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Administration Report of the Madras Animal Husbandry Department for the year 1959-60.

CHAPTER I—GENERAL.

The Animal Husbandry Department of the Madras State continued to be fully alive to its primary and fundamental responsibilities, namely, affording prompt protection and effective treatment to the livestock population of this State by adopting up-to-date methods against the ravages of contagious as well as non-contagious diseases, at the same time upgrading and thus improving the types of Livestock towards better standards of conformation and production through supply of pedigreed breeding stock and through controlled artificial insemination, and with its meagre technical staff has been straining itself towards a satisfactory discharge of these responsibilities. Production of more and better type of fodder which is a necessary complement for the production of better types of livestock has also received its due share of attention at the hands of this department. The various plan schemes of the Second Five-Year Plan have been implemented with the utmost expedition towards achievement of the targets fixed. It can with confidence be said that the department has during the year under report achieved a great measure of success in its efforts as the progress in the various sections of the department which are expatiated in the following chapter will indicate. This success is not a little due to the co-operation and reciprocity shown by the livestock owners and the people at large.

A gist of the achievements in the various sections is furnished in this chapter.

2. *Administration.*—Consequent on the expansion of the Key Village Scheme over more areas and with a view to their effective supervision, an additional post of Inspector of Key Villages with Headquarters at Dharapuram was sanctioned together with the necessary ministerial staff. The post was filled up with effect from 29th May 1959.

3. *Veterinary Education.*—During the year under report, Sri I. D. Mantramurthi held the post of Principal, Madras Veterinary College, for the period from 1st April to 14th September 1959, during the absence of Sri Bertie A. D'Souza who was undergoing Post-Graduate training in the United States of America sponsored by the T.C.M.

There were forty-seven Gazetted officers in the Madras Veterinary College at the beginning of the year including the five supernumerary posts of lecturers. Of these, four posts were discontinued consequent on the return of the professors who previously held these posts. The post of Professor of Dairy Science which was held by Dr. C. N. Stark fell vacant from 11th August 1959 as Dr. Stark has returned to America on completion of his assignments.

As in the previous year, the courses of study offered at the College were—

- (1) The pre-professional course in Veterinary Science.
- (2) The B.V.Sc. Degree Course.
- (3) The M.V.Sc. Degree Course.
- (4) The Slaying Course.
- (5) The Stockmen Course.

The number of admissions to the above courses were 116, 119, 18, 79 and 202 respectively.

The selection of candidates for the first three Courses was done by Committees appointed by the Government for the purpose as on previous years, and due consideration was given for district representation and representation for Backward and Scheduled Castes and Tribes.

Refresher training of Instructors in Animal Husbandry and Veterinary Science for the Extension Officers (Animal Husbandry) employed in National Extension and Community Development Blocks was also continued this year. Two candidates from the Madras State and fifteen from the Mysore State under went this course.

During the year under report one member of the College staff was awarded the M.S. Degree of the Madras University. Thirteen other members were continuing their research work for the M.Sc. Degree and one other, for the Ph.D. Degree of the same University.

It is noteworthy that an alumnus of this College, Dr. O. S. Reddy, has been awarded the Hufield Dominion Travelling Fellowship and has taken his assignment at Edinburgh in February 1960. Dr. Reddi is the first Veterinarian to secure this high distinction.

The students and staff of the College continued to make full use of the college library. Three hundred and nine new volumes were added during the year. A new feature during the year was the introduction of library hours in the time-tables of the pre-professional, and first and second B.V.Sc. classes.

The various college associations continued their activities with increased tempo and the extra curricular activities of the students were as usual of a high order.

Among the noteworthy events during the year the visit of eight students of the Project India Group from California to the Madras Veterinary College in July 1959, deserves special mention. The visit helped to create mutual understanding and gave an opportunity for our students to have an insight into the academic life and aspiration of their American counterparts.

A new three-storeyed building constructed to provide additional accommodation for the increased admission in the college was completed during the year under report and was declared open by the Chief Minister of Madras on 13th August 1959.

4. *Institute of Veterinary Preventive Medicine, Ranipet.*—During the year under report this Institute continued not only to manufacture and supply almost all the requirements of Biological products for this State but was able to meet the demand from other States also. It has almost reached self-sufficiency in so far as the biological products required for this State are concerned. Besides manufacture of routine products research work was also undertaken with a view to improve the quality of the products.

This Institute which has been selected for the manufacture of freeze-dried Rinderpest vaccine for the All-India Pilot Scheme for the eradication of Rinderpest for the Southern Zone, by the Government of India, continued its work during the year. Seventy-one lakhs forty-seven thousand three hundred and seventy-five doses of the vaccine was manufactured and 6,165,450 doses were actually supplied to various States for use under the scheme.

The scheme for the improvement in the technique and methods used in the manufacture of virus vaccines which was partly financed by the Indian Council of Agricultural Research was continued up to 26th February 1960 during the year. The scheme for the control of Brucellosis in the State continued to work during the year. The Brucella Abortus vaccine required for use in field and certain diagnostic antigens were also manufactured in the Institute during the year.

5. *Livestock development.*—During the year under report, the following items of work under the Second Five-Year Plan were carried out:—

Four Key Village Blocks were established during the year under the All-India Key Village Scheme making a total of 32 blocks in this State.

Four more Artificial Insemination Centres under the All-India Key Village Scheme were opened, making a total of 13 centres in the urban areas.

Six State Artificial Insemination Centres and 13 Artificial Insemination Centres started under Community Development/National Extension Service Scheme continued to function.

Twelve Key Village Extension Centres under the Key Village Scheme were established during the year making a total of 29 at the end of the year.

The total number of bulls including buffalo bulls under various schemes rose to 3,681 during the year from 3,001 of the previous year. Under Goshala Development the Kasturba Gandhi Kanya Gurukulam was brought under the scheme during the year.

Six Romney Marsh Rams received from Russia and allotted by the Indian Council of Agricultural Research to this State have been stationed at the Sheep Farm, Ootacamund, for breeding work.

Under Poultry, four more Poultry Extension Centres were established. Sixty-three farmers were given training in Poultry Husbandry at the Poultry Research Station, Teynampet.

The 57 Poultry Demonstration units attached to the Veterinary Institutions in the State continued to function satisfactorily. From these units 683 birds and 21,606 eggs were utilized for breeding purposes.

6. *Veterinary Health Services and Itinerating staff.*—The number of Veterinary Institutions in the State rose from 116 during the previous year to 120 during the year under report, two Veterinary Dispensaries having been opened and two Institutions started under the Community Development Administration having been reverted to this department. These institutions continued to function satisfactorily wherein a total number of 368,461 cases were treated and 59,932 scrub bulls were castrated during the year as against 341,232 cases and 57,500 castrations of the previous year.

The demand for opening more Veterinary Institutions has been on the increase as is evidenced by the numerous memorials and representation received, but paucity of qualified men has been the greatest handicap for any progressive action in this direction.

The team of the touring staff consisted of 80 Veterinary Assistant Surgeons in charge of Minor Veterinary Dispensaries and 15 touring Billets. The speedy and prompt attendance of outbreaks of contagious diseases of livestock in the State, and advance preventive vaccinations in endemic areas, by this staff have resulted in keeping the disease position of the State well under control. During the year under report, 1,705 outbreaks of all diseases among

all species of animals were received resulting in 8,380 deaths as against 1,596 outbreaks and 7,028 deaths during the previous year. The slight increase may be due to vigilance on the part of the staff and the prompt detection of clandestine outbreaks in the interior villages by the newly introduced mobile units and the awakening among people in detecting and reporting the outbreaks with good expectations. The incidence and mortality from contagious diseases can be reduced considerably if the mobile units are established in all the Veterinary districts. The touring staff treated 221,102 cases and castrated 61,548 scrub bulls.

7. *Disease position.*—The State continued to occupy an enviable position with regard to livestock diseases during the year under report. Rinderpest continued to be kept out from the State. Even the incidence of most of the other diseases was low and well under control. There was a slight increase in the total number of outbreaks as compared with the previous year, the actual number being 1,705 as against 1,596. The increase is due to the larger number of reports of diseases among sheep and goats which numbered 349 as against 220 of the previous year. This may be attributed to the fact that sheep diseases are more and more coming under the purview of this department and that sheep owners who some years ago were averse to modern methods of disease control are slowly recognizing and availing of the benefits offered by this department in the prevention and cure of sheep diseases. More detection of clandestine outbreaks by mobile units and people's new enthusiasm also count a lot in this direction. As has already been pointed out, this comparatively low disease position is not a little due to the very large number of advance preventive vaccinations and quick and prompt attendance of outbreaks and preventive vaccinations. A total number of 2,821,129 vaccinations were done during the year against all diseases among all species of animals as against 2,059,872 of the previous year.

8. *Investigation and Research.*—Research which is very essential for the progress of this department was being carried on at the Madras Veterinary College, at the Institute of Veterinary Preventive Medicine, Ranipet, and by the three Disease Investigation Officers for cattle, sheep and goats and poultry. The important ones among the items of research conducted during the year under review are enumerated below:—

1. Studies on the use of meat meal for feeding poultry.
2. Use of cow-dung at 10 per cent level in the feeding of poultry to access the oestrogenic effect on growing birds.
3. Determination of the nutritive value of infertile eggs.
4. Study on the Bacterial flora in the genital tract of bovines with special reference to metritis and sterility.
5. Bacterial flora involved in contagious coryza of fowls.
6. Studies on the etiology of retention of placenta and prolapse of the vagina in bovines.
7. Treatment trials on nasal sebastos-omiasis.
8. Studies on the species of tapeworms affecting bovines.
9. Survey on the prevalence of mastitis in the State.
10. Determination of period of immunity in animals vaccinated against rinderpest with rinderpest freeze-dried, vaccine.
11. Research on enhancing the potency of H.S. Vaccine and the minimum dose of the vaccine required for immunisation.

12. Field trials on alum-precipitated Black-quarter vaccine.

13. Studies on the period of immunity in sheep conferred by the Anthrax spore vaccine manufactured at the Institute of Veterinary Preventive Medicine.

14. Studies on the oral administration of ranikhet disease antigen for immunisation of chicks against the disease.

15. Studies on the casual agent in contagious coryza of fowls.

16. Viability tests on sheep-pox vaccine.

17. Studies on a combined vaccine against fowl-pox and ranikhet disease.

18. Studies on fits and bovine paralysis.

19. Studies on the prevalence of leptospira infection in Madras State.

20. Studies on enterotoxaemia of sheep.

21. Treatment trials with special vaccine in contagious coryza of fowls.

9. *Veterinary Public Health.*—This department besides engaging itself in the improvement of livestock and control cure and protection of their diseases, concerns itself with safeguarding the health of human population also. This was being done by effective control of communicable diseases like anthrax, rabies, tuberculosis, etc., and by the technical supervision of the production of milk and meat to ensure their freedom from diseases. The staff of the department have been inspecting almost all the slaughter-houses in the State and doing ante-mortem and post-mortem examination of meat, etc., in recognized slaughter-houses.

Taking steps for the safe burial of carcasses of animals that died on communicable disease and at times destruction of stray dogs and those affected with rabies were also some of the measures undertaken by this department to safeguard human lives.

10. *Statistics.*—This section continued to function during the year. It concerned itself with collection of statistics relating to this department and collection of data connected with research and their analysis. In addition, the section undertook work dealing with propaganda and publicity.

11. *Propaganda.*—Though very much handicapped for want of a full-fledged propaganda section with modern amenities, the section was putting forth its best in the matter of conducting propaganda and publicity with its meagre staff and facilities.

During the year under review, among the various items of work undertaken like preparation of charts, maps, graphs, models, etc., the following deserves special mention:—

Preparation of—

1. Life-size models of Kangayam, Hallikar, Umblacherry and Sindhi bulls with suitable background with lighting arrangements.
2. Three dimension models on the activities of the Key Village Scheme.
3. Life-size cut-out models of Mandya ram, Bellary sheep and Nilgiri sheep, white Leghorn, Black minorca, Rhode Island red breeds of fowls and light Sussex cocks.
4. Five-Year Plan Schemes in folding boxes.
5. Illuminated show cases for wool samples.

6. Three leaflets in Tamil entitled,

(a) கால் நடை வளர்ப்பு.

(b) கால் நடை தீவனத்தில் பசும்பூலின் அவசியம்.

(c) கன்றுகள் நம் சம்பத்து, சிறந்த முறை.

by Dr. D. Pattabhiraman, Director of Animal Husbandry, Madras.

12. *Shows and Exhibitions.*—During the year under review, 120 shows were conducted out of which six were livestock shows at district level, 29 were cattle shows and calf rallies in Key Village Blocks, 22 were Sheep shows, 15 were shows in National Extension Service and Community Development Block areas, 10 were poultry shows and the rest were shows conducted in connection with Gosamvardhana Week celebrations and "More Milk Day" celebrations, etc.

The District Level Show was not conducted during the year in view of the Southern Regional Cattle Show conducted by the All-India Cattle Show Committee at Madras.

The shows were a great success and they not only helped to rouse the enthusiasm of the public in Livestock Development but acted as forums for Propaganda and Publicity for the departmental activities.

CHAPTER II—ADMINISTRATION.

The administrative control and technical supervision of the activities of the department was vested with the Director of Animal Husbandry assisted by three Deputy Directors of Animal Husbandry at State level who exercised individual control over Veterinary, Livestock and Key Village Scheme inclusive of Artificial Insemination activities of the department.

(a) *Director of Animal Husbandry.*—Dr. D. Pattabhiraman, G.M.V.C., A.I.D.I., continued as the Director of Animal Husbandry, Madras, during the period.

During the period under report he attended the following meetings:—

Serial number and particulars.	Place.	Date of meeting.
1 13th Meeting of the Animal Husbandry Wing of the Board of Agriculture and Animal Husbandry at Aarey Milk Colony.	Bombay	.. 27th April to 2nd May 1959.
2 Discussions on the formulation of schemes under the Third Five-Year Plan.	New Delhi	.. 3rd July to 7th July 1959.
3 Annual Conference on Community Development.	Mysore	.. 22nd July to 29th July 1959.
4 Southern and Eastern Regional Committee of the Indian Council of Agricultural Research in the Animal Husbandry side.	Ootacamund	.. 7th September to 10th September 1959.
5 Advisory Board meeting of Indian Council of Agricultural Research.	New Delhi	.. 24th November to 26th November 1959.
6 Meeting with the Planning Commission	Do.	.. 1st December to 19th December 1959.
7 Interim Indian Veterinary Council meeting	Calcutta	.. 1st February to 3rd February 1960.
8 The Northern Regional and All-India Cattle and Poultry Show as judge and also World Agriculture Fair.	New Delhi	.. 9th February to 12th February 1960.
9 The Southern Regional Committee meeting of the Indian Council of Agricultural Research.	Poona	.. 23rd March to 25th March 1960.

Besides the above meetings, he attended the various meetings connected with the Community Development Programme, State Development Board, Salvage of Dry Cows' Advisory Board, and meetings of the State Livestock Improvement Board held at Bhavanisagar and Orathanad.

During the course of his tours in the State, he inspected various institutions and offices of the subordinate officers of this department like Livestock Farms, Research Institutions, Veterinary Institutions, and offices of the District Veterinary Officers.

(b) *Deputy Director of Animal Husbandry (Veterinary).*—Dr. R. Ragu-path Reddi, G.M.V.C., acted as Deputy Director of Animal Husbandry (Veterinary) till 14th September 1959 when he was relieved by Dr. I. D. Mantramurti, G.M.V.C., B.V.Sc., who continued in the post during the rest of the year under report.

During the year, the Deputy Director of Animal Husbandry (Veterinary) attended the following meetings:—

Serial number and particulars.	Place.	Date of meeting.
1 Meeting of the State Wild Life Board presided over by the minister for Agriculture.	Ootacamund	.. 4th May 1959.
2 47th Session of the Indian Science Congress Association.	Bombay	.. 3rd January to 8th January 1960.

The offices of the District Veterinary Officers and Veterinary Disease Investigation Officers, Veterinary Institutions, Touring Bilets, slaughterhouses and the work of Extension Officers (Animal Husbandry) were inspected by them during the year.

During the course of their tours in interior parts the efficiency of preventive measures undertaken by the staff against various contagious diseases in villages with special reference to extension block areas. Lectures were also delivered to the Revenue Divisional Officers on Orientation Training at Gandhigram and the Grama Sevaks on training in the Rural Extension Training Centres at Gandhigram and Bhavanisagar.

Dr. I. D. Mantramurthi, G.M.V.C., B.V.Sc., underwent the special course of Re-orientation Training at the Central Institute of Study and Research in Community Development at Mussoorie for a period of five weeks commencing from 8th November 1959.

(c) *Deputy Director of Animal Husbandry (Livestock).*—The post of Deputy Director of Animal Husbandry (Livestock) continues to be held by Dr. T. Ananthapadmanaban, G.M.V.C., during the period under report. During the course of his tour he carried out inspection periodically on the work turned out in Livestock Farms, Poultry Farms, Research stations and progress under various Livestock Development Schemes in rural areas excluding the areas of Key Village Scheme.

Some of the important meetings attended by him during the year under report are given below:—

Serial number and particulars.	Place.	Date of meeting.
1 Meeting of the State Livestock Improvement Board.	Bhavanisagar	.. 26 August 1959.
2 The All-India Cattle Show (World Agriculture Fair).	New Delhi	.. 14th February to 15th February 1960.
3 Meeting of the State Livestock Improvement Board.	Orathanad	.. 29th March 1960.
4 The first Regional Agricultural Information Workshop Seminar.	Kodeikana	.. 30th March 1960.

(d) *Deputy Director of Animal Husbandry (Key Villages).*—Dr. C. K. Subbu Singh, G.M.V.C., P.G. (Reading), continued to hold the post of Deputy Director of Animal Husbandry (Key Villages) during the period under report except for a brief period of a month when he underwent the eighth Course of Training at the Central Institute of Study, Mussoorie, and Research in Community Development.

The work of the Key Village Scheme and Artificial Insemination Centres in the State were periodically inspected by him. Proposals for the extension of the schemes to other areas were also examined by him and local inspections in this regard undertaken. He attended the following meetings, during the period:—

Serial number and particulars.	Place.	Date of meeting.
1 Agricultural Extension Council Meeting ..	Coimbatore ..	14th September 1959.
2 Thirteenth Meeting of the Animal Husbandry Wing of the Board of Agriculture and Animal Husbandry at Aarey Milk Colony.	Bombay ..	27 April to 2nd May 1959.

He also delivered lectures on Animal Husbandry to the trainees at Gandhigram.

Audit.—The detailed departmental audit was satisfactorily undertaken in all the offices of the department by the Accounts Officer, during the year.

Gazetted staff.—The following two new posts sanctioned during the year were filled up during the year, thus making a total of 100 posts at the end of the year:—

(1) Inspector of Key Villages, Dharapuram.

(2) Superintendent, Poultry Research Station, Madras.

Both the above posts carried a scale of Rs. 260—700.

Non-Gazetted staff.—The sanctioned strength of Veterinary Assistant Surgeons in the department as on 31st March 1960 was 621 against 601 at the end of the previous year.

The sanctioned strength of other categories of staff are given below:—

Veterinary Livestock Inspector	...	...	319
Stockmen	...	...	703
Stockmen - Compounders	...	...	97
Ministerial staff—			
Superintendents	...	...	9
Office Managers	...	...	3
Accountants	...	...	10
Upper Division Clerks	...	...	61
Lower Division Clerks	...	...	90
Typists	...	...	48
Stenographers	...	...	2
Computers	...	...	10
Store-keepers	...	...	10

The distribution of the staff of the department in the State has been shown in the table No. IX annexed to this report.

Deputation for Advanced Training.—The following officers of the Madras Veterinary College who were selected under T.C.M. Programme and deputed to United States of America for Post-Graduate studies rejoined the staff of the Madras Veterinary College on completion of their training abroad as shown below:—

Name of officers.	Date of rejoining.
1 Dr. D. Mariappa, G.M.V.C., Professor of Anatomy.	1st September 1959 forenoon.
2 Dr. Bertie A. D' Souza, G.M.V.C., B.V.Sc., Principal and Professor of Medicine.	14th September 1959 forenoon.
3 Dr. K. P. Chandrasekaran, G.M.V.C., B.V.Sc., Professor of Pathology.	27th February 1960 forenoon.
4 Dr. M. S. Ganapathy, Professor of Therapeutics and Toxicology.	24th February 1960 afternoon.
5 Dr. F. D. Wilson, G.M.V.C., B.V.Sc., Professor of Surgery.	29th February 1960 forenoon.

Dr. M. Ranganathan, G.M.V.C., B.V.Sc., Lecturer in Medicine who was selected for post-graduate training in United States of America, under the T.C.M. Inter Institutional Programme left by air on 15th December 1959 to undergo the training at the University of Tennessee.

Dr. E. V. Babu, G.M.V.C., Superintendent, Poultry Research Station, Madras, was deputed to United States of America for undergoing advanced training in Poultry Husbandry for a period of six months under the Point-Four Programme (T.C.M.) and he was relieved on 26th December 1959 afternoon to proceed to United States of America for the training.

Dr. R. Vijayarangam, G.M.V.C., the Sheep and Goat Development Officer, Madras, who was deputed to Australia for a period of six and half months from 18th January 1959 under the Colombo Plan for training in Sheep and Wool Industry has resumed the charge of the post on 3rd October 1959 afternoon on his return from Australia.

CHAPTER III—EDUCATION.

The Madras Veterinary College is an important institution under the control of the Director of Animal Husbandry, Madras, for imparting theoretical and practical education in Veterinary and Animal Husbandry subjects. This college has also been selected as one of the Regional Centres of post-graduate Training in Veterinary Science by the Government of India. Necessary facilities for the following courses of study were available at the College during 1959-60:—

- (1) Pre-professional course in Veterinary Science.
- (2) B.V.Sc. Degree course.
- (3) M.V.Sc. Degree course.
- (4) Flaying course.
- (5) Stockmen course.

In addition, facilities were made available to research scholars to work for their M.Sc. and Ph.D. degrees of the University of Madras in almost all the subjects.

(i) *Pre-professional course in Veterinary Science.*—(1) During the year under report the pre-professional course which was being conducted at the Loyola College was taken over by the Madras Veterinary College, in the interest of the students and the profession.

There were 120 seats available for this course, 108 to be filled up from students of this State and 12 from those coming from outside.

In all 292 applications were received. Out of these, 109 were selected from this State. Two seats were given to Government of India nominees and five to Mysore Government candidates. Four seats had to be kept vacant for want of candidates.

(2) *B.V.Sc. degree course.*—The total seats available were 120. The selection of students for admission was done by a Committee appointed by Government consisting of Sri T. V. Subbia Mudaliar as Chairman and V. K. Subramania Mudaliar, Principal, Madras Veterinary College and the Principal, Agricultural College, Coimbatore, as members.

Out of the 120 seats available, two were allotted to Government of India nominees, three to Mysore State candidates and 3 to Jammu and Kashmir State nominees. Out of the balance, 90 were filled up by candidates who had passed the Pre-professional Course and Intermediate Examinations or otherwise qualified for admission. An anomalous feature during the year was that enough fully qualified students did not come forward to fill up the sanctioned seats and so 21 students who had failed in one subject in their pre-professional course had also to be admitted under special instructions from the Registrar of the Madras University. One seat was however vacant. Due consideration was given in the matter of allotment of seats for representation to Scheduled castes and tribes and backward communities and for equitable district representation.

(3) *M.V.Sc. Degree course.*—Only branches three and five out of the five sanctioned branches could be instituted during the year under report. The other branches are expected to be opened as and when facilities become available.

During the year, the students who had taken up courses in branches three and five during 1958-59 continued their studies in their respective courses. As for fresh admissions 18 students were ordered to be admitted for the two courses in branches three and five. Out of 82 applicants 18 were selected statewise representation being given as detailed below :—

Madras	9
Andhra Pradesh	6
Orissa	1
Bihar	1
Madhya Pradesh	1
Total ..	18

The working of the post-graduate course was inspected by a Committee appointed by the Syndicate of the Madras University on 30th January 1960.

(4) *Flaying course.*—This course was conducted for the seventh year in succession. The duration of the course being three months, candidates were interviewed, selected and admitted once in every three months. The

main centre for this course was Madras with a sub-centre at Vaniambadi. Seventy-one students at Madras and 8 at Vaniambadi were trained during the year. In addition, 87 Extension Officers were also given training in scientific Flaying at Madras.

(5) *Stockmen course.*—The sanctioned number of seats for this course was as in the previous year, 200 out of which 100 were at the Livestock Research Station, Hosur Cattle Farm and 50 each at the District Livestock Farms at Pudukkottai and Orathanad. The selection of candidates was by a committee set up by the Government who interviewed the probable candidates at Madras City, Thanjavur, Madurai and Coimbatore. The full sanctioned number of 200 students were selected due regard being given to representation of Scheduled Castes and Backward communities and for the several districts.

(6) *Refresher course.*—This course which has been sponsored by the Government of India for the benefit of Extension officers in Animal Husbandry employed in Block Development areas so as to enable them to keep their professional knowledge up to date. Fifteen candidates from Mysore State and two from Madras State underwent this course during the year under report.

(7) *Post-graduate studies.*—Five members of the staff obtained the post-graduate degrees (M.S.) from United States of America and one, the M.Sc., degree of the Madras University. Fourteen others have registered themselves for post-graduate degrees of the Madras University and were continuing their research in their respective subjects.

(8) *Deputation abroad.*—Sri M. Ranganathan, Lecturer in Medicine who was selected for training in United States of America under the Inter-institutional Programme left by air on 15th December 1959 to undergo the training at the University of Tennessee.

(ii) *Examinations.*—(1) *B.V.Sc. degree course.*—During the period under report the annual and supplementary examinations for the B.V.Sc., degree course were conducted by the University of Madras and the results are shown below :—

ANNUAL EXAMINATIONS (APRIL-JUNE).

	Number appeared.		Number appeared.		Percentage of whole passes.
	Whole.	By parts.	Whole.	By parts.	
	(1)	(2)	(3)	(4)	PER CENT.
Preliminary	114	18	67	14	50
Intermediate, Part I	101	15	30	7	35
Intermediate, Part II	107	4	39	3	36
Final	75	4	37	3	49

SUPPLEMENTARY EXAMINATIONS (OCTOBER AND DECEMBER 1959).

	Number appeared.		Number appeared.	
	Whole.	By parts.	Whole.	By parts.
	(1)	(2)	(3)	(4)
Preliminary	14	31	6	29
Intermediate, Part I	2	69	1	54
Intermediate, Part II	7	62	3	58
Final	..	39	..	37

(2) *Stockman course*.—In this course out of 201 candidates from all the three centres that were examined 188 passed which works out to 93 per cent.

(iii) *Scholarships and stipends*—(1) *B.V.Sc. degree course*.—One hundred and fifty-six students from Madras State including 136 under Harijan Welfare Scheme were awarded scholarships. Besides these, 16 from Andhra State, 5 from Mysore State, 12 from the Government of India, 2 from Coorg and 1 from Pondicherry were awarded scholarships. In addition 117 students of the Madras State and 14 students from Andhra State were given fee concessions.

(2) *Flying course*.—All students undergoing this course were granted a monthly stipend of Rs. 25 per mensem for an amateur and Rs. 10 per mensem for a professional butcher.

(3) *Stockmen course*.—Among those undergoing this course 52 belonging to scheduled castes and tribes were in receipt of a stipend of Rs. 35 per mensem each and 129 belonging to backward communities received a stipend of Rs. 30 each per mensem.

(4) The Nuffield Dominion Travelling Fellowship was awarded during the year under report to Dr. O. S. Reddi, an alumnus of this college for undertaking further studies at the Institute of Animal Breeding and Genetics, Edinburgh. It may be mentioned that this is the first Veterinarian to secure this high distinction.

(iv) *Library*.—The college library was made full use of both by the staff and students of the college. During the year under report, 309 new books were added and 15,589 readers used the library. Seventy-five journals were being received.

(v) *Madras Veterinary College Association*—(1) *The Madras Veterinary College Association*.—The association continued its useful activities during the year. Sixteen meetings were held for different purposes such as discussion on professional subjects, reception to foreign students, inter-collegiate debates, etc., and eminent men of culture and science were invited to preside over these meetings.

(2) *The College Athletic Association*.—Association apart from its normal activities at home, undertook a sports tour to Ceylon and played five matches in that country winning four of them.

(3) *The Madras Veterinary College Clinical Club*.—This Club held four meetings and interesting professional subjects were discussed. A rolling shield was donated by Dr. Oosman Khan, Retired Veterinary Officer from Malaya to be presented to the best speaker of the year in the Club. It was named "Dr. Oosman Khan's rolling shield" in memory of the donor.

(4) *The Madras Veterinary College Planning Forum*.—During the year under report the forum did intensive work at Perungalathur village. This village was visited weekly by 35 students and 5 of the staff. Talks on matters relating to Animal Husbandry, Veterinary and Social Welfare were given to the people. Practical demonstrations on the above subjects were also undertaken. The Farmers' Day was celebrated on 23rd January 1960 and some of the farmers were shown round the college and the work done there, explained.

(vi) *The Madras Veterinary College Hostel*.—Four hundred and seven students were accommodated in the hostel during the year. A medical officer looked after the health of the students. The vegetarian and non-vegetarian messes were run in the hostel and these messes were run by the students themselves.

(vii) *The Madras Veterinary College Hospital*.—The college has a well-equipped hospital which is divided into a small and large animal clinic. This hospital serves as the main forum for imparting clinical knowledge to the college students. The work turned out in the hospital is tabulated below:—

Cases treated.						1957-58.	1958-59.	1959-60.
In-patients—								
Large animal clinic	..	..	..	..	..	337	276	320
Small animal clinic	..	..	..	..	..	405	418	377
Out-patients—								
Large animal clinic	..	..	..	..	..	5,576	5,948	5,513
Small animal clinic	..	..	..	..	..	9,535	9,630	10,866
Total						15,853	16,302	17,076
Daily average attendance						139.33	147.00	154.37

Out of these 11,011 were medical cases and the rest consisted of surgical and gynaecological cases. Twenty-nine animals were castrated.

Radiology.—Two hundred and fourteen cases were attended to in this department. Screening was also done as an aid to diagnosis. Electrotherapy was administered to 17 cases. One case was treated with infra-red therapy.

Shoeing forge.—This forge affords practical training to the students in shoeing. Five hundred and fifty-one animals were dealt with in this forge.

Pharmacy.—Forty-four thousand two hundred and nine prescriptions were dispensed by the pharmacy during the year with a daily average of 120.73 against 98.693 of the previous year.

Fees.—The college realised a sum of Rs. 20,841.32 as fees from among the animals admitted into the College Hospital as against 18,653.50 of the previous year.

Contagious and infectious diseases.—The following contagious and infectious diseases were met with in the animals attending the College Hospital during the year under report:—

Blackquarter	...	...	...	...	...	...	5
Anthrax	...	...	...	...	...	...	7
Hæmorrhagic septicaemia	...	...	...	...	...	...	13
John's disease	..	...	...	...	...	...	51
Bovine lymphangitis	...	...	...	...	...	...	7
Tuberculosis	...	...	...	...	...	...	3
Rabies	...	...	...	...	...	...	160

Protozoan diseases.—One hundred and thirty-four cases were treated for diseases under this category.

Parasitic diseases.—Twenty cases of nasal schistosomiasis were treated.

Prophylactic measures taken during the year.—Ten thousand four hundred and sixty-two birds were vaccinated against Ranikhet disease. Six hundred and forty-six birds were protected with pigeon-pox virus. Four hundred and sixty-three birds were also protected with fowl-pox vaccine against fowl-pox. Three hundred and eighty-seven animals were protected against rabies.

Clinical materials handed in the laboratories.—Fourteen thousand seven hundred and twenty-seven specimens were received during the year in the departments of Bacteriology, Pathology, Parasitology and in the clinical laboratory.

Of these 2,023 specimens were dealt with in the bacteriological department. And out of these, 100 were positive for the suspected etiological causes and the rest were negative. Sixteen dogs were supplied with autovaccine.

In the department of parasitology and clinical laboratory, 10,893 specimens were examined and 591 were positive and the rest negative.

In the department of Physiology 1,805 materials were received and dealt with for biochemical examination.

Chemico-legal cases.—Post-mortem certificates in respect of seven bovines were issued.

Materials from 36 bovines, one cat, 4 pullets and one squirrel were sent for chemical analysis as chemical-legal items. Two of them are pending receipt of results and the rest were negative.

(viii) *Publications.*—Seventeen articles on scientific subjects were published by the various departments of the college during the year in professional journals.

(ix) *The Board of Honorary Visitors.*—The following members were appointed by Government to constitute the Board of Honorary Visitors for the college during the year under review :—

- (1) Sri P. T. Rajan, M.L.A.
- (2) Sri V. K. Ramasamy Mudaliar, M.L.A.
- (3) Sri T. Vinayaka Mudaliar, Editor, Indian Veterinary Journal, Madras.
- (4) Sri P. K. S. Chari, Retired Postmaster-General, Madras; and
- (5) Sri S. P. Namasivayam, Executive Engineer, North Presidency Division, Madras.

The Board met thrice during the year and offered their valuable suggestions.

(x) *Distinguished visitors.*—Eight students of the Project India Group from California visited the Madras Veterinary College on the 15th July 1959. The visit was noteworthy in that it helped to create mutual understanding and have Indian students an insight into the academic life and aspirations of their American counterparts.

Dr. W. Pender Grass, Dean, College of Agriculture, University of Tennessee and Mr. Clyde Yark, Trustee, visited the college on 11th January 1960.

(xi) *Events of interest during the year.*—(1) The new Animal Husbandry Block constructed to provide additional accommodation for the increased admission in the college under the Second Five-Year Plan was declared open by the Chief Minister of Madras on 13th August 1959.

(2) The Eleventh Departmental Officers Conference of the Madras Animal Husbandry Department was held in the college on 12th and 13th August 1959.

(3) The Chief Secretary of the Madras Government Sri W. R. S. Sathianathan inaugurated the 13th Madras State Veterinary Conference on 14th August 1959.

(xii) *Animal Husbandry in the Agricultural College, Coimbatore.*—Animal Husbandry is one of the subjects in the curriculum of studies for the B.Sc. (Agriculture) Degree Course offered at the Agricultural College, Coimbatore, and is in charge of a professor in Animal Husbandry assisted by one Lecturer and three Assistant Lecturers.

A Veterinary hospital is attached to this college. In this hospital, 4,927 animals were treated and 563 castrations were done. Two hundred and fifty-one animals were vaccinated against blackquarter, 241 birds against ranikhet disease and 422 birds against fowlpox. All these inoculations were done in disease-free areas.

CHAPTER IV—INSTITUTE OF VETERINARY PREVENTIVE MEDICINE, RANIPET.

This Institute is yet another important limb of the Madras Animal Husbandry Department and was established with the object of the manufacturing sera and vaccine required primarily for use in the Madras State and for their supply to the neighbouring State if required and for conducting research work. It can be said that the Institute has almost fulfilled its objective.

(i) *Staff.*—The Institute was in overall charge of the Superintendent under the control of the Director of Animal Husbandry, Madras.

The following were the officers working under him :—

One Research Officer, one Special Officer for freeze dried vaccines from 27th February 1960 ;

One Research Officer—virus vaccines up to 26th February 1960 ;

One Research Officer for increased production of freeze dried rinderpest vaccine, and

One Research Officer for survey and control of brucellosis in the State.

Out of a sanctioned strength of 19 Veterinary Assistant Surgeons including those sanctioned for temporary schemes, 16 were actually on duty during the period.

(ii) *Buildings.*—The Institute continued to be housed in the buildings taken over from the Military Authorities but certain alterations and additions were being carried out according necessity.

(iii) *Water-supply.*—Water-supply to the Institute continued to be made by Messrs. Parry & Co., at 69 nP. per 1,000 gallons. Extension of municipal water-supply by the Ranipet Municipality is under correspondence.

(iv) *Livestock and fodder.*—Four hundred and fifty-two buffalo calves, 180 bull and heifer calves, 2,542 goats, 319 sheep and 5 lambs were purchased for the manufacture and test of the different biological products manufactured at the Institute and for experiment and research. Of these, a total of 789

animals managed to survive from the tests and experiments and they were sold to contractors. All purchases were on contract basis except a few chicks which were purchased locally.

The requirements of eggs for research purposes were met from the poultry unit maintained at the Institute.

Except for a small quantity of lucerne and sunhemp, and 255 Kgms. of cholam and 2,950 Kgms. of cholam straw the rest of the cattle feed and roughage were purchased on contract basis.

(v) *Production of biological products.*—During the year the following virus vaccines were manufactured in this Institute in a freeze dried form:—

- (1) Ranikhet vaccine,.
- (2) Pigeon pox vaccine,
- (3) Fowl pox vaccine.
- (4) Sheep pox vaccine,
- (5) Lapinised rinderpest vaccine,
- (6) Fowl pox experimental vaccine, and
- (7) Ranikhet experimental vaccine.

The following table shows the biological products manufactured and disposed of at the Institute during the year together with their opening and closing balances:—

Name of product.	Opening balance.	Quantity manufactured.	Quantity expended.	Closing balance.
(1)	(2)	(3)	(4)	(5)
1 Antirinderpest Serum ..	4,120 doses.	..	2,656	3,884 (inclusive of 1,62 doses returned by field staff unused.)
2 Rinderpest Bull Virus ..	..	3,975 o.e.	3,975	..
3 Rinderpest goat virus ..	..	29,050 doses	39,550	..
4 Freeze dried rinderpest vaccine.	2,769,450 (under Indian Council of Agricultural Research Scheme).	7,147,375	6,271,675	3,645,150
5 Haemorrhagic Septicaemia vaccine (alum precipitated)	2,82,314	2,360,880	2,371,380	76,974
6 Anti-Haemorrhagic Septicaemia Serum.	3,960	*100 doses.	480	3,380
7 Black quarter vaccine ..	265,923	1,870,680	2,077,342	63,106
8 Cl. welchii inoculture ..	20,160	*3,840 256,800 *4,020	259,440	21,540
9 Sheep-pox vaccine ..	121,600	122,590	216,100	28,000
10 Bovine Lymphangitis vaccine.	189	868	1,072	5
11 Fowl-cholera vaccine ..	300	2,320	2,105	515
12 Ranikhet vaccine freeze dried.	283,600	2,149,800 *200	2,276,000	157,600
13 Fowl-pox vaccine freeze dried	13,500	70,500	72,000	11,300
14 Pigeon-pox vaccine ..	33,600	121,150	142,450	12,300
15 Anti-Anthrax Serum ..	5,600	4,300 *1,040	4,020	7,100
16 Anthrax spore vaccine ..	89,773	31,800 *2,900	222,135	183,538

* Denotes quantity returned by staff.

Serial number and name of State to which supplied.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1 Pondicherry State ..	..	..	..	..	..	..	..	..	..	..	..	..	..
2 Andhra Pradesh ..	..	..	..	..	..	..	..	..	..	..	..	..	..
3 K. R. State ..	..	..	..	..	..	..	..	..	..	..	..	..	..
4 Deputy Director, Biological Products Section, Lucknow.	..	..	..	..	..	..	..	..	..	..	..	..	..
5 Director, Livestock Research Station, Patna.	..	..	..	..	..	..	..	..	..	..	..	..	..
6 Animal Husbandry, Officer, Imperial S. S. C.	..	..	..	..	..	..	..	..	..	..	..	..	..
7 Officer in charge, National Dairy Research Institute, Bangalore.	..	..	..	..	..	..	..	..	..	..	..	..	..
8 Veterinary Officer, Sheep Breeding Station, Guttal.	..	..	..	..	..	..	..	..	..	..	..	..	..
9 Deputy Director, Serum Institute, Bangalore	..	..	..	..	..	..	..	..	..	..	..	..	..
10 Military Farm, Kirkee	..	..	..	..	..	..	..	..	..	..	..	..	..
11 Military Farm, Belgium.	..	..	..	..	..	..	..	..	..	..	..	..	..
12 Military Farm, Secunderabad.	..	..	..	..	..	..	..	..	..	..	..	..	..
13 Military Farm, Bangalore.	..	..	..	..	..	..	..	..	..	..	..	..	..
14 Other private parties.	..	..	..	..	..	..	..	..	..	..	..	..	..

The following quantities of biological products were supplied to Andhra, Kerala and other States and a sum of Rs. 2,85,125-97 was realized as cost of the products from them:—

Kind of Products.

Haemorrhagic septicaemia vaccine (doses).	8,160	..	..	..	..	..	..	..	..	..	..	..	..
Black quarter vaccine (doses).	5,100	..	..	..	..	..	..	..	..	..	..	..	..
Anthrax spore vaccine (doses).	700	..	..	..	..	..	..	..	..	..	..	..	..
Ranikhet disease vaccine (doses).	26,800	..	..	..	..	..	..	..	..	..	..	..	..
Pigeon pox vaccine (doses).	5,700	..	..	..	..	..	..	..	..	..	..	..	..
Fowl pox vaccine (doses).	2,100	..	..	..	..	..	..	..	..	..	..	..	..
Bovine lymphangitis vaccine (courses).	18	..	..	..	..	..	..	..	..	..	..	..	..
Sheep pox vaccine (doses).	300	..	..	..	..	..	..	..	..	..	..	..	..
Anti-anthrax serum (doses).	160	..	..	..	..	..	..	..	..	..	..	..	..
Cholera tridium Wel-chii inoculture (doses).	4,800	..	..	..	..	..	..	..	..	..	..	..	..
Freeze dried rinderpest vaccine (doses).	..	..	..	..	..	..	..	..	..	..	..	..	..
Fowl cholera vaccine (doses).	1,420	..	..	..	..	..	..	..	..	..	..	..	..

The following products required for use in this State were purchased from the Indian Veterinary Research Institute, Mukteswar :—

- (1) Tuberculin concentrated—1,320 doses.
- (2) Johnin—1,460 doses.
- (3) Mallien—49 doses.
- (4) Tuberculin avian—100 doses.
- (5) Salmonella Pullorum Antigen—10 × 10 c.c.
- (6) Salmonella Pullorum positive serum—1 × 0.5 c.c.

(vi) *Experiments and Research.*—The noteworthy facts in research are given below :—

(1) In the case of rinderpest immunity tests in animals vaccinated with Rinderpest Goat Virus showed that the immunity lasted up to 2 years and 7 months.

(2) The minimum dose of oil adjuvant H.S. vaccine required to protect a buffalo calf against H.S. was found to be 3 c.c.

(3) Vaccination of sheep with anthrax spore vaccine was found to confirm an immunity of over 10 months.

(4) The oral administration of ranikhet disease vaccine to protect chicks against the disease has given encouraging results.

(5) Freeze dried ranikhet disease vaccine was found to be viable for 34 days in room temperature.

(6) The immunity following fowl pox vaccination was found to develop fully only after 3 weeks after vaccination.

(vii) *Laboratory.*—Out of the 938 microscopical specimens examined in the laboratories of the institute during the year 328 were positive for the causal agents suspected and the rest were negative.

(viii) *Post-mortem examination.*—During the year under report 2,476 autopsies were conducted, most of them being goats used in the manufacture of rinderpest goat tissue vaccine.

(ix) *Miscellaneous.*—The institute participated in the Regional Cattle and Poultry Show and in the Congress Exhibition held at Madras during the year. The various biological products manufactured in the institute were also exhibited in some of the District Cattle Shows.

CHAPTER V—LIVESTOCK.

1. CATTLE.

(i) *Cattle and Dairy Farms.*—One of the main activities of the department is to open farms for various species of livestock at suitable centres in the State with the main object of producing pedigree stock for supplying them to the public for upgrading the local stock and to serve as demonstration centres for practical study of Animal Husbandry on scientific lines.

There were four District Livestock Farms, one sheep farm, two sheep Breeding Research Stations, one Poultry Research Station and 39 Poultry Demonstration Units inclusive of two units in each of the institutions of Madras Veterinary College and Institute of Veterinary Preventive Medicine, Ranipet, in the State during the year.

In general the breeding policy in all the livestock farms is more or less the same, viz., selective breeding with a view to maintain the pure breeds and at the same time to improve their yielding capacity for the economic factors.

During the year under report, the work in all these farms was found to be satisfactory. The farms were not only in a position to issue good number of pedigree for breeding, but they had also a good stock of young bulls at the end of the year for further issue in the next year. The production of milk in all the farms was also satisfactory. The details of location, species and breed of livestock maintained in these farms, etc., are given in table number XI (a), (b), (c) and (d) annexed to this report.

(ii) *Livestock Research Station, Hosur Cattle Farm, Hosur.*—(a) This Livestock Research Station is situated in the outskirts of the Mathigiri town of Hosur taluk in Salem district. It can be counted as a pioneer and foremost among the Livestock Research Stations in India. This station happens to possess a pedigree herd of the reputed milch breed of cattle, namely, the Scindhi which has become difficult to obtain on account of its home tract having gone away to Pakistan and the whole Madras State as well as the neighbouring States look to this station for the supply of the Scindhi Bulls required for upgrading the existing non-descript type of cattle, in this State which item of work forms an important fact in Livestock Development work.

Besides supplying Scindhi Bulls for upgrading work, the station takes credit also for the supply of pedigree studs of the Murrah, Hallikar and Kangayam Breeds of Cattle, White Leghorn, Rhode Island and Black Minorca Breeds of poultry and Bellary, Mandya and Bikanir breeds of sheep for upgrading work in the respective spheres. The station has also recently taken up breeding of exotic breeds of pigs with the same purpose in view.

Research in Livestock Breeding, and feeding and allied problems form an important item of work of this Research Station.

(b) The different breeds of cattle, sheep, poultry and pigs maintained in the farm are furnished below :—

Cattle.	Buffalo.	Sheep.	Poultry.	Pigs.
(1)	(2)	(3)	(4)	(5)
Scindhi.	Murrah.	Bellary.	White Leg Horn Hen.	..
Gir.		Bikanir.	Rhode Island Red.	
Hallikar.		Mandya.	Black Minorca.	
Sahiwall.				
Tharparkar.				
Kangayam.				

Besides the above, stallions are also kept for stud purposes.

(c) *Strength*.—The total number of cattle, buffaloes and horses at the beginning of year was 764 to which 292 were added. One hundred and seventy-four animals were disposed off leaving a balance of 882 at the end of the year.

Breedwar details of additions and disposals and balance as on 31st March 1960 are furnished below :—

(1)	Scindhi.	Gir.	Hallikar.	Kangayam.	Murrah Buff.	Sahiwal.	Tharparker.	Other breeds.	Horses
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Stock on 1st April 1959.	448	114	108	62	6	14	2	6	6
Additions—									
Birth	111	23	37	1	..	..	..	..	1
Receipts	1	14	6	3	87	..	..	..	..
Purchases	2	..	..	..	3	..	3	..	..
Total	580	151	151	66	96	14	5	6	7

(1)	Scindhi.	Gir.	Hallikar.	Kangayam.	Murrah Buff.	Sahiwal.	Tharparker.	Other breeds.	Horses.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Disposals—									
Sold for breeding ..	83	1	4	17	..	..	..	..	..
Sold by auction ..	6	4	11	1	..	13	..	..	..
External transfer ..	4	1	1	2	7	..	..	..	..
Death and Destruction.	10	2	1	1	5	..	..	..	..

Breedwar particulars of the stock as on 31st March 1960 are furnished below :—

At stud.	Young.	Bulls.	Cows.	Heifers.	Calves.	Heifer calves.	Work cattle	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1 Scindhi	6	84	162	91	55	48	11	457
2 Kangayam	2	1	..	1	..	..	41	45
3 Gir	2	33	41	30	13	9	15	143
4 Hallikar	1	17	48	20	20	17	11	134
5 Cross breed	..	..	..	..	..	..	6	6
6 Tharparker	..	3	..	..	..	..	2	5
7 Sahiwal	1	..	..	..	..	..	..	1
8 Murrah Buff	1	2	81	..	..	..	..	84
9 Horses	1	..	5	..	1	..	..	7
Total	12	141	237	222	90	74	86	882

(d) *Dairy*.—Out of total average herd of 211.56 cows 142.05 cows were in milk on an average and they yielded a total quantity of 547,124.5 lb. of milk which works out to a daily average of 10.6 lb. among cows in milk and 7.06 lb.

for the whole herd as against 8.821 lb. and 5.34 lb. respectively of the previous year. Breedwar average of yield both for the cows in milk and whole herd are furnished below with comparative figures for the previous year :—

Breed.	Average number of cows in the herd.	Average number of cows in Milk.	Total yield.	Average yield per cow 1959-60 for cows in milk.	For whole herd.
(1)	(2)	(3)	(4)	(5)	(6)
Scindhi	132.64	91.12	4,21,942.5	12.7	8.8
Kangayam	1.00	1.00	1,592.0	5.5	..
Gir	33.5	21.23	86,741.0	11.3	7.1
Hallikar	45.1	23.9	36,447.5	3.5	2.3

Average yield per cow 1958-59.

	For cows in milk.	For the whole herd.
Scindhi	13.2	8.8
Kangayam	4.4	1.4
Gir	22.5	7.6
Tharparker	8.5	4.3
Hallikar	3.9	2.1

Exceptionally good performers in the different breeds deserve to be recorded and the details of their yields are furnished below :—

Serial number and breed.	Number of cow.	Milk yield.	Days in milk.	Daily average for lactation.
(1)	(2)	(3)	(4)	(5)
1 Sindhi	483	9,490.0	385	24.6
2 Do.	323	10,423.8	321	32.8
3 Do.	856	7,060.8	314	20.5
4 Do.	494	6,117.0	313	28.0
5 Gir	21	7,112.0	341	20.0
6 Do.	47	9,092.0	370	24.6
7 Hallikar	44	1,744.8	287	6.1
8 Do.	30	1,727.8	274	6.2

(e) *Special activities*.—Serviced cows are as a rule examined for pregnancy after three months. During the year under report out of 447 cows thus examined, 207 were positive for pregnancy giving a percentage of 46.3 as compared with 40 per cent for the previous year. Non-pregnant cows, heifers over 1½ years and cows not exhibiting oestrus within 30 days of calving are also examined, defects, if any detected and necessary treatment undertaken. The following conditions were diagnosed and appropriate remedial measures adopted after which 68 cows became pregnant :—

1 P.C.L./An-oestrus	98
2 Ovaries	23
3 Cystic ovaries	1
4 Vaginitis	1
5 Endometritis	2
6 Cervicitis	2
Total	127

With a view to inducing early maturity and early pregnancy special feeding with concentrates are being undertaken and the results are encouraging as the following figures would show :—

	Age at maturity.				Age at first calving.			
	Y.	M.	D.		Y.	M.	D.	
1 Scindhi	12	5	6		3	8	2	
2 Gir	2	6	23		3	8	22	
3 Hallikar	2	7	2		3	8	25	

(f) *Premilking and Udder Massage* which are expected to stimulate and improve the yield were employed in all near pasturition cows and 2 heifers with good results. Fat tests were carried out in all cows in milk and fat percentage recorded. The average fat per cent for Scindhi cows was 4.5 while that for Gir and Hallikar was 4.7 and 4.8 respectively.

(g) *Veterinary Hospitals and Clinical Laboratory—Disease position in the farm.*—The farm can be said to have been almost free from the common prevailing contagious diseases, the only disease among this group that made its appearance during the year being an outbreak of foot and mouth disease and few cases of Johne's diseases. In the farm 175 animals were attacked but there was no mortality and with appropriate treatment. Care and management all of them recovered from the disease.

As for non-contagious diseases excepting for 41 cases of ephemeral fever and ring-worm in calves which of course responded to appropriate treatment, there were no affections of any significance during the year.

The work done in the Veterinary Hospital attached to the farm is furnished below with figures for the previous year :—

Cases treated.				Castrations done.	D.A.A.	Specimens examined.
E.	B.	O.	T.			
1958-59—						
9	731	153	893	27	25.8	2,554
1959-60—						
9	533	100	642	5	23.43	3,909

D.A.A.—Daily average attendance.

Details of positive results of specimens examined at the Clinical Laboratory attached to the Veterinary Hospital during the year are shown below :—

Cattle.				Sheep.				Poultry.			
(1)				(2)				(3)			
1 Johne's disease ..	26			Johne's disease ..	30			Coccidiosis ..	11		
2 Strongles	72			Strongles	76			Avian Leucosis ..	8		
3 Coccidiosis	20			Coccidiosis	34			Complex			
4 Trichurias	8			Trichurias	2						
5 Babesia Beggiana ..	4			Tape-worms	5						
6 Ascariasis	2			Amphistomes	5						
7 Staphylococcus ..	2										
8 Amphistomiasis ..	2										
9 Demodex folliculorum ..	7										
10 Trychophyton	11										
11 Nasal Schistosomiasis ..	3										

Post-mortem examinations on 431 poultry, 41 sheep and cattle were conducted.

(h) *Miscellaneous work*—(i) *Apiary.*—Ten colonies were being maintained during the year out of which 3 got resolved. From the remaining 7 colonies 50 lb. of honey was obtained as against 40 lb. from 10 colonies of the previous year.

Tree-planting. Vanamahotsava was celebrated in the farm by planting 415 trees consisting of eucalyptus, casuarina, sheshum, pungam, glyrcedia and agathy.

(ii) *Soil Conservation Scheme.*—The following items of work under this scheme were carried out during the year over the areas noted against each :—

1 Contour bunding and marginal bunds	165 acres.
2 Contour trenching	60 "
3 Contour furrowing	12 "
4 Gully ploughing	28 "
5 Check dams	12 "
6 River training and stream straightening ..	632 r.ft.
7 Wind bills	354 "
8 Tree planting	1,470 "
9 Soil saving Dams	13 nos.
10 Retention Wall	160 r.ft.
11 Pond construction	4 nos.
12 Channel work	260 r.ft.
13 Terracing and levelling	15 acres.
14 Survey and Planning	300 "
15 Other items of work	33 "

(iii) *First-Aid Medical Centre.*—The centre treated 7,790 patients with a daily average attendance of 21.34.

(iv) *Recreation.*—The Radio maintained in the farm continued to work satisfactorily during the year.

(v) *Education and training.*—Practical training for the students undergoing the stockman course was imparted in this farm. The final year students of Madras Veterinary College and the Madras Agricultural College, Coimbatore visited the farm and practical knowledge was imparted to them, in the different items of work carried on in this Farm.

(vi) *Shows and exhibitions.*—The animals of this farm participated in the Southern Regional Cattle Show held in Madras during September 1959 and the All-India Cattle Show held in New Delhi in February 1960. One Scindhi heifer and Scindhi bull were also exhibited in the World Agricultural Fair held in Delhi from December 1959 to February 1960. Out of a total of 70 animals of all breeds that entered in the Southern Regional Show, one breed championship prize for the Hallikar bull, one shield, one cup, 15 first prizes, 6 second prizes and 2 third prizes were awarded.

In the All-India Cattle Show, out of 9 animals that participated, the Scindhi cow carried away a cup for being the best animal in the Scindhi breed. The Hallikar bull won a cup for being the best draught animal in the show.

8. *Visitors.*—Besides the departmental officers the following distinguished personages visited the farm during the year :—

(1) Sri M. Mariappa, Honourable Minister for Finance, Government of Mysore.

(2) Sri Ralph, J. Fisher, T.C.M., American Embassy.

- (3) Sri C. Subramaniam, Honourable Minister for Finance, Madras.
 (4) Sri R. Venkataraman, Honourable Minister for Industries, Madras.
 (5) Sri P. G. Pande, Director, Indian Veterinary Research Institute, Izatnagar.
 (6) The Estimate Committee of the Madras Legislature.
 (7) Mr. L. H. Brown, Chief Agriculturist, Ministry of Agriculture, Kenya Colony.
 (8) Mr. Merton G. Badenhop, T.C.M., Ag. Econ. Advisor, Government of India.
 (9) Srimathi Leelavathy Magaady, Deputy Minister, Mysore.
 (10) Sri V. K. Ramaswamy Mudaliar, M.L.A., Madras and Member of Livestock Improvement Board.

Receipts and expenditure.—A sum of Rs. 1,80,561-00 was realised from the the sale of Livestock and Livestock products and a sum of Rs. 2,23,357-00 was spent towards maintenance and upkeep of animals.

(iii) *District Livestock Farm, Pudukottai, Tiruchirappalli district.*—
 (a) The Farm is located within the limits of Pudukottai town and at Machuvadi, in an area of 9.26 acres and 900 acres respectively.

(b) *Livestock.*—(i) The total strength at the beginning of the year was 269 as against 238 in the previous year. There were 140 additions and 80 disposals during the year as noted below :—

Additions.				Disposals.			
By births	..	..	..	By sale for breeding	..	..	..
.. receipts from other stations	..	..	83	.. sale for non-breeding	..	..	21
				.. transfer to other stations	..	..	31
				.. deaths	..	..	6
			140				80

(ii) Thus the strength at the end of the year was 328 as against 269 in the previous year. The classwise strength of the animals is given below :—

Serial number and Breed.	Cows.	Heifer.	Young bulls.	Cattles.	Stud bulls.	Work Cattle.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1 Scindhi	25	22	13	10	2	3	75
2 Graded Scindhi ..	25	15	14	19	..	3	76
3 Kangayam	40	25	18	23	8	36	150
4 Gir	..	..	..	..	1	2	3
5 Sahiwal	..	..	..	..	1	..	1
6 Cross breed Tharparker	2	..	..	..	..	..	2
7 Murrah	..	..	3	..	3	..	6
8 Cross breed Scindhi	..	..	2	..	..	..	2
9 Umblacherry	..	..	..	..	..	13	13
Total	92	62	50	52	15	57	328
			Excluding one stallion.				

(c) *Dairy.*—(i) Out of a total 81.71 animals in the herd an average of 52.05 animals remained in milk and they yielded 166,026.0 lb. of milk with a daily individual average of 9.26 lb. over cows in milk and 6.0 over the whole herd as against 10.6 lb. and 6.7 lb. respectively of the previous year. The decrease in milk yield, daily individual average and herd average is due to 57 calvings compared to 64 calvings of the previous year.

(ii) The breedwar particulars of milk yield are furnished below :—

Breed.	Average number of			For 1959-60		For daily average yield 1958-59.	
	Cows in herd.	Cows in milk.	Total milk yielded.	Cows in milk.	Cows in herd.	Cows in milk.	Cows in herd.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			LB.	LB.	LB.	LB.	LB.
Scindhi	24.04	13.4	55,890.0	11.3	6.3	13.9	8.8
Graded Scindhi ..	21.04	16.75	65,913.5	11.0	8.5	12.7	7.5
Kangayam	36.63	21.9	44,222.5	5.5	3.2	7.3	4.5

Good performers in milk for the year are furnished below :—

Serial number and breed.				Milk yield.	Daily average.	Number of days in milk.
(1)	(2)	(3)	(4)	LB.	LB.	(4)
1 Scindhi	..	..	..	740	2,476.0	25.13
2 Do.	..	..	..	809	5,951.5	18.8
3 Graded Scindhi ..	..	..	..	85	6,046.5	17.33
4 Do.	..	..	..	90	948.0	27.0
5 Kangayam	..	..	..	936	1,450.0	21.47
6 Do.	..	..	..	811	1,864.5	14.39

(d) *Incidence of disease in the farm.*—(i) There was no out-break of any contagious disease in the farm during the year under report. All the adult animals were protected against rinderpest, haemorrhage septicaemia and black quarter.

(ii) *Mange.*—There was a mild attack of mange among young bulls and the same was brought under control by regular treatment.

(iii) *Abortion.*—There were four abortions, three in Kangayam heifers and one in a Scindhi cow. Materials from the above aborters were sent for examination to the Disease Investigation Officer, Ranipet and the result was negative for brucella abortus.

(iv) *Sterility.*—Cows which were not holding or which were repeated were treated appropriately as and when necessary.

(v) *Mortality.*—There were six deaths during the period.

(vi) *General.*—One hundred and thirty-nine animals were treated for common ailments and 28 animals were castrated during the period.

The weak animals were specially fed and attended to individually.

The treatment of managing cows and heifers in advanced stage of pregnancy was continued as usual and the same had improved the docility and dairy temperament of the cows and especially heifers.

The non-serving bulls and young bulls which did not serve were sent with the outside herd of cows, so that they might develop sex impulse.

(e) *Cattle Shows.*—(i) During the Gosamvardhana week celebrations from 1st to 8th November 1959 an one day cattle show was conducted on 4th November 1959 at the old palace play ground. Out of 258 animals that participated in the show, 128 were awarded prizes being the best exhibits, to a tune of Rs. 187-64.

(ii) *Southern Regional Cattle Show, Madras.*—Fifteen animals from this farm participated in the Southern Regional Cattle Show, Madras, from 24th to 29th September 1959 and the following animals were awarded prizes :—

Serial number, breed and number.	Particulars.	Remarks.
1 Graded Scindhi cow 83	Cow	First and Breed Championship.
2 Graded heifer 99	Heifer	I prize.
3 Kangayam cow 191	Cow	I prize.
4 Sahiwal 101	Bull	I prize.
5 Kangayam cow 936	Cow	III prize.
6 Graded Scindhi cow 84	Do.	II prize.
7 Graded Scindhi cow 97	Do.	III prize.
8 Scindhi heifer 16	Heifer	II prize.

Milking competition.—One graded Scindhi cow, No. 97, cow II prize (21.0 lb).

(iii) *All-India Cattle Show, New Delhi.*—Graded Scindhi cow No. 83 and Kangayam No. 191 were taken to the All-India Cattle Show, New Delhi, during February 1960 and the Kangayam cow No. 191 was awarded the I prize for the best draught type cow of the show and has won the Ratlam Challenge Cup.

(f) *Receipts and charges.*—The total revenue received by sale of cattle and dairy products was Rs. 56,386.18 as against Rs. 47,270.68 of the previous year.

The total expenditure on maintenance of cattle was Rs. 1,72,956.22 as against 76,914.01 of the previous year.

(g) The farm produced a total quantity of 166,026.0 lb. of milk out of which 156,913.5 lb. were sold to the public and the balance was fed to calves and issued for separation.

(h) The farm issued 22 bulls as against 27 bulls in the previous year. There were 47 bulls at the end of the period as detailed below as against 30 bulls in the previous year :—

1 Scindhi	13
2 Graded Scindhi	14
3 Kangayam	18
4 Cross-bred Scindhi	2
Total ..	47

(i) *Visitors.*—His Excellency the Governor of Madras, Sri Bishnuram Medhi visited the farm on 17-7-1959 along with the District Collector, Tiruchirappalli, and other distinguished visitors and participated in Vanamahotsava by planting mango grafts.

Sri V. Ramaiah, Minister for Electricity, Government of Madras, visited the farm with the distinguished visitors.

(j) *Training.*—The farm continues to provide facilities in various sections for imparting training to the stockmen students of the Madras Veterinary College.

(iv) *District Livestock Farm, Orathanad—Thanjavur district.*—(a) *Object.*—This farm which is located in the heart of Thanjavur district was started with the primary object of resuscitating the deteriorating Umblacherry breed of

cattle which is an economic hardy and resistant type of animals indigent to the locality incidentally to serve as a centre for the dissemination of predominant milk breeds of Scindhi and Murra buffalo in the district to augment its milk supply.

(b) *Strength.*—There were 507 heads of cattle and she-buffaloes at the beginning of the year as against 591 during the previous year. During the year 222 animals were added and 94 were disposed off as detailed below :—

Additions.				Disposals.			
By births	..	..	121	By transfer to other stations	..	..	35
„ receipts	..	..	101	„ sale	..	..	7
				„ auction	..	..	19
				„ transfer to Indian Council of Agri- cultural Research.			2
				„ deaths	..	..	31
Total	..		222	Total	..		94

Thus the strength of the cattle at the end of the year was 635 as against 507 in the previous year. The breedwar particulars of animals as on 31st March 1960 are given below :—

Serial number and breed.	Cows.	Heifer.	Young bulls.	Stud bulls.	Calves.	Work cattle.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1 Scindhi	67	39	24	4	41	7	173
2 Umblacherry	58	90	18	2	42	11	221
3 Murrah	103	25	24	6	63	..	221
4 Kangayam	..	..	..	..	..	19	19
5 Jersey	..	..	..	1	..	..	1
Total ..	228	145	66	13	146	37	635

(c) *Dairy.*—On an average 204.7 cows and she-buffaloes remained in the herd of which 97.8 cows and she-buffaloes remained in milk and they yielded 414,304.8 lb. of milk with a daily individual average yield of 9.6 lb. over the cows and she-buffaloes in milk and 5.7 lb. over the whole herd as against 291,883.8 lb. of milk with a daily individual average yield of 10.6 lb. over the cows and she-buffaloes in milk and 5.3 lb. over the whole herd of the previous year.

Out of a total quantity of 414,304.8 lb. of milk produced during the period under report, 241,215.0 lb. were sold to public for cash, 57,070.0 lb. sold on credit basis, 13,400.0 lb. separated and the rest fed to calves as against a total quantity of 291,883.8 lb. of milk produced during the last year.

The breedwar particulars of milk yield are given below :—

Breed.	Average number of cows in the herd.	Average number of cows in milk.	Total milk yield during the period.	Daily average yield per cow 1955-59.		Daily average yield per cow, 1958-59.	
				in milk.	For cows in milk.	in milk.	For cows in milk.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			LB.	LB.	LB.	LB.	LB.
Scindhi	65.4	30.3	144,455.0	12.7	6.1	13.2	6.4
Umblacherry	62.1	17.6	21,731.8	3.4	0.9	3.1	1.1
Gir	2.0	2.0	1,726.8	8.4	7.2	10.7	10.7
Murrah	75.2	45.4	246,391.8	13.9	8.7	13.9	8.5

Details of some of the best performers in various herd are furnished below :—

Breed.	Brand number.	Milk yield.	Number of days in milk.	Daily average for lactation.
(1)	(2)	(3)	(4)	(5)
		LB.		LB.
1 Scindhi	912	5,871.0	322	18.2
2 Do.	559	5,705.0	265	21.5
3 Do.	649	6,122.8	289	21.1
4 Umblacherry	11	1,007.0	208	44.3
5 Do.	18	1,172.0	226	5.2
6 Do.	28	1,488.0	229	6.5
7 Murrah	11	5,836.0	346	16.9
8 Do.	73	5,850.0	323	18.1
9 Do.	48	6,257.8	315	19.8

(d) *Rational system of maintaining average animals in milk.*—To keep the ratio of milk and dry cows in the dairy throughout the year allowing the cows and she-buffaloes for service three months after calving, (ii) preiodical examination of the cows and buffaloes for sterility among them and rectifying the defects, if any, and thus reduce the dry period among the female stock were carried out.

The general health of farm animals remained satisfactory during the period. The young calves were periodically dewormed and the hairs in the buffalo calves were clipped to avoid forming of hair balls and to avoid lice infestations among calves as well as adult animals.

(e) *Disease position in the farm.*—Thirty-one animals died during this year, as against 26 animals during the last year. All possible steps are being taken to avoid mortality among farm animals, by attending to the sick in time, and giving necessary and timely treatment. All the farm animals were protected periodically against hæmorrhagic septicæmia. All farm stocks were protected against hæmorrhagic septicæmia and blackquarter during the period and 1,645 birds were protected against Ranikhet and pigeon-pox.

(f) *Clinical Laboratory.*—Two thousand thirty-seven specimens were examined in the laboratory of which 532 were positive for the suspected diseases and the rest negative.

(g) *Special activities (Apiculture).*—On average 12 bee-hives were working and 24 lb. of honey was collected and sold.

(i) *Pisciculture.*—Stray fish from the farm ponds were collected and sold for Rs. 82.14.

(ii) *Arbiculture.*—Two hundred ipomea, 23,244 glyricidia, 12 coconuts, 31 rain tree, 25 arecanut seedlings and 1,000 casuarina seedlings were planted on avenues and boundaries.

Five hundred and twenty-one lb. of prosopis pods were collected and sent to Eachancottai for dibbling along boundaries for fencing.

One hundred and forty lb. of glyricidia seeds were collected from avenues and issued to the Agricultural department. 3.63 acres of paddy crop was dusted with 50 per cent D.D.T. and 19.45 acres were sprayed with

'Folidol' against pest. Five hundred and seventy-five mango seedlings, 350 tamarind seedlings, 2,750 palmyra nuts, 373 iluppai seedlings, 575 othiyam stumps and 250 teak seedlings were planted along field boundaries and outer boundaries.

(iii) *Soil conservation work.*—One hundred acres were contour banded. 363.50 acres were cleared of scrub jungle.

(iv) *Education and training.*—Practical training for the students undergoing the stockmen course was imparted in this farm. The students of Madras Veterinary College visited the farm and practical knowledge imparted in the different items of work carried on it.

(h) *Cattle-shows and exhibitions.*—An one-day cattle-show was conducted at the farm in connection with the "Gosamvardhana Day". There was a good response from the public who brought large number of cattle, poultry and sheep for the show. A total of 462 animals participated in the show, and 40 prizes were awarded for the best exhibits. Farm animals consisting of 4 Scindhi, 3 Umblacherry, 7 Murra buffaloes took part in the Southern Regional Cattle Show held in Madras during September 1959, 6 first prizes, 6 second prizes and two third prizes were awarded. Again during February 1960 at the All-India Cattle Show held at New Delhi, 4 farm animals consisting of 1 Murra bull, 2 Scindhi and an Umblacherry bull participated. The Murra bull obtained the Breed Championship prize.

(i) *Receipts and charges.*—A sum of Rs. 71,205 was realised towards livestock section receipts and the total expenditure on maintenance of cattle was Rs. 3,83,593 as against a sum of Rs. 72,352 and Rs. 1,78,917 respectively during the last year.

(j) *Visitors.*—Besides the departmental officers, the following distinguished personages visited the Farm during the year under report :—

(1) Sri M. A. Manickavelu Naicker, Minister for Revenue, Government of Madras.

(2) Sri M. Bhaktavatsalam, Minister for Food and Agriculture, Madras.

(3) Sri E. V. Ramaswamy Naicker, Leader of Dravida Kazhakam, Madras.

(4) Sri K. S. Lakshmiipathy Naicker, Idayakottai, Member of State Livestock Improvement Board.

(5) Sri V. K. Ramaswamy Mudaliar, M.L.A., Member of State Livestock Improvement Board.

(6) Sri R. Srinivasa Iyer, M.L.A., Member of State Livestock Improvement Board.

(7) Sri T. Vinayaga Mudaliar, Editor, Indian Veterinary Journal.

(8) Sri P. Natesan, Member of State Livestock Improvement Board.

(9) Sri T. Linga Reddy, Member of State Livestock Improvement Board.

(v) *District Livestock Farm, Chettinad, Ramanathapuram district.*—

(a) The establishment of the District Livestock Farm in Ramanathapuram district is one of the schemes sponsored under the Second Five-Year Plan and this was opened on 9th November 1956. The farm is situated in the Karaikudi-Tiruchirappalli Main Road at a distance of about 9 miles from Karaikudi, and is located in the site familiarly known as the aerodrome site in Tirupathur

taluk of Ramanathapuram district. An area of 1,769.08 acres of Government lands was first taken over. Preliminaries were completed and the lands have been taken advance possession concerned though the formalities are yet to be completed.

(b) *Objects.*—(i) To serve as a demonstration and training centre to the public on the scientific breeding, feeding, housing and management of cattle including pasture management, fodder production, conservation of fodder as silage and hay, arboriculture, etc.

(ii) Maintenance of approved breeds of cattle like Kangayam, Tharparkar, Hariana, and Murrah buffaloes, to assess their adaptability to the climatic and geological condition of the area and to make available, stud bulls of acclimatised strains of these breeds for the improvement of local type of cattle.

(iii) To undertake research on breeding and other problems connected with Animal Husbandry.

(iv) Fodder production and pasture management primarily to meet the requirement of this farm stock and incidentally to study the local varieties of grasses if any and to study the ecology of different forage crops with reference to this area and to explore the possibility of improving them qualitatively and quantitatively.

(v) Incidentally making available to the public milk and milk products.

The actual work at the site commenced on 4th June 1957.

(c) *Livestock.*—The year under report opened with 331 head of cattle, there were 52 births, 177 receipts by transfer from other stations, and 57 receipts by purchase during the year under report. Thirty animals were sold for breeding, 11 culled out animals were sold in auction, 6 animals were transferred to other stations, 25 animals died and one was destroyed during the year. The closing balance on 31st March 1960 was 544 head of cattle and buffaloes.

(i) *Births.*—There were 52 normal births of which 35 were in Kangayam breed, 15 in Tharparkar breed and 2 in Hariana breed. There were besides the above 21 abortions.

(ii) One hundred and seventy-seven animals consisting of 23 Kangayams, 2 Tharparkars, 4 Murrahs and 148 Harianas were received by transfer from other stations.

(iii) Thirty Murrah she-buffaloes with 22 calves at foot and 4 Tharparkar cows with 1 calf at foot, making a total of 57 animals were received by purchase.

(iv) Eleven Kangayam animals were culled and sold by auction during the year.

(v) Twenty-two Kangayam bulls, one Tharparkar bull, 6 Hariana heifers and one Hardana cow making a total of 30 animals were sold for breeding during the year.

(vi) Four Kangayams, one Tharparkar and one Scindhi making a total of 6 animals were transferred to other stations during the year.

(vii) There were in all 25 deaths during the year.

The classwar—strength of animals on 31st March 1960 is furnished below :—

Breed.	Breeding bulls.	Young bulls.	Cows.	Heifers.	Bull calves.	Heifer calves.	Work cattle.	Total.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Kangayam ..	4	24	100	106	16	14	24	288	..
Tharparkar ..	4	5	24	11	7	7	..	58	..
Scindhi and Gir. ..	..	..	1	2	..	..	115	8	..
Hariana ..	..	..	6	134	..	2	..	142	..
Murrah Buffalo. ..	4	4	29	..	7	4	..	48	..

(d) *Dairy.*—(i) Out of an average of 102.3 cows in the herd 35.0 cows remained in milk and they yielded a total of 98,791.5 lb. of milk with a daily individual average yield of 7.7 lb. over the cows in milk and 2.6 lb. over the cows in the herd as against 7.6 lb. and 4.3 lb. respectively during the previous year.

(ii) The following animals are the best yielders which completed their lactation during the year under report.

Serial number.	Cow number.	Milk yield.	Number of days in milk.	Daily average for the lactation.
		LB.		LB.
(1)	(2)	(3)	(4)	(5)
1	944	4,745.0	416	11.4
2	978	3,847.0	408	9.4
3	207	3,534.0	415	8.5
4	926	3,410.0	381	9.0

(e) *Pests and diseases.*—Nil.

(f) *Soil conservation scheme—Jungle clearance.*—This work which was started year before last year was continued during the year under report and an area of 501.25 acres was cleared. The total area cleared so far is 1,613.50 acres. The other items of soil conservation work are as shown below :—

(i) Farming of marginal bunds with drains to a length of 12.8 furlongs was done this year with a total length of 38 miles and 6.6 furlongs so far.

(ii) *Contour bunding.*—The contour survey and bunding work was continued during this year and contour bunds to a total length of 15 miles and 7.7 furlongs were formed during the year thus making a total length of 35 miles and 1.1 furlongs covering about 1,300 acres.

(iii) *Vegetative stabilization of contour bunds.*—The contour bundings were planted with grass slips for stabilisation to a length of 7 miles 6 furlongs.

(iv) *Roads.*—Inter-communicating roads were formed by spreading the debries from the excavated wells, etc.

(v) *Arboriculture.*—The following shade trees and fruit plants were introduced during the year under report.

To provide green leaf manure planting of glyricidia and impomea were also taken up.

	Numbers.
1 Cocanut seedlings	97
2 Cashew	160
3 Punnam	185
4 Glyricidia	205
5 Impomea	8,444

(vi) *Block fencing*.—In order to have a controlled grazing, showing of presopis was done on margins of paddocks. Farming beds for the sowing was also taken up.

(g) *Wells*.—Construction of 3 open wells were taken up and completed during the year report in addition to the existing 3 wells. Proposals for purchase and installation of electric motor pumpsets were submitted to Government and orders are awaited.

(i) *Hand boring set*.—A hand boring set obtained from the Agricultural Department was put into commission for about 6 months during the year under report.

(ii) *Power drilling*.—A power drill from the Agricultural Department was obtained during the close of the last year and continued to work during the first quarter of the year under report.

(h) *Veterinary hospital*.—(i) In all 621 cases were admitted and treated for various ailments apart from the systematic routine daily check up of calves.

(ii) Three hundred and fourteen animals were protected against blackquarter and 385 against haemorrhagic septicaemia during the year.

(iii) The following laboratory specimen were sent to the Madras Veterinary College :—

I Blood smear	34
II Heart blood smear	19
III Swabs charged with heart blood and other viscera ..	9
IV Tissues for histopathological examination	28
V Impressions smear from viscera	17
VI Bowel washings	5
VII Pus smear	1
VIII Washings from intestines	2
IX Faeces	1
X Blood serum	18

(iv) Four specimens of stomach and intestines from the foetus of aborted animals were sent to the Research Officer, Brucellosis Scheme, Ranipet

(i) *Visitors*.—Besides the departmental officers, the following important Gentlemen visited the farm during the year are :—

(1) Sri M. Bhaktavatsalam, Minister for Agriculture and Home, Madras.

(2) Sri Rajah M. A. Muthia Chettiar, M.L.A., Chettinad.

(3) Sri V. K. Ramaswamy Mudaliar, M.L.A., Member of State Livestock Improvement Board, Madras.

(4) Dr. Randawa, I.C.S., Vice-Chairman, Indian Council of Agricultural Research, New Delhi.

(j) *Receipts and charges*.—A total amount of Rs. 56,611-96 was realised by sale of livestock and livestock products and the total expenditure on maintenance of cattle was Rs. 2,50,643-08 against 19,509-21 and 94,122-08 respectively during the last year.

(vi) *Alambadi cattle at sheep breeding station at Chinnasalem*.—(a) Alambadi cattle are maintained in the farm with a view to sublimating the deteriorated Alambadi Breed by selective breeding. The year opened with 29 animals of this breed consisting of 19 cows, 2 bulls, 4 heifer calves and 4 bulls calves. Six heifer calves and 5 bull calves were received by birth during the year leaving a closing balance of 38 head of cattle consisting of 18 cows, 2 bulls, 10 bull calves and 8 heifer calves.

(b) *Dairy*.—Incidental to the above scheme a dairy farm is kept as an adjunct to the Farm. The particulars of cows, their yield, etc., are furnished in the following statement :—

Number of cows in herd.	Number of cows in milk-dry.	Quantity of milk obtained.	I.D.A. rear cows in milk,	Herd average,
		LB.	LB.	LB.
(1)	(2)	(3)	(4)	(5)
18-4	7-11-4	747-0	3-6	1-4

A total quantity of 51865 lb. of milk was obtained and disposed off during the year.

(vii) *Season and Crops in Livestock Farms*—(a) *Livestock Farm, Hosur*.—(i) The seasonal conditions and rainfall during the year under report were just normal. The total rainfall for the year was 30-10 inches in 81 days which means that the rainfall was well distributed during the year.

(ii) *Pasture*.—The pasture land in this farm consists of 956-88 acres of which 697-21 acres are reserved for hay making any 259-37 acres for grazing. Besides the above 114-10 acres were under cultivation of fodder crops like guinea grass, buffalo grass, teosinte maize, etc., and food crops like Ragi horse gram, etc.

The fresh fodder crops were supplied as ration to the farm livestock and surplus converted into silage, during the months of October and November. The entire requirements of dry fodder for this farm was met from the hay produced out of this pasture land. A total quantity of 1,219,446 lb. of hay was produced during the year as against 8,85,714 lb. produced during the previous year. A total quantity of 5,003, 582 lb. of fodder were produced during the year under report out of which 1,698,278 lb. of green fodder was ensiled. A total quantity of 4,361,926 lbs. of fodder was supplied to the Farm animals. This includes all green, dry and ensiled fodder crops.

(iii) *Gardens*.—This section is intended primarily for the supply of green fodder to the Farm livestock throughout the year as far as possible and it has been able to achieve this object almost completely. This section also has an area of 1½ acres for growing vegetables intended for sale to the farm staff. The following grains and fodder were produced during the year under report in this farm as against the productions during the previous year shown against each item.

Name of crop.	Total yield in lbs.			Yield during the previous year in lbs.		
	Green fodder.	Straw.	Grains.	Greens.	Straw.	Grains.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ragi	..	97,375	..	..	69,670	544
Gingelly	..	..	154	..	..	..
Horse gram	..	9,910	8,341	..	22,157	..
Maize	24,548	..	..	..	..	..
Cholam	4,89,94	..	..	..	..	..
Teosinte	1,43,600	..	..	..	..	..
Buffaloe grass	86,37	..	..	5,85,490	..	..
Guinea grass	1,86,507	..	..	6,61,105	..	..
Spear grass	2,67,804	..	..	4,786	..	..
Mixed grass	12,324	..	..	2,58,210	..	..
Seythel grass	1,19,606	..	..	..	..	..

The fodder position during the year under report was on the whole satisfactory and the farm is self-supporting in so far as fodder is concerned.

(b) *District Livestock Farm, Orathanad.*—The total rainfall during the year was 26.48 inches spread over 31 rainy days, which was below the normal average.

Pasture and garden cultivation.—The total area under cultivation for grasses crops, etc., is 133.25 acres in this farm and 83.50 acres in the Eachankottai farm which is an annexe to the main farm.

A total quantity of 2,777,105 lb. of dry and fresh green fodder was produced and issued to the Farm Livestock besides 2,10,654 of silage. Besides the above, the farm produced 1,11,326 lb. paddy. A sum of Rs. 557.55 was realised by sale of vegetables grown in this Farm.

(iv) *General.*—One hundred and forty lb. of glycidia seeds were collected and issued to the State Agricultural Department.

(c) *District Livestock Farm, Chettinad.*—(i) The year under report can be considered normal in so far as rainfall is concerned. There was a total of 30.12 inches of rain during the year spread over 52 days as against 37.51 inches in 53 days during the previous year and so the water supply position was unsatisfactory.

(ii) *Pasture and garden cultivation.*—This farm is a recently started one and is just being established. The area taken up for cultivation during the year was 88.53 acres. A total quantity of 1,972 lb. of grain consisting of cholam, cowpea and horse gram 124,442 lb. of green fodder and 17,819 lb. of straw were produced during the year in the farm.

(iii) *General.*—Although the total area of the Farm is 1906 acres, only 88.53 acres have been taken up for cultivation in view of the unsatisfactory nature of the water-supply. This problem is being tackled by the construction of open wells, repairing and desilting of the uranics, putting up of hand-boring sets and power drills. Three uranics were repaired during the year. Three open wells were constructed during the year and construction of one more well has been taken up. A hand boring set and a power drill have been put up.

(d) *District Livestock Farm, Pudukkottai.*—(i) The total rainfall during the year was 32.59 as against 33.04 inches of the previous year with 62 and 46 rainy days respectively. This amount of rainfall is the normal average for the Farm.

(ii) The Farm has a total area of only 5.98 acres for cultivation of fodder crops. A total quantity of 3,76,111 lbs. of fodder were produced and utilised for the Farm animals. This farm is not self sufficient in the matter of fodder and 1,099,100 lb. of fodder has to be purchased from outside.

(iii) Hundred acres at Machuvadi have been reclaimed and is being brought under cultivation.

(e) *Sheep Breeding Research Station, Chinnasalem.*—(i) *Season and Rainfall.*—The year under report in general was very dry but during the 1st week of December 1959 there were heavy rains and floods. The rains were untimely and it was not of much use for agricultural operations. There was a total rainfall of 583 M.M. spread over 18 days. A total of 325.25 acres of land were prepared for cultivation.

(ii) The details of crops cultivated are given below :—

Crops.	Areas.
	ACS.
Maize	4
Cholam	48
Cumbu	8
Horse gram	93

(iii) The following fodder crops were cultivated :—

Crops.	Areas.
	ACS.
Guinea grass	2 00
Napier grass	0.20
Panicum Nerkery	0.50
Blue buffal	0.60
Rhodes grass	0.80
Australian brought resistant	0.20
Sudan grass	0.15
Lucerne	0.60
Kudzu	0.02
Total	5.7

(iv) The total quantities of grains and straw received by harvesting the crops are furnished below :—

	KILOS.
Grass	16,529
Straw	46,674
Grain	7,347

(v) *Aboriculture.*—One thousand nine hundred and seventy-two seedlings of various plants were planted during the year. The details are furnished below :—

Fruit bearing.		Non fruit bearing.	
Tomarind	15	Glycidia	1,013
Coconut	4	Gold Mohar	176
S. pota	2	Pungam	174
Melita lemon	2	Vagai	212
Seedless lemon	2	Polyathia	65
Lime	2	Aracaria	1
Sathugudi	2		
Goya	2		
Palmyrah	300		
Total ..	331	Total ..	1,641

(viii) *Cross Breeding Scheme, Ootacamund, Nilgiris district—Objects.—*

(a) This scheme sponsored by the Indian Council of Agricultural Research on a fifty per cent grant was started on 20th January 1955 with a view to exploring the potentialities of cross breeding with reference to increase in milk production and assessing the optimum percentage of foreign blood that would give the best results, and to find out the effect of dilution, packing and storage and transmission of semen through various modes of conveyances, on its motility and general quality. The obvious result of the scheme will be the increase in the milk yield of the local nondescript cows and buffaloes which are very poor yielders.

(b) *Working of the scheme.*—The semen used in the scheme is from pedigree jersey bulls maintained at the Central Artificial Insemination Centre at Bangalore and being flown to Ootacamund in four weekly consignments. This is distributed to the four sub-centres located at Thavani, Nanjanad prospect Estate and Thummanabatty and to the main centre at Ootacamund for insemination of sows in "heat". The number of cows of breed-able age both in the main and sub-centres is about 6,000 of which 2,548 have no foreign blood in them. These animals are tattooed and detailed records of insemination pregnancy, calving, etc., are maintained. All scrub bulls in the area are castrated by enforcement of the Livestock Improvement Act. Three thousand and eighty bulls were castrated so far. All possible prophylactic measure are undertaken against contagious cattle diseases and first-aid rendered to the animals at all the sub-centres.

(c) *Milk recording.*—Milk recording of the scheme cows chosen at random is done at monthly intervals. The average daily yield was found to be 2.9 lbs. of milk per day.

(d) *Marking of female progeny.*—All female calves born after the introduction of the scheme are tattooed and followed up for study of their performances.

Free advice on all animal husbandry matters is given—

A statement showing the details of work done under the scheme is furnished below with comparative figures for the previous year.

	1959-60.	1958-59.
	(1)	(2)
1 Quantity of semen received	Jersey 5,940 c.c. Murrah 2,622½	7,294½ CC.
2 Inseminations done	Cows 2,877 She buffalo 150	3,020 224
3 Number of pregnancies verified	Cows 2,393 She buffalo 96	2,717 165
4 Number of calves born	Cows 965 Buffalo 43	1,154 85
5 Number of calves verified	Cows 965 Buffalo 43	1,154 85
6 Number of calves tattooed	71	71
7 Number of scrub bulls castrated	318	328
8 Number of sterility cases handled	61	111
9 Number of animals treated	933	952
10 Number of cows milk recorded	325	344
11 Number of prophylactic Vaccinade done	Nil	228
12 Number of F1 progeny inseminated	91	54

(e) *General.*—The advantages of controlled breeding is being brought home to the people by propaganda. The F1. progeny will serve to demonstrate practically the economic usefulness of the scheme.

(f) *Visitors.*—Sri P. G. Pande, Director, Indian Veterinary Research Institute, the Governor of Madras and Sri Shalibudin an Officer of the Malaya Veterinary Services visited the scheme and were much impressed by it.

Finance.—A sum of Rs. 41,243-69 was expended under the scheme. A sum of Rs. 143-96 was realized by way of receipts.

(ix) *Artificial Insemination centres started under the State Scheme.*—The six Artificial Insemination Centres started under the above Scheme continued to function during the year. The work turned out therein is furnished in the following statement:—

Serial number and name and location of the Artificial Insemination Centres.	Number of bulls maintained under each breed.									
	Scindhi.	Sahiwal.	Tharparkar.	Ongole.	Kangayam.	Hallikar.	Neddi.	Murrah.	Jersey.	Total.
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Madras	2	..	*2	2	..	..	..	3	*4	13
2 Coimbatore	4	1	*1	..	1	..	..	2	*1	10
3 Madurai (Tallakulam)	4	1	..	..	..	..	..	3	..	8
4 Tiruchirappalli	2	..	..	..	..	..	..	2	..	4
5 Salem	2	..	..	..	..	..	1	1	..	6
6 Erode	..	..	..	..	2	..	..	2	..	4
	Number of collections made.			Number of inseminations done.		Number of calves born and ins-pected.		Remarks.		
	(12)			(13)		(14)		(15)		
1 Madras	753			7,347		834		*		
2 Coimbatore	520			12,897		2,948		..		
3 Madurai (Tallakulam)	253			3,939		680		..		
4 Tiruchirappalli	234			3,765		841		..		
5 Salem	491			6,272		1,251		..		
6 Erode	367			4,937		477		..		

* The bulls are located at National Dairy Research Institute, Bangalore and diluted semen received from latter Institute.

(x) *Artificial Insemination Centres in urban areas, started under the Second Five-Year Plan.*—The year opened with nine Artificial Insemination Centres under this category. During the Course of the year under report, four more centres at Karur, Kalla Kurichi, Periakulam and Udumalpet were opened, making a total of thirteen functioning at the end of the year.

The work turned out in the above centres is furnished below:—

Number of bulls maintained under each breed.											
Serial number and name and location of the Artificial Insemination Centres.			Scindhi.	Sahiwal.	Gir.	Cross.	Kangayam.	Hallikar.	Murrah.	Neddi.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		
1	Vellore	2	..	..	..	..	2	..	4		
2	Tirunelveli	2	..	..	..	..	2	..	4		
3	Vaidhunagar	1	1	..	..	..	1	..	3		
4	Chinnai put	2	..	..	..	..	2	..	4		
5	Tanjore	1	..	1	..	..	2	..	4		
6	Cuddalore	2	..	..	..	..	2	..	4		
7	Tiruppur	..	..	..	..	2	3	..	5		
8	Pollachi	1	..	..	..	..	3	..	4		
9	Kodaikanal	..	2	..	..	..	2	..	4		
0	Karur	2	..	..	..	..	2	..	4		
1	Kallakurichi	..	2	..	..	..	2	..	4		
2	Periakulam	..	2	..	..	..	2	..	4		
3	Udumalpet	..	2	..	..	1	3	New	4		

	Number of collections made.	Number of inseminations done.	Number of calves born and ins- pected.	Remarks.
	(11)	(12)	(13)	(14)
1 Vellore	231	2,217	782	..
2 Tirunelveli	309	1,134	250	..
3 Virudhunagar	193	428	271	..
4 Chingleput	232	1,153	286	..
5 Tanjore	233	1,785	654	..
6 Cuddalore	207	1,503	181	..
7 Tiruppur	309	4,437	520	..
8 Pollachi	260	1,358	188	..
9 Kodakanal	97	212	..	Work commen- ced only on 1st July 1959.
10 Karur	71	590	Not due	..
11 Kallakurichi	80	306	Not due	..
12 Periakulam	32	112	Not yet due	..
13 Udumalpet	59	406	Not yet due	..

xi. Artificial Insemination Centres handed over from Community Development and National Extension Service Schemes.—The eleven centres existing at the beginning of the year under this category, continued to function through out the year. Two more centres at Mayuram and Kumbakonam which have been ordered to be reverted to this department are being taken over. The details of work done in these centres are given below :—

Serial number and name and location of the Artificial Insemination Centre.	Number of bulls maintained under each breed.						Collections made.	Inseminations made.	Calves born and inspected.	Remarks.
	Scindhi.	Kangayama.	Umbra cheery.	Hallikar.	Murrah.					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
1 Tirukalikundram ..	2	..	..	..	2	109	637	77	..	
2 Malayampalayam ..	..	2	..	..	2	306	2,093	588	..	
3 Cherenmahadevi ..	1	1	..	..	1	243	896	538	..	
4 Kavandapady	..	2	..	..	2	314	4,654	1,262	..	
5 Pinnalur	..	1	..	..	1	100	465	115	..	
6 Vadipatty	..	2	..	..	2	310	1,980	428	..	
7 Dharmathupatty ..	..	2	..	..	2	589	2,749	978	..	
8 Bungalapudur	..	2	..	..	2	250	3,977	766	..	
9 Krishnagiri	1	..	..	2	2	230	802	253	..	
10 Panruti	2	..	..	..	2	148	712	102	..	
11 Mallavadi	..	2	..	..	2	176	327	57	..	

(xii) Key Village Scheme.—(a) The Key Village Scheme sponsored by the Government of India was introduced in the Madras State in 1952-53. During the few years of its existence, its popularity has become so great that there is constant demand for its expansion.

(b) At the beginning of the year there were 28 Key village centres. Four more centres were opened during the year, making a total of 32 centres at the end of the year. The Key Village Centre at Nagercoil was shifted to Kottaram on 6th February 1960 and the Key village block was reorganized by opening two more key village centres (sub-centres).

(c) With the expansion of the Key village scheme and the increase in the number of Key village centres, with a view to have effective control and supervision of these key village centres, an additional post of Inspector of Key villages was sanctioned with head-quarters at Dharapuram and it began functioning from 25th May 1959. Consequent on the opening of the above office, jurisdiction of the controlling officers was reallocated as shown below :—

Name of Key Village Centre.	Number of sub-centres attached.	Breed tract.	Name of officer exercising jurisdiction.
(1)	(2)	(3)	(4)
1 Kangayam	6	Kangayam	Inspector of Key villages, Kangayam.
2 Vellakoil	6		
3 Muthur	6		
4 Sivagiri	6		
5 Pongalur	6		
6 Uthukuli (newly opened) ..	6		
7 Chennimalai (newly opened) ..	6		
8 Sultanpet	6		
9 Thoppampatty	6		
10 Kallimandayam	6		
11 Idayakottai	6	Do.	Inspector of Key villages, Palni.
12 Ayakudi	6		
13 Neikkarapatti	6		
14 Vedsandur	6		
15 Gujiliamparai	6		
16 Malayandipatnam	6		
17 (newly opened) Valavadi ..	6		
18 Sa karandampalayam	6		
19 Chikhanapuram	6		
20 Mulanur	6		
21 Vadugapatty	6	Hallikar	Inspector of Key villages, Dharapuram
22 Pettaikalipalayam	6		
23 Chinnadharapuram	6		
24 Aravakurichi	6		
25 Thennilai	6		
26 Hosur Cattle Farm	6		
27 Denkanikottai (newly opened).	6		
28 Kilacheri	6	Non breeding tract	Special Officer for Artificial Insemination, Madras.
29 Kancheepuram	6		
30 Poonamallee	6		
31 Chidambaram	6		
32 Kottaram	6		
			District Vete- rinary Officer, Nagercoil.

(d) There were 434 breeding bulls in the scheme at the close of the year, as against 424 during the previous year. These bulls were responsible for 132,587 inseminations and 14,601 natural services as against 105,293 inseminations and 11,279 natural services during the previous year. Twenty-nine thousand and sixty-three calves were born by artificial insemination and 6,208 by natural service.

(e) The details of location of bulls, semen collections and inseminations done at the various centres are furnished in the statement attached to this report.

House-to-house survey, with a view to maintain correct statistics of livestock in the village covered by the scheme, was undertaken. In addition to inseminations, natural services, and follow up of these operations, the other aspects of Animal Husbandry like prophylactic measure against the common epidemic diseases of livestock treatment of ordinary ailments, castration of scrub bulls, fodder production, and advice on scientific feeding and management of livestock, were given due attention. Key village livestock improvement associations were formed in all the Key village blocks to facilitate to intensify the livestock mindedness of the people, to foster a spirit of co-operation and mutual help among them and to facilitate marketing of livestock and other products.

(f) *Work on sterility.*—Due attention was paid to the study and treatment of pathological conditions of the genetical system to avoid economic waste among the breeding stock.

(g) *Disease control.*—Details of preventive inoculations with cases treated and castrations done during the year under report are shown below :—

Name of key village.	Castrations done.	First aid cases.									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Inspector of Key villages, Kangayam.	2,375	114	9,945	60,833	278	33,806	..	..	171	..	..
Inspector of Key villages, Pilleri.	4,813	..	22,193	46,037	10,342	23,552	216	..	660	..	..
Inspector of Key villages, Dharapuram.	2,418	3,772	14,119	64,196	1,682	46,685	..	..	2,343	..	..
Special Officer for Artificial Insemination, Madras.	4,027	9,400	23,104	5,292	32,107	873	1,624	150	..	..	..
Superintendent, Hosur Cattle Farm Hosur.	22,44	45	25	3,009	..	..	1,143	200	..	5	200
Total ..	15,977	13,430	74,371	185,372	44,606	110,276	2,453	350	3,174	5	200

(h) *Cattle shows and calf rallies.*—In all the key village blocks, cattle shows and calf rallies were conducted to encourage the people in livestock improvement work and scientific rearing and management of calves. Prizes were awarded to good specimens among the exhibits. The finance required for the shows were partly met from Government grant and partly from local contributions.

The details of these shows and rallies are furnished below :—

Key village centres.	Number of animals participated.			Number of prizes awarded.
	Cattle.	Calf.	Sheep.	
1 Hosur Cattle Farm ..	671	1,100	10	543
2 Dhonkanikotta ..	..	..	..	..
3 Vellakoil ..	428	..	..	91
4 Kangayam ..	1,220	..	..	364
5 Idiyakottai ..	700	..	..	192
6 Neikarapatty ..	408	..	..	147
7 Kilacheri ..	160	..	..	170
8 Poonamalle ..	179	..	..	137
9 Chidambaram ..	261	..	..	468
10 Mulalur ..	579	..	..	16
11 Sankarandampalayam ..	939	..	..	277
12 Malayandipatnam ..	553	..	..	144
13 Valavadi ..	401	..	..	137
14 Chikkanuram ..	275	..	..	219
15 Thoppampatty ..	600	..	..	134
16 Sivagiri ..	516	..	..	219
17 Kottaram ..	..	..	..	..
18 Chinnadharapuram ..	508	..	..	246
19 Pettaiikal palayam ..	501	..	..	172
20 Sultanpet ..	556	..	..	156
21 Kallimandayam ..	607	..	..	300
22 Kancheepuram ..	354	..	..	123
23 Ayakudi ..	382	..	..	215
24 Thennalai ..	338	..	..	138
25 Pongalur ..	512	..	..	161
26 Vadugapatty ..	595	..	..	128
27 Vendasandar ..	331	..	..	142
28 Muthur ..	480	..	..	176
29 Gujiliamparai ..	505	..	..	201
30 Aravakurichi ..	475	..	..	160
31 Uttukuli ..	395	..	..	208
32 Chennimalai ..	468	..	..	197

(i) *General.*—Twenty-nine Veterinary Assistant Surgeons and 63 stockmen were trained in Animal Husbandry work at the Kangayam Key village centre.

Name of the key village centre.	Number of bulls in the centre.					The Key Village Centre.					Number of collections made.				
	For Artificial Insemination.					For natural.									
	Kangayam.	Hallikar.	Scindhi.	Sabliwal.	Murrah.	Kangayam.	Hallikar.	Scindhi.	Sabliwal.	Murrah.	Kangayam.	Hallikar.	Scindhi.	Sabliwal.	Murrah.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Hosur Cattle Farm ..	..	6	..	..	2	..	11	..	..	..	..	373	..	..	84
2 Vellore ..	5	..	..	..	2	6	..	..	..	..	334	..	..	..	119
3 Kangayam ..	3	..	..	..	3	5	..	..	..	..	340	..	..	..	180
4 Malayandi patnam ..	3	..	..	..	2	8	..	..	..	1	183	..	..	..	173
5 Mulanur ..	4	..	..	..	1	10	..	..	..	..	204	..	..	..	146
6 Sankaran dampalayam ..	3	..	..	..	2	9	..	..	..	..	200	..	..	..	131
7 Chikkanapuram ..	3	..	..	..	2	11	..	..	..	..	292	..	..	..	139
8 Thoppampatty ..	3	..	..	..	1	10	..	..	..	2	181	..	..	..	139
9 Ilayukottai ..	3	..	..	..	2	10	..	..	..	2	173	..	..	..	152
10 Sivagiri ..	4	..	..	..	1	12	..	..	..	1	233	..	..	..	141
11 Neikarupatti ..	3	..	..	..	2	4	..	..	..	6	160	..	..	..	141
12 Poonamallee ..	..	..	3	..	2	..	..	3	..	5	..	..	150	..	156
13 Kilacheri ..	..	..	3	..	4	..	..	2	21	5	5	..	145	..	163
14 Chidambaram ..	..	..	2	..	2	..	..	5	..	4	..	..	140	..	138
15 Chinnadharapuram ..	4	..	..	..	2	9	..	..	..	2	208	..	..	..	115
16 Pettaikalipalayam ..	3	..	..	..	1	12	..	..	..	..	186	..	..	..	51
17 Sultanpet ..	3	..	..	..	3	9	..	..	..	1	256	..	..	..	191
18 Kalinandyam ..	3	..	..	..	2	8	..	..	..	3	187	..	..	..	187
19 Nagercoil (shifted to Kottaram on 6th February 1960).	..	..	4	..	..	..	..	2	..	..	..	..	144	..	91
20 Ayakudi ..	2	..	..	..	2	9	..	..	..	2	181	..	..	..	163
21 Tondurai ..	3	..	..	..	1	8	..	..	..	1	212	..	..	..	58
22 Pongalur ..	3	..	..	..	1	9	..	..	..	3	190	..	..	..	107

23 Kancherapuram ..	..	..	..	2	3	..	..	..	6	6	..	..	145	207	181
24 Aravakurichi ..	3	..	..	..	2	9	..	..	..	2	221	..	..	..	126
25 Valupatti ..	4	..	..	..	1	11	..	..	..	1	174	..	..	..	101
26 Velamandur ..	2	..	..	..	3	7	..	..	..	4	203	..	..	..	244
27 Gajilumpara ..	2	..	..	..	2	11	..	..	..	1	134	..	..	..	133
28 Muthur ..	4	..	..	..	2	9	..	..	..	2	228	..	..	..	76
29 Dhanukotta ..	..	2	..	..	2	..	12	..	..	..	..	54	..	..	32
30 Chennalai ..	3	..	..	..	3	1	..	..	..	4	118	..	..	..	102
31 Velavadi ..	3	..	..	..	2	4	..	..	..	2	96	..	..	..	86
32 Uttukuli ..	3	..	..	..	3	..	..	..	..	7	126	..	..	..	128
Total ..	79	8	12	2	63	200	23	12	6	67	5,050	427	724	207	4,177

	Number of insemina- tions done.		Number of natural services performed.		Number of calves born by artificial insemination.				Number of calves born by natural service.			
					Cows.		Buffaloes.		Cows.		Buffaloes.	
	Cows.	Buffaloes.	Cows.	Buffaloes.	Bull calves.	Heifer calves.	Bull calves.	Heifer calves.	Bull calves.	Heifer calves.	Bull calves.	Heifer calves.
1 Hosur Cattle Farm	..	..	..	..	..	..	..	..	..	..	..	..
2 Vellore	2,814	314	246	..	558	318	62	94	259	144	..	..
3 Kangayam	5,161	519	357	5	810	610	16	80	108	86	..	..
4 Mayavadi	7,315	1,149	198	..	821	629	52	63	47	42	..	..
5 Mulanur	5,428	1,192	500	46	1,045	895	223	216	104	98	2	2
6 Sankarandampalayam	5,359	725	765	..	1,575	1,139	115	127	222	232	..	..
7 Chikkarapuram	5,670	536	471	..	1,406	1,205	84	88	250	218	..	..
8 Thoppampatty	6,096	1,173	474	11	661	523	50	76	152	11	..	..
9 Idiyakottai	3,679	1,100	533	124	523	423	58	87	92	46	12	15
10 Sivagiri	3,302	2,530	280	181	439	364	158	174	81	83	12	16
11 Neelakurupatti	4,815	743	457	62	721	781	81	67	72	81	..	..
12 Poonamallee	2,721	1,293	171	418	306	315	107	148	35	32	51	71
13 Kilachi	862	915	17	75	94	86	141	124	9	8	41	34
14 Chidambaram	443	1,061	43	194	51	48	102	81	5	3	40	20
15 Chinnadharapuram	1,628	910	115	319	71	52	30	36	14	16	25	24
16 Pottaiyalipalayam	3,528	403	637	61	272	312	13	16	107	99	1	..
17 Sultempet	3,905	130	593	..	46	634	8	4	147	120	..	..
18 Kattandiyam	6,525	2,913	616	149	683	723	268	319	146	145	..	..
19 Nagercoil (shifted to Kottaram on 6th February 1960).	2,636	1,760	431	222	431	394	131	141	82	80	25	30
20 Ayakudi	1,353	333	144	91	90	99	8	6	..	..	..	..
21 Tennilai	2,551	1,665	589	156	366	347	124	200	28	57	11	11
22 Ponalur	3,553	117	211	42	328	288	2	6	31	16	..	..
	4,802	749	438	182	630	482	33	68	97	59	26	38

23 Kancheepuram	..	..	..	..	..	..	..	..	..	..	..	..
24 Aravakurichi	1,740	986	20	113	128	101	47	29	10	6	8	6
25 Vadugapatti	3,328	370	307	95	60	50	10	14	23	27	8	8
26 Vedasandur	2,582	458	383	84	258	175	25	41	51	34	7	13
27 Gujjilampara	1,697	1,441	385	231	12	7	..	..	16	21	14	17
28 Muthur	861	524	223	71	6	10	3	1	24	15	10	9
29 Denkanikotta	3,637	310	395	88	400	334	1	1	51	53	10	11
30 Chennimalai	229	52	418	..	..	..	..	..	..	..	..	..
31 Valavadi	1,401	337	57	87	..	..	..	..	..	..	..	..
32 Uttukuli	1,518	617	158	132	..	..	..	..	..	..	..	..
	2,291	1,218	26	326	..	..	..	..	..	..	..	..
Total	103,504	28,979	10,961	3,468	13,420	11,344	1,952	2,347	2,243	1,932	303	325

Scheme started only on 5th May 1959. Calves born during the year.

Do.

Do.

Do.

Do.

Do.

(xiii) *Calf Subsidy Scheme.*—Under the All-India Key Village Scheme, pure-bred bull-calves in the breeding tract and graded heifer calves in the non-breeding tract (over six months) are subsidized in areas covered by the Key Village blocks. A monthly subsidy of Rs. 10 per calf is paid to such calves for a period of 30 months or till maturity, whichever is earlier, so as to give an incentive to ryots to maintain these calves in good condition. These pure-bred bull calves when they mature are utilized for breeding purpose in the supplementary extension centres started in the State under the Key Village Scheme and also in Community Development and National Extension Service areas. The year under report opened with 2,363 calves in the scheme, 2,886 were added and 1,811 were removed from the scheme either due to maturity, death or sale leaving a balance of 3,438 calves, enjoying the subsidy at the end of the year.

(xiv) *Scheme for the utilization of the bulls produced in the Key Village areas and opening of supplementary extension centres.*—(a) This is a scheme to make use of the good breeding bulls produced in Key Village areas for upgrading the cattle in areas where the cattle are of a non-descript type. Bulls that are up to the required standard are purchased for a decent price from the owners in Key Village areas for distribution in the supplementary extension centres. This indirectly acts as an incentive to the ryots in Key Village areas to devote more care in the rearing of these calves born to approved bulls.

(b) A compact area with a population of 5,000 cows and or she-buffaloes of breedable age is selected. All scrub bulls are castrated and bulls of suitable breeds distributed in the area at the rate of one bull for every 100 cows or she buffaloes of breedable age. These bulls are entrusted to the care of suitable ryots interested in the improvement of livestock in the village, with a subsidy of Rs. 20 per month per bull, for the proper upkeep of the bull. The bull is made available for service to the cows of the locality free of cost. The obvious effect of the scheme will be the mass upgrading of the non-descript cattle and buffaloes with conspicuous increase in their quality and milk production.

Seventeen such centres were functioning in this State at the beginning of the year. Twelve new centres started during the year at the following places:—

- | | |
|-----------------|----------------|
| 1 Ariyalur. | 7 Kombai. |
| 2 Nachikuppam. | 8 Alathambadi. |
| 3 Vikravandi. | 9 Salavakkam. |
| 4 Kaveripakkam. | 10 Sanarpatty. |
| 5 Vilathikulam. | 11 Mavanur. |
| 6 Paramathy. | 12 Sathur. |

Thus there were 29 centres functioning at the end of the year.

The details of work turned out at the different centres are as follows:—

Particulars of work done in supplementary extension centres.

Serial number and name of centre.	Name of district.	Number of bulls distributed.						Number of services performed.	Number of castration done.	Number of inoculation done.	Number of calves born and inspected.
		Umbacherry.	Kangayam.	Halikar.	Seidhi.	Sachival.	Murrah.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1 Mafuranthakam	Chingleput	..	..	..	39	..	11	847	562	8,053	206
2 Sunkuwarchatram	Do.	..	..	..	13	19	18	740	574	9,591	97
3 Salavakkam	Do.	..	..	..	33	6	10	143	634	14,503	..

Particulars of work done in the Supplementary Extension Centres.

Serial number and name of centre.	Name of district.	Number of bulls distributed.						Number of services performed.	Number of castration done.	Number of inoculation done.	Number of calves born and inspected.
		Umbacherry.	Kangayam.	Halikar.	Seidhi.	Sachival.	Murrah.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
4 Polur	North Arcot	..	44	..	..	..	6	1,152	316	5,672	238
5 Kaveripakkam	Do.	..	36	..	..	..	14	230	575	3,436	..
6 Valavanoor	South Arcot	..	..	..	45	..	5	1,630	347	3,932	221
7 Vikravandi	Do.	..	..	..	44	1	5	368	347	739	..
8 Alathampadi	Nagapattinam (Tanjore East).	36	..	..	..	..	14	560	157	6,418	..
9 Karur	Tiruchirappalli (South).	..	36	..	..	..	12	2,987	191	4,954	677
10 Alangudi	Do.	..	85	..	..	..	14	1,632	564	5,320	564
11 Vellianai	Do.	..	38	..	..	..	12	2,063	191	8,114	321
12 Mayanoor	Do.	..	18	..	..	..	20	1,588	225	3,589	..
13 Ariyalur	Tiruchirappalli (North).	..	30	..	..	..	20	611	190	2,443	..
14 Namakkal	Salem	..	33	..	..	..	17	4,517	162	1,789	919
15 Tiruchengode	Do.	..	33	..	..	..	17	3,343	129	4,221	791
16 Paramathy	Do.	..	31	..	..	..	19	752	..	856	..
17 Bagalur	Do.	..	44	..	..	..	4	2,277	313	7,769	1,276
18 Nachikuppam	Do.	..	43	..	..	..	2	1,435	76	6,939	..
19 Vallaparai	Coimbatore	..	..	..	48	..	..	1,197	40	2,847	242
20 Dindigul	Madurai (North)	..	35	..	..	..	..	3,803	188	1,757	1,429
21 Sanarpatty	Do.	..	42	..	..	..	6	1,080	223	3,197	..
22 Uthamapalayam	Madurai (South)	..	37	..	..	..	12	2,059	984	4,90	1,476
23 Thirumangalam	Do.	..	39	..	..	..	13	2,105	1,554	4,765	933
24 Kombai	Do.	..	34	..	..	..	16	713	637	4,285	..
25 Sivakasi	Ramanathapuram.	..	24	..	..	..	23	2,308	213	5,410	371
26 Sathur	Do.	..	32	..	..	..	18	740	113	7,432	..
27 Eral	Tirunelveli	..	27	..	..	..	21	1,50	2,482	10,397	747
28 Vasudevanthur	Do.	..	25	..	..	..	25	800	945	14,235	215
29 Vilathikulam	Do.	..	26	..	..	..	23	833	599	5,127	..

(xv) *Scheme for the salvage of dry cows.*—(a) Under this scheme a farm which was opened in 1944 at Kambakkani Kancha in Chingleput district at a distance of 54 miles from Madras, was shifted to Alamadhi during the year 1957-58. The object of the scheme is to salvage the dry cows in the city from being sold for slaughter for reasons of economy and want of space, a dry cow being a heavy liability in the city. According to this scheme cows in the city which become dry are admitted in this farm and maintained for a nominal fee of Rs. 10 per mensem till they are taken back pregnant or after calving by the owners.

(b) *Strength.*—(i) Animals which are fit for breeding only are admitted in the farm.

The details of admissions, etc., of the farm are as follows:—

Details.		1959-60.	1958-59.
1 Number of cows on hand at the beginning of the period..	..	261	151
2 Number of cows admitted during the year	..	348	298
3 Number returned after calving	..	201	134
4 Number returned pregnant	..	36	12
5 Number returned as unfit for salvage	..	53	29
6 Number died	..	10	13
7 Number transferred to adult stock	..	..	..
8 Number on hand on 31st March	..	309	261

(ii) Admission continued to be restricted only to those animals which are fit for further breeding. This is done to maintain the popularity of the salvage farm and also to run it economically. Work on the improvements and alteration to the existing old buildings to make them suitable such as quarters for the staff of the farm and for locating the office have not yet been taken up by the Public Works Department.

(iii) The work of fencing the entire area sanctioned by Government is pending execution with the Public Works Department.

(iv) There was an increase in the number of admissions made during the year as compared with last year and this is due to the propaganda carried out in this direction, the popularity of the scheme and to the shifting of the farm from Kambakkam to Alamadhi which is closer to the city.

(v) The average period of stay of the cows in the farm was 292.85 days as against 289.02 days in the previous year.

(vi) There were three breeding bulls at the beginning of the year. One Ongole bull was purchased and placed at stud in the farm, and another bull calf reared in the farm became adult and is added to the number of breeding bulls making a total of 5 at the end of the year.

(vii) The total number of services performed by the breeding bulls in the salvage scheme was 537 as against 279 of the previous year.

(viii) One hundred and ninety-four calves were born in the farm during the year as against 135 last year.

(ix) A pair of Kangayam bullocks continued to be stationed at the farm for agricultural operations. During August 1959 another pair of bullocks was received from Superintendent, Livestock Research Station, Hosur Cattle Farm. Besides six pairs of bullocks were received from the District Veterinary Officer, Erode, during October 1959. During January 1960 one Kangayam bullock died due to old age and natural causes. There were 15 kangayam bullocks remaining at the farm bulls at the close of the year.

(d) (i) *Pasture*.—There is grazing facility in the extensive farm and are programmes for establishing good pasture and for raising fodder grass and fodder crops on a large scale after fencing off the area. During the year four acres were taken up for cultivation, out of which one acre was for fodder cholam which yielded 575 lbs. of cholam and 8,370 lbs. of cholam stakes and three acres were for horsegram which yielded 870 lbs. of horsegram and 670 lb. of chaff.

(ii) Rainfall in Alamadhi had been moderate during the year.

(e) *Tick infestation*.—Periodical spraying with gammaxene has been done to minimise tick infestation.

(f) *Health of the staff*.—The general health of the staff continued to be satisfactory. Efforts are being taken for obtaining medical facilities for the staff and their families in the farm.

(g) *Control of contagious diseases*.—There was no incidence of any contagious disease, among the animals of the farm. All the farm animals were protected against rinderpest at the time of admission and then periodically against haemorrhagic septicaemia and Black Quarter.

(h) *Advisory Committee*.—The Advisory Committee was reconstituted for a period of one year with the following officials and non-officials as members of the Committee.

Official members.

1. The Director of Animal Husbandry, Madras (Chairman).
- 2 The Registrar of Co-operative Societies, Madras.
3. The Deputy Director of Animal Husbandry (Livestock), Madras.

Non-official members.

1. Sri R. Koteswara Rao, I.A.S. (Retired Deputy Secretary to Government of Madras).
- 2 Sri N. Varadha Pillay, George Town, Madras.
3. Sri A. N. Parasurama Ayyar, Principal, Minerva Tutorial College, Egmore.
- 4 The President of the Co-operative Society for the salvage of dry cows scheme, Madras.

During the year one meeting was held on 3rd August 1959 and resolutions for necessary improvement in the farm were passed.

(xvi) *Goshalas and Salvage Farms under Private Agencies—Goshala Development Scheme in Madras State*.—(a) By the term "Goshala" is meant "Home for Cows" (Go stands for cows and Shala for home). Goshalas are public and charitable institutions working for the protection, preservation and improvement of bovine cattle. There are a number of such Goshalas existing in North India maintaining bovine cattle. The ban on Cow slaughter on sentimental grounds in the North resulted in the accumulation of cattle. All the useful cattle went to the Goshalas while all the useless cattle found their way to gosadans or pinjrapoles. A scheme for the development of the animal in the Goshalas on Scientific lines has been started, in all the States and also in our State.

(b) The main features of the Goshala Development Scheme are—

The selected institutions will be eligible for the following assistance :—

(i) Goshalas or Pasumadams belonging to public and charitable institutions are usually admitted to this scheme. The Goshalas selected should possess not less than 10 cows of any recognized breed preferably milch ones.

(ii) Supply (by Government) of (10 cows and a bull) in the same breed or type of cattle available with the Goshala.

(iii) A maintenance grant of Rs. 2,000 per annum for meeting increased expenditure on productive herd.

(iv) A subsidy of Rs. 10 per month for rearing bull calves for a period of two years after weaning. Improved female calves will also be eligible for the subsidy.

(v) An ad-hoc non-recurring grant up to Rs. 5,000 for equipments, repairs and alterations to existing buildings, cattle sheds and paddocks.

(vi) Provision of free Veterinary aid.

(c) In our State there are no Goshalas comparable to those in North India. There are herds of cattle in the Pasumadams of temples and mutts and other charitable institutions. As the cattle at these institutions do not conform to any recognized type and as our State has to build

up the strength of milch breeds of cattle, pure or graded of such breeds as Scindhi, Tharparkar, etc., are recommended as foundation stock for these institutions, so that the cattle may be upgraded further by breeding to pure stud bulls. There are at present 16 such public charitable institutions, that have applied for financial aid under the Goshala Development Scheme and they are—

- (i) Gandhi Goshala at Alathambadi.
- (ii) Kasturba Gandhi Kanya Gurukulam at Vedaranyam.
- (iii) Mazhaiyunkanni Goshala at Valivalam.
- (iv) Sri Agneeswaraswamy Devasthanam at Tirupugalur.
- (v) Sri Swetaranyeswaraswamy Devasthanam at Tiruvengadu.
- (vi) Sri Dhandayuthapaniswamy Devasthanam at Palni.
- (vii) Sri Subramaniaswamy Devasthanam at Tiruchendur.
- (viii) Sri Tirukuttalanathaswamy Devasthanam at Courtallum.
- (ix) Sri Tirumalaikumaraswamy Devasthanam at Ponpoli.
- (x) Sri Madyarjuneswaraswamy Devasthanam at Pettaivaithalai.
- (xi) Sri Vetrodi Velayudhaswamy Temple at Uttukuli.
- (xii) Gosamvardhana Samajam at Salem.
- (xiii) Seethalakshmi Ramaswamy College Farm at Tiruchirappalli.
- (xiv) Sir P. S. S. High School Farm at Tirukattupalli.
- (xv) Sri Ramakrishna Mission Tapovanam at Tiruparathurai.

Of the above, so far 3 institutions have been brought under the Goshala Development Scheme during the years 1956-57, and 1959-60 and the remaining ones are to be included under the scheme as and when fresh Goshalas are sanctioned.

(d) A Veterinary Assistant Surgeon continued to be incharge of the Scheme from the year 1957.

(e) The Gandhi Goshala at Alathambadi in Tiruthuraipoondi taluk in Thanjavur district which was in the Goshala Development Scheme at the beginning of the year continued to function till the end of the year 1959-60.

(f) Two more institutions, viz., Kasturba Gandhi Kanya Gurukulam at Vedaranyam and Mazhaiyunkanni Goshala at Valivalam both in Thanjavur district were admitted to the scheme during the year.

(g) The Veterinary Assistant Surgeon in charge of the scheme toured for 120 days in places like Delhi, Punjab and Bombay States in connection with the procurement of Haryana cattle under wild cattle catching scheme and Buffalo calves from the Aarey Colony, Bombay supplied free by Central Government to the State Government and private parties.

(h) *Gandhi Goshala Alathambadi.*—The progress noted in the Gandhi Goshala at Alathambadi under the Goshala Development Scheme during the year 1959-60 is given below:—

(i) Fifty acres of wet land are taken on lease every year and pillipassara and cultivation of Guinea grass is progressively being extended.

(ii) Strength of the cattle—

	At the beginning of the year.	At the end of the year.
Bulls	1	1
Cows in milk	10	10
Cows dry	21	21
One to three years heifers	19	19
Young bulls	5	5
Young stock below (one to three year)	26	28
Others	2	2
Total	84	85

The Goshala consists of 10 pure bred Umblacherry cows provided by Government and 21 pure bred cows belonging to the Goshala. One breeding bull of the same breed was also supplied by the Government.

(iii) During the year 20,282.5 lbs. of milk was produced with the daily yield of 47.5 lbs. on average and daily overall average 3.96 lbs. as against the production of 19,394 lbs. of milk or 53.13 lbs. daily yield and 3.73 lbs. of the daily overall average of the year. The Milk produced was sold direct to the public and an amount of Rs. 3,008.22 was realized. A sum of Rs. 5,266 was also realized by the sale of livestock as against Rs. 3,337.05 and Rs. 3,411 respectively of the previous year. Five calves were admitted to the calf-subsidy scheme.

Staff.—One paid manager with 3 attendants and 1 gardener was in charge of the Goshala.

(iv) Organization of pasumadams attached to temples into proper Goshalas possessing pure or grades of any one particular milch breed, particularly that of Scindhi or its grades was suggested to the Commissioner, Hindu Religious Endowments and the temples concerned by the Animal Husbandry Department. The proposals were accepted by the Government and have sanctioned initially the starting of Goshala in seven important temples. These Goshalas are also expected to be brought under the Goshala Development Scheme as and when sanctioned so that these pasumadams may play a vital role in the production of milk and improvement of cattle in the State.

Salvage Farms under Private Agencies.—(a) The Tiruchi-Sreerangam Milk Supply Co-operative Society is running a salvage Farm at Thuvarakudy village of Tiruchi taluk in an area of about 100 acres. Grass cultivation is being done. Eighty-one cows were salvaged during the year.

(b) One salvage farm for dry cows is being run by the Co-operative Department at Abishekapatti village in Tirunelveli district. The area covers 1,000 acres belonging to the Nellaippar Devasthanam. The object of the farm is to take care of dry cows and she-buffaloes during their dry period. Three hundred dry cows and she-buffaloes got admission to the Farm. Arrangements have been made to send semen from the Artificial Insemination Centre from Tirunelveli Veterinary Hospital for the insemination of cows and buffaloes at the farm. The number of inseminations done at the farm during the year was 194.

(c) The Co-operative Milk-supply Union, Coimbatore, continued to maintain the salvage farm for dry cows at Veerapandy. It is 70 acres in extent and 180 animals have so far been admitted into the scheme from its inception. The present strength of the farm is 47 cows and 21 buffaloes. Fodder cultivation is also being done here. The farm maintains one Scindhi and one Murrah Bull for natural service at the farm.

(xvii) *Village Livestock Improvement Scheme.*—(a) The Scheme aims at wholesale upgrading of the existing non-deposit cattle with recognized breed of bulls. This is done through castration of all the scrub bulls in the selected area and introduction of approved bulls in their place so that the entire progeny will be the offsprings of the latter with their improved characteristics. An annual subsidy of Rs. 50 for each heifer calf born under the scheme is also part of the scheme. The scheme also contemplates prophylactic inoculation of the Livestock in the scheme area against the common prevailing contagious diseases.

(b) The scheme was implemented in the Alathambady village and in the villages of Saliangalam, Poondi, Palliyur and Thiruppurvanam in the Thanjavur district and Malli in Ramanathapuram district, to which Villuppanoor, Pallakulam and Sallipatty were added on. These centres catered to a total of 1,850 cows and 1,960 she-buffaloes of breedable age. A poultry unit was also attached to the Alathambady Centre.

(c) Consequent on the opening of the Supplementary Extension Centre at Alathambady on 12th June 1959 the centre at Alathambady was merged with the former, and the 3 Umblacherry and 2 Murrah bulls located, were also transferred to the Supplementary Extension Centre. In the Saliangalam centre 2,208 services were performed by the bulls and 391 calves were born from the inception of the scheme. The work turned out at the other two centres is furnished below :—

	Alathambady		Malli.	
	Umblacherry.	Murrah.	Kangayam	Murrah.
	(1)	(2)	(3)	(4)
Number one of bulls located	3	2	2	2
Services performed	70	21	55	333
Calves born from the inception of the scheme.	391		642	
Pedigree bulls supplied	7		..	
Number of eggs supplied for hatching ..	345		..	
Cases treated	730		..	
Vaccinations done	5,121		653	
Castrations done	104		158	

(xviii) *Cattle Breeding through Co-operative Societies and Associations.*—With the expansion of the activities of this department in all branches of Animal Husbandry particularly in the matter of cattle breeding, there appears no necessity for other agencies to be engaged in the same item of work. However a few of such organisations that were started some time ago are being continued. The following are the ones under the above category :—

(i) *The Anamalai Hill Cattle Society, Coimbatore district.*—This society which was started some 24 years ago with the object of upgrading the local cattle with red scindhis has now been converted into a key village centre in 1958, so that the continuity of work may be kept up. This key village centre has a strength of 41 scindhi bulls. They performed 1,127 services and 156 calves were born.

(ii) *The Mecheri Co-operative Cattle Breeding Society, Salem district.*—This Society continued to function during the year under report. The society is maintaining 10 hallikar bulls. The bulls have performed 609 services and 166 calves were born.

(iii) *The Anchetty Co-operative Cattle Breeding Society, Anchetty, Salem district.*—This Society started in the year 1937, continued to function during the year under report. It maintained a herd of 7 Hallikar bulls. These bulls performed 354 services and 337 calves were born.

(iv) *The Bhcemankulam Cattle Breeding Society, North Arcot district.*—This society maintained three Kangayam Bulls, which performed 117 services and 19 calves were born.

(xix) *Breeding Bulls under departmental scheme.*—(a) Pure bred pedigree bulls of various breeds were maintained under different schemes to keep up the purity of the respective breeds in breeding tracts and to grade up the cattle in other areas. Particulars of bulls maintained under various schemes are furnished below :—

Breed.	Veterinary Institutions and Artificial Insemination centres.	Government Male-stock Distribution scheme.	Supplementary Extension Centres.	Key village scheme.	Village Livestock Improvement scheme.	District Board's scheme.	Premium scheme.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Kangayam	71	23	670	231	2	243	557	1,837
Scindhi	50	21	215	22	..	..	80	397
Gir	5	2	..	..	..	..	6	13
Sahiwal	10	..	26	8	..	..	..	44
Umblacherry	5	..	36	..	5	..	184	230
Hallikar	2	12	92	31	..	..	92	229
Jersey Cross	..	..	..	..	..	..	3	3
Jersey	..	..	..	..	..	..	2	2
Alambady	..	..	..	..	..	..	1	1
Ongole	2	..	..	..	..	..	..	2
Ayreshire	..	..	..	..	..	..	..	..
Cross Breed	1	..	..	..	..	..	12	13
Murrah	10	40	338	141	5	2	231	907
Neeli	1	..	..	..	..	1	..	2
Hariana	..	..	..	..	..	..	1	1
Total	266	98	1,427	473	12	243	1,109	3,681
Services performed	8,568	5,929	44,399	14,454	576	14,353	65,548	1,54,427
Insemination done.	80,920	..	..	132,493	..	..	..	213,413
Calves born	20,473	1,082	9,431	33,919	568	8,574	14,278	88,478
Calves inspected.	18,723	1,089	9,923	3,919	185	3,571	8,559	75,969

(b) *Bulls at stud in Veterinary Institutions and Artificial Insemination Centres.*—Two hundred and sixty-six bulls of different breeds were maintained at the Veterinary Institutions and the Artificial Insemination Centres in the State for stud purposes as against 312 bulls in the previous year. The decrease is due to resorting to more and more of Artificial Insemination by which process less number of bulls could cater to a larger number of females than by natural service. These bulls were responsible for serving 8,568 cows by the natural process and 80,920 by Artificial Insemination 29,153 calves were born under this scheme out of which 18,723 were inspected.

(c) *Bulls under Male-stock Distribution Scheme.*—This scheme has been discontinued from the year 1957 since the introduction of a more intensive scheme namely the Key Village Extension Scheme. But some of the bulls already at stud under the scheme prior to 1957 continued to be so during the year under report 98 bulls of different breeds continued to be at stud under this scheme during the year as against 147 during the previous year. These bulls performed 59,219 services as a result of which 1,612 calves were born and 1,080 of them inspected by the staff of this department.

(d) *Bulls under premium scheme.*—The scheme encourages private individuals in the matter of maintaining approved breeding bulls for use

of the community in their respective areas. A subsidy at a rate of Rs. 200 in the case of a bull and Rs. 220 for a buffalo bull under certain conditions and terms is paid annually to the owners.

There were 1,169 bulls under this scheme during the year under report as against 1,029 in the previous year. They performed 65,648 services resulting in 14,278 calf births out of which 8,530 were inspected.

(e) *Bulls under the District Board Scheme.*—This scheme envisages the District Boards to interest themselves in Livestock Development work. Government gives a grant to such of the Boards that come forward to participate in this scheme.

There were 236 bulls under this scheme as against 252 in the previous year. They performed 14,853 services and 8,574 calves were born of which 3,571 were inspected.

Details of bulls maintained under Key Village Scheme, Supplementary Extension Centres and Village Livestock Improvement Scheme are dealt with separately.

(xx) *Breeding bulls under other schemes.*—Twenty-five bulls were maintained under this category as detailed below:—

(a) *Bulls at Agricultural Research Stations.*—(i) Agricultural Research Station, Koilpatti maintained one scindhi and one murreh bull for stud purposes. They performed 213 services.

(ii) The Rice Research Station, Ambasamudram was maintaining a murreh bull and it did 45 services.

(b) *Bulls purchased from common good funds.*—(i) *Salem district.*—Ten Hallikar breeding bulls continued to be maintained by the mecheri co-operative cattle breeding society, Mecheri during the year. These bulls have been included in the premium scheme. They performed 609 services and 166 calves were born to them of which 139 were inspected. The Anchetty Cattle Breeding Society continued its work with 7 hallikar bulls. These bulls were included in the premium scheme. During the year, one bull was removed from the Scheme and one was newly included. Thus the number of bulls at the end of the year was 7. They performed 354 services and 337 calves were born and inspected.

(ii) *Coimbatore district.*—The Co-operative Milk Supply Union, Coimbatore maintained two buffalo bulls for stud purposes during the year.

(c) *Bulls maintained in Jails.*—(i) The Central Jail, Salem, maintained 2 scindhi and 2 Sahaiwal bulls. They performed 121 services.

(ii) The Central Jail, Coimbatore, maintained one Scindhi bull which performed 38 services and 25 calves were born.

(xxi) *Livestock Improvement Board.*—(a) The Livestock Improvement Board continued to function during the year under report. Two meetings were held, one at Bhavanisagar on 26th August 1959 and the other at Orathanad on 29th March 1960 with the Home Minister, Government of Madras as Chairman, The Secretary to Government, Food and Agriculture Department acted as Secretary for the first meeting with the following members.

Non-officials.

1 Sri Nallasenapathi Sarkarai Manradiar, Pattagar of Palayakottai.

2 Sri V. K. Ramaswamy Mudaliar, M.L.A., Mirasdar of Cheyur, Chingleput district.

3 Sri K. S. Lakshmiipathy Naicker, Idayakottai, Madurai district.

4 Sri R. Srinivasa Iyer, B.A., B.L., M.L.A., Advocate, Pattukkottai, Thanjavur district.

5. Sri A. R. Subbiah Mudaliar, M.L.A., Mirasdar Idaikal (via) Thenkasi, Tirunelveli district.

6 Sri J. J. Devolois, American Arcot Mission, Katpadi, North Arcot district.

7 Sri T. Vinayaka Mudaliar, President, Madras Veterinary Association, Madras.

8 Sri R. Natesan, Secretary, District Congress Committee, Pudukkottai, Tiruchirappalli district.

9. Sri T. Linga Reddy, Chinna Vellagonda Palli, Hosur Cattle Farm, Salem district.

Officials.

1 Sri D. Pattabhiraman, GMVC, A.I.D.I., Director of Animal Husbandry, Madras.

2 Sri A. Venkatesan, I.A.S., Director of Agriculture, Madras.

3 Sri T. Ananthapadmanabhan, GMVC, Deputy Director of Animal Husbandry (Livestock), Madras.

4 Sri M. A. Hafeez, Joint Registrar of Co-operative Societies, Madras.

5. Sri C. G. Ranga Bashyam, I.A.S., Milk Commissioner, Madras.

(b) Subjects discussed—

1 Subsidised private cattle farm.

2 Trial of Cross breeding with brown swiss semen at Hosur Farm.

3 Breed with a plan to get a calf every year.

4 Starting of Co-operative Livestock Farms.

5 One Government model cattle farm in each district.

6 Opening of a Sheep Farm in Tirunelveli district.

7 Establishment of at least one grass farm of suitable size in Community Development or National Extension Service Block adjacent to forest areas.

8 Programme to develop milch breeds under goshala development scheme first in Devasthanams.

9 Provision of a mobile propaganda unit with film show in Animal Husbandry matters.

10. Steps for the improvement in Murreh buffaloes in the State owing to their inadequacy in numbers.

11 Request to place the report of the sub-committee on exemption of land set apart for approved cattle farms from land ceiling.

12 Creation of a separate Engineering section for the Animal Husbandry Department to speed up the building programme.

13 Up-grading the post of the Superintendent, Livestock Research Station, Hosur Cattle Farm and providing him with necessary assistance for the effective implementation of various schemes.

14 Stocking of Murreh buffaloes in the Livestock Farm, Alamadhi.

15 Construction of permanent building for the location of the Veterinary Dispensary. Pattukottai in Thanjavur district.

16 Offering incentive to owners to rear calves of known breeds.

17 Provision of facilities for members of Co-operative Milk supply societies for supply of milch animals of recognized breed.

18. Appeal to help the All-India Cattle Show Committee to collect funds for its building activities.

(c) The Second meeting of the Board was held at Orathanad on 29th March 1960 with the following changes in the personnel of the board: Sri V. Thillai Govindan, Deputy Secretary to Food and Agriculture department acted as Secretary to the Board. Sri T. M. Kutti Krishnan Nambiar, Special Deputy Registrar of Land mortgage banks attended the meeting representing the Registrar of Co-operative Societies. Sri M. J. John, B.S.C., (Agriculture) M.A., M.S. American Arcot Mission, Katpadi was substituted as member in place of Sri J. J. Devalois, American Arcot Mission.

(d) Subjects discussed at the Second Meeting:—

1 Establishment of one more milk colony at Kattupakkam.

2 Revival of male stock distribution scheme.

3 Intensification of cock exchange scheme.

4 Distribution of Haryana Cattle throughout the State.

5 Rearing of Murrah buffalo calves by Government and distribution to recognized breeders.

6 Creation of a squad for compulsory castration of bulls.

7 Replacement of the old stallion at Hosur Cattle Farm

8 Acquisition of Poramboke lands, the Chatram compound, Eastern and Western Garden at Orathanad.

9 Expansion of Eachankottai Annexure of the District Livestock Farm, Orathanad.

10. Starting a Key village centre in any one of taluk headquarters of Thanjavur district.

11. Inclusion of cross-bred approved bulls in the premium scheme.

12 Formation of a committee of experts in Genetics, Nutrition, Dairying and Cattle Breeding to evolve a new type of animal best suited for our needs.

13 Declaration of ownership of breeding bulls distributed under the Key Village Extension Scheme.

14 Raising of subsidy from Rs. 30 to 50 for breeding bulls maintained in Key Village Extension Centres.

15 Location of more milking cows to meet the demand for milk from the Pudukottai Town.

16 Transferring of dry cattle from the town farm to Machuvadi Cattle Farm.

17 Opening of a new sheep farm at Pudukkottai.

18 Grant of subsidy to graded progeny of buffaloes in rural areas.

19 Removal of slaughter house from Mathagiri Panchavat area in Hosur taluk

20. To classify the northern part of Hosur as Hathikar tract.

21 Rearing of haryana breed of cattle in Government farms.

22 Supply of milk to Government hospitals by Milk Co-operative in sealed cans

23 Purchase and distribution of haryana cattle from Delhi.

24 Request to start livestock or mixed farm in Tirunelveli district.

25 Request to introduce artificial insemination work at Sankarankoil.

26 To upgrade the Veterinary Dispensary in Bangala-Pudur of Coimbatore district.

27 Grant of special allowances to Assistants working in livestock farms of the State.

28 Request to enact legislation to prevent or ban useful cattle moving from Madras State to Kerala or other States.

29 Every municipality may be asked to start fodder or grass farm utilising sewage water.

30 A target of at least 2 district farms should be opened in a year straight away.

31 Exemption from land ceiling for the existing livestock farms run by private people.

32 Setting up of an organisation for the conduct of cattle, sheep and poultry shows in the State.

(xxii) Milk supply through private agencies.—(a) The collection and distribution of milk for public consumption in the State are done chiefly by the Co-operative Milk Supply Unions and Societies, Private Dairy farms and individual milkmen. The following are the important private dairy farms operating in the various districts of this State.

(b) Private dairies.—The private dairies that were functioning in the districts are detailed below:—

						Name of dairy.
						District.
						Name of dairy.
Madras	..	..	..	..	..	(1) Loyola College Dairy Farm Nungambakkam.
						(2) Madras Pinjarapole.
						(3) North India, Ramanuja Goshala of Triplicane.
Chingleput	..	..	..	..	..	(4) Messrs. C.M.V.R. Agriculture Corporation Dairy Farm, Chunarpet.
The Nilgiris	..	..	..	..	..	(5) A dairy farm was maintained by the Ootacamund Municipality for the supply of milk in Ooty town
Madurai	..	..	..	..	..	(6) Narendra Dairy Farm, private limited, Nerkarapatti.
						(7) Dairy Farm, Idayakottai.
						(8) Dairy Farm, Angunagar Cattle Farm, Dindigul.
Tiruchirappalli	..	..	..	..	..	(9) St. Joseph's College Dairy Farm, Tiruchirappalli
						(10) Central Jail Dairy Farm, Tiruchirappalli.

study the disease problems under farm conditions and (v) to investigate and establish suitable grasses that will withstand the weather conditions of the area.

Besides the selective breeding carried on, the Indian Council of Agricultural Research has supplied exotic breeds such as Romney marsh for cross breeding work.

Strength of the farm.—(i) The strength of the farm at the beginning of the year was 416 as against 690 in the previous year.

(ii) There were 171 additions including the two Kugishov rams received during the year and 49 disposals as shown below :—

Additions, (1)			Disposals, (2)		
By births	189		By sale for breeding culling and auction.	21	
By receipts	2		By deaths	28	
	<u>171</u>			<u>49</u>	

Thus there were 538 animals at the end of the year as against 418 animals in the previous year as detailed below :—

Serial number Breed.	Rams.	Ewes.	Ram lambs.	Ewe lambs.	Others.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 Romney Marsh ..	9	..	..	..	..	9
2 Nilgiris	23	201	42	44	..	310
3 Romney Marsh Nil- giris cross.	46	97	29	34	..	206
4 F2. Flock ..	..	..	7	4	..	11
5 Russian Romney marsh	2	..	..	..	..	2
Total ..	<u>80</u>	<u>298</u>	<u>78</u>	<u>82</u>	<u>..</u>	<u>538</u>

Two kangayam work bullocks were in the farm throughout the year.

(d) *Mating.*—The policy adopted on breeding in the farm is as follows :—

1. Selective breeding of Nilgiris breed sheep.
2. Cross breeding of Nilgiris sheep with the Romney marsh ram.
3. Mating of F1 ewes with Romney Marsh Rams and lastly mating of F1 ewes with F1 Rams.

There were two mating seasons that is in April-May 1959 and September, October 1959. The details of matings are given below :—

Under selective breeding, for the two seasons, 188 ewes were allowed to the 3 rams out of which 124 were served resulting in 85 lamb births giving a percentage of 44.7 lambs to the ewes allowed. Under cross breeding of the Romney marsh with the Nilgiris, during the seasons, 152 ewes were allowed to the 6 rams out of which 83 ewes were served resulting in 49 lamb births giving a percentage of 32.2 lambs to ewes allowed. Under forward mating, for the 4 Romney marsh rams, 80 ewes were allowed. Forty-nine ewes got served and 13 of them lambed giving a percentage of 16.25 lambs to the ewes allowed. It will be observed from the above facts that the percentage of birth is satisfactory, under selective breeding. Under Cross breeding the Romney Marsh rams are making good services only in autumn and they are not very active in spring.

(j) *Soil conservation*.—Great importance is attached to this problem and in all places where reclamation has been done to establish pasture, necessary trenches and gullies have been provided. No animal is allowed to graze in this area till the grasses completely cover the area. Further in order to avoid very close grazing rotational grazing of sheep is practised, so that each area has a rest period.

(k) *Extension work*.—The flockmen visited the surrounding villages, dewormed and sheared the sheep and did propaganda on how best to maintain sheep. The work turned out by the flockmen are furnished below :—

1 Number of villages visited	...	...	...	...	...	622
2 Number of rams castrated	...	...	...	...	...	464
3 Number of sheep dosed with phenovis	...	...	...	...	...	5,934
4 Number of sheep washed	...	...	...	...	...	1,786
5 Number of sheep sheared	...	...	...	...	...	1,786
6 Number of sheep sprayed with Gammaxane	...	...	...	...	...	6,310
7 Number of sheep hooves pared	...	...	...	...	...	541
8 Number of rams inspected	...	...	...	...	...	146
9 Number of lambs born to rams inspected	...	...	...	...	...	267

(l) The following distinguished gentlemen visited the farm during the year besides the departmental officers :—

Visitors.

- 1 Sri Sreenivasa Ayyar, B.A.B.L., M.L.A., Member of Livestock Improvement Board.
- 2 Sri S. V. Subbiah Mudaliar, M.L.A., and Member of Livestock Improvement Board.
- 3 Sri Sattanada Karayalar, M.L.A.
- 4 Sri Lazar, M.L.A., and Tourist Officer, Ootacamund, with a party of pressmen including Anandavikatan.
- 5 Sri A. P. Jain, Food and Agriculture, Minister, Government of India.
- 6 Sri L. Sahai, Animal Husbandry Commissioner, Indian Council of Agricultural Research, New Delhi.
- 7 Sri P. G. Pande, Director, Indian Veterinary Research Institute, Izatnagar.
- 8 Sri S. V. Sathe, Director (Wool), Khadi and Village Industries Commission, Bombay and Minister of Indian Council of Agricultural Research, Sheep and Goat Wool Committee.

(ii) *Wool Analysis, Laboratory, Ootacamund*.—(i) During the year under report 703 samples were taken up for analysis for length, thickness, medullation and number of crimps per inch. They were analysed for length by Burn's taut method. Mean thickness and the medullation percentage by using the Rauseh and Lomb VH fibre projector; scoured yield by the laboratory method; the number of crimps by using the magnifying glass and the density (i.e., the number of fibres per sq. cm. area) by using the weight and number method; and the results are recorded.

for each lass of sheep is furnished in tabular form. The number of scales per 100 microne length of the fibre was recorded by actually counting using the "Alkathene" film strips and the impression device.

Class of sheep.	Mean length in M.M.	S.D.	C.V.	Mean diameter in Microns.	S.D.	C.V.	Average number of crimps per inch.	Density average number of fibres.
							PER SQ.	C.M. AREA.
R.O. rams	115.51	30.3	22.0	22.26	4.38	19.8	6	3049
R.O. ewes	108.23	23.6	20.8	25.77	6.39	24.9	5	3318
Nilgiri rams	92.69	20.6	22.2	27.48	5.19	18.9	6	2018
Nilgiri ewes	79.98	13.6	16.9	27.04	6.26	22.8	6	2407

The visitors who visited the sheep farm during the year invariably went round the laboratory and saw the working of the laboratory.

(iii) *Sheep Section of the Livestock Research Station, Hosur Cattle Farm.*—(i) The Sheep section attached to the Livestock Research Station, Hosur Cattle Farm continued to function during the year.

(ii) Three breeds of sheep are maintained at the farm, namely the Bellary, the Bikanir and the Mandya.

(iii) The Bikanir flock is being maintained for the production of stud rams for upgrading of the woolly variety of sheep in the plains of our State.

(iv) The maintenance of the Mandya flock which is a mutton type has for its object, production of Madhya rams for introduction among the flock of hairy sheep in the State to improve their mutton quality.

(b) *Strength.*—There were 338 sheep in the beginning of the year. The additions and disposals effected during the year are as follows :—

Additions.				Disposals.			
(1)				(2)			
By births	..	..	179	By sales	..	..	16*
.. purchases	..	..	..	.. transfers	..	..	2
.. receipts	..	..	..	.. auctions	..	..	29
				.. deaths	..	..	29
Total	..	..	179	Total	..	..	76

* Eight Bikanir rams and 8 Mandya rams were sold for breeding purposes during the year.

Thus at the end of the year there were 411 sheep as against 338 in the previous year. The breedwar strength as on 31st March 1960 is given below :—

	Rams.	Ewes.	Ram lambs.	Ewe lambs.	Total.
(1)	(2)	(3)	(4)	(5)	(6)
Bikanir	8	51	16	18	93
Bellary	2	11	4	5	22
Mandya	29	171	66	60	326
Total	39	233	86	83	441

(c) *Matings.*—There were two mating seasons that is in April-May 1959 and October, November 1959. The first mating season started on 15th April 1959 and the rams were removed on 31st May 1959. The

second mating season started on 15th October 1959 and the rams were removed on 30th November 1959. The details of mating are given below :—

Breed and ram's number.	Number of ewes put.	Number served.	Number lambd.	Average birth weight.
(1)	(2)	(3)	(4)	(5)
Mandya No. 79	..	17	17	13
Do. No. 101	..	17	17	14
Do. No. 118	..	19	19	16
Do. No. 79	..	37	23	19
Do. No. 101	..	39	39	29
Do. No. 116	..	37	37	26
Bellary No. 934	..	2	2	7
Do. No. 904	..	8	8	7
Bikanir No. 82	..	11	8	5
Do. No. 83	..	10	10	4

Breedwar fertility percentage worked out is as follows :—

										Season.	
Breed.										First mating.	Second mating.
										PER CENT.	
Manliya	..	..	..	..	..	..	..	..	..	81.1	} Could not be calculated since lambing is going on.
B.kanir	..	..	..	..	..	..	..	..	..	50.0	
Bellary	..	..	..	..	..	..	..	..	..	No ewes conceived.	

(d) *Shearing.*—Sheep were shorn twice a year that is in September and March with the shearing machine and the hand shears. Before shearing sheep were washed and dried.

(ii) *The details of shearing are given below :—*

Breed.	Total number of sheep shorn.	Total yield of wool.	Average yield per head.
		LB. OZ.	LB. OZ.
Bikanir	134	196 0	1 7
Bellary	26	29 6	1 2
Mandya	131	137 2	0 12

(iii) *Wool yield.*—The study on wool yield of sheep sexwar was carried out as in the previous year and the details are given below :—

Breed.	Adults.				During the period Yearlings.			
	Rams.		Ewes.		Rams.		Ewes.	
	LB.	OZ.	LB.	OZ.	LB.	OZ.	LB.	OZ.
Bellary	1	8	0	14	2	0	1	8
Bikanir	2	5	1	0	2	7	1	10

The details of good performers of various breed are furnished below :—

Breed.	Sex.	Tag. number.	Annual wool yield.
(1)	(2)	(3)	(4)
			LB. OZ.
Bellary	Ram.	934	3 0
Do.	Ram.	963	3 0
Do.	Ewe.	898	2 0
Do.	Ewe.	901	2 1
Bikanir	Ram.	83	4 12
Do.	Ram.	117	4 15
Do.	Ram.	119	4 8
Do.	Ewe.	163	2 10
Do.	Ewe.	126	2 12
Do.	Ewe.	176	3 0

(iv) *Wool analysis.*—Wool analysis was carried out by testing and recording the medullation percentage of every animal. All the wool was graded and stored according to region of the body, colour, age, breed and quality.

The flock average percentage of medullation for different breeds are furnished below:—

Breed.	Number of samples tested		Per centage of medullation		Total tested for the year.	Flock average per centage of medullation for the year.
	1st season.	2nd season.	1st season.	2nd season.		
Bellary	2	..	46.0	..	2	46.0
Bikanir	82	..	12.4	..	82	12.4

Body weight.—All the sheep were weighed after shearing. Their average weight are furnished below:—

Breed.	Average body weight.			
	Rams.		Ewes.	
	LB.	OZ.	LB.	OZ.
Bellary	92	4	62	7
Bikanir	75	8	49	3
Mandya	72	6	52	7

(e) *Incidence of disease.*—There were 29 deaths among the sheep due to various causes. No contagious disease was prevalent during the period except Joine's disease which proved fatal in five animals. Appropriate remedial measures were undertaken for control of various diseases. Sheep were not allowed to graze near low lying areas and around the tanks. Weak lambs were specially cared for and cow's milk was given to them both morning and evening. Liberal amount of salt and mineral mixture were fed to sheep along with the feed. Once in a month all the sheep were weighed and their condition watched and necessary steps were taken whenever a decrease in weight was noticed by giving proper treatment and special food.

(f) *Mortality.*—The percentage of mortality was 5.6 per cent as against 10.04 in the previous year.

(iv) *Sheep Breeding Research Station, Chinnasalem.*—(a) The Sheep Breeding Research Station, Chinnasalem, is situated in Cuddalore-Salem-Vriddhachalam Cross road, which situation is almost a central point for the three district of Tiruchirappalli, Salem and South Arcot where nearly one-third the sheep population of the State are concentrated. The area of this Research station is 1,501.14 acres out of which 886.88 acres are in Salem district and the rest 614.96 acres are in South Arcot district.

(b) *Objects.*—The objects of the station are:—

(i) To improve the quality and quantity of wool yield of the local sheep so that the almost extinct cottage industry of cumbly weaving can be revived to its pristine condition.

(ii) To evolve white woolly sheep out of the local strain.

(iii) To study sheep diseases in this area and to educate the sheep breeders in the modern and scientific methods of sheep husbandry.

(iv) To supply pedigree rams to the public to grade up local stock.

(v) To serve as a model centre for maintenance of pastures, cultivation of new varieties of grasses and various methods of grazing; and

(vi) To carry out research in problems relating to sheep husbandry.

(c) *Strength.*—(i) The strength of the farm at the beginning of the year was 456 consisting of 18 rams, 247 ewes, 85 ram lambs and 106 ewe lambs of all breeds. During the year 439 were added and 244 were disposed off as detailed below:—

Additions.		Disposals.	
By birth	113	By sale through auction	12
Receipts from Rajasthan	326	Death	232
Total	439	Total	244

(ii) The stock at the end of the year was 651 consisting of 11 rams, 231 ewes among black woolly sheep 5 rams in bikaners, 50 rams, 72 ewes, 24 ram lambs and 20 ewe lambs under graded sheep with 238 under bikaner magre type. The breed war strength as on 31st March 1960 is given below:—

Breed.	Rams.	Ewes.	Ram lambs.	Ewe lambs.	Total.
(1)	(2)	(3)	(4)	(5)	(6)
Black Woolly	11	231	..	..	242
Bikanir	5	..	..	..	5
Graded	50	72	24	20	166
Total	66	303	24	20	413

(d) *Mating.*—The mating was carried out during May, June 1959. Out of the total of 124 ewes allowed for mating to the 4 bikanir rams, 109 ewes came to "heat" and got served. The percentage of ewes served to ewes allowed works to 87.9 per cent.

(ii) *Lambing.*—There were 108 births during the year ending 31st March 1960 out of which 59 were ram lambs and the rest were ewe lambs. Only one ewe gave birth to twins.

(e) *Shearing.*—The sheep were shorn during the month of August 1959. Second shearing scheduled in February 1960 could not be done as the condition of sheep went down due to "Aluminium gel sheep pox vaccination".

(ii) The details of sheep shorn during the year under report are tabulated below:—

Serial number and class of sheep.	Number of sheep shorn.	Quantity of wool obtained in G.M.S.	Average yield in G.M.S.
(1)	(2)	(3)	(4)
1 Black Woolly (purchase)	217	21,000	96.8
2 Black Woolly (Farm bred)	15	2,300	153.3
3 Black Woolly rams (Farm bred)	11	1,625	147.7
4 Graded rams	10	2,075	207.5
5 Graded ewes	11	2,350	213.6
6 Graded yearling rams	10	2,325	232.5
7 Graded yearling ewes	22	5,775	262.5
8 Bikanir rams	4	3,400	850.0
Total	300	40,850	136.1
9 Magra sheep rams	249	1,51,975	610.0
10 Magra sheep ewes	47	22,050	469.0

(iii) All the wool produced was sold to the cumbly weaving centre at Ammaigaram which is a cottage industry centre under theegis of the Women's Welfare department.

(f) *Exhibitions and cattle shows.*—(i) Four bikanir rams, one bull, three cows and three Heifer calves of Alambadi breed were exhibited at the Southern Regional Cattle Show held at Madras, between 24th and 27th September 1959 and they were awarded certificates of merits.

(ii) A cattle and sheep show was conducted on 6th November 1959 during the Gosamvardhana week in this farm. Altogether 250 livestock entered for the show out of which 74 prizes worth Rs. 250 were awarded.

(iii) Specimens of different varieties of fodder grasses raised in the farm were exhibited at the village leaders camps at Chinnasalem and Thalaj-vasal areas and at the District Cattle Show held at Chidambaram.

(g) *Incidence of diseases and mortality.*—Sheep are periodically dewormed with phenovis. Dipping them was also being regularly done to prevent tick infestation, etc., 232 sheep died during the year suspected to be due to the reaction of the Aluminium gel sheep pox vaccination. All the farm stock were protected against Anthrax and other prevalent epidemic diseases. One Alambadi cow and another Alambadi heifer calf died during the year and percentage of mortality on number of cattle maintained worked out to 2.98 per cent.

(h) *The receipts and expenditure of the farm are as follows:—*

	1959-60.	1958-59.
	RS. NP.	RS. NP.
Receipts	4,021 16	154 91
Expenditure	97,360 17	53,172 31

(i) *Visitors.*—Besides the departmental officials, the names of important personalities who visited the farm are furnished below:—

1. Sri M. Bakthavatsalam, B.A., B.L., Minister for Food and Agriculture, Madras.
2. Sri Natarajan, M.L.A., Kallakurichi.
3. Rao Sahib Dr. T. Vinayaka Mudaliar, G.M.V.C., Editor, *Indian Veterinary Journal*, Madras.

(v) *Sheep Breeding Research Station, Kattupakkam, Chingleput district.*—(a) This farm is situated in the Kattupakkam Reserve Forest in Chingleput district just on the western side of the Grand Southern Trunk Road at the 25th mile from Madras. The farm has been started on 12th September 1957 with the object of increasing the body weight of the indigenous sheep by cross breeding with rams of suitable breeds, scientific feeding and disease control. It extends over an area of 515 acres. During the year under report the building to accommodate the office was completed.

(b) *Rainfall.*—The farm area received a total rainfall of 40.53 inches spread over 60 rainy days during the year and this corresponds to the normal yearly average. 50 acres of the farm out of 515 acres all of which was shrub jungle at the time of taking charge has been cleared of shrubs and foot paths have been laid. As far as the water-supply is concerned out of the three trial wells, one has been converted into a pucca one and the remaining two, will be made usable shortly.

(c) *Strength.*—There were 301 sheep at the beginning of the year as detailed below:—

Breed.	Rams	Ewes.	Ram lambs.	Ewe lambs.	Total.
Mecheri	4	93	15	16	128
Mandya	2	19	7	9	37
Ramnathapuram	1	88	17	13	119
Local	..	14	1	2	17

Six rams were purchased for breeding purposes. There were 185 births during the year as detailed below:—

Breed.	Ram lamb.	Ewe lamb.	Total.
Mecheri	33	39	77
Mandya	7	7	14
Ramnathapuram	42	36	78
Local	11	5	16

There were 156 deaths and two sheep were sold by auction. The strength at the end of the year was 334 sheep as detailed below:—

Breed.	Rams.	Ewes.	Ram lambs.	Ewe lambs.	Total.
Mecheri	15	78	15	19	127
Mandya	8	22	2	3	35
Ramnathapuram	17	84	20	22	143
Local	..	15	10	4	29
	40	199	47	45	334

(d) *Disease control, feeding and management.*—The sheep in the farm were periodically dewormed and sprayed and protected against Anthrax by spore vaccine. All the sheep in the farm were fed with concentrates as a supplementary diet. The animals were periodically weighed and weights recorded. Weak ones were specially cared for. The farm has not yet reached the stage for sending out of superior rams for upgrading work in the field.

(e) *Fodder cultivation.*—A total area of 45.24 acres were brought under cultivation for fodder production. The following quantities of fodder and grams were produced:—

Cholam—13,073 lbs. fodder and 858 lbs. grain.

Teosante—721 lbs. fodder and 339 lbs. green.

Green gram Busa—140 lbs. fodder and 53 lb. of seeds.

Dhaincha—53 lbs. of seeds.

Horse gram busa—7,237 lbs. and 3,617 lbs. of seeds.

A total number of 2,569 seedlings of shade trees were planted in the farm during the year.

(f) *Visitors.*—Besides the departmental officers the following gentlemen visited the Farm:—

1. Animal Husbandry Commissioner, New Delhi
2. Sheep Research Officers from Australia.
3. Village leaders of Poodi Development Block.

(g) *Receipts and Expenditure.*—

Receipts—Rs. 53.41.

Expenditure—Rs. 31,494.08.

(vi) *Sheep Farming and Demonstration Units.*—(a) There were seven sheep demonstration units operating in the State during 1959-60 with Headquarters at Kancheepuram, Cuddalore, Tiruchirappalli, Virudhunagar, Madurai, Salem and Coimbatore. These units carried out intensive propaganda on scientific methods of breeding, feeding and management of sheep and better and cleaner production of wool in their respective jurisdictions. The Veterinary Assistant Surgeons in-charge of the units also undertook treatment for ecto and endo-parasites of sheep, during their routine inspection of village flocks. The conspicuous improvement in the general health of the sheep and quality of wool among the treated sheep served to practically demonstrate the advantages of scientific Sheep Husbandry.

(b) The units carried out practical demonstrations on shearing with improved shears in village flocks and trained local enthusiastic men in shearing with improved shears. Demonstrations were also conducted on improved methods of washing, and classifying wool according to their colour and quality. Castration of scrub rams was also one of the chief items of work undertaken by these units. Advantage was taken by the Units of the various shows and exhibitions conducted in the State for doing propaganda. They invariably

attended the Village Leaders Camps and gave lectures on Sheep Husbandry. They also purchased 1,273 rams on behalf of the Community Development Blocks for distribution in the Blocks for upgrading work.

(ii) The details of work done by the Units during the year under report is furnished below:—

1 Number of villages visited	1,072
2 Number of shearing demonstrations held	279
3 Number of sheep washed	18,827
4 Number of persons trained in shearing	275
5 Number of castrations done	1,528
6 Number of shows and exhibitions attended	41
7 Number of stud bucks and rams inspected	941
8 Number of sheep shorn	16,950
9 Number of sheep dewormed	50,200
10 Number of sheep deticked	76,262

(vii) *Grading Scheme for mutton sheep at Hosur.*—(a) This is a scheme for improving the mutton quality of the Local Sheep by cross breeding with selected mandhya rams. The scheme was in operation in and around Hosur taluk. Controlled mating with superior rams along with systematic castration deworming and deticking operations among the local sheep were undertaken in the villages covered by the Scheme. The scheme has produced spectacular results which have received the appreciation of the people.

One hundred and ninety-nine rams have been distributed under this scheme out of which, in the case of 124 ownership was declared in favour of the custodians. A total of 4,298 lambs have been born to the superior rams during the year.

(b) The work turned out under the scheme during the year is furnished below:—

1 Number of sheep dewormed	19,051
2 Number of sheep deticked	6,338
3 Number of sheep washed	2,161
4 Number of rams castrated	602
5 Number of sheep shorn	2,650
6 Number of sheep protected against contagious diseases	2,267
7 Number of progeny born	4,238
8 Number of persons trained in shearing	24

(viii) *Pilot scheme for the improvement of sheep in the Key village areas.*—(a) This scheme which was started in the Key village centres of Kangayam and Vellakoil continued to work during the year under report.

The villages and hamlets covered by the Key village areas were regularly visited and advice with regard to feeding, breeding and disease control given to the people by the flock-men.

(b) The work turned out at these two centres during 1959-60 is furnished below:—

	Number of rams at the beginning of the year.	Number distributed during the year.	Balance at the end of the year.	Number of sheep dewormed.	Number of sheep deticked.	Number of improved progeny born.	Number of scrub rams castrated.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Kangayam ..	45	..	45	3,774	1,335	609	19
Vellakoil ..	55	..	55	5,309	2,044	1,801	5

(c) The scheme is proving useful to the people and is bringing home to them modern methods of Sheep Husbandry.

(ix) *Sheep and Wool Extension Centres.*—(a) This scheme aims at improving the quality and quantity of Woolly Sheep in the State by grading up the local sheep by cross breeding with Bikanir rams. The scheme is to be worked out in eight centres which go by the name of Sheep and Wool Extension Centres. The places selected for the centres have a population of about 3,000 ewes of breedable age and are located at—

1 Ammayagaram	..	..	} South Arcot district.
2 Ammayagaram II	..	..	
3 Veeraghanur	..	..	} Salem district.
4 Thondapade	..	..	
5 Thondapade II	..	..	} Tiruchirappalli district.
6 Murugur	..	..	
7 Sulur I	..	..	} Tiruchirappalli district.
8 Sulur II	..	..	
			} Coimbatore district.

(b) Two hundred and forty-six Bikanir rams intended for distribution under the scheme have been purchased and are kept at the sheep farm, Chinnasalem for acclimatisation, before distribution to the sheep owners. The actual distribution is expected to be made in 1961-62.

(c) The centres also undertake eradication of the endo and ectoparasites of sheep in the respective scheme areas. Propaganda and demonstration on improved Sheep Husbandry, use of modern methods of shearing, control of diseases, castration of scrub rams, are also items of work undertaken by the centres.

(d) During the year under report sheep shows were conducted in six of the centres.

(x) *Wool Utilization Centre, Sulur.*—(a) This centre was started on 19th March 1958. It has for its object, conducting of experiments to find out how best and in what all ways the different qualities of wool that is being produced in the State as a result of the various sheep developmental schemes can be utilised, so that the producer can derive the maximum benefit for his labour.

(b) The centre is in over all charge of the Veterinary Assistant Surgeon of the Sheep Demonstration Unit, Coimbatore. One weaver, an Assistant for him and two Flockmen are the staff working under the scheme. A designer is also a sanctioned post to be filled up by a suitable candidate very soon.

(c) The work of the centre during the year under report was, as detailed below:—

Twenty-five kilograms of black wool, 5,443 kilograms of Bellary wool and 22.68 kilograms of Bikanir wool were received at the centre and out of these six cumblies and four mufflers were manufactured by the Centre.

3. POULTRY.

Poultry Development work in the State was continued during the year through the Poultry Research Station, Teynampet, Poultry Units in the Livestock farms at Hosur and Orathanad, the poultry Demonstration Units at Veterinary Institutions and Poultry Extension Centres in rural areas, through encouragement of Private Poultry Farms by subsidising the

owners for the eggs and birds sold from them for breeding. Besides serving as centres of training they catered to the needs of the public for birds and eggs.

(i) *Poultry Development work in Livestock Farms.—Livestock Research Station, Hosur.*—(a) White leghorn, Rhode Island Red and Black Minorca breeds of poultry were maintained in the farm.

The flock consisted of 1,868 birds at the beginning of the year as against 1,386 of the previous year.

There were 3,415 additions and 2,794 disposals during the year as detailed below :—

Additions.		Disposals.	
(1)		(2)	
By hatch	2,463	By sale for breeding	946
By receipt from the Veterinary Disease Investigation Officer (Poultry), Ranipet.	6	By culling	781
		By transfers	3
By receipt from the Agricultural Institute, Katpadi.	946	By deaths	857
		Destructions	207
Total	3,415	Total	2,794

Thus at the end of the year there were 2,489 birds as against 1,868 birds in the previous year.

The breedwar strength is as follows :—

	Cocks.	Hens.	Chicks.	Total.
	(1)	(2)	(3)	(4)
White Leghorn	20	164	1,296	1,480
Rhode Island Red	16	140	676	832
Black Minorca	2	14	161	177
Total	38	318	2,133	2,489

(b) *Egg production.*—There was an opening balance of 859 eggs. Fifty-one thousand seven hundred and thirty-seven eggs were collected during the year under report as compared to 30,639 eggs of the previous year. The receipts and disposals of the eggs during the year are furnished below :—

Receipts.		Disposals.	
(1)		(2)	
Opening Balance	859	Kept for hatching	5,050
Collected during the year ..	51,737	Sold for hatching	1,739
		Transferred to other stations for hatching	8,190
		Sold for table	28,401
		Transferred to other stations for table	6,423
		Broken or fed to chicks ..	1,821
		Free transfer to Artificial Insemination Centre and Dairy	409
Total	52,596	Closing balance	531
		Total	52,596

Egg yield during the year was satisfactory. In addition to farm hatching 1,730 hatching eggs were sold to the public and 8,190 hatching eggs were transferred to other stations for hatching purposes.

(c) *Percentage of hatchability.*—The overall percentage of hatchability for 5,050 eggs set for hatching was 49 per cent as against 60 per cent in the previous year.

(d) *Performance of laying hens.*—There was an average of 309 hens of all breeds yielding 51,737 eggs giving an overall whole flock average of 167.4 as compared to 176.81 laying hens yielding 30,639 eggs giving whole flock average of 173.3 of the previous year.

The number of pullets that had completed their first year laying are given below breedwar with details of their performance :—

Breed.	Number of birds which completed their first year of laying.	Number of eggs laid in the pullet year.	Average egg yield.
(1)	(2)	(3)	(4)
White Leghorn	62	10,172	164.1
Rhode Island Red	83	14,223	171.3
Black Minorca	8	799	99.9

Breedwar performance are furnished below :—

Breed.	Average number of laying hens.	Total egg yield.	Average per hen.
(1)	(2)	(3)	(4)
White Leghorn	166.32	27,562	165.6
Rhode Island Red	131.5	22,670	172.4
Black Minorca	11.18	1,505	134.5

(e) *Incidence of diseases.*—(i) An outbreak of contagious coryza which occurred the previous year continued to be prevalent in a mild form during the period under report. Only nasal discharge and no other severe specific symptoms of coryza were present. All the birds which showed nasal discharge were segregated and treated with dihydrostreptomycin sulphate at 0.2 gm. dose per bird intramuscularly. Most of the birds responded to the treatment and the disease has almost disappeared in the farm. The egg production was not seriously affected on account of the prevalence of the disease since the infection was milder.

(ii) There was an outbreak of fowl pox also at the beginning and at the end of the year under report. The outbreak was mild and hence there were not many deaths. Regular vaccinations against fowl pox and Ranikhet disease were conducted on all batches of chicks. Vaccinations with pigeon pox virus on chicks of 2 weeks old and with fowl pox virus on chicks of 6 weeks old were conducted. Ranikhet disease vaccination was also conducted on chicks of 8 weeks old.

(iii) *The details of mortality are furnished below—Avian Leucosis complex.*—There were only 6 deaths during the year. This disease which was prevalent in the farm previously continued to be prevalent during this year also. Visceral forms were generally met with. Blood smears of suspected birds were examined periodically and positive cases were called out for table purposes.

Coccidiosis.—There were only 10 deaths. All the affected groups of chicks were treated with sulphamezatine Sodium 16 per cent solution which is also used as a preventive and the same is found to be effective.

The other conditions that caused mortality among the birds are shown below :—

1 Crop bound	87
2 Hatched weak	426
3 Egg bound	7

4 Rupture of liver	38
5 Rupture of yolk sac	36
6 Abscess liver	5
7 Fowl pox	42
8 Contagious coryza	63
9 Abscess lung and kidney	9
10 Enteritis	18
11 Debility	3
12 Nephritis	7
13 Internal Haemorrhage	23
14 Oophoritis	1
15 Myocarditis	1
16 Volvulus Intestines	9
17 By the smoke of the foster motherlamp during night ..	61
18 Rupture of heart	3
19 Tumour	2

(iv) *Mortality*.—There were 857 deaths as against 431 deaths in the previous year. The increase in the total number of deaths this year when compared to the last year was due to corresponding increase in the stock of birds and the receipt of 946 day old chicks from the Agricultural Institute, Katpadi for rearing under the All-India Poultry Development Scheme. The percentage of mortality was 16.22 as against 11.21 in the previous year. The percentage of deaths to the total number of birds maintained has not increased much when compared to the previous year.

(ii) *District Livestock Farm, Orathanad*.—The poultry section which was opened on 10th July 1955 in this farm continued, to function during the year with a unit of white leghorn and Rhode Island Red breeds of birds.

(a) *Strength*.—There were 876 birds at the beginning of year as against 420 in the previous year. There were 1,336 additions and 988 disposals as detailed below :—

Additions. (1)				Disposals. (2)			
By hatch	1,336	By sale for breeding	246	.. .. .	218	.. .. .	462
.. .. .		.. sale of culled birds	218	.. .. .	462	.. .. .	62
.. .. .		.. deaths	462	.. .. .	62	.. .. .	
.. .. .		.. destruction	62	.. .. .		.. .. .	
Total	1,336	Total	988	.. .. .		.. .. .	

This at the end of the year there were 1,224 birds as against 876 birds in the previous year as detailed below :—

Breed. (1)	Cock. (2)	Hen. (3)	Chicks. (4)	Total. (5)
White Leghorn	41	131	745	917
Rhode Island Red	4	35	268	307
Total	45	166	1,013	1,224

(b) *Egg production*.—During the year 17,572 eggs were produced as against 14,090 eggs in the previous year. The receipt and disposal of eggs are detailed below :—

Receipts. (1)		Disposals. (2)	
(a) Opening balance on 1st April 1959	161	(a) Kept for farm hatch	3,290
(b) Receipts	17,615	(b) Sold for hatch	1,210
		(c) Sold for table	6,602
		(d) External Transfers for hatch	2,940
		(e) Fed to chicks	3,317
		(f) Fed to sick animals	68
		(g) Closing Balance	349
Total	17,776	Total	17,776

(c) *Percentage of hatchability*.—During the period 2,540 eggs were kept for farm hatch and 1,336 chicks were hatched out giving a percentage of 52.6 per cent of hatchability as against 45.6 per cent in the previous year.

(d) *Egg yield*.—On an average 102.6 layers in white leghorn and 36.5 layers in Rhode Island Red yielded 13,124 and 4,448 eggs respectively.

Breeder performances are detailed below :—

Breed. (1)	Average number of hens. (2)	Total egg yield. (3)	Average yield per hen (4)
White Leghorn	102.6	13,124	129.5
Rhode Island Red	36.5	4,448	122.4

(e) *Incidence of disease*.—The general condition of farm birds remained satisfactory during the period under report. There were 462 deaths due to "hatched weak" coryza, enteritis, snake bite heat stroke, paralysis and other, normal causes.

Mortality.—There were 462 deaths as against 254 in the previous year which works out to a percentage of 20 as against 19 per cent in the previous year.

(iii) *Poultry Research Station, Teynampet, Madras*.—(a) This station was started in the year 1941 with a view to study (i) the performance of exotic birds under the local environmental conditions, (ii) the potentialities of the different breeds for increased egg production, egg size, body weight under farm conditions and to evolve an economic and superior strain by selective breeding, (iii) to produce and rear birds intended for distribution under the All-India Poultry Development Scheme and other State Schemes under the Second Five-Year Plan, and (iv) to serve as a central institution for training both departmental and private candidates in Poultry Husbandry.

The following breeds of exotic poultry were maintained in the farm during the year (i) White Leghorn, (ii) Rhode Island Red, (iii) Black Minor (a), (iv) Light Sussex, (v) Brown Leghorn, (vi) Black Leghorn and (vii) Australorp.

(b) *Strength*.—(i) At the beginning of the period there were 6,146 birds as against 6,803 birds in the previous year. During the year there were 11,195 additions and 13,590 disposals as detailed below :—

Additions. (1)				Disposals. (2)			
By hatch	10,325	By sale for breeding	1,824	.. .. .	3,423	.. .. .	311
.. purchase	801	.. sale for table	3,423	.. .. .	311	.. .. .	7,627
.. transfer	69	.. transfer to other stations.	311	.. .. .	7,627	.. .. .	375
		.. death	7,627	.. .. .	375	.. .. .	
		.. destruction	375	.. .. .		.. .. .	
Total	11,195	Total	13,590	.. .. .		.. .. .	

(iv) *Poultry Development Schemes in Madras State*—(a) *All-India Poultry Development Scheme*.—The salient features of the scheme are—

(1) Rearing of baby chicks at Government Farms up to the age of about 5 months, protecting them against contagious diseases prior to distribution at special concessional rates in suitable community development blocks at the rate of two hens and one cock per person. During the year under report 4,000 baby chicks were purchased and reared at the Poultry Extension Centre, Polivakkam and at the Livestock Research Station, Hosur for distribution under this scheme.

Extension work development and marketing which will consist of—

(a) distribution of 100 cocks and 200 pullets at concessional rates of Rs. 2 each to 100 persons at one trio per person in the Development Block chosen.

(b) Opening of a demonstration centre or unit for each block to be located either in the Veterinary Dispensary if there is one or elsewhere in the Block Headquarters. The centre is intended to demonstrate modern methods of Poultry keeping and management, to interested persons in the block area. The centre will, besides helping the villagers in the marketing of the eggs, will distribute annually, 1,000 hatching eggs, at 16 nP. per egg.

(ii) During the year under report four more new centres at Nanjanad, Kootapally, Chingleput and Chengathurai were opened in March 1960 in addition to the already existing 17 centres functioning during the previous year. As the four new centres were opened only during March 1960 no work could be turned out in them. These centres have been supplied with 90 pullets and 10 cockerels for each centre to serve as foundation stock.

(c) The details of eggs collected and sold at the 17 centres are furnished below :—

Name of the Poultry Extension Centres.	Number of eggs produced	Number of eggs sold for hatching.
1 Gandhigram	6,316	3,303
2 Polivakkam	6,720	3,308
3 Krishnagiri Reservoir Project	2,487	463
4 Anuppinkulam	7,415	4,708
5 Kondanagram	4,114	2,449
6 Thuringapuram	5,661	1,615
7 Bhuvanagiri	880	404
8 Kottaram	7,729	5,875
9 Kothandagi	1,011	600
10 Palayakottai	6,891	2,937
11 Kottapattu	11,171	8,751
12 Veppanthattai	3,836	2,315
13 Tiruvankulam	9,899	6,468
14 Dunsandle Sheep Farm, Ottamund	3,935	1,848
15 Mukkupe i at Kandawampuram	1,789	1,297
16 Kodaikanal	3,188	1,136
17 Peraiyur	913	54

An egg de-fertilisation unit will be part of each centre where the eggs collected from the villagers will be defertilised to increase the keeping quality of the eggs so that the eggs may be disposed off to the best advantage of the producer.

Training of 5 suitable farmer youths every year for a period of six weeks on a monthly stipend of Rs. 30 so that these trained farmers can be used as supplementary propagandists and demonstration agencies. Sixty-three farmers were trained in Poultry Husbandry during the year under the scheme.

(d) One town for each demonstration centre will be selected and 20 persons in that town will each be given 9 hens and one cock at a concessional rate of Rs. 5 per bird. Each such person is expected to serve as a practical guide to the people in the town in the matter of poultry development and husbandry, besides himself becoming a central figure in poultry breeding and management. Two hundred and eighty-eight birds were sold at the above concession rate to the public under this scheme during the year.

A grant of Rs. 50 as half cost of wire netting each to 5 individuals in each development block for purchase of wire netting for protection of poultry in the poultry runs from predatory animals.

Holding of poultry shows in each Development Block, every year at Rs. 100 per show for awarding of prizes, etc.

A sum of Rs. 13,000 was paid to private poultry breeders as subsidy during the year.

(a) *Poultry Improvement in Key Village areas*.—The 3 grading centres already established, continued to function during the year at Chidambaram, Malayandipattanam and Neikarapatti. The fieldman attached to each centre inspected the exotic cockerels distributed, did propaganda and carried out chemical castration of surplus desi cockerels. Two thousand and seventy-one graded chicks were hatched in these centres. One thousand two hundred and ten cockerels of improved variety were distributed on an exchange basis. Seven hundred and twenty-five exotic cockerels were sold to people in Key Village areas. Five thousand and nine hundred sixty-six birds were protected against Ranikhet disease.

(b) Eleven new grading centres were opened during the year in the following places :—

1 Kangayam.	7 Kancheepuram.
2 Chinnadharapuram.	8 Mulanoor.
3 Hosur Cattle Farm.	9 Ayakudi.
4 Aravakuruchi.	10 Vendasandur.
5 Sankarandampalayam.	11 Nagercoil.
6 Kilicheri.	

These centres were opened during the fag end of the year under report and therefore no work could be turned out.

(d) *Poultry Production Centres*.—The three poultry production centres at Malli, Salaiaamangalam and T. Kallupatti continued to function during the year. These centres sold 499 birds and 3,129 eggs for breeding.

(e) *Research*.—(i) The scheme for conducting experiments on economics of poultry rations was continued during the year.

(ii) The object of the scheme is to assess the nutritional value of farm and industrial waste material not fit for human consumption and to compute a balanced ration for poultry from out of these materials. The experiments were conducted by actual feeding trials. The details are furnished below :—

Cereals.—In all these trials maize was taken as control ration. Comparative nutritive value of ragi, cumbu and cholam were studied. It was found that growth rate at eight-week age was as follows :—

	Maize.	Ragi.	Cumbu.	Cholam.
Pullets	9.5	9.2	9.14	8.6
Cockerels	12.7	11.5	11.12	10.2

Under protien trials, fish meals was taken as control and nutritive value of pencillin mycelian residue and tamarind were studied and the result is tabulated below:—

						Fishmeal.	Pencillin mycelian residue.	Tamarind.
Growth rate pullets	..	..	..	..	..	9.5	9.10	4.6
Cockerels	..	..	..	..	..	12.7	11.12	5.9

Comparative trials of fibre bran—

						(Standard) wheat bran.	Rice bran.
Pullets	..	..	..	..	..	9.5	5.8
Cockerels	..	..	..	..	..	12.7	7.6

(iii) It is proposed to conduct trials with samai and varagu among sereals, cotton seed oil-cake and silk worm purpæ residue among protenins and also molasses, mango seed, kernels and cowdung extract in future.

(v) *Poultry development in districts.*—(a) Poultry rearing has of late assumed considerable importance both in rural and urban areas. On account of the comparatively small capital required for starting of units and quick returns, poultry meat and eggs help to solve the food shortage of the country to some extent and supplies the much needed protien portion of human food. Poultry Farming will be can easy and quick method for rural economic development. Hence its importance and special attention paid to it. The steps which have been taken by the department to improve the local indigeuous poultry for higher production of eggs and to spread exotic breeds of poultry which are reputed for poduction of larger number of eggs and more quantity of meat, are as follows:—

1. Supply of exotic pedigree birds and eggs at noiminal cost from Government farms and demonstration units;
2. Subsidizing the existing priyate Poultry Farms;
3. Through distribution of birds and eggs free of cost or at half cost or in exchange of a desi bird, in the area under National Extension Service and Community Development SSchemes;
4. Opening of model units in the Community Project and National Extension Service areas; and
5. Rendering free professional help to private poultry farms.

(b) The 37 poultry demonstration units attached to the Veterinary Institutions in the districts that were functioning at the beginning of the year continued to do so throughout the year under report, no new units having been started. The breed maintained, number of birds in stock and receipt and disposal of eggs in each of these units are furnished in statements annexed to this report. A total number of 488 exotic birds were sold for breeding and 136 birds for table as against 798 and 95 respectively during the previous year.

(c) The total number of 16,556 eggs were sold to the public for hatching and 8,059 eggs were set for hatching in the institutions as against 15,055 eggs and 4,728 eggs respectively of the previous year. Twenty-nine per cent of the total eggs received in the units were utilized for hatching during the year. Besides the abovementioned units there were two poultry units one at the Veterinary College, Madras, to impart practical training in Poultry Husbandry to the College students and the other at the Institute of Veterinary Preventive Medicine, Ranipet, for the production of eggs

and chicks for the manufacture of Ranikhet disease, fowl pox, and pigeon pox vaccines and for laboratory research work. The details of exotic birds and eggs sold for breeding and table in these two units are given under the concerned districts separately.

(i) *Chingleput district.*—There were three poultry demonstration units at the Veterinary Hospital, Kancheepuram and at the Veterinary Dispensaries, Tirukkalikundram and Kaliyampundy respectively. A total of 3,228 eggs were utilized for hatching and 46 birds were sold for breeding. The details of work turned out in these units are included in the statements xiii (a) and xiii (b) attached to this report.

One Poultry Extension Centre located in Polivakkam under All-India Poultry Development Scheme continued to function satisfactorily during the year. The centre had an opening balance of 127 birds. One thousand, one hundred and seventy birds were received by hatch making a total of 1,297 birds, of these 545 birds were transferred to other institutions, 33 were sold for breeding and 491 died. The balance was carried over. During the year 6,751 eggs were produced, out of which 2,010 were set for hatching, 3,308 were sold for hatching and the rest sold for table and fed to chicks except 73 which were carried over to next year's opening balance.

One hundred and fifty-eight private poultry farms were maintained in the block areas during the year under report.

(ii) *North Arcot district.*—The poultry demonstration unit attached to the Veterinary Hospital, Tiruvannamalai, continued to function during the year. Out of 534 eggs produced, 152 were sold for hatching and 48 set for hatching. The rest were either sold for table or fed to chicks. Out of 60 birds that the unit had during the year, 22 were sold for table and 16 died, the balance being carried over to next year's balance.

The unit attached to the Minor Veterinary Dispensary, Kalasapakkam, which was started under Community Development funds, produced 584 eggs, out of which 88 were sold for hatching, 472 for table and 24 were set for hatching at the unit.

The Poultry Extension Centre at Thuringapuram started under All-India Poultry Development Scheme continued to function during the year. The Centre had 167 white leghorn and 2 desi birds at the beginning of the year. One hundred and four chicks were hatched out at the centre, 25 pullets were received from American Arcot Mission, Katpadi, 19 were sold for breeding, 40 were culled out and sold for table, 107 died and 4 were sent to Veterinary Disease Investigation Officer (Poultry), leaving a balance of 128 birds at the end of the year. Out of 4,908 eggs collected, 448 were set for hatching and 1,063 sold for hatching.

The 12 model poultry units run by the American Arcot Mission, Katpadi, were brought under the subsidy scheme with effect from 1st June 1958 and of these five were closed down during the course of the year leaving 7 units at the end of the year. Under the scheme cockerels were sold for upgrading the desi stock in villages around Katpadi within a radius of 25 miles and each bird thus sold was given a subsidy of Rs. 3. During the year under report 198 birds were sold from the units and 2,129 eggs were sold for hatching. A sum of Rs. 528 has been recommended as subsidy.

Chick hatchery and Poultry Processing Scheme of American Arcot Mission, Katpadi, financed by Indian Council of Agricultural Research, New Delhi.—The pilot scheme for commercial chick hatchery and poultry processing, financed by the Indian Council of Agricultural Research, New Delhi,

and run by the American Arcot Mission, Katpadi, continued to function satisfactorily during the year under report.

The details of work done are given below :—

1 Number of eggs collected	38,573
2 Number of eggs set in the incubator ..	38,573
3 Number of eggs sold for table and other purposes.	Nil.

Birds—

(a) Opening balance of birds at the beginning of the year.	Nil.
(b) Number of birds hatched out during the year.	20,934
Total ..	20,934
(2) Number of birds sold to—	
(a) Village farms	1,211
(b) Individuals	2,551
(c) National Extension and Community Development areas.	4,671
(d) Poultry Development Officer, Madras ..	2,000
(e) Central Farm, American Arcot Mission, Katpadi.	460
(f) Culled and slaughtered	1,953
(g) Died	7,390
(h) Destroyed	698
Total disposed ..	20,934

A small poultry unit for the supply of birds and eggs required for experimental purposes is maintained at the Institute of Veterinary Preventive Medicine, Ranipet. The unit produced a total number of 4,550 eggs out of which 4,133 were used up for vaccine production and the rest were either fed to chicks or transferred to other sections. One hundred and eighty-eight birds and chicks were on stock on 1st April 1959. Three hundred and seventy-two birds were added by purchase and hatch, and 271 were received from other sections. Out of these 281 were transferred to other sections, 144 were sold by auction, 202 died leaving a closing balance of 204.

A sum of Rs. 1,364.74 nP. as subsidy to four private poultry breeders was given during the year under report under Second Five-Year Plan Schemes. A sum of Rs. 100 was sanctioned to the Principal, American Arcot Mission, Katpadi, for work done in connection with Poultry Development.

(iii) *South Arcot district.*—There were two poultry units attached to Veterinary Institutions at Cuddalore and at Kallakurichi. There was one poultry demonstration unit attached to Veterinary Dispensary, Panrutti, 29 birds were sold for breeding and 702 eggs were sold for hatching. Besides one Poultry Extension Centre started under All-India Poultry Development Scheme at Bhuvanagiri was functioning satisfactorily during the year. The work turned out at the centre has been given in a separate chapter.

A sum of Rs. 1,124.24 was given as subsidy to private poultry breeders for the purchase of incubators, wire netting, sale of birds for breeding and eggs for hatching.

(iv) *Thanjavur district.*—There were two poultry demonstration units attached to Veterinary Institutions at Thanjavur and at Nagapattinam.

Besides one poultry production centre was maintained at Salliamangalam with 237 birds. A total number of 3,339 eggs were collected and out of these 222 eggs were set for hatching at the centre itself and 951 eggs and 1,180 eggs were sold for hatch and for table respectively during the year. Thirty-six birds were sold for breeding.

In addition to these two poultry units were maintained at Village Livestock Improvement Centres, Alathambadi and Mayuram.

The details of work turned out at the units are shown below :—

	Alathambadi.	Mayuram.
Number of birds at the beginning of the year ..	98	92
Number of birds received by hatch ..	68	138
Number of birds supplied ..	7	105
Number of birds died and destroyed ..	44	54
Number of birds at the end of the year ..	115	71
Number of eggs produced ..	1,746	3,216
Number of eggs set for hatching ..	40	464
Number of eggs sold for hatching ..	109	816
Number of eggs sold for table ..	1,153	1,148

Besides, a Poultry Extension Centre started under All-India Poultry Development Scheme at Kothangudi continued to function well during the year. The centre sold 36 birds for breeding and 600 eggs for hatching. A sum of Rs. 200 sanctioned by the Collector under his discretionary grant was awarded as cash prize to two Private Poultry Farms in the district for good work done in poultry development.

(v) *Tiruchirappalli district.*—The poultry unit attached to the Veterinary Hospital, Pudukottai has been transferred to the control of the Superintendent, District Livestock Farm, Pudukottai from 16th December 1959. The unit produced 33 chicks and 20 birds were received from outside. Out of these, 2 were sold and 11 died. The rest have been carried forward. There were three Poultry Extension Centres opened under All-India Poultry Development Scheme at Veppanthattai, Tiruvarankulam and Kottapattu. The centre produced 588 birds and 20,820 eggs out of which 120 birds and 17,899 eggs were utilized for breeding and hatching respectively.

(vi) *Madurai district.*—Thirteen Poultry Demonstration Units were functioning in the Veterinary Institution at Thallakulam, Periakulam, Melur, Chatrapatty, Vellaloor, Varichoor, Kodaikanal, Pallapatti, Dharmathupatti, Athoor, Thirumalrayapuram, Alanganallur and Ambathurai. While leg-horn, Rhode Island Reds and Black Minorcas are the breeds reared. (Details are furnished in Statement 13-A and B).

Besides there were two Poultry Extension Centres at Gandhigram and Kodaikanal under All-India Poultry Development Scheme. These centres distributed 16 birds for breeding, 4,439 eggs for hatching and 1,903 eggs were set for hatching at the centres. In addition one Poultry Farm run by the Rural Extension Training Centre, T. Kallupatty continued to function with a view to impart practical training in Poultry Husbandry to the Gramasevak trainees of this institute. Four hundred and nine birds and 843 eggs were distributed by this farm.

Thirty Private Poultry Farms are also functioning in this district.

(vii) *Ramanathapuram district.*—There was one Poultry Demonstration Unit attached to the Veterinary Dispensary, Devakottai. Rhode Island Red Breed of poultry is maintained; 44 eggs were set for hatching at the Unit and 200 eggs were sold for hatching.

The Poultry Production Centre at Malli.—The Poultry Production Centre at Malli continued to function satisfactorily during the year with White Leghorn birds.

The details of receipt and disposal of birds and eggs are given below :—

BIRDS

Number of birds at the beginning of the year ..	125
Number of birds received by hatch	328
Number of birds supplied	28
Number of birds distributed	54
Number of birds died or destroyed	160
Number of birds at the end of the year	211

EGGS.

Number of eggs at the beginning of the year ..	31
Number of eggs collected	5,852
Number of eggs received from outside	156
Number of eggs set for hatching	726
Number of eggs sold for hatching	787
Number of eggs sold for table	4,295
Number of eggs broken and fed to chicks ..	183
Number of eggs at the end of the year	48

The Poultry Demonstration Centres started at Anuppankulam and Periyar under the Second Five-Year Plan Schemes were functioning satisfactorily during the year under report. These centres sold 4,727 eggs for hatching purposes.

(viii) *Tirunelveli district.*—There were two Poultry Demonstration Centres one at Kondanagaram of Tirunelveli taluk and another at Kandaswamipuram of Tiruchendur taluk functioning in the district under Second Five-Year Plan. Apart from these centres, there were three Poultry Demonstration Units functioning in Veterinary Institutions at Tirunelveli, Cheranmahadevi and Sankarankoil. White Leghorn and Rhode Island Red breeds were maintained. The above centres have distributed 42 chicks, 2 cocks and 2,212 eggs for breeding purposes.

(ix) *Kanyakumari district.*—There were two model Poultry Units attached to Veterinary Hospital, Nagercoil and Veterinary Dispensary, Kottaram. There was a Poultry Extension Centre at Perumalpuarm under the All-India Poultry Development Scheme. The above units sold 42 birds for breeding and 5,488 eggs for hatching. Six hundred and sixty-one eggs were set for hatching at these units.

Subsidies were given to four private poultry breeders for poultry keeping and three were given subsidies for purchase of wire-netting. The amounts were Rs. 1,020.24 and Rs. 149.87 respectively. The Y.M.C.A., Marthandam, are running a Poultry Farm at Marthandam under a scheme sponsored by the Indian Council of Agricultural Research. White Leghorn breeds are reared in this farm.

The details of work done therein are shown below :—

BIRDS.

1 Number of chicks at the beginning of the year ..	1,906
2 Number of chicks hatched during the year ..	1,925
3 Total	10,931
4 Mortality 1 to 2 days	110
5 Mortality during rearing	1,241
6 Destroyed 1 to 2 days	257
7 Destroyed during rearing	55
8 Culled	343
9 Distributed	6,159
10 Supplied for stock foundation	121
11 Number of chicks at the end of the year ..	2,645
Percentage of mortality	15 per cent.
Percentage of loss in rearing	9.7 per cent.

Eggs.—Sixteen thousand and ninety-six eggs were set for hatching, out of which after deducting infertile ones, death of chicks, etc., 6,159 chicks were distributed.

A few informative percentages are furnished below :—

	PER CENT.
1. Percentage of eggs dead in germ (infertile eggs) ...	15.6
2. Percentage of eggs dead in shell (infertile eggs) ...	22
3. Percentage of hatchability	46
4. Percentage of hatchability (infertile eggs) ...	56.1

(x) *Nilgiris district.*—There were two poultry Demonstration units attached to the Veterinary Hospital, Ooty and Coonoor. White Leghorn breed is maintained in the former and the Rhode Island Red breed in the latter. These units collected 1,309 eggs out of which 1,165 eggs were sold for breeding. Six birds were also sold for the same purpose. The Poultry Demonstration Centre started during the year 1958-59 at Dunsandle Sheep Farm, Ooty under All-India Poultry Development Scheme continued to function satisfactorily. This centre produced 3,935 eggs out of which 1,848 eggs were sold for breeding and 1,450 set for hatching. One Poultry Unit was started under National Extension Centre Scheme. This Unit sold 2,229 eggs for hatching.

(xi) *Coimbatore district.*—There are seven Poultry Demonstration Units attached to the Veterinary Institutions in the district as detailed below wherein the breeds of birds maintained are noted against each of them :—

1 Pollachi	Rhode Island Red.
2 Erode	White Leghorn.
3 Dharapuram	White Leghorn.
4 Tiruppur	Rhode Island Red.
5 Malayampalayam	White Leghorn.
6 Kavandapadi	Rhode Island Red.
7 Nathakadayar	White Leghorn.

These units sold 36 birds for breeding and 6,548 eggs for hatching.

A Poultry Extension Centre was also functioning at Palayakottai under All-India Poultry Development Scheme. The working of the centre was satisfactory. A total number of 277 birds were sold to the public for breeding.

Two Private Poultry breeders were given subsidy.

(xii) *Salem district*.—There was a Poultry Demonstration Unit in Veterinary Hospital, Salem. Seven cocks and 1,177 eggs were sold for breeding. There was also a Poultry section at Livestock Research Station, Hosur Cattle Farm, Hosur. The details of receipts and disposals of birds and eggs are given in a separate statement annexed to this report.

Besides under the Second Five-Year Plan one Poultry Extension Centre has been opened at Kootapally in Tiruchengode taluk and has started work from 27th March 1960. One Poultry Extension Centre opened under All India Poultry Development Scheme at Krishnagiri Reservoir Project, was functioning satisfactorily during the year. Eight birds were sold for breeding and 1,334 eggs were sold for hatching and set for hatching.

A sum of Rs. 299.73 was given as subsidy for the purchase of wire netting to six Poultry breeders. Another sum of Rs. 1,316.11 was also given as subsidy to the three Poultry breeders.

Twenty-two Poultry Units have been started under the Community Development and National Extension Service Scheme. They had a total strength of 639 birds. One hundred and seventy-nine birds were sold for breeding as also 3,333 eggs for hatching out of 11,525 eggs produced.

(xiii) *Madras district*.—A poultry unit was maintained at the Madras Veterinary College to impart practical training in poultry breeding to the students of the B.V.Sc. and M.V.Sc. courses.

The details of receipts and disposals of birds and eggs are furnished below :—

<i>Birds—Breed wise</i>				<i>R.I.R. Graded. W.L.H. DESI</i>			
Opening balance on 1st April 1959	..	..	..	88	13	..	..
II. Receipts—							
(i) Number of birds received by hatch	..	..	..	588	124	203	71
(ii) Number of birds received from outside	..	..	..	..	..	..	..
III. Disposals—							
(i) Number of birds sold for hatching	..	..	..	19	6	8	..
(ii) Number of birds sold for table	..	..	..	30	13	2	..
(iii) Number of birds transferred to other section.	..	..	..	47	17	..	..
(iv) Number of birds died and disposed during the year.	..	..	..	150	48	25	8
IV. Closing Balance on 31st March 1959	..	..	..	430	53	168	63
Eggs—							
I. Opening balance	..	..	..	25	..	..	..
II. Receipts—							
Number received from outside	..	..	..	501	..	512	480
Number collected	..	..	..	3,764	1,292	..	..
Disposals—							
(i) Number of eggs sold for hatching	..	..	..	119	..	..	..
(ii) Number of eggs sold for table	..	..	..	2,085	833	41	..
(iii) Number of eggs broken and fed to chicks	..	..	..	130	88	3	..
(iv) Number of eggs transferred	..	..	..	904	143	130	100
(v) Number of eggs set for hatching	..	..	..	1,029	222	338	330
(vi) Closing balance	..	..	..	23	6	..	..

The above unit along with the Poultry Research Station at Teynampet has been serving as powerful centres for infusing poultry-mindedness among the people of the city and surrounding districts with the result that very many people have taken to poultry farming either as a small unit or as backyard units for home consumption and as a commercial concern. Among them the unit maintained at the Loyola College deserves mention. Another unit that has been doing poultry development work is at the Presentation Convent, Vepery. The latter unit has been granted a subsidy of Rs. 464 during the year.

4. HORSE-BREEDING.

Ponies used for transport purposes are non-descript in our State. Pony breeding is being done in a small way at a few places in our State.

In order to improve the local stock, stallions for stud purposes are stationed in Veterinary Institutions at Pollachi, Tirupur, Erode and Dharapuram of Coimbatore district at the Livestock Research Station, Hosur in Salem district and with private parties.

The number of services performed by the stallions at Veterinary institutions and Livestock Research Station, Hosur are furnished below with the corresponding figures of the previous year :—

Place of location.	Number of stallions.	Number of services performed.	
		1959-60.	1958-59.
Veterinary Hospital, Pollachi	1	48	39
Do. Erode	1	41	49
Do. Tiruppur	1	30	37
Do. Dharapuram	1	28	35
Livestock Research Station, Hosur Cattle Farm	1	26	27

In G.O. Ms. No. 3860, Food and Agriculture, dated 25th November 1958 a scheme for the revival of pony breeding in Point Calimere area, Thiruthurai pundi taluk in Thanjavur district was sanctioned and accordingly two Kangayam stallions have been located at Point Calimere village during the year. The stallions were entrusted to two private custodians of the locality for looking after them. The custodians are paid a monthly subsidy of Rs. 45 each towards maintenance charges.

A stallion was loaned to Sri Janakiramakullama Naicker, Neikarapatty in Madurai district for pony breeding in the area. It performed ten services and two foals were born to the stallion.

5. PIG BREEDING.

Pig breeding was not undertaken as a departmental item of work in this State till the end of the previous year. A beginning has now been made in this branch of work, as pig breeding would go a long way in augmenting the animal food production in the country.

Government in their order G.O. Ms. No. 1337, dated 21st March 1959 have sanctioned the purchase of a nucleus stock of pigs to revive the pig breeding at the Livestock Research Station, Hosur Cattle Farm which was closed down during the year 1940-41.

On 25th February 1960 a small piggery unit was started with one boar, six sows and four piglings (2 male and 2 female) which were purchased from St. Joseph's College, Tiruchirappalli. The breed introduced was large

white Yorkshire. At the end of the year three more boars, seven sows and five piglings (three female and two male) were added. During the year five piglings (three females and two males) were littered by a sow and the stock position at the end of the year was increased to 31—

Boar pigs	...	4
Sows	...	4
Gilts	...	9
Male piglings	...	6
Female piglings	...	8
Total	...	31

Programme of work at the farm—

1. Multiplying the breed of large white yorkshire.
2. To study the adaptability and performance of this exotic breed under farm conditions.
3. To produce pure bred pedigree boars for distribution to other parts of the State to grade up the indigenous stock.

Elsewhere in the State.—A few Australian and English breeds of pigs are maintained by some individuals at the following places and breeding and rearing are being done on a small scale for meat purposes:—

- 1 St. Joseph's College, Tiruchirappalli (Tiruchirappalli district).
- 2 St. Paul's Seminary, Tiruchirappalli (Tiruchirappalli district).
- 3 Sacred Heart College, Shembaganur, Kodaikanal taluk, Madurai district.
- 4 Beschi College, Dindigul, Madurai district.
- 5 Messrs. R. M. Buck, Chingleput district.
- 6 In a farm near Pudupakkam, Chingleput district.
- 7 By the Indian Air Force personnel at Tambaram, Air Force Station, Chingleput district.
- 8 Sri Joe Aruliah, Nursingapuram, Chingleput district.

In the Loyola College, Madras, a few Berkshire boar and sows are reared.

Besides the above the community called oddars in the villages rear pigs of the non-descript variety for meat.

6. DEVELOPMENT OF FEEDS AND FODDER RESOURCES ON THE KEY VILLAGE AREAS.

(a) *Introduction.*—The continuous deterioration and the low productivity of cattle due to insufficiency of feeds and fodder resources has been well-known. The Government of India with the object of solving this ever-neglected problem included a scheme in the Second Five-Year Plan for the development of fodder resources in the key village areas. Accordingly a moderate scheme sanctioned at a total cost of Rs. 63,000 for the year 1958-59, was continued during the year under report.

(b) *Object of the scheme.*—(i) The scheme contemplates the establishment of two more 100 acres improved pasture plots in the State Livestock Farms in addition to the two acres plots already sanctioned last year.

(ii) Establishment of five-ten acres demonstration plots in the Key Village areas to serve as a model to the ryots for the proper maintenance of pastures.

(iii) Supply of seeds and cuttings of fodder grasses at subsidized rates to the ryots in the Key Village areas to popularise the raising of fodder grasses and crops.

(c) The scheme which was originally sanctioned in G.O. Ms. No. 2456, Food and Agriculture, dated 15th July 1958, with the following staff was continued during the year under report, vide G.O. Ms. No. 104, Food and Agriculture, dated 9th January 1959:—

- 1 One Fodder Development Officer.
- 2 Two Veterinary Assistant Surgeons.
- 3 One Upper Division Clerk.
- 4 One typist.
- 5 Two peons.

Sri N. Ramaswamy, B.A., B.Sc. (Agriculture), continued to be in charge of the scheme for the period under report, with the full staff with the exception of the two Veterinary Assistant Surgeons.

(d) *Establishment of improved 100 acre pasture plots in the State Livestock Farms.*—Two more State Livestock Farms were selected for establishing the improved pasture plots, viz., Sheep Breeding Research Station, Chinnasalem and District Livestock Farm, Orathanad.

(e) *Progress made at the District Livestock Farm, Pudukkottai.*—The pending items of work at the District Livestock Farm, Pudukkottai, were completed and the entire provision of Rs. 15,000 was fully utilized. A total quantity of 10,000 elephant grass slips, 23,000 guinea grass slips, 5,000 blue bafiel grass slips and 12,500 buffalo grass slips were planted and about 1,06,000 lb. of green grass and 21,600 lb. of hay were harvested from the plot and fed to cattle. A total quantity of about 1,750 lb. of various fodder seeds were produced from the plot.

(f) *Progress made at the District Livestock Farm, Orathanad.*—The entire area of 100 acres was cleared, bunded and fenced along the borders. Raising of shade trees was also taken up along the borders and road sides. One thousand and five hundred lb. of Kolukattai grass seeds and about 250 lb. of various other fodder seeds were procured and kept ready for sowing during the next monsoon.

(g) *Progress made at the Sheep Breeding Research Station, Chinnasalem.*—The entire area was cleared and bunded. As it is a newly started farm, the entire area was sown with horsegram mixed with Kolukattai to enrich the soil. Fodder and shade tree saplings were planted all along the road-sides and bunds. The horsegram was harvested and fed to cattle.

(h) *Establishment of five 10-acre demonstration plots in the Key Village areas.*—The five-acre demonstration plots were selected in private holdings in the following five places within the respective Key Village Blocks:—

1. Kangayam, 2. Sankarandampalayam, 3. Neikarapatti, 4. Edaya-kottai and 5. Pettaikalipalayam.

The owners of plots were given all necessary technical help for establishing the pastures and their proper maintenance. A subsidy of Rs. 500 to each of the owners of the pasture demonstration plots in the holdings at Sankarandampalayam, Neikarapatti and Edayakottai were paid during the year.

(i) *Supply of seeds and cuttings of fodder and seeds at subsidized rate.*—Livestock Research Station, Hosur Cattle Farm, and the District Livestock Farm, Pudukottai, have been selected for this purpose and so far about 70,000 slips of guinea napier and buffalo grass slips were supplied from the livestock farms to the ryots in the Key Village areas and National Extension Service Blocks.

Besides the ryots were encouraged to raise perennial fodder grasses and legumes and an area of about 60 acres was brought under lucerne guinea grass and buffalo grass in Palni, Udumalpet and Dharapuram taluks. Necessary propaganda was also done for raising buffalo grass along the canal bunds in the Lower Bhavani Project area and also for raising fodder trees like babul in waste lands and tank-bed areas.

(j) *Receipts and expenditure—*

Receipts.—Nil.

Expenditure.—

Pay and allowances and other office contingencies ...	11,677.01
Establishment of 100 acre improved pasture, establishing demonstration plots, etc. ...	23,242.97
Total ...	34,919.98

7. TRADE IN LIVESTOCK.

(i) Trade in livestock in the Madras State is usually carried on through weekly cattle shandies and annual cattle fairs.

(ii) Cattle fairs are mostly held as adjuncts to important temple festivals and jatras in almost all the districts of this State. It is at these cattle fairs that intra and inter-district transactions of livestock are carried on. Some of the important cattle shandies and fairs are detailed below.

(iii) The daily cattle market at Thiruvottiyur in Chingleput district is a perpetual one. Animals mostly milch cows and buffaloes are brought in for sale from the Nellore and Guntur districts of Andhra State to this market which is the chief source for milch animals for the Madras City and nearby districts.

(iv) Pallavaram is another place where a weekly cattle market is held every Friday. The transactions in this market are usually inter-district and only inferior type of cattle and beef stock are assembled. The village of Salachery near Vyasarpady is the place where, the sheep and goats required for meat in the City are assembled from the districts and sales effected.

(v) Thiruvannamalai in North Arcot district is famous for its annual cattle fair held in conjunction with the Kirthikai festival which comes off in December every year, at the temple in that town.

(vi) Hallikars from Mysore State form the bulk of the cattle offered for sale in this fair. People from the Southern districts like Tirunelveli and Ramanathapuram look to this fair only for their supplies of draught animals.

(vii) Animals left over in this Thiruvannamalai fair and fresh ones are driven to Nirathanallur in Thanjavur district where also an annual large scale cattle fair is held during January and February of each year.

(viii) In Coimbatore district in connection with the annual cattle show held in June every year at Tiruppur a big cattle market assembles. Kangayam breed cattle form the largest number in this fair and hundreds are sold. In Puliampatti of the same district, a weekly cattle shandy of a fairly large scale is held.

(ix) In Tirunelveli district five weekly cattle shandies are held at Melapalayam, Pambankoil, Pavurchattram, Koilpatti and Nainanagaram.

(x) In Madurai district, two large scale cattle fairs are held at Madurai in connection with the Chithirai festival and at Veerapandi in Periakulam taluk in connection with the Mariamman festival there. These fairs were held during the year under report also.

(xi) Export of cattle and sheep from this State is mostly done from the ports in Thanjavur district. Cattle and sheep intended for export are purchased from the weekly markets in Ramanathapuram and Thirunelveli districts and they are exported to Ceylon from the ports of Tuticorin, Tondi and Kilakarai ports. The prevailing market prices of livestock in the chief livestock markets of the State were as usual reported to the Director of Statistics, Madras—

(a) A statement showing the number of cattle fairs conducted in this State during the year under report is attached to this report in Table No. VI-A.

(b) A statement showing the export and import of livestock and livestock products during the year as obtained from the Director of Statistics is furnished below:—

IMPORTS.

	Quantity. cwt.	Value. RS.
Meat and meat preparation—		
Bacon	..	10
Meat and meat preparations in airtight containers not elsewhere specified.	1	280
Dairy products—		
Whole milk, evaporated or condensed.	125	13,870
Other kinds of milk and cream evaporated or condensed.	150	14,486
Others	26,931	20,46,899
Whole milk	465	95,726
Other kinds of milk and cream dry ..	82,099	48,81,286
Cheese	46	11,398
Malted milk	99	33,119
Milk food for infants and invalids (wholly or mainly milk) canned or bottled.	1,875	7,22,592
Other dairy products	125	12,794

	Quantity. CWT.	Value. RS.
Hides and skins—		
Buffaloe hides including light buffalo hides (Katais).	8,844	4,59,669
Cow hides	2,291	4,11,105
Other cattle hides	1,606	3,79,793
Sheep skin dry salted	118	13,391
Sheep skin wet salted	210	10,801
Sheep skins otherwise cured	62	2,633
Goat skins dry salted	99	32,419
Goat skins wet salted	6,078	8,63,498
Chrome leather shavings	4,495	86,937
Chrome cuttings of leather	7,426	1,17,448
Others not elsewhere specified	39	1,050
Wool and other animal hairs—		
	LBS.	
Sheep wool	105,833	3,28,283
Wool shoddy	6,007	18,667
Wool taps	109,771	6,88,902
Waste of wool and other animal hairs	93,569	1,19,622
Leather, leather manufactures—		
	CWT.	
Cow-calf skin	5	2,558
Machine leather belting and other articles of leather for use in machinery.	75	1,00,328
EXPORTS.		
Live animals chiefly for food—		
	NOS.	
Sheep and lambs	9,762	3,60,028
Goats and skins	19,227	7,69,047
Turtles	1,306	55,781
Meat and meat preparation—		
	CWT.	
Poultry killed or dressed	1,338	1,86,479
Sheep casings (salted)	6	4,081
Animals casings not elsewhere specified	644	4,23,293
Others	164	1,03,062
Eggs—		
	IN HUNDREDS.	
Eggs in the shell	240,823	35,10,772
Hides, skins and furskins undressed—		
	CWT.	
Goats skins dry salted	422	2,38,705
Goats skins otherwise cured	..	172
Wool and other animal hair—		
	LB.	
Sheep wool	48,537	54,471
Goat hair other than angora	3,258,596	21,36,561
Others	171,892	1,10,594
Others excluding wool tops (corded or combed).	887,423	13,57,986

	Quantity. LB.	Value. RS.
Ivory, hoofs, horns, claws and similar products—		
Bones crushed	63,430	11,00,658
Hoofs, horns tips of pieces of horns unmanufactured.		
	CWT.	
Hoofs, horns tips of pieces of horns unmanufactured.	5,573	1,68,108
Bones crust for manufacturing purposes.	8,194	1,19,855
Materials of animal origin-bone sinews, meal blood, Raw hides and skins cuttings of sheep guts salted cochineal unworked goulochan.	4,397	1,37,615
Raw hides and skins cuttings.	900	12,720
Others	..	66,744
Leather, leather manufactures and dressed furs—		
	CWT. AND NUMBER.	
Tanned buffaloe calf skin	24,629	94,76,419
Tanned cow calf skin	17,046	94,87,737
Tanned buffaloe hides	8,277	21,98,783
Tanned cow hides	172,549	5,68,07,741
Tanned goat skins	69,638	7,06,50,186
Tanned kips	3,035	10,25,535
Tanned sheep skins	50,552	5,69,19,027
Machines leather belting and other articles of leather for use in machinery.		
	EXT.	
Machines leather belting and other articles of leather for use in machinery.	882	92,277
Manufacturing of leather not elsewhere specified.	..	1,393
Live animal not for food—		
Dogs	1	45

(c) The details of import and export of livestock from the Madras State and the prices for the year for hides and skins in Madras City and Dindigul as furnished by the State Marketing Officer are enclosed herewith.

Statement showing the prices of hides and skins that prevailed in the Madras City and Dindigul markets during the year 1959-60 and prices in Rs. nP. per lb.

Year and months.	Raw cow hides.				Tanned cow hides.			Raw hides buffaloes.		Tanned buffalo hides.	
	Dindigul.				Madras city.			Madras city.		Madras city.	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
1959—											
April	..	0.50	0.81	0.53	1.99	1.99	1.99	0.44	2.25	1.60	
May	..	0.50	0.92	0.59	2.33	2.33	2.33	0.97	2.81	1.70	
June	..	0.55	0.81	0.66	2.33	2.33	2.33	0.44	2.81	1.70	
July	..	0.60	0.86	0.72	2.48	2.48	2.48	0.55	2.90	1.78	
August	..	0.60	0.78	0.66	2.48	2.48	2.48	0.55	2.90	1.73	
September	..	0.62	0.81	0.66	2.46	2.46	2.46	0.60	2.90	1.78	
October	..	0.65	1.03	0.84	2.68	2.68	2.68	0.64	2.90	1.78	
November	..	0.73	0.97	0.78	2.58	2.58	2.58	0.60	2.90	1.78	
December	..	0.63	0.84	0.72	2.68	2.68	2.68	0.64	2.90	1.78	
1960—											
January	..	0.53	0.84	0.72	2.30	2.30	2.30	0.54	2.55	1.50	
February	..	0.56	1.31	0.78	2.40	2.40	2.40	0.55	2.60	1.56	
March	..	0.56	1.31	0.78	2.45	2.45	2.45	0.50	2.53	1.58	
					2.39	2.39	2.39	0.50	2.55	1.60	
					2.40	2.40	2.40	0.53	2.63	1.63	

	Raw goat skins.				Tanned goat skins.			Raw sheep skins.			Tanned sheep skins.		
	Dindigul.				Madras city.			Dindigul.			Madras city.		
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1959—													
April	..	1.85	1.38	5.56	5.07	4.70	4.45	3.45	3.00	1.42	7.35	6.45	N.S.
May	..	2.40	1.52	6.00	5.38	5.10	4.50	3.50	3.37	2.14	7.38	7.22	..
June	..	2.24	1.52	6.00	5.38	5.10	4.45	3.45	3.37	2.14	7.35	6.60	..
July	..	2.39	1.59	6.50	5.28	..	4.50	3.50	1.84	1.04	8.55	8.12	..
August	..	2.08	1.09	6.30	5.40	5.23	4.97	3.97	1.84	1.04	8.86	8.00	..
September	..	1.59	1.00	6.00	5.05	5.35	5.05	3.70	2.03	1.47	9.00	8.27	..
October	..	2.47	1.88	6.14	5.68	5.10	5.10	3.80	1.93	1.37	9.30	8.73	..
November	..	2.13	2.38	6.14	5.63	5.10	5.10	3.80	2.13	1.56	9.44	8.80	..
December	..	2.63	2.38	6.14	5.63	5.10	5.10	3.80	2.13	1.56	9.39	8.80	..
1960—													
January	..	2.18	1.81	6.43	5.90	5.05	5.05	3.78	2.13	1.56	9.39	8.80	..
February	..	2.31	1.81	7.15	6.30	5.88	4.75	3.63	2.06	1.56	9.32	8.32	..
March	..	2.42	1.63	7.15	6.30	5.18	4.50	3.57	2.06	1.56	9.32	8.20	..
	..	2.44	2.18	8.00	6.79	6.21	4.75	3.63	2.18	1.68	9.73	8.33	..
	..	2.43	2.18	7.65	6.69	6.06	4.51	3.57	2.18	1.60	9.26	8.10	..
	..	2.43	2.06	8.00	6.79	6.23	4.50	3.57	2.06	1.66	9.63	8.20	..
	..	2.43	2.18	7.35	6.72	6.06	4.55	3.60	2.18	..	9.05	8.12	..
	..	2.43	2.18	7.65	6.75	6.13	4.55	3.60	2.18	..	9.63	8.66	..

N.S. = No stock.

STATEMENT II.

Statement showing the imports and exports of animals during 1959-60 in and out of Madras State.

IMPORTS.

				Cattle.	Sheep and goats.	Others.
From other State	..	..	..	2,413	..	..
From other countries	..	..	..	..	..	..
To other states	..	..	..	15,177	1,350	..
To foreign countries	..	..	..	..	30,168	..

COLLECTORS' DISCRETIONARY GRANT.

The grant available at the discretion of Collectors of Districts was availed of during the period under report towards livestock developmental activities as detailed below :—

(a) *North Arcot district.*—A sum of Rs. 100 was sanctioned by the Collector from his discretionary grant to the Principal, American Arcot Mission Katpadi towards award of prizes in connection with the 22nd Annual Fair and Exhibition held at Katpadi.

(b) *South Arcot district.*—A sum of Rs. 140 sanctioned by the Collector, was awarded as prizes in the shape of brass vessels to 14 persons interested in Livestock and poultry development work.

(c) *Thanjavur district.*—A sum of Rs. 200 was sanctioned by the Collector of Thanjavur to Thambi Poultry Farm, Alamara street, Thanjavur and to the Sub-Inspector of Railway Police for maintenance of poultry units.

(d) *Madurai district.*—A sum of Rs. 100 sanctioned by the Collector was awarded as cash prizes at Rs. 10 each to ten persons interested in Livestock and Poultry Development work in the jurisdiction of the District Veterinary Officer, Madurai and another sum of Rs. 100 sanctioned was awarded as prizes at Rs. 20 each to five persons interested in Livestock Development work in the jurisdiction of the District Veterinary Officer, Dindigul.

(e) *Ramanathapuram district.*—A sum of Rs. 200 was sanctioned for the award of cash awards to four individuals interested in the field of Livestock and Poultry Development and the amount was disbursed to them on the occasion of the one day Cattle Show held at Manasapuram on 29th March 1960.

(f) *Salem district.*—During the year a sum of Rs. 100 was sanctioned by the Collector of Salem and the amount has been disbursed to the poultry breeders of the District for taking keen interest in Poultry Development.

9. RECEIPTS AND EXPENDITURE IN VARIOUS FARMS.

Total receipts and expenditure in the various farms of this department during the year under report are given below :—

Places.	Receipts. Rs.	Expenditure. Rs.
1 Livestock Research Station, Hosur ..	1,80,773-00	4,71,057-00
2 District Livestock Farm, Pudukkottai ..	49,001-18	3,16,951-78
3 District Livestock Farm, Orathanad ..	71,205-34	3,83,592-96
4 District Livestock Farm, Ramanathapuram.	56,611-96	2,50,643-58

VETERINARY AID IN MADRAS STATE, DURING THE YEAR 1959-1960.



<i>Places.</i>	<i>Receipts.</i>	<i>Expenditure.</i>
	RS.	RS.
5 Sheep Breeding Research Station, Chinna-Salem.	4,021.16	48,422.56
6 Sheep Farm, Ootacamud	8,859.43	70,775.78
7 Sheep Breeding Research Station, Kattupakkam.	53.41	31,494.08
8 Poultry Research Station, Teynampet ..	25,248.25	70,617.30

There was considerable increase over the previous year in receipts at all the farms mentioned except at the Sheep Breeding Research Station, Kattupakkam.

The expenditure was more than what it was in the previous year in the Livestock Research Station, Hosur Cattle Farm, District Livestock Farm, Pudukkottai, District Livestock Farm, Orathanad, Sheep Breeding Research Station, Chinnasalem and Sheep Farm, Ooty. This was due to the increase in the staff sanctioned, higher tender rates for 1959-60 increase in the strength of permanent mazdoors, intensive agricultural operations at Machuvadi Farm at the District Livestock Farm, Pudukkottai, purchase of Livestock at the Sheep Breeding Research Station, Chinnasalem, purchase of equipment for Wool Analysis, laboratory and furniture for laboratory, and cost of transport of two Russian Rams from New Delhi to the Sheep Farm, Ooty.

CHAPTER VI.

VETERINARY HEALTH SERVICES.

The several Veterinary Institutions maintained by the State in various towns and villages are intended for the timely treatment of different ailments of livestock and a selected few of them to serve as infirmaries under the society for the prevention of cruelty to animals act. Most of these institutions are also centres for livestock development work, where castration of scrub bulls are undertaken and where arrangement for servicing of female stock by pedigree stud animals both by the natural and artificial methods are available.

Clinical laboratories, which are essential for prompt diagnostic purposes and to make possible, treatment on up-to-date and modern lines and adoption of immediate prophylactic measures, have been provided in all the districts, most of them being attached to major veterinary institutions of the state and a few in livestock farms. These laboratories also help the touring staff in getting their specimens examined and diagnosis confirmed.

The various veterinary institutions in the State continued their useful activities during the year under report as detailed in the following paragraphs. In these institutions the sick animals are treated free of cost except those belonging to owners whose monthly income exceeds Rs. 200.

(i) *Veterinary Institutions.*—There were in all 116 institutions (36 veterinary hospitals and 80 veterinary dispensaries) at the beginning of the year in the State.

During the year two veterinary dispensaries were opened at Nellikuppam in the Chingleput district and at Arupukottai in Ramanathapuram district. The veterinary dispensaries at Panruti and Kuruvikulam were taken over by this department from the Community Development Administration. Thus at the end of the year there were 120 institutions (36 veterinary hospitals and 84 veterinary dispensaries).

In addition to the above one Veterinary Hospital attached to the Agricultural College, Coimbatore, and five Veterinary institutions in Madras City maintained by the Corporation of Madras continued to function during the year.

Sixty-two of these institutions were located in Government buildings of which 43 were electrified. Thirty-two institutions were equipped with refrigerators and 63 institutions with microscopes.

In all the departmental institutions including the veterinary hospital at the Livestock Research Station, Hosur, and Veterinary College, Madras, a total number of 368,464 cases were treated and 59,932 castrations were done against 341,232 cases and 57,500 castrations during the previous year. The figures speak for themselves, the usefulness, the popularity and progress of these institutions.

The number of cases treated and castrations done in some of the important institutions of the State are given below:—

		Cases treated.	Castrations done.
Veterinary Hospital, Madras	Veterinary College	17,076	52
Do.	Coimbatore	9,721	314
Do.	Salem	9,497	213
Do.	Tiruchirappalli	9,182	501
Do.	Saidapet	8,000	92
Veterinary Dispensary, Madurai City	.. ..	7,892	766

(1) *Madras City*.—There were two Veterinary Hospitals one attached to the Madras Veterinary College at Vepery and the other at Saidapet. In addition there was a veterinary dispensary at Rayapuram located in a rented building. The veterinary hospital at Saidapet was located in Government buildings which has recently been electrified and equipped with a microscope and a refrigerator.

In all these three institutions 32,350 cases were treated and 153 animals were castrated as against 31,393 cases and 172 castrations of the previous year.

In addition to the above institutions five veterinary dispensaries were maintained during the year by the Madras Corporation in each of the cattle depots at Basin Bridge, Harris Road, Hamilton Bridge, Perambur and Trirumalaipillay Road. In these dispensaries 18,296 cases were treated and 37 castrations were done.

(2) *Chingleput district*.—There was one veterinary hospital and veterinary dispensaries at the beginning of the year. One veterinary dispensary was opened at Nellikuppam in Chingleput taluk on 14th December

1959 making the number of dispensaries to eight at the close of the year. The location of the nine institutions are as follows:—

1	Veterinary Hospital	.. ..	Kancheepuram.
2	Veterinary Dispensary	.. ..	Kaliyampoondi.
3	Do.	.. ..	Thirukalikundram.
4	Do.	.. ..	Maduranthakam.
5	Do.	.. ..	Tiruvallur.
6	Do.	.. ..	Chingleput.
7	Do.	.. ..	Ponneri.
8	Do.	.. ..	Cheyyur.
9	Do.	.. ..	Nellikuppam.

The institutions at Kancheepuram, Kaliyampoondi and Thirukalikundram are located in pucca Government buildings of which the one at Kancheepuram has recently been electrified. The other institutions are located in rented buildings of which those at Chingleput and Maduranthakam have been electrified. Veterinary dispensaries at Chingleput, Thiruvallur, Thirukalikundram and Ponneri have been provided with refrigerators. Microscopes have been supplied to the veterinary hospital at Kancheepuram and veterinary dispensaries at Chingleput and Thirukalikundram.

In the above institutions 22,029 cases were treated and 2,674 castrations of scrub bulls were performed as against 19,361 cases and 3,458 castrations of the previous year.

(3) *North Arcot district*.—There were three veterinary hospitals and five veterinary dispensaries in this district as shown below:—

1	Veterinary Hospital	.. ..	Vellore.
2	Do.	.. ..	Ranipet.
3	Do.	.. ..	Thiruvannamalai.
4	Veterinary Dispensary	.. ..	Tiruppattur
5	Do.	.. ..	Vaniyambadi.
6	Do.	.. ..	Arakonam.
7	Do.	.. ..	Wandhiwash.
8	Do.	.. ..	Kilpennathur.

All the three hospitals were located in Government buildings and are electrified. The veterinary dispensaries at Wandiwash and Kilpennathur were located in buildings constructed by the Community Development Administration. The rest of the institutions were located in rented buildings. The veterinary hospital at Vellore and the veterinary dispensary at Tiruppattur have been provided with refrigerators. The veterinary hospitals at Vellore, Thiruvannamalai and Ranipet and the veterinary dispensaries at Arakonam and Tiruppattur have been equipped with microscopes.

In these institutions 24,102 cases were treated and 4,963 castrations done as against 22,215 cases treated and 4,290 castrations done during the previous year.

(4) *South Arcot district*.—There were two veterinary hospitals and four veterinary dispensaries at the beginning of the year. The veterinary

dispensary at Panruti run by the Community Development Department was taken over by this department during the year thus making the number of veterinary dispensaries to five, at the end of the year as detailed below :—

1	Veterinary Hospital	..	..	..	Cuddalore.
2	Do.	..	..	..	Kallakurichi.
3	Veterinary Dispensary	..	..	..	Chidambaram.
4	Do.	..	..	..	Tindivanam.
5	Do.	..	..	..	Kattumannarkoil.
6	Do.	..	..	..	Pinnalur.
7	Do.	..	..	..	Panruti.

The veterinary hospitals at Cuddalore and at Kallakurichi have been located in Government buildings and out of the veterinary dispensaries, these at Tindivanam, Pinnalur and Panruti are located in Government buildings while the rest were located in rented buildings. Only the dogward of the veterinary hospital at Cuddalore has been electrified. Sanction has been accorded for extension of electricity to the other sections of the hospital and the work in this regard is expected to be taken up in the coming year. Among the veterinary dispensaries the one at Kattumannarkoil has been electrified. Microscopes have been provided for the veterinary hospitals at Cuddalore and Kallakurichi and the veterinary dispensaries at Chidambaram, Tindivanam and Pinnalur. Refrigerators have been provided for the veterinary hospitals at Cuddalore and Kallakurichi and for the veterinary dispensaries at Pinnalur and Panruti. In the above institutions 21,230 cases were treated and 3,610 castrations were done as against 19,500 cases and 3,441 castrations of the previous year.

(5) *Salem district.*—The district had one veterinary hospital and three veterinary dispensaries as shown below :—

1	Veterinary Hospital	..	..	..	Salem.
2	Veterinary Dispensary	..	..	..	Namakkal.
3	Do.	..	..	..	Tiruchengode.
4	Do.	..	..	..	Mettur Dam.

The veterinary hospital at Salem was located in Government buildings while the veterinary dispensaries at Namakkal and Tiruchengode were located in rented buildings. The veterinary dispensary at Mettur dam was located in a rent-free building provided by the Mettur Township Committee. Among these only the veterinary hospital at Salem has been electrified and equipped with a refrigerator. Microscopes have been supplied to the veterinary hospital at Salem and the veterinary dispensaries at Namakkal and Tiruchengode.

In these institutions 16,559 cases were treated and 823 castrations were done during the year as against 16,970 cases and 952 castrations during the previous year.

(6) *Tirunelveli.*—There were two Veterinary hospitals at Tirunelveli and Shencotta and six Veterinary dispensaries at the beginning of the year. One veterinary dispensary at Kuruvikulam started under the auspices of the Community Development was taken over by this department. Thus the

number of veterinary dispensaries at the end of the year was seven. The location of these institutions are shown below :—

1	Veterinary hospital	..	..	..	Tirunelveli.
2	Do.	..	..	..	Shencotta.
3	Veterinary dispensary	..	..	..	Tuticorin.
4	Do.	..	..	..	Cheranmahadevi.
5	Do.	..	..	..	Tenkasi.
6	Do.	..	..	..	Kadayanallur.
7	Do.	..	..	..	Sivagiri.
8	Do.	..	..	..	Sankarankoil.
9	Do.	..	..	..	Kuruvikulam.

The veterinary hospitals at Tirunelveli and Shencotta, the veterinary dispensaries at Sivagiri, Cheranmahadevi, Sankarankoil and Kuruvikulam were located in Government buildings and the other institutions were located in rented buildings. Permanent Government buildings for the veterinary dispensary at Tuticorin were under construction by the Public Works Department and expected to be completed by the end of the year under report. The veterinary hospital at Shencotta and the veterinary dispensaries at Cheranmahadevi, Sankarankoil and Tuticorin have been electrified. The electrification of the veterinary hospital at Tirunelveli has been sanctioned and work in this regard is expected to be taken up during the coming year.

Among the above institutions, the veterinary hospital, Tirunelveli and the veterinary dispensary at Cheranmahadevi and Sankarankoil were equipped with microscopes and refrigerators while the veterinary dispensaries at Tuticorin and Tenkasi were equipped with microscope only. The veterinary dispensary at Kuruvikulam has been provided with a refrigerator only.

In these institutions 20,006 cases were treated and 6,325 castrations were performed as against 16,872 cases and 5,594 castrations during the previous year.

(7) *Tiruchirappalli South.*—There were two veterinary hospitals and two veterinary dispensaries in the district as shown below :—

1	Veterinary hospital	..	..	..	Tiruchirappalli.
2	Do.	..	..	..	Pudukkottai.
3	Veterinary dispensary	..	..	..	Karur.
4	Do.	..	..	..	Manapalai.

Of these the veterinary hospitals at Tiruchirappalli and Pudukkottai were located in Government buildings while the two veterinary dispensaries at Karur and Manapalai were located in rented buildings. Both the hospitals at Tiruchirappalli and Pudukkottai have been electrified and among the veterinary dispensaries only one at Karur was electrified. Microscopes have been supplied to all the four institutions of the district and refrigerators have been provided to veterinary hospital, Tiruchirappalli, and the Veterinary dispensary at Karur.

The total number of cases treated and castrations done during the year were 16,510 and 1,771 as against 16,065 and 1,995 respectively of the previous year.

(8) *Tiruchirappalli North.*—There were only three veterinary dispensaries in the district as shown below :—

1	Veterinary dispensary	..	..	..	Ariyalur.
2	Do.	..	..	..	Lalgudi.
3	Do.	..	..	..	Musiri.

The one at Ariyalur was located in Government buildings while the other two were located in rented buildings. The Veterinary dispensary at Ariyalur has been electrified during the year. The other two institutions were not electrified.

The Veterinary dispensary Musiri has been equipped with a refrigerator and the one at Ariyalur has been provided with a uncroscope.

In all the above veterinary institutions a total of 6,721 cases treated and 3,478 castrations were done as against 6,116 cases and 3,067 castrations of the previous year.

(9) *Madurai South*.—There were two veterinary hospitals and six veterinary dispensaries during the year in this district as shown below :—

1 Veterinary hospital	..	..	..	Tallakulam.
2 Do.	..	..	..	Periyakulam.
3 Veterinary dispensary	..	..	..	Madurai.
4 Do.	..	..	..	Melur.
5 Do.	..	..	..	Tirumangalam.
6 Do.	..	..	..	Bodinaickanoor.
7 Do.	..	..	..	Cumbum.
8 Do.	..	..	..	Chatrapatti.

The veterinary hospitals at Tallakulam and Periyakulam and the veterinary dispensary at Madurai City have been located in Government buildings of which the three institutions at Tallakulam, Periyakulam and Madurai City, Tirumangalam, Melur and Cumbum have been equipped with microscopes. The veterinary dispensaries at Madurai City, Tirumangalam, Melur and Periyakulam have been equipped with refrigerators.

In the above institutions 28,886 cases were treated and 7,094 castrations were done as against 26,653 cases and 7,227 castrations of the previous year.

(10) *Madurai North*.—There was one veterinary hospital and five veterinary dispensaries in the district during the year as shown below :—

1 Veterinary Hospital	..	..	..	Kodaikanal.
2 Veterinary Dispensary	..	..	..	Dindigul.
3 Do.	..	..	..	Palani.
4 Do.	..	..	..	Dharmathupatti.
5 Do.	..	..	..	Sholavandan.
6 Do.	..	..	..	Pallapatty.

Of these, the veterinary institutions at Kodaikanal, Pallapatty and Dharmathupatty were located in Government buildings of which the one at Kodaikanal has been electrified. The other three were located in rented buildings, out of which two have been electrified. Microscopes have been provided for the veterinary hospital, Kodaikanal and the veterinary dispensaries at Palani, Dindigul and Sholavandan.

In these institutions a total of 15,778 cases were treated and 1,865 castrations done as against 14,993 cases and 1,930 castrations during the previous year.

(11) *Thanjavur District (West)*.—There were two hospitals and six dispensaries as shown below :—

1 Veterinary Hospital	..	..	..	Thanjavur.
2 Do.	..	..	..	Kumbakonam.
3 Veterinary Dispensary	..	..	..	Orathanad.
4 Do.	..	..	..	Tiruppanandal
5 Do.	..	..	..	Aranthangi.
6 Do.	..	..	..	Papanasam.
7 Do.	..	..	..	Thiruvaiyaru.
8 Do.	..	..	..	Pattukkottai.

The first four institutions were located in Government buildings of which those at Thanjavur, Kumbakonam and Tiruppanandal have been electrified.

The institution at Thanjavur, Kumbakonam, Pattukkottai, Aranthangi and Tiruppanandal have been provided with microscopes. Refrigerators have been supplied to the institutions at Thanjavur, Tiruppanandal and Pattukkottai.

In these institutions 28,007 cases were treated and 6,427 castrations were done as against 26,070 cases and 5,870 castrations of the previous year.

(12) *Thanjavur East (Nagapattinam)*.—There were three veterinary hospitals and seven veterinary dispensaries in the district as detailed below :—

1 Veterinary Hospital	..	..	..	Nagapattinam.
2 Do.	..	..	..	Thiruvarur.
3 Do.	..	..	..	Mannargudi.
4 Veterinary Dispensary	..	..	..	Konerirajapuram.
5 Do.	..	..	..	Koradacheri
6 Do.	..	..	..	Valivalam.
7 Do.	..	..	..	Nannilam.
8 Do.	..	..	..	Mayuram.
9 Do.	..	..	..	Sirkali.
10 Do.	..	..	..	Thiruthuraipoondi.

Of these, the first seven institutions were located in Government buildings of which the three institutions at Nagapattinam, Thiruvarur and Mannargudi were electrified. The rest of the buildings were located in rented buildings. The one at Thiruthuraipoondi was located in a building given free of rent by the District Board, Thanjavur. The Veterinary dispensaries at Mayuram and Sirkali were electrified. The Veterinary dispensary at Thiruthuraipoondi has been equipped with a refrigerator. Microscopes have been provided for the institutions at Nagapattinam, Thiruvarur, Mannargudi, Valivalam, Thiruthuraipoondi and Koradacheri.

Twenty-three thousand seven hundred and sixty-three cases were treated and 5,489 castrations were done in all the above institutions during the year as against 24,071 cases and 6,286 castrations in the previous year.

(13) *Ramanothapuram district*.—There were two veterinary hospitals and five veterinary dispensaries in the district at the beginning of the year. One veterinary dispensary was opened at Aruppukottai during the year.

Thus there were two veterinary hospitals and six veterinary dispensaries at the end of the year as shown below :—

1	Veterinary Hospital	..	..	..	Rajapalayam.
2	Do.	..	..	..	Sivaganga.
3	Veterinary Dispensary	..	..	..	Virudunagar.
4	Do.	..	..	..	Ramanathapuram.
5	Do.	..	..	..	Devakottai.
6	Do.	..	..	..	Karaikudi.
7	Do.	..	..	..	Srivilliputhur.
8	Do.	..	..	..	Aruppukottai.

The first four institutions were located in Government buildings which were electrified and the rest were located in rented building. The veterinary hospital at Virudunagar was equipped with a refrigerator and the veterinary dispensaries at Karaikudi and Ramanathapuram have been equipped with a microscope each.

In these institutions 18,794 cases were treated and 5,031 castrations were done during the year as against 16,486 cases and 4,505 castrations of the previous year.

(14) *Coimbatore, West.*—There were four veterinary hospitals and five veterinary dispensaries in the district as shown below :—

1	Veterinary Hospital	..	..	..	Coimbatore.
2	Do.	..	..	..	Pollachi.
3	Do.	..	..	..	Vettaikaranpudur.
4	Do.	..	..	..	Udumalpet.
5	Veterinary Dispensary	..	..	..	Ramachandrapuram.
6	Do.	..	..	..	Singanallur.
7	Do.	..	..	..	Mudis.
8	Do.	..	..	..	Annur.
9	Do.	..	..	..	Mettupalayam.
(10)	Do.	..	..	..	Malayandipatnam.

The first five institutions were located in Government buildings which were electrified and the rest of the institutions were located in rented buildings except the one at Mudis which was located in a rent free buildings. The institutions except the one at Annur have been electrified. The veterinary institutions at Coimbatore, Pollachi and Udumalpet were equipped with microscopes and refrigerators. The veterinary dispensary at Vettaikaranpudur has been equipped with a microscope.

In the above institutions 42,075 cases were treated and 4,657 castrations were done as against 36,701 cases and 3,543 castrations of the previous year.

(15) *Coimbatore East (Erode).*—There were three veterinary hospitals and nine Veterinary dispensaries in the district as shown below :—

1	Veterinary Hospital	..	..	..	Erode.
2	Do.	..	..	..	Tiruppur.
3	Do.	..	..	..	Dharapuram.
4	Veterinary Dispensary	..	..	..	Gobichettipalayam.
5	Do.	..	..	..	Sathayamangalam.
6	Do.	..	..	..	Nathakadayur.
7	Do.	..	..	..	Bhavani.
8	Do.	..	..	..	Chennimalai.
9	Do.	..	..	..	Malayampalayam.
10	Do.	..	..	..	Kavandapady.
11	Do.	..	..	..	Bungalapudur.
12	Do.	..	..	..	Palladam.

Five of the above institutions were located in Government buildings of which four were electrified. Four institutions were located in rent free buildings and the rest in rented buildings. Out of the latter, two were electrified. The Veterinary institutions at Erode, Tiruppur, Dharapuram, Malayampalayam Bungalapudur and Kavandapadi have been equipped with refrigerators and microscopes.

In the above institutions, 25,674 cases were treated and 4,233 castrations were done as against 24,226 cases and 4,155 castrations during the previous years.

(16) *Nilgiris district.*—There were two veterinary hospitals and one veterinary dispensary in the district as shown below :—

1	Veterinary Hospital	..	..	..	Octacamund.
2	Do.	..	..	..	Coonoor.
3	Do.	..	..	..	Gudalur.

The two veterinary hospitals were located in Government buildings and were electrified. The other was located in a rented building and was also electrified. All the three institutions have been provided with microscopes and refrigerators.

During the year under report 8,500 cases were treated 387 castrations were done in the above institutions as against 8,883 cases and 225 castrations during the previous year.

(17) *Kanyakumari district.*—There were three veterinary hospitals and three veterinary dispensaries in the district as shown below :—

1	Veterinary Hospital	..	..	..	Nagercoil.
2	Do.	..	..	..	Kuzhithurai.
3	Do.	..	..	..	Thuckalay.
4	Veterinary Dispensary	..	..	..	Kottaram.
5	Do.	..	..	..	Aramboly.
6	Do.	..	..	..	Bhoothapandy.

Of the above, the institutions at Nagercoil, Kuzhithurai and Kottaram were located in Government buildings. The others were located in rented buildings. The institutions at Kuzhithurai and Kottaram were electrified. Microscopes have been supplied to the institutions at Nagercoil and Kottaram. A refrigerator has been supplied to the institution at Kottaram.

During the year, 14,391 cases were treated and 565 castrations were done as against 12,354 cases and 601 castrations of the previous year.

(18) *Salem North—Krishnagiri.*—There was only one veterinary institution as shown below :—

Veterinary Dispensary	...	...	...	Krishnagiri
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It was located in rented building. 2,447 cases were treated and 322 castrations were done in this dispensary during the year under report as against 2,541 cases and 345 castrations of the previous year.

In this district in addition to the above, there was a veterinary hospital attached to the Livestock Research Station, Hosur Cattle Farm. It was located in a Government building and is provided with a microscope. In this hospital 642 cases were treated and five castrations were done during the year under report as against 898 cases and 27 castrations during the previous year.

(ii) *Clinical Laboratories*.—Correct diagnosis of diseases is essential for efficient and proper treatment and clinical laboratories for the examination of materials from suspected patients are therefore a necessity. It is also necessary that the laboratories should be within quick reach so that delay in getting materials examined from laboratories situated in distant places as Veterinary College at Madras can be avoided and immediate appropriate preventive or curative measures undertaken.

With the above objectives in view and to carry out investigations into diseases peculiar to different localities 12 regional laboratories have been established in our state as shown below :—

Place of location.				Jurisdiction of laboratories.
1	Veterinary College	..	..	Madras City.
2	Veterinary Hospital, Kancheepuram	..	..	Chingleput district.
3	Do. Cuddalore	..	..	South Arcot district.
4	District Livestock Farm, Orathanad	..	..	Thanjavur district.
5	Veterinary Hospital, Pudukkottai	..	..	Tiruchirappalli district.
6	Veterinary Dispensary, Madurai	..	..	Madurai district.
7	Veterinary Hospital, Sivaganga	..	..	Ramanathapuram district.
8	Do. Tirunelveli	..	..	Tirunelveli district.
9	Do. Coimbatore	..	..	Coimbatore district.
10	Do. Salem	..	..	Salem district.
11	Livestock Research Station, Hosur	..	..	Do.
12	Veterinary Hospital, Vellore	..	..	North Arcot district.

All the above 12 laboratories continued to function during the year under report and a total number of 45,867 specimens were examined in these laboratories of which 13,710 were found positive.

The details of specimens examined are given below :—

Kind of specimens.	Number received.	Number examined.	Number positive.	Number negative.
(1)	(2)	(3)	(4)	(5)
Faeces	31,865	31,865	11,595	20,271
Blood smears	6,811	6,811	451	6,360
Pus smears	111	111	38	73
Scrapings	2,702	2,702	730	1,972
Nasal washings	1,192	1,192	667	525
Urine	37	37	28	9
Milk	1,038	1,038	81	957
Worms	23	23	23	..
Other specimens	2,088	2,088	98	1,990
Total ..	45,867	45,867	13,710	32,157

(iii) *Criminal Poisoning*.—Materials from suspected cases of poisoning were as usual sent to the chemical examiner to the Government of Madras for examination and report. Materials from 73 animals suspected of poisoning were sent for examination. The details of examination are furnished below :—

Nature of materials examined.	Number of materials.	Number positive.	Kind of poison.
(1)	(2)	(3)	(4)
Viscera and contents	111	39	Parathin arsenic nitrite oleander.
Stomach contents	41	14	Parathin. zinc phos-phide.
Miscellaneous	22	4	Arsenic.

(iv) *Post-mortem and wound certificates*.—During the year under report, the staff of this department examined and issued certificates in 362 cases of wounds and malicious injuries. They conducted 352 post-mortem examinations and issued certificates thereon during the year.

(v) *Societies for the prevention of cruelty to animals*.—During the year 7,714 cases were convicted under the Act for the prevention of cruelty to animals and 1,901 animals were remanded for treatment after conviction in the Veterinary Institutions declared as infirmaries in the state.

(vi) *Glanders Inspection*.—A whole time Veterinary Assistant Surgeon under the control of the District Veterinary Officer, Madras is in charge of Glanders inspection work within the city of Madras. He inspected the hackney ponies and horses belonging to private individuals in the city. One horse which landed at Madras port during the year was also inspected. Twelve animals intended for the zoos at Trivandrum and Mysore were also inspected.

In addition to his duties as glanders inspector, the Veterinary Assistant Surgeon, carried out routine inspection of cows brought to the milking yards in the State Hospitals in the city.

(vii) *Veterinary Council*.—The first Veterinary Council, which was constituted as per G.O. No. 4146, Food and Agriculture, dated 19th December 1958 with the following persons continued to function during the year under report :—

President.

1 Sri D. Pattabiraman

Members.

- 2 Sri I. D. Mantramurti.
- 3 „ T. Ananthapadmanabhan.
- 4 „ T. Vinayaka Mudaliar.
- 5 „ V. S. Alwar.
- 6 „ A. R. Vedanayagam.
- 7 „ T. A. Natarajan.
- 8 „ C. B. Viswanathan.

Member Ex-officio.

- 9 „ The Principal, Madras Veterinary College, Madras.

The Council met twice during the year and approved the draft set of rules and regulations for carrying out the provisions of the Madras Registration of Veterinary Practitioners Act, 1957.

(viii) *Private Practitioners*.—During the year under report there were 23 private Veterinary Practitioners in the State who are mostly retired personnel of this department.

During the year under report the private Veterinary Dispensary run by Sri K. Narayanasamy at Sivayam in Tiruchirappalli district was continued and an annual subsidy of Rs. 1,200 was also granted by Government during the year. Altogether 6,770 cases were treated and 159 castrations were done in this dispensary, during the period of one year commencing from 1st April 1959.

(ix) *Livestock in Forest department*.—A forest Veterinary Officer assisted by a Forest Assistant Veterinary Officer is in charge of care and management of Livestock, belonging to the Forest Department of this State.

There were 30 elephants at the beginning of the year. During the year there was one capture, three deaths, two transfers and two sales. Thus at the end of the year there were 24 elephants as against 30 of the previous year.

The strength of Livestock in the Forest department is furnished below :—

Kind of animals.	Number Remaining on 1st April 1959.	Capture.	Birth.	Transferred.	Purchased.	Total.	Sold.	Died.	Destroyed.	Transferred.	Total.	Number Remaining on 31st March 1960.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1 Elephants ..	30	1	..	..	..	31	2	3	..	2	7	24
2 Bullocks ..	2	..	..	..	..	2	..	..	..	..	..	2

Contagious and infectious diseases.—There was no occurrence of any contagious disease among elephants during the year. All the elephants were being protected against Anthrax with Anthrax spore vaccine periodically.

One hundred and sixty-five cases among elephants were treated for non-contagious diseases as against 200 cases of the previous year.

CHAPTER VII—ITINERATING STAFF.

The department provided efficient veterinary aid at village level through touring staff consisting of Veterinary Assistant Surgeons, Veterinary and Livestock Inspectors, Stockmen and Stockmen compounders. The headquarters of the staff are usually fixed at taluk headquarters or at important towns with jurisdiction extending over one taluk or even less. These itinerating staff have been provided with accommodation and equipment so as to enable them to run a minor veterinary dispensary whenever they happen to be at Headquarters. Their duties are prompt control of epidemics, treatment of ailing animals, castration of scrub bulls and propaganda on the various activities of the department. They also run one or two first aid centres at important places in their jurisdiction which they visit once or twice on fixed days of the week.

(i) *Minor Veterinary Dispensaries Touring billets and First Aid Centres.*—There were 80 minor veterinary dispensaries, 15 touring billets and 92 First Aid Centres during the year under report.

In all the minor veterinary dispensaries and in the villages visited on tour 221,102 cases were treated and 61,548 castrations were done during the year under report as against 210,365 cases and 52,615 castrations of the previous year.

The District-wise details of location of these touring billets and Minor Veterinary Dispensaries are given below :—

Chingleput district.—There were five minor veterinary dispensaries, two touring billets and six First Aid Centres in the district as detailed below :—

Kind of Institution.	Place of location.
1 Minor Veterinary Dispensary ..	Sriperumbudur.
2 Do. ..	Tirupporur.
3 Do. ..	Thiruvottiyur.

Kind of institution.	Place of location.
4 Minor Veterinary Dispensary ..	Satyavedu.
5 Do. ..	Ladkaranai (Endathur) opened in July 1959.
6 Touring Billets	Kancheepuram from 1st to 30th May 1959 only.
7 Do.	Tiruvellore from 17th April 1959 to 6th January 1960 only.
8 First Aid Centres	Nellikuppam upto 14th December 1959.
9 Do.	Chunampet.
10 Do.	Vallipuram.
11 Do.	Vitlapuram.
12 Do.	Tambaram.
13 Do.	Red Hills.

Four of the minor veterinary dispensaries were located in rented buildings while the fifth was in a rent free building. The minor veterinary dispensary at Tiruvottiyur has been equipped with a refrigerator.

During the year 13,942 cases were treated and 2,001 castrations were done in these institutions and on tour as against 9,549 cases and 1,502 castrations during the previous year.

South Arcot district.—There were six minor veterinary dispensaries and one touring billet, in the district as shown below :—

The minor veterinary dispensary at Sankarapuram was opened on 9th September 1959.

Kind of institution.	Place of location.
1 Minor Veterinary Dispensary ..	Vridhachalam.
2 Do. ..	Gingee.
3 Do. ..	Tirukkoyilur.
4 Do. ..	Villupuram.
5 Do. ..	Thirunavalur.
6 Do. ..	Sankarapuram.
7 Touring Billet	Cuddalore at Kurinchipadi.

All the minor veterinary dispensaries were located in rented buildings except the one at Sankarapuram which was located in a rent-free building.

In the above institutions 12,548 cases were treated and 3,065 castrations were done during the year under report as against 9,549 cases and 1,502 castrations of the previous year.

North Arcot district.—There were eleven minor veterinary dispensaries, one touring billet and seven first aid centres functioning in the district during the year under report. Of these the minor veterinary dispensaries at Vettavalam and Kalasapakkam and first aid centres at Mangalan and Konalur were opened during the year. The details are furnished below :—

Kind of institution.	Place of location.
1 Minor Veterinary Dispensary ..	Ambur.
2 Do. ..	Gudiatham.
3 Do. ..	Alangayam.
4 Do. ..	Vettavalam.
5 Do. ..	Polur.
6 Do. ..	Kalasapakkam.
7 Do. ..	Arni.
8 Do. ..	Cheygar.

Kind of institution.		Place of location.	
9	Minor Veterinary Dispensary	..	Desur.
10	Do.	..	Wallajah.
11	Do.	..	Chengam.
12	Touring Billet	.. ..	Panapakkam.
13	First-Aid-Centre	.. ..	Mailpatti.
14	Do.	.. ..	Mullaikommai.
15	Do.	.. ..	Konalur.
16	Do.	.. ..	Mangalam.
17	Do.	.. ..	Theyyar.
18	Do.	.. ..	Kilnarma.
19	Do.	.. ..	Ponnai.

Two minor veterinary dispensaries were located in Government buildings, five in rented buildings and the rest in rent-free buildings.

In the above institutions 19,577 cases were treated and 7,774 castrations were performed as against 19,744 cases and 7,835 castrations of the previous year.

Salem district.—There were six minor veterinary dispensaries, one touring billet and five first aid centers in the district. Out of these one minor veterinary dispensary at edapady and the first aid centre at Malur were opened during the year. The details are shown below :—

Kind of institution.		Place of location.	
1	Minor Veterinary Dispensary	..	Attur.
2	Do.	..	Rasipuram.
3	Do.	..	Velur.
4	Do.	..	Sendarapatty.
5	Do.	..	Omalur.
6	Do.	..	Idapady (newly opened).
7	Touring Billet	.. ..	Salem.
8	First-Aid-Centre	.. ..	Belukurichi.
9	Do.	.. ..	Konganapuram.
10	Do.	.. ..	Valapadi.
11	Do.	.. ..	Valasaiyar.
12	Do.	.. ..	Mallur.

The minor veterinary dispensaries at Velur and Sendarapatty were located in rent-free buildings and the others are located in rented buildings. The minor veterinary dispensary at Attur has been equipped with a refrigerator. During the year 20,212 cases were treated and 2,264 castrations were done in all the above institutions as against 11,807 cases and 2,909 castrations during the previous year.

Salem North—Krishnagiri.—The district had four minor veterinary dispensaries, one touring billet and four first aid centres.

Out of these the first aid centres at Anchetty Bagaloor and Nandimangalam were opened during the year. The details are shown below :—

Kind of institution.		Place of location.	
1	Minor Veterinary Dispensary	..	Dharmapuri.
2	Do.	..	Hosur.
3	Do.	..	Harur.
4	Do.	..	Denkanikotta.
5	Touring Billet	.. ..	Kaveripatnam.
6	First-Aid-Centre	.. ..	Kelamangalam.
7	Do.	.. ..	Bagalur.
8	Do.	.. ..	Anchetty.
9	Do.	.. ..	Nandimangalam.

All the four minor veterinary dispensaries were located in rented buildings.

Twelve thousand and twenty-two cases were treated and 2,858 castrations were done during the year against 24,280 cases and 5,557 castrations during the previous year.

Madurai, South.—This district had four minor veterinary dispensaries and one touring billet and four veterinary first aid centres during the year. Their locations are given below :—

Kind of institution.		Place of location.	
1	Minor Veterinary Dispensary	..	Natham.
2	Do.	..	Allinagaram.
3	Do.	..	Usilampatti.
4	Do.	..	Chinnamanur.
5	Touring Billet	.. ..	Madurai.
6	First Aid Centre	.. ..	Vellalapatti.
7	Do.	.. ..	Vellalur.
8	Do.	.. ..	Samayanallur.
9	Do.	.. ..	Varichur.

The minor veterinary dispensaries at Allinagaram and Chinnamanur were getting a contribution of Rs. 750 and Rs. 1,000 per annum respectively from the respective Panchayat Boards. The Natham Panchayat Board is giving a lump-sum contribution of Rs. 1,000 per annum for the maintenance of the Minor Veterinary Dispensary, Natham and a sum of Rs. 15 per mensem towards the rent of the Minor Veterinary Dispensary Building.

In these institutions 12,779 cases were treated and 5,618 castrations were done during the year as against 16,013 cases and 4,439 castrations during the previous year.

Madurai North (Dindigul).—There were three minor veterinary dispensaries, one touring billet and five first aid centres in the district during the year as detailed below :—

Kind of institution.		Place of location.	
1	Minor Veterinary Dispensary	..	Pannaikadu.
2	Do.	..	Nilakottai.
3	Do.	..	Oddanchatram.
4	Touring Billet	.. ..	Dindigul.
5	First Aid Centre	.. ..	Vadipatty.
6	Do.	.. ..	Athur.
7	Do.	.. ..	Ambuthurai.
8	Do.	.. ..	Alanganallur.
9	Do.	.. ..	Tirumalroyapuram.

All the minor veterinary dispensaries were in rented buildings only. In the above institution 16,878 cases were treated and 2,543 castrations were done as against 14,229 cases and 3,097 castrations of the previous year.

Ramanathapuram district.—There were eight minor veterinary dispensaries including one at Manamadurai which was opened during the year, one touring billet and one first-aid centre as detailed below :—

Kind of institution.		Place of location.	
1	Minor Veterinary Dispensary	..	Paramakudi
2	Do.	..	Sivakasi.
3	Do.	..	Mudukulathur.
4	Do.	..	Thiruppathur.
5	Do.	..	Sathur.
6	Do.	..	Thiruvadanai.

Kind of institution.	Place of location.
7 Minor Veterinary Dispensary ..	Thiruchili.
8 Do. ..	Manamadurai.
9 Touring billet	Malli.
10 First Aid Centre	Managacheri.

The minor veterinary dispensaries were located in rented buildings.

During the year under report 9,703 cases were treated and 3,240 castrations were done in the above institutions and on tour as against 12,116 cases and 3,896 castrations of the previous year.

Tirunelveli district.—There were five minor veterinary dispensaries including the one opened on 4th August 1959 at sivalperi, one touring billet and 11 First-Aid Centres in the district during the year as shown below :—

Kind of institution.	Place of location.
1 Minor Veterinary Dispensary ..	Kovilpatti.
2 Do. ..	Thiruchendur.
3 Do. ..	Ambasamudram.
4 Do. ..	Srivaikundam.
5 Do. ..	Sivalperi.
6 Touring billet	Sankarankoil.
7 First Aid Centre	Kadayam.
8 Do. ..	Velankuli.
9 Do. ..	Melacheval.
10 Do. ..	Vilathikulam.
11 Do. ..	Kadambur.
12 Do. ..	Otthanatham.
13 Do. ..	Perungulam.
14 Do. ..	Iruvapappan.
15 Do. ..	Nazareth.
16 Do. ..	Arumuganeri.
17 Do. ..	Udayankudi.

The rent for the minor veterinary dispensary building at Tiruchendur is paid by the panchayat board of the place. The minor veterinary dispensary at Sivalaperi is located in a rent free building.

During the year 15,267 cases were treated and 7,763 castrations were done in all the above institutions and on tour as against 9,454 cases and 6,118 castrations of the previous year.

Kanyakumari district.—There were one minor veterinary dispensary and four first-aid centres in the district as shown below :—

Kind of institution.	Location.
1 Minor Veterinary Dispensary ..	Valliyoor.
2 First Aid Centre	Azhagappapuram.
3 Do. ..	Eravaiputhur.
4 Do. ..	Nanguneri.
5 Do. ..	Kalakkadu.

During the year 4,990 cases were treated and 750 castrations were done as against 3,580 cases and 656 castrations of the previous year.

Thanjavur district (West).—During the year there were three minor veterinary dispensaries and one first-aid centre in the district as shown below :—

Kind of institution.	Place.
1 Minor Veterinary Dispensary ..	Salaimangalam.
2 Do. ..	Aduthurai.
3 Do. ..	Peravoorani.
4 First Aid Centre	Thirukattupalli.

The first one was located in a Government building while the second and third ones were in rented buildings.

In the above institutions 28,904 cases were treated and 7,152 castrations were done as against 14,584 cases and 4,082 castrations of the previous year.

Thanjavur East (Nagapattinam).—During the year there were seven minor veterinary dispensaries including the one at Thiruvengadu which was opened during the year under report one touring billet and two first aid centres in the district as detailed below :—

Kind of institution.	Location.
1 Minor Veterinary Dispensary ..	Muthupet.
2 Do. ..	Kuttalam.
3 Do. ..	Kodavasal.
4 Do. ..	Kivalur.
5 Do. ..	Vedaranyam.
6 Do. ..	Thalanayar.
7 Do. ..	Tiruvengadu (newly opened).
8 Touring Billet	Nidamangalam.
9 Veterinary First Aid Centres ..	Ayakarambalam.
10 Do. ..	Alathambadi.

During the year under report 10,284 cases were treated and 2,209 castrations were done in all the above institutions as against 7,613 cases and 2,545 castrations of the previous year.

Tiruchirappalli.—There were five minor veterinary dispensaries, one touring billet and seven First-Aid Centres in the district during the year as detailed below :—

Kind of institution.	Place of location.
1 Minor Veterinary Dispensary ..	Srirangam.
2 Do. ..	Kulithalai.
3 Do. ..	Chinnadharapuram.
4 Do. ..	Keeranur.
5 Do. ..	Alangudy.
6 Touring Billet	Thirumayam.
7 First Aid Centres	Uppidamangalam.
8 Do. ..	Pugalur.
9 Do. ..	Viralimalai.
10 Do. ..	Andakulam.
11 Do. ..	Karambakudi.
12 Do. ..	Ponnamaravathi.
13 Do. ..	Thiruparathurai.

The minor veterinary dispensaries at Keeranur and Kulithalai were located in Government buildings.

During the year under report 11,765 cases were treated and 1,933 castrations were done as against 13,108 cases and 3,214 castrations of the previous year in the above institutions.

Tiruchirappalli North (Ariyalur).—There were three minor veterinary dispensaries and seven first-aid centres functioning in this district during the year as detailed below :—

Kind of institution.	Place of location.
1 Minor Veterinary Dispensary ..	Perambalur.
2 Do. ..	Jayankondam.
3 Do. ..	Thuraiyur.
4 First Aid Centres	Naramangalam.

Kind of institution.				Place of location.
5	First Aid Centre	..	..	Nakkasalam.
6	Do.	..	..	Sendurai.
7	Do.	..	..	Ponparappi.
8	Do.	..	..	Udayarpalayam.
9	Do.	..	..	Pullambadi (opened on 2nd November 1959).

The minor veterinary dispensary at Perambalur was located in a Government building.

In the above institutions 7,109 cases were treated and 2,918 castrations were done as against 4,682 cases and 1,630 castrations of the previous year.

Coimbatore district.—In this district there were four minor veterinary dispensaries one touring billet and nine first-aid centres as shown below out of which one was closed during the year :—

Kind of institution.				Place of location.
1	Minor Veterinary Dispensary	..	..	Periyanaiaickenpalayam.
2	Do.	..	..	Avanasi.
3	Do.	..	..	Kuruchikottai.
4	Do.	..	..	Negamam.
5	Touring Billet	..	..	Kinathukadavu.
6	First Aid Centres	..	..	Bujanganur.
7	Do.	..	..	Koilpalayam.
8	Do.	..	..	Ikkaraiboluyampatti.
9	Do.	..	..	Periapodi (closed on 2nd May 1958).
10	Do.	..	..	Ramanathapuram.
11	Do.	..	..	Periapatti.
12	Do.	..	..	Chinnathadagam.
13	Do.	..	..	Onnipalayampudur.
14	Do.	..	..	Thendakaranpalayam.

The minor veterinary dispensaries at Kurichikottai, Negaman are located in rent free buildings. The others are located in rented buildings.

During the year 12,409 cases were treated and 3,961 castrations were done in the above institutions and on tour as against 7,413 cases and 1,417 castrations during the previous year.

Coimbatore district—(East Erode).—There were five minor veterinary dispensaries and six first aid centres in the district during the year as shown below :—

Kind of institution.				Place of location.
1	Minor Veterinary Dispensary	..	..	Perundurai.
2	Do.	..	..	Kodumudi.
3	Do.	..	..	Kangayam.
4	Do.	..	..	Andhiyur.
5	Do.	..	..	Punjaipuliampatty.
6	First Aid Centres	..	..	Arachalur.
7	Do.	..	..	Modakkuruchi.
8	Do.	..	..	Ekkatampalayam.
9	Do.	..	..	Mettupalayam.
10	Do.	..	..	Kuramandhur.
11	Do.	..	..	Siruvalur.

All the minor veterinary dispensaries were located in rented buildings.

In the above a total of 9,818 cases were treated and 3,560 castrations were done as against 14,137 cases 3,673 castrations during the previous year.

Nilgiri district.—There were one minor veterinary dispensary, two touring billets and five First-Aid Centres in this district during the year as shown below :—

Kind of institution.				Place of location.
1	Minor Veterinary Dispensary	..	..	Kotagiri.
2	Touring Billet	..	..	Ootacamund.
3	Do.	..	..	Gudalur.
4	First Aid Centres	..	..	Nanjanad.
5	Do.	..	..	Thummanahatty.
6	Do.	..	..	Prospect Estate.
7	Do.	..	..	Dhavanai.
8	Do.	..	..	Clovely.

In the above 2,895 cases were treated and 244 castrations were done as against 9,235 cases and 696 castrations of the previous year.

(ii) *Pilot scheme for the eradication of rinderpest.*—Two two check posts established at Thiruvottiur in Chingleput district and Thiruvallam in North Arcot district functioned till 30th September 1959 on which date they were closed once for all.

These check posts were intended to check all animals entering into the Madras State from the neighbouring States chiefly Andhra in order to minimise the chances of Rinderpest getting into the Madras which state has been free from this fell-disease for nearly a decade. The number of animals vaccinated in these two posts during the year up to its closure was 10,897.

(iii) *Veterinary mobile unit.*—Efficiency in the matter of control of contagious diseases depends upon prompt and expeditious attendance of outbreaks, preventive vaccinations treatment of the sick and undertaking advance prophylactic inoculations against these diseases in endemic areas in anticipation of their occurrence. In undertaking these control measures Veterinary Mobile Units have been of considerable help. They have also helped in the prompt attendance of outbreaks especially from interior and inaccessible villages. Mobile Units have been so far supplied to the districts of Chingleput, Thanjavoor, Tirunelveli, Tiruchirappalli, North Arcot, Kanyakumari and Ramanathapuram to intensify cattle disease preventive measures.

During the year under report two Mobile Units have been sanctioned for South Arcot and Salem districts. The first unit has been supplied to the former on 28th December 1959, while the supply of the second unit is awaited. The work turned out by the units is furnished below :—

Name of the district where the units are stationed.				Number of miles traveled.	Number of villages visited.	Number of O.B.R.s. attended.	Number of vaccinations done.
(1)				(2)	(3)	(5)	(5)
1	Tanjavur	..	..	13,253	387	4	2,044,479
2	Chingleput	..	..	12,001	268	39	43,112
3	Tirunelveli	..	..	14,349	548	20	98,338
4	Kanyakumari	..	..	8,357	445	25	11,817
5	North Arcot	..	..	26,568	428	72	210,935
6	Tiruchirappalli	..	..	4,291	207	32	35,578
7	South Arcot	..	..	275	6	6	7,598
8	Ramanathapuram	..	..	5,940	197	10	16,200

CHAPTER VIII—DISEASES AMONG LIVESTOCK.

Control and prevention of contagious and infectious diseases of livestock are the primary duties of the staff of this department. Incidence of epidemics are either brought to the notice of the staff by the village officials block staff or the concerned persons themselves or at times detected by the staff during their routine tours in the villages and rural areas. Prompt action to control the outbreaks by advance prophylactic vaccinations and timely treatment of the affected animals are undertaken by the staff. It is gratifying to note that there has been such a great awakening among the people that demand for prompt veterinary aid was much more than what we could cope up with.

During the year under report, the disease position in the state was well under control and the incidence of contagious diseases and mortality have been considerably reduced by prompt prophylactic measures in actual outbreaks and by undertaking intensive advance preventive vaccinations against the prevalent contagious diseases in endemic areas in anticipation of the outbreaks. A total number of 2,821,128 vaccination and inoculations were done by the staff both in affected and free areas during the year under report as against 2,059,872 during the previous year. A total number of 1,705 outbreak reports of all diseases was received as against 1,596 reports of the previous year. The slight increase can be attributed to the shepherds taking cognisance of sheep diseases, of late, which alone accounted for 347 reports. It may also be partly attributable to the intensive drive among extension officers to detect outbreaks of contagious diseases in their blocks. The details of outbreaks and inoculations done are furnished in Table 1 annexed to this report.

Mortality.—There was a total number of 8,424 deaths due to various contagious diseases during the year as against 7,028 during the previous year. Here again the slight increase in the number of deaths may be attributed to the deaths among sheep which alone accounted for 3,184 deaths and which of late are being reported to the departmental staff with the hope of getting prompt aid. As a result of intensive prophylactic and curative methods undertaken of the department the rate of mortality to the livestock population of the State works out to only 0.00013. The diseasewar particulars are furnished below :—

(i) Diseases among cattle and buffaloes—(a) Contagious diseases—

1. **Rinderpest.**—The State continued to be free from this disease during the year under report. A strict and continued vigilance is being kept on all vulnerable points to prevent the ingress of the disease into the State. A total number of 22,283 animals were protected against this disease during the year as a prophylactic measure.

2. **Hæmorrhagic septicæmia.**—There has been a considerable fall in the incidence of this disease with less than 50 per cent mortality as compared with the figures of last year. The disease though prevalent in all the districts of the state during the year under report was in a less severe form. The largest number of outbreaks was in Chingleput district with 202 outbreaks. In the entire state 587 outbreaks with 1,189 deaths were received as against 685 reports with 2,565 deaths during the previous year. The figures are quite revealing and the effect of intensive prophylactic measures is reflected in the low mortality figures. A total number of 890,677 animals (291,795 in affected areas and 598,882 in free areas) were protected against this disease during the year under report, as against 603,327 during the previous year.

3. **Black quarter.**—This disease was also prevalent in all the districts of the state during the year under report but was slightly more severe

than what it was in the previous year. The total number received was 606 with 2,206 deaths as compared with 490 outbreaks with 1,554 deaths during the previous year. As usual, Ramanathapuram district was the worst affected with 112 outbreaks and 417 deaths. A total number of 924,896 animals (271,622 in affected areas and 653,277 in free areas) were vaccinated against the disease during the year under review as against 584,560 during the previous year.

4. **Anthrax.**—This disease was prevalent only in 11 districts of the State during the year, with 53 outbreaks and 237 deaths the maximum reports and mortality being in North Arcot district. During the previous year there were 44 outbreaks with 174 deaths due to this disease.

Altogether 52,068 animals (30,263 in affected areas and 21,805 in free areas) were vaccinated against the disease during the year under report as compared with 14,346 animals of the previous year.

5. **Foot and mouth disease.**—This disease was prevalent only in four districts of this state with only 9 outbreaks and no mortality. The outbreaks were rather mild and the affected animals were promptly treated and cured.

6. **Surra.**—There was a great fall in the incidence of this disease during the year under report. This disease was prevalent in Chingleput, North Arcot, South Arcot, Madurai, Ramanathapuram, Coimbatore and Salem districts. North Arcot was the worst affected. In the rest of the districts it was rather mild. Only 40 outbreaks were received with 109 deaths as against 62 outbreaks and 155 deaths during the previous year. Nine hundred and eighteen animals were given preventive and curative treatment with anticide prosalt.

7. **Nasal Schistosomiasis.**—There was no mortality due to this disease. Two thousand, eight hundred and twenty-nine cases were treated during the year as against 3,166 during the previous year, which is an indication that the disease was not a great problem during the year.

8. **Johne's disease.**—Ten cases were treated during the year as against 7 of the previous year.

9. **Brucellosis.**—Eighty-five cases were treated as against 16 cases of the previous year.

10. **Bovine lymphangitis.**—Five hundred and four cases of this disease were treated during the year as against 465 of the previous year.

11. **Strongylosis.**—Three thousand, one hundred and forty-eight cases were treated during the year under report as against 2,985 of the previous year.

12. **Mange.**—One thousand, five hundred and eighty-nine cases were treated as compared with 1,519 of the previous year.

13. **Mastitis.**—Nine hundred and sixty-one cases were treated during the year as against 916 of the previous year.

14. **Coccidiosis.**—One thousand three hundred and seventy-one cases underwent treatment during the year as against 740 of the previous year.

15. **Ephemeral fever.**—Two thousand, five hundred and forty-six cases were treated during the year under report as against 1,559 of the previous year.

16. **Piroplasmosis.**—Two hundred and fifty-eight cases were treated during the year as compared with 393 of the previous year.

17. *Theileriasis*.—Forty-four cases were treated during the year as compared with 39 of the previous year.

18. *Rabies* (among cattle and buffaloes).—Three hundred and eighty-four bovines were given antirabic treatment during the year as against 204 of the previous year.

(b) *Non-contagious diseases*—1. *Rheumatic arthritis*.—Four hundred and seventy cases were treated during the year as against 1,054 of the previous year.

2. *Urethral calculi*.—Only one case was under treatment during the year as against 9 in the previous year.

3. *Haematuria*.—Eighty-one cases underwent treatment during the year under report as against 98 of the previous year.

4. *Chronic luxation of Patella*.—Four thousand five hundred and eighty-five cases were treated by the staff during the year as against 6,440 of the previous year.

5. *Sterility*.—Six hundred and fifty-seven cases were treated during the year as against 588 of the previous year.

6. *Cancer* (horn and eye).—Five hundred and eighty cases were given treatment during the year.

7. *Retention of placenta*.—Four hundred and ninety-five cases were treated during the year.

(ii) *Diseases among sheep and goats*—*Contagious and infectious diseases*.—The details of outbreaks, mortalities and vaccinations against the various diseases of sheep and goats are furnished in the following statement :—

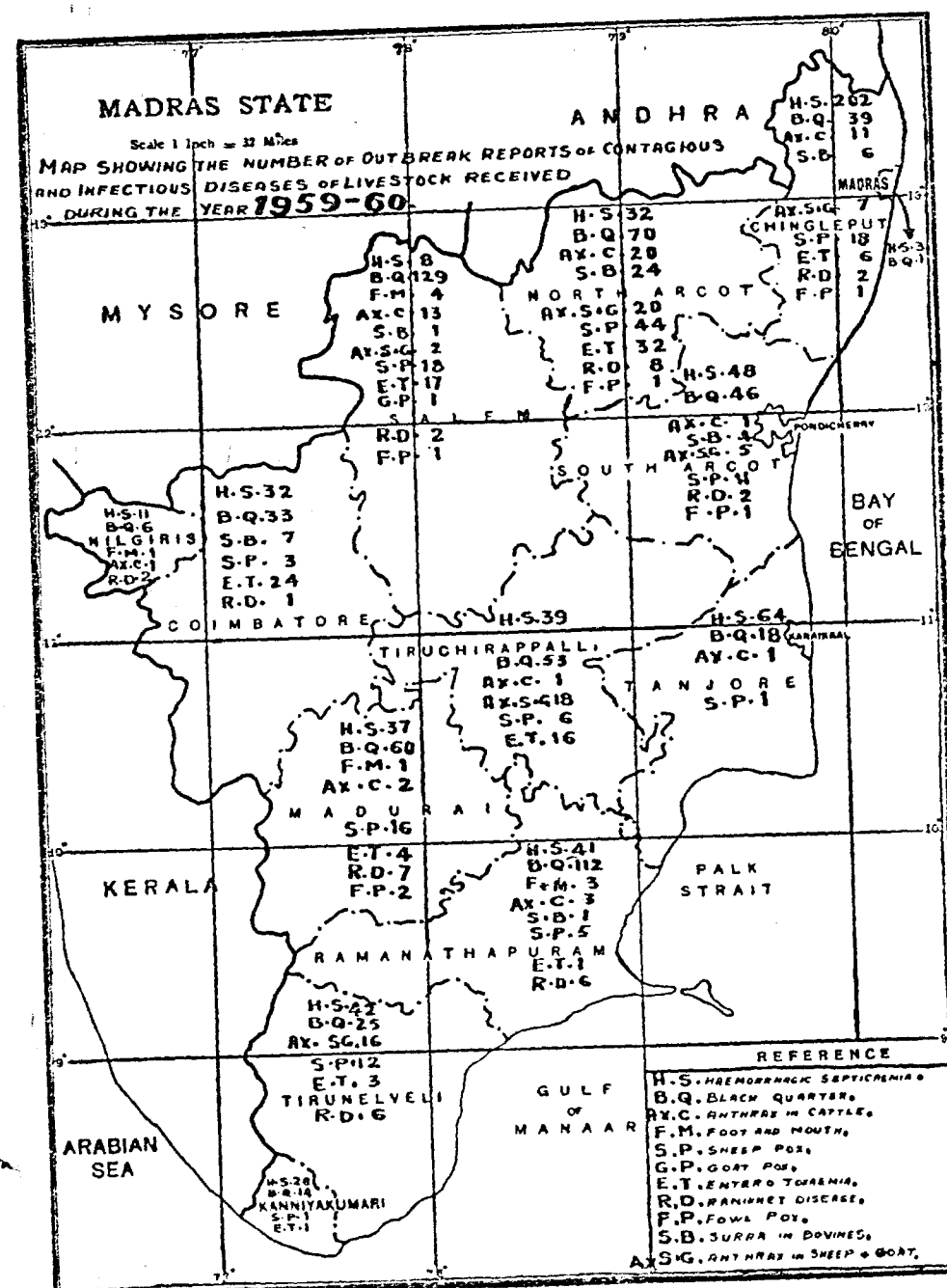
Name of diseases.		Number of outbreak reports received.	Number of deaths.	Number protected	
				In effected areas.	Free area.
(1)		(2)	(3)	(4)	(5)
Anthrax ..	1949-50 ..	109	924	21,019	52,228
	1958-59 ..	98	873	33,950	27,831
Sheep pox ..	1959-60 ..	134	893	35,634	21,877
	1958-59 ..	85	599	23,054	28,137
Enterotoxaemia ..	1959-60 ..	104	1,229	49,363	113,020
	1958-59 ..	37	267	10,585	53,300
Total ..	1959-60 ..	347	3,046	106,016	187,125
	1958-59 ..	220	1,739	67,589	109,268

(iii) *Diseases among other animals*—*Contagious and infectious diseases*—1. *Surra in equines*.—Only one death from this disease in a pony was reported from Thanjavur district during the year. There was no report during last year.

2. *Rabies in canines*.—There were 176 deaths due to this disease during the year as against 53 deaths during the previous year. One thousand and nine dogs were given antirabic treatment during the year under report as compared with 649 during the previous year.

Thirty-five thousand five hundred and three stray dogs are reported to have been destroyed in the various lethal chambers of the state as against 17,428 during the previous year.

3. *Ranikhet disease*.—Thirty-six outbreaks of this disease with 398 deaths were received during the year under report as against 31 outbreaks



with 321 deaths of the previous year. Thirty-one thousand one hundred and twenty-three birds in affected areas and 575,625 birds in free areas were vaccinated against this disease during the year as against 22,988 and 2,181,584 respectively of the previous year.

4. *Fowl pox*.—Seven outbreaks of this disease with 122 deaths were received during the year as against 8 outbreaks and 57 deaths during the previous year. Seven hundred and sixty-six birds in the affected areas and 5,486 birds in free areas were vaccinated as against this disease against 366 birds in affected areas and 14,058 in free areas of the previous year. Twenty-four thousand six hundred and thirty-one chicks received vaccination with pigeon pox vaccine during the year under report.

CHAPTER IX—INVESTIGATION AND RESEARCH.

For the progress and advancement of any scientific Institution, Research is an imperative necessity. Research not only tackles new problems and finds out better, easier and economic methods of solution of such problems but improves upon existing methods and practices. The Animal Husbandry Department, Madras which has a vast scope for progress and development, reckons investigation and research as one of the most necessary items among its activities.

Investigation and Research into problems connected with control and eradication of epidemic diseases among livestock, investigation into new diseases and discovering new products for their cure and prophylaxis research into economic and balanced feeding of animals so as to bring out the full potentialities of our livestock, research into the problem of producing better and more productive type of animals, are some of the important aspects of research work done by the investigation and research staff of this department. They consist of the officers in charge of the various departments of the Madras Veterinary College, like the Bacteriology, Pathology, Helminthology, Genetics, Animal nutrition, Gynaecology, etc., the research officers at the Institute of Veterinary Preventive Medicine, Ranipet, and the Veterinary Disease Investigation Officers. In addition to the above officers, are sometimes appointed for tackling special and specific problems and diseases. The important items of research work undertaken by the various research officers in the department are furnished below :—

(i) *Madras Veterinary College—Animal Nutrition Department*—1. Studies on the use of meat meal for feeding poultry in comparison with fish meal.

2. The use of cow dung at 10 per cent level in the feeding of poultry to assess the oestrogenic effect on growing birds in both sexes.

3. Work is in progress on the determination of nutritive value of infertile eggs.

Department of Bacteriology.—(1) Bacterial Flora in the genital tract of bovines with special reference to metritis and sterility.

(2) Bacterial Flora involved in contagious coryza in fowls.

Mastitis.—A survey work determine the extent of the incidence of mastitis in the State by collecting milk samples from 1038 healthy and suspected quarters subjecting them to chemical, microscopical and bacteriological examinations.

Department of Gynaecology.—Studies on the cases treated for retention of after-birth and prolapse of vagina in cattle with a view to ascertain the possible etiology of these diseases.

Department of meat inspection.—A method of preparing meat meal suitable for poultry feeding from the flesh of dead cattle has been worked out. The method evolved was to be practised under village conditions.

Department of Parasitology.—Intensive treatment trials of nasal schistosomiasis were conducted.

Department of Helminthology.—Studies on infestation with tape worms such as *Moneizia Artellina* and *stilesia*.

Madras Helminthiasis Scheme.—The object of the scheme was to accurately estimate the species of cestodes that affect ruminants in the State and how far these worms are responsible for the loss of condition in the infected animals.

(ii) *Institute of Veterinary Preventive Medicine, Ranipet—Rinderpest.*—Period of immunity in case of rinderpest by using freeze dried vaccine.

Hæmorrhagic septicæmia.—Production of a more effective vaccine of lasting immunity.

A Booster dose of hæmorrhagic septicæmia alum precipitated vaccine 7 days after the original vaccination was found to confer a more lasting immunity than a single vaccination.

The minimum dose of oil adjuvant hæmorrhagic septicæmia vaccine required for protecting buffalæ calves against the diseases was found to be 3 c.c.

Black quarter vaccine.—Field trials with alum precipitated black quarter vaccine to protect cattle against black quarter diseases.

Anthrax.—Period of immunity conferred by the anthrax spore vaccine manufactured at this institute.

Ranikhet disease.—(1) The oral administration of Ranikhet disease vaccine to protect chicks against the disease.

(2) Studies on immunising chicks with the combined vaccine for Ranikhet disease and fowl pox.

Fowl Coryza.—To determine the casual agent responsible for contagious coryza in fowls. A few strains of pasteuralla organisms, hæmophilus gallinarum and eorimi bacterim have been isolated from the ailing chicken.

Schemes wholly or partly financed by the Indian Council of Agricultural Research.—(1) *Scheme for the increased production of freeze dried rinderpest vaccine.*—This scheme which is entirely financial by the Government of India, was continued during the year. Seventy-two batches of vaccine yielding 7,147,375 doses were manufactured as against 9,351,250 doses during the previous year. The decrease is mainly due to lesser demand as a result of effective eradication programme. Sixty-one lakhs sixty-five thousand four hundred and fifty doses of the vaccine were supplied to the states of Bombay, Bihar, Orissa, Mysore and Madras during the year for use in the Rinderpest Eradication campaign and for protecting livestock in Government and Military Farms and other selected areas.

There was no short fall in the production.

Experiments.—Studies made on the keeping qualities of rinderpest freeze dried vaccine under different storage conditions showed that with the

changes in temperature there was deterioration in the viral content and hence the vaccine should be used as soon as possible after removal from the deep-freeze cabinet.

2. *Scheme for the improvement in the Technique and methods used in the manufacture of virus vaccines.*—This is a scheme which was partly financed by the Indian Council of Agricultural Research the sanction for which expired on 26th February 1960 and so the scheme was terminated on that date.

Sheep pox vaccine.—Further work on the use of aluminium gel absorbed sheep pox vaccine showed that the vaccine was found viable only for a period of six days when stored at a temperature of 37.4 c.c. and for nine days when stored at room temperature of 78 to 94 F.H.

The vaccine was found to be safe when administered subcutaneously both in the outer aspect of the ear and in the candal fold and successfully immunised sheep against sheep pox.

Immunity tests conducted on sheep vaccinated with sheep pox aluminium-gel absorbed vaccine showed that immunity was conferred seven days after vaccination and that the immunity lasted for eleven months.

Fowl-pox.—The fowl-pox virus passaged in ducks eggs was tested on chicks aged 4 weeks and was found to be safe and conferred adequate protection against the disease. The virus did not spread infection to incontact healthy chicks nor did it produce any generalized lesion in the vaccinated chicks.

Ranikhet disease.—The milder strains of ranikhet disease virus suitable for protecting baby chicks against the disease was obtained from the Indian Veterinary Research Institute, Mukteswar, and studies on it are in progress.

Combined vaccine against ranikhet disease and fowl-pox.—This vaccine was tried on 737 chicks aged about 8 weeks and the results showed that the vaccine confers immunity against both the diseases.

3. *Scheme for the survey and control of brucellosis in the State.*—The survey into the incidence of the disease was continued in the four districts of Coimbatore, Madurai, Ramanathapuram and Tirunelveli. In the two centres at Pollachi and Gobichettipalayam the survey was completed as per the targets fixed. An examination of the data collected showed that the percentage of the incidence of the disease varied from 0 to 15 per cent even though the overall average incidence for all the villages surveyed so far was 2.2 per cent.

During the year under report 299 villages were surveyed and 10,884 cattle were tested of which 233 animals were found positive to the agglutination test giving an overall incidence of 2.2 per cent.

One thousand five hundred and thirty-four vaccinations were carried out as a preventive measure.

Strains of brucella abortus isolated from the materials collected locally were sent to the Indian Veterinary Research Institute for confirmation. These strains appear to vary from the classical *Brucella Abortus* Organisms.

During the year, the following quantities of vaccine and antigen for use in the field were manufactured at the Brucella Laboratory:—

					Doses
1	Brucella Abortus vaccine	..	..	..	2,340
2	do. do. Plate vaccine	..	..	..	780
3	do. do. Tube Antigen	..	..	..	2,500
4	Antigen for Milk-ring tests	..	..	..	100
5	Brucella Mellitensis Plan Antigen	..	..	..	50
6	do. do. Tube Antigen	..	..	..	1,500

(iii) *Disease investigation.*—The three Disease Investigation Officers, one for cattle, one for sheep and one for poultry continued their research and investigation in their respective spheres during the year. Their work is summarized in the following paragraphs:—

Investigation into diseases of cattle.—Investigations were carried out on the following diseases, by the investigation officer for cattle:—

- 1 Anthrax.
- 2 Black quarter.
- 3 Brucellosis.
- 4 Fits and bovine paraplegia.
- 5 Trypanasomiasis and field trials with antrycide prosalt new formulation.
6. Haemorrhagic septicæmia and field trials with oil adjuvant vaccine therefor.
- 7 Immature amhistomiasis.
- 8 Johne's disease.
- 9 Tuberculosis.
- 10 Sterility in bovines with special reference to trichomphiasis and uberiosis.
- 11 Mastitis.
- 12 Obscure diseases.

Anthrax.—In two villages of South Arcot District, it was found that an anthrax outbreak which started first among sheep and goats subsequently spread to cattle and finally to human beings also, due to indiscriminate and clandestine skinning of affected animals.

An ailing anthrax animal was treated with anti-anthrax serum and penicillin for 3 days resulting in the recovery of the animal.

Brucellosis.—One Sindhi bull and Kangayam bull belonging to Government which had orchitis and synovitis were tested for this disease by the quick and tube test methods and out of these one was found positive for brucellosis. Two hundred and eighty-six animals intended for purchase on Government account were tested for this disease as a routine measure and none gave positive reactions.

Fits and bovine paraplegia.—This disease was found to be widespread and was noticed in most of the districts. It was found to manifest in acute, subacute and chronic forms. The studies so far made indicate that the cause of the condition was due to heavy micro-filarial infestation and treatment with hetrazon followed by a course of anthiomaline or antimozan gave promising results.

Trypanasomiasis and field trials with antrycide prosalt new formulations.—Controlled experiments were conducted to find out the efficacy of the above drug on 20 animals in the village of Karikiluppai in North Arcot District which village is an endemic area for Trypanasomiasis. The results were however inconclusive.

Two stud bulls belonging to Government were successfully treated for trypanasomiasis with antrycide prosalt.

Haemorrhagic septicæmia and field trials with H.S. oil adjuvant vaccine.—One thousand one hundred and fifty-three animals were vaccinated with this special vaccine during the year under report. Animals vaccinated with this vaccine during previous years were inspected with a view to study the

efficacy of the vaccine in endemic areas for hæmorrhagic septicæmia. From the field observation so far made it can be safely said that this vaccine conferred an immunity for a period of about one year.

Johne's disease.—Two hundred and eighty-six animals at the Bharat Livestock Agency were tested for this disease and were found negative for the disease.

At the Livestock Research Station, Hosur, out of 45 animals tested against this disease 15 gave positive reactions.

Tuberculosis.—The work under this item consisted of testing 352 animals belonging to both Government and private bodies out of which eleven animals showed positive reaction.

Sterility in bovines.—Seventy-two uterine swabs taken from cows were examined for trichomonias and vibrios and no organisms suspected could be detected in them.

Mastitis.—Samples of milk from 56 cows tested for mastitis by the strip cup test and Hott's test were negative for mastitis.

Obscure diseases.—Detailed investigation was carried out along with the Superintendent, Institute of Veterinary Preventive Medicine on an obscure disease which was reported from Irumaram village of Chingleput District. Materials from the suspected cases were examined by the Investigating Officers and were also sent to the Principal, Madras Veterinary College and Director, Indian Veterinary Research Institute, Mukteswar. The materials were subjected to various laboratory tests and finally the disease was diagnosed as leptospira which is rather a rare disease in Madras State.

2. *Investigation into diseases of sheep and goats.*—The following diseases in sheep and goats were investigated by the Disease Investigation Officer, sheep and goats:—

- | | |
|-------------------------------|-------------------------------------|
| 1 Anthrax in sheep and goats. | 4 Helminthiasis in sheep and goats. |
| 2 Sheep-pox. | 5 Other obscure diseases. |
| 3 Enterotoxæmia. | 6 Johne's disease. |

Anthrax in sheep and goats.—This disease was investigated in 8 centres in the districts of North Arcot, South Arcot and Tiruchirappalli confirmation of the diseases was obtained in 5 of these centres. In one instance anthrax bacilli were recovered from the ticks of apparently healthy sheep in an infected flock and in three centres the disease was found to have infected human beings also.

Control of outbreaks of anthrax in sheep and goats were found to be successful through vaccination of the healthy ones with anthrax spore vaccine.

Sheep-pox.—The disease was investigated in actual outbreaks in 26 centres. The efficacy of the injection method of vaccination against the disease over the scarification method was studied. Six thousand nine hundred and eight animals were protected by the injection method.

Enterotoxæmia.—The disease was investigated in 15 centres in the districts of North Arcot, Chingleput, Tiruchirappalli, South Arcot, Salem and Coimbatore. The disease was confirmed in seven centres. Five thousand and four sheep and 66 goats were vaccinated. In 22 centres it was found that no immune bodies could be detected in the sera of vaccinated

animals when tested one month after vaccination. Further studies are required for improving upon the present vaccine.

Helminthiasis.—The condition was investigated in 10 centres. In most cases, the condition was due to infestation with either strongyles or amphistomes species of worms treatment with phenovis or hexachlorethane as the case may be were found effective in the reduction of the parasites.

Obscure disease.—Reports of mortality from seven villages from unknown causes were received and investigated. But no definite conclusions as to either the cause of the disease or the mortality could be arrived at.

3. *Investigation into diseases of Poultry.*—During the period under report the following diseases were investigated by the Disease Investigation Officer, Poultry :—

- | | |
|--------------------------|-------------------------------------|
| 1 Ranikhet disease. | 5 Avian tuberculosis. |
| 2 Fowl-pox. | 6 Salmonellosis. |
| 3 Contagious coryza. | 7 Parasitic infestation in Poultry. |
| 4 Avian Leucosis complex | 8 Coccidiosis. |

Ranikhet disease.—The reaction in birds vaccinated with Ranikhet vaccine both in free and affected areas was studied and was found to be mild in both cases.

Ranikhet disease vaccine prepared from the Kumorove strain of the virus was tried on 2,808 birds and was found to be safe and conferred an immunity lasting up to 2 years and 10 months.

Experiments conducted with a mixed vaccine for Ranikhet disease and Fowl-pox have given encouraging results. Immunity tests conducted in these birds showed that immunity lasted up to 1 year 2 months in the case of Ranikhet disease and 1 year and 1½ months in the case of fowl-pox. It is therefore concluded that chicks of 6 weeks and above of age could be safely vaccinated simultaneously against fowl-pox and Ranikhet disease with this mixed vaccine.

Fowl-pox.—Treatment of chicks affected with fowl-pox with streptopos an antibiotic in 0.1 gram doses has given excellent results. In the matter of prophylaxis of this disease it was found desirable to vaccinate all chicks of 2 weeks old with pigeon pox vaccine followed by fowl-pox vaccine at 6 weeks of age. Experiments with freeze-dried chick embryo fowl-pox vaccine as an immunising agent in chicks of 6 weeks and over have given encouraging results and the immunity conferred by this vaccination was found to last up to 2 years 7 months and 2 days.

Contagious coryza.—This disease has a wide distribution all over the State. Cultural tests conducted has resulted in the isolation of an organism of the corynebacterium type as the cause of the disease. A vaccine prepared from this organism has given encouraging results both as a curative and preventive.

Avian leucosis complex.—This disease also has a wide distribution in the State. The affected birds manifested general weakness, emaciation and abnormal paleness of combs and wattles due to acute anæmia. Control methods consisted in early detection of the affected birds by hæmatological examination of apparently healthy birds and entering out all affected ones. During the year under report blood of 2,603 birds were examined out of which 53 proved positive for the disease.

Avian tuberculosis.—To ascertain the degree of incidence of this disease, 126 emaciated adult birds from Government poultry farms and units were treated during the year under report with 0.2 c.c. of avian tuberculin. Of the above, 19 birds showed positive reactions. These were destroyed and the disease confirmed in them by post-mortem examination.

Salmonella Pullorum Disease.—Although no outbreak of this disease occurred during the year under report in this state, birds in Government Poultry Farms and units were subjected to tests to find out carriers, if any. Two thousand two hundred and twenty-two birds were thus tested and all were negative for the disease.

Parasitic infestation in poultry.—It has been found that fowls do suffer from round and tape worm infestations. Trials with piperazine compounds or round worms have given good results.

Coccidiosis.—This disease was met with in poultry units all over the state. *Eimeria tenella* is the most common type of parasite met with in the field. Some other species were also found to cause the condition occasionally. The adoption of the deep litter method of rearing chicks and rearing them on wire floors were found to minimise the incidence of this disease.

CHAPTER X—ANIMAL HUSBANDRY WORK IN NATIONAL EXTENSION SERVICE AND COMMUNITY DEVELOPMENT BLOCKS.

Animal Husbandry forms an important item in the programme of Community Development as it has a direct bearing on the economic uplift of the masses and therefore concentrated attention is being paid to this aspect of community development work. This is being done through the agency of the Extension Officers of Animal Husbandry, in the developmental blocks under the immediate guidance and technical supervision of the District Veterinary Officers concerned. The Extension Officers in Animal Husbandry, freely mingle with the people in the villages, and bring home to the latter the different ways in which the ryots can obtain help and advise them in the field of Animal Husbandry.

The following are items of work attended to by the Extension Officers :—

- 1 Distribution of pedigree bulls, rams, etc., for stud purposes.
- 2 Opening of Veterinary Institutions and First Aid Centres.
- 3 Opening of Poultry Demonstration Units.
- 4 Distribution of exotic varieties of birds for starting small backyard Poultry Units by individuals.
- 5 Arranging of sale of surplus poultry and eggs.
- 6 Development of pasture.
- 7 Protection of animals against contagious diseases.
- 8 Treatment of non-contagious ailments of cattle.
- 9 Castration of scrub bulls to prevent indiscriminate breeding.
- 10 Organisation of co-operative societies.
- 11 Propaganda by arranging Cattle Shows, Exhibition, etc.

The work turned in the block areas is furnished below districtwise :—

1. *Chingleput district.*—This district had five stage I Blocks, two stage II blocks and four Community Development Blocks besides two Pre-extension Blocks during the year. One Veterinary Dispensary, one Minor Veterinary Dispensary, twenty-one First-aid Centres, three Key Village Centres with

eighteen sub-centres attached one Artificial Insemination Centre and three supplementary extension centres were functioning in these block areas.

Two hundred bulls of different breeds under various schemes are at stud in the Block areas. Three hundred and thirty-three rams have been distributed for upgrading work. One thousand eight hundred and forty exotic birds and 13,131 hatching eggs were distributed for breeding. One Poultry Extension Centre is located here. Fifteen Co-operative Milk Supply Societies functioned during the year.

Four hundred and forty-three acres of land was brought under fodder cultivation. Sixteen thousand slips of guinea grass were supplied. Nine thousand fingerlings were distributed.

During the year under report 15,479 cases were treated. Six thousand seven hundred and six castrations were performed, 188,158 inoculations were done and 26,462 sheep were dewormed.

2. South Arcot district.—There were five stage I blocks and four stage II blocks during the year under report in this district. One Veterinary Hospital, one Veterinary Dispensary and one minor Veterinary Dispensary are situated in the block area. Three Artificial Insemination Centres (including one Urban Artificial Insemination Centre) and six Key Village Sub-centres were also functioning in the block area of the district. Thirty-nine Kangayam, 35 Scindhi and 15 Murrah bulls were at stud under different schemes. Two Key Village Extension Centres were located partly in blocks. Three hundred and ninety-two rams of Nellore and Mecheri types were distributed and 2,123 lambs were born to these rams. For upgrading the local breed of sheep, 80 ewes of the Mecheri type were also introduced in the Kallakurichi block for breeding.

Two Poultry Demonstration Centres attached to the Veterinary Hospital, Kallakurichi and Veterinary Dispensary, Panrutti, functioned during the year in Block area. These units sold 29 birds and 990 eggs for breeding.

In the block areas of the district 18,016 cases were treated, 14,150 scrub bulls were castrated and 102,586 prophylactic vaccinations were done during the year under report. Fifteen thousand five hundred and seventy-eight sheep were also dewormed.

3. Tanjore district.—There were eight blocks in the district at the beginning of the year. No new blocks were opened. Six veterinary institutions and one Livestock Improvement Centre with four sub-centres were functioning in the block area during the year. One Village Livestock Improvement scheme was operating. It had two Umblacherry and one Murrah bull attached to the scheme.

Six rams were at stud and 79 kids were born to them during the year.

Two poultry units functioned in the area. These units sold 37 birds and 1,551 eggs for breeding. Four hundred and two cocks were also distributed for the same purpose.

Two Co-operative Milk Supply Societies functioned in the block area. One cattle-show and one poultry-show were conducted during the year.

In the block areas 22,619 cases were treated, 9,780 castrations were done and 105,208 preventive vaccinations were carried out. Two thousand six hundred and four sheep were also dewormed.

4. Nagapattinam (Tanjore district).—Twelve Developmental blocks were functioning in this district during the year under report.

Three veterinary hospitals, 12 veterinary dispensaries, one touring billet and 13 first-aid centres were operating in the area. One Livestock Improvement Centre with four sub-centres was also functioning.

Two hundred and fifteen bulls were at stud under various schemes including those in the one Supplementary Extension Centre. Two bucks were also at stud.

There were three Poultry Extension Centres, and five Grading Centres operating in the block area. Two thousand two hundred and twenty-one birds and 6,919 eggs were supplied.

14.31 acres of land was brought under fodder grass cultivation.

The veterinary work turned out in the block areas of this district during the year under report is as follows:—

Twenty-one thousand one hundred and five cases were treated, 7,812 scrub bulls were castrated, 1,543 animals and birds were protected against various epidemic diseases and 10,475 sheep were dewormed.

5. Tiruchirappalli, South.—Five Developmental blocks functioned in the district during the year. Three Veterinary dispensaries and 11 First Aid Centres were situated in the block areas. Three key village blocks and four supplementary extension centres were functioning during the year. Three hundred and fifty-three bulls were at stud under various schemes. Seven thousand two hundred and thirty-four services were performed by these bulls and 2,523 calves were born. Nine thousand four hundred and ninety-six inseminations were also done. Three hundred and sixteen rams were at stud at the beginning of the year to which 120 were added during the year.

Two Poultry Extension Centres were operating. They supplied 752 birds and 8,632 eggs for breeding.

Three cattle-shows and two poultry shows were held.

In the block 8,670 cases were treated, 958 castrations were performed, 26,931 preventive inoculations were done and 449 sheep were dewormed during the year.

6. Ariyalur (Tiruchirappalli, North).—The block area of this district comprised 8 stage I blocks and 2 Stage II blocks. One pre-extension block was included during the year. There were three Veterinary dispensaries, two Minor Veterinary dispensaries and twenty First-aid centres in the block. A key village extension centre is functioning in the block area.

One hundred and sixty-one bulls under various scheme were at stud. They did 7,139 services and 1,802 calves were born.

Four hundred and eighty rams have been distributed for upgrading work.

During the year 2,573 birds and 12,926 hatching eggs were distributed.

One hundred and eighty acres of land were brought under fodder cultivation. Four cattle-shows were conducted.

During the year under report 35,309 cases were treated, 12,145 castrations were done, 119,043 protective vaccinations were carried out and 18,885 sheep were dewormed and deticked in the National Extension Service and Community Development areas of this district.

7. Madurai district.—Fourteen blocks were functioning in this district during the year out of which 3 were opened during the year.

Two Veterinary dispensaries and 3 first-aid centres were functioning. One hundred and one breeding bulls were at stud. One co-operative cattle-breeding society functioned in the block area. One key village extension centre is functioning in community development area.

The block area of this district contains the home of the Kuruva breed of sheep. Two hundred rams of this breed were purchased and sent to other places for cross-breeding work. Two sheep units are functioning here. One cumbly weaving co-operative society is doing useful work. One hundred and twenty-five rams were distributed for stud purposes.

Thirty-two poultry units were operating. Two thousand one hundred and twenty-eight birds and 6,765 eggs were distributed for breeding.

Thirty-one co-operative milk supply societies functioned in the block area of this district during the year.

In the block areas of this district 31,952 cases were treated, 13,115 castrations were done and 109,770 animals and birds were protected against various contagious diseases during the year. Twenty-one thousand one hundred and twenty-seven sheep were also dewormed.

8. *Dindugul (Madurai North)*.—This district had seven National Extension and Community Development Blocks at the beginning of the year. Two pre-extension blocks at Kodaikanal and Vendasur were opened during the year.

One Veterinary Hospital, four Veterinary Dispensaries, two Minor Veterinary Dispensaries, eight First-Aid Centres, three Artificial Insemination centres, two Key Village centres, one Key Village Extension centre, and two Sheep Units are functioning in the Block area of this district.

Twenty-four Kangayam, 25 Murrah and three Sindhi bulls are at stud besides the 100 bulls in the Key Village Extension areas and the bulls under the two Key Village Centres. There was one stallion at stud in the Block area of this district. It performed ten services and two foals were born. Forty-four stud rams were added to the 38 rams already at stud making a total of 82,888 lambs were born to these rams during the year.

Eight Poultry Units and one Poultry Extension Centre were functioning during the year. They distributed 88 birds and 8,119 eggs for breeding.

During the year under report 40,535 cases were treated, 6,905 bulls were castrated and 10,566 prophylactic vaccinations were done in the National Extension Service and Community Development areas. Thirty-three thousand nine hundred and fifty-two sheep were also dewormed.

9. *Ramanathapuram district*.—This district had 16 National Extension Service and Community Development Blocks at the beginning of the year. Three more were opened during the year making a total of 19 at the end of the year.

Five Veterinary Institutions are functioning in the Block areas of this district. Two Key Village Extension Centres and one Village Livestock Improvement Scheme were functioning during the year.

Sixty-two Kangayams, one Scindhi and three Murrah bulls were at stud in the Block areas besides the 100 bulls in the Key Village Extension Centres.

Seven hundred and forty-six rams were at stud to improve the local breeds of sheep.

There were two Poultry Demonstration Centres in the block area. From these centres 467 cocks, 357 chickens and 889 hens were distributed for breeding and 15,305 eggs were utilised for hatching.

Six Pasture Demonstration Units have been established. Twenty thousand, one hundred and fifty-four guinea grass slips were distributed. Four "One Day" cattle shows were conducted from Block Funds.

During the year under report 22,593 cases were treated and 10,479 bulls were castrated in the block areas of this district. Thirty-six thousand, two hundred and sixty-three animals and birds were protected against various contagious diseases.

10. *Tirunelveli district*.—There were nine stage I blocks, five stage II blocks and three Pre-extension blocks in the district. Two Key Village Extension Centres at Vasudevanallur and Vilathikulam and two Artificial Insemination Centres with two sub-centres are functioning in the Block area of this district.

Sixty-six Kangayam, four Scindhi and 36 Murrah buffalo bulls were at stud under various schemes in the block area of this district during the year. They performed 2,675 services and 456 calves were born to them.

Fifty-three rams were at stud in the Block areas for grading up work of the local sheep.

Three Poultry Units maintained by the department functioned within the Block area. From these units 43 chicks and 3,776 eggs were sold for rearing and hatching purposes respectively.

Development of Pasture.—Four lb. of Lucerne seeds were sold for raising Lucern fodder. Five thousand slips of guinea grass were distributed.

Ten thousand fingerlings were also distributed as a measure of fish development.

Three Veterinary Institutions and one Touring billet were functioning in the Block area of this district.

Three Co-operative Milk Supply Unions were operating in the Block area during the year under report.

Eleven thousand, two hundred and forty-five cases were treated, 4,375 scrub bulls were castrated and 40,010 inoculations were done in the Block areas of this district during the year. Seven hundred and ninety sheep were dewormed.

11. *Kanyakumari district*.—This district had one developmental block, one stage I block and five stage II blocks. There were two Veterinary Dispensaries, four First-Aid Centres and one Key Village Block functioning in the Block area of this district during the year. Twenty-seven Scindhis, twenty-two Kangayams and ten Murrah bulls were stationed for stud purposes. These bulls performed 2,776 services and 190 calves were born.

Sixty-two Poultry Units, one Poultry Extension Centre, one Demonstration Unit and 32 private Poultry Farms functioned during the year. These units and centres produced 17,546 eggs of which 10,315 were sold for hatching and 3,282 were set for hatch. Ninety-nine birds were also sold for breeding.

One hundred and four Ramnad rams and 59 Suratty rams were kept at stud for upgrading work in this Block area.

In the above Block areas 20,258 cases were treated, 3,327 scrub bulls were castrated and 96,638 preventive vaccinations were conducted during the year under report.

12. *Nilgiris district*.—There were two stage II blocks and one Stage I Block in the district. Two Veterinary Hospitals, one Veterinary Dispensary, one Minor Veterinary Dispensary and 12 First-Aid Centres functioned in the area during the year under report. One Artificial Insemination Centre under the Cross-Breeding Scheme with four sub-centres continued to work throughout the year. Three thousand and thirty-six inseminations were done and 1,008 calves were born during the year under report. Sixteen bulls were at stud and 80 Nilgiri rams and 21 Romney Marsh Nilgiri cross rams were distributed for upgrading work in the Block area. Five hundred and forty-one lambs have been born to these rams.

Two Poultry Demonstration units functioned during the year. One hundred and seventy-five eggs were sold for hatching and six cocks for breeding. Besides 2,838 eggs were sold for hatching.

Five Co-operative Milk Supply Societies functioned in the Block area during the year.

During the year under report 9,394 cases were treated and 939 castrations were performed and 88,606 preventive inoculations were conducted in the Block areas of this district. One thousand five hundred and thirty-nine sheep were also dewormed.

13. *Coimbatore district*.—There were four stage I blocks functioning in this district during the year under report.

One Veterinary Hospital, two Minor Veterinary Dispensaries and one Touring Billet were situated in this Block area. An Artificial Insemination sub-centre is also located here.

Fifty-seven bulls were at stud, 26 rams, 1,174 birds and 3,866 hatching eggs were distributed.

Ninety-nine acres were grown with fodder grass and lucerne and 120 lb. of lucerne seeds were distributed.

During the year under report 7,845 cases were treated, 3,585 castrations were performed and 77,360 inoculations were conducted in the Block areas of this district. Sixteen thousand one hundred and fifty-three sheep were also dewormed.

14. *Erode*.—There were three Community Development Blocks and 17 National Extension Service Blocks in the jurisdiction of the District Veterinary Officer, Erode.

Three Veterinary hospitals, nine Veterinary dispensaries, five Minor Veterinary dispensaries, five First-Aid centres and three Artificial Insemination Centres were functioning in the Block areas during the year.

Two hundred and sixty-two bulls were at stud. There were 12 Sheep Units and six Poultry Units functioning during the year.

One hundred and twenty Mecheri rams and 12 ewes and six Bikanir rams were distributed during the year.

In the Poultry Units 151 White Leghorn and 172 Rhode Island red birds were sold for breeding.

During the year under report 23,171 cases were treated, 9,391 bulls were castrated, 100,895 preventive inoculations were conducted and 44,423 sheep were dewormed in the Block Development areas of this district.

15. *Salem district*.—There were eight Blocks in this district during the year under report.

Fifty-two bulls were at stud for upgrading work. Seventy-eight rams and 329 birds were distributed for breeding purposes as also 3,333 eggs of improved variety for hatching. Twenty-two Poultry Units were run by private individuals. Three supplementary Extension Centres are partly located in the Block areas.

Sixteen acres of guinea grass and 127 acres of fodder cholam were cultivated under fodder.

There were one Veterinary Dispensary, four Minor Veterinary Dispensaries, one Touring Billet and fourteen First-Aid Centres in the Block areas of this district. In the above areas 17,389 cases were treated, 6,362 castrations were done and 486,726 prophylactic vaccinations were conducted.

16. *Krishnagiri*—(*Salem North*).—There were seven stage I Blocks and two stage II Blocks functioning, in this district. One Pre-Extension Block was opened during the year in Hosur taluk. There were one Veterinary Dispensary, one Minor Veterinary Dispensary and one Veterinary Hospital, one Artificial Insemination Centre and one Key Village Block and two supplementary Extension Centres in National Extension Service area operating in the Block area. There were 92 stud bulls of various breeds in the area. Eight hundred and forty-four fowls of exotic breeds and 364 rams were distributed to upgrade the local breeds.

Fifty thousand, nine hundred and ninety-five cattle and 18,832 fowls were protected against different contagious diseases in the Block areas of this district.

Eight thousand four hundred and ninety-two cases were treated, 6,429 castrations were performed. Nineteen thousand seven hundred and fifty-three sheep were dewormed during the year.

17. *North Arcot district*.—This district has seven stage I blocks and ten stage II blocks. One Poultry Extension Centre and 155 Poultry Units were situated in this Block area. One hundred and sixty-six breeding bulls and 32 Murrah bulls were at stud. One Artificial Insemination Centre was also functioning. Two supplementary extension centres are functioning. One hundred and forty rams, 2,767 birds and 9,554 eggs of improved varieties were distributed.

There were one Veterinary dispensary, five Minor Veterinary dispensaries and eight First-Aid Centres functioning in the Block areas of this district. In the above institutions 25,768 cases were treated, 10,001 castration were done and 140,580 inoculations and vaccinations were performed during the year under report.

CHAPTER XI—VETERINARY PUBLIC HEALTH.

The veterinary side of public health activities undertaken by the staff of this Department consisted of inspection of milking yards and milch animals belonging to public institutions inspection of meat at abattoirs, and inspection of lethal chambers maintained by Municipalities.

(i) *Inspection of milch animals.*—The general health of milch animals belonging to co-operative Milk Supply Unions and Societies were examined by the staff during the year under report. Advise on the proper upkeep of the animals care and management of calves, etc., were given to the owners of the animals. Milking-yards in the Government Human Hospitals were inspected for their cleanliness and sanitation, and the animals brought there for milking were examined for their health.

(ii) *Inspection of meat.*—With a view to ensure the supply of good and hygienic meat for human consumption, inspection of animals prior to slaughter and examination of carcasses after slaughter by qualified Veterinary personnel was being insisted upon. During the year under report 199 slaughter houses maintained by panchayats and municipalities were regularly inspected by the Veterinary Assistant Surgeons of this Department on a part-time basis. Thus 76,988 cattle and buffaloes, 1,171,289 sheep, 646,741 goats and 5,279 pigs were slaughtered during the year under report inclusive of those slaughtered at the slaughter houses run by the Madras Corporation.

Meat inspection work in the City of Madras has been done by the Veterinary staff of the Corporation of Madras. There were 5 slaughter houses, 2 for sheep, 2 for pigs and 1 for cattle maintained by the Corporation of Madras. Twenty-six thousand nine hundred and forty-five cattle, 383,169 sheep, 173,523 goats, and 4,363 pigs were slaughtered during the year.

(iii) *Lethal Chambers.*—Various municipalities in the State maintain lethal chambers for destruction of stray dogs to prevent the incidence of Rabies and prevent its spread to human beings. This Department through its staff arranged for the technical advise and periodical inspection of the lethal Chambers to see whether they were in proper working condition.

Thus during the year under report 45,491 stray dogs were destroyed in the 42 lethal Chambers maintained by the Local Bodies.

CHAPTER XII—PROPAGANDA.

(i) *Propaganda Unit.*—Propaganda plays a very important part in publicising and popularising the activities of an institution. It is propaganda that brings conviction in favour of modern methods of people so as to enlist their co-operation for these methods, and therefore, for a department such as the State Animal Husbandry Department which has been making very rapid progress on modern scientific livestock development work propaganda should be reckoned as an essential item in its activities.

To carry on propaganda in villages of the State the following measures are being undertaken by this department :—

(a) Through mass contact in village meetings and by personal contacts by distribution of leaflets in regional languages during the course of routine tours by the staff of this department and of the technical staff working in Community Development and National Extension Service areas,

(b) through organizing exhibitions along with the departmental shows, Annual Day Celebrations, Conferences and the leading Swadeshi Industrial and Agricultural Exhibitions organized in different parts of the State,

(c) through Audio-visual medium, and

(d) through conduct of livestock shows and calf rallies.

A small propaganda unit consisting of only one Veterinary Assistant Surgeon, two artists and one Lower Division Clerk with some equipment for photography and for Audio-visual education was functioning during the year. The main functions of this unit were—

(i) to participate in well known exhibitions of the State,

(ii) to prepare leaflets, charts, posters, maps, models, etc., for exhibition and supply to the district staff, and

(iii) to screen educational films on Animal Husbandry activities in the various parts of the State.

(a) During the year under report the propaganda unit participated in the following exhibitions and shows :—

(1) More Milk Day Celebration.

(2) Gosamvardhana Day celebration.

(3) Gopashtami Day, Pinjrapole, Madras.

(4) Pongal Day celebrations.

(5) All-India Khadi Swadeshi and Industrial Exhibition, Madras.

(6) Southern Regional Cattle and Poultry Show held at Madras.

(7) First World Agricultural Fair held at New Delhi.

(8) All-India Cattle Show held at New Delhi.

(9) First Regional Agricultural and Information Workshop Seminar, held at Kodaikanal.

In these exhibitions, the various activities of the department, models of several breeds of cattle, sheep, goats and poultry, illustrated posters and charts and graphs, illuminated maps of the State depicting the activities of the department, illuminated colour photographs of several breeds of livestock, photographs on silage making, artificial insemination work, models of Key Village Centre, Poultry Farm and Dairy Farm, in glass cases with arrangements for illumination and life size models of several breeds of cattle, sheep and poultry were displayed.

(b) *Leaflets.*—During the year under report three new Tamil leaflets on Animal Husbandry Department No. 1/1959, Animal Husbandry Department No. 2/1959 and Animal Husbandry Department No. 3/1959 entitled

“கால்நடை வளர்ப்பு”, “கால்நடை வேளத்தில் பசும் புற்களின் அவசியம்” “கன்றுகள் நம் சம்பத்து, சிறந்த முதுகை” by Dr. D. Pattabiraman, Director of Animal Husbandry, Madras, were got printed at the Government Press, Madras, and were distributed to all the departmental officers.

(c) *Posters and Charts*.—The following posters and charts were prepared during the year :—

(1) Key village scheme folders	2
(2) Endemic charts for anthrax, Haemorrhagic septicaemia and Black quarters.	10 sets of 3 charts each.
(3) Charts on mixed farming	4
(4) State maps showing various activities of the department.	13
(5) Map on breed tracts and Livestock census	2
(6) Map showing Key village centres in the State.	1
(7) Veterinary Institutions in Madras State	1
(8) Graphs on Key village and Artificial Insemination Centres.	2

The following models were also prepared for exhibition purposes :—

(1) Life size models of Kangayam, Hallikar, Umblacherry and Scindi bull with suitable back ground with lighting arrangements.	4
(2) Three dimension models on the activities of the Key village scheme with display board stands and lighting arrangements.	12
(3) Life size cut-out models of Mandya ram, Bellary sheep and Nilgiri sheep.	3
(4) Life size models of white Leghorn, Black Minorca, Rhode Island Reds and Light sussex cocks.	4
(5) 4×3 maps on perspex sheet with frame and tube light arrangements.	4
(6) Five-Year Plan—Scheme in folding boxes	20
(7) 20"×19" large enlargements of photographs taken in the state and Regional Cattle Show—Displayed on cellotex boards.	..
(8) Transparent coloured photographs of various breeds of cattle, sheep and poultry mounted on suitable display stands with lighting arrangements.	..
(9) Illuminated show cases for wool samples	2
(10) Departmental sign board in plastic with lighting arrangements.	1
(11) State Government Emblem	..

(d) *Photographs*.—A good number of photographs for publicity purposes were taken during the year on all important occasions such as cattle shows, calf rallies and exhibitions conducted in the State.

(i) *Shows and Exhibitions*.—(a) Livestock shows have been recognised as effective forums for propaganda in infusing Livestock mindedness in people and dissemination of modern methods of Animal Husbandry. Therefore Livestock Shows have been one of the many regular features of the Madras Animal Husbandry Department.

During the year under report Government sanctioned one State Show and six District Level Shows and sanctioned Rs. 10,000 for the former and Rs. 16,000 for the latter at the rate of Rs. 1,000 for each district. In view of

holding of the Southern Regional All-India Cattle Show in September 1959 at Madras, the State Cattle Show was thought to be superfluous and so was not held. The six district level shows were held at the following places :—

(1) Pudukkottai	Tiruchirappalli district.
(2) Munchira	Kanyakumari district.
(3) Ootacamund	Nilgiris district.
(4) Koilpatti	Tirunelveli district.
(5) Uthamapalayam	Madurai district.
(6) Chidambaram	South Arcot district.

The details of exhibits prizes awarded, etc., are furnished in the following statement :—

Place where show was held.	Dates of show.	Number of entries.	Number of prizes awarded.	Value of prize awarded.	Government contribution.	Public contribution.	Total expenditure.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				RS.	RS.	RS.	RS.
1 Pudukkottai	22nd January 1960 to 24th January 1960.	500	251	955.00	1,000	1,130.00	2,130.00
2 Munchira	18th February 1960 to 19th February 1960.	422	97	762.92	1,000	..	1,000.00
3 Ootacamund	22nd February 1960 to 23rd February 1960.	691	263	801.36	1,000	375	1,375.00
4 Kovilpatti	26th February 1960 to 29th February 1960.	382	231	1,200.00	1,000	2,267.00	3,267.00
5 Uthamapalayam.	9th March 1960 to 10th March 1960.	633	208	1,000.00	1,000	1,355.63	2,355.63
6 Chidambaram	12th March 1960 to 13th March 1960.	331	137	1,000.00	1,000	1,200.00	2,200.00
		2,869	1,187	5,719.28	6,000	6,327.63	12,327.63

(b) The Southern Regional Cattle Show under the auspices of the All-India Cattle Show Committee was held at Madras from 27th to 29th September 1959 at the Congress Grounds, Teynampet. The Departmental Officers actively co-operated with the authorities of the All-India Show Committee and rendered all help to make the show a success that it was 110 animals from the State Livestock Farm and Research Stations participated in the show and won, two Breed Championships, one shield, one cup, 24 first prizes, 14 second prizes and 6 third prizes. The Madras State Government sanctioned a cash payment of Rs. 5,000 as contribution towards the conduct of this show to the National Livestock Committee.

Besides the above, Livestock Shows were conducted in connection with Gosamvardhana Week, "More Milk Day" and Agricultural Week in different parts of the State. Calf rallies, Poultry Shows in Key Village areas and Community Development Blocks were also held. Exclusive sheep shows were also conducted in predominantly sheep rearing areas.

The detailed information regarding these shows are furnished in the following statement:—

Names of shows.	Number of shows conducted	Number of entries.						Total
		Cattle.	Buffalo.	Horses.	Sheep.	Goats.	Poultry.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1 District Cattle shows ..	6	1,396	225	22	297	86	843	2,869
2 One day Cattle Show (Gosamvardhan).	* 19	2,730	469	106	123	42	431	3,901
3 More Milk Day Cattle Shows.	8	941	137	30	15	19	47	1,189
4 Agricultural Week Cattle Shows.	11	1,289	246	30	78	68	263	1,974
5 Sheep and Goat Shows ..	22	..	..	..	19,054	4,577	..	23,631
6 Cattle shows and calf rallies in Key villages.	29	10,008	1,292	47	1,515	225	2,365	15,482
7 Poultry shows ..	10	..	..	..	..	..	2,405	2,405
8 Cattle shows in Community Development and NES areas.	15	1,804	443	..	325	150	722	3,444
Total ..	120	17,662	2,812	235	21,407	5,197	7,076	54,805

* 2 in Tiruchirappalli district.

	Amount sanctioned by Government.		Contribution from others.		Total.		Amount spent for award of prizes.	
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
	RS.	NP.	RS.	NP.	RS.	NP.	RS.	NP.
1 District Cattle shows ..	6,000	00	6,327	63	12,327	63	5,719	28
2 One Day Cattle Shows (Gosamvardhan).	4,750	00	2,963	18	7,713	18	5,010	62
3 More Milk Day Cattle Shows.	1,280	00	716	00	1,996	00	1,663	92
4 Agricultural Week Cattle Shows.	2,100	00	3,747	74	5,847	74	3,607	46
5 Sheep and Goat Shows ..	5,920	00	596	24	6,516	24	6,220	12
6 Cattle shows and calf rallies in Key villages.	14,500	00	11,016	33	25,516	33	7,228	00
7 Poultry shows ..	1,800	00	629	35	2,429	35	1,144	00
8 Cattle shows in Community Development and NES areas.	1,800	00	655	00	2,455	00	2,117	34
Total ..	38,150	00	26,651	47	64,801	47	31,710	74

(c) *General.*—Nine animals from the Livestock Research Station, Hosur Cattle Farm, participated in the All-India Cattle Show held at New Delhi in February 1960. Out of these one Scindhi cow obtained a cup for being the best animal in the Scindhi breed. One Hallikar bull won a cup for being the best draught animal in the show.

One graded Scindhi cow and one Kangayam cow from the District Livestock Farm, Pudukkottai, were also exhibited at the above show. The Kangayam cow obtained the first prize for being the best draught type cow of the show and won the Rutlam Challenge Cup.

One Scindhi heifer and one Scindhi bull were exhibited in the World Agricultural Fair held in Delhi from December 1959 to February 1960. The District Livestock Farm, Orathanad, exhibited one Murrah bull, 2 Scindhi and 1 Umbalacherry bulls. Out of these the Murrah bull obtained the breed championship.

(d) The various activities of this department were exhibited in all the shows as an adjunct to them. In the exhibition held at the Congress grounds, this department had a stall wherein the working of the various branches of the department were impressively displayed by models, charts, posters and pictorial representations. The propaganda unit of this department availed of every opportunity for giving publicity to the various departmental activities.

(ii) *Gosamvardhana week.*—The Gosamvardhana week which was organized for the first time in 1952 by the Central Council of Gosamvardhana in connection with Gopasthami has since become an annual feature and thus during the year, this week was celebrated between 1st to 8th November 1959 all over the State. Throughout the State the Celebration was conducted by holding cattle shows, exhibition of cattle feed, dairy equipments, fodder preservation, meeting for educative propaganda on proper management of cattle, breeding, feeding and prevention of epidemics. During the year special emphasis was made on the importance of cattle in the country's economy and the need for adopting improved herd management practices. During the week 18 cattle shows were conducted by the department one in each of the Government Livestock Farms including the sheep farm, Chinnasalem, and in the districts at a total expenditure of Rs. 9,263.77 realised through Government contributions and public donations. A total sum of Rs. 5,983.28 was sanctioned by Government for the purpose of the celebrations all over the State of which 50 per cent was met by the Central Council of Gosamvardhana. A total number of 5,346 animals took part in these cattle shows of which 1,492 were awarded prizes to the value of Rs. 4,316.82.

(iii) *More milk day celebrations.*—(a) Milk is an important and ideal article of food for people in health and in disease. It supplies three of the important ingredients required for growth and repair of the human body, namely, protein, fat and vitamins. It also contains mineral salts which are as essential as the abovementioned articles. It is but appropriate therefore, that Government should feel incumbent to rouse the consciousness of the people to production and consumption of more of this essential health-building food article, namely, milk. With this end in view the State Government ordered the celebration of "More Milk Day" to synchronise with the Tamil New Year's Day in 1955 for the first time. Seeing that the response to the call was encouraging, Government have been making the celebrations an annual affair. Accordingly Government sanctioned an expenditure of Rs. 300 for the City of Madras and Rs. 200 for each district for the purpose of celebrating the "More Milk Day" on the Tamil New Year's Day this year also which date corresponded to 14th April 1959.

(b) The More Milk Day was celebrated throughout the State on that date including the Madras City with the following items forming the programme :—

- (i) Processions and public meetings.
- (ii) Holding of Dairy Exhibitions.
- (iii) Entertainments.
- (iv) Holding of cattle shows and calf rallies.
- (v) Distribution of leaflets.
- (vi) Holding of milk yield competitions.
- (vii) Distribution of milk to children and the poor.

CHAPTER XIII.

REPORT ON THE WORK DONE IN THE STATISTICAL SECTION DURING THE YEAR 1959-60.

The functions of the Statistical section fall into two broad categories, namely, (A) those connected with research work and the analysis of data collected and (B) those concerning the collections of Statistics. In addition, work dealing with propaganda and publicity is also undertaken by the section for co-ordinating the research and the Livestock Improvement activities of the Department.

(A) *Statistical analysis.*—The following are the summary of the items of Statistical analysis undertaken during the year under report and the details of analysis and the interpretation of results are furnished below under each item :—

Heritability studies—Milk yield—Scindhi breed.—The heritability studies are important to the animal breeders since they are essential for chalk-ing out breeding plans for improving the desired traits and also in estimating the genetic gain achieved. Heritability can be defined as that part of the phenotypic variation which is attributable to genetic differences between individuals.

$$\text{Coefficient of heritability--} h^2 = \frac{G}{E + G}$$

Where G = Genetic variation.

Where E = Environmental variation.

The most common method of estimating heritability amongst dairy cattle is the one based upon the intra-sire regression of the daughters performances on those of their dams. This method is preferable to other methods since it has got smaller standard error. As the second and later lactations are influenced by the selection of the cows on the basis of their performances in the early lactations the first lactation records were used for the present study.

In all 341 dam daughter pairs were considered and their first lactation records analysed. This covered 21 bulls on the whole. The intra-sire regression was calculated first and then it was doubled to get the coefficient of the heritability. The details of the analysis are given below.

Table showing the sum of squared and the sum of products.—

Scindhi—

Serial number.	Sire number.	E. (X-X.) ²	E (X-X) (Y-Y)
(1)	(2)	(3)	(4)
1	118	8,611,470.0	131,189.0
2	102	39,651,002.5	4,906,729.8
3	T. 160	28,660,568.2	7,173,678.2
4	8	87,440,373.8	19,365,421.9
5	56	4,045,246.0	1,258,733.0
6	73	22,714,055.5	3,028,626.0
7	65	7,351,336.9	2,145,500.9
8	98	17,617,015.6	7,450,782.4
9	144	35,293,673.9	6,410,169.7
10	139	12,881,126.9	5,965,508.1
11	236	20,109,589.1	7,024,081.3
12	238	11,491,096.9	624,633.3
13	255	150,282,382.4	1,510,968.8
14	282	38,386,736.7	8,060,603.0
15	333	59,917,273.9	4,549,503.4
16	341	6,731,220.9	68,044.0
17	420	27,438,868.7	9,268,195.9
18	485	49,677,900.0	7,327,506.0
19	481	28,776,932.5	17,100,901.2
20	508	20,167,400.9	6,521,814.9
21	510	40,422,773.6	20,662,769.0
		718,827,134.9	123,317,336.6

$$\text{by } x = \frac{E(X-X)(Y-Y)}{E(X-X)^2}$$

$$\text{Heritability : } 0.172 \times 2 = 0.344.$$

Where X = the dams' first lactation yield.

Where X = the daughter's first lactation yield.

$$\text{by } x = \frac{123,317,336.6}{718,827,134.9} = 0.172.$$

by x—intra sire regression of daughter's yield on dams,

From the above it is seen that heritability co-efficient is 0.344. Thus about 34.4 per cent of the variation amongst the first lactation record of the Scindhi herd is attributable to genetic differences between cows.

Kangayam breed—(Milk yield).—In all 445 dam daughter pairs were considered and their first lactation records analysed. This covered 20 bulls on the whole. The intra-sire regression was calculated first and then it was doubled to get the co-efficient of the heritability. The details of the analysis are given below :—

Serial number.	Sire number.	E (X-X) ²	E (X-X) (Y-Y)
(1)	(2)	(3)	(4)
1	104	1,933,102.0	35,088.0
2	33	3,808,914.4	425,339.2
3	34	9,252,562.2	1,123,212.2
4	35	9,071,381.3	1,007,894.5
5	39	2,104,408.9	81,782.4
6	47	4,083,107.0	161,682.2
7	50	3,443,454.0	1,622,298.5
8	85	105,918,485.8	4,176,517.3
9	307	21,159,514.9	14,957,739.4
10	269	11,538,980.1	2,306,410.5
11	391	2,681,154.2	1,167,153.8

Serial number.	Sire number.	$E(X-X)^2$	$E(X-X)(Y-Y)$
(1)	(2)	(3)	(4)
12	554	14,729,690.8	1,311,800.8
13	555	3,847,212.0	136,359.0
14	612	7,801,796.7	56,533.3
15	869	2,158,540.9	295,638.6
16	506	2,941,752.0	39,997.0
17	531	273,020.2	789,958.1
18	90	11,546,877.5	5,213,340.1
19	231	6,559,210.6	350,640.9
20	306	18,444,750.2	9,981,937.9
		262,518,459.6	29,773,423.3

$$\text{by } x = \frac{E(X-X)(Y-Y)}{E(X-X)^2}$$

$$\text{by } x = \frac{29,773,423.3}{262,518,459.6} = 0.114.$$

by x = Intra sire regression of daughter's yield on dams.
Heritability: $0.114 \times 2 = 0.228$.

From the above it is seen that heritability coefficient is 0.228 thus about 22.8 of the variation amongst the first lactation records of the Kangayam herd is attributable to genetic differences between cows.

Repeatability studies.—Repeatability studies are also important to the breeder, since they are very much useful in selection and replacement of cows. The degree to which a cow tends to produce the same amount of milk from lactation to lactation is defined as the repeatability of this characteristic and it is measured by the co-efficient of correlation between the records of the same cow. Repeatability includes a part of the environmental variation along with variation due to heritable causes including the effects of dominance and epistasis. A high repeatability coefficient means that the culling of cows on the basis of early lactation will be successful. Absence of repeatability will indicate absence of genetic variations and hence lack of scope for selection in the herd.

Scindhi—(1) Lactation yield.—In all 1,323 records pertaining to 309 cows were analysed. The co-efficient of repeatability was worked out to be 0.4538 which was significant at 1 per cent level. The details of the analysis are given below:—

(a) Analysis of variance table—

Source of variation.	Degrees of freedom.	Sum of squares.	Mean square.	Variance ratio.
(1)	(2)	(3)	(4)	(5)
Between cows ..	308	1,306,950,704.7	4,243,346.6 (E)	3.96665
Within cows ..	1,014	1,981,766,740.0	1,958,741.16 (F)	..
Total ..	1,322 c.	2,391,717,444.7	..	..

(b) Estimation of Repeatability—

Co-efficient of repeatability is measured by intra class correlation co-efficient.

$$\text{Intra class co-relation coefficient } \lambda = \frac{V}{V+F} \text{ Where } V = \frac{E-F}{f} = \text{True}$$

Variance between animals.

E = Mean square between animals within records.

F = Mean square for error.

—average number of records for each cow.

For estimation from analysis of variance table the above formula in a modified form will be useful.

$$\lambda = \frac{V}{V+F} = \frac{E-F}{n} = \frac{E-F}{E-F+fF} = \frac{E-F}{E+(n-1)F}$$

$$f = \frac{1}{m-1} \left[Eni - \frac{Eni^2}{am} \right]$$

Where m = the number of animals.

Eni = Total number of records.

ni = Number of records in each lactation.

In our data $m = 309$.

$Eni = 1,323$.

$Eni^2 = 295,391$.

By substitution we get—

$$F = \frac{1}{309-1} 1,323 - \frac{295,391}{1,323}$$

$$= \frac{1}{308} 1,323 - 223.07.$$

$$= \frac{1}{308} [1,099 - 73].$$

$$= 3.57.$$

$$\lambda = \frac{E-F}{E+(f-1)F} = \frac{4,243,346.4 - 1,069,789.7}{4,243,346.4 + (357-1) 1,069,789.7}$$

$$= \frac{3,173,556.7}{6,992,705.9} = 0.454.$$

or

$$V = \frac{E-F}{f} = \frac{4,243,346.4 - 1,469,789.7}{3.57}$$

$$\lambda = \frac{V}{V+F} = \frac{888,951.46}{888,951.46 + 1,069,789.70}$$

$$\frac{888,951.46}{1,958,741.16} = 0.4538 \text{ or } 0.454.$$

as before significant at 1 % level.

(2) **Daily average yield.**—In all 1,064 records pertaining to 263 cows were analysed. The coefficient of repeatability was worked out to be 0.626 which was significant at 1 per cent level. The details of the analysis are given below:—

(a) Analysis of variance table.

Source of variation.	Degrees of freedom.	Sum of squares.	Mean square.	Variance ratio.
(1)	(2)	(3)	(4)	(5)
Between cows ..	262	11,156.8	42.6 (E)	6.45
Within cows ..	801	5,312.5	6.6 (F)	..
Total ..	1,063	16,469.3	..	..

(b) Estimation.

$$N = \frac{1}{N-1} \left[E n_i - \frac{E n_i^2}{E n_i} \right]$$

$$N = \frac{1}{263-1} \left[1,064 - \frac{223,022}{1,064} \right]$$

$$= \frac{1}{262} [1,064 - 209.6]$$

$$= \frac{1}{262} [854.4]$$

$$= 3.26.$$

$$\lambda = \frac{E \cdot F}{E + (u-1) F} = \frac{42.6 - 6.6}{4.26 + (3.26-1) 6.6} = \frac{36.0}{42.6 + (2.26) 6}$$

$$= \frac{36.0}{42.6 + 14.9} = \frac{36.0}{57.5} = 0.62608.$$

(3) *Lactation period*.—In all 1,064 records pertaining to 263 cows were analysed. The co-efficient of repeatability was worked out to be 0.2447 which was significant at 1 per cent level. The details of the analysis are given below :—

(a) Analysis of variance table.

Source of variation.	Degrees of freedom.	Sum of squares.	Mean square.	Variance ratio.
(1)	(2)	(3)	(4)	(5)
Between cows ..	262	1,577,206.7	6,019.9 (E)	2.056
Within cows ..	801	2,345,171.7	2,927.8 (F)	..
Total ..	1,063	3,922,378.4	..	..

(b) Estimation.

$$\lambda = \frac{E-F}{E+(F-1)F} = \frac{6,019.9 - 2,927.8}{6,019.9 + (3.96-1) 2,927.8}$$

$$= \frac{3,092.1}{6,019.9 + (2.25) 2,927.8}$$

$$= \frac{3,092.1}{6,019.9 + 6,616.8}$$

$$= \frac{3,092.1}{12,636.7} = 0.24,469^{**}.$$

(4) *Dry period*.—In all 1,064 records pertaining to 263 cows were analysed. The co-efficient of repeatability was worked out to be 0.1551. The details of the analysis are given below :—

(a) Analysis of variance table.

Source of variation.	Degrees of freedom.	Sum of squares.	Mean square.	Variance ratio.
(1)	(2)	(3)	(4)	(5)
Between cows ..	262	7,719,810.4	29,464.9 (E)	1.60
Within cows ..	801	14,752,870.5	18,417.7 (F)	..
Total ..	1,063	22,472,680.9	..	..

(b) Estimation.

$$\lambda = \frac{E-F}{E+(F-1)F} = \frac{29,464.9 - 18,417.7}{29,464.9 (326-1) 18,417.7}$$

$$= \frac{11,047.2}{29,464.9 (2.26) 18,417.7}$$

$$= \frac{11,047.2}{29,464.9 + 41,624.0}$$

$$= \frac{11,047.2}{7,10,889.9} = 0.15,539.$$

(5) *Calving interval*.—In all 1,064 records pertaining to 263 cows were analysed. The co-efficient of repeatability was worked out to be 0.1256. The details of the analysis are given below :—

(a) Analysis of variance table.

Source of variation.	Degrees of freedom.	Sum of square.	Mean square.	Variance ratio.
(1)	(2)	(3)	(4)	(5)
Between cows ..	262	8,183,707.9	31,235.5 (E)	1.46
Within cows ..	801	17,041,525.0	21,275.3 (F)	..
Total ..	1,063	25,225,232.9	..	..

(b) Estimation.

$$\lambda = \frac{E-F}{E+(F-1)F} = \frac{31,235.5 - 21,275.3}{31,235.5 (3.26-1) 21,275.3}$$

$$= \frac{9,960.2}{31,235.5 (2.26) 21,275.3}$$

$$= \frac{9,960.2}{31,235.5 + 48,082.2}$$

$$= \frac{9,960.2}{79,317.7} = 0.12,557.$$

Kangayam—Repeatability studies—(1) *Lactation yield*.—In all 1,666 records pertaining to 390 cows were analysed. The co-efficient of repeatability was worked out to be 0.6218 which was significant at 1 per cent level. The details of the analysis are given below :—

(a) Analysis of variance table.

Source of variation.	Degrees of freedom.	Sum of square.	Mean square.	Variance ratio.
(1)	(2)	(3)	(4)	(5)
Between cows ..	389	568,968,410.6	1,462,643.7 (E)	6.76**
Within cows ..	1,276	27,628,104.0	216,521.2 (F)	..
Total ..	1,665	596,596,514.6	..	..

(b) Estimation.

$$F = \frac{1}{N-1} \left[\sum Eni - \frac{\sum Eni^2}{\sum Eni} \right]$$

$$F = \frac{1}{390-1} \left[1,666 - \frac{5,05,764}{1,666} \right]$$

$$= \frac{1}{389} [1,666 - 303.6]$$

$$= \frac{1}{389} [1,362.4]$$

$$= 3.50.$$

$$\lambda = \frac{E-F}{E+(F-1)F} = \frac{14,62,643.7 - 2,16,521.2}{14,62,643.7 + (3.50-1)2,16,521.2}$$

$$= \frac{12,46,122.5}{14,62,643.7 + (2.50)2,16,521.2}$$

$$= \frac{12,46,122.5}{14,62,643.7 + 5,41,303.0}$$

$$= \frac{1,46,122.5}{20,03,946.7} = 0.62,183.$$

$$\text{or } 0.6,218^{**}.$$

(6) *Correlational study between service period and current lactation yield in Kangayam breed and Livestock Research Station, Hosur.*—With a view to study the correlation between the service period, viz., the period from the date of calving to the date of successful service and the current lactational yield. Three hundred and sixty-seven records of first lactation yields were analysed. The average service period was 173 days and the average first lactation was 1,510 lb. The correlation co-efficient was worked out to be 0.0013 which was not statistically significant. In other words, the service period does not have any significant influence on the current lactation yield of cows.

B. Collection of statistics.—During the year the following are the major items of work done by this section :—

1. *Herd books.*—The object of maintaining the herd books is to provide useful information for the evaluation of livestock work in the Livestock Farms of the State, for the estimation sire indices, for progeny testing and also for the collection of data for statistical analysis.

The monthly progress report of the Livestock Farms containing the details of the pedigree particulars of all animals maintained at these farms were received and entered in the respective herd books of this office.

2. *Statistics on departmental activities.*—The statistics of this department giving information on the facts of the livestock population of this State and also the activities of the department is being collected every month. The statistical data showing the particulars of work turned out by the departmental staff and details of about the number of cases treated for contagious and non-contagious diseases, castrations performed, number of outbreak reports received, incidence of mortality, number of inoculations done, number of animals slaughtered, number of cattle fairs and shows held, etc., were received and tabulated. Statistical information on the location and maintenance of breeding bulls distributed or stationed under various schemes sponsored by the department were maintained by the section.

3. *Statistics on the incidence of contagious diseases.*—Statistical data pertaining to the incidence of scheduled diseases that affect the livestock of this State were collected, compiled and tabulated every month. A press bulletin embodying the data about the incidence of these diseases along with the forecast of occurrence was also prepared every month.

With a view to enforce the control of contagious diseases among livestock more effectively, weekly data on the incidence of contagious diseases along with the measures taken for their control were also collected and suitable instructions were issued to the departmental officers in the appropriate time resulting in the efficient working of the machinery intended for disease control.

4. *Supply of statistical information to State and Central Government, etc.*—During the year under report statistical information of varied nature was supplied to State and Central Governments, Director of Statistics, Indian Council of Agricultural Research, Directorate of Marketing and Inspection, etc., on the activities of the department and also the problems connected with Animal Husbandry.

5. *Propaganda, publicity and broadcasting.*—The subject of propaganda and publicity was taken up by this section. During the year information on the activities of the department was periodically given for publication in the Government Bulletins. Besides journals and periodicals on Animal Husbandry, both Indian and foreign, were collected and compiled in the section. In addition statistical scrutiny of all the development schemes and reports was also done.

CHAPTER XIV—FINANCE.

The total receipts and expenditure of the department during the year are given below :—

Receipts	Rs. 23,18,163.37.
Expenditure	Rs. 97,04,822.06—Animal Husbandry.
	Rs. 1,16,639.65—S2 A. Capital Accounts.

The details of expenditure are given in table No. VIII annexed to this report.

CHAPTER XV—FUTURE PROGRAMME OF WORK FOR 1960-61.

Cattle play an important role in the rural economy of the country. The welfare of these cattle and their proper development is a matter of vital concern to the people of the State because of their close connection with agriculture which is the main occupation of the bulk of the people. The Second Five-Year Plan aims at the development of all species of livestock, control of contagious diseases among them, providing additional training

facilities in veterinary education, etc. The Plan ceiling for Animal Husbandry for 1960-61 is Rs. 65.52 lakhs. The main features of the various schemes under each group to be undertaken are given below :—

Cattle development.—The development of cattle in the State under the Second Five-Year Plan is mainly through Key Village Schemes. In addition to the expansion of the 15 key village centres started during the First Plan period, 16 key village blocks have been started during the first four years of the Plan. During the same period 13 Artificial Insemination Centres are the grading up of urban cattle and 29 Supplementary Extension Centres for the utilisation of bulls produced in Key Village areas were also established. Calves produced in Key Village areas were also subsidised.

During 1960-61 it is proposed to start five Key Village blocks, four Artificial Insemination Centres in urban areas and 15 supplementary extension centres. The payment of subsidy to the calves born in the Key Village areas will be continued. With a view to develop fodder resources further, it is proposed to establish 100-acre pasture plots in two more livestock farms and to set up five more 10-acre pasture demonstration plots. One Goshala will be taken up for development during the year. One State Cattle Show and six District Shows will be conducted during the year.

Provision of additional buildings at District Livestock Farm, Orathanad, Electrification of Hosur Cattle Farm laying of irrigation channels at the Hosur Cattle Farm and introduction of soil conservation measures in the Hosur Cattle Farm will also be taken up during the year.

Development of poultry.—Under the All-India Poultry Development Scheme, 21 Poultry Extension Centres have so far been started in the State and 16 poultry grading centres have also been set up in the key village areas of this State. During 1960-61, four poultry extension centres and four Poultry Grading Centres will be established. It is proposed to subsidise 20 private poultry breeders at a cost not exceeding 0.17 lakhs in all. Two duck rearing centres will also be started during the year.

Sheep development.—With a view to evolve superior breeding stock of sheep for finer quality of wool and increased yields of mutton, eight sheep and Wool Extension Centres have been established in the State. During 1960-61, eight more extension centres will be established.

Piggery development.—Two pig breeding units will be set up during 1960-61.

Control of cattle-diseases.—Four mobile units will be established during the year 1960-61. Five Touring Billets will be opened—four in Kanyakumari and one in Tirunelveli district. One clinical laboratory at Nagercoil has also been sanctioned. There is provision for the appointment of 31 stockmen to assist the Veterinary Assistant Surgeons in their routine work.

ANNEXURES.

TABLE I (a)—Statistics of outbreak reports, mortality and inoculations done due to contagious diseases and other causes among Livestock in the State of Madras during the year 1959-60.

Bovines.																
Description.	Equines.															
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1959-60—																
Number of outbreak reports.	..	..	1	..	..	..	1	..	587	9	613	53	40	..	1,302	..
Number of attacks ..	..	..	1	..	..	..	1	..	2,112	616	2,278	240	131	48	5,425	60
Number of deaths ..	..	..	1	..	..	..	1	..	1,989	..	2,206	237	109	48	4,569	44
Number of vaccinated in Affected areas.	..	..	..	..	..	..	..	..	291,795	..	271,622	30,263	918 (treated)	..	594,598	..
Free areas ..	..	..	..	..	..	..	..	22,283	598,882	..	653,277	21,805	..	..	1,296,247	..
Total ..	..	..	..	..	..	..	..	22,283	890,677	..	924,899	52,068	918	..	1,890,845	..
1958-59—																
Number of outbreak reports.	..	..	..	..	..	..	..	..	685	56	490	44	62	..	1,337	..
Number of attacks ..	..	..	..	..	..	..	..	..	2,720	2,846	1,822	183	227	..	7,798	..
Number of deaths ..	..	..	..	..	..	..	..	..	2,565	91	1,554	174	155	..	4,539	..
Number of vaccinated in Affected areas.	..	..	..	..	..	2	2	..	199,474	..	179,841	7,867	1,824	..	389,006	..
Free areas ..	..	..	..	..	..	..	..	53,151	403,383	..	404,769	47	14	..	1,867,346	..
Total ..	..	..	..	..	..	2	2	53,151	603,327	..	584,560	14,346	1,968	..	1,257,352	..
1957-58—																
Number of outbreak reports.	..	..	..	..	..	..	..	..	831	28	804	147	149	..	..	..
Number of attacks ..	..	1	..	..	..	1	..	3,493	1,159	3,012	355	728	16	8,763	19	..
Number of deaths ..	..	1	..	..	..	1	..	3,330	18	2,852	347	624	4	7,175	18	..
Number of vaccinated in affected areas.	..	..	..	..	..	..	..	260,928	112	209,627	16,977	2,899	..	496,543	..	..
Free areas ..	..	..	..	..	..	..	..	79,076	270,968	..	232,858	5,605	..	..	588,507	..
Total ..	..	..	..	..	..	..	..	79,076	537,896	112	442,485	22,582	2,899	..	1,085,060	..

TABLE I (a)—Statistics of outbreak reports, mortality and inoculations done due to contagious diseases and other causes among livestock in the State of Madras during the year 1959-60—cont.

Description.	Sheep and goats.					Dogs.					Poultry.							
	Anthrax.	Sheep-pox.	Goat-pox.	Foot and mouth.	Enterotamanea.	Other contagious diseases.	Total.	Other causes.	Rabies.	Other contagious diseases.	Fowl pox.	Other contagious diseases.	Total.	Other causes.				
	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	
1959-60—																		
Number of outbreak reports.	110	134	1	..	104	..	349	..	9	..	9	..	36	7	2	45	..	
Number of attacks ..	983	2,443	42	..	1,236	128	4,991	59	32	..	32	..	435	122	136	693	..	
Number of deaths ..	965	893	2	..	1,229	128	3,235	18	32	..	32	..	398	68	78	544	..	
Number of vaccinated in Affected areas.	21,221	35,634	..	..	49,363	..	106,218	..	1,369	..	1,369	..	31,123	..	..	31,123	..	
Free areas ..	52,294	21,877	..	..	113,020	..	187,191	..	..	..	..	..	575,624	5,486	..	605,741	..	
Total ..	73,515	57,511	..	..	162,383	..	293,409	..	..	..	..	..	606,747	24,631	..	636,874	..	
																	(pigeon pox vaccination 30,117)	
1958-59—																		
Number of outbreak reports.	98	85	..	..	37	..	200	..	..	..	..	..	31	8	..	39	..	
Number of attacks ..	969	1,423	..	..	267	366	3,016	..	38	..	38	..	358	126	..	484	..	
Number of deaths ..	873	599	..	..	267	319	2,053	..	53	..	53	..	321	57	..	378	..	
Number of vaccinated in Affected areas.	33,950	23,954	..	..	10,585	..	67,589	..	..	..	..	..	22,988	396	..	23,384	..	
Free areas ..	27,831	28,137	..	..	53,300	..	109,268	..	..	..	..	..	281,584	14,058	..	295,642	..	
Total ..	61,781	51,191	..	..	63,885	..	176,857	..	..	..	..	..	304,572	14,451	..	319,026	..	
1957-58—																		
Number of outbreak reports.	66	36	1	..	36	..	139	..	..	..	..	..	..	38	10	..	48	..
Number of attacks ..	357	624	6	..	56	381	1,599	12	20	..	20	..	..	514	224	1	739	..
Number of deaths ..	357	352	2	..	55	325	1,266	12	20	..	20	..	..	470	174	1	645	..
Number of vaccinated in Affected areas.	29,186	23,953	250	..	27,316	..	80,705	..	..	..	..	..	..	31,745	1,181	..	32,926	..
Free areas ..	40,432	15,913	..	..	69,933	..	126,278	..	..	..	..	..	..	272,847	18,135	..	290,982	..
Total ..	69,618	39,866	250	..	97,249	..	206,983	..	..	..	..	..	..	304,592	19,316	..	323,908	..
																		G.P. = Goat-pox. F.P. = Fowl-pox.

H.S. = Hemorrhagic septicaemia.
F. & M. = Foot and mouth.B.C. = Black-quarter.
S.P. = Sheep-pox.G.P. = Goat-pox.
F.P. = Fowl-pox.

TABLE I (b).—Incidence of rabies in Madras State during the year 1959-60.

District.	Canines.			Bovines.		
	Number of attacks.	Number of deaths.		Number of attacks.	Number of deaths.	
		Vaccinated.	Non-vaccinated.		Vaccinated.	Non-vaccinated.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 Madras ..	139	1	139	392	11	11
2 Chingleput ..	11	1	1	16	10	10
3 North Arcot ..	15	1	15	15	1	1
4 South Arcot ..	1	1	1	24	27	12
5 Thanjavur ..	1	1	1	20	5	13
6 Nagapattinam ..	1	1	1	10	18	144
7 Tiruchirappalli ..	1	1	1	3	36	185
8 Ariyalur ..	1	1	1	94	10	10
9 Madurai ..	1	1	1	15	1	1
10 Dindigul ..	6	1	6	10	1	1
11 Ramanathapuram ..	1	1	1	1	1	1
12 Tirunelveli ..	2	1	2	1	1	1
13 Kanyakumari ..	1	1	1	1	1	1
14 Coimbatore ..	3	1	3	1	1	1
15 Erode ..	1	1	1	1	1	1
16 Nilgiris ..	3	1	3	1	1	1
17 Salem ..	9	1	9	1	1	1
18 Krishnagiri ..	1	1	1	1	1	1
Total ..	190	1	184	1,021	21	11

District.	Equines.			Others.		
	Number of attacks.	Number of deaths.		Number of attacks.	Number of deaths.	
		Vaccinated.	Non-vaccinated.		Vaccinated.	Non-vaccinated.
(12)	(13)	(14)	(15)	(16)	(17)	(18)
1 Madras ..	3	1	3	1	3	3
2 Chingleput ..	1	1	1	1	1	1
3 North Arcot ..	1	1	1	1	1	1
4 South Arcot ..	1	1	1	1	1	1
5 Thanjavur ..	1	1	1	1	1	1
6 Nagapattinam ..	1	1	1	1	1	1
7 Tiruchirappalli ..	1	1	1	1	1	1
8 Ariyalur ..	1	1	1	1	1	1
9 Madurai ..	1	1	1	1	1	1
10 Dindigul ..	1	1	1	1	1	1
11 Ramanathapuram ..	1	1	1	1	1	1
12 Tirunelveli ..	1	1	1	1	1	1
13 Kanyakumari ..	1	1	1	1	1	1
14 Coimbatore ..	1	1	1	1	1	1
15 Erode ..	1	1	1	1	1	1
16 Nilgiris ..	1	1	1	1	1	1
17 Salem ..	1	1	1	1	1	1
18 Krishnagiri ..	1	1	1	1	1	1
Total ..	3	7	3	3	3	3

TABLE II (a).—Statement showing the number of veterinary hospital, veterinary dispensaries, minor veterinary dispensaries, first-aid centres and touring billets in Madras State during the year 1959-60.

[illegible]

TABLE II (a).—Statement showing the number of veterinary hospitals, veterinary dispensaries, minor veterinary dispensaries, first-aid centres and touring billets in Madras State during the year 1959-60—cont.

District.	Taluk.	Veterinary hospital.	Veterinary dispensary.	Minor veterinary dispensary.	First-aid centres.	Touring billets.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
9 Thanjavur (West)	Thanjavur.	Thanjavur.	Tiruvaiyaru.	.....	Thirukattupalli.	.....
	Kumbakonam.	Kumbakonam.	Thirupananthi.	Aduthurai.	.....	.....
	Papanasam.	.....	Papanasam.	Saliyanangalam.	.....	.....
	Orathanad.	.....	Orathanad.	Peravoorani.	.....	.....
	Pattukottai.	.....	Pattukottai.	.....	.....	.....
10 Thanjavur (East) (Nagapattinam).	Arantangi.	.....	Arantangi.	.....	.....	.....
	Nagapattinam.	Nagapattinam.	Valivalam.	Kivalur.	.....	.....
	Tiruvavur.	Tiruvavur.	.....	.....	.....	.....
	Nannilam.	.....	Nannilam.	Kodavasal.	.....	.....
	Sirkali.	.....	Koradacheri.	.....	.....	.....
11 Madurai (South)	Mannargudi.	.....	Sirkali.	.....	.....	Needamangalam.
	Mayuram.	.....	Mayuram.	.....	.....	.....
	Thiruthurai.	.....	Konerirajapuram.	Kuttalam.	.....	.....
	Thiruthurai.	.....	Thiruthurai.	Tiruvengadu.	.....	.....
	Thiruthurai.	.....	Thiruthurai.	Muthupet.	.....	.....
12 Madurai (North) (Dindigul).	Thiruthurai.	.....	Thiruthurai.	Vedaranayam.	.....	.....
	Thiruthurai.	.....	Thiruthurai.	Thalanayar.	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
13 Ramanathapuram.	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
14 Tirunelveli	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
15 Kanyakumari	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
16 Coimbatore (West)	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....
	Thiruthurai.	.....	Thiruthurai.	.....	.....	.....

TABLE II (a).—Statement showing the number of veterinary hospitals, veterinary dispensaries, minor veterinary dispensaries, first-aid centres and touring billets in Madras State during the year 1959-60—cont.

Name of the district.	Taluk.	Veterinary Hospital.	Veterinary Dispensary.	Minor Veterinary Dispensary.	First-Aid Centre.	Touring Billets.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Coimbatore (West)— cont.	Avanashi.	....	Mettopalayam. Annur.	Avanashi.	Thandakaranpalayam. Bujanganur. Koipalayam. Arachalur. Modakurichi. Elkkatampalayam. Kurumandur. Siruvalur.	....
17 Coimbatore (East) ..	Erode.	Erode.	Chennimalai. Malayampalayam.	Kodumudi. Perundurai.	....	....
	Gobichettipalayam.	....	Gobichettipalayam. Satiyamangalam. Bangalapudur.	Punjaipuliampatti.	....	....
	Palladam	Tiruppur.	Palladam.	....	....	....
	Dharapuram.	Dharapuram.	Nathakadaiyur.	Kangayam.	....	....
	Bhavani.	....	Bhavani.	Andiyur.	....	....
18 Nilgiris ..	Ootacamund.	Ootacamund.	Kavandapadi. ....	....	Nanjand. Prospect Estate. Thummanahutti. Davani. Clovely.	Ootacamund. Gudalur.
	Coonoor.	Coonoor.	....	Kotagiri.	....	....
	Gudalur.	....	Gudalur.	....	....	....

TABLE II (b).—Statement showing the number of veterinary hospitals, veterinary dispensaries, minor veterinary dispensaries, first-aid centres and touring billets opened and closed during the year in Madras State.

Name of the district.	Name of the taluk.	Place and location.	Number of institutions opened.					Number of institutions closed.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Chingleput ..	Chingleput ..	Nellikoppam ..	Veterinary Hos- pital.	Veterinary dis- pensary.	Minor veteri- nary dispen- sary.	First Aid Cen- tres.	Touring billets.	Veterinary hos- pital.	Veterinary dis- pensary.	Minor veteri- nary dispen- sary.	First Aid Cen- tres.	Touring Billets.
North Arcot ..	Maduranakam ..	Lodakaranai Endathur ..	..	1	1	1	..	..	..	..	..	..
	Tiruvannamalai ..	Mangalam ..	..	..	..	1	..	..	..	..	..	..
	Do.	Konalar ..	..	..	1	..	..	..	..	..	..	..
	Do.	Vettavalam ..	..	..	1	..	..	..	..	..	..	..
South Arcot ..	Polur ..	Kalasupakam ..	..	..	1	..	..	..	..	..	..	..
	Cuddalore ..	Panruti ..	..	1	..	..	..	..	..	..	..	..
	(taken from CD and NES area)	..	..	..	..	..	..	..	..	..	..	..
Nagapattinam ..	Kallakurichi ..	Sankarapuram ..	..	..	1	..	..	..	..	..	..	..
Tiruchirappalli ..	Mayuram ..	Tiruvannazhi ..	..	..	1	..	..	..	..	..	..	..
	Alangudi ..	Karimbakudi ..	..	..	..	..	..	..	..	..	..	..
	Tiruchirappalli ..	Somanampatti ..	..	..	..	..	..	..	..	..	..	..
	Do.	Pattayaithalai ..	..	..	..	..	..	..	..	..	..	..
	Do.	Tirupirathurai ..	..	..	..	..	..	..	..	..	..	..
Ariyalur ..	Tirumayam ..	Ponnamravathy ..	..	..	..	..	..	..	..	..	..	..
Ramanathapuram.	Lalgudi ..	Pullambadi ..	..	..	..	..	..	..	..	..	..	..
	Aruppukottai ..	Aruppukottai ..	..	1	..	..	..	..	..	..	..	..
	Sivaganga ..	Manandurai ..	..	..	1	..	..	..	..	..	..	..
	Mudholathur ..	Tiruppuvanam ..	..	..	..	..	..	..	..	..	..	..
Coimbatore ..	Pollachi ..	Melchiruputhur ..	..	..	..	..	..	..	..	..	..	..
	Tirunelveli ..	Periapodu ..	..	..	..	..	..	..	..	..	..	..
	Sankarankoil ..	Sivalperi ..	..	1	1	..	..	..	..	..	..	..
	(taken over from CD and NES administration)	Kurivikuram ..	..	..	..	..	..	..	..	..	..	..
Nilgiris ..	Gudalur ..	Nellakotta ..	..	..	..	1	..	..	..	..	..	..
Salam ..	Edupady ..	Edapady ..	..	..	1	..	..	..	..	..	..	..
Krishnagiri ..	Hosur ..	Bagalur ..	..	..	..	1	..	..	..	..	..	..
	Do.	Anchetty ..	..	..	..	1	..	..	..	..	..	..
	Do.	Nandimangalam ..	..	..	..	1	..	..	..	..	..	..

TABLE III.—Statement showing the number of animals treated and castrated at veterinary hospitals and dispensaries in the State of Madras during the year 1959-60.

Years.	Number of Veterinary Institutions.			Number of veterinary Assistant Surgeons employed.				Number of in-patients treated.					Number of out-patients treated.					Castrations performed.				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	Total number of cases supplied with medicine but not brought to institution.				
1959-60	..	120	135	4,305	269	114	4,688	261,202	3,706	98,868	363,776	368,464	948	44,172	58	15,702	59,932					
1958-59	..	116	110	3,776	125	912	4,818	230,445	3,566	102,408	336,419	341,232	1,097	43,690	32	12,778	57,500					
1957-58	..	113	119	3,164	163	659	3,986	203,428	7,760	94,274	305,462	308,448	2,850	42,769	20	11,971	54,770					

TABLE IV (a).—Statement showing the number of animals treated and castrated by the Touring Veterinary Assistant Surgeons during the year 1959-60.

Years.	Number of Veterinary Assistant Surgeons.			Number of villages visited by the Veterinary Assistant Surgeons.			Castrations performed.					Treated for contagious disease.					Treated for non-contagious disease.												
	(1)	(2)	(3)	Bovines.	(4)	(5)	Equines.	Others.	(6)	(7)	Total.	Bovines.	(8)	(9)	Equines.	Others.	(10)	(11)	Total.	Bovines.	(12)	(13)	Equines.	Others.	(14)	(15)	Total.	(16)	
1959-60	..	80	1,1453	53,752	1	7,795	61,548	132	..	556	688	182,208	665	27,541	210,414	272,650	..	..	..	..	..	..	..	..	..	..	..	..	..
1958-59	..	73	11,194	49,436	2	8,901	58,339	2,131	..	591	2,722	173,287	1,080	33,286	207,643	268,704	..	..	..	..	..	..	..	..	..	..	..	..	..
1957-58	..	79	9,741	41,461	88	11,066	52,615	1,322	..	432	1,754	154,830	1,009	21,834	177,682	232,042	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE No. IV (b).—*Consolidated statement showing the cases treated, castrations done, vaccinations conducted and sheep dewormed by the different section during 1959-60.*

Name of agency.	Number of cases treated.	Number of castrations done.	Number of vaccinations done.	Number of sheep dewormed.
(1)	(2)	(3)	(4)	(5)
1 Veterinary Hospitals and Dispensaries.	368,464	59,932	..	..
2 Touring Billets, Minor Veterinary Dispensaries, First Aid Centres and Check Posts.	211,102	61,548	2,821,128	..
3 Key Village Areas	13,430	15,877	421,130	..
4 Key Village Extension Centres.	..	13,206	154,785	..
5 Village Livestock Improvement Scheme.	..	158	658	..
6 Cross Breeding Scheme, Ooty.	933	318	..	..
7 Community Development and National Extension Service areas.	308,061	126,493	1,860,710	212,190
8 Private Veterinary Institutions.	6,770	159	..	..
Total ..	908,760	277,196	518,411	212,190

TABLE V (a).

TABLE V (a).—Statement showing the number of approved breeding bulls at stud in the Madras State during the year 1959-60.

Serial number and district.	Present on 1st April 1959.			Obtained during the year.			Casualties, transfers, removals, etc., during the year.		
	Number.			Average price.					
	G.	LB.	O.	G.	LB.	O.	G.	LB.	O.
1 Madras ..	12	..	11	2	..	4	..	..	6
2 Chingleput ..	114	..	8	43	..	2	7	..	3
3 North Arcot ..	56	..	33	42	..	22	4	..	3
4 South Arcot ..	69	2	14	50	..	10	9	1	3
5 Thanjavur ..	11	3	40	..	..	15	..	2	2
6 Nagapattinam ..	15	5	173	36	..	48	..	5	29
7 Tiruchirappalli ..	150	..	74	3	..	..	7	..	31
8 Ariyalur ..	4	1	90	30	..	62	1	..	17
9 Madurai ..	93	..	31	68	..	17	..	..	14
10 Dindigul ..	140	..	12	43	1	4	..	..	6
11 Ramanathapuram ..	76	6	30	6	..	18	15	..	5
12 Tirunelveli ..	73	1	26	27	..	23	12	..	9
13 Kanyakumari ..	10	..	19	1	..	20	1	..	2
14 Coimbatore ..	73	86	40	33	13	2	3	32	18
15 Nilgiris ..	2	..	9	..	..	..	1	..	1
16 Erode ..	164	137	114	1	23	23	8	..	23
17 Salem ..	78	9	40	31	..	27	1	..	10
18 Krishnagiri ..	77	..	77	66	..	20	3	..	200
Total ..	1,217	250	841	482	37	339	87	57	199
1958-59 ..	1,035	231	750	288	58	286	104	39	276
1957-58 ..	477	214	696	696	71	330	138	54	..

	Number of approved bulls at stud.				Net cost for issues and maintenance of stud bulls.	Population of cows over three years according to census.	Number of bulls.		Number of cows covered during the year.	Number of inseminations done to cows.	
	Balance on hand on 31st March 1960.						Required to be maintained.	Short of requirements.			
	G.	LB.	O.	T.							
	(14)	(15)	(16)	(17)	(18) Rs. NP.	(19)	(20)	(21)	(22)	(23)	
1 Madras ..	14	..	9	23	4,189 42	13,334	133	110	1,802	5,296	
2 Chingleput ..	150	..	7	157	..	213,297	2,133	1,976	2,557	2,880	
3 North Arcot ..	94	..	52	146	31,574 59	112,141	1,122	976	4,527	1,509	
4 South Arcot ..	110	1	21	132	26,621 21	437,203	4,372	4,240	1,769	3,169	
5 Thanjavur ..	11	1	53	65	35,280 00	135,000	1,350	1,285	4,201	1,400	
6 Nagapattinam ..	50	..	192	242	46,371 22	155,832	1,559	1,317	9,029	3,009	
7 Thiruchirappalli ..	143	..	43	186	..	386,979	3,870	3,084	9,221	14,747	
8 Ariyalur ..	33	1	135	169	46,486 24	89,610	896	728	7,661	..	
9 Madurai ..	159	..	34	193	60,819 12	182,348	1,823	1,630	8,000	23,912	
10 Dindigul ..	158	1	10	169	..	25,230	252	83	6,219	4,072	
11 Ramanathapuram ..	70	6	43	119	46,413 32	198,628	1,986	1,867	5,270	1,756	
12 Tirunelveli ..	84	..	40	124	1,15,450 81	78,821	788	664	4,990	1,788	
13 Kanyakumari ..	10	..	39	49	7,582 53	25,286	253	204	2,264	788	
14 Coimbatore ..	97	71	42	210	8,936 00	40,243	402	190	6,878	50,199	
15 Nilgiris ..	1	..	10	11	1,600 00	39,641	396	385	661	3,036	
16 Erode ..	157	147	114	418	39,203 44	275,495	2,755	2,337	2,047	35,914	
17 Salem ..	114	6	49	169	57,791 52	304,917	3,050	2,881	9,655	3,218	
18 Krishnagiri ..	107	..	81	188	39,351 65	119,150	1,191	1,003	8,481	5,578	
Total ..	1,562	234	974	2,770	5,67,671 07	2,833,155	28,331	25,560	105,232	168,271	
Grand total ..	1,219	250	837	2,306	5,19,331 12	2,796,984	27,969	25,672	94,728	144,168	
1957-58 ..	1,035	231	750	2,016	3,48,123 75	3,011,551	30,117	28,101	83,579	95,293	
G = Government.					LB = Local Boards.				O = Others.		T = Total.

TABLE V (b).—Statement showing the number of approved buffalo bulls at stud in the Madras State during the year 1959-60.

Serial number and district.	Present on 1st April 1959.			Obtained during the year.			Average price.			Casualties transfers, removals, etc., during the year.		
	Number.			Number.			Average price.			Number.		
	G.	LB.	O.	G.	LB.	O.	G.	LB.	O.	G.	LB.	O.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1 Madras ..	7	..	5	1	..	2	..	..	..	2	..	3
2 Chingleput ..	70	..	2	11	..	..	..	..	..	..	..	..
3 North Arcot ..	18	..	2	15	..	2	..	..	..	3	..	2
4 South Arcot ..	20	..	2	10	..	1	1,000	..	660	12	..	..
5 Thanjavur ..	10	..	20	..	..	5	..	..	..	1	..	..
6 Nagapattinam ..	11	..	16	1	..	10	..	..	..	..	..	2
7 Tiruchirappalli ..	58	..	22	5	..	..	1,000	..	..	..	..	6
8 Ariyalur ..	1	..	71	20	..	47	785	..	..	..	..	144
9 Madurai ..	32	..	6	19	..	2	..	..	..	7	..	1
10 Dindigul ..	67	..	2	7	..	..	..	..	..	9	..	2
11 Ramanathapuram ..	55	..	3	1	..	2	..	..	..	3	..	..
12 Tirunelveli ..	62	..	15	24	..	2	..	..	..	1	..	9
13 Kanyakumari ..	4	..	4	..	..	2	..	..	..	..	..	..
14 Coimbatore ..	14	..	7	4	..	2	..	..	900	7	..	..
15 Nilgiris ..	3	..	..	..	..	2	..	..	..	..	..	..
16 Erode ..	34	..	7	..	..	5	..	..	..	..	..	..
17 Salem ..	36	1	7	26	..	1	..	..	..	4	..	3
18 Krishnagiri ..	7	1	1	1	..	..	900	900	900	..	..	..
Total	509	2	192	145	..	85	..	..	..	49	..	46
Grand total	407	3	157	137	..	85	..	..	..	40	1	50
1958-59 ..	165	..	154	259	7	48	..	..	..	17	4	45
1957-58 ..	..	..	..	..	..	..	..	..	..	..	..	..

	Number of approved bulls at stud.				Net cost for issues and maintenance of stud bulls.	Population of cows over three years according to census.	Number of bulls.		Number of she buffaloes covered.	Number of inseminations done to buffaloes.
	Balance on 31st March 1960.						Required to be maintained.	Short of requirements.		
	G.	LB.	O.	T.						
	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
					RS. NP.					
1 Madras ..	6	..	4	10	1,100 00	13,129	131	121	..	2,051
2 Chingleput ..	56	..	2	58	..	97,525	975	917	1,557	3,409
3 North Arcot ..	34	2	..	36	11,529 67	72,130	721	685	1,906	638
4 South Arcot ..	22	..	3	25	3,426 30	69,578	696	670	2,560	1,657
5 Thanjavur ..	7	..	25	32	22,240 00	112,648	1,126	1,094	3,907	1,302
6 Nagapattinam ..	8	..	24	32	..	64,619	646	614	3,654	1,217
7 Tiruchirappalli ..	64	..	16	80	..	151,721	1,517	1,438	3,242	1,957
8 Ariyalur ..	21	..	104	125	29,553 00	89,610	896	779	2,886	..
9 Madurai ..	68	..	7	75	60,819 12	62,374	624	549	3,573	7,534
10 Dindigul ..	71	..	..	73	..	14,256	142	69	3,699	1,233
11 Ramanathapuram.	53	..	4	57	46,413 32	53,966	539	482	320	106
12 Tirunelveli ..	85	..	8	93	115,450 81	78,737	787	694	1,523	507
13 Kanyakumari ..	4	..	6	10	3,480 00	10,220	102	92	843	2,529
14 Coimbatore ..	58	..	9	69	1,760 00	28,437	284	315	9,760	11,634
15 Nilgiris ..	3	..	2	5	..	14,768	147	142	220	..
16 Erode ..	41	..	12	53	..	37,399	374	321	4,015	7,233
17 Salem ..	50	1	5	64	55,791 52	550,851	550	5,444	4,175	1,568
18 Krishnagiri ..	12	1	1	14	3,520 00	68,889	688	674	602	566
Total ..	623	4	230	911	355,083 74	1,590,837	15,912	1,500	49,195	45,141
Grand total	504	2	192	698	102,310 59	1,576,455	15,763	15,065	28,904	42,016
1958-59 ..	407	3	157	567	125,929 76	1,577,608	15,776	15,209	21,515	26,794
1957-58 ..	..	..	..	..	..	..	..	..	..	..

NOTE.—G=Government, LB=Local Boards, O=Others, T=Total.

TABLE VI (b).—Statement showing the particulars of livestock shows held during the year 1959-60 in Madras State.

Number of shows held during the year.	Number of animals that competed.					From State fund.			From local sources.			From All-India Show Society.			From other sources.			Total amount provided.			Amount actually spent for award of prizes.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
	Cattle.	Buffaloes.	Horse.	Sheep.	Goats.	Poultry.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.	RS. NP.
120	18,168	2,812	235	21,407	5,197	7,076	38,150 00																

TABLE VII.—Livestock slaughtered in recognized slaughter-houses in Madras State during the year 1959-60.

Year.	Number of recognised slaughter houses.										Number of animals slaughtered.										Total number of animals slaughtered.	
(1)	Cattle.					Sheep and goats.					Pigs.					Others.					(21)	(22)
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)		
1959-60	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,900,297	1,024,215
1958-59	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,024,215	1,469,988
1957-58	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,024,215	1,469,988

TABLE VIII.—Cost of Animal Husbandry Department in the State of Madras during the year 1959-60.

Major head.	Expenditure.					
	State.		Local bodies.		Total.	
	(2)		(3)		(4)	
	RS.	NP.			RS.	NP.
41. Animal Husbandry—						
(a) Direction	2,28,594	77	..	..	2,28,594	77
(b) Superintendence	3,17,197	66 *	..	..	3,17,197	66
	18,173	62 †	..	..	18,173	62
(c) Subordinate Animal Husbandry Establishment.	4,26,131	34	..	..	4,26,131	34
(d) Hospitals and Dispensaries	9,30,630	08 *	..	..	9,30,630	08
	25,150	68 †	..	..	25,150	68
(e) Veterinary Education and Research	7,38,307	17 *	..	..	7,38,307	17
	5,48,089	50 †	..	..	5,48,089	50
(f) Other Charges	2,34,909	57 *	..	..	2,34,909	57
	1,35,236	41 †	..	..	1,35,236	41
(g) Breeding Operation	30,81,821	26 *	..	..	30,81,821	26
	29,99,605	13 †	..	..	29,99,605	13
(h) Works	21,044	87 *	..	..	21,044	87
(i) Charges in England	..	..	..	..	..	..
Total	97,04,892	06	..	..	97,04,892	06
82. Capital Accounts of other works outside the Revenue Account—						
(a) Original Works	..	..	..	..	..	..
(b) Soil Conservation Measures	9,019	70	..	..	9,019	70
(c) Improvement of water facilities	4,529	26	..	..	4,529	26
Reclamation of land and construction of buildings.	98,743	74	..	..	98,743	74
Salvage Farm, Alamadhi Reserve Forest	4,346	95	..	..	4,346	95
	* Non-plan.	† Plan.				

* Non-plan.

† Plan.

TABLE IX.—Strength of staff and how distributed in the State of Madras during the period from 1st April 1959 to 31st March 1960.

Description.	Whether paid from State, Central or Local Funds.	Gazetted Officers		Subordinate staff.	
		Scale of pay.	Number.	Scale of pay.	Number.
(1)	(2)	(3)	(4)	(5)	(6)
		RS.			
Head of Department ..	State ..	1,200—1,400.	1	..	..
Deputy Director of Animal Husbandry (Livestock).	Do. ..	800—1,000 ..	1	..	..
Deputy Director of Animal Husbandry (Veterinary).	Do. ..	800—1,000 ..	1	..	..
Deputy Director of Animal Husbandry (Key villages.)	Partly by State and partly by I.C.A.R.	800—1,000 ..	1	..	..
Principal, Madras Veterinary College, Madras.	State ..	800—1,000 ..	1	..	..
Superintendent, Institute of Veterinary Preventive Medicine, Ranipet.	Do. ..	800—1,000 ..	1	..	..
Professor of Physiology ..	Do. ..	600—900 ..	1	..	..
Professor of Anatomy ..	Do. ..	600—900 ..	1	..	..
Professor of Animal Genetics.	Do. ..	600—900 ..	1	..	..
Professor of Animal Nutrition.	Do. ..	600—900 ..	1	..	..
Professor of Bacteriology ..	Do. ..	600—900 ..	1	..	..
Professor of Biology ..	Do. ..	600—900 ..	1	..	..
Professor of Dairy Science.	Do. ..	600—900 ..	1	..	..
Professor of Gynaecology ..	Do. ..	800—1,000 ..	1	..	..
Professor of Medicine ..	Do. ..	600—900 ..	1	..	..
Professor of Parasitology ..	Do. ..	600—900 ..	1	..	..
Professor of Pathology ..	Do. ..	600—900 ..	1	..	..
Professor of Pharmacology.	Do. ..	600—900 ..	1	..	..
Professor of Surgery ..	Do. ..	600—900 ..	1	..	..
Professor of Therapeutics and Toxicology.	Do. ..	600—900 ..	1	..	..
Reader in Animal Genetics.	Do. ..	420—700 ..	1	..	..
Reader in Animal Nutrition.	Do. ..	420—700 ..	1	..	..
Reader in Dairy Science ..	Do. ..	420—700 ..	1	..	..
Reader in Pathology ..	Do. ..	420—700 ..	1	..	..
Reader in Bacteriology ..	Do. ..	420—700 ..	1	..	..
Reader in Parasitology ..	Do. ..	420—700 ..	1	..	..
Reader in Anatomy ..	Do. ..	420—700 ..	1	..	..
Reader in Physiology ..	Do. ..	420—700 ..	1	..	..
Reader in Hygiene ..	Do. ..	420—700 ..	1	..	..
Reader in Pharmacology ..	Do. ..	420—700 ..	1	..	..
Reader in Meat Inspection.	Do. ..	420—700 ..	1	..	..
Lecturer in Agriculture ..	Do. ..	260—700 ..	1	..	..
Lecturer in Anatomy ..	Do. ..	260—700 ..	1	..	..
Lecturer in Animal Genetics.	Do. ..	260—700 ..	1	..	..
Additional Lecturer in Animal Husbandry.	Do. ..	260—700 ..	1	..	..
Lecturer in Bacteriology ..	Do. ..	260—700 ..	1	..	..

TABLE IX.—Strength of staff and how distributed in the State of Madras during the period from 1st April 1959 to 31st March 1960—cont.

Description.	Whether paid from State, Central or Local Funds.	Gazetted Officer		Subordinate staff	
		Scale of pay.	Number.	Scale of pay.	Number.
(1)	(2)	(3)	(4)	(5)	(6)
		RS.			
Lecturer in Chemistry ..	State. ..	260—700 ..	1	..	..
Lecturer in Flaying ..	Do. ..	260—700 ..	1	..	..
Lecturer in Medicine ..	Do. ..	260—700 ..	1	..	..
Lecturer in Parasitology ..	Do. ..	260—700 ..	1	..	..
Lecturer in Pathology ..	Do. ..	260—700 ..	1	..	..
Lecturer in Physiology ..	Do. ..	260—700 ..	1	..	..
Lecturer in Physics ..	Do. ..	260—700 ..	1	..	..
Lecturer in Surgery ..	Do. ..	260—700 ..	1	..	..
Lecturer in Gynaecology	Do. ..	260—700 ..	1	..	..
Lecturer in Stockmen Course, Hosur Cattle Farm.	Do. ..	260—700 ..	2	..	..
Lecturer in Stockmen Course, Pudukkottai.	Do. ..	260—700 ..	1	..	..
Lecturer in Stockmen Course, Orathanad.	Do. ..	260—700 ..	1	..	..
Research Officer, Animal Nutrition.	Do. ..	260—700 ..	1	..	..
Research Officer, Helminthology.	Do. ..	260—700 ..	1	..	..
Research Officer, Mastitis.	Do. ..	260—700 ..	1	..	..
Regional Sterility Officer, Madras.	Do. ..	260—700 ..	1	..	..
Supernumerary Posts.					
Additional Lecturer in Anatomy.	State ..	260—700 ..	..	..	..
Lecturer in Hygiene ..	Do. ..	260—700 ..	..	..	..
Lecturer in Therapeutics and Toxicology.	Do. ..	260—700 ..	..	..	..
Lecturer in Pathology ..	Do. ..	260—700 ..	..	..	..
Lecturer in Surgery ..	Do. ..	260—700 ..	..	..	..
Professor in Animal Husbandry, Agricultural College, Coimbatore.	Do. ..	420—700 ..	1	..	..
Lecturer in Animal Husbandry, Agricultural College, Coimbatore.	Do. ..	260—700 ..	1	..	..
Superintendent, Livestock Research Station, Hosur Cattle Farm.	Do. ..	260—700 ..	1	..	..
Superintendents, District Livestock Farms.	Do. ..	260—700 ..	3	..	..
District Veterinary Officers.	Do. ..	260—700 ..	13	..	..
Veterinary Disease Investigation Officer (Cattle), Ranipet.	Do. ..	260—700 ..	1	..	..
Veterinary Disease Investigation Officer (Sheep and Goats) Ranipet.	Do. ..	260—700 ..	1	..	..
Veterinary Disease Investigation Officer (Poultry), Ranipet.	Do. ..	260—700 ..	1	..	..

TABLE IX.—Strength of staff and how distributed in the State of Madras during the period from 1st April 1959 to 31st March 1960—cont.

Description.	Whether paid from State, Central or Local Funds.	Gazetted Officers		Subordinate staff	
		Scale of pay.	Number.	Scale of pay.	Number.
(1)	(2)	(3)	(4)	(5)	(6)
		RS.			
Poultry Development Officer, Madras.	State ..	260—700 ..	1	..	..
Animal Husbandry Statistician.	Do. ..	260—700 ..	1	..	..
Research Officer, Freeze Dried Rinderpest Vaccine, Institute of Veterinary Preventive Medicine, Ranipet.	Central ..	260—700 ..	1	..	..
Research Officer, Institute of Veterinary Preventive Medicine, Ranipet.	State ..	260—700 ..	1	..	..
Special Officer, Freeze Dried Vaccine, Institute of Veterinary Preventive Medicine, Ranipet.	Do. ..	260—700 ..	1	..	..
Research Officer, for the survey and control of Brucellosis in Madras State.	Indian Council of Agricultural Research.	260—700 ..	1	..	..
Forest Veterinary Officer.	Partly by Central and partly by State.	260—700 ..	1	..	..
Special Officer, Artificial Insemination, Madras.	State ..	260—700 ..	1	..	..
Sheep and Goat Development Officer, Madras.	Do. ..	260—700 ..	1	..	..
Assistant Research Officer, Cross Breeding Scheme, Ootacamund.	Partly by State and partly by I.C.A.R.	260—700 ..	1	..	..
Inspector of Key Villages, Kangayam.	Partly by State and partly by Government of India.	260—700 ..	1	..	..
Inspector of Key Villages, Palni.	Do.	260—700 ..	1	..	..
Inspector of Key villages, Dharapuram.	Do.	260—700 ..	1	..	..
Superintendent, Poultry Research Station, Madras.	State	260—700 ..	1	..	..
Research Officer for Poultry Rations, Madras.	Partly by State and partly by I.C.A.R.	260—700 ..	1	..	..
Accounts Officer, Animal Husbandry Department.	State ..	200—400 ..	1	..	..
Superintendent, Sheep Breeding Research Station, Chinnasalem.	Do. ..	260—700 ..	1	..	..
Sheep Breeding Officer, Ootacamund.	Partly by State and partly by I.C.A.R.	260—700 ..	1	..	..

TABLE IX.—Strength of staff and how distributed in the State of Madras during the period from 1st April 1959 to 31st March 1960—cont.

Description.	Whether paid from State, Central or Local Funds.	Gazetted Officers		Subordinate staff	
		Scale of pay.	Number.	Scale of pay.	Number.
(1)	(2)	(3)	(4)	(5)	(6)
		RS.			
Fodder Development Officer, Madras.	Partly by State and partly by Government of India.	260—700 ..	1	..	..
Personal Assistant to Director of Animal Husbandry (Non-technical).	State ..	300—700 ..	1	..	..
		Total ..	100		
Veterinary Assistant Surgeons in Veterinary Institutions.	State ..	..	..	150—5—200—10—300	104
Veterinary Assistant Surgeons in Touring Billets and Minor Veterinary Dispensaries.	Do. ..	..	..	Do.	81
Veterinary Assistant Surgeons in Disease Investigation.	Do. ..	..	..	Do.	3
Veterinary Assistant Surgeons in Institute of Veterinary Preventive Medicine, Ranipet.	Do. ..	..	..	Do.	15
Veterinary Assistant Surgeons in Madras Veterinary College.	Do. ..	..	..	Do.	56
Veterinary Assistant Surgeons in Livestock Farms.	Do. ..	..	..	Do.	17
Veterinary Assistant Surgeon in Key village and Key Farm Centres, and in Artificial Insemination Centres.	Do. ..	..	..	Do.	52
Veterinary Assistant Surgeons in Sheep Development.	Do. ..	..	..	Do.	10
Veterinary Assistant Surgeons in Cross Breeding Scheme, Ootacamund.	Do. ..	..	..	Do.	1
Veterinary Assistant Surgeons in Poultry Development.	Do. ..	..	..	Do.	4
Veterinary Assistant Surgeons in chemical Laboratories.	Do. ..	..	..	Do.	3
Veterinary Assistant Surgeons in Statistical Section.	Do. ..	..	..	Do.	1
Veterinary Assistant Surgeon in the Office of the Director of Animal Husbandry.	Do. ..	..	..	Do.	1

TABLE IX.—Strength of staff and how distributed in the State of Madras during the period from 1st April 1959 to 31st March 1960—cont.

Description.	Whether paid from State, Central or Local Funds.	Gazetted Officers		Subordinate staff	
		Scale of pay.	Number.	Scale of pay.	Number.
(1)	(2)	(3)	(4)	(5)	(6)
Rs.					
Goshala Development Scheme—					
Veterinary Assistant Surgeons in Goshala Scheme.	State ..	..	..	150—5—200—10—300.	1
Veterinary Assistant Surgeons Propaganda Unit.	Do. ..	..	..	Do.	1
Veterinary Assistant Surgeon in Glanders Inspection.	Do. ..	..	..	Do.	1
Veterinary Assistant Surgeon, in Forest Department.	Do. ..	..	..	Do.	1
Veterinary Assistant Surgeon in Agriculture Department.	Do. ..	..	..	Do.	3
Veterinary Assistant Surgeon in King Institute Guindy.	Do. ..	..	..	Do.	3
Veterinary Assistant Surgeons Community Development and National Extension Service areas.	Do. ..	..	..	Do.	Nil
Veterinary Assistant Surgeons in Rural Extension Training Centres.	Do. ..	..	..	Do.	7
Veterinary Assistant Surgeons in Mobile Units.	Do. ..	..	..	Do.	2
Veterinary and Livestock Inspectors—				90—3—120—4—160.	319

Post kept in abeyance.

Stockmen—

Madras Veterinary College.	State ..	..	..	60—3—105..	14
District Work	Do. ..	..	..	Do. ..	158
Livestock Farm	Do. ..	..	..	Do. ..	7
Sheep Section	Do. ..	..	..	Do. ..	19
Artificial Insemination Centre.	Do. ..	..	..	Do. ..	10
Key Village and Key Farm Centres.	Partly by State and partly by Government of India.	..	..	Do. ..	333
Cross Breeding Scheme.	I.C.A.R. ..	..	..	Do. —	10
Quarantine Station ..	Rinderpest Control Committee.	..	..	Do. ..	Nil.

TABLE IX.—Strength of staff and how distributed in the State of Madras during the period from 1st April 1959 to 31st March 1960—cont.

Description.	Whether paid from State, Central or Local Funds.	Gazetted Officers		Subordinate staff	
		Scale of pay.	Number.	Scale of pay.	Number.
(1)	(2)	(3)	(4)	(5)	(6)
Rs.					
Stockmen—cont.					
Community Development and National Extension Service.	State and Central.	..	..	60—3—105 ..	148
Community Projects and Reverted Blocks.	..	..	..	Do. ..	46
Compounders and stockmen compounders—					
District Work.	State ..	..	..	35—1—60 ..	43
Livestock Farms ..	Do. ..	..	..	Do. ..	8
Artificial Insemination Centres.	Do. ..	..	..	Do. ..	1
Community development and National Extension Service areas.	State and Central.	..	..	Do. ..	1
Ministerial Staff—					
Senior Superintendent..	State ..	..	..	190—10—240	1
Junior Superintendents	Do. ..	..	..	140—5—190	3
Office Managers	Do. ..	..	..	115—5—140	3
(a) Accountant	Do. ..	..	..	110 (fixed)	1
(b) Accountants.. ..	Do. ..	..	..	80—3—95—5—110	9
Upper Division Clerks, Grade I.	Do. ..	..	..	80—3—95—5—125	27
Upper Division Clerks, Grade II.	Do. ..	..	..	80—3—95—5—110.	24
Typists	Do. ..	..	..	45—3—60—2—90.	48
				(plus Rs. 10 special pay).	
Lower Division Clerks ..	Do. ..	..	..	45—3—60—2—90.	83
Steno-Typists	Do. ..	..	..	45—3—60—2—90.	4
				(plus Rs. 10 special pay).	
Clerk-cum-Typist	Do. ..	..	..	45—3—60—2—90.	1
Store-keepers	Do. ..	..	..	Do.	10
Computer, Senior	Do. ..	..	..	100—5—175	1
Do. Junior	Do. ..	..	..	80—3—95—5—110.	1

TABLE XI (c).—Statement showing the location and other particulars of Livestock Farms in the State of Madras during the year 1959-60.

Goats—Nil.

TABLE XI (d).—Statement showing the location and other particulars of livestock in the State of Madras during the period from 1st April 1959 to 31st March 1960.

Name and address of the farm.	Area of the farm.		Purpose of the farm and flock.	Breed.	Number of birds in the breed.			Number of cockerels issued for breeding during the period.	Number of eggs/hatching sold during the period.			Average egg yield per hen for the period.		
	Total.	Under cultivation.			Cocks.	Hens.	Chicks.		1959	1958	1957			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Livestock Research Station, Hosur Cattle Farm.	1,046.41 ACS.	240.63 ACS.	For the development of poultry in the State by supplying hatching eggs, pure bred cocke- rels to the public and to the institutions like Poultry Demonstration Units in the hospitals, Co-operative Societies and in the schools. Breeding poultry are also supplied to the Block Development and Key village areas for grading up of the poor indigenous vari- ety and also to set up	W.L.H. R.I.R. B.M.	20 16 2	164 140 14	1,296 676 161	20 16 2	16 19 4	13 12 1	1,730	1,460	360	164.1 171.3 99.9

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District Livestock Farm, Orathanad.	262.67	..	..	Supply of hatching eggs and cockerels of exotic breeds to the public and Block Development areas.	41	131	745	145	191	150	2,230	1,013	600	964	129.5
				W.L.H.	4	35	268	96	70	102	1,920	600			122.4
				R.I.R.											
Poultry Research Station, Teynampet.	9.98	..	..	To study the performance of the exotic breeds under the local environmental conditions. To study the potentialities of the different breeds for increased egg production, egg size, body weight under farm conditions and to evolve an economic superior strain by selective breeding. To produce and rear birds intended for distribution under All-India Poultry Development Scheme.	38	310	1,815	59	191	879					84.7
				W.L.H.	4	40	101	4	3	10					87.0
				R.I.R.	4	3	10	4	6	56					84.9
				L.S.	1	6	36	2	4	36					82.0
				B.H.	4	14	108	4	14	108					61.2
				L..	1	2	29	1	2	29					86.2
				Austra-	4	3	7	1,824	3,975	1,656	4,581	6,055	8,626		74.1
				lorps.											58.3
				B.L.H.	1	2	29								80.5
				Blarred	3	9	7								
				plymouth	2	1	12								52.5
				rock.											
				To Ancona											

TABLE No. XII (a).—Performance of cows at the Livestock Research Station, Hosur Cattle Farm in the end of the period from 1st April 1959 to 31st March 1960 classified according to sires.

Serial number.	Sire number.	Daughter and Dam.	First lactation.					Second lactation.					
			N.R.A.	A.Y.M.	A.D.M.	A.P.Y.	A.S.P.	N.R.A.	A.Y.M.	A.D.M.	A.P.Y.	A.S.P.	A.D.D. Pl.
(1)	(1a)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	485	Daughter	3	4,223	358	..	110	..	..	..	..	..	..
		Dam ..	3	3,387	329	..	235	..	4,786	381	..	211	..
2	516	Daughter	3	5,531	216	..	107	1	2,813	267	19	150	69
		Dam ..	3	3,886	300	..	188	2	4,940	328	27	198	215
3	510	Daughter	8	4,550	323	..	107	5	4,662	317	..	230	165
		Dam ..	8	3,322	272	19	272	1	3,268	271	16	125	164
4	102	Daughter	8	3,265	308	14	147	8	4,249	335	..	211	183
		Dam ..	8	3,860	287	..	230	7	3,212	298	..	133	134
5	T.60	Daughter	5	3,856	365	..	135	3	1,592	332	18	151	185
		Dam ..	4	2,442	293	..	210	3	2,613	240	14	100	309
6	255	Daughter	10	2,888	277	15	227	10	4,253	288	..	162	217
		Dam ..	10	4,093	344	..	280	10	3,647	314	11	144	162
7	333	Daughter	7	3,634	317	14	171	7	3,002	235	..	115	211
		Dam ..	6	2,029	197	..	209	6	4,825	375	..	210	188
8	421	Daughter	6	3,525	294	..	160	1	27,567	231	18	235	160
		Dam ..	5	3,328	313	..	130	5	3,184	306	..	98	268
9	420	Daughter	8	4,428	343	11	123	4	3,743	300	..	127	142
		Dam ..	4	2,770	250	..	232	4	2,750	264	14	216	250
10	282	Daughter	7	3,555	316	..	173	7	3,741	324	..	115	134
		Dam ..	7	3,794	328	13	286	6	3,985	346	16	135	348
11	508	Daughter	9	3,899	326	..	120	9	3,517	328	..	100	116
		Dam ..	9	3,443	316	..	360	3	5,233	357	..	113	148
12	503	Daughter	5	3,809	361	..	207	4	3,662	316	..	116	120
		Dam ..	4	3,525	331	..	188	4	3,835	326	16	116	120
13	481	Daughter	6	2,800	234	10	105	4	3,319	255	17	164	214
		Dam ..	6	3,050	241	..	171	4	..	..	..	..	..

		Third lactation.							Fourth lactation.						
		N.R.A. A.Y.M. A.D.M. A.P.Y. A.S.P. A.D.D. Pl.							N.R.A. A.Y.M. A.D.M. A.P.Y. A.S.P. A.D.D. Pl.						
		(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)		
1	435	Daughter	..	..	..	..	..	..	..	..	..	..	..		
2	516	Dam ..	..	..	..	..	..	..	..	..	..	..	..		
3	510	Daughter:	..	..	..	..	..	..	..	..	..	..	..		
4	102	Dam ..	3	4,746	336	22	162	165	5,572	280	31	207	67		
5	T.60	Daughter	3	3,207	283	..	283	80	3,845	238	..	66	38		
6	255	Dam ..	8	3,290	289	..	104	180	3,534	298	..	102	115		
7	333	Daughter	6	4,799	300	..	228	266	4,764	298	..	321	335		
8	431	Dam ..	1	3,934	319	..	..	164	4,121	273	..	120	107		
9	430	Daughter	1	1,854	228	..	211	186	..	272	..	..	365		
10	282	Dam ..	9	4,120	308	17	103	164	3,708	298	22	120	60		
11	508	Daughter	9	3,662	294	..	255	179	2,720	274	23	275	238		
12	503	Dam ..	7	4,437	334	18	109	153	3,772	303	20	120	128		
13	481	Daughter	6	3,330	259	..	197	198	2,926	238	..	80	192		
14	431	Dam ..	..	..	..	..	..	..	..	..	..	..	..		
15	430	Daughter	1	3,676	333	..	333	101	4,741	337	..	104	286		
16	282	Dam ..	4	3,604	292	..	150	155	3,631	279	..	183	149		
17	508	Daughter	6	4,141	301	24	113	177	3,741	286	135	102	190		
18	503	Dam ..	6	3,499	204	..	133	173	3,055	296	..	197	113		
19	481	Daughter	..	..	..	..	..	..	..	..	..	..	..		
20	503	Dam ..	1	3,975	321	21	126	65	..	..	..	..	..		
21	481	Daughter	4	4,547	294	..	116	112	..	..	..	..	..		
22	481	Dam ..	2	3,980	325	16	103	150	..	..	..	..	..		
23	481	Daughter	4	3,230	224	14	116	291	..	..	..	..	..		

TABLE No. XII (a).—Performance of cows at the Livestock Research Station, Hosur Cattle Farm in the end of the period from 1st April 1959 to 31st March 1960 classified according to sires—cont.

[illegible][illegible]

TABLE No. XII (a).—Performance of cows at the Livestock Research Station, Hosur Cattle Farm in the end of the period from 1st April 1959 to 31st March 1960 classified according to sires—cont.

Serial number.	Sire and Dam.	Ninth Lactation.					Tenth Lactation.						
		N.R.A.	A.Y.M.	A.D.M.	A.P.Y.	A.S.P. A.D.D. Pl.	N.R.A.	A.Y.M.	A.D.M.	A.P.Y.	A.S.P. A.D.D. Pl.		
1	485 Daughter ..	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
2	576 Dam ..	..	..	..	..	..	..	..	..	..	..	..	..
3	510 Daughter ..	..	..	..	..	..	..	..	..	..	..	..	..
4	102 Dam ..	..	..	..	..	..	..	..	..	..	..	..	..
5	T. 60 Daughter ..	..	..	..	..	..	..	..	..	..	..	..	..
6	255 Dam ..	1	700	69	..	90	63	..	..	..	..	..	..
7	333 Daughter ..	4	1,807	196	..	118	199	..	..	..	..	..	..
8	401 Dam ..	..	..	..	..	..	..	..	..	..	..	..	..
9	420 Daughter ..	..	..	..	..	..	..	..	..	..	..	..	..
10	282 Dam ..	..	..	..	..	..	..	..	..	..	..	..	..
11	508 Daughter ..	..	..	..	..	..	..	..	..	..	..	..	..
12	503 Dam ..	..	..	..	..	..	..	..	..	..	..	..	..
13	481 Daughter ..	..	..	..	..	..	..	..	..	..	..	..	..

		Eleventh Lactation.					Twelfth Lactation.						
		N.R.A.	A.Y.M.	A.D.M.	A.P.Y.	A.S.P.	A.D.D. P.L.	N.R.A.	A.Y.M.	A.D.M.	A.P.Y.	A.S.P.	A.D.D. P.L.
1	485 Daughter	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)
2	576 Dam ..	..	..	..	..	..	..	..	..	..	..	..	..
3	510 Daughter	..	..	..	..	..	..	..	..	..	..	..	..
4	102 Dam ..	..	..	..	..	..	..	..	..	..	..	..	..
5	T. 60 Daughter	..	..	..	..	..	..	..	..	..	..	..	..
6	244 Dam ..	..	..	..	..	..	..	..	..	..	..	..	..
7	333 Daughter	..	..	..	..	..	..	..	..	..	..	..	..
8	401 Dam ..	..	..	..	..	..	..	..	..	..	..	..	..
9	420 Daughter	..	..	..	..	..	..	..	..	..	..	..	..
10	282 Dam ..	..	..	..	..	..	..	..	..	..	..	..	..
11	508 Daughter	..	..	..	..	..	..	..	..	..	..	..	..
12	503 Dam ..	..	..	..	..	..	..	..	..	..	..	..	..
13	481 Daughter	..	..	..	..	..	..	..	..	..	..	..	..

N.R.A.—Number of records averaged.
A.Y.M.—Average yield in milk.
A.D.M.—Average days in milk.
A.P.Y.—Average peak yield.
A.S.P.—Average service period.
A.D.D.P.—Average days dry preceding to lactation.

TABLE XII (b).—Performance of cows at the Livestock Research Station, Hosur Cattle farm, during the year 1959-60 classified according to sires.

Particulars.	First lactation.						Second lactation.					
	N.R.A. (2)	A.Y.M. (3)	A.D.M. (4)	A.P.Y. (5)	A.S.P. (6)		N.R.A. (7)	A.Y.M. (8)	A.D.M. (9)	A.P.Y. (10)	A.S.P. (11)	A.D.D.P.L. (12)
Sire No. 1—												
Daughter	6	3,687	334	..	160		1	4,617	334	..	120	104
Dam	6	4,427	332	..	127		6	3,438	269	18	149	83
Sire No. 2—												
Daughter	11	3,655	336	..	183		6	3,498	256	..	85	267
Dam	10	3,488	282	..	115		11	3,250	273	18	106	160
Sire No. 3—												
Daughter	3	3,870	353	..	105		..	..	..	..	..	..
Dam	3	3,343	317	..	106		..	..	..	..	..	..
Third lactation.												
	N.R.A. (13)	A.Y.M. (14)	A.D.M. (15)	A.P.Y. (16)	A.S.P. (17)	A.D.D.P.L. (18)	N.R.A. (19)	A.Y.M. (20)	A.D.M. (21)	A.P.Y. (22)	A.S.P. (23)	A.D.D.P.L. (24)
Sire No. 1—												
Daughter	1	5,553	404	..	60	172	1	4,307	310	25	120	82
Dam	6	4,802	315	..	114	234	5	4,612	309	55	90	103
Sire No. 2—												
Daughter	3	5,941	371	30	80	53	2	6,045	315	30	75	123
Dam	9	3,936	257	..	89	211	8	5,133	305	28	122	99
Sire No. 3—												
Daughter	..	..	..	..	..	..	..	..	..	..	..	..
Dam	..	..	..	..	..	..	..	..	..	..	..	..

N.R.A. = Number of records averaged.
A.Y.M. = Average yield in milk.
A.D.M. = Average days in milk.
A.P.Y. = Average peak yield.
A.S.P. = Average service period.
A.D.D.P.L. = Average days dry preceding to lactation.

TABLE XII (c).

Performance of cows at the District Livestock Farm, Orthanad,

at the end of 1959-60—Classified according to sires.

Particulars.	First lactation.				Second lactation.					Third lactation.					Fourth lactation.				
	A.Y.M.	A.D.M.	A.P.Y.	A.S.P.	A.Y.M.	A.D.M.	A.P.Y.	A.S.P.	A.D.D. P.L.	A.Y.M.	A.D.M.	A.P.Y.	A.S.P.	A.D.D. P.L.	A.Y.M.	A.D.M.	A.P.Y.	A.S.P.	A.D.D. P.L.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Sire No. 255—																			
Daughter No. 546 ..	4,331.5	325	..	259	3,727	327	16	80	226	3,526	306	17	96	446	5,249	355	18	125	55
Dam No. 402 ..	4,666.0	320	15	..	1,681	91	19	..	..	5,994	299	20	..	..	4,652	322	..	414	..
Daughter No. 679 ..	5,309.0	439	..	262	6,557	320	22	185	148	3,283	259	25	196	388	1,777	144	23	279	250
Dam No. 309 ..	3,422.0	343	10	..	5,055	313	16	..	..	4,036	273	15	..	..	3,906	266	..	404	..
Daughter No. 726 ..	3,907.0	336	50	165	3,384	302	15	87	302	4,498	299	20	205	299	..	..	..	..	..
Dam No. 512 ..	1,914.0	266	7	..	2,493	254	10	..	..	2,135	206	10	..	..	..	..	..	..	..
Daughter No. 649 ..	5,103.0	329	..	109	6,036	327	..	122	79	4,438	288	..	97	116	3,596	313	19	201	180
Dam No. 304 ..	4,253.0	277	15	..	7,535	353	19	..	..	6,138	293	21	..	..	6,702	353	..	432	..
Daughter No. 812 ..	3,966.0	307	..	125	2,593	284	15	126	65	3,351	300	19	258	..	..	..	..	..	..
Dam No. 602 ..	3,108.0	338	9	..	4,181	280	15	..	..	3,823	292	13	..	..	..	..	..	..	..
Daughter No. 538 ..	3,397.0	247	..	249	4,227	259	..	151	236	4,347	380	..	273	180	4,613	315	..	245	320
Dam No. 310 ..	6,640.0	387	17	..	4,542	366	12	..	..	6,070	..	19	..	..	4,442	332	..	148	..
Sire No. 102—																			
Daughter No. 583 ..	3,230.0	341	..	186	3,756	339	..	72	429	4,300	334	..	102	56	3,128	288	..	101	..
Dam No. 212 ..	3,082.0	360	4	..	3,794	..	12	..	..	4,774	358	13	..	..	5,254	339	..	102	..
Daughter No. 669 ..	4,762.0	334	..	203	3,240	329	..	160	108	4,156	274	..	..	108	4,520	294	19	..	..
Dam No. 440 ..	6,161.0	315	20	..	109	15	7	..	..	3,533	271	13	..	..	3,762	283	..	115	..
Daughter No. 759 ..	4,499.0	284	..	283	3,376	250	..	..	220	3,900	235	20	..	..	..	..	..	..	..
Dam No. 203 ..	3,853.0	..	10	..	3,185	367	9	..	..	138	38	4	..	..	..	..	..	..	..
Sire No. 341—																			
Daughter No. 657 ..	3,701.0	373	..	62	3,399	227	26	134	177	4,248	285	23	131	162	3,889	266	20	267	275
Dam No. 245 ..	4,260.0	128	3	120	421	88	5	..	..	1,154	168	7	..	..	199	48	..	237	..
Daughter No. 696 ..	3,375.0	360	..	..	3,521	294	19	46	182	4,124	293	23	110	92	..	..	..	..	..
Dam No. 178 ..	4,752.0	316	15	..	4,311	270	16	..	..	3,338	249	14	..	..	..	..	..	..	..
Sire No. 481—																			
Daughter No. 699 ..	5,843.0	423	..	..	5,574	344	20	341	322	5,587	302	24	..	..	..	..	..	..	..
Dam No. 299 ..	4,117.0	317	11	..	5,783	373	15	..	..	7,325	358	21	..	..	..	..	..	..	..
Sire No. 508—																			
Daughter No. 801 ..	4,167.0	359	..	..	3,250	283	..	160	82	3,163	285	14	453	402	3,378	302	18	..	..
Dam No. 526 ..	3,085.0	311	10	..	3,892	281	13	..	..	3,726	269	14	..	..	4,173	282	..	60	..
Sire No. 420—																			
Daughter No. 818 ..	2,450.0	302	..	..	2,120	187	17	213	301	419	70	7	..	..	..	..	..	..	..
Dam No. 136 ..	4,474.0	..	12	..	5,313	..	16	..	..	4,424	..	17	..	..	..	..	..	..	..
Daughter No. 0.6 ..	5,134.0	339	20	201	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dam No. 697 ..	4,604.0	405	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sire No. 160—																			
Daughter No. 717 ..	4,723.0	309	..	..	3,653	303	..	238	113	4,424	305	19	215	..	..	..	..	..	..
Dam No. 465 ..	5,557.0	89	6	..	1,805	191	9	..	..	1,951	280	7	..	..	..	..	..	..	..
Daughter No. 752 ..	3,455.0	304	..	..	2,992	298	..	281	271	3,675	303	16	80	62	..	..	..	..	..
Dam No. 524 ..	2,925.0	317	9	..	3,556	273	73	117	..	3,267	275	12	..	..	..	..	..	..	..
Daughter No. 741 ..	4,329.0	331	..	..	3,843	315	..	171	..	6,212	291	33	386	..	..	..	..	..	..
Dam No. 273 ..	3,045.0	327	9	..	2,682	287	9	..	..	2,536	228	11	..	..	..	..	..	..	..
Sire No. 510—																			
Daughter No. 884 ..	3,595.0	304	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dam No. 697 ..	4,604.0	405	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Daughter No. 738 ..	4,530.0	345	..	..	75	17	..	129	..	4,334	266	20	..	305	..	..	..	..	..
Dam No. 507 ..	2,995.0	358	9	..	3,602	312	12	..	..	3,008	300	10	..	..	..	..	..	..	..
Daughter No. 791 ..	5,324.0	321	..	..	4,195	347	..	430	..	..	..	..	..	..	..	..	..	..	..
Dam No. 299 ..	6,843.0	335	20	..	7,407	323	23	..	..	..	..	..	..	..	..	..	..	..	..
Daughter No. 808 ..	1,963.0	262	10	257	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dam No. 507 ..	2,995.0	358	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Daughter No. 798 ..	3,713.0	302	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dam No. 222 ..	4,630.0	..	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Third lactation. *Fourth lactation.*

Particulars.	First lactation.				Second lactation.					Third lactation.					Fourth lactation.				
	A.Y.M.	A.D.M.	A.P.Y.	A.S.P.	A.Y.M.	A.D.M.	A.P.M.	A.S.P.	A.D.D. P.L.	A.Y.M.	A.D.M.	A.P.Y.	A.S.P.	A.D.D, P.L.	A.Y.M.	A.D.M.	A.P.Y.	A.S.P.	A.D.D. P.L.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Sire No. 510—																			
Daughter No. 912	3,637.0	294	18	87	5,871	322	36	159	182	..	..	..	..	..	..	..	..	..	..
Dam No. 758	2,932.0	271	18	..	4,183	300	..	170	195	..	..	..	..	..	..	..	..	..	..
Daughter No. 799	3,325.0	300	..	459	113	22	8	206	369	..	..	..	..	..	..	..	..	..	..
Dam No. 608	3,053.0	332	9	..	4,042	361	11	..	..	..	..	..	..	..	..	..	..	..	..
Daughter No. 803	4,892.0	319	..	188	4,434	343	..	278	220	4,204	243	24	..	..	..	..	..	..	..
Dam No. 285	3,768.0	313	12	..	5,310	342	16	..	..	3,268	271	12	..	..	..	..	..	..	..
Daughter No. 815	3,406.0	328	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dam No. 301	3,830.0	333	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sire No. 430—																			
Daughter No. 692	2,183.0	307	14	61	2,954	259	19	300	326	3,076	298	14	197	184	3,611	212	18	..	..
Dam No. 483	3,919.0	343	12	..	5,640	275	21	..	..	5,339	347	15	..	..	6,806	231	..	..	..
Sire No. 1 CBE																			
Daughter No. 661	3,361.0	349	..	308	3,427	308	..	295	168	1,926	260	..	325	350	309	43	7	..	..
Dam No. 152	2,731.0	314	9	..	2,825	335	9	..	..	2,674	349	8	..	..	2,249	243	..	..	..
Sire No. 503—																			
Daughter No. 758	2,933.0	271	..	181	4,183	300	..	170	195	3,511	277	..	249	257	4,014	267	19	98	116
Dam No. 539	726.0	113	5	..	1,155	240	5	..	..	2,561	272	9	..	..	1,468	208	..	..	..
Sire No. 516—																			
Daughter No. 865	1,589.0	274	..	153	1,499	207	11	234	313	1,747	220	10	..	..	..	..	..	..	..
Dam No. 657	3,701.0	373	11	102	3,399	227	22	134	177	4,248	285	..	131	162	..	..	..	..	..
Sire No. 431—																			
Daughter No. 828	3,048.0	308	..	97	3,070	297	17	68	56	3,842	266	25	186	205	..	..	..	..	..
Dam No. 309	5,813.0	339	17	..	681	59	12	..	..	8,652	352	27	..	..	..	..	..	..	..
Daughter No. 12	2,470.0	250	13	..	2,470	250	13	..	..	..	..	..	..	..	..	..	..	..	..
Dam No. 726	3,907.0	300	15	165	3,384	302	15	87	..	..	..	..	..	..	..	..	..	..	..
Daughter 0.4	3,719.0	311	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dam No. 546	1,432.0	325	..	259	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Daughter No. 0.5	2,936.0	275	13	56	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dam No. 599	2,288.0	326	..	62	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sire No. 485—																			
Daughter No. 847	4,486.0	389	..	663	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dam No. 524	2,925.0	317	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sire No. 545—																			
Daughter No. 0.7	3,389.0	306	15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dam No. 837	5,129.0	235	17	157	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Performance of cows at the District Livestock Farm, Orathanad,

A.Y.M. = Average yield of milk. A.D.M. = Average days in milk.
A.D.D.P.L. = Average days dry preceding to lactation.

at the end of 1959-60—Classified according to sires.

A.P.Y. = Average peak yield

TABLE No. XIII (a).—Statement showing the receipts and disposal of birds in Poultry Development units for the period from 1st April 1959 to 31 March 1960.

Serial number and location of the unit.	Breed.	Stock on 1st April 1959.	Received by hatch.	Received from outside.	Sold for breeding.	Sold for table.	Transfers.	Loss due to death, destruction, etc.	ADMINISTRATION REPORT OF THE		
									RS. NP.	RS. NP.	RS. NP.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1 Kancheepuram	.. R.I.R.	42	37	3	26	1	..	5	50	301 89	376 51
2 Kaliyampoondi	.. R.I.R.	9	5	10	4	2	5	3	10	23 59	208 20
3 Tirukalkundram	.. R.I.R. and W.L.H.	17	12	11	11	2	..	8	19	67 53	244 97
4 Cuddalore	.. W.L.H.	36	54	7	4	3	9	52	29	89 17	381 22
5 Kallakurichi	.. W.L.H.	50	125	..	18	21	25	75	36	142 47	645 73
6 Thiruvannamalai	.. W.L.H.	42	18	..	..	22	..	16	22	71 17	295 14
7 Pallapatty	.. R.I.R. and W.L.H.	29	26	1	..	..	..	23	33	172 33	425 00
8 Kodaikanal	.. R.I.R.	19	8	..	6	..	..	12	9	33 96	234 10
9 Athur	.. W.L.H.	42	..	4	15	..	3	3	25	106 81	406 48
10 Tirumalnayapuram	.. B.M.	59	53	..	12	..	4	51	45	243 41	796 46
11 Alangudi	.. W.L.H.	31	22	..	16	..	..	..	37	172 33	425 00
12 Tallakulam	.. W.L.H.	37	160	10	19	1	..	98	89	381 84	465 72
13 Periakulam	.. B.M.	45	88	2	39	..	..	17	79	308 17	659 98
14 Melur	.. W.L.H.	28	25	8	4	18	..	12	27	227 14	347 70
15 Chatrapatti	.. W.L.H.	19	77	..	35	..	..	4	57	40 75	364 50
16 Vellalur	.. W.L.H.	6	..	13	..	..	..	8	11	41 96	114 29
17 Varichur	.. W.L.H.	10	18	8	..	3	..	10	23	59 19	146 81
18 Erode	.. W.L.H.	71	157	20	89	..	25	59	75	305 40	1,282 43
19 Dharapuram	.. W.L.H.	60	161	37	63	..	34	53	108	515 04	1,392 68
20 Thiruppur	.. R.I.R.	49	50	7	18	..	22	32	34	335 83	1,121 62
21 Malayampalayam	.. R.I.R.	95	397	..	103	12	94	119	164	592 58	2,564 84

Serial number and location of the unit.	Breed.	Stock on 1st April 1959.	Received by hatch.	Received from outside.	Sold for breeding.	Sold for table.	Transfers.	Loss due to death, destruction, etc.	ADMINISTRATION REPORT OF THE		
									RS. NP.	RS. NP.	RS. NP.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
22 Kavandapadi	.. R.I.R.	22	..	..	3	2	..	4	13	215 79	652 56
23 Pollachi	.. R.I.R.	30	78	12	21	20	5	..	94	291 99	355 66
24 Ootacamund	.. W.L.H.	18	25	..	3	..	..	5	35	138 85	324 12
25 Pudukkottai	.. W.L.H.	..	33	20	..	2	..	9	42	..	..
26 Nagapattinam	.. R.I.R. and W.L.H.	16	7	..	4	..	..	8	11	70 57	241 15
27 Thanjavur	.. B.M.	49	105	..	82	..	42	20	70	773 66	755 13
28 Tirunelveli	.. R.I.R.	25	39	5	2	3	..	21	43	15 00	401 26
29 Cheranmahadevi	.. R.I.R. and W.L.H.	131	158	51	22	4	50	238	26	130 87	1,347 05
30 Devakottai	.. R.I.R.	22	24	..	..	1	2	22	21	73 73	274 84
31 Nagorecoil	.. W.L.H.	31	59	3	6	..	..	36	51	222 74	541 90
32 Dharmathupatti	.. R.I.R. and W.L.H.	34	244	5	17	6	6	120	134	..	..
33 Coonoor	.. R.I.R.	15	40	..	3	..	..	28	24	171 79	351 40
34 Salem	.. W.L.H.	9	136	..	13	7	23	50	52	495 40	476 49
35 Ambathurai	.. R.I.R.	52	53	..	12	15	..	56	22	179 42	922 95
36 Kottaram	.. W.L.H.	50	99	1	4	1	..	113	11	154 31	829 71
37 Sankarankoil	.. W.L.H.	50	173	17	9	4	14	161	52	257 94	542 32
Total	..	1,359	2,826	255	683	150	363	1,551	1,693	7,424 62	20,915 92

R.I.R. = Rhode Island Red. W.L.H. = White Leghorn. B.M. = Black Minorca.

TABLE XIII (b).—Statement showing the receipts and disposal of eggs in Poultry Demonstration units for the period from 1st April 1959 to 31st March 1960.

Serial number and location of unit.	Breed of poultry.	Balance of eggs on 1st April 1959.	Number of eggs.					Set for hatching.	Broken and fed to chicks.	Transferred.	Balance of eggs on 31st March 1960.
			Received from outside.	Collected.	Sold for hatching.	Sold for table.					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
1 Kancheepuram ..	R.I.R.	9	..	1,510	73	328	1,094	24	..	..	..
2 Kaliyampoondi ..	R.I.R.	..	..	311	..	299	..	2	..	..	..
3 Thirukalkundram ..	R.I.R.	19	271	..	10	222	51	7	..	..	10
4 Cuddalore ..	W.L.H.	..	..	..	274	199	159	69	101	..	..
5 Kallakurichi ..	W.L.H.	13	..	1,232	302	302	456	100	69	..	9
6 Tiruvannamalai ..	W.L.H.	..	..	534	152	300	48	34	..	..	16
7 Pallapatty ..	W.L.H.	9	..	877	494	284	33	86	..	..	..
8 Kodalkanal ..	R.I.R.	7	..	301	44	157	64	1	35	..	9
9 Athur ..	W.L.H.	36	..	862	137	415	..	7	..	..	7
10 Thirumalayapuram.	B.M.	50	..	1,233	314	598	144	140	81	..	339
11 Alanganallur ..	W.L.H.	12	..	738	515	177	44	..	..	..	6
12 Tallekulam ..	W.L.H.	4	198	1,590	1,106	459	174	44	..	..	14
13 Periakulam ..	B.M.	7	..	1,418	702	325	226	164	..	..	9
14 Melur ..	W.L.H.	12	35	1,236	671	486	99	19	..	..	8
15 Chatrapatti ..	W.L.H.	22	..	1,450	450	324	109	141	..	..	8
16 Velalur ..	W.L.H.	6	368	..	64	244	10	30	434	..	14
17 Varichur ..	W.L.H.	4	..	417	136	207	32	27	22	..	4
18 Erode ..	W.L.H.	12	..	2,592	1,136	688	323	24	11	..	8
19 Dharapuram ..	W.L.H.	6	..	3,489	645	2,253	470	86	399	..	34
20 Tirupur ..	R.I.R.	29	..	1,895	535	782	197	69	..	..	41
21 Malayampalayam ..	W.L.H.	..	..	3,821	1,032	1,504	936	74	207	..	17
											68

22 Kavandepady ..	R.I.R.	11	..	750	263	239	..	8	252	7
23 Pollachi ..	R.I.R.	..	..	994	500	205	123	166	..	..
24 Ootacamund ..	W.L.H.	..	..	518	430	12	76	..	..	..
25 Pudukottai ..	W.L.H.	12	..	928	63	824	23	30	..	..
26 Nagapattinam ..	W.L.H. and R.I.R.	..	..	585	42	532	..	9	..	2
27 Tanjavur ..	B.M.	..	..	1,518	1,245	1,536	170	322	245	..
28 Tirunelveli ..	W.L.H.	17	..	1,525	766	166	91	196	315	8
29 Cherannabadevi ..	W.L.H.	23	..	3,023	557	1,302	896	25	241	25
30 Dovelkottai ..	R.I.R.	..	..	516	200	249	44	11	..	12
31 Nagercoil ..	W.L.H.	17	..	1,044	386	208	44	145	244	34
32 Dharmathupatti ..	W.L.H.	95	361	1,348	239	116	581	250	574	44
33 Coonoor ..	R.I.R.	1	..	791	560	114	99	..	..	19
34 Salem ..	W.L.H.	10	..	1,456	918	189	173	75	..	41
35 Ambathurai ..	R.I.R.	22	..	1,723	367	630	589	104	..	55
36 Kottaram ..	W.L.H.	22	..	956	388	291	55	228	..	16
37 Sankarankoil ..	W.L.H.	10	..	2,114	770	621	417	243	6	67
Total		495	1,233	48,178	16,556	17,737	8,050	2,960	3,652	951

R.I.R. = Rhode Island Red.

W.L.H. = White Leghorn. B.M. = Black Minorca.

MADRAS,
8th October 1960.

D. PATTABHIRAMAN,
Director of Animal Husbandry.

TABLE X (a).—Working of the Veterinary College in Madras State during the year 1959-60.

Veterinary college or school.	Length of course.	Admitted during the period.		Passed in final examination.	Failed in final examination.	Under instructions at the end of the year.	Educational qualifications of the students admitted.
		Scholarship holders.	Others.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Madras Veterinary College, Vepery, Madras-7.	B.V.Sc. degree course. Four years and one term.	5 (College scholarship, Madras.) 23 (Harijan Welfare, Madras.)	86	77	2	466	Pre-professional course.
Do.	Pre-professional course. One year duration.	35 (Harijan Welfare, Madras.) 1 (Government of India.)	80	76	8	116	Pre-University course.

TABLE X (b).—Training classes for stockmen during the year 1959-60.

Name of the centre.	Stockmen course.	Length of course.	Basic qualification required.	Number of students admitted.	Number of students passed.	Grade of pay.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Hosur Cattle Farm ..	Stockmen Course ..	Eleven months ..	S.S.L.C. declared eligible for University Classes.	100	93	RS.
Pudukkottai ..	Do. ..	Do. ..	Do. ..	52	48	Do.
Orathanad ..	Do. ..	Do. ..	Do. ..	50	47	Do.

ADMINISTRATION REPORT OF THE

(ii) Thus at the end of the period there were 3,751 birds as against 6,146 in the previous year as detailed below :—

Breed.	Cocks.	Hens.	Chicks.	Total.
White Leghorn	38	310	1,815	2,163
Rhode Island Red	59	191	879	1,129
Black Minorca	4	40	101	145
Light Sussex	4	3	10	17
Brown Leghorn	1	6	58	63
Indigenous	2	4	36	42
Australorps	4	14	108	126
Black Leghorn	1	2	29	32
Barred Plymouth Rock	3	9	7	19
Ancona	2	1	12	15
Total	118	580	3,033	3,751

(iii) Details of birds sold for breeding—

(a) Poultry Research Station.—Five hundred and fifty-three birds were sold at scheduled rates for breeding.

(b) Second Five-Year Plan.—Two hundred and eighty-eight birds were sold under the Second Five-Year Plan in the cities and towns at the rate of Rs. 5 per bird.

(c) Birds supplied to Community Development and National Extension Service Blocks.—Two hundred and forty-one birds were sold to the various Community Development and National Extension Service Blocks in the State.

(d) Key Village Scheme.—Seven hundred and twenty-five cockerels were sold to the Key Village Schemes in the State.

(e) Indian Council of Agricultural Research Scheme for Poultry Rations.—Ten birds were supplied to the Indian Council of Agricultural Research Scheme for poultry rations.

(c) Egg production.—(i) During the year 46,204 eggs were collected as against 44,958 in the previous year. Receipts and disposals of eggs during the period are detailed below :—

Receipts.	Disposals.
Opening balance	Set for hatching
Number collected	Sold for hatching
Number purchased	Transferred to other stations for hatching
	Sold for table
	Fed to chicks
	Transferred to other stations for table
Received from other stations	Closing balance
Total	

(ii) Abstract of egg yield for the year 1959-60—

Breed.	Average number of hens maintained.	Number of eggs laid.	Average yield per hen.
White Leghorn	311.7	26,430	84.7
Rhode Island Red	167.7	14,505	87.0
Black Minorca	29.6	2,512	84.9
Light Sussex	3.0	246	82.0
Brown Leghorn	8.6	527	61.2
Indigenous	3.7	319	86.2
Australorp	13.0	964	74.1
Black Leghorn	1.2	70	58.3
Barred Plymouth Rock	16.2	499	80.5
Ancona	0.8	42	52.5
Total	545.5	46,204	84.7

(iii) Percentage of hatchability.—Out of a total of 23,656 eggs set for hatching, 10,325 chicks were hatched out giving a percentage of 43 as against 37.4 in the previous year. There was an increase in the yield among all the breeds during the year.

(d) Incidence of disease.—There had been 7,627 deaths during the year under report as against 9,563 of the previous year. The mortality was mostly among chicks due to various causes as detailed below :—

Cause of death.	Number.
Weakling	1,527
Contagious coryza	1,574
Haemorrhage	463
Debility	193
Enteritis	792
Congestion lungs	30
Crippled	81
Egg peritonitis	52
Nephritis	64
Hatched weak	2,024
Hepatitis	169
Pneumonia	147
Paralysis	172
Catarrh	190
Cannibalism	12
Roup	4
Cropbound	4
Ascites	30
Rupture of liver	2
Unthrifty	47
Avian leucosis complex	2
Heat stroke	13
Other causes	35
Total	7,627

Adequate steps are being taken to control the prevalence of contagious diseases at the farm and to reduce the mortality. The percentage of mortality was 43.9 as against 38.2 in the previous year.

(e) Education and training.—Sixty-six students were trained for a period of 1½ months under the All-India Poultry Development Scheme. The trainees were given stipend at the rate of Rs. 30 per mensem each. The Poultry Research Station serves as an education centre for practical course in Poultry Husbandry apart from Research and production work.

(f) Exhibition.—(i) Good specimens from the Farm were exhibited at the Southern Regional Cattle and Poultry show held at Madras from 27th August 1959 to 29th September 1959. Three first prizes and two second prizes were awarded to the exhibits that participated.

(ii) Stalls were put up exhibiting the modern methods of poultry keeping at the Congress Exhibition which was held at the Congress Grounds, Teynampet from 19th December 1959 to 31st January 1960.

(iii) The following distinguished persons visited the farm during the year under report besides the departmental officials :—

(1) His Excellency the Governor of Madras.

(2) The Animal Husbandry Commissioner, Government of India, New Delhi.

(3) The Director of Animal Husbandry, Kerala.

ADMINISTRATION REPORT OF THE

(ii) Thus at the end of the period there were 3,751 birds as against 6,146 in the previous year as detailed below :—

Breed.	Cocks.	Hens.	Chicks.	Total.
White Leghorn	38	310	1,815	2,163
Rhode Island Red	59	191	879	1,129
Black Minorca	4	40	101	145
Light Sussex	4	3	10	17
Brown Leghorn	1	6	58	63
Indigenous	2	4	36	42
Australorps	4	14	108	126
Black Leghorn	1	2	29	32
Barred Plymouth Rock	3	9	7	19
Ancona	2	1	12	15
Total	118	580	3,033	3,751

(iii) Details of birds sold for breeding—

(a) Poultry Research Station.—Five hundred and fifty-three birds were sold at scheduled rates for breeding.

(b) Second Five-Year Plan.—Two hundred and eighty-eight birds were sold under the Second Five-Year Plan in the cities and towns at the rate of Rs. 5 per bird.

(c) Birds supplied to Community Development and National Extension Service Blocks.—Two hundred and forty-one birds were sold to the various Community Development and National Extension Service Blocks in the State.

(d) Key Village Scheme.—Seven hundred and twenty-five cockerels were sold to the Key Village Schemes in the State.

(e) Indian Council of Agricultural Research Scheme for Poultry Rations.—Ten birds were supplied to the Indian Council of Agricultural Research Scheme for poultry rations.

(c) Egg production.—(i) During the year 46,204 eggs were collected as against 44,958 in the previous year. Receipts and disposals of eggs during the period are detailed below :—

Receipts.	Disposals.
Opening balance	Set for hatching
Number collected	Sold for hatching
Number purchased	Transferred to other stations for hatching
	Sold for table
	Fed to chicks
	Transferred to other stations for table
Received from other stations	Closing balance
Total	

(ii) Abstract of egg yield for the year 1959-60—

Breed.	Average number of hens maintained.	Number of eggs laid.	Average yield per hen.
White Leghorn	311.7	26,430	84.7
Rhode Island Red	167.7	14,505	87.0
Black Minorca	29.6	2,512	84.9
Light Sussex	3.0	246	82.0
Brown Leghorn	8.6	527	61.2
Indigenous	3.7	319	86.2
Australorps	13.0	964	74.1
Black Leghorn	1.2	70	58.3
Barred Plymouth Rock	16.2	499	80.5
Ancona	0.8	42	52.5
Total	545.5	46,204	84.7

(iii) Percentage of hatchability.—Out of a total of 23,656 eggs set for hatching, 10,325 chicks were hatched out giving a percentage of 43 as against 37.4 in the previous year. There was an increase in the yield among all the breeds during the year.

(d) Incidence of disease.—There had been 7,627 deaths during the year under report as against 9,563 of the previous year. The mortality was mostly among chicks due to various causes as detailed below :—

Cause of death.	Number.
Weakling	1,527
Contagious coryza	1,574
Haemorrhage	463
Debility	193
Enteritis	792
Congestion lungs	30
Crippled	81
Egg peritonitis	52
Nephritis	64
Hatched weak	2,024
Hepatitis	169
Pneumonia	147
Paralysis	172
Catarrh	190
Cannibalism	12
Roup	4
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- (1) His Excellency the Governor of Madras.
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- (3) The Director of Animal Husbandry, Kerala.

TABLE X (a).—Working of the Veterinary College in Madras State during the year 1959-60.

Veterinary college or school.	Length of course.	Admitted during the period.		Passed in final examination.	Failed in final examination.	Under instructions at the end of the year.	Educational qualification of the students admitted.
		Scholarship holders.	Others.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Madras Veterinary College, Vepery, Madras-7.	B.V.Sc. degree course. Four years and one term.	5 (College scholarship, Madras.) 28 (Harijan Welfare, Madras.)	86	77	2	466	Pre-professional course.
Do.	Pre-professional course. One year duration.	35 (Harijan Welfare, Madras.) 1 (Government of India.)	80	76	8	116	Pre-University course.

TABLE X (b).—Training classes for stockmen during the year 1959-60.

Name of the centre.	Stockmen course.	Length of course.	Basic qualification required.	Number of students admitted.	Number of students passed.	Grade of pay.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Hosur Cattle Farm ..	Stockmen Course ..	Eleven months	.. S.S.L.C. declared eligible for University Classes.	100	93	RS. 60-3-105
Pudukkottai ..	Do. ..	Do.	Do.	52	48	Do.
Orathanad ..	Do. ..	Do.	Do.	50	47	Do.

(e) *General management.*—All the sheep in the farm are periodically dewormed with phenovis. The sheep are also protected with anaculture of Cl. welchi twice a year just before mating. All lambs are treated for tape worms when they are about three months old. The sheep are also protected against H.S. periodically. On the feeding side the sheep receive a small quantity of concentrates consisting of oil cake and rice bran.

(f) *Incidence of disease and mortality.*—There was no major outbreak of any contagious disease in the farm during the year. There were 27 deaths due to apparent pneumonia with lesions of congestion and consolidation. Materials sent to the Superintendent, Institute of Veterinary Preventive Medicine, Ranipet, are reported to be positive for pasturella organism. All possible preventive measures are being taken for preventing loss due to this disease. Conjunctivitis and foot affections are commonly encountered during the rainy season due to the sheep being confined indoors for long periods. These respond easily to ordinary care and treatment Joane's disease was confirmed in one instance. The experiment to determine the estrus cycle is being continued.

(g) *Shearing of sheep.*—(i) Sheep are as a rule thoroughly washed on sunny days prior to shearing sheep were shorn during the months of April and October.

(ii) One hundred and sixty-seven animals were shorn in April 1959 and a total quantity of 360 lb. 1 oz. of wool were obtained. During the October shearing, 142 animals were shorn and a total quantity of 351 lb. 15 oz. were obtained. The following table gives the average yield for the whole year for each class of sheep:—

	LB.	OZ.
Ramney marsh rams	...	9 14
Nilgiri rams	...	1 14.3
Nilgiri ewe	...	1 9
Cross-bred rams	...	4 0
Cross-bred ewes	...	3 2

It will be observed from the above that the quantity of wool obtained in the cross-breed is nearly 300 per cent more than the parent.

(iii) The whole quantity of the wool produced in the farm was sold to the Industries Department of the Government of Mysore except a small quantity out of the October clipping.

(iv) During the year under report one Nilgiri Ram and 8 cross-bred F1 rams were sold to the Block Development Officer in the Nilgiris district for breeding purposes.

(h) *Agricultural operations.*—The year under report was a heavy rainfall year with 75.21 inches of rain spread over 126 days. Experiences has shown that love grass withstand the climatic conditions of the Nilgiris one of the important not introduced into this farm for the first time is swedes. Its growth is promising and the sheep relish it well. It is proposed to extend the area under this grass next year.

During the year 120,697 lb. of fodder grasses and leaves were cut as against 1,21,849 lb. in the previous year. This farm is not only self sufficient as far as fodder is concerned but has a small surplus.

(i) *Silage.*—The silage pit was opened during the year under report. Mainly love grass was ensilaged and the quality of silage obtained was good.

(j) *Soil conservation.*—Great importance is attached to this problem and in all places where reclamation has been done to establish pasture, necessary trenches and gullies have been provided. No animal is allowed to graze in this area till the grasses completely cover the area. Further in order to avoid very close grazing rotational grazing of sheep is practised, so that each area has a rest period.

(k) *Extension work.*—The flockmen visited the surrounding villages, dewormed and sheared the sheep and did propaganda on how best to maintain sheep. The work turned out by the flockmen are furnished below:—

1 Number of villages visited	...	622
2 Number of rams castrated	...	464
3 Number of sheep dosed with phenovis	...	5,934
4 Number of sheep washed	...	1,786
5 Number of sheep sheared	...	1,786
6 Number of sheep sprayed with Gammaxane	...	6,310
7 Number of sheep hooves pared	...	541
8 Number of rams inspected	...	146
9 Number of lambs born to rams inspected	...	267

(l) The following distinguished gentlemen visited the farm during the year besides the departmental officers:—

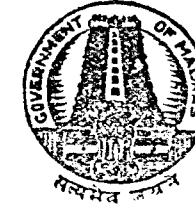
Visitors.

- 1 Sri Sreenivasa Ayyar, B.A.B.L., M.L.A., Member of Livestock Improvement Board.
- 2 Sri S. V. Subbiah Mudaliar, M.L.A., and Member of Livestock Improvement Board.
- 3 Sri Sattanada Karayalar, M.L.A.
- 4 Sri Lazar, M.L.A., and Tourist Officer, Ootacamund, with a party of pressmen including Anandavikatan.
- 5 Sri A. P. Jain, Food and Agriculture, Minister, Government of India.
- 6 Sri L. Sahai, Animal Husbandry Commissioner, Indian Council of Agricultural Research, New Delhi.
- 7 Sri P. G. Pande, Director, Indian Veterinary Research Institute, Izatnagar.
- 8 Sri S. V. Sathe, Director (Wool), Khadi and Village Industries Commission, Bombay and Minister of Indian Council of Agricultural Research, Sheep and Goat Wool Committee.

(ii) *Wool Analysis, Laboratory, Ootacamund.*—(i) During the year under report 703 samples were taken up for analysis for length, thickness, medullation and number of crimps per inch. They were analysed for length by Burn's taut method. Mean thickness and the medullation percentage by using the Rausch and Lomb VH fibre projector; scoured yield by the laboratory method; the number of crimps by using the magnifying glass and the density (i.e., the number of fibres per sq. cm. area) by using the weight and number method; and the results are recorded.

(ii) One hundred samples of wool were taken up for the study of scales, and the average number of scales per 100 microns length of the fibre

MISCELLANEOUS



FOOD AND AGRICULTURE DEPARTMENT.

G.O. No. 501, 21st February 1961

Animal Husbandry Department—Administration Report for 1959-60—
Recorded with remarks.

READ—the following paper :—

Letter from the Director of Animal Husbandry, Roc. No. 70045/AR/60, dated
4th October 1960, D. Dis. No. 91850 B-3/60, dated 19th December 1960
and 1st February 1961.

Order—No. 501, Food and Agriculture, dated 21st February 1961.

The report of the Administration of the Animal Husbandry Department for 1959-60 submitted by the Director of Animal Husbandry has been considered by the Government and it is recorded with the following remarks.

I. General.—In reviewing the objectives of the Department, the Government consider that in the context of the recent developments the emphasis on the objectives of the Department has changed from protection of livestock against diseases to development of livestock. The primary responsibility of the Department should therefore be hereafter defined as the development of livestock in the State. This will in no way reduce the emphasis to be laid on the work of protection of livestock against diseases in view of the fact even this work is an important element in the work of development of livestock.

II. Administration.—Sri D. Pattabhiraman, G.M.V.C., A.I.D.I., continued as Head of the Animal Husbandry Department throughout the period under review. During this period the Animal Husbandry Department expanded still further, the strength of the gazetted staff going up to 100 and the total number of Veterinary Assistant Surgeons being 621 against 601 during the previous year.

The Director of Animal Husbandry should hereafter include in this portion of the Administration Report particulars about the number of inspections programmed in the year, the number of inspections carried out, defects revealed during the course of these inspections and action taken to remedy such defects. The Director of Animal Husbandry should also give particulars about the number of disciplinary cases initiated during the year, the number of cases decided during the year and the number of cases left pending at the end of the year. Particulars may also be given about the major and minor punishments inflicted as a result of these disciplinary proceedings.

III. Policy.—The work of the Department continued to be directed towards development of livestock on scientific lines with special emphasis on improving the quality of cattle, both for milk yields as well as drought capacity. Measures adopted for this purpose included selective breeding, improved feeding and timely preventive measures against diseases. Research and training were continued for supporting the development work.

IV. Special training of officers.—During the period under review six members of the staff of the Madras Veterinary College were sent abroad for various courses of post-graduate studies. Sri R. Vijayarangam, Sheep and Goat Development Officer, Madras, who was deputed to Australia for training in Sheep and Wool Industry, returned after training. Sri E. V. Babu, Superintendent, Poultry Research Station, Madras, was deputed to U.S.A. for undergoing advanced training in Poultry Husbandry.

V. Veterinary Education.—The various courses of study—Professional course in Veterinary Science, B.V.Sc., Degree course, M.V.Sc. Degree course, Flaying course and Stockmen course were available in the Madras Veterinary College. The total seats available for admission to the B.V.Sc. course were 120 as in the previous year, and those for the Stockman course were also the same as in the previous year. A Refresher course for the benefit of Extension Officers in Animal Husbandry employed in Block Development areas was conducted this year also.

VI. Institute of Veterinary Preventive Medicine.—The Institute continued its useful work of preparing vaccines and sera required for the protection of livestock. Large quantities of biological products were supplied to neighbouring States.

VIII. Livestock.—The Livestock Farms located at Hosur, Orthanad, Pudukottai and Chettinad, where pure breeds of Sindhi, Kangayam, Gir, Tharparkar, Hallikar, Alambadi and Umbalacharry cattle and Murrah buffaloes are maintained have been working satisfactorily and adequate stock was supplied from these farms for upgrading work. It is however observed that the increase in expenditure during the year on the maintenance of cattle at the District Livestock Farm, Pudukottai, and the Livestock Farm, Orthanad, is not commensurate with the increase in the number of cattle at these farms during the year. The Director of Animal Husbandry should submit a special report justifying this increase in expenditure.

VIII. Sheep.—The Sheep Farms at Ootacamund, Chinnasalem and Kattupakkam continued to progress during the year. Sheep and Wool Extension Centres started in some districts for the improvement of woolly sheep also functioned well in addition to the Sheep Shearing Demonstration units in various districts. The pilot scheme for improvement of sheep in Key Village areas continued during the year.

IX. Poultry.—The Poultry Development work continued in the Poultry Research Station, Teynampet, in the poultry sections of the Livestock Farms, Hosur and Orthanad, in Poultry Demonstration units in the various Veterinary Institutions, in the Poultry Grading Centres and in Poultry Extension Centres under the All-India Poultry Development Scheme. There is much scope for the development of poultry in this State. The Director of Animal Husbandry is therefore requested to pay special attention in the subject and to ensure better progress in future.

X. Veterinary Institutions.—The various cattle diseases continued to be treated at the Departmental Veterinary Institutions. There were 116 Veterinary Institutions (36 Veterinary Hospitals and 80 Veterinary Dispensaries) at the beginning of the year and two Veterinary dispensaries were opened during the year, one at Nellikuppam in Chingleput district and another at Aruppukottai in Ramanathapuram district. At the end of the year there were 120 institutions (36 Veterinary Hospitals and 84 Veterinary Dispensaries). The Hospital attached to the Madras Veterinary College functioned satisfactorily with an increase in daily attendance. The clinical laboratories in the districts also showed progress. The rate of mortality based on the total livestock population in the State against the corresponding number of total deaths due to contagious diseases works out to '00013. The Government are pleased to note the low rate of mortality of cattle due to diseases.

XI. Key Village Scheme.—The Government are pleased with the continued progress of the Key Village Scheme. At the end of the year under review there were 32 Key Village blocks in 192 Key Villages catering to the needs of about 160,000 cows and buffaloes of breedable age. The number of Key Village Extension Centres intended to utilise the bulls produced in the Key Village Blocks to upgrade non-descript cattle in various districts increased to 29 and catered to the needs of about 145,000 cows and buffaloes of breeding age. The Urban Artificial Insemination Centres started under the Key Village Scheme increased to 13 during this year. Further, the Artificial Insemination Centres functioning under the State Artificial Insemination Scheme and the Cross-Breeding Scheme at Ootacamund progressed during the year. About 1,996 breeding bulls were utilized for breeding under all the above schemes during the year both in urban and rural areas. There were 3,438 calves under the Calf Subsidy Scheme at the end of the year under review in the various Key Village Blocks in the State. The scheme for improvement of feeds and fodder resources in Key Village areas introduced last year functioned satisfactorily. The Government commend the marked improvement in the production of calves, and also the maintenance of breeding bulls in good condition.

XII. Propaganda.—The Propaganda Unit worked satisfactorily during the year. Propaganda was carried on by organizing exhibitions, shows and calf rallies and distribution of leaflets in the regional languages. The Director of Animal Husbandry should however ensure that the Propaganda Unit makes as much use of the press, radio and films as possible for conducting propaganda.

XIII. Revenue and Expenditure.—The receipts and expenditure of the Department for the year as compared to the previous year are as follows :—

	1959-60.		1958-59.	
	RS.	NP.	RS.	
Receipts	23,18,163	37	18,56,799	
Expenditure	97,04,892	06	76,59,793	

It is observed that the receipts during the year have recorded as marked increase over those of the previous year. The Government however desire that the Director should take steps to increase the receipts of the Department still further.

4 No. 501, FOOD AND AGRICULTURE 21ST FEBRUARY 1961.

During the year the Department made satisfactory progress in the Second Five-Year Plan and other development schemes. Effective action taken by the Department prevented spread of any epidemic and the health of the livestock in the State continued to be generally good. Government have pleasure in recording that the work of the Department during the year was satisfactory and trust that the Department will continue to implement the various development schemes effectively and according to approved time schedules.

(By order of the Governor)

A. VENKATESAN;
Secretary to Government.

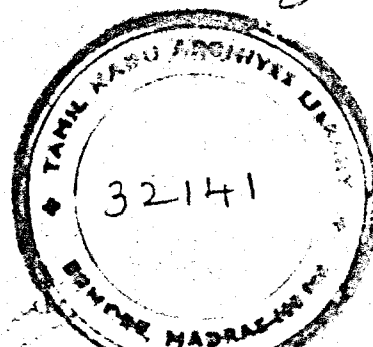
To the Director of Animal Husbandry, Madras-8.

- „ Secretary to Government of India, Ministry of Food and Agriculture (Department of Agriculture), New Delhi.
- „ Secretary, Indian Council of Agricultural Research, New Delhi.
- „ Commissioner of Food Production.
- „ Development Commissioner, Madras.
- „ Board of Revenue, Madras.
- „ Director of Public Instruction, Madras.
- „ Controller of Stationery and Printing, Madras.
- „ Rural Development and Local Administration Department.
- „ Public (Information and Publicity) Department.

Copy to C II Section.

„ C III Section.

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