

21

Red No 2169

Vol. IV-1

Rural India.

JOURNAL OF THE MADRAS
FOREST PANCHAYATS.

212
93

V3

January, 1929

Annual, Rs. 3
Single Copy, As. 6

Editor:
A. Swaminatha Iyer, B.A.

Tel. Address:
'PANDIT'

Post Box 287,
Madras

AYURVEDASRAMAM (REGISTERED)

Established in 1898 by

Vaidyaratna Pandit D. Gopalacharlu

The only House

FOR

Plague and Cholera Remedies
(Curatives & Preventives)

For Plague

Haimadi Panakam
REGISTERED

Satadhowtaghritam
Per Set Rs. 2-2-0.

For Cholera

Karpooradyarishtam
REGISTERED

Vishoochisanjivini Vati
Per set Rs. 1-2-0.

FOR

VIM — VIGOUR — VITALITY
JEEVAMRUTHAM

(REGISTERED).

OR

VITAL DROPS

An Excellent Nervine Tonic. It is a sovereign remedy for nervous debility and exhaustion. It is unequalled in restoring vitality to the muscles and in building up the system.

An admirable specific for removing physical prostration consequent upon overwork worry, excessive mental strain, etc. Improves the powers of memory, sustains continuous study and mental work, keeps the brain cool gives tone and energy to the body and adds beauty to the complexion and personal appearance. Price Rs 3-4-0 per bottle.

Catalogue printed with various unsolicited testimonials sent free on application.

Sole Manufacturers.

Ayurvedasramam

151, Govindappa Naick Street, Madras,
Bhishagraj Pandit D. DESIKACHARLU,

Managing Proprietor and Physician

VRISHYAYGOA:—For Nervous exhaustion &
Loss of Manhood Price per Complete Course Rs. 5

BHRUGUVATI:—Renowned Gonorrhea cure which knows
no failure. Price per Complete Course Rs. 6-12

RURAL INDIA

(Journal of the Madras Forest Panchayats)

A monthly Periodical devoted to the discussion of all
Topics of Rural interest.

EDITED BY

A. SWAMINATHA AIYAR.

Office—No 9, Brodie's Road, Mylapore, Madras S.

Vol. IV.

January, 1929.

No. 1.

CONTENTS.

No	Page
1. Economics of Rural Motor Transport By Prof. N. G. Ranga, B. Litt (Oxon)	1
2. The Road Committee and the Future of Transport By Mr. K. Srinivasan, B.A.	10
3. Mosquitoes and their eradication By Dr. M.S. Krishnamoorthy Aiyar, M.B.C.M., F.R.I.P.H.	12
4. Village Panchayats	15
5. Co-operation and Rural Re-construction	17
6. Notes and Comments	18
The Fourth Forest Panchayats Conference—The Raja of Panagal—Mr. V. Kailasam Aiyar—The Madras Veterinary Department—Medical Relief—Prohibition in Japan—Public Health—A new menace to Indian Agriculture—Rural Education—The Goat—The International Agricultural Assembly—Abolition of Animal sacrifice—Agricultural Demonstration—	
7. Reviews and Notices	23

Annual Subscription (inclusive of Postage)

Inland Rs. 3 : Foreign Rs 4-8-0.

Single copy, Inland As 6 : Foreign As 8.

Rural India reaches the Villages and Towns of India

It is the best medium for advertisement.

Bharata Dharma.
 A Magazine of Liberal Hinduism
 The Official Organ of the Bharata Samaj
 Published Monthly--Every Full-Moon Day
 Editor: M. S. Raja Ram
 Annual Subscription Fe. 1-8; Single copy As. 4;
 Foreign 3Sh. & 4d.
 The best Medium for Advertisement.
 For copies & Advertisement rates apply to:—
 The Managing Editor,
 'Bharata Dharma' Adyar.

Aroodam!!!

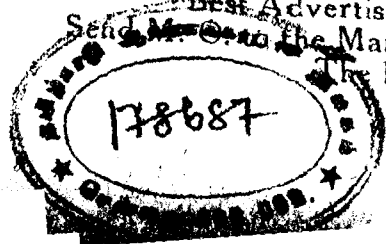
For 5 questions Re. 1
 Each additional question As 4
 V. P. and Postal charges extra
Sri Sakthi Talisman: By wearing this one would
 improve in Trade, Employment, Agriculture etc. All
 troubles peculiar to the fair sex and Children could be
 averted.

Price Rs 2 only
 V P and Postage extra. If you want a reply
 please send postage stamps.

Foreign: Double the above rates to be sent in advance

Apply to:
 Palasoor N. Ramanatha Sastri,
 Pandit Adyar Library,
 Mylapore, Madras.

THE INDIAN EDUCATOR, MADURA.
 An Illustrated High Class Cheap Monthly.
 Editor: V. Aravamuda Iyengar B.A., L.T.
 Annual subscription Rs. 2 only: Sample copies 3 As.
 Controlled by an influential Editorial Board.
 Recommended by District Educational Officers
 For use in Schools, Colleges, Clubs and Libraries
 Best Advertising Medium.
 Send ~~to the Manager~~ to the Manager
 The Indian Educator, Madura.



Wonders of The Ancient Manuscripts

Original, Valuable, Worth Reading, Interesting
 and Very Useful.

Celestial Correspondence Vol 2.

Book of strange secrets, wonders and mysteries in lucid
 English. This book contains many hidden mysteries & re-
 velations yet unpublished & unknown to the world. Besides
 many it contains the mantric cures, how to attain mysterious
 powers, mystery of life-No fear of Death, Experiences of
 Hindu practical Yogis and Rishis. The True Religion Re-
 vealed, Secrets of Hindu Yogic Culture & Occultism, wonders
 of the other worlds a mere reading of which helps us to for-
 get the miseries of the world, first message from the Spirit of
 Swami Vivekananda, miracles of prayer, etc. An Encyclopædia
 of a very useful knowledge first of its kind-published for the
 Benefit of humanity. Believe us & try and you will be mar-
 vellously convinced. Price per copy Rs. 2 Postage extra.

Apply to:—Tata Indian Science Institute,
 Vizianagram City. B. N. Ry. (S. India.)

The Mysore Economic Journal

THE ONLY JOURNAL OF
 ITS KIND IN INDIA.

Has a large number of First-Class
 Contributors on Economic Topics.

Sir Koper Lethbridge Writes:—

“MOST ADMIRABLE JOURNAL”

Sample copy: One Rupee.

Apply to Editor:—

‘Mysore Economic Journal’

Gundopunt Building, Bangalore City P. O.

FEDERATED INDIA.

An All-India Popular Weekly.

Subscription Rs. 5 only, per annum.
 323, Tiruvattur High Road, Madras.

Dr. G. B's. Medicated Snuff.

Registered

A Sovereign remedy for Neuralgia, Scrofula, Nasal Catarrh, Headache, Toothache and such other kindred ailments.



Try a bottle and be now convinced.

Price As. 4 a bottle

Trade Mark
Sole Manufacturers :-

GURU BASAVA & Co., Ltd.,

Snuff Manufacturing Specialists,

Post Box No. 510, Park Town, MADRAS.

Tele: "Medicated"

S. C. Nagichettiar,

Telephone No. 3272.

Managing Director.

The Madras Journal of Co-operation

The Premier Co-operative Monthly in India.
Voices forth the Co-operative Opinion of the Province.

ANNUAL SUBSCRIPTION

Inland :—(Including postage)—Rs. 4

Foreign :— " Rs. 4—12—0.

Please Apply to—

The Madras Provincial Co-operative Union,

Royapetta, Madras, S. India.

THE EASTERN HERALD.

A high class Monthly Journal.

Annual Subscription Rs 2 Foreign 5 Shillings.

Kalinga Buildings, Vizianagram City.

"The Student"

An Illustrated English Monthly Devoted Exclusively to the Interests of High School Students.

Office : **CHINGLEPUT.** S. I. Ry.

Editor :-**T. E. Veeraraghava Sarma**

Annual Subscription :- Rs. 2 0-0.

Single copy : against : 3 As. Stamps.

LET US RAISE YOUR SALARY.

No matter who you are, what you do, what you earn, or where you live, the I. S. A. will go to you and train you in your own home and spare time for a better job and bigger salary. Prospectus Free.

The Indian School of Accountancy.

Post Box 2020, Calcutta.

COMMERCIAL EDUCATION.

India's most popular monthly Magazine of Business Training with specialised sections on Accountancy, Salemanship, Mail-Order Business, Banking and Finance. Advertising. Spare-time Occupation, Formulas and Recipes, etc: etc. Particulars of special terms now offered can be had from :-

The Manager, C. E. Office,

Post Box 2020, Calcutta.

THE CHILDREN'S NEWS

(An illustrated English Monthly for Boys and Girls)

Recommended and approved by Directors General of Public Instructions, Education Ministers, Inspectors of Schools, Headmasters, Principals and such.

THE MANAGER,

The Children's News

(A. P. B.), Egerton Road, DELHI.

JUNGLEWALLAH.

A monthly journal dealing with Forestry, Sylviculture and kindred subjects. Published by Mr. C. P. Garudachala Mudaliar Retired Forest Range Officer, Wee-Nestle, Mambalam Madras. Annual Subscription :- Rs. 3 only. Sample copies supplied free.

A Golden Wrist Watch Free!

Please secure 5 Subscribers and you will get free the above mentioned watch. THE "ECONOMIST"

A monthly Journal of Economics, Industries and Commerce. 5,000 copies circulated every month throughout India, Burma, Ceylon and Straits. ADVERTISEMENT RATES.

One page contg. 3 columns Rs. 10 per month.

One column (8" X 2") Rs. 4 „ „

Half column (4" X 2") Rs. 2-8 „ „

Quarter column (2 X 2) Rs. 1-8 „ „

One inch Re 1 no voucher given

All Payable strictly in advance.

Subscription Rates Annual Re. 1 Foreign Re. 1-8 post free

N. B. For full particulars regarding free watch, please apply for free sample, copy

to the Manager, THE "ECONOMIST"

Office: 4, Shama Charan Dey St., Calcutta.

It will 'pay' you!

To Advertise your Goods

The Premier Telugu Monthly

SUBHASHI

Rajas, Maharajas, Zaminders, Businessmen, Taluqdars and Educationists read it.

For Particulars please write to:—

Manager, "Subhashi" Rajahmundry

UPANISHADS

By Swami Sharvananda.

Isha and Kena	...	...	each	As 6
Katha and Prasna	...	...	each	„ 12
Mundaka Mandukya (combined)	...	...	each	„ 12
Taittiriya	...	...	each	„ 14
Aitareya upanishad	...	...	each	„ 6

(To the Subscribers of "Vedanta Kesari" each As 2 less.)

The Vedanta Kesari

(Started May 1914.)

Editor: Swami Yatiswarananda.

A high-class religious and philosophical monthly in English devoted to practical and popular exposition of the Vedanta—interprets religion in the light of the universal teaching of Sri Ramakrishna and Swami Vivekananda. Deals with the most momentous questions of the day, social, educational, economic etc.,—on non-sectarian lines. Having a wide circulation all over India, Burma, Ceylon, F. M. S. United States of America and other foreign countries, it is an excellent medium of Advertisement.

Volume XV began from May 1928. Annual Subscription Inland Rs. 3, Foreign Rs. 4-8.

(Many books at concession rates to the Subscribers)

Apply to:

The Manager, Vedanta Kesari,
Sri Ramakrishna Math, Mylapore, Madras.

PEACE.

A high class Monthly of Life, Light & Love, in English

Annual Subscription Rs. 3

SANTI.

A high class Telugu monthly run on the same lines as that of the English journal. Annual Subscription Rs 2 only.

For both the journal Annual Subscription Rs. 4-8 only

Swami Omkar

President

Swami Rajeswarananda

Editor

SRI SANTI ASRAM,

Totapalli Hills, Santi Asram Post,

Peddapuram Taluk, Godavary Dt. India

THE NATURE HEALER

The only Indian Monthly Journal in English on NATURE CURE.

Edited by Mr. N. C. Chatterje, B. L.

Apply to:—

The Manager:—THE NATURE HEALER,

20-a Kaliprasad Chakrabarty Street,

Baghbazar, Calcutta.

The Health.

The Premier Monthly of its kind in India can be had in ENGLISH, TAMIL, TELUGU or CANARESE

at Rs. 1-8 a year Post Paid.

Apply to: The Manager, The Health, Box 166, Madras,

Hindi Pracharak.

193 High Road, Triplicane, Madras.

The only organ of the Dakshina Bharat Hindi Prachar Sabha. Consists of two sections:—Hindi & English.

To Subscribe to it is to To Subscribe

To the Hindi Movement.

Annual Subscription Rs 1-8 Students Re. 1

RURAL INDIA

EDITORIAL AND PUBLISHING OFFICE

9, Brodies Road, Mylapore, Madras, India.

An all India Journal, the only one of its kind devoted to the discussion of

Rural Problems and Village Reconstruction.

"Rural India" stands for better farming, better business, and better living and will endeavour to disseminate sound ideas on rural education, rural sanitation, agricultural improvements, co-operation and cottage industries.

Annual subscription (Inland) Rs 3 Foreign Rs. 4-8-0.
Single copy Inland Annas Six: Foreign annas Eight.

As it largely circulates in villages, "Rural India" will be a first class medium of advertisement.

For rates apply to the manager.

The Editor will be glad to consider contributions on all topics of rural welfare. Contributions should be neatly typed on one side of the page. Rejected manuscripts will be returned on receipt of stamps to cover postage.

The Young East

A monthly review in English life and thought in the Far East. Indispensable to all those who desire correct information and right understanding of the Asiatic peoples.

Contributors to "The Young East" include some of the best-known Japanese, Chinese and Indian writers, thinkers and philosophers.

Subscription:—4 yen per year (approximately Rs. 6)

The Young East Publishing Office,

Hongo, Tokyo, Japan

'Cross-Words Magazine'

(A Fortnightly Journal Devoted to Crosswords
Sport, Art, Literature, Commerce and Industry)

For particulars, apply to

The Manager,

Cross-words Syndicate.

Chingleput, S. India.

RURAL INDIA

Managing Editor : A. Swaminatha Iyer, B.A.

Vol. IV.

JANUARY, 1929.

No. I.

Economics of Rural Motor Transport

By Prof. N. G. Ranga, B. Litt. (Oxon)

Sometime Special Officer for Economic Survey, Madras Govt.

The last decade has seen an enormous import of motor cars and buses into the Madras Presidency. Almost every important trunk road in this Presidency has been supplied at present with one or two buses running from two or more important towns. The number of buses plying in every district and the demand for these buses are ever on the increase. The supply of mechanics, drivers, cleaners, conductors, petrol agents has reached to demand very quickly. Capital seems to be flowing into this industry much more quickly, and with less restraint than into any other industry. This industry seems to have caught the imagination of the people in a much more rapid and effective manner than any other modern industry; even rice hulling and groundnut shelling enterprises, have not been half as fortunate as this motor bus transport. Everywhere one sees activity and hope among the numerous people of every town or city who are engaged in this industry. To add to the romance of the growth of this enterprise, only men of 30 years of age and less have come to interest themselves in the various activities and bi-employments created by the existence of this enterprise and these people seem to be running a furious race with the busy Americans in making the most of their time.

But if we look into this problem a little more in detail, we shall find that most of the people who avail themselves of the services of this enterprise are not in any way assisted or induced to take up any new employment or to pursue the old employments more skilfully, ably or profitably. Many of them travel to and from some nearby city or town in order to satisfy their thirst for the latest news, for the buzz of the city life and for a change in their environment. A great majority of the bus travellers used to walk fairly long distances without feeling any

great amount of dissatisfaction or disutility. Even the mobility of labour has not been increased to any noticeable extent nor have the ordinary labouring classes been in any way assisted by this industry. This bus transport has certainly facilitated and cheapened the methods of electioneering for the local Boards and Legislative Councils and it has helped litigants to go to courts more easily. Moreover the ryots and others are induced to visit the places of their relatives more often than before. Only a few have been enabled by this new mode of transport to take to new employments and to earn more than formerly. Therefore we are obliged to come to the conclusion that at least 75 per cent of the services rendered by this new industry go to satisfy the consumers' wants by stimulating expenditure upon travelling more from the consumers' point of view than from producers' point of view. So this is a luxury trade.

My studies of the economic conditions of our villages have brought out clearly the fact that the possibilities open for the ryots and others to increase their earnings either by producing more through the existing occupations or by introducing new employments, is strictly limited and that the total annual production of any village is not increasing in direct sympathy with the rise in the population. Under these circumstances any new item of expenditure which does not directly or indirectly conduce to the growth of the efficiency of rural masses is sure to be an additional drain upon the economic resources of the people. The only way in which a new direction can be given to the consumption of the people of our village is by substituting more nutritive, tasty and substantial items of food for the wasteful, useless and intoxicating materials of consumption such as tobacco, betel leaf, chunam, drink. But to enable and to induce these ryots to travel more and more miles per annum without any purpose as it were, is to impoverish them in a very effective manner.

The phenomenal growth of this industry is indicated by the following two tables: Statistics for Coimbatore district and all India.

Imports into India %		Coimbatore District.	
Motor-cars including Taxis	Motor (omni-)buses.	First half Year.	Second half Year.
1923-24	7,984	1,044	58
1924-25	9,380	2,162	85
1925-26	12,757	4,840	106
1926-27	13,197	6,343	253
1927-28	15,122	8,682	195
		216	276

The following table gives us an idea of the increasing amount of drain of India's economic resources to other countries owing to the development of this luxury industry. Indians spend 1½ annas per head per annum upon motor transport alone.

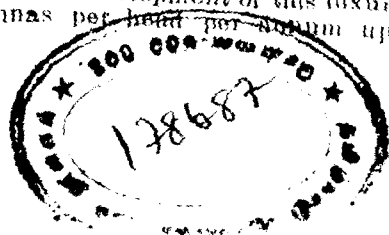


Table showing the increase in value of the imports of motor vehicles (including taxis) and all kinds of cars, buses, motor by-cycles and tyres and tubes.

Imports of Motor vehicles				All kinds of cars, tyres etc.					
INDIA				MADRAS		INDIA		MADRAS	
Year	No. of cars.	Value in lakhs of Rs. ex-duty.	No. of cars.	Value Rs.	Value in lakhs of Rupee ex-duty.				
1922--23	2880	1.38	778	19	339				48
1926--27	13,197	2.94	1,678	34	665				70

The Organisation of this industry in the mofussil.

Although very many people had to learn in the beginning, motor driving in one of the Motor Schools of Madras, it has become very easy for anyone in the villages to learn the art from any of the numerous drivers of the buses in the mofussil. The following figures for Guntur and Coimbatore Districts indicate how popular this motor driving has become among the people. First, people have taken to it a bit hesitatingly and later on, they flocked to it with bravado.

Year.	No. of licenses granted by the Police	
	Guntur Dt.	Coimbatore Dt.
1921	97	
1922	108	
1923	110	122
1924	143	142
1925	253	149
1926	318	217
1927	215	380
From Jan 1 1928 to May		272

That the income derived by the District Boards by granting licenses to the buses and pleasure cars is not inconsiderable is indicated by the following statistics.

Area	The annual income from licenses.
Madras Presidency.	Rs. 7,00,000
Bellary ...	.. 10,000
Vizagapatam ...	.. 4,495
Guntur ...	.. 27,098
Ganjam ...	.. 19,564

A great portion of the income derived from the toll gates (often exceeding 33 1/3%) by the District Boards, is due directly to the growth of this new industry of motor transport.

Local Area	The annual income from Toll Gates.
Madras Presidency & Ganjam	11,000.00
	87,215

§ Report of the Indian Road Development Committee P. 104

§ Ibid P. 35.

§ Ibid page 35

Vizagapatam	167,095
Guntur	51,500
Bellary	35,000

Entrepreneurs. The people who have so far entered this industry with their capital and enterprise mostly belong to the middle-classes and are able to invest only Rs. 5,000 each. In fact the American system of purchasing cars on credit by paying instalments has induced or enabled many ordinary people with a few hundreds of rupees each, to enter into this industry and to try their luck. It is quite a common thing for one to own a bus and to drive it himself. Very often a driver or a conductor is engaged while the owner himself works on the car in the capacity of a driver or a conductor. Here and there one finds one or two big capitalists also entering this business and plying a number of pleasure cars and buses for hire, manned completely by salaried staff. But neither their number nor the place they occupy in this business is very important and it is largely true to say that it is still an industry of ordinary middle class entrepreneurs who have not given up their associations with manual work. It is also interesting to notice that Non-Brahmins many of whom are fairly rich have contributed to the development of this industry their due share as is justified by their economic prosperity. The following figures for Coimbatore Dt. give us a fair indication of the caste-wise exploitation of this industry in this Presidency:—

No. of Buses owned	the caste of the people owning the buses
165	Non-Brahmins
42	Brahmins
18	Mahamedans
5	Christians
230	

The Drivers and Conductors: It is quite a common thing for many people to start life as drivers or conductors and to purchase pleasure cars or buses to be plied for hire, after earning six to ten hundreds of rupees. Indeed many of the present day entrepreneurs of this industry were not long ago only employees of similar employers. Thus the American system of sales on credit has facilitated the rapidity with which workers in this industry can grow into entrepreneurs.

Wages: In the beginning, about the year of 1920, a driver was paid as much as Rs 50 plus food per month in any of the Districts and a conductor used to get a salary of Rs 30 plus food. But the supply of labour of this kind has quickly reacted itself to this growing demand to a more than corresponding extent and the wages paid to have come down to Rs. 30 in the case of drivers and Rs. 20 for conductors. Even then this kind of employment seems to be much better paying than any other employment and hence its popularity,

Nature of Labour Supply.—Both economists and politicians are still fond of harping upon the traditional complaint that Indian educated youth is averse to accepting manual labour and is unwilling to interest itself in mechanical pursuits. But the extraordinary manner in which this industry has been manned from the beginning mostly by educated young men belies this popular saying. Most of the entrepreneurs belong to high caste Hindus and many of them have had some sort of English education or other. Almost all the drivers and conductors are also drawn from the caste Hindus and many of them have had an inkling of English education and most of them are literates. Brahmins, I am glad to say, have been some of the first few enthusiasts who rushed into this industry and who have helped to make it popular among the educated middle classes.

Petrol Agencies.—Before and during the Great War, there was a great rush for kerosine oil Agencies and even now, a B. O. C. or Shell Kerosine Agent can secure a few thousands of rupees for his good will. But in the last ten years, the clamour for the agency for petrol has rather outstripped that for kerosine oil and one finds scores of young men in every town or city who are seeking to make a living by pushing on the sales of this new oil.

Motor Agencies.—Every District boasts of at least one Agent for each Motor Car Manufacturing Company and many Districts have in addition several sub-agents, working in co-operation and in conjunction with the District Agents. It so happens sometimes that the same Agent has the agencies for three or four Motor manufacturing companies. It is also not uncommon to find some agents who also possess buses and pleasure cars and ply them for hire in a regular businesslike manner and thus keep their mechanics, garages and employees fully employed and lower burden of overhead charges for every Rs. 100 worth of business done. Moreover, many of these Motor Agents manage to hold Agencies for Petrol and thus lower the cost of production of their bus services. It is these people who have invested about Rs. 25,000 each and who run their business on quite a capitalistic basis.

Repair Shops: It is often those who hold Agencies for motor companies who also maintain repair shops and who undertake to carry out repairs on a large scale and promptly. But one finds a few mechanic here and there in every District, who carry out repairs on a small scale and thus seek to make a decent living.

The reaction of Indians to changed economic circumstances seems to be really extraordinary in certain spheres of economic life. On one hand we find large numbers of rural masses and handloom weavers who are unable to adjust themselves to the altered economic conditions of their employment, and on the

other we see these numerous people recruited from every place in the Presidency ready to learn hawking petrol, exhibiting cars running buses and repairing cars under the most adverse social and economic circumstances. There have sprung as, if from nowhere, many carpenters who can build the bus bodies, mechanics who can carry out the most intricate mechanical repairs and dare-devils who can run a car, pleasure-car or bus along the most slippery, the least comfortable and the most dangerous routes. To see old women, who cannot read and write, selling petrol, to find young boys carrying out repairs, and to meet ordinary village-smiths adjusting the machinery of a car is indeed a pleasure to a student of economics.

Profits : In the early stages of the development of this industry, many middle-class entrepreneurs had to undergo many difficulties, face untold risks and overcome many unforeseen calamities. But those of them who were fortunate enough to get over these initial difficulties made large profits, almost commensurate to the risks undertaken. But on the heels of these people many more less enterprising but more rich persons entered this business and keen competition ensued. It looks as if the spirit of competition is imbedded to a greater extent in our blood than in that of Englishmen and this spirit has a tendency to run riot. To make matters worse, there was no tradition of industrial organisation or cooperation in our country in the last two centuries. Therefore the number of pleasure cars and buses plying on the same routes has increased indefinitely without any relation even to the potential demand for means of travelling and the consequence was a cut throat competition in reducing the fares charged. This necessarily resulted in the routing of many small entrepreneurs and that is why one usually finds many people in each District who were for some time drivers, then entrepreneurs and again drivers.

It is very difficult to say how many of the numerous entrepreneurs in this business are able to make a decent profit, in addition to making a reasonable living for themselves. This is due to the fact that many of them seek only to recover the cost of the car in the first few months and to get afterwards as high a monthly income as possible for as many months as they can. They never seek to be able to save enough to buy a car or bus of their own and set themselves up as independent capitalists. Moreover, this instalment system of purchasing cars stimulates an unwholesome habit of thriftlessness which is dormant in these pleasure loving young men and thus tends to waste the human energy without making provision for the wear and tear of the human body of the workers. Therefore it is not incorrect to say that on the whole, most of the entrepreneurs are only able to make a decent living for themselves but are unable to save anything.

Buses and Roads.—It is a great pity that this industry is not at all organised and has not developed the capacity to voice its grievances. Hence it has become very easy for every

District Board to neglect the development of an energetic policy of road repairs and road construction and enlargement, so as to cope with the ever growing wear and tear, due to the plying of numerous cars and buses. Instead of spending the funds derived through granting motor licenses and maintaining Toll-gates upon the roads, many District Boards divert a position of those funds in other directions. This has caused a noticeable deterioration in the roads and consequent heavy expenses of working and losses to the motor-bus owners. Incidentally we must note that the recommendation of the committee that Toll-gates must be abolished is a timely one. (Vide p. 37)

Moreover, the District Boards grant licenses to bus-owners to ply their services even upon those roads, which are neither wide nor strong enough to stand this speedy mode of transport in addition to the slow but heavy bullock carts. This causes irritation both to the motor-owners and bullock cart drivers and very often the former get into an unreasonable fury and drive their cars in such a manner as to help to capsize the bullock-carts. The amount of inconvenience, loss and injury caused by the motor-drivers to the poor and numerous ryots can only be imagined. I think, it is a ruinous and suicidal policy to neglect the greater interests of the more numerous ryots as systematically as is done at present both by the District Boards and by the drivers of motor-cars.

Indirect Economic Benefits.—The handloom weavers of different villages and hamlets of any District are at present able to resort to the local markets much more easily than formerly owing to the presence of the motor bus services. Many prosperous and middle-class ryots are able to go to the towns more easily and more often to enquire into the prices of commodities. The merchants who are interested in the marketing of agricultural, semi-manufactured and manufactured commodities are now able to keep themselves in touch with the prices ruling in a greatly extended area of market than formerly. The economic fabric of the country is made more complex and for that reason, more rich by bringing more and more places within easy reach of places of knowledge of markets, schools, courts and amusements. A large number of young men, who would otherwise have been unemployed, have been provided with a rich source of employment, while the latent capacities of our youth for taking risks, developing industrial concerns and running enterprises are stirred to action. The Motor not only fills the engine with energy but also energises our youngmen.

The Indian Road Development Committee has for reasons best known to itself avoided the discussion of the increased cost to the State of policing the high ways, in order to prevent deaths and accidents caused by the motor cars and buses. Even in such a highly organised country like England supplied as it is with very much more efficient police there were in 1927 as

many as 5329 fatal accidents on the roads in 1925 and 4886 or 13 persons per day in 1926. Unfortunately we do not even possess accurate statistics for the fatal and other accidents caused by mechanically propelled cars and buses. If we take into account all the accidents sustained by bullock cart drivers, our list of accidents will certainly be heavy. The Committee has come to the conclusion that the development of motor traffic is not very injurious to the railways. But the last report of the Railway Board makes it quite clear that the problem of competition between motor transport and railways has already assumed much importance. The Committee discusses the question of incidence of a duty upon petrol and motor accessories in a very scientific manner and it suggests fairly light import duty upon petrol, solely for the purpose of raising funds for the development of roads in the country. But it has not entered into the discussion of the economic effects in the near future resulting from popularisation of motor traffic in the country and what is worse it accepted the shallow and superficial view that the marvellous development of this industry is all for the good. But it is high time for us to realise that these import duties must be made even higher not only for the purpose of raising funds for road development but also for checking imports of motors—a policy once followed by the Government of India.

Although the Committee was able to realise that the motor traffic has not been able to render any service by facilitating the movement of perishable and not easily perishable goods to the markets it was not able to discern the fact that except for important exceptions such as the motor passenger traffic in the cities this industry has so far been a drain upon the resources of the Country. The Committee also agrees that the transport of goods by motor traffic must be promoted. Yet it has not taken care to show any preference to motor vans etc. catering for goods traffic by suggesting at least lower duties upon motor vans and their accessories.

It is a pity that the Committee should omit to consider the economic conditions of men and women who carry head-loads of earth, fuel and other commodities in the New Delhi and in Tuticorin and those who pull fully loaded carts in cities like Madras, Madura and the unfortunate rikshaw-wallahs. The amount of inconvenience caused to them by development of motor traffic merits a detailed discussion. Surely the Committee could have recommended at least the abolition of such inhuman institutions as rikshaws and carts pulled by man power alone.

Lastly it is well to remember that so long ago as 1924, Mr. William Ernest Weld has shown in his excellent "India's Demand for Transportation" that the development of canal and road transport must go hand in hand with that of railways and that there are immense possibilities for the progress of motor

transport for marketing perishable commodities to the best advantage. He recommended the establishment of a Department of Transportation for each of the Provinces and an investigation into the potential demand for additional means of transport. (Economic organisation of Indian villages Vol II p. 81 by N.G. Ranga) Yet the Committee has ignored the results of this scientific enquiry and has neglected to comprehend the inter-dependence of different means of transport which are to serve the growing agricultural and industrial needs of the country. Unless we view the recommendations of the Committee with special reference to questions relating to the canals and railways we cannot have a proper perspective.

Conclusion.—But again and again the question recurs to the student of economics as he travels through our Districts whether rural India can afford this expensive and ruinous luxury industry. Our ability to earn and save has not been increased in any appreciable manner by this or any other new industry. Our incentive to save has not been stimulated by this trade. Our capacity to increase our total economic income and to further the industrial progress of the country is strictly limited. Under these circumstances, can we afford this luxury?

If our answer is in the negative as it is bound to be, then several unpleasant issues arise. First of all, the imports of cars, buses, motor accessories and tyres and tubes will have to be taxed not only with a view to derive revenue but also with the object of minimising the imports. Secondly a system of granting licenses to one or two bus-owners alone on every route will have to be developed in order to prevent the cut-throat competition that prevails in the market and to ensure decent profits for the entrepreneurs. But motor-vans, used for transporting commodities, must be exempted from this tax. Thirdly, a definite policy of earmarking all the funds raised through the import duties; punitive taxes, licenses and toll-gates for the development of roads alone must be accepted. If the expenses of transporting agricultural commodities were to be lowered, and if the risks involved in utilising bullock carts and cars on the same roads are to be minimised, proper precautions must be taken not to grant licenses for buses on those roads which are not wide enough for both bullock-carts and cars. Lastly, compulsory provident fund, and reserve fund may have to be organised in the interests of the workers and entrepreneurs respectively so that their future is not jeopardised in a foolish manner as at present by unjustified and unjustifiable excessive expenditure upon the present needs.

§ I learn that the Bombay Government is considering the question of establishing a Department of Transport.

The Road Committee and the Future of Transport.

By K. Srinivasan, B.A.

The roads, the railways and the waterways being the natural arteries of commerce and culture, their efficient and proper development, is of the utmost importance to a country. It is the recognition of this fact that has impelled modern governments to create a separate bureau for transport and to develop it as a first class productive national concern. In modern years, quite a revolution has been brought in the life of many a country by a more considered reorganisation of the means and ways of transport. Such a revolution is taking place even to day on our own frontiers in Afghanistan.

In our own country also there has been considerable development in the ways of transport, since the advent of British rule. Thousands of miles of roads have been built, the intercourse of people of one part with another facilitated, and the volume of trade increased. Nevertheless the economic condition of the people has not apparently improved as expected. Not the least important, among the prime reasons, for this poor achievement of Indian transport is, it has been hitherto unco-ordinated, and worked rarely if at all, with any fore-thought national policy. The early roads and railways built in India by the British, were all strategic, and if they helped the other needs of the country, such as commerce and culture, it was only incidentally.

Only in the closing years of the last century, the building of roads and railways for commercial purposes was taken up. But as then commerce meant mostly that of the foreigner in India, the building of the roads and the railways, followed the lines of foreign trade. Only in recent years government has been forced to recognise and follow a national transport policy. The first great step in the building up of a national policy in transport was made possible, by the constitution of elected local bodies with powers and funds to build roads to suit popular needs. However, their effective usefulness was found to be curtailed in practice, by the financial hardships they were put to, in the post-war reform period. Yet during this dark period, a great forward step was taken in our transport policy, when the government decided to accept the request of the Assembly to separate the Railway Budget from general finance and constitute a separate Railway Board. The correctness and usefulness of such a step can be easily gauged from the progress in the constitution of inland railways, and the setting up of a Railway Rates Committee, to regulate the coaching tariffs to suit the economic and industrial needs of the country.

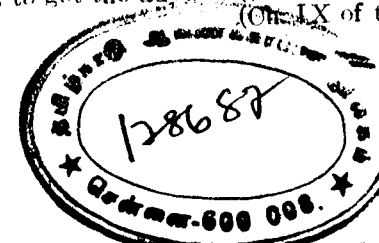
The phenomenal increase in the mileage of inland railways in recent years, at the same time as the motor is building up its own traffic in the roads--oftentimes in competition

with the railway--has raised the question rather acutely, are our roads enough and well kept, and are we to build up more roads or railways or both. The question is by no means easy to decide, even for experts, in these days of revolutions in transport craft. However, in the case of a big agricultural country like India, it can be said with a measure of certainty that the railway as a long distance bulk carrier--can be hardly displaced by the motor in the near future. Nevertheless transference of considerable passenger traffic by the motor along the roads, coupled with the growing cost of maintaining a permanent way, is likely to entail an increase in the cost of railway transport, unless to a corresponding extent an increase in the volume of goods traffic is effected.

Only with a view to achieve this consummation, the government in consultation with the Railway Board have been trying their best to increase the feeder roads. Till now the Local Boards, having funds barely enough to maintain the trunk roads, were seldom able to build roads to rural parts, however much they desired to do so.

The recommendations of the Road Committee, are important as providing a way out of this impasse. The proposal to put a duty on petrol to create an all-India road fund, and utilise it for the maintenance and construction of trunk roads, through the provincial governments, will have the salutary effect of relieving the Local Boards of the present obligation of spending heavily on the trunk roads. At the same time it is hoped the abolition of tolls will make long distance motor transport possible. This in turn, by increasing the revenue from petrol duty will help the motor to build its own roads, as at present the railway is made to find its own funds for building.

The Road Committee by recommending the transfer of trunk roads from the Local Boards to provincial governments, leaves these boards to attend unfettered to the development of village communications and roads so indispensable for the development of rural life. Our thanks are indeed due to the Road Committee that has by its findings, thus made possible the development of rural roads, at the same time as the trunk roads also are to be maintained in fitness and gradually even added to. That indeed nothing less was expected of the committee, will be evident from the following quotation from the report of the Royal Commission on Agriculture: "a road development committee consisting of 14 members of the Central Legislature is investigating the whole question of road development in India. The concern of this committee is primarily with the development of the main roads, but we could emphasise the importance of subsidiary communications, which are of even greater concern to the cultivator. His village must be linked up with the main arterial roads, if the villager is to get the advantage of good communications at all". (Ch. IX of the abridged report).



With the other recommendations of the committee, however important, students of rural transport need have no concern, but for such as directly affect rural-welfare. The suggestion of the Committee, to so amend the Railway Act and devolution rules as to enable the Railway Administration to contribute towards the construction and maintenance of feeder roads, is worth pressing. Even so the suggestion to constitute the railway, the road and the water way into a single department in charge of a separate member (may we say Minister!) is worth the attention of administrators and public men. But before such a change is effected, it is necessary that the entire transport problem—including the road, the railway, the waterway and coastal traffic—be thoroughly investigated not piecemeal, but as a whole, and the outlines of a national policy of transport for the future laid out. Unless such a step is taken early, it is possible, competing interests may develop between the rural modes of transport, as between the railway and the coastal services on the one hand or the motor and the railway on the other. That should not be the case, and unless the outlines of a national transport policy is clearly laid out, development may easily become lopsided, and public funds run the risk of being locked up as dead capital. It is to be hoped that the leaders in the Assembly who have had the statesmanship to lay down their national road policy for the future, will lose no time to press it on the government to appoint a committee with wider terms of reference to investigate and lay down the policy for the future development of our modes of transport and communications.

Mosquitoes and their Eradication

by Dr. M. S. Krishnamurthi Ayyar, M.B.C.M., F.R.I.P.H.,

Retired Sanitary Commissioner, Travancore.

It is the painful experience of the inhabitants of this city (Madras) that the mosquitoes are increasing of late. The capital of the Province has become a nursery of all the diseases prevalent both in and outside the Province. It is not to be inferred from these statements that the civic administration of the city is condemned but certainly it does not deserve any congratulation. It may not be possible to bring up the sanitation of the city to the highest level either an account of want of funds, the habits of the people, configuration of the site etc., but there can be no excuse whatever for the Corporation not to arrange for and collect correct statistics pertaining to the health of the people. In respect of deaths in which the causes are not certified by the medical practitioner attending on the patients during their last illness, the medical officers attached to the several dispensaries in the city should be directed to visit the locality concerned and by enquiries find out the cause of death.

The free treatment given in these institutions is not as important particularly in the city where there are a number of medical practitioners and philanthropic people who have opened free dispensaries for the treatment of the really poor, as finding out the cause of death. Charity comes after duty. The vital statistics registers themselves require modification. In the Birth register, the age of the mother, the order of birth, the date of last birth, may be very properly added. It is on the basis of the correct and accurate statistics, the nature of the action to be taken can be determined and the results gauged. To be told as the committee appointed to report on high mortality prevailing in the city did, that the increase in the number of deaths from child births observed after the introduction of the Child Welfare Scheme indicated improvements in registration is indeed a cold comfort to the tax payer.

As regards mosquitoes apart from the fact that they are the agents for spreading several diseases as malarial fever, elephantiasis, yellow fever, etc. and in course of time by further investigation and research the mosquitoes may be indicated as agents for spreading more diseases. The music and bites of the mosquitoes are horrible and more for the abatement of this nuisance than for anything else their eradication must be undertaken. It may not be known to all that the music produced by the mosquitoes is not sung by them by their vocal chords but is caused by the vibration of their wings. The lady mosquitoes only bite. At present Sir Malcolm Watson is sent from England to study the problem of malaria in India. Antimalarial measures so far undertaken in this country have not been successful. They are found to be of some utility in tea estates, railway premises, in contonments, where the habits of the people and the sanitation of their environment may be brought under control. But in places with civil and free population they have failed. All the Commissions not only in connection with public health but with respect to other matters as well and which have assumed epidemic proportions of late have not justified the money spent on them by the results attained. In the matter of public health, the investigations have been hitherto directed towards the seed and not the soil. If the economic condition of the people and the standard of living are satisfactory they will have sufficient vitality to withstand the invasion of diseases and even if they get them they will very soon get over them. But with poverty staring them in their face, a large majority of the people in India have very little vitality and the slightest change in the weather, leaving aside invasion of disease producing microbes affects them prejudicially and they easily catch all infections. It is not possible to free the universe from micro-organisms but it is possible to improve the economic condition of the people and consequently their vitality. Any expenditure incurred on Commissions and Com-

mittees apart from being unproductive of any good results make the people poorer and thus lower their vitality still further.

In order to eradicate the mosquitoes their breeding places near and within inhabited places should be destroyed. Taking the city of Madras, the mighty Cooum and the stinking Buckingham Canal are the parental sources of breeding and if it is not possible to improve them the question of diverting their courses away from the city limits demands consideration. It will involve a large sum of money. The value of the lives lost and damaged by diseases caused and spread by them during the last several decades, if converted into money, will cover the cost several times. The Panama which was at one time uninhabitable was made a sanatorium by lavish expenditure of money and the people are enjoying the fruits of the expenses now. Besides destroying these main sources of breeding there are several others which could be rendered less dangerous by educating the people and by the exertion of the Municipal Corporation on right lines. Mosquitoes are more in evidence in bungalows with compounds than in streets with rows of small houses. It is the characteristic of the Indians—it is not meant to offend anybody—to invest large sums of money in constructing houses with big compounds and to leave them either unfinished or without proper maintenance. Anybody having the least doubt in this may go round Mylapore, see the Indian bungalows and satisfy himself. The compounds are little better than jungles overgrown with shrubs. The trees are not trimmed, the broken branches hanging down without being properly cut. The sweepings from houses are removed and thrown out but the sweepings of bungalows are thrown pellmell into the compounds which are never swept. The fallen leaves are allowed to rot. The rain water stagnates in the crevices of the broken branches still hanging from trees, in the cocoanut shells and beneath the rotten leaves thrown in the compounds. There is also the imitation of the practice obtaining among Europeans of growing climbing plants over the windows and flowerpots in the verandas. Unless these are properly attended to, a contingency which is very unlikely among us, they will not only serve as breeding places for mosquitoes, but prevent along with the untrimmed trees in the compound, the free circulation of air, and afford facilities to mosquitoes to infest the bungalow and afford a safe asylum. It is within the power of the Corporation to see that the compounds are kept clean and sanitary. But no such power seems to be in operation.

The practice of allowing the cows to be kept in small houses should be prevented. The stalls are not kept clean and are full of ruts and pits affording facilities for stagnation of water used in cleaning them. The best arrangements from the point of view of public health is to prohibit the keeping of cows with-

in city limits. They should be kept outside the city where good pasture is available. The milk from cows fed with straw and other things is not nutritious. Green grass is very essential. The cows kept in the city are very rarely fed with green grass. Outside the city limits, it is possible to get good grazing grounds. The milk for the city may be supplied daily from outside the city limits by motor cars etc. The people must be educated to keep their courtyards clean and not allow the water to stagnate. The stone *elav* which is found in every house, to pound articles of food, is used rarely and is kept in the open courtyards and during rains, the hole in it is filled with water and mosquitoes breed in it. Cocoanut shells are usually thrown away by the people, or taken by crows and put over the roof. Water stagnates in them and mosquitoes breed. The wells which saved the people during the last scarcity of water supply should not be left unused when the supply of water is satisfactory. Unused wells serve as breeding grounds for mosquitoes. But if daily used, the agitation caused in the water by the dipping of pots etc., prevents the mosquitoes from laying their eggs there. It may not be possible to educate the grown up people as they are deeply immersed in old ways. But boys and girls whose minds are plastic and who have not been bound down by habits and customs if properly instructed in matters of public health will turn out to be useful citizens. The education of children should be made free and compulsory and Hygiene should be made a compulsory subject and taught by medical men as they have received special training in the subject. The practice as at present obtains in Madras of requiring men who have had no knowledge or training in Hygiene to teach from books written by persons who are ignorant of Hygiene is absurd and brings to mind the old Tamil saying குருடன் படிக்க, செவ்வன் கேட்க, செம்பாணி செவடிக்கட்ட, ஊமைபன் கணக்கு சொல்ல. Will the civic authorities rise equal to the occasion and tackle the problem earnestly and properly.

Village Panchayats.

We have again the pleasure to record the good work done by the village Panchayats in the Madras Presidency as seen from the Report of the Registrar General of Panchayats for the year 1927—1928. As an aid to the work of rural reconstruction and as an index to the development of Community consciousness in the villages, the administration of the village Panchayats should evoke considerable public interest. The village Panchayat Act enables the villages in which the Panchayats have been constituted to engage in activities for providing themselves with the amenities of village life. It is gratifying to note that several Panchayats have taken advantage of the facilities in the Act for improving the conditions in their villages e.g. the lighting of the village roads and providing for

village conservancy. A number of them engaged themselves in clearing prickly pear and in maintaining the village roads and pathways and managing the customary kudimaramat works and attended to irrigation. Some Panchayats were managing village libraries and schools. Mr. Rutherford bears testimony to the good work done by most of the Panchayats in spite of the limited scope and opportunities afforded to them and to the anxiety of these rural bodies to make the best of the educational grants at their disposal. In a significant passage in the report, Mr. Rutherford says that "Panchayats have materially taken root most easily in districts where there was already in existence an informal system of administering a village common fund for festivals, temple expenditure, channel clearance, watch and ward of crops and other purposes. That is a proof if proof were needed of the existence in the part of autonomous forms of local government, the "Little Republics" as Thomas Munroe happily characterised them, which were a common feature of South Indian village life.

The vestiges of community life still exist and what is now required is to revive it under modern sanctions. Proper guidance, advice and financial help are necessary if these Panchayats should function and the work of rural reconstruction on which such great emphasis has been laid by the Royal Commission on Agriculture is not to be a mere paper recommendation. As in the progressive State of Mysore, funds should be provided in the budget earmarked for grant to Panchayats. And out of the nucleus of the fund thus constituted supplemented by local levies—an uncertain factor—Panchayats should be enabled to carry on the works entrusted to them. There is no limit to the directions in which they could engage themselves. The government is getting land revenue from the rural people for purposes of general administration and it should not be unwilling to part with a small percentage of it for village administration through village Panchayats.

Another desirable and necessary reform is not to multiply the class of Panchayats according as they engage in particular works, but to have statutory village Panchayats, charged with the duty of attending to particular kinds of work according to requirements for management of irrigation or management of village forests. Rivalries are generated by the existence side by side of different classes of Panchayats, which is not conducive to the development of sound village autonomy. Above all, the already overworked officers of the Revenue Department should not be overburdened with the duty of creating or supervising the Panchayats.

Co-operation and Rural Reconstruction.

"Better farming, better business, and better living, sum up the ideals of rural life. It is admitted that farming is ceasing to be a paying proposition and that business has virtually disappeared with the decay of cottage and subsidiary occupations, resulting in the lowering of the standard of living. The new, commercial and economic regime coupled with the new administrative system has completed the destruction of the corporate life of the village and the villages of to-day are mere clusters of houses inhabited by individual residents who are not animated by common economic or civic purpose in life but live in a state of pathetic, placid dependence upon the foreign rulers to look after all their needs." This quotation which we have taken from an informing article by the Hon'ble V. Ramadas Pantulu in the Anniversary number of the "Searchlight" correctly sums up the present condition of the Indian village. He pleads for the application of the co-operative principle for the reconstruction of India's decayed life. The entire fabric of the village community was built upon genuine co-operative principle and the modern conception of co-operation has much in common with the ancient ideal of the communal life of the village. Fortunately co-partnership in rural economy and desire for corporate life are not totally extinct in villages. As well observed by Mr. Ramadas Pantulu, Rural India provides a congenial soil for the application of the co-operative principle to tackle the problems of the villages to prevent the disintegration of rural life and to wean the poor ryot from chronic indebtedness.

What are the practical methods by which the co-operative principle may be applied for the amelioration of the villager's lot? To the solution of this problem Mr. N. K. Ray Dty. Director of Co-operative Societies, Orissa has addressed himself and his comprehensive paper on the subject of Rural Reconstruction also appears in the "Searchlight" Anniversary Number.

While the co-operative movement has assumed large proportions and is growing apace in certain directions, the co-operative principle has not so far proved to be a vital factor in effecting the moral and economic improvement of the people. The possibilities of the movement as a factor in Rural reconstruction have not been fully realised. Mr. Ray gives a realistic picture of the modern Indian Village. "The people are suffering from a great poverty of soul—a great want of character; they are selfish and circumscribed in the extreme, and characterised by an utter lack of co-operation. They are not stirred by any common aim or purpose in life. They fight over small things and go to court on the slightest provocation. They carry on litigation from father to son. The community in the village exists only in name. What we have is a disunited set of individuals. They regard each one for himself and devil take the hindmost as their only motto in life." No reform is

possible without re-creating the rural community and evolving a social organism in the village, and this the co-operative movement should undertake.

The true object of a Co-operative Society is to bring about the moral and economic welfare of the members by endeavouring to effect agricultural improvements, encouraging cottage industries, and providing supplementary employment to the villager, establishing village schools, improving village sanitation and health of the members to provide for the settlement of village disputes by arbitration and organising village amusements and recreations. In order to enable co-operative societies, to fulfil the above objects, the first and foremost requisite Mr. Ray rightly considers is the provision of a permanent institution for giving specialised training to co-operative workers. Each of the Development Departments—Education, Industries, Co-operative, Forest and Public Health should co-operate in making this training institute worthy of its high objective. The institute itself will be placed under the co-operative department as the fundamental basis of training will be how to teach the agriculturists to apply the co-operative method in all matters relating to their own development. The teachers of village schools should be linked up with the co-operative society and the village schools must form an integral part of the organic life of the village and the training of the teacher should be such as will enable him to play this important part in the scheme of village development.

Notes and Comments

The Fourth Forest Panchayat Conference: The Fourth Conference of Forest Panchayats was held at Ongole in Guntur District on the 5th January under the presidency of Rao Bahadur B. Muniswamy Naidu Garu, B.A., B.L., M.L.C., President, District Board, Chittoor. The conference which was attended by delegates from North Arcot, Chittoor, Nellore, Kurinool Bellary Nantapur, Kishna, Chingleput, South Arcot, and Trichinopoly besides Guntur, was a splendid success. A number of important resolutions affecting the future working of the Panchayat Forests were passed at the conference. The detailed proceedings of the Conference including the valuable address of its worthy President we shall publish in our next issue.

To carry on sustained work and to keep watch over the interests of the Panchayats it was resolved at the conference to form a Forest Panchayats Association with a standing working committee which will be in actual touch with the Panchayats and the Government and carry on systematic propaganda work.

Several Panchayatdars presented petitions at the Conference detailing grievances in the working of the forests. The Forest Panchayat Officer, Mr. R. D. Paul, M.A., who was deputed by the Board of Revenue to watch the pro-

ceedings of the Conference, kindly promised to place the petitions before the Board of Revenue for consideration.

The following are the members of the Executive Committee of the Forest Panchayats Association for 1929:—

M.R.Ry. Rao Bahadur B. Muniswami Nayudu Garu B.A., B.L., M.L.C., President.

Vice-Presidents.

1. M.R.Ry. Dewan Bahadur P. Kesava Pillai Avl., C.I.E., M.L.C.
2. " K. Koti Reddi Garu, Bar-at-law, M.L.C., Cuddappah.
3. " A. Ramaswami Mudaliar Avl., B.A., B.L., President, Corporation, Madras.
4. " J. Kuppuswami Chowdri Garu, M.L.C., President, Dt. Board, Guntur.
5. " B. Ramachandra Reddi Garu, B.A., M.L.C., Nellore.
6. " B. Perumal Naidu Garu, B.A., M.L.A., Nellore.
7. " A. Swaminatha Ayyar Avl., B.A., (Retired Deputy, Collector,) Editor, "Rural India" Mylapore, Madras.
8. " Dewan Bahadur Kumaraswami Reddiar Avl., M.L.C. President, Dt. Board Tinnevely.
9. " S. Venkatasubba Reddi Garu, President, Forest Panchayat, Chimakurti, Ongole Taluk, Guntur. Dt.

Joint Secretaries.

1. Prof. N. G. Ranganayakalu B. Litt. (Oxon) Prof. Pachaiappa's College, Madras.
2. M.R.Ry. A. Rajagopala Reddi Garu, President, Forest Panchayatdars' Union, Ltd., Mylapore Madras.

Members of the Committee.

1. M.R.Ry. Santhayya Garu Kondapalli, Guntur Dt. [Trichy Dt.
2. " T. S. Ekambara Padaichi Avl., Ayan Thathanur,
3. M.R.Ry. C. Purnachandra Rao, Chilakallu Kistna Dt
4. " P. Kesava Ayyar Avl., Porasaikurichi, S. Arcot.
5. " N. R. Subbarayalu Reddiar Avl., Manakollai, do.
6. " R. Doraiswami Kavandar, North Arcot Dt.
7. " T. Govindaswami Naidu, North Arcot Dt.
8. " Pedda Siddama Naidu Garu, Bandarlapalli Chittoor.
9. " Venkatasami Reddi Nagireddipalli, Anantapur Dt.
10. " Kesava Reddi Garu, Ramapuram, Anantapur Dt.
11. " Linga Reddi Garu, Theliki, Cuddappah Dt.
12. " Hanumantha Rao Garu, Kurnool Dt.
13. " G. Balakrishna Reddi Garu, Sangam, Nellore Dt.
14. " Krishnamachari Garu, Bellary. [Chingleput Dt.
15. " Paida Balasubramanya Reddi Garu, Santhavelur.
16. " P. Chinnaaswami Reddiar Avl., Pallikuppam, Chingleput Dt.
17. " Venkatappa Reddi Garu, Guntur Dt.

The Rajah of Panagal: We deeply regret to record the death of Sir. P. Ramarayanagar, the Rajah of Panagal. As a member of Government under the Reformed Constitution for a period of six years he was responsible for inaugurating several useful reforms in the administration of the Presidency. The

Act for the better management of Religious Endowments was his hand work and he will be chiefly remembered in connection with it as in the large measure of Indianisation which he brought about in the Departments over which he had control. The support he gave to the Indigenous systems of medicine by the establishment of the Government School of Indian Medicine has rescued the ancient Ayurvedic and other systems from the oblivion with which they were threatened. Among his other achievements may be mentioned the Vizagapatam Medical College. His policy as Minister of Public Health was marked by a spirit of progressiveness and the scheme of Rural Medical relief which he inaugurated is a measure of far reaching effect. As a man he was suave, polished and cultured and had in an eminent degree the qualities which are necessary for leadership and a distinguished leader of a great party he was till his death, even after he relinquished his place as Chief Minister. We offer our sincere condolences to the members of the bereaved family.

Mr. V. Kailasam Ayyar—We understand that Mr. V. Kailasam Ayyar G. B. V. C. Deputy Superintendant C. V. D. Madras has been deputed to England for Post-Graduate studies. As a man of high professional integrity and efficiency in practical work, Mr. Kailasam Ayyar is well known in the Department and we have no doubt that the additional equipment he will derive by his study abroad will be of real usefulness to the Department.

The Madras Veterinary Department.—We trust that the series of Conferences which have been held between the Veterinary Advisor and the Government of Madras will result in a substantial addition to the District Veterinary hospitals and the opening of more Cattle Dispensaries. Cattle die in hundreds and thousands owing to the fewness of dispensaries and the paucity of qualified veterinary men. There is at present a lack of Co-ordination between the Revenue, Agricultural and Veterinary Departments. The first thing to be aimed at is the correct preparation of the Cattle Disease and Mortality registers. Revenue officers and officers of the Agricultural Department should be charged with the duty of seeing that these registers are properly and correctly maintained. We have known of instances in which the village monigars whose duty it is to maintain these registers, woefully neglect it and epidemics go unheeded, unchecked and unremedied.

Medical Relief : A careful compiler of statistics has stated that only five percent of the population in the Madras Presidency go for treatment to allopathic dispensaries. Put in other words, the allopathic dispensaries served only five percent of the population. What becomes of the remaining 95 percent? They have either to go without any medical relief at all or get such relief as they can get from the few ayurvedic practitioners and practitioners of other indigenous systems of medicine. The provision of a sufficient number of allopathic dispensaries and hospitals with their costly equipment would not

be a business proposition. A practical method is to train a large number of Ayurvedic, Siddha and Unani doctors who should be set up in villages for medical relief under State control. Until the output of students trained from the existing schools of indigenous medicine is sufficient to serve the requirements of the rural areas, the Vaidas and Hakims should be encouraged by a system of state subsidies to practice in defined areas and arrangements made at the same time to absorb the trained men as quickly as they become available. People have confidence in the indigenous methods of medical treatment. It is wise to provide facilities for making it available to them. The cost of providing this much needed relief to the villagers will be a trifle.

Prohibition in Japan : On a former occasion we referred to the prohibition movement in Japan which is really making headway and steadily gaining ground. Recently a big parade was staged in Tokyo by the National Prohibition Federation. According to the "Young East", 6000 persons representing 150 social organisations joined in the parade. It is understood that similar demonstrations were held in the principal cities of the Empire and that the movement is promoted by the Buddhists and Christians without discrimination and supported by public bodies.

Public Health : The public health of the Madras Presidency continues to be unsatisfactory. The total number of deaths from all causes is higher than the average for the quinquennium. Nearly every district was infected with malaria, an insidious and debilitating disease which affects the well being and stamina of the agricultural population. Apart from remedial measures, active health propaganda in the villages is necessary in order that the people may be educated as to the value of clean and healthy living. From the report of the Director of Public Health we learn that propaganda work was carried on with the aid of cinema demonstrations, lectures, posters, lantern demonstrations, health dramas and exhibitions. We are gratified to note in this connection the proposal of the National Health Association of Southern India to inaugurate a permanent movement for carrying on health propaganda throughout the Presidency all the year round.

A New menace to Indian Agriculture. The position which India has been having as an important producer of certain tropical and sub-tropical products is being threatened. The following remarks of Sir Atul Chatterjee, High Commissioner for India in presenting to the Government of India the two years' report of the work done by the Trade Commissioner in London should be carefully read and digested by Indian producers.

In the past, the export trade of India prospered because she held a practical monopoly in certain classes of tropical or semi-tropical produce. The conditions are rapidly changing in this respect. Extensive virgin areas are being brought under cultivation in Africa, South America and the Asiatic Archipelago

The principle sea-board countries of Europe are developing their own tropical resources in Africa and Asia. Synthetic substances are replacing natural products of the soil. In these circumstances if India wishes to retain or widen her markets special endeavours are necessary in various directions. The agricultural and marketing processes in India have to be improved and brought up-to-date. Transport facilities should be developed and the costs reduced. The requirements of overseas markets should be carefully and continuously studied for communication to producers in India.

Rural Education : A rural scheme of free and compulsory education was inaugurated the other day at Poonamallee, in the Chingleput District, by the Hon'ble Dr. P. Subbarayan, Minister for Education. The scheme has been introduced as an experimental measure in the Saidapet Taluk which covers an area of about 250 square miles with a population of over 2½ lakhs. Excluding girls there are about 20000 boys of school-going age who will have to be provided for by the scheme, which would necessitate the opening of 44 new schools. Government have deputed six Deputy Inspectors of the Education Department to visit all the villages in the area and to submit proposals for giving effect to the scheme, which will be tried for a period of three years. The extension of the scheme to the other parts of the Presidency will depend upon the success of the experiment. The scheme is estimated to cost Rs. 4,40,000 during the remainder of the present financial year. The major portion of the cost will be met by government. The experiment which is due to the praiseworthy enterprise of Rao Bahadur M. K. Reddi, the energetic President of the Chingleput District Board, will be watched with interest.

The Goat : The Government of His Highness the Maharaja of Mysore have directed that goat browsing in State forests should be entirely prohibited except in annual coupes in special localities. The goat may be the friend of man but it is the enemy of forest growth and no one who has forests to care for could afford to be indifferent to the attentions of the goat which should only be allowed in State and Panchayat forests under sufficient safeguards and in extremely limited areas and differentiation should be made between sheep and goats in the matter of the levy of fees.

The International Agricultural Assembly, Rome: We understand that Mr. Guru Saday Dutt, I.C.S. now on leave in England, has been appointed by the Government of India to lead the Indian Delegation to the 9th general Assembly of the International Institute of Agriculture, Rome. As District Officer and Magistrate in the Districts of Bankura and Birbhum Mr. Dutt has done enough to improve agricultural conditions by providing irrigational facilities and has intimate knowledge of Indian Agricultural problems. The deputation for the first time of an Indian to lead the delegation is a noteworthy

indication of a welcome change of outlook in the Government of India.

Prohibition of Animal Sacrifice.—The Bombay Humanitarian League asks us to announce that His Highness the Maharaja Jam Sahib of Jamnagar has prohibited animal sacrifice on Dasra days in his State. The Bombay League have made a general appeal to the ruling princes to prohibit animal sacrifice in their States which we trust will meet with response, as cattle power is the mainstay of agriculture in this country.

Agricultural Demonstration. We understand that the car and caravan to carry on agricultural demonstration work in rural areas in Coimbatore and the two adjoining districts are doing excellent work with the result that the Government have now decided to extend the benefit of the demonstration to agriculturists in the northern districts in this Presidency. With this object in view a car and a caravan similar to those functioning in Coimbatore and Salem are being fitted up and they will be ready for service in the near future. Through the generosity of a philanthropist, the southern districts, namely Trichinopoly, Madura and Rammad will be enabled to have similar demonstration cars which will be named after His Excellency the Governor.

Reviews and Notices

The Path to Perfection by Swami Ramkrishnananda—Published by the Sri Ramkrishna Mutt, Mylapore, Madras. Man the finite, is distinct from man the infinite. One is subject to want, fear and death and the other is beyond all want, fear and death. Thus while the finite man seems so diametrically opposed to the Infinite man, yet the Finite man by the very constitution of his being, yearns to become one with the Infinite. This in essence is what is known as realisation or attainment of Bliss or God-head. In a well reasoned essay, the late Swami Ramkrishnananda discusses the method of attaining God-head which is the Path to perfection.

Lambs among Wolves.—*Missionaries in India* by Sister Nivedita (Margaret E. Noble) published by the Udbodhan Office, Bagbazaar Calcutta, 1928. This is a reprint of the article originally contributed by Sister Nivedita (Margaret E. Noble) to the Westminster Review. The article was intended to counteract the half-truths and untruths regarding Indian social life and customs spread by a certain class of Christian missionaries in the West for their particular ends. The author who by her intimate acquaintance with Indian life and thought has a unique inside knowledge of real India has no difficulty in exposing the half-truths and untruths, and what she wrote two decades ago applies with equal force and appropriateness today and is calculated to serve as a timely repudiation of some of the falsehoods spread by Miss Mayo in her "Mother India".

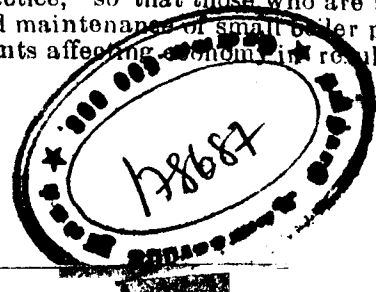
Macmillan's Rural Science Series. We have received from Messrs Macmillan and Company the following publications in their Rural Science Series :—

- (1) *Natural Phenomena* (Telugu) by K. Suryanarayana B.A., L.T.
- (2) *Plant Life* (Telugu) by Dewan Bahadur K. Rangacharlu and K. Suryanarayana.
- (3) *Animal life.* By Prof. R. Gopala Ayyar M.A., L.T. and K. Suryanarayana.

These three books together deal with elementary science in all its aspects and are designed to meet the needs of the Lower Forms of our schools including rural schools and serve the purpose of nature study on the usefulness of which for the pupils of the elementary schools, particularly in the rural areas, the Royal Commission on Agriculture have laid considerable stress. This study conduces to the education of the pupil in its real sense "by developing his power of accurate observation, clear thinking and correct judgment." The books are written in simple language capable of being understood by the young pupils, and the methods adopted by the author who has large and varied experience in teaching science, as pointed out by Mr. K. Janaki Rao, Principal Maharaja's College, Vizayanagaram in his foreward are both instructive and illuminating.

We have received **Bulletins Nos. 36 and 39** FROM the DEPARTMENT OF INDUSTRIES, GOVERNMENT OF BENGAL. Bulletin No 36 by S. C. Mitter, B. Sc., (Lond), Industrial Engineer, deals with ice making. Ice is now a common necessity in this country and its demand is growing and this increasing demand, particularly in areas where it has large commercial use for the preservation of fish etc., during transport has made ice making a sound business proposition. The advantage of large scale production is well known, but it is a feature of this industry that it can be made successful on a small scale also and the Bulletin deals with this aspect of the business. An estimate of the cost of the ice factory of the smallest economic unit is given, from which it appears that it is possible to install a plant and run a factory at an initial cost of less than Rs. 10,000 which can be expected to yield a minimum net return of Rs. 185 per month.

Bulletin 39 by the same author deals with the care and management of small boiler plants. The object of the Bulletin is to express as concisely and as clearly as possible, some of the elementary principles regarding the cost and management of small industrial boiler plants and to draw attention to some of the difficulties that are generally met with in actual daily practice; so that those who are responsible for the supervision and maintenance of small boiler plants will realise some of the points affecting economy in results.



SADHANA

AUSADHALAYA

DACCA (Bengal)

—ADHYAKHA—

Joges Chandra Ghose, M. A. F. C. S. (London)
Formerly Professor of Chemistry, Bhagalpur College.

Guaranteed absolutely Pure & Genuine Medicines prepared strictly according to the Ayurvedic Sastras
Catalogues are sent free on Application.
On describing the nature of diseases prescriptions are given gratis with great care.

Makaradhwaj (Swarna Sindur)
(Pure & with Gold) Rs. 4 per tola

A wonderful, specific for all diseases. It regulates the nerves bile and phlegm, increases vitality, mental and physical vigour and tones up the system.

Saribadi Sarsa.

A wonderful, infallible medicine for Syphilis, Mercurial Poisoning, Gonorrhoea, urinary troubles and all sorts of blood impurities. Rs 3 per seer.

Sukra Sanjiban

It is a very powerful medicine for sexual debility, thinness of semen, impotency, night-pollution, debility in general. Rs 16 per seer.

Abala Bandhab Jog.

A great remedy for all female diseases as leucorrhoea, white, yellow or dark discharges, pain in the waist back or womb, irregular monthly courses, sterility &c.

16 doses 2

50 doses 5.

Imitations merely advertise the original

AMRUTANJAN

The dictionary word for The Pain Balm for 40 years

A MAGIC CURE FOR

RHEUMATISM

LUMBAGO

HEADACHE

STIFF JOINTS



SPRAINS

COUGH, COLD

NEURALGIA

SWELLINGS

and All Aches & Pains

It is easier for a camel to go through the eye of a needle than for aches and pains to enter the kingdom of Amrutanjan!!!

Price 10 As a pot.

Amrutanjan Depot

BOMBAY

&

MADRAS

Published by MR. A. RAJAGOPALA REDDI, President, Forest Panchayatdars' Union Ltd., Madras. Printed by Mr. T. E. V. SARMA AT THE MAGAZINE PRESS CHINGLEPUT

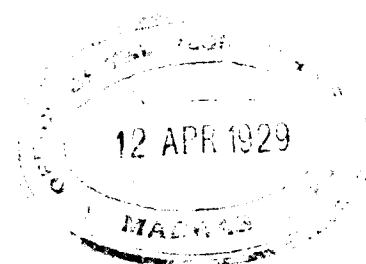
64

No 2169

Vol. IV—2

Rural India.

JOURNAL OF THE MADRAS
FOREST RANCHAYATS.



February, 1929

Annual, Rs. 3
Single Copy, As. 6

Editor:
A. Swaminatha Iyer, B.A.

Shunmugam Snuff.

Reputed for over 80 years for quality

Largest sale in India, Burma & Ceylon.

80 Years ago more or less a new Snuff sprang up on the Madras Market. It was the *Shunmugam Snuff* born of the need for a really high class snuff. In prosperity it grew until it established unquestioned leadership.

Within 80 years no other Snuff has come to displace it. The "SHUNMUGAM SNUFF" still stands supreme for its quality, still stands above all other high class snuffs in sales.

1st Quality.		Postal Parcel Rates.		
Tolas.	Cost.	Postage.	Packing.	Total.
24 Rs.	1 0 0.	0 5 0	0 1 0	1 6 0
30 Rs.	1 4 0.	0 5 0	0 1 0	1 10 0
120 Rs.	3 8 0.	0 14 0	0 3 0	4 9 0
Special Quality.				
120 Rs.	4 0 0.	0 14 0	0 3 0	5 1 0

Dr. R. K. Fr grant or Parimala Snuff.
(THE JOY OF SNUFFERS).

The best & most sweetly Scented Snuff in India, As. 4 a phial.

A Sovereign Cure for and prevention of Headache Neuralgia, Scrofula, Nasal Catarrh, toothache and 96 other diseases. Eminent gentlemen have testified to its marvellous effects. Please enquire your snuff-supplier or write to us.

	Cost.	Postage.	Packing.	Total.
3 Bottles	0 9 0	0 4 0	0 1 0	0 14 0.
6 Bottles	1 2 0	0 5 0	0 1 0	1 8 0.
12 Bottles	2 4 0	0 8 0	0 1 0	2 13 0.
24 Tolas Tin Rs.	1 9 0.		12 Tolas Tin As.	0 14 0.

N.B. A packet of the famous Shunmugam Snuff of 80 years reputation and 1 Bottle of Dr. R. K. Medicated Fragrant Snuff will be forwarded to you by V. P. for Rupee One all charges including.

Shunmugam Snuff Co. Ltd.,
Post Box. 140, Madras.

RURAL INDIA

(Journal of the Madras Forest Panchayats)

A monthly Periodical devoted to the discussion of all Topics of Rural interest.

EDITED BY
A. SWAMINATHA AIYAR.
Office: No 9, Brodie's Road, Mylapore, Madras S.

Vol. IV. February, 1929. No. 2.

CONTENTS.

No	Page
1. Mass Education	25
By S. V. Ramanarathi, M. A. I. C. S.	
2. Wholesome Water	29
By T. N. S. Raghavachari, B.A.	
3. Fourteen Experiments in Rural Education	37
By N. Subrahmanyam, M.A., L.T.	
4. The Fourth Forest Panchayat Conference	40
5. A model Village in Japan	45
6. Notes & Comments	46
Agricultural Commission's Recommendations—The co-operative movement—Seed production and distribution—Agricultural Demonstration—The Madras Forest Panchayats Association—Dewan Bahadur S. Kumarasami Reddiar—A New Agricultural School—An epidemic among fowls—Middle class unemployment—Cattle mortality—The education of the peasant—Training in Cooperation and agriculture—Mr. Frank Noyce I. C. S.—Some telling figures—Village Panchayats and village courts—Instruction in Rural science—Observe the Trees—Village self-government in Bengal.	
7. Reviews & Notices	51

Annual Subscription (inclusive of Postage)

Inland Rs. 3 : Foreign Rs 4—8—0.

Single copy, Inland As 6 : Foreign As 8.

Rural India reaches the Villages and Towns of India
It is the best medium for advertisement.

Dr. G.B's. Medicated Snuff.

Registered

A Sovereign remedy for Neural-



gia, Scrofula, Nasal Catarrh, Head-
ache, Toothache and such other
kindred ailments.

Try a bottle and be now con-
vinced.

Price As. 4 a bottle

Trade Mark

Sole Manufacturers :-

GURU BASAVA & Co., Ltd.,

Snuff Manufacturing Specialists,

Post Box No. 510, Park Town, MADRAS.

Tele: "Medicated"

S. C. Nagichettiar,

Telephone No. 3272.

Managing Director.

The Madras Journal

of Co-operation

The Premier Co-operative Monthly in India.

Voices forth the Co-operative Opinion of the
Province.

ANNUAL SUBSCRIPTION

Inland :—(Including postage)—Rs. 4

Foreign :—Rs. 4—12—0

Please Apply to—

The Madras Provincial Co-operative Union,
Royapetta, Madras, S. India.

THE EASTERN HERALD.

A high class Monthly Journal.

Annual Subscription Rs 2 Foreign 5 Shillings,
Kalinga Buildings, Vizianagram City.

PEACE.

A high class Monthly of Life, Light & Love, in English
Annual Subscription Rs. 3.

SANTI.

A high class Telugu monthly run on the same lines as that
of the English journal. Annual Subscription Rs 2 only.

For both the journal Annual Subscription Rs. 4—8 only

Swami Omkar
President

Swami Rajeswarananda
Editor

SRI SANTI ASRAM,

Totapalli Hills, Santi Asram Post,
Peddapuram Taluk, Godavary Dt. India

THE NATURE HEALER

The only Indian Monthly Journal in English on
NATURE CURE.

Edited by Mr. N. C. Chatterje, B. L.

Apply to:—

The Manager,—THE NATURE HEALER,

20-a Kaliprasad Chakrabarty Street,

Baghbazar, Calcutta.

The Health.

The Premier Monthly of its kind in India
can be had in ENGLISH, TAMIL, TELUGU
or CANARESE

at Rs. 1—8 a year Post Paid.

Apply to : The Manager, The Health. Post Box 166,
Madras,

Hindi Pracharak.

193 High Road, Triplicane, Madras.

The only organ of the Dakshina Bharat Hindi Prachar Sabha.

Consists of two sections :—Hindi & English.

To Subscribe to it is to To Subscribe

To the Hindi Movement.

Annual Subscription Rs 1—8 Students Re. 1

A Golden Wrist Watch Free!

Please secure 5 Subscribers and you will get free the above mentioned watch. THE "ECONOMIST"

A monthly Journal of Economics, Industries and Commerce. 5,000 copies circulated every month throughout India, Burma, Ceylon and Straits. ADVERTISEMENT RATES.

One page contg. 3 columns Rs. 10 per month.

One column (8" X 2") Rs. 4

Half column (4" X 2") Rs. 2-8

Quarter column (2 X 2) Rs. 1-8

One inch Re 1 no voucher given

All Payable strictly in advance.

Subscription Rates: Annual Re. 1 Foreign Re. 1-5 post free

N. B. For full particulars regarding free watch, please apply for free sample copy

to the Manager, THE "ECONOMIST"

Office: -4, Shama Chakra Day St., Calcutta.

It will 'pay' you!

To Advertise your Goods in

The Premier Telugu Monthly

SUBHASHI

Rajas, Maharajas, Zaminders, Businessmen, Taluqdars and Educationists read it.

For Particulars please write to:-

Manager, "Subhashi" Raja's country

UPANISHADS

By Swami Sharvananda.

Isha and Kena each As. 6

Katha and Prasna each .. 12

Mundaka Mandukya (combined) each .. 12

Taittiriya each .. 14

Aitareya upanishad each .. 6

(To the Subscribers of "Vedanta Kesari" each As 2 less.)

The Vedanta Kesari

(Started May 1911)

Editor: Swami Yatiswarananda

A high-class religious and philosophical monthly in English devoted to practical and popular exposition of the Vedanta. interprets religion in the light of the universal teaching of Sri Ramakrishna and Swami Vivekananda. Deals with the most momentous questions of the day, social, educational, economic etc., on non-sectarian lines. Having a wide circulation all over India, Burma, Ceylon, F. M. S. United States of America and other foreign countries, it is an excellent medium of Advertisement.

Volume XV began from May 1928. Annual Subscription Inland Rs. 3, Foreign Rs. 4-8.

(Many books at concession rates to the Subscribers)

Apply to **The Manager, Vedanta Kesari,**
Sri Ramakrishna Math, Mylapore, Madras.

Wonders of The Ancient Manuscripts

Original, Valuable, Worth Reading, Interesting and Very Useful.

Celestial Correpondence Vol 2.

Book of strange secrets, wonders and mysteries in lucid English. This book contains many hidden mysteries & revelations yet unpublished & unknown to the world. Besides many it contains the mantric cures, how to attain mysterious powers, mystery of life-No fear of Death. Experiences of Hindu practical Yogis and Rishis. The True Religion Revealed, Secrets of Hindu Yogic Culture & Occultism, wonders of the other worlds a mere reading of which helps us to forget the miseries of the world, first message from the Spirit of Swami Vivekananda, miracles of prayer, etc. An Encyclopadia of a very useful knowledge first of its kind-published for the benefit of humanity. Believe us & try and you will be marvellously convinced. Price per copy Rs. 2 Postage extra.

Apply to:—Tata Indian Science Institute,
Vizianagram City. B. N. Ry. (S. India.)

The Mysore Economic Journal

THE ONLY JOURNAL OF
ITS KIND IN INDIA.

Has a large number of First-Class

Contributors on Economic Topics.

Sir Eoper Lethbridge Writes:—

"MOST ADMIRABLE JOURNAL"

Sample copy: One Rupee.

Apply to Editor:-

'Mysore Economic Journal'

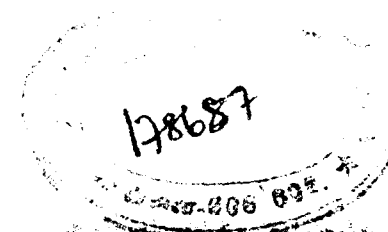
Gundopunt Building, Bangalore City P. O.

FEDERATED INDIA.

An All-India Popular Weekly.

Subscription Rs. 5 only, per annum.

323, Tiruvattiyur High Road, Madras.



RURAL INDIA

EDITORIAL AND PUBLISHING OFFICE

9, Brodies Road, Mylapore, Madras, India.

An all India Journal, the only one of its kind devoted to the discussion of

Rural Problems and Village Reconstruction.

"Rural India" stands for better farming, better business, and better living and will endeavour to disseminate sound ideas on rural education, rural sanitation, agricultural improvements, co-operation and cottage industries.

Annual subscription (Inland) Rs 3 Foreign Rs. 4-8-0. Single copy Inland Annas Six: Foreign annas Eight.

As it largely circulates in villages, "Rural India" will be a first class medium of advertisement. For rates apply to the manager.

The Editor will be glad to consider contributions on all topics of rural welfare. Contributions should be neatly typed on one side of the page. Rejected manuscripts will be returned on receipt of stamps to cover postage.

FREE!

Rubber Stamp.

FREE!

A fountain pen with 14-ct. Rolled Gold Nib which will write on all sorts of paper and is very durable



To purchasers of this pen a

Rubber Stamp with their address supplied free.

1 Pen Costs Rs. 2-10-0 Catalogue Free,

G. S. & Co., 8, Govindappa Naik Street,

MADRAS.

'Cross-Words Magazine'

(A Fortnightly Journal Devoted to Crosswords Sport, Art, Literature, Commerce and Industry)

For particulars, apply to

The Manager,

Cross-words Syndicate.

Chingleput, S. India

RURAL INDIA

Managing Editor :- A. Swaminatha Iyer, B.A.

Vol. IV.

FEBRUARY, 1929.

No. 2

Mass Education.

By S. V. Ramamurti, M.A., I.C.S.

Of all the activities which we are witnessing to-day in India as the beginnings of a new life, there is hardly any which holds the key position as mass education.

A century ago when the flood of European knowledge began to pour into this country, we had become self-sufficient and rigid in our vision and conduct of life. A century of rough contact between Indian and European life has taught us that Europe has learnt much since our great ancients claimed to have reached the summit of knowledge. The two claims need not be and, I believe, are not inconsistent.

The learning of Europe relates partly to substance and partly to method. She has opened fields in Science which we had not more than dreamt of. But she has also developed methods of progress, methods of operating on one's own heritage and making it grow which are of great value to us. We in India have a large capital of intellectual, social and spiritual wealth. But we are like the idle sons of industrial kings who can only spend and not earn. We know now that if we would continue to live in the world, we have to develop our capital in the shape of men as well as natural resources. Education is the method of developing our capital in men. Quantitatively our classes are sufficiently educated. It is our masses that require an extension of education both in quantity and in quality.

First as regards quantity, our mass education has aimed practically entirely at the education of boys and not also of adults. We have a large mass, some 90 per cent of men who are illiterate. Of these our annual attempts are to take out some of the children of 5 to 10 years and put them into elementary schools. The percentage of boys of school-going age who attend schools is 35 per cent; of girls, it is 12 per cent. But these figures are worse than they look. Most of the children are sent to school as to a nursery when they

are too young to do work but not too young to keep out of mischief. The percentage of children in schools who pass through the full five standards of primary education is only 15 per cent. Hence, apart from the quality of our primary education being good or not, such as it is, it is given only to less than 4 per cent of our children of school-going age.

Again, after these children leave the school, they revert to the atmosphere of their illiterate parents. Such influence as the teacher had in 3 or 4 years is easily wiped out by the parents and the home. Unless therefore adult education is attacked at the same time as that of children, the latter tends to be a waste. The agencies, public or private, which try to develop mass education have to attend equally to that of children and adults. It is different in the case of higher education. There the boys or girls who are educated enough to develop their own personality cannot be easily lost in the influence of less educated or illiterate parents.

Apart however from the defects of quantity and area in mass education, there are serious defects in quality. The teaching in primary schools consists mainly of the 3 Rs. The organization of education in this country has started from the centre. The curricula of university education have been derived from English universities. The curricula of secondary schools, middle schools and primary schools have been arrived at by a process of successive truncations. Hence the primary school curriculum is not a whole in itself but a section of university education. A graduate has to start with the learning of the 3 Rs. and such padding as is necessary to pack the Rs. in. This slice of his education is cut out and prescribed for the consumption of primary schools. That is to say, the prescription for 1 per cent of the people is made and the remaining 99 per cent, if needed treating, are given the first part of the prescription of the 1 per cent. It is obvious that the curriculum of 99 per cent of the people has to be made on the basis of their own needs. If there is any body of people who can help in doing this, it is teachers and the trainers of teachers.

There has been a tendency to over-emphasize the importance of the 3 Rs. owing to a superstition that literacy is a necessary and sufficient qualification for democracy. It is enough to state that before 1870, the percentage of literates in England was less than 20 per cent, to expose the fallacy. England was not less great before 1870 than she is now. In a democracy, the candidate for votes in order to instill his ideas into a large mass of voters requires that they should be able to read what he says. The mechanism of the ballot box requires that the voter should be literate. The virtues of literacy are more advertised by the men who seek to be heard and thereby to control than by the men who receive propaganda. Literacy of the masses is enough for the men who control democracy.

It is not enough for the masses themselves. Obviously the education of the masses should be based on their needs and not on the needs of men who seek to use them.

Again, the curriculum for the primary school suffers from the same evil as that of the university, namely, that it has no relation to the life of the child either, now or hereafter. Education implies a three-fold growth—of the mind, the heart and the body. It is the concentration on the growth of the mind alone that has been the bane of higher education. Recently, I had occasion to witness a dramatic performance in a training school. I found that the best actors were ineligible S.S.L.C.'s. It needed the special consideration of a liberal-minded District Educational Officer to allow them to join the school. It seems to me that it is wrong assessment of human values to give no importance to the educational values of artistic capacity and attach value only to mental capacity. In English schools and universities, the one-sided importance of mental equipment has been gradually submerged by the genius of the race. A captain of a football team is at least as much honoured as a First Class First. Not only at school and university but in life, excellence in games which means both bodily and moral excellence has value in England. In India we have no such correctives to wrongly emphasised principle.

Therefore in dealing with the education of the masses, let the one-sidedness which is the bane of higher education not be repeated. The object of Rural education should be to make the villager a better man and better fitted to his environment.

First to make him a better man, you do not make him better by making him dull. The 4 or 5 years of life the child stays in a primary school should be years of joyous activity. It is no good merely arming him with the 3 R's and adding a few cheap packets of knowledge. The Indian villager is not the same, say, as an African villager or an Italian villager. Teach the boy to feel what he is. For this, you have to make him feel what he has been—for ever so many centuries. The most important thing in making the villager a better man is the teaching of Indian History—not the learned, elaborate history which we read in colleges but its essence in as simple a form as mother's milk. Children can see the flow of streams and enjoy their beauty and grandeur. Let the simple minds of villagers be shown the way Indian life has been flowing, its direction, its meaning and purpose and its achievements. Few teachers of primary schools know this. But they have to learn it. They seek to wake the villager from his sleep and make him walk. If they do not know where the waking man may walk, they are not competent for the job. One who does not know Indian History, who does not appreciate the essence of Indian life has no right to be a teacher in India. You cannot teach men ideas unless you love the men and the ideas. Therefore God has

placed children in the first instance in the hands of parents whose nature it is to love them and to teach the things for which they themselves stand.

In addition to history, the villager needs to be taught art. Folk songs, bhajanas and bhagavathams appeal to the villager. They were the traditional way of educating the masses before the introduction of printing. They develop the aesthetic sense of the villager. It is wrong that the present day village school is divorced from these traditional ways to the large extent that it is. Further if adult education is tackled, more effective work can be done in these ways than by books.

Then again, bodily development should be organized in village clubs where the fact of common activity will tend to communal harmony.

Coming next to the fitting of the villager better to his environment, the teacher has to give him the knowledge he needs in the form he appreciates. A simple book can be written giving a little of each science which is useful to the villager in his daily life. Such a book with a simple one on Indian History and culture would form the minimum library of a villager. In regard to the spread of useful knowledge, let me mention a concrete instance. Recently I visited an agricultural demonstration farm at Tanjore. The normal method of transplanting paddy is to plant the seedling in bunches. The Agricultural Department following the method in certain Telugu districts has been advising ryots to plant one or two seedlings at a place. This means that about 14 Madras measures of paddy seed is enough for an acre in place of the usual 36 Madras measures in Tanjore. Further the crop is richer with fewer seedlings. A moderate estimate of the profit due to this one idea is half a crore of rupees in the one district of Tanjore. That is, a single idea if followed increases the capital wealth of Tanjore district by ten crores. This then is an idea which is not less valuable for a teacher to teach a villager than any other fact he teaches now. Let there be a Bhagavatham written about this idea. Let it be played in villages. The idea is worth propagating with religious fervour.

Such activities as these, the teacher should regard as falling within his purview. If mass education holds the key position in Indian progress, the teacher holds the key position in the village. He is not merely a wheel in a big machine, paid his little salary, doing his work for 5 hours a day in a dingy hut with dull boys. He is the man whose wand wakes to life the minds of many—young and old. He has almost the joy of creation. And what a wide field is his! He can pick and choose from all history. He can move men in all parts of their being. He can quicken the nation's growth in all directions. It is for him to take the lead in citizenship, in neighbourliness, in good

example, in achievements. It is not for him to look at life in water-tight compartments and be content to be a compartment himself. It is not for him to let shoddy goods be passed on in education. It is for him to say how his treatment shall be followed and to insist on its being fully followed or not at all. May the Training Colleges make teachers realize that theirs is the power and theirs the responsibility to quicken the life of crores of men and women!

WHOLESOME WATER.

With special reference to Rural Water-supplies.

By T. N. S. Raghavachari, B.A.,

(Senior Bacteriological Assistant, The King Institute, Guindy, and Member of the Government Committee on Water and Sewage Purification.)

The three essentials of life are air, food and water. If we wish to be happy, we must be healthy and if we wish to be healthy we must see that the air we breathe, the food we eat and the water we drink, are pure and wholesome. It is common knowledge that we get sick if we eat food, which is of poor quality or which has gone bad through keeping or being stored in dirty vessels. We know also that the breathing of impure air in crowded places or in filthy surroundings will cause sickness. So also will water taken from impure sources make us ill. It is a common saying that water, particularly running water washes everything. This implies that water itself is always clean and can never be impure. This is *not true* and there are several ways in which water can be made harmful and dangerous, not only to our health but also to our lives, and so it is very necessary to keep our water pure and wholesome.

In order to understand this question properly, however, it is first necessary to know how disease is caused and how it comes. Many of the common diseases such as, cholera, dysentery, fever and consumption are caused by little invisible microbes (*poochies*), which enter our bodies and by living in them, make us sick. The cholera and dysentery *poochies*, once they have reached our bodies, live in our intestines, the fever *poochies*, in our blood, and the *poochies* which cause consumption, in our lungs. You may now ask: 'If these *poochies* enter our bodies, where do they come from, and how do they get inside us?' The answer is simple. The *poochies* come from people who are already sick with these diseases, and they are passed on to us in various ways from the sick people. The *poochies* which cause fever (Malaria) are passed from the sick person to the healthy one, by means of the mosquito which bites first the sick and then the healthy. The consumption *poochie* is carried mainly by means of air. The *poochies* of Cholera, typhoid fever, and dysentery

are present in very large quantities in the discharges of persons sick with these diseases. If these discharges reach our food or water, the *poochies* gain entrance into our bodies when we eat or drink such food and in this way we are infected.

These *poochies* can reach our food either by means of flies which have first fed on these discharges, or else from our hands if we have been attending on a sick person and have got them soiled with his discharges. If the sick person lives near a well it is easy for his discharges to be carried into the well, if the well is not protected. It is our water which is most dangerous when infected in this way, because the disease becomes more widely distributed by means of water than by means of food.

First of all, where does the water come from? From the clouds, by means of rain. When the rain falls on the ground, most of it runs off the surface into streams which in turn, run into rivers, ponds and lakes, or the artificial tanks, which we ourselves make to store water during the dry season. Some of it however sinks into the grounds and goes to join the water which lies under the ground and which becomes evident in spring and in the wells which we dig. Underground water lies at different levels. It is sometimes far down in the ground and can only be reached by deep wells. In the other cases it is close to the surface and requires only a little digging to make it available for use. These are generally shallow wells.

We have thus, streams, rivers, ponds, lakes, tanks, springs, and deep and shallow wells, as the sources of our water in this country. Let us now see what happens to our water as it passes from the rain to any one of these sources of supply. Rain water is absolutely pure and wholesome before it falls on the ground. Once it reaches the ground, it gets mixed with the earth and becomes dirty looking as it flows in the streams and rivers. The earth by itself, however, does not make it very unwholesome for drinking. It is the impurities on the earth, whether derived from men or animals, which make the waters in our rivers unfit to drink, with safety.

Men and animals, in this country defaecate, and urinate broadcast all over the countryside without any restraint. In India, our customs are especially dangerous, so far as water is concerned, for we always answer Nature's Calls, near collections of water, and use the water for washing purposes afterwards. Many of our people are already sick, when they do this and their dejecta and the disease *poochies* which are contained in them, are washed into the streams and rivers and make the water dangerous to drink. But this is not all.

Most of you must be familiar with a river in flood with men and animals standing and washing in it, and the animals defaecating and urinating in it also. Carts are washed and drinking

water then carted from it. All of these things take place within a few yards of each other. Some of the men are probably diseased and fill the water with disease *poochies*, which in its turn, is being placed in the water cart. How can the people who drink the water from this cart escape getting disease, if what has already been told you is true?

Now take the case of a sacred tank. Tirukkulam, Teppakulam, or a pushkarani as we variously call it—attached to a temple. Every man who goes to the God for relief of suffering, first takes a bath in this tank, no matter what filthy disease he is suffering from. The feeling of sanctity attaching to the tank prevents any one from stopping him from bathing. But he infects the water with disease *poochies* all the same and as the water of the tank is also generally used for drinking, he may infect the people who drink from it.

The village tanks are even worse: cattle and clothes are washed and the people bathe in the same tank which is used for drinking. It is little wonder then that there is so much sickness in our villages and yet our Vedas, Agamas, Shastras, Puranas, and other holy scriptures of the different religions have sternly forbidden the pollution of water supplies and the use of water from supplies polluted in these ways. Lord Sree Krishna, in the eleventh book of the Bhagawad Gita, has forbidden the use of such waters as being harmful to health and advised the use of no other water than that filtered or strained through several layers of cloth. Lord Sree Krishna had obviously no knowledge of the modern filter plants. To quote from other Sources:

I. In Yajurveda, the part called Arana contains the following commendations:—"Do not spit out with retching in water. Do not pass urine or discharge excreta in the water. Do not drop blood into the water. Do not throw hair, or nails, or bones, or ashes, nor dip dirty clothes into water. For to do so is to abuse a precious gift of the gods".

II. Then passing to the Smritis, or the rules laid down by the law-givers regarding the use and abuse of water, the following are universally quoted authorities:

"Yagnya Valkya prohibits the drinking of eight kinds of water (1) water kept boiled by a stranger, (2) foaming water, (3) heavy dirty water, (4) water giving off offensive smells, (5) water rising in bubbles, (6) hot water (7) muddy water, and (8) salt water."

"The sage Sathathapa prohibits bathing in a tank or pond defiled by the following persons by washing or bathing:—Those suffering from sore-eyes or itch on the head or ear, those subject to epileptic attacks, or ulceration in the head, running off

through the nostrill, or to consumption or those affected by leprosy, or small-pox, or diarrhoea, cholera, or other contagious diseases."

III. In the second book of Ramayana Prince Bharatha calls down upon himself a curse if he were guilty of something charged against him, by saying:—

'His sin, who deadly poison throws,
To spoil the water as it flows,
Lay on the wretch its burden dread,
Who gave cease it when Rama fled.

The sin of spoiling drinking water was evidently considered by Prince Bharatha, as one of the greatest possible gravity, as rendering the man who did it, fit only for the infernal regions.

IV Again, the sage YagnyaValkya prohibits "the use of water that remains after washing one's feet or hands and the private parts of the human body, or the remnant of what another person drinks, or the water near the Dhoby's place for washing clothes, or where chandalas or butchers, chacklers, and other outcastes, wash themselves, or where women after menses or child-birth, or people under pollution bathe."

The great law-giver Manu, in chapter IV of Manu Dharma Sastra says:—

V "Let him not cast into the water either urine or ordure nor saliva, nor any other thing soiled with impurity, nor blood nor any other kind of poison."

All these authorities are taken from the chapter headed Acharakanda, on the use of water, in the book of the Hindu law by Vaidynadha, held in high esteem by the Hindu community of Southern India.

But you may say that this pollution of water may be the case with our rivers and tanks but the water in our wells must be good because it is clear and bright and no cattle or people can wash or bathe in it. Let us see if this is so.

I have already told you, that the water in wells comes from the surface of the earth and thus any impurities on the surface especially the case in shallow wells, for the water has only to go a short distance. Unfortunately most of the wells in India are shallow wells. You will see therefore, that the water in wells can easily be made as dangerous as river and tank water, if the ground round about a well is dirty. Unfortunately, too, water which is clear may yet be just as dangerous to our health as muddy water, for the disease *poochies* are so small that they can be very plentiful in clear well water, without its becoming hazy. Now, what is the condition of most of our wells?

You have the well in the backyard usually and the cattle shed is very close to it. These adjoin living quarters of a number of people. The washing from the house, the latrine and the cattle sheds all soak into the ground and can often flow freely into the well itself. The well usually has a broken parapet wall, with a number of cracks through which subsoil water can and often does percolate into the well. The washing from the sides of the well get back into the well. The women-folk bale out water from the well with their own vessels by means of a rope which has been soaking in the mire around the well. Do you need to be told that the people of this house are constantly sick? Can it be wondered at, that the water in our wells is as dangerous as that in our rivers and our tanks?

In large towns, water is taken to different parts of the town by pipes and such waters are generally safe: But to show you, how easy it is for water to spread disease, let me give you an instance of a big garden-house bungalow, the occupants of which were constantly getting ill: On investigation, it was found that there was a water tap in the garden with a tub below it.

The gardener after manuring the plants, washes his hands before he left to go home for his breakfast. The sweeper who had only been waiting for the gardener to go home, came next and stealthily cleaned the commode and her brooms in the tub. It was then the cook's turn. He brought the vegetables and fish to be washed and then plunged the celeries and tomatoes into the basin, which he had filled with the water from the tub. The poor master of the house was quite unaware of the cook's dishonest and stupid act.

As if to crown all, the unscrupulous milkman obtained his supply of water for diluting the milk from the self-same tub. The lazy butler probably provided drinking water also from this tub.

It is easy to see, that here we have a chain of events, exactly similar to that which is occurring with your rivers and tank.

Now that you have seen how dangerous water can be and how it is responsible for so much of the sickness in our country,

you will naturally ask what can be done to make it safe to drink? The principle to be adopted in every case is the same. you must guard your drinking water-supply from pollution by either man or animals and where this is not possible, then, you must purify your water before you drink it. The correct methods of doing this will depend upon the source from which the drinking water comes.

Where the drinking supply comes from rivers and streams:—

It is impossible to prevent entirely men and animals from reaching the banks. The water cannot be kept absolutely pure and therefore it will require to be purified in some way before it is used. The methods by which this is done, will be considered later.

Much can be done, however, to improve the conditions found in this country at present, for water is most dangerous when it has been recently polluted. The river-banks near the villages should be divided into different parts. The water for drinking, should be drawn from the part nearest the source--none of the village animals should be allowed to approach the tanks or enter the stream *at this part or above it* and no bathing or washing of clothes should be permitted here. Special places for washing and bathing should be allocated lower down the stream and below these places again, the animals should be watered, or washed.

Where tanks or lakes form the water-supply :

If it is possible, one of these, preferably the one on the highest ground should be entirely set aside for drinking water. It should be fenced in, so as to prevent cattle or human beings from reaching it. Entirely separate tanks should be used for bathing, washing and the watering of animals.

It is of little use, using one tank for all these purposes, even if they are carried out in separate parts of the tank, for the whole of the water in the tank will be rendered impure in this way. When only one tank is present it would be well worth, while making another small tank, on a slightly lower level

which could be fed from the first one and used for washing, bathing and watering of animals, so that the first tank could be kept entirely for drinking purposes. If you cannot keep your drinking water supply separate, then the water must be considered dangerous and be purified before it is used for drinking.

Where wells and springs are used for the water-supply.

Here again care must be taken that the water in the well does not get polluted from outside sources. The well must first be carefully steined. (Steining is the name given to the brick-in mortar lining of the sides of the well from the surface of the ground to the level of the feeder springs in the bottom) It should have a water-proof platform round it, so as to prevent the surface water from running into it. A proper drain should lead the waste water away to a safe distance. No cattle or men should be permitted to defile the ground round about the well and no cattle sheds, latrines or other sources of pollution should be built near it.

If possible, the well should be covered over and a pump should draw the water to the surface. An arrangement, whereby water is pumped up and stored in an elevated closed tank from which it is drawn by a number of taps, will be best for a public village drinking supply. It is not very expensive and can be put up and maintained by raising a small subscription from the villagers, once a year during the harvest season. If this is, however, impossible, a proper bucket with a pulley and rope should be fixed and the people should not be permitted to lower their own utensils into the water. If the well is an open one and leaves or other matter drop into it, it should be periodically cleaned out and treated with Potassium Permanganate.

But you will now say, there are many cases such as the rivers and tanks that you have mentioned, where we know the water is polluted but where we cannot prevent it becoming so and yet we must use the water. What can we do then? My answer to you is that in these cases the water must be purified—that is the disease-Poochies must be got rid of before it is safe to use it for drinking. There

through the nostrill, or to consumption or those affected by leprosy, or small-pox, or diarrhoea, cholera, or other contagious diseases."

III. In the second book of Ramayana Prince Bharatha, calls down upon himself a curse if he were guilty of something charged against him, by saying:--

'His sin, who deadly poison throws,
To spoil the water as it flows,
Lay on the wretch its burden dread,
Who gave consent when Rama fled.

The sin of spoiling drinking water was evidently considered by Prince Bharatha, as one of the greatest possible gravity, as rendering the man who did it, fit only for the infernal regions.

IV Again, the sage YagnyaValkya prohibits "the use of water that remains after washing one's feet or hands and the private parts of the human body, or the remnant of what another person drinks, or the water near the Dhoby's place for washing clothes, or where chandalas or butchers, chucklers, and other outcastes, wash themselves, or where women after menses or child-birth, or people under pollution bathe."

The great law-giver Manu, in chapter IV of Manu Dharma Sastra says:--

V "Let him not cast into the water either urine or ordure nor saliva, nor any other thing soiled with impurity, nor blood, nor any other kind of poison."

All these authorities are taken from the chapter headed Acharakanda, on the use of water, in the book of the Hindu law by Vaidynadha, held in high esteem by the Hindu community of Southern India.

But you may say that this pollution of water may be the case with our rivers and tanks but the water in our wells must be good because it is clear and bright and no cattle or people can wash or bathe in it. Let us see if this is so.

I have already told you, that the water in wells comes from the surface of the earth and thus any impurities on the surface especially the case in shallow wells, for the water has only to go a short distance. Unfortunately most of the wells in India are shallow wells. You will see therefore, that the water in wells can easily be made as dangerous as river and tank water, if the ground round about a well is dirty. Unfortunately, too, water which is clear may yet be just as dangerous to our health as muddy water, for the disease *poochies* are so small that they can be very plentiful in clear well water, without its becoming hazy. Now, what is the condition of most of our wells?

You have the well in the backyard usually and the cattle shed is very close to it. These adjoin living quarters of a number of people. The washing from the house, the latrine and the cattle sheds all soak into the ground and can often flow freely into the well itself. The well usually has a broken parapet wall, with a number of cracks through which subsoil water can and often does percolate into the well. The washing from the sides of the well get back into the well. The women-folk bale out water from the well with their own vessels by means of a rope which has been soaking in the mire around the well. Do you need to be told that the people of this house are constantly sick? Can it be wondered at, that the water in our wells is as dangerous as that in our rivers and our tanks?

In large towns, water is taken to different parts of the town by pipes and such waters are generally safe: But to show you, how easy it is for water to spread disease, let me give you an instance of a big garden-house bungalow, the occupants of which were constantly getting ill: On investigation, it was found that there was a water tap in the garden with a tub below it.

The gardener after manuring the plants, washes his hands before he left to go home for his breakfast. The sweeper who had only been waiting for the gardener to go home, came next and stealthily cleaned the commode and her brooms in the tub. It was then the cook's turn. He brought the vegetables and fish to be washed and then plunged the celeries and tomatoes into the basin, which he had filled with the water from the tub. The poor master of the house was quite unaware of the cook's dishonest and stupid act.

As if to crown all, the unscrupulous milkman obtained his supply of water for diluting the milk from the self-same tub. The lazy butler probably provided drinking water also from this tub.

It is easy to see, that here we have a chain of events, exactly similar to that which is occurring with your rivers and tank.

Now that you have seen how dangerous water can be and how it is responsible for so much of the sickness in our country,

you will naturally ask what can be done to make it safe to drink? The principle to be adopted in every case is the same. you must guard your drinking water-supply from pollution by either man or animals and where this is not possible, then, you must purify your water before you drink it. The correct methods of doing this will depend upon the source from which the drinking water comes.

Where the drinking supply comes from rivers and streams:—

It is impossible to prevent entirely men and animals from reaching the banks. The water cannot be kept absolutely pure and therefore it will require to be purified in some way before it is used. The methods by which this is done, will be considered later.

Much can be done, however, to improve the conditions found in this country at present, for water is most dangerous when it has been recently polluted. The river-banks near the villages should be divided into different parts. The water for drinking, should be drawn from the part nearest the source--none of the village animals should be allowed to approach the tanks or enter the stream *at this part or above it* and no bathing or washing of clothes should be permitted here. Special places for washing and bathing should be allocated lower down the stream and below these places again, the animals should be watered, or washed.

Where tanks or lakes form the water-supply :

If it is possible, one of these, preferably the one on the highest ground should be entirely set aside for drinking water. It should be fenced in, so as to prevent cattle or human beings from reaching it. Entirely separate tanks should be used for bathing, washing and the watering of animals.

It is of little use, using one tank for all these purposes, even if they are carried out in separate parts of the tank, for the whole of the water in the tank will be rendered impure in this way. When only one tank is present it would be well worth, while making another small tank, on a slightly lower level

which could be fed from the first one and used for washing, bathing and watering of animals, so that the first tank could be kept entirely for drinking purposes. If you cannot keep your drinking water supply separate, then the water must be considered dangerous and be purified before it is used for drinking.

Where wells and springs are used for the water-supply.

Here again care must be taken that the water in the well does not get polluted from outside sources. The well must first be carefully steined. (Steining is the name given to the brick-in mortar lining of the sides of the well from the surface of the ground to the level of the feeder springs in the bottom) It should have a water-proof platform round it, so as to prevent the surface water from running into it. A proper drain should lead the waste water away to a safe distance. No cattle or men should be permitted to defile the ground round about the well and no cattle sheds, latrines or other sources of pollution should be built near it.

If possible, the well should be covered over and a pump should draw the water to the surface. An arrangement, whereby water is pumped up and stored in an elevated closed tank from which it is drawn by a number of taps, will be best for a public village drinking supply. It is not very expensive and can be put up and maintained by raising a small subscription from the villagers, once a year during the harvest season. If this is, however, impossible, a proper bucket with a pulley and rope should be fixed and the people should not be permitted to lower their own utensils into the water. If the well is an open one and leaves or other matter drop into it, it should be periodically cleaned out and treated with Potassium Permanganate.

But you will now say, there are many cases such as the rivers and tanks that you have mentioned, where we know that the water is polluted but where we cannot prevent it becoming so and yet we must use the water. What can we do then? My answer to you is that in these cases the water must be purified—that is the disease-*Poochies* must be got rid off before it is safe to use it for drinking. There

are many ways of purifying water. Big towns spend large sums of money and erect large water-works, where the water is purified by filtering it through sand. This process when carried out properly removes all the germs and makes the water safe. Small towns and villages cannot afford to pay for such big and elaborate methods but there are many other ways which do cost very little money, whereby polluted water can be made safe to drink. Your District Health Officer can advise you on which particular method is most suitable for your village. Until some such method is introduced, you have to rely on keeping your water supply as pure as possible. If you fail and disease, such as Cholera or dysentery comes, then we must purify our water by means of medicines, which will kill the disease *poochies*, while they do no harm to the water and leave no taste in it. One such medicine is Potassium Permanganate which is put into your wells by the doctor when Cholera comes to the village. This medicine makes the water pink for some hours afterwards. There are other medicines which the doctor can use also—such as solutions of bleaching powder—none of these medicines can do any harm to you.

Finally if your water is impure, you yourselves, every one of you can make it quite safe by boiling it for a short time; for the heat of boiling water is sufficient to kill all the *poochies* which cause disease.

The lesson which I wish you to remember is that disease comes from living *poochies* which live in men and animals and makes them sick. These *poochies* are carried by food and often by water from the sick to the healthy. To prevent disease from attacking us, we must be careful that our food and especially our water is pure and wholesome. To keep our water pure, we must prevent the discharges of men and animals from getting into it. Every village should attempt to keep the source of its water supply clean and should aim at keeping a special supply for drinking purposes. If diseases, such as cholera or dysentery come to your village you should immediately boil all your drinking water, just as you boil your milk and wash your utensils in this boiled water. You should then send for the nearest doctor who will advise you as to how to purify your water and destroy the disease *poochies* which are in it.

If any of you is rich and wish to do good for your village, by providing it with the means of purifying its drinking water, consult the Health Officer of your District and he will tell you what you can do in this direction, particularly on a co-operative basis.

You can do no kinder or better act than this, for by so doing, you will prevent disease from coming to your village and you will thus be daily saving the lives of your family, your friends and fellowmen,

Fourteen Experiments in Rural Education¹

By N. Subrahmanyam, M.A., L.T.

Lecturer, Teachers' College, Saidapet.

Through the ages the vitality of India had been in her villages, and not in the ephemeral empires and kingdoms, and capitals and dynasties. Rural India has always been the real India of History. But in recent times, owing to various causes which need not be detailed here, rural life and conditions have been steadily going down and villages dwindling. It is the general recognition of this fact that has of late pushed the idea of Rural Reconstruction to the forefront. Of the various items of its remedial programme, Education is one of the most fundamental; and a book of experiments in Rural Education, appearing at this juncture, is very opportune indeed:

Mr. K. T. Paul, in his valuable introduction, points out the causes and influences at work in bringing about a general change of attitude recently in educational matters, traces the genesis and shows the real significance of the 'Moga movement,' and suggests the inculcation of new ideals in the village teacher while yet he is in the Normal School.

Of the fourteen experiments conducted in widely scattered parts of India and recorded in this volume, eight treat of boys' schools, three of girls' schools and three others of special experiments in Co-education, Village School Supervision and Reclamation of Criminal Tribes by means of Adult Education. All the schools have these common features that they are for Christian youth, mostly of the backward classes, in the rural parts, and that their courses are vocational in character and practical in aim. The objective has everywhere been shifted and rightly too, from book knowledge to right conduct and the formation of character.

In spite of these common characteristics, however, there are important individual variations, whose nature and significance can be best appreciated by going through the pages of this stimulating book. "Each school has met its own situation, and has its own tale to tell of problems, not all solved, but at least being faced." Attention is drawn below to some of the special features of these schools.

At Moga in the Punjab, the Project Method of Dr. Kilpatrick has been given a fair and full trial. It has been proved here that, in spite of handicaps of material, boys learning by this method easily satisfy the Government Code requirements, owing to the greater vitality and practical nature of the teaching which has been based on the results of scientific research. There is a normal class attached to the institution to which

¹Fourteen Experiments on Rural Education. Edited by A. B. V. Doren, Association Press, Calcutta, 1921. Price Re. ONE.

students come from all parts of India to benefit by the special methods taught here. Their training also is based on actual experience.

At Ushagram, Asansol (Bengal), the atmosphere is one of creative and co-operative industry. The cottage system is the peculiar feature here. Each cottage, while it is the home of a boy, is held in common with other boys; and, the head-boys of each cottage compose the village Council or Panchayat. All the work of the village is done by the boys themselves.

At Dhamtari, (C. P.), as in the previous schools, Project Method has been followed with great success for the pupils belonging to the most backward boys in the region.

At the St. Barnabas' School, Manmad, while the Project Method is tried only in a very limited way, industrial and agricultural training is given to the boys, who mostly belong to the Mahar and Mang communities in the villages.

The Vocational Training School at Ankleswar (Guzerat) for Boys, has its own farm, school shop, co-operative bank and store, in all of which the boys get a practical training through the Project Method. A special feature here is the practical self-government by means of special committees of pupils for looking after the different activities of the institution.

The Ingraham Institute at Ghaziabad (U. P.) has developed the theological side—its primary aim being the training of leaders, both clerical and lay, for the Christian Church. This institution has made a beginning in Extension Work through its annual institutes for the teachers and annual refresher courses for the evangelist workers. Groups of teachers and boys go to surrounding villages and give lantern lectures on sanitation, agriculture, and religious subjects. A small circulating library and a medicine chest help to connect the school with the life and needs of the village.

The Community Middle School at Chapra (Bengal) is designed specially to fit the village lad for life in the village; and this is sought to be achieved by correlating manual, field and classroom work.

The Agricultural and Industrial School at Sangli (S. M. Country) aims at meeting the economic problems in its own particular section of the country. Everything is kept in the whole school on as simple a basis as possible, and there is not much expensive equipment. A very intensive type of agriculture with poultry, fruit culture, and gardening emphasised, is being taught and demonstrated. The trades most suitable have been selected and are being taught with a view to turning out young men who can 'carry on' successfully themselves. A peculiar feature here is the division of the pupils into shifts, one half attending class-room work and the other their trades and *vice versa*.

A vocational middle school for girls does not have as its primary aim self-support, entire or partial, but the preparation of girls for home life. A daily time-table of work at the Lucy Percy Noble Institute, Rachyanapuram (Madura) and two courses of study, one at Pakaur for Santali girls and the other at Akleswar, where the girls' school is run upon a well-thought out and carefully co-ordinated plan along with the boys school already referred to—show what subjects in home economics are being experimented with in these three schools. The Cottage System, which is found to be indispensable for girls far more than for boys, forms an essential feature of these schools. The description of the work of the departments of home crafts and home life at the first of these schools is particularly interesting and deserves careful perusal.

The experiment at Co-education at the Vocational Training School at Dornakal is unique and has proved a success. The boys here choose a vocation out of agriculture, carpentry, weaving and leather-work, while the girls take their turns in cooking, gardening, poultrying and tailoring. The boarding arrangements are separate, but both boys and girls learn together. It is claimed that this experiment has been a great help in training character, and that the boys and the girls here know each other's faults and failings. A feature of the institution is the division of the pupils into full-time and half-time workers according to their age and ability.

At Vellore an attempt has been made to help the village teachers by means of systematic supervision by persons who visited the schools as friends and guides, and not as harsh critics or inspectors. Their work is educationally constructive, and is not confined to the school only but extends to the whole village. Teachers' meetings of various kinds are summoned frequently to spread progressive ideas, while educational exhibitions and short-time vacation courses have also been held, in which demonstration of better methods of teaching forms an important item. Further guidance is given through syllabuses, pamphlets, bulletins, and central libraries.

The Kurava settlements at Atur form an experiment of a different kind—an attempt made to reclaim some of the so-called criminal tribes by means of compulsory adult education, simultaneously with the education of the boys and girls in day schools. It is tried here to turn the Kurava into a producer, by settling him on land, and giving him an industry suited to the genius of his people.

It is not possible in this brief survey to touch on all the details of the various interesting experiments as well as on the measure of success attending them. What is worth noting is the earnestness and the spirit of service at the back of all this endeavour, the attempt to apply new principles to the problem of rural education, and a refusal to walk the trodden path merely marking time. Those who are interested in Rural



Education and to the inspecting officers of the Educational Department in particular, this volume will amply repay careful perusal.

The Fourth Forest Panchayats' Conference.

The Fourth Conference of the Forest Panchayats was held at Ongole on the 5th January with Rao Bahadur B. Muniswami Nayudu Garu B.A., B.L., M.L.C., President District Board, Chittoor, in the chair.

Among those present were Messrs. J. Kuppuswami Chouduri, President, Guntur District Board, A. Swamintha Ayyar, B.A. Editor "Rural India", B. Perumal Naidu, M. L. A., Prof. N. G. Ranga, B. Litt (Oxon), Pachappa's College, Madras, A. Rajagopal Reddi Garu, President, Forest Panchayats' Union Limited, Madras, Jayarama Reddi Garu, President Taluk Board, Ongole, and C. V. Krishna Rao, Hon. Magistrate, Ongole.

Welcome Address.

The proceedings commenced with a prayer, after which Mr. S. Venkatasubba Reddi, Chairman of the Reception Committee, welcomed the delegates, over two hundred, representing North Arcot, South Arcot, Chittoor, Bellary, Karnool, Nellore, Anantapur, Kistna, Chingleput, Trichinopoly, and Guntur. Mr. R. D. Paul, M.A. Forest Panchayat officer, was also present on behalf of the Board of Revenue.

Chairman's Speech.

Mr. Muniswami Nayudu who was then installed as President, addressed the Conference in Telugu and in the course of his speech he traced the administration of the Forests and referred to the recommendations of the Horne Committee in 1912, of which Dewan Bahadur P. Kesava Pillai was a member. The said Committee divided the Forests into five classes of which the last two formed the bulk of the forests and were intended for supplying small timber, fuel and to serve as grazing grounds, and they recommended that those forests should be handed over to these panchayats. The Government did not give effect to these recommendations fully, but made half-hearted attempts at constituting some Panchayats and dissolving them as soon as possible on the spurious plea that they did not work well. It was not until the Reform Councils were set up that the question was seriously taken up. As a consequence of a number of resolutions, passed in the Council in 1921, a Forest Advisory Committee was appointed and it was ultimately decided to hand over minor forests to panchayats and make a serious beginning by appointing a special officer. The Government have since classified the forests into two classes viz. (1) Provincial and (2) Local, and have transferred the Local Forests to the Revenue Department to be managed through

Forest Panchayats. They have also increased the special staff. As a result we find today more than 1100 Panchayats constituting about 5000 square miles area of forests under their management. He expressed satisfaction that almost from the commencement of the Panchayats system, the Panchayats have organised themselves and have been holding Conferences every year and hoped that as a result of their deliberations the movement will be put on a stable and useful basis. He then mentioned a number of questions which required careful deliberation at the hands of the Conference with a view to improve the position, status and usefulness of the Panchayats. The following points were among others mentioned by him:—

(1) The classification now made by the Government is not satisfactory and a large area of what is now classified as Provincial Forests should be transferred to Local Forests. All the Forests classed as IV under the Horne Committee scheme are really Local Forests and yet the Government have retained most of that area under their control. These areas are not of Provincial importance but are intended to serve local needs for fuel and grazing (2) The rent now demanded of the panchayats is in many cases high and more than what the incomes from the area can justify. The income from these forests which the Forest Department was getting was very much less than what is now demanded as rent. The Government should be approached to appoint a Committee to investigate into the question and reduce the rents suitably. At any rate, a reasonable rent must be fixed permanently for each panchayat area and such rents should not be liable to be enhanced by reason of the improvements which the panchayats may make in the forests. The benefit of such improvements should be guaranteed to the panchayats for use for the benefit of the village. (3) The compounding fees levied in respect of forest offences committed in the panchayat areas should be handed over to the panchayats and not credited to the general revenues of the state and no distinction should be made between panchayats which are authorised to compound offence and those which are not authorised. (4) The principle that these panchayat areas are intended for grazing and for the benefit of the locality, should be clearly recognised and Government should guarantee that such areas will not be assigned for cultivation or for other purposes. (5) The transfer of control of panchayats to the Collector is no doubt a desirable step but the tendency of the Collectors to delegate their authority to their subordinates may lead to serious abuses, and tend ultimately to sap all independence and initiative in the panchayats and convert them in course of time to be treated as a branch of the administration. Such defects should be carefully guarded against. The interference of the Revenue Officials and the special staff, in the

elections to those panchayats constitutes another source of danger. (6) The panchayats should be put on a statutory basis as regards their powers and duties and their right as self-governing units should be declared and recognized. (7) The Government according to the latest budget, receive an income of Rs. 2,00,000 from the panchayats, while the charges of the special staff etc., come to about Rs. 90,000. The Government are thus making a profit of Rs. 1,10,000 from these panchayats. When these panchayat areas were under the management of the Forest Department, the income to the Government from them would have been practically nothing and possibly there was loss, having regard to the costly establishment of the Department. The Government have no justification to make profit out of these village forests. The rents have to be reduced in many cases and the balance may well be distributed to the poorer panchayats as subsidies to help them to improve their forests. In any event, the Government should clearly declare their policy not to enhance these rents once in every three years and thus make it a source of increasing revenue. (8) Some of the panchayats are now too small and may with profit be clubbed with the neighbouring panchayats. (9) Lastly the panchayats should organize their own unions to supervise the panchayats and to focus the attention of the Government on the defects of the system and remedial measures to be taken. The president exhorted the Conference to set up a prominent organization with funds placed at its disposal to carry on the work throughout the year on behalf of the Panchayats and closed his speech with thanks to the organizers of the Conference for having invited him to preside over the Conference and to conduct its deliberations.

Resolutions.

A number of resolutions were then passed at the Conference:—

(1) This Conference is much concerned to hear of the illness of His Majesty the King-Emperor and fervently prays for His Majesty's speedy recovery and restoration of health.

(2) This Conference records its sense of the great loss which the Presidency has sustained by the death of Sir P. Ramarayaningar, Raja of Panagal, to whose untiring efforts the forest panchayats movement owes its inception and development.

(3) This Conference resolves that a Forest Panchayats Association be formed for the whole Presidency with the following constitution:—

(a) Every panchayat to become a member and the annual subscription to be Rs. 2.

(b) Individuals who sympathise with the aims and objects of the Association to be admitted as members on payment of Rs. 5 per year.

(c) The Association business to be conducted by an Executive Committee consisting of a President, Nine Vice-Presidents, Two Secretaries and Twenty-one other members.

All these to be elected by the Association, at its annual Conference and to hold office till fresh election at the next Conference.

(4) The aims and objects of the Association to be (a) to take steps to safeguard the interests of the panchayats, (b) to take steps to improve their status and powers, (c) to take steps to give effect to the resolutions of the Conference, (d) to organise District and Provincial Conferences, (e) to take all necessary steps for their successful working.

(5) This Conference resolves that the Forest Panchayats should be placed on a statutory basis.

(6) This Conference requests the Government to authorise all forest Panchayats to compound offences with due provision for prevention of abuse of such powers.

(7) This Conference requests the Government to credit to panchayats the income derived from compounding fees for offences committed in their respective areas even in cases where the offences are compounded by Tahsildars or other agencies and also the sale proceeds of forest produce being the subject of forest offences.

(8) This Conference requests the Government to order a reclassification of forests and include under "Local Forests", all areas classed hitherto as class IV Forests and also such portions of Provincial Forests as are contiguous to villages or cultivable lands.

(9) This Conference is of opinion that the rents now fixed for panchayats are in the majority of cases high and require to be revised and reduced and requests the Government to place such rent on a permanent basis so as to secure to the panchayats the benefit of all improvements made by them in the forests.

(10) This Conference resolves to request the Ministers for Development, Education, The Registrar-General of Panchayats, Presidents of District and Taluq Boards to encourage in all possible manner, "Rural India," the official organ of the Madras Forest Panchayats which is doing propaganda work for village uplift.

(11) This Conference requests that in years in which panchayat forests do not yield sufficient revenue to pay the lease amount after meeting incidental charges, a rebate be allowed to cover the loss.

(12) This Conference reiterates resolution No. 5 of the resolutions passed at the last year's Conference.

(13) This Conference requests that the Government may be pleased to order that grazing fees collected for excess cattle should be handed to the panchayats concerned for effecting improvements to panchayat forests and not credited to the Government.

(14) This Conference requests the Government to give financial help to the Forest Panchayatdars' Union Ltd., to do propaganda work for the uplift of the rural population just as they have been doing in the co-operative line.

(15) This Conference resolves to request the Government to direct that panchayats only should grant permits for quarrying in their respective areas and for tapping trees for toddy and that no permits for such purposes be given by the Tahsildar or other authorities and that all income derived therefrom should go to the panchayats concerned.

(16) This Conference is of opinion that locating coupes close to villages is prejudicial to the ryots and so requests the Government to establish coupes in such proximity only after consulting with the ryots concerned and their representatives.

(17) This Conference protests against the raising of the fees for sheep from two annas per head to four annas in No. 76 Panchayat in Vinukonda Taluk, Guntur District.

(18) This Conference protests against the Government's decision to abolish some forest panchayats in Narasaraopet and Palnad Taluks and to allot the land for assignment and requests the Government to reconsider their orders and direct panchayats to be reconstituted for these areas.

(19) This Conference requests the authorities that in all cases where the areas in existing panchayats are clubbed together or are divided or where parts of such areas are proposed to be removed from such panchayat areas, the authorities should consult the panchayats concerned and consider their objections, if any, before passing final orders.

(20) This conference places on record its grateful appreciation of the valuable services rendered to the panchayats and the ryot population by Mr. A. Swaminatha Ayyar as Editor of "Rural India".

A Model Village in Japan.

In the *Young East*, Mr. K. Yamamoto writes "If I say there is a village in Japan where no tenant troubles are known because the villagers are all owners of the land they cultivate, where they are not required to pay any tax, and where all the young men and girls are admitted with no entrance examination to schools of the secondary grade and have to pay no tuition fees, you will, I am sure think that I am simply talking of dreams." But that such a village exists is nevertheless a fact. This is the work of three capable leaders, the Principal of the girls' school and two village headmen who with the co-operation of the villagers resolved among themselves that (1) all the villagers should observe strict economy in their living and lay aside as much as possible so that the financial condition of the village can be consolidated. (2) that all the villagers should co-operate for the improvement of the education of the young men and women of the village to make them capable and advanced workers of good culture, (3) that all the villagers should co-operate for the acquisition of the spirit of autonomy and try to enhance the habit of mutual help. (4) that all the villagers should try to cultivate the patriotic spirit and enhance their moral standard and (5) that all the villagers should try to improve their respective physical strength so that their productive capacity can be increased. As a means of putting these resolutions to practice they organized three social organisations one for the heads of the families, one for the housewives and one for the aged people so that they could exchange views and opinions regarding the improvement of the village. In 1910, the three leaders organized a credit association with 368 members and a share capital of 9430 Yen. Now the membership is 1561 and the amount invested is 100,000 Yen. In 1913, the work of unification and adjustment of the forests of the village was taken up and the village now realises 4000 Yen from the forests, and it is expected that the income from this source will go up to 10,000 in the near future. All the land in the village—a small area with 560 families containing 3,000 people was formerly owned by a few big landlords, and the others in the village were tenants, and labourers. As elsewhere

owing to extravagance and careless farming, they became heavily involved and the three leaders managed to buy up the lands of the insolvent landlords for the villagers by raising a loan and thus all the land in the village came to be owned by the villagers themselves, and there are no tenants. And by the device of a consolidated fund to cover all the village expenditure for all time, no periodical tax is collected from the villagers by the Government. A splendid example of village autonomy. Will the village Panchayats take note of this.

Notes and Comments

AGRICULTURAL COMMISSION'S RECOMMENDATIONS. As we stated on a former occasion, His Excellency the Governor of Madras and the Heads of Departments have at a Conference decided to appoint Committee of 11 officials and 4 nonofficials who will devise ways and means to give effect to the recommendations of the Royal Commission on Agriculture in the light of the discussion at the Simla meeting on the same subject. The Committee has to prepare material for the Government and the Legislative Council, outlining a policy and programme for putting to action swiftly the various schemes which are at the present moment necessary to stimulate and expand the great industry. The four non-officials will represent the northern and southern district the Ceded Districts and the West Coast and one of them will probably be the Rajah of Parlakimedi, who was a member of the Royal Agricultural Commission and who recently gave a sum of about Rs. 17,000 for improving agriculture in the Telugu Districts.

THE CO-OPERATIVE MOVEMENT. Four prizes are offered to the best essays on the following subject: "How the Co-operative Movement, combined with the issue of a sound Paper Currency based not on gold and silver, but on organised reliable labour and the assets, which that labour will create, will provide plenty and employment for all, and unity in India." The four prizes are as follows: 1st prize Rs. 500, 2nd prize Rs. 300, 3rd and 4th prizes Rs. 100 each. These prizes are due to the generosity of S. r. D. M. Hamilton, whose interest in India especially in the poor of India, has been so admirable through a long life of much useful service to the country. The competition is limited to "South India" which includes the Madras Presidency, Mysore, Travancore and Cochin. The prizes will be awarded on the judgment of the Hon. Mr. Ramadoss Pantulu, San. Thome, Madras. Mr. T. K. Doraiswamy Iyer, Professor of Economics, Presidency College, Madras, and Mr. K. T. Paul, National General Secretary, Y. M. C. A., 5 Russell

Street, Calcutta. Candidates should submit their essays by registered post to Mr. K. T. Paul before March next.

SEED PRODUCTION AND DISTRIBUTION: The demand for seed has been rapidly outstripping the organisation for its supply and the problem of seed production and distribution has become one of outstanding importance. The Government of Behar and Orissa as is evident from the Report of the Director of Agriculture for 1927-28 are tackling the problem in the right spirit and manner. It is proposed to build up circles of registered seed growers whose produce will be purchased at a premium and stored by the Department for general distribution. Ultimately it is hoped that it will be possible to organise co-operative seed unions which will gradually be able to take up the main work of seed distribution.

AGRICULTURAL DEMONSTRATION. The exhibition Motor Van of the Department of Agriculture, Madras inaugurated by His Excellency the Governor sometime ago was in view during the Health and Baby Week held in January in the city. For the benefit of the Members of the Legislative Council, the Agricultural Department at the recent meeting of the Council demonstrated the advantages of the scientific agricultural operations through the motor van and caravans.

The caravan has done such useful work since in Salem, Coimbatore and other adjoining districts that the Government have decided to extend the demonstration in Northern districts of this Presidency by sending out similar car and caravan. In the meanwhile attempts are being made to benefit the Southern districts with similar demonstrations and in this connection a rich member of the Nagarathar community has donated Rs. 10,000 for purchasing a van and a caravan in the name of H. E. the Governor.

THE MADRAS FOREST PANCHAYATS' ASSOCIATION. The Forest Panchayats Association which was constituted with Rao Bahadur B. Muniswami Nayudu Garu as President at the last Conference of Forest Panchayats held at Ongole has begun to function with commendable promptitude. In order to get into actual touch with the Panchayats and the management of the forests entrusted to them, the Committee of the Association is circulating to the Panchayats a form asking for information on the following among other points:—the area of the forests under the panchayats, the kists payable to Government, whether there was profit or loss during last provincial year, the number of cow units, and the number of permits issued and the rates at which they were issued. Generally the Panchayats are requested to state the present difficulties.

DEWAN BAHADUR S. KUMARASWAMI REDDIAR. Dewan Bahadur S. Kumaraswami Reddiar one of the Vice-

Presidents of the Madras Forest Panchayats Association has we understand been appointed chairman of the Fisheries Committee *vice* Sir K. V. Reddi resigned.

A NEW AGRICULTURAL SCHOOL. Mr. R. D. Anstead C. I. E., Director of Agriculture, Madras, laid the foundation stone towards the close of January of a building which the District Board, Madura is going to construct for an agricultural school at Usalampattta in the centre of the Kallar country. This is the first instance of a District Board launching on such a praiseworthy enterprise which will, we trust, serve as an incentive to other District Boards.

AN EPIDEMIC AMONG FOWLS. It is reported that recently an epidemic of a virulent type among fowls has been prevailing in parts of Malabar and that a large number of fowls are dying daily. It would appear that the affected birds flutter along and all on a sudden fall to the ground and die flapping their wings. It is to be hoped that an enquiry will be made by trained experts and a remedy found with a view to preventing avoidable loss to village folk.

MIDDLE CLASS UNEMPLOYMENT. With a view to relieving unemployment among the middle classes in Bengal, a scheme is under preparation by the Local Government for establishing a vocational institution in the outskirts of Calcutta for young men to be trained in practical agriculture, dairy farming and pisciculture.

Writing to the Mayor of the Calcutta Corporation in this connection, the Secretary to the Bengal Government says:—“Hitherto the main difficulty was to find the initial capital necessary for the inauguration of the scheme. Fortunately, a donor promised one lakh of which he has paid Rs. 50,000. The Ministry of Agriculture having favoured the idea and accepted a suitable scheme, a strong committee has been formed to give effect to the scheme. It has been decided that 100 *bighas* of land in the suburbs of Calcutta should be acquired for the purpose. It is expected that the proposal would appeal to the councillors of the Corporation. Financial assistance is also expected from the District Board of Alipur and the Bengal Council.

CATTLE MORTALITY. In spite of the eleven new Veterinary dispensaries which were opened during the year 1927–28 and the Government's decision that extra Veterinary Assistants attached to veterinary institutions should run camp dispensaries when not attending to outbreaks of contagious diseases, we note that a regrettable feature of the year was the high cattle mortality, the total number of deaths being 76196 against 59031 in the previous year. Rinderpest was responsible for half the number of deaths, nearly the whole of which occurred in the Districts of Anantapur, Malabar, Chingleput, Ganjam,

and Bellary. We take liberty to suggest that the number of deaths reported is a fearful under-estimate and no improvement in the treatment of cattle disease is possible without the hearty cooperation of the Revenue and Veterinary Departments. Cattle mortality registers are not maintained properly and there is no effective check over this sad neglect of duty by village officers.

THE EDUCATION OF THE PEASANT. Writing in the Indian Journal of Economics on this subject, Prof. Findlay Shirras says that the Indian peasant's great hope of salvation lies in the extension of well-organised cooperation based upon careful education and scientific training as insisted upon by the Royal Commission on Agriculture. As pointed out by the Commission, the progressive adoption of compulsory education is the best basis of cooperation. He adds that the spread of literacy among women will result in lasting literacy among the young. Compulsion should be introduced as rapidly as local conditions permit and should be preceded by a campaign of explanation and persuasion. Wherever possible, the policy of establishing 'central schools' should be adopted and 'single teacher' schools converted into branch schools. Teachers should be recruited to the utmost practicable extent from men of rural origin and upbringing. No attempt should be made to teach agriculture to boys, in primary schools but vernacular middle schools on the lines of the Punjab experiment which include agriculture as an optional subject in the curriculum should be encouraged. The addition to the curriculum of high schools in rural areas of a course in agriculture on the lines of that given in vernacular middle schools of the Punjab type but of a more advanced character would be productive of good results. Agricultural colleges should be affiliated to Universities.

TRAINING IN CO-OPERATION AND AGRICULTURE. The Bengal Co-operative Organisation Society has with the help of the Agricultural and Co-operative Department of the Government of Bengal inaugurated a scheme for the training of the officers and workers of the two departments. The training which will be both theoretical and practical will consist of two separate courses of lectures on co-operation and agriculture, and include the following subjects:—Organisation of the Agricultural Department, plant breeding and its economic aspects, Sericulture, breeding of cattle and the value of fodder crops, dairying, co-operative societies, co-operative finance.

MR. FRANK NOYCE, I. C. S. We understand that Mr. Frank Noyce I. C. S., will on return from leave be appointed President or Chief Administrative Officer of the Central Agricultural Council, which is shortly to be set up in accordance with the recommendations of the Lalithgow Commission.

SOME TELLING FIGURES. The figures of the trade of Madras for December 1928 as compared with the corresponding period of the previous year reveal certain interesting facts. During December 1928, Madras imported manures to the value of Rs. 2,85,635 as compared with the value in December 1927, Rs. 33,468. On the other hand, we exported oilseeds (groundnut and castor) and ground-nut-cakes to the value of Rs. 1,05,70,139 during December 1928 as against Rs. 10,116,036 worth of the material during the corresponding period of 1927. The obvious inference is that we are sending out enormous quantities of cattle food and manures importing at the same time large quantities of manure. These figures should make us pause and consider how rapidly we are losing cattle power which is the main stay of our agriculture and starving our lands of manurial substances. Such things cannot be allowed to go on if agriculture which is the main occupation of the majority of our people should be a paying proposition.

VILLAGE PANCHAYATS AND VILLAGE COURTS. We have the following in the report of the Board of Revenue on the Settlement of Land Revenue in the Madras Presidency for fasli 1337 (1927-28) :-

The Village Panchayat Act and the Village Courts Act afford greater opportunities to the people to administer local affairs and to participate to a greater extent in local self Government than formerly. However in the district of Cuddappa the successful working of these Acts is retarded to some extent by the existence of fictitious disputes and lack of co-operation and public spirit among the people. The Panchayat Courts are becoming more popular. The members of the depressed classes are slowly becoming conscious of the greater attention paid to them.

INSTRUCTION IN RURAL SCIENCE.—A Mysore experiment. It is understood that the Board of Education in Mysore are about to inaugurate an educational experiment, according to which middle schools in rural areas will be given agricultural bias by including agricultural training in the curriculum thus bringing it into closer relation with the environment of the pupils. The scheme will be introduced in certain select schools. Agriculture will be compulsory subject, as it is believed and we consider quite rightly, that a compulsory course would be useful to all who go through it, and that even to those who do not take up agriculture as an occupation after completing the school course, the value of the training they had received would not be lost to the country-side but would bring their lives into closer relation with the environment. In order to ensure the successful working of the scheme it is insisted that the teacher should be well trained in agriculture and be able to demonstrate the latest agricultural methods and improvements. He should be able not only to train boys but also

to afford guidance to the neighbourhood and be a source of advice and a centre of propaganda in respect of agricultural matters. The scheme has great possibilities and we heartily wish it all success.

OBSERVE THE TREES. Yes; observe the trees to judge the wind's speed. We read the following in the *Popular Mechanics*.

When the tree's leaves are still, there is no appreciable wind, or its speed is usually less than two miles per hour. Faintly stirring leaves indicate a wind speed of about five miles an hour. When the branches move slightly, the speed is nearly 10 miles an hour and, if they bend a little, the wind is moving in the neighbourhood of fifteen. At twenty five miles, leaves will sometimes be blown from the trees, and when small branches are broken off, the rate is thirty-five miles an hour or more.

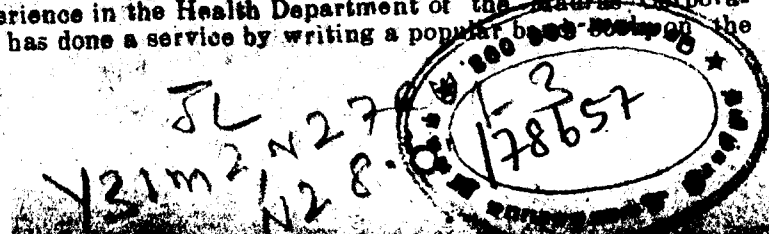
VILLAGE SELF GOVERNMENT IN BENGAL: Village Self-Government in Bengal practically started, with the passing of the Village Self-Government Act of 1919 and now there are about 4,000 Union Boards out of a possible number of 5,500. Amongst their duties, are the assessment and collection of Union rents for the Village police which are compulsory, while the Boards are empowered to impose taxes providing a system of roads and water-supply, the banishment of illiteracy and for concerting measures dealing with public health and medical relief.

The members of successful Union Boards have been allowed to form Union Benchers or Courts for dealing with petty cases. In 1926-27, 3,000 Union Boards had raised Rs 5½ lakhs for purposes other than the payment of the Village police. Altogether, these Boards in Bengal raised about 17 lakhs, of which they spent 4½ lakhs on roads, 2¾ lakhs on water supply, 2½ lakhs on schools and Rs. 80,000 on dispensaries. The work of the Bench Courts is described as efficient, cheap and lasting. An enormous amount of work has been done by these Boards in regard to rural uplift.

Reviews and Notices

CHOLERA, ITS PREVENTION AND TREATMENT:
by A.M. Vayyapuri Mudaliar, Medical officer in charge, Krishnamper Infectious Diseases Hospital, Madras. (1928)
Price Annas Ten

Mr. A. M. Vayyapuri Mudaliar who is best fitted to deal with the subject being in charge of one of the biggest infectious diseases Hospital in the City of Madras with long and varied experience in the Health Department of the Madras Corporation has done a service by writing a popular book on the



prevention and treatment of cholera the dread disease which counts thousands of deaths every year. It is in the main a water-borne disease, the bacillus of cholera entering by the stomach. The mortality from cholera is greatest at the beginning of an epidemic as at that time there are several who are susceptible and fall an easy victim to it. As cholera is a water-borne disease, it is advisable to use boiled water always and it is safe to avoid the use of milk and milk products during epidemics as they form favourable media for the rapid development of the specific germs. All food including vegetables should be thoroughly cooked and eaten hot. Unripe or overripe fruits, salt fish, and decomposed food are dangerous. Above all cleanliness is a great consideration. Purgatives should not be taken during an epidemic and if diarrhoea occurs it should be treated at once. The book contains several such useful hints on the prevention of the disease and for the observance of sanitary measures. The chapter on the treatment of cholera will be found very helpful to medical men engaged in the treatment of the disease.

x x x x x x

We have received *Kisan* (Hindi) a Journal devoted to agriculture and kindred subjects, published in Indore. In the current issue there are number of articles useful to agriculturists. The articles on 'unemployment' and on 'cattle' are particularly interesting.

SELF CULTURE "A quarterly magazine and review for promoting success in health and happiness"—Ed tor Dr. K. T. Ramaswami Ph. D.—The Indian Academy of Science, Kizhannathur, Tinnavelly Dt. Annual subscription Rs 3. Single copy annas twelve. We have received the opening issue of this magazine (Oct—Decr. 1928) which contains varied and useful matter.

RAMBLES IN THE WEST. By Dewan Bahadur C. V. Viswanatha Sastri, B.A., B.L., Retired Dt. & Sessions Judge; for some time Judge, H. M's High Court, Madras.

The interesting account of the author's recent travels in the west has been lying on our table for some time. The volume is a collection of letters which originally appeared in the "Swarajya". Mr. Viswanatha Sastri who wields a facile pen has given us a very attractive picture of the countries he visited, France, England, Scotland, Belgium, Holland, Germany, Switzerland and Italy. The volume before us is full of interesting matter descriptive of the life and customs in the countries he had visited. It is not a mere record of the author's itinerary but is a lively account interspersed with personal reminiscences, interesting anecdotes and humorous episodes. We would strongly recommend the perusal of the book to any one who is contemplating a visit to the west. He will find it a trustworthy companion and an intellectual guide. We thank Mr. Sastri for making available his rambles in book form.

prevention and treatment of cholera the dread disease which counts thousands of deaths every year. It is in the main a water-borne disease, the bacillus of cholera entering by the stomach. The mortality from cholera is greatest at the beginning of an epidemic as at that time there are several who are susceptible and fall an easy victim to it. As cholera is a water-borne disease, it is advisable to use boiled water always and it is safe to avoid the use of milk and milk products during epidemics as they form favourable media for the rapid development of the specific germs. All food including vegetables should be thoroughly cooked and eaten hot. Unripe or overripe fruits, salt fish, and decomposed food are dangerous. Above all cleanliness is a great consideration. Purgatives should not be taken during an epidemic and if diarrhoea occurs it should be treated at once. The book contains several such useful hints on the prevention of the disease and for the observance of sanitary measures. The chapter on the treatment of cholera will be found very helpful to medical men engaged in the treatment of the disease.

X X X X X X

We have received *Kisan* (Hindi) a Journal devoted to agriculture and kindred subjects, published in Indore. In the current issue there are number of articles useful to agriculturists. The articles on 'unemployment' and on 'irrigation' are particularly interesting.

SELF CULTURE "A quarterly magazine and review for promoting success in health and happiness." Editor, Dr. K. T. Ramaswami Ph. D. The Indian Academy of Science, Kizhannathur, Tinnavally Dt. Annual subscription Rs 3. Single copy annas twelve. We have received the opening issue of this magazine (Oct. Decr. 1928) which contains varied and useful matter.

RAMBLES IN THE WEST. By Dewan Bahadur C. V. Viswanatha Sastri, B.A., B.L., Retired Dt. & Sessions Judge, for some time Judge, H. M.'s High Court, Madras.

The interesting account of the author's recent travels in the west has been lying on our table for some time. The volume is a collection of letters which originally appeared in the "Swarajya". Mr. Viswanatha Sastri who wields a facile pen has given us a very attractive picture of the countries he visited, France, England, Scotland, Belgium, Holland, Germany, Switzerland and Italy. The volume before us is full of interesting matter descriptive of the life and customs in the countries he had visited. It is not a mere record of the author's itinerary but is a lively account interspersed with personal reminiscences, interesting anecdotes and humorous episodes. We would strongly recommend the perusal of the book to any one who is contemplating a visit to the west. He will find it a trustworthy companion and an intellectual guide. We thank Mr. Sastri for making available his rambles in book form.

SADHANA AUSADHALAYA DACCA (Bengal)

—ADHYAKHA—

Joges Chandra Ghose, M. A. F. C. S. (London)
Formerly Professor of Chemistry, Bhagalpur College.

Guaranteed absolutely Pure & Genuine Medicines prepared
strictly according to the Ayurvedic Sastras

Catalogues are sent free on Application.

Makaradhvaj (Swarna Sindur)

(Pure & with Gold) Rs. 4 per tola

A wonderful, specific for all diseases. It regulates the
nerves bile and phlegm, increases vitality, mental and physical
vigour and tones up the system.

Saribadi Sarsa.

A wonderful, infallible medicine for Syphilis, Mercurial
Poisoning, Gonorrhoea, urinary troubles and all sorts of blood
impurities. Rs 3 per seer.

Sukra Sanjiban

It is a powerful medicine for of all kinds debility, Rs 16 per seer.

Abala Bandhab Jog.

A great remedy for all female diseases as leucorrhoea
white, yellow or dark discharges, pain in the waist back of
womb, irregular monthly courses, sterility &c.

16 doses Rs 2

50 doses Rs 5.

Imitation: merely advertise the original

AMRUTANJAN

The dictionary word for The Pain Balm for 40 years

A MAGIC CURE FOR

RHEUMATISM

LUMBAGO

HEADACHE

STIFF JOINTS



SPRAINS

COUGH, COLD

NEURALGIA

SWELLINGS

and All Aches & Pains

It is easier for a camel to go through the eye of a needle than for aches and pains to enter the kingdom of Amrutanjan!!!

Price 10 As a pot.

Amrutanjan Depot

BOMBAY

&

MADRAS

Published by MR. A. RAJAGOPALA REDDI, President, Forest Panchayat Union, Ltd., Madras. Printed by Mr. T. E. F. KARMA AND SONS, CHENNAI.

5

No. 2169

Vol. IV-3

Rural India.

JOURNAL OF THE MADRAS
FOREST PANCHAYATS.



March, 1929.

Annual, Rs 3
Single Copy As 6

Editor:
A. Swaminatha Iyer, B.A.

24
6
30

Shunmugam Snuff.

Reputed for over 80 years for quality.
Largest sale in India, Burma & Ceylon.

80 Years ago more or less a new Snuff sprang up on the Madras Market. It was the *Shunmugam Snuff* born of the need for a really high class snuff. In prosperity it grew until it established unquestioned leadership.

With n 80 years no other Snuff has come to displace it. The "SHUNMUGAM SNUFF" still stands supreme for its quality, still stands above all other high class snuffs in sales.

1st Quality.

Tolas.	Cost.	Postage.	Packing.	Total.
24 Rs.	1 0 0.	0 5 0.	0 1 0.	1 6 0.
30 Rs.	1 4 0.	0 5 0.	0 1 0.	1 10 0.
120 Rs.	3 8 0.	0 14 0.	0 3 0.	4 9 0.

Postal Parcel Rates.

Special Quality.

120 Rs.	4 0 0.	0 14 0.	0 3 0.	5 1 0.
---------	--------	---------	--------	--------

Dr. R. K. Fr grant or Parimala Snuff.

(THE JOY OF SNUFFERS).

The best & most sweetly Scented Snuff in India. As. 14 phial.

A Sovereign Cure for and prevention of Headache Neuralgia, Scrofula, Nasal Catarrh, toothache and 96 other diseases. Eminent gentlemen have testified to its marvellous effects. Please enquire your snuff-supplier or write to us.

	Cost.	Postage.	Packing.	Total
3 Bottles	0 9 0.	0 4 0.	0 1 0.	0 14 0.
6 Bottles	1 2 0.	0 5 0.	0 1 0.	1 8 0.
12 Bottles	2 4 0.	0 8 0.	0 1 0.	2 13 0.
24 Tolas Tin Rs.	1 9 0.			
12 Tolas Tin As.	0 14 0.			

N. B. A packet of the famous Shunmugam Snuff 80ft years reputation and 1 Bottle of Dr. R. K. Medicated Fragrano Snuff will be forwarded to you by V. P. for Rupee One all charges including.

Shunmugam Snuff Co. Ltd.,

Post Box. 140, Madras.

RURAL INDIA

(Journal of the Madras Forest Panchayats)
A monthly Periodical devoted to the discussion of all
Topics of Rural interest.

EDITED BY

A. SWAMINATHA AIYAR.

Office - No 9, Brodie's Road, Mylapore, Madras S.

Vol. IV.

March, 1929.

No. 3.

CONTENTS.

No		Page
1	Recent Agricultural Developments in Madras By Rudolph D. Anstead, C. I. E.	53
2.	Happy Village By Prof N. G. Ranga, B. Litt. (Oxon)	61
3.	Cattle in India By A. Swaminatha Aiyar, B. A.	65
4.	Rickets in Children	69
5.	Food and Fitness	73
6.	The New Year Honours	73
7.	Notes and Comments The Rt. Honble V. S. Srinivasa Sastry - Dewan Bahadur T. Raghavaya C. S. I. - Economic En- quiry - Slaughter of Milch cows - The Co-opera- tive Ideal - The Madras Budget and Rural Development - Agricultural Co-operative Socie- ties - State Forests - Depressed Classes - The Handloom Weaving Industry - Manures - Panch- Panchayats Conference	78
8.	Reviews and Notices	

Annual Subscription (inclusive of Postage)
Inland Rs. 3 : Foreign Rs 4-8.

Single copy, Inland As 6 : Foreign As 8.

Rural India reaches the Villages and Towns of India
It is the best medium for advertisement.

Bharata Dharma
 A Magazine of Liberal Hinduism
 The Official Organ of the Bharata Samaj
 Published Monthly—Every Full-Moon Day
 Editor Mr. S. Raja Ram
 Annual Subscription Re. 1-8 ; Single copy As. 4 ;
 Foreign 3Sh. & 4d.
 The best Medium for Advertisement.
 For copies & Advertisement rates apply to :—
 The Managing Editor,
 'Bharata Dharma' Adyar.

A r o o d a m !!!

For 5 questions Re. 1
 Each additional question As 4
 V. P. and Postal charges extra
Sri Sakthi Talisman: By wearing this one would
 improve in Trade, Employment, Agriculture etc. All
 troubles peculiar to the fair sex and Children could be
 averted.

Price Rs 2 only
 V P and Postage extra. If you want a reply
 please send postage stamps.
 Foreign: Double the above rates to be sent in advance
 Apply to :

Palasoor N. Ramanatha Sastri,
 Pandit, Adyar Library,
 Mylapore, Madras

THE INDIAN EDUCATOR, MADURA.
 An Illustrated High Class Cheap Monthly.
 Editor : V. Aravamudan Iyengar B.A., L.T.
 Annual subscription Rs. 2 only: Sample copies 3 As.
 Controlled by an influential Editorial Board.
 Recommended by District Educational Officers
 For use in Schools, Colleges, Clubs and Libraries
 Best Advertising Medium.
 Send M. O. to the Manager
 The Indian Educator, Maduras.

THE NATURE HEALER

The only Indian Monthly Journal in English on
NATURE CURE.

Edited by Mr. N. C. Chatterje, B. L.

Apply to :—

The Manager,—**THE NATURE HEALER,**
 20-a Kaliprasad Chakrabarty Street,
 Baghbazar, Calcutt

PEACE.

A high class Monthly of Life, Light & Love, in English.
 Annual Subscription Rs. 3.

SANTI.

A high class Telugu monthly run on the same lines as that
 of the English Journal. Annual Subscription Rs 2 only.

For both the journals Annual Subscription Rs. 4—8 only
 Swami Omkar President
 Swami Rajeswarananda Editor

SRI SANTI ASRAM,

Totapalli Hills, Santi Asram Post,
 Peddapuram Taluk, Godavary Dt. India

The Health.

The Premier Monthly of its kind in India
 can be had in **ENGLISH, TAMIL, TELUGU**
 or **CANARESE**

at Re. 1—8 a year Post Paid.

Apply to : The Manager, The Health, Post Box 166,

Hindi Pracharak.

193 High Road, Triplicane, Madras

The only organ of the Dakshina Bharat Hindi Prachar Sabha
 Consists of two sections :—Hindi & English.

To Subscribe to it is to To Subscribe

To the Hindi Movement.

Annual Subscription Rs 1—8 Students Re. 1

COMMERCIAL EDUCATION

India's most popular monthly Magazine of Business Training with specialised sections on Accountancy, Salesmanship, Mail-Order Business, Banking and Finance, Advertising, Spare-time Occupation, Formulas and Recipes and etc. Particulars of special terms now offered can be had from:-

The Manager, C. E. Office,

Post Box 2020, Calcutta.

JUNGLEWALLAH.

A monthly journal dealing with Forestry, Sylviculture and kindred subjects. Published by Mr. C. P. Garudachari, Mudaliar Retired Forest Range Officer, Wee-Nestle, Mambalam Madras.

ANNUAL SUBSCRIPTION

Rupees 5 for those whose monthly income is above Rs. 75 and Rs. 3 for those below 75.

SAMPLE COPIES FREE.

The Student, Chingleput S. I.

The only All-India Magazine for High School Students.

ANNUAL SUBSCRIPTION Single Copy Against **Rs. 2.** 3 Annas in stamps. Free Copies Positively No.

Send M. O. to the MANAGER No. V. P. P.

THE CHILDREN'S NEWS

(An illustrated English Monthly for Boys and Girls)

Recommended and approved by Directors General of Public Instructions, Education Ministers, Inspectors of Schools, Headmasters, Principals and such.

THE MANAGER,

The Children's News

(A. P. B.) Ekertan Road, Delhi

A Golden Wrist Watch Free!

Please secure 5 Subscribers and you will get free the above mentioned watch. THE "ECONOMIST"

A monthly Journal of Economics, Industries and Commerce. 5,000 copies circulated every month throughout India, Burma, Ceylon and Straits. ADVERTISEMENT RATES.

One page contg. 3 columns Rs. 10 per month.

One column (8" X 2") Rs. 4 " "

Half column (4" X 2") Rs. 2-8 " "

Quarter column (2" X 2") Rs. 1-8 " "

One inch Re I no voucher given

All Payable strictly in advance.

Subscription Rates Annual Re. 1 Foreign Re. 1-8 post free

N. B. For full particulars regarding free watch, please apply for free sample, copy

to the Manager, THE "ECONOMIST"

Office:—4, Shama Charan Dey St., Calcutta.

It will 'pay' you!

To Advertise your Goods in

The Premier Telugu Monthly

SUBHASHI

Rajas, Maharajas, Zaminders, Businessmen, Taluqdars and Educationists read it.

For Particulars please write to:—

Manager, "Subhashi" Rajahmundry

UPANISHADS

By Swami Sharvananda.

Isha and Kena	...	each	As 6
Katha and Prasna	...	each	" 12
Mundaka Mandukya (combined)	...	each	" 12
Taittiriya	...	each	" 14
Aitareya upanishad	...	each	" 6

(To the Subscribers of "Vedanta Kesari" each As 2 less.)

(Started May 1914.)

Editor: Swami Yatiswarananda.

A high-class religious and philosophical monthly in English devoted to practical and popular exposition of the Vedanta—interprets religion in the light of the universal teaching of Sri Ramakrishna and Swami Vivekananda. Deals with the most momentous questions of the day, social, educational, economic etc.,—on non-sectarian lines. Having a wide circulation all over India, Burma, Ceylon, F. M. S. United States of America and other foreign countries, it is an excellent medium of Advertisement.

Volume XV began from May 1928. Annual Subscription Inland Rs. 3, Foreign Rs. 4 8.

(Many books at concession rates to the Subscribers)

Apply to The Manager, Vedanta Kesari, Sri Ramakrishna Math, Mylapore, Madras.

Dr. G. B's Medicated Snuff.

Registered

A Sovereign remedy for Neural-



gia, Scrofula, Nasal Catarrh, Head-
ache, Toothache and such other
kindred ailments.

Try a bottle and be now con-
vinced.

Price As. 4 a bottle

Trade Mark

Sole Manufacturers :-

GURU BASAVA & Co., Ltd.,

Snuff Manufacturing Specialists,

Post Box No. 519, Park Town, MADRAS.

Tele: "Medicated"
Telephone No. 3272.

J. C. Nageshettiar,
Managing Director

The Madras Journal of Co-operation

The Premier Co-operative Monthly in India.
Voices forth the Co-operative Opinion of the
Province.

ANNUAL SUBSCRIPTION

Inland :—(Including postage)—Rs. 4

Foreign :— " " Rs. 4—12—0

Please Apply to :-

The Madras Provincial Co-operative Union,
Royapetta, Madras, S. India.

THE EASTERN HERALD.

A high class Monthly Journal.

Annual Subscription Rs 2 Foreign 5 Shillings,
Kalinga Buildings, Vizianagram City.

Wonders of the Ancient Manuscripts

Original, Valuable, Worth Reading, Interesting
and Very Useful.

Celestial Correspondence Vol 2.

Book of strange secrets, wonders and mysteries in lucid
English. This book contains many hidden mysteries & re-
velations yet unpublished & unknown to the world. Besides
many it contains the mantric cures, how to attain mysterious
powers, mystery of life-No fear of Death, Experiences of
Hindu practical Yogis and Rishis. The True Religion Re-
vealed, Secrets of Hindu Yogic Culture & Occultism, wonders
of the other worlds a mere reading of which helps us to for-
get the miseries of the world, first message from the Spirit of
Swami Vivekananda, miracles of prayer, etc. An Encyclopædia
of a very useful knowledge first of its kind-published for the
Benefit of humanity. Believe us & try and you will be mar-
vellously convinced. Price per copy Rs. 2 Postage extra.

Apply to :—Tata Indian Science Institute,
Vizianagram City. B. N. Ry. (S. India.)

The Mysore Economic Journal

THE ONLY JOURNAL OF
ITS KIND IN INDIA.

Has a large number of First-Class
Contributors on Economic Topics.

Sir Roper Lethbridge Writes :—

"MOST ADMIRABLE JOURNAL"

Sample copy : One Rupee.

Apply to Editor :-

'Mysore Economic Journal'

Gundopunt Building, Bangalore City P. O.

FEDERATED INDIA.

An All-India Popular Weekly.

Subscription Rs. 5 only, per annum.

323, Tiruvattur High Road, Madras.

RURAL INDIA

EDITORIAL AND PUBLISHING OFFICE

9, Brodies Road, Mylpore, Madras, India.

An all India Journal, the only one of its kind devoted to the discussion of

Rural Problems and Village Reconstruction.

"Rural India" stands for better farming, better business, and better living and will endeavour to disseminate sound ideas on rural education, rural sanitation, agricultural improvements, co-operation and cottage industries.

Annual subscription (Inland) Rs 3 Foreign Rs. 4-8-0. Single copy Inland Annas Six; Foreign annas Eight.

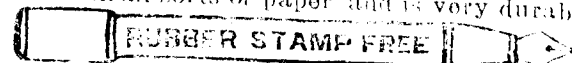
As it largely circulates in villages, "Rural India" will be a first class medium of advertisement. For rates apply to the manager.

The Editor will be glad to consider contributions on all topics of rural welfare. Contributions should be neatly typed on one side of the page. Rejected manuscripts will be returned on receipt of stamps to cover postage.

FREE!

Rubber Stamp.

A fountain pen with 14-ct. Rolled Gold Nib which will write on all sorts of paper and is very durable.



Rubber Stamp with their address supplied free.

1 Pen Costs Rs. 2 10 0 Catalogue Free,

G. S. & Co., 8, Gopindapur, Rajahmundry Street,

MADRAS.

'Cross-Words Magazine'

(A Fortnightly Journal Devoted to Crosswords Sport, Art, Literature, Commerce and Industry)

For particulars, apply to

The Manager, Cross-words Syndicate

Chingleput, S. India.

RURAL INDIA

Managing Editor :-A. Swaminatha Iyer, B.A.

Vol. IV.

MARCH, 1929

No. 3

Recent Agricultural Developments in Madras

By Rudolph D. Anstead, C. I. E.,

Director of Agriculture, Madras Presidency.

In the Madras Presidency we have a very wide range of conditions and we are able to grow in consequence more or less every crop which is grown in India with the single exception perhaps of Bengal jute.

On the East Coast we have three large deltas with big irrigation systems and a net-work of canals which carry paddy, on the West Coast we have an intricate maze of rivers and back waters; in the central regions we have land which is cultivated under wells and tanks, or merely rainfed and in the north the rainfall is so precarious that we are seldom free from famine conditions of greater or less intensity. Down the western side of the Presidency runs a range of hills which rise to 9000 feet in places and provide dense jungles and open rolling grass downs. Here are situated our Hill stations where fruit and flowers can be grown which will rival those grown in England. Large areas have been brought under tea, coffee, and rubber.

Our soils range from heavy black cotton soils, through clay loams, laterites and gravels to almost pure sands, the latter carrying coconuts and casaurina.

We depend upon both monsoons and our rainfall varies from 300 inches to 20 or less. Our main crops are paddy and cotton, and we have large areas under groundnuts, millets, and

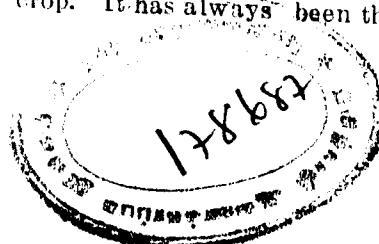
¶ Notes of an address given to the Science Congress.

coconuts. Sugarcane is a minor crop and is grown in small patches all over the Presidency and we look on a five acre block of cane as rather a big thing.

It will be understood therefore that our agricultural problems spread over a very wide range.

As in other Provinces we have paid a great deal of attention to crop improvement by selection and breeding, especially with our two main crops paddy and cotton. Development in recent years has been in the opening of new breeding stations to serve particular areas and in the study of other crops. Thus we now have four Paddy Breeding stations, one at Coimbatore, the head-quarter station, one at Aduturai to serve the Tanjore delta, one at Maruteru to serve the Godavari delta, and one at Pattambi to serve the West Coast. So also with cotton we have several subsidiary stations as well as the head-quarter station at Coimbatore. In 1923, a Millet breeding station was started at Coimbatore and we are now taking steps to open a subsidiary station for millets and cotton work, these two crops being grown in rotation in the Bellary district at Adoni. Considerable progress has been made with the improvement of cholam and ragi by the usual methods of selection and it is hoped to issue the first of the improved strains to the ryots in the coming year. A beginning has also been made in a small way with the improvement of groundnuts in the same way and we contemplate the appointment of an oil-seeds Specialist before long to take up the intensive study of this crop as well as coconuts. The latter is a big and important crop with us, along our sea-coasts. Under our conditions the coconut is never self fertilised naturally so that selection of nuts for sowing purposes is of limited value. We have evolved a method which has proved quite successful of selfing selected trees and a number of plants have been raised as a result of both self-fertilization and cross fertilization of trees chosen for special characters. It will naturally take a long time to produce any results of a tangible nature but a start has been made.

In recent years another advance has been made with this crop. It has always been thought that coconuts can only be



grown in places where they can be watered, at least in the young stages, during the hot weather. We have been able to demonstrate on a very wide scale that coconuts can be grown quite successfully from the nursery stage without any water except the natural rainfall if dry farming methods are employed and the plants are set out 30 to 35 feet apart and the soil between them thoroughly inter-cultivated during the hot weather. This has enabled large areas of land hitherto carrying no crop at all to be placed under coconuts. Grown under these conditions, the palms come into full bearing at 8 to 10 years old which is a gain of several years over the local method of cultivation.

A considerable number of improved strains of both paddy and cotton have been evolved on the breeding stations and issued to the ryots. These have become popular and are in great demand but it is difficult, often impossible, to supply seed. To overcome this difficulty we have organised a system of seed farms conducted under a simple agreement with selected ryots. There is nothing novel about this system but we are now endeavouring to persuade the seed farm ryots to form co-operative societies for the multiplication and supply of seed and in the case of cotton to combine this work with co-operative ginning and the sale of pure unmixed lint of standard types.

Full advantage of the improved strains of cotton has not been obtained by the ryots owing to the unpopularity of legislation introduced in the first place to control the ravages of insect pests and the second to control the mixing of lint types. The Pest Act and the Cotton Transport Act have raised a storm of controversy and unfortunately brought agriculture into the realm of politics with the result that both Acts have been so modified that they are largely abortive and certainly do not now produce the result for which they were originally designed.

Cultural improvements such as the economic planting of paddy from thinly sown nurseries, the drilling, sowing and subsequent intercultivation of cotton and millets with bullock drawn implements have been adopted over wide areas as a result of demonstration and propaganda work.

JL
43122, N29 RU
N29.4.1-3

Now that a strain of combodia cotton has been isolated which is vigorous and produces lint of fair quality and we are in a fair way to do the same for rainfed cottons we have begun to pay our attention to the cultivation and manuring of this crop. The question of the best time at which to sow is now under investigation. The local practice is to wait for the monsoon rains, but the results of our experiments have shown that the interval between the date of sowing and the date of picking has a profound effect upon the final yield, and early sown cotton has in our hands given nearly four times the yield of later sown cotton. If future experiments confirm this result the introduction by the ryots of early sowing should have far-reaching effects.

The use of light iron ploughs is also spreading but more slowly, probably on account of their price and also because of the smallness of the cattle in some places. About 2000 ploughs a year are purchased and there must be some 10,000 now at work in the Presidency. The increased use of implements like ploughs and three roller cane crushing mills is linked up with the problem of cattle breeding and fodder production in a very intimate way and these problems have to be dealt with as a whole and they will take time and patience to solve. We have recently started an organised campaign with the demonstration of pit silage making, but it is not always easy to find the material to silage when the cultivator does not grow enough fodder to feed his animals even in the rainy season and when he is tempted to place land under a money crop rather than under a fodder crop. There are opportunities, however on the West Coast of converting the hill grasses into valuable silage and this idea is being exploited.

By economic planting, by green manuring, and by using selected strains the department has demonstrated to the ryots that it is possible to increase the yield of paddy very considerably and these methods have been applied to other crops and widely adopted. But there is a limit to this, the limiting factor being the quantity of available manurial constituents, especially phosphorous and nitrogen in the soil. To maintain these increased yields and to obtain still better yields, more intensive

manuring is necessary and unless this is attended to there is a danger that the introduction of improved strains which are inherently heavy yielders may do more harm than good by exhausting an already impoverished soil. This is a point of view which has been brought to the notice of this Congress in former years.

There is not enough cattle manure to go round and the use of artificials is indicated. Ten years ago, Dr. Harrison had shown that the nitrogen in green manure is largely dissipated in the form of gas and experiments conducted on our station at Manganallur based on his work had shown that paddy responds well to a concentrated nitrogenous manure such as sulphate of ammonia in addition to green manure and that this is particularly the case when phosphate is also added.

The difficulty at that time which stood in the way of demonstrating this to the ryots was the very high price of all imported artificials like sulphate of ammonia and superphosphate while the price of bone-meal was also tending to rise owing to the export demand and the supply of fish manure from the West Coast was variable depending upon the seasons.

Of late years the whole situation has changed and now not only sulphate of ammonia and superphosphate are easily obtainable at reasonable prices but firms are vying with one another to sell all kinds of artificials and one of the outstanding features of recent years is the way in which the ryots have waked up to the value of manures and are quite ready to buy them. Over 3,000 tons of sulphate of ammonia alone was purchased last year. This is due to the fact that the department had demonstrated the value of green manure and cattle and fish manure and planted the idea in their minds.

But they are now being besieged by propagandists and firms to buy sulphate of ammonia, nitrate of soda, calcium cyanamide, ammophos, leunaphos, nitrochalk and a number of other new fertilisers about which no one knows anything at all. They naturally turn to the Agricultural department for advice, but unfortunately we also know little or nothing about these new fertilisers and as yet have had no time to experiment with them. Realising, however, that it is our duty to test them out,

we are just starting an experiment station on a new plan. This station will be subsidised by manure firms. The cost of each trial has been worked out and firms will pay a subsidy as a proportionate share, of the total cost based on the number of trials which they wish to have made. The Agricultural department will carry out the work and the trials will be conducted on scientific lines based on the latest method adopted at Rothamsted over a period of five years when the results will be published.

In this way, it is hoped to give a thorough trial to all new fertilisers placed on the market. In the first instance the trials will be confined to paddy, but if the scheme proves popular and successful it will be extended to trials with other crops and on dry as well as on wet lands.

There is a danger at present that these cheap artificial manures will be used to replace organic manures and not merely to supplement them and this leads me to speak of another problem on which we have done a good deal of work recently. It was found by a study of our permanent manure plots that seed produced in the different plots behaved in different ways, depending upon how the crop from which it was obtained had been manured. When sown on soil of average fertility seed produced on plots which had been manured with cattle manure gave a much better crop than seed which had been produced on plots manured with artificials only. This somewhat surprising result was followed up and in collaboration with Lt. Col. Mc. Carson it has been found that the food value and vitamine content of the grain is probably dependent upon, and can be controlled by, the system of manuring, and that in order to produce grain of high food value the crop must be manured with organic manure. What the minimum quantity of organic manure necessary to ensure a full vitamine content in the resulting grain may be we do not yet know but if it is all replaced by minerals the food value and vitamine content of the grain fall beneath that of an unmanured crop.

This has opened up a new field of study and we are beginning to pay attention to the study of the food value of paddy

and other crops from all points of view. It emphasises the necessity for increasing the supply of organic manure and the system of producing artificial farm yard manure advocated by Rothamsted has been carefully studied and we have now been able to prepare good material from waste products like prickly-pear, can trash, weeds, stubbles, cotton stalks and even groundnut husk by a method which is demonstrable to the ryots. We are also about to instal an experimental activated sludge Plant at Coimbatore to convert our estate sewage into fertiliser for the farm.

We have also taken up the study of animal nutrition and have our own buildings and staff at Coimbatore so that we can work out local problems. We carry on this work in collaboration with and under the friendly guidance of Mr. Warth, the Imperial Physiological Chemist at Bangalore.

Turning now to other sections, we have recently attempted the biological control of a caterpillar pest of coconuts on the West Coast. This pest was introduced a few years ago to the West from the East Coast on coconut leaves carried on the railway, and it was introduced without the parasites which control it naturally on the East Coast. The consequence was that it spread with alarming rapidity and did a great deal of damage. We have now introduced a number of its natural parasites and have established laboratories where these are bred and released in large numbers. This method has met with considerable success and the pest is being kept under reasonable control. Quite recently the *Icerya* scale has made its appearance in the Nilgiris where it is attacking Wattle and a number of local weeds. We propose to deal with this biologically also and are only awaiting a consignment of the necessary lady bird beetle from South Africa and Australia.

Satisfactory progress has been made in recent years with the control of fungoid diseases of crops. A fungus which attacks the fruit bunches of the areca palm during the monsoon has proved controllable by spraying just before the rains with Bordeaux Mixture and this method is now adopted on a large scale and involves millions of trees. The bud-rot disease of palmyra palms on the East Coast is also being controlled suc-

cessfully by systematic destruction of dead trees and removal of attacked leaves at the outset of infection. The Pest Act has been introduced to deal with this disease and it has worked quite smoothly and the work is carried out systematically by the Revenue Department under our guidance, a special staff being employed for the purpose.

The most recent development in mycological research of recent years has been the search for stains resistant to certain diseases, a more logical way of attacking the disease problem in general than a frontal attack on the disease itself which can never give a permanent amelioration. This work now involves several crops and fungi among which may be mentioned the mosaic of sugarcane, piricularia of paddy, and the wilt of groundnuts.

On the propaganda and district work side we have found that the most satisfactory way of getting information to the ryots and persuading them to adopt new methods is to demonstrate the improvement whatever it may be on their own land so that they may be convinced that it is an improvement in the first place and that it can be carried out under their conditions of life and farming in the second place. We now have hundreds of such demonstrations and confine ourselves to small plots rather than trying to conduct big demonstration areas or model farms. The latter we have persuaded co-operative societies to undertake and we now have a few better farming co-operative societies which conduct small model farms on which the improved methods of cultivation and manuring advocated by the department are adopted and demonstrated, one or two plots being farmed in accordance with local methods to act as a control and contrast. Departmental officers supply advice and draw up cropping schemes but the society runs the farm and keeps a profit and loss account so that it is able to demonstrate to the members the monetary gain to be obtained by the adoption of these improved methods. I may say that in the case of paddy it amounts on the average to an increased profit of about Rs. 25 per acre. Improved strains of seed are grown on these farms and the seed is sold to the members of the society. Some of these societies are now beginning to conduct the sale of implements and manures.

We take advantage of all local fairs and festivals to hold small agricultural exhibitions and to deliver lantern lectures. and we endeavour to make these as practical as possible, that is to say, we give actual demonstrations of iron ploughs at work for example and allow and encourage the visitors to handle them themselves; during the cane crushing season we erect a sindewahe furnace and actually make jaggery over it in a thin pan, and so on.

We have just built and equipped a travelling motor van to carry an exhibition from village to village thinking that in this part of the world where we have not many railways and where they do not always pass through most densely populated rural areas such vans would serve our purpose better than exhibition trains. We hope before long to add a cinema outfit to it; at present it carries a magic lantern outfit.

I have now touched quite briefly on some of the more important and outstanding recent developments of the Madras Agricultural Department. I have not touched on the thorny problem of agricultural education nor on cattle breeding work which is being done on a large scale on three cattle farms the largest of which is at Hosur, near Bangalore.

Happy Village.

By Prof : N. G. Ranga, B. Litt. (Oxon).

We hear so many people criticising adversely the report of the Royal Commission on Agriculture because it has provided us with no definite programme of rural reconstruction. But none of them seems to have realised that unless a complete survey of all the experiments made in rural reconstruction in different parts of the country is made, no one can prepare a definite line of work. We have several rural reconstruction centres in different parts of the Madras Presidency and the experiments made in them are based upon different programmes of work. To take for instance, the work carried on by the rural reconstruction trust under the guidance of Mr. Venkatasubbayya of the servants of India Society, the main objects for this centre are the maintaining of an account of farm costs, to see whether a scientifically managed farm pays better than

any ordinary farm, to introduce new manures, tested seed, green manure, seed drills, iron ploughs and proper weeding and transplantation; to find out the different avenues along which a village school teacher can render help and assistance to this centre and to devise ways and means by which elementary and adult education can be made universally applicable. This is an example of a very intensive local demonstration work.

On the other hand all the rural reconstruction centres organised by the Chingleput District Board are intended to perform not only the above functions but also to find out the different methods by which the administrative officers of the Government, belonging to different Development Departments can be made to render assistance to such work. In addition to this work, magic lantern lectures and Harikatha Kalakshepams are to be carried on from time to time in such centres. According to the rural reconstruction scheme of Mr. V. Ramadoss Pantulu, a few villages are to be taken into one centre and experiments are to be made into the possibilities of rendering social service and economic help to the villagers in a field of work which embraces more than one village. In such a centre the Government Officers as well as the permanent social worker are expected to be in close co-operation with each other. It is yet too early to say which of these three experiments is the best suited for our country. I think that these three centres possess several distinct features of their own which if brought together into the activities of a rural reconstruction centre would certainly make it a good success.

We find in any village we may like to take, various ryots making experiments in various branches of work, namely manuring their lands properly, purchasing proper seed, removing prickly pear, digging their wells very deep, growing avenues of coconuts or other trees on either side of the cattle-walks by the wells or growing a few plaintains, tamarind, palmyras, coconuts or vegetables and so on. And yet we find that the other ryots of the same village not interesting themselves in any of these fruitful sources of employment and blindly carrying on

their unvariegated system of agriculture. Here and there we do find some house wives tending a few sheep and goats, keeping a few chicken or marketing the curds and milk of their cattle daily or weekly in the local markets or shandies. Such women are able to earn enough to provide the family with cloths needed for the year, sweets demanded by the children and ordinary accompaniments to staple food such as onions, tamarind, salt, chillies and beans with the money realised through any or all of those above-mentioned activities. A few Adi Dravidas may be trying to rid themselves of their indebtedness by earning a few rupees more than usual by interesting themselves in any of the following employments: -engaging themselves as annual servants, renting others' lands, keeping sheep, goats or poultry, manufacturing shoes, ropes, mats

What is needed for such a village is, not only Demonstration farm, wherein the profitability of intensive and diversified culture is demonstrated but also a full-time social worker who learns from the experience of such progressive individuals as have been mentioned above. He has to try to popularise the knowledge thus gained among the people at large. In order to carry out this function satisfactorily, he must first of all make a detailed survey of all that is going on in a village as far as advanced and profitable methods of work are concerned. Then he will have to find out the causes for the apathy of the masses towards the progressive methods of agriculture and to devise means by which he can persuade them to adopt such methods.

We find in every village a tendency for expenditure to rise very quickly while there is almost no chance for income to rise correspondingly. Because of the indirect influence of the life led by the educated and semi-educated young of the villages who constantly come into touch with city life and its luxuries, the standard of living of the ryots and their workers tends to rise abnormally in several wasteful directions. Even if we take those sections of the population which have not come under this baneful influence of so-called educated people, we shall find much to complain of. To take for instance, the chucklers or the Pallas, more than one-eighth of their weekly earnings are wasted upon toddy, while their women spend the

few pies they are able to earn, upon betel leaves, chunam, boiled roots and toddy. Even if we take the Vellalas of Salem and Coimbatore Districts, most of them are so addicted to drink and other wasteful habits of life that their own women do not often trust them with money. If we want to prevent all these people from becoming victims to bad habits of life we shall have to expect the social worker of our rural reconstruction centre to make a thorough study of the existing systems of living which prevail among different sections of the population. Then he may be expected to come to some useful conclusions as to how to combat the evils of wastefulness and low living. In addition to this our social worker will have to take a few families for special enquiry which are trying to spend their money in such a way as to get the best satisfaction out of it. With the knowledge thus gained, this social worker may be able to plan out a scheme of work by which he can carry on a campaign among different sections of the population for the minimising of the channels of wasteful expenditure. To achieve this purpose, I think it is advisable to form what is known as "Better-Living Society" in every village and to carry on an intensive house to house, individual to individual, propaganda and inspection day after day for years to come with the active help and co-operation of other social workers in the village and the occasional assistance of national leaders of rural reconstruction. Unless we pay serious attention to this side of our work, which has unfortunately escaped the attention of our social workers till now, there is no chance for any of our attempts towards rural reconstruction to result beneficially. If we do not try to maximise the real satisfaction to be derived from the expenditure upon all those commodities which are necessary for human existence, it is almost useless for us to attempt to find means by which the earnings of villagers can be increased. It is time for us to realise that just as a sword in the hands of a child is dangerous not only to the child but also to others, so also money placed in the hands of those who do not know how to use it, is dangerous not only to them but also to others.



Cattle in India.

Some Representative Types

By A. Swaminatha Aiyar, Deputy Collector, (Retd.)

Editor "Rural India."

By cattle we ordinarily mean Bovine animals, principally of two species—European cattle and the humped cattle of India and Africa. When man first turned his attention to the domestication of wild cattle is lost in the mists of antiquity. It may however be assumed that his first attempt at domestication must have been coeval with his emergence from the nomadic to the agricultural state, that is, when he began to produce the food he needed for his sustenance. That would take us to a period long anterior to the Vedic age. In the Rig Veda Samhitas we have numerous hymns indicative of settled agricultural life and the use of cattle in agriculture. We come across such hymns of praise as the following addressed to Rudra:—"We offer those praises to the mighty Rudra with the braided hair, the destroyer of heroes, in order that health may be enjoyed by bipeds and quadrupeds and that all beings in this village may be well nourished and free from disease. "Harm us not Rudra in our sons and grand-sons or other male descendants nor in our cattle nor with our herds inflamed with anger kill not our valient men, for we, presenting clarified butter, perpetually invoke Thee." "Destroyer of heroes, may thy cow-killing or manslaying weapon be far away and the felicity granted by Thee be ours." These hymns addressed to the Mountain Lord with the *trishula* (trident) and the sacred bull (*vrishabha*) as His mount are significant.

The most striking feature of the modern breeds of domestic animals is that they consist of strains which differ in form, colour and disposition, for man has come into contact with and has more or less influenced wild forms as a sportsman, as a stock owner, as an agriculturist and in many other ways thus disturbing, so to say, the stability of a species by domestication. As regards form, domestication appears to have from the beginning lead to variation in the skin, limbs, horns etc. The hump is the peculiar characteristic of the Indian type which is absent in the European cattle. In voice also, Indian cattle differ much from the European races; in place of the ringing bellow of the English bull in which both lungs and throat play an important part there is a coarse guttural grunt or half-cough thrown down. These are the two main distinguishing characteristics of the two races.

In form or general appearance, Indian cattle are as a rule inclined to be leggy and rather thinly made up. They carry

little fish and are in this respect strikingly deficient in their thighs. Taken as a race, Indian cattle represented by pure bred specimens, are what may be termed whole-coloured as opposed to broken-coloured. The most common colour of Indian cattle is white or light grey in the body and the ends of the limbs are of various shades which blend harmoniously. When broken or patchy colours appear they with few exceptions indicate cross-breeding of more or less recent date. A most interesting and remarkable peculiarity of the Indian cattle is the fact that however white the hair, they mostly have dark skins underneath. Could it be that the dark skin is provided by nature to enable Indian cattle to stand the hot sun of the country? The point probably requires further investigation but we have it on record that animals which have lived and slept entirely in the open in a cold country like England grew thick warm coats, and never developed disease particularly tuberculosis. We have also the record of experiments in Jamaica where infusion of Indian, or as it is called in the Island "Mysore" or "Zebu" blood, left unspoiled in the British original breed, the shape, quality and size of the British cattle and yet produced the pigmented skin and short hair that fitted them for life, in a tropical island.

Climate and rainfall, the nature of the soils and the agricultural systems pursued play an important part in the production of the breeds of cattle. In Northern India, we have every variation from the dry climate of the west and north-west accompanied by the marked difference of summer heat and winter cold, to the permanently damp climate and heavy rainfall of Eastern Bengal. In southern India, there is uniform warmth with dampness in the west and dryness in the east and in the interior. On the west coast of the Madras Presidency, for instance, the rains of the south-west monsoon are so heavy as to bring to the greater part of the districts of Malabar and South Kanara more than double the rainfall that reaches any other part of the Presidency. One may notice the wide difference between the diminutive cattle of Bengal or Malabar where a damp atmosphere prevails and the fine, strong, large cattle in the dry parts of Sind or the Punjab. In further illustration of the effect of climate and rainfall on the cattle in a region, we may instance south Konkan where the poor soil, heavy rainfall, scarcity of water after the monsoon and the trying climate during the rains make the tract unsuitable for breeding purposes and the tract has consequently to depend upon the adjoining Karnatic for its supply of agricultural cattle. On the other hand, Mysore from a very early period has been famous for superior breeds of cattle and this is mainly due to the mild and salubrious climate of the plateau with extensive pastures over which cultivation has not made much inroads.

An opposite climatic effect might be noticed in the case of buffaloes as no climate is too damp or rainfall too heavy for

them. They are the principal agricultural cattle throughout the districts of heavy rainfall below the Western Ghats. At Mahim, in the Bombay Presidency, the buffaloes are magnificent but the other cattle are poor and miserable. So too is it in Eastern Bengal. In Behar, on the other hand where the climate is drier, cattle are superior.

Let us next proceed to consider the effect of soils and agricultural systems pursued in particular regions on the breeds of cattle produced or those that thrive best in those regions. We have the vast alluvial plains composed of mud and sand stretching across Northern India from west to east. There are again the black cotton soils which occupy mainly the Central and western portions of the Deccan Plateau where the Kishna valley cattle and Guzarat cattle are to be found. The soils of the Madras Presidency are for the most part loamy, gravelly or sandy alternating with the alluvium of the great river deltas. This alluvium varies with the nature of the soils in the drainage basins of the rivers. There are also wide stretches of Black cotton soil in the central and southern districts where can be seen the Ongole or the Alambadi cattle. As regards the bearing of the systems of agriculture pursued on the quality of cattle in a tract, it almost resolves itself to the question of food supply. With the pressure of population, the grazing areas get continuously narrowed down and the result is reflected in the degenerate specimens of cattle which can be seen in highly cultivated tracts.

Proceeding next to describe a few representative breeds of southern India we shall begin with the variety of Mysore cattle known as *Amritamahar* which is preeminently the handsomest and one of the best known of south Indian cattle. They are famous trotters and are largely used in military transport. Of the other important breeds of Mysore cattle, the large white bullocks in the Cauvery basin in the Southwest of the Mysore Plateau hold the most important place. Their superior weight and strength peculiarly suit them as carrier cattle. The "Punganur" is a small variety of the "Mysores." This variety is now almost extinct having nearly died out along with the owners during a famine. Most of the "Punganurs" now extant are cross-bred "Mysores" which form a useful source of supply for working the shallow moat-lifts in Chittoor and North Arcot Districts. Another useful variety of cattle bred in the wild country in the Cauvery valley amongst the hills of Salem and Coimbatore is the "Alambadi." They are good coach and cart bullocks and are largely used in the south of the Presidency for field work in the black cotton soil. A good south Indian variety is the "Kangayam" raised in the main portion of the Coimbatore District. They are good milkers and good draught cattle. Perhaps the most famous and widely known of the breeds of the Madras Presidency is the "Nellore" or the "Ongole" which besides producing good milk cows also supply

most of the draught cattle of the Ceded Districts. From the point of view of size and strength, the Ongole cattle can stand comparison with the best breeds of cattle in the world. The complaint is heard that the breed shows signs of deterioration owing to the fact that the best specimens had been taken away by foreign breeders by purchase at the periodical cattle shows.

It is a well recognised rule that the sire by virtue of his greater potency should be of the more improved breed. Cattle breeders are aware that in farm stock, it is the male that gives the external form, the female the more vital and internal organs. It is a common saying among Western farmers that the male is half the herd. This principle seems to have been well known and practised in ancient India as evidenced by copious references to it in Narada and Brigu Smritis. In the Central Research Institute at Pusa several attempts at pure line and cross breeding have been made. Pure breeding with a pure Montgomery herd by selection of sires descended from distinguished dams, or the crossing of poor milkers in the pure Montgomery herd with an Ayreshire bull have been attempted. A third line of advance was the crossing of half bred Ayreshire—Montgomery cows with pure Montgomery bulls. The results having proved disappointing the experiments have been discontinued. The object aimed at in these experiments is to produce good milking cows. Recently some successful attempts have been made by the crossing of a Kangayam cow with an Ongole sire to produce a better type of Kangayam bullock not only for trotting but for heavy transport work. In the cattle stations at Chintaladevi, Hosur and other places in the Madras Presidency, the work now being done follows more or less what is being done at Pusa. The Madras Government have taken up the Ongole and Kangayam out of the South-Indian types to work on. They have also imported the Sindh breed primarily for milk and secondly for draught purposes and they are also making experiments with the imported European breeds. It is too soon to judge of the value of the experiments as it will be some years before satisfactory results are obtained. In the meantime large landholders and zamindars should be encouraged to breed and maintain pure bred herd of local cattle if suitable. For village service, facilities should be afforded and bulls of a superior breed made available to the ryots. Village and Forest Panchayats and Co-operative Societies where they exist being utilised for this purpose. Further, effective steps should be taken to see that inferior and immature bulls and bull calves which now serve the village cows are castrated early. Common village pastures are wholly inadequate and special encouragement should be given to grow grass and fodder crops. Forest Panchayats which have been started in various parts of the Madras Presidency and which are admittedly doing very good work might with advantage be encouraged to devote special attention to this work.

Rickets in Children.

It is said that more than 90 per cent of the children in large cities suffer from rickets. Relatively fewer cases of rickets are found in rural areas than in cities. The obvious inference is that the disease is the result of overcrowding in congested areas with the attendant absence of adequate sunshine, fresh air and wholesome food.

Rickets is a nutritional disease due to deficiency of calcium or lime, salt and phosphorus in food supplied by a group of nutritional substances known as the vitamins. Vitamin D is the regulator of the calcium and phosphorus balance in food. As the result of the inability properly to use calcium and phosphorus, the bones of the growing child become soft and when this happens they bend easily and are readily deformed, the bones of arms and legs being usually affected. Medical men tell us that children suffering from rickets are apt to be delicate and liable to develop certain forms of respiratory diseases such as colds, bronchitis, pneumonia and also tuberculosis. According to a writer in the Hygeia, such diseases when they complicate the underlying condition of rickets are likely to produce more serious consequences than does the actual rickets itself. There is no reason why people in India should at all suffer from rickets but for their ignorance and foolishness and heedless of the fact that health giving bright sunshine and fresh air are within the reach of the poorest of us and could be had for the mere asking. It is unfortunate that our people should not avail themselves of these benefits and enable the children to grow strong and healthy.

Food and Fitness.

On a former occasion (see page 83 of Vol. II) we gave an account of the valuable work which is being done at Coonoor by Col. R. McCarrison on the subject of food values. The work on which the Col. is engaged is to ascertain the nature of the diseases which are brought about directly or indirectly by defects in quality and balance of the foods in common use in India and the means of preventing them. It used to be thought that so long as a diet contained the proximate principles—proteins, fats,

carbo-hydrates, water and salts,—necessary for the supply of energy, heat and the repair of the bodily tissues all was well. It is now recognised that these factors do not suffice but certain vital factors of food commonly known as "Vitamins" are essential to the proper utilisation by the body of these proximate principles of food. In fact "Vitamins" are like the spark which ignites the fuel mixture of a petrol driven engine liberating its energy. The fuel is no use without the spark nor the spark without the fuel. Both must be present in a well constituted diet to secure health and efficiency. Formerly it was considered that disease was caused by bacteria and other pathogenic agents but the newer knowledge of nutrition has demonstrated that disease resulted from certain deficiencies in the food, deficiencies of vitamins, or mineral salts or of protien, either absolute or relative to other food-essentials and that by the use of faulty and ill-balanced food the tissues of the body were rendered susceptible to invasion by bacteria and other disease producing agencies. Thus Col McCarrison's investigation relates to malnutrition as a cause of inefficiency and ill-health among the Indian masses. His researches have nothing to do with the quantity of food available or consumed by the Indians but with the quality or life-giving or energy-giving value of the food consumed. On experiments conducted on a number of mice, rats, and guinea-pigs, and a few monkeys, Col McCarrison has arrived at very important results. A number of rats were fed with all the ordinary essentials of food proteins, fats, carbo-hydrates, and salts—but *without vitamins*. They no doubt lived but did not grow and after a short time developed paralysis. One of the chief foods in many parts of India is rice which is fundamentally a poor diet. But when these same rats were given wheat instead of rice to furnish the vitamin spark they showed signs of growth. To ascertain biologically the relative values of the national diets of India investigations were conducted on seven groups of twenty young rats of the same initial weight, age, and sex, placed in separate cages under similar conditions of life, each group being fed on a diet such as is used by the race represented. The diet of the wheat eating races—the Sikhs, Pathans and Marathas were the best, in conformity with fine physique

and military history of these races, whilst the groups representing the rice-eating races—Madrasis and Bengalis—proved the worst in conformity with their smaller stature, poor physique and decreased capacity for hard work. Below is a table showing the percentage increase in the body weight of the seven groups of rats experimented upon during the first period of eighty days under experiment and their relative weights after 140 days.

Groups.	Percentage increase in eighty days. per cent.	Relative weight after 140 days. 235 grams.
Sikh	60	230
Pathan	57	220
Mahratha	55	200
Gurkha	40	185
Kanarese	36	180
Bengali	34	155
Madras	24	

These figures to which we are indebted to the "Humanist" published by the Humanist club, Bangalore, explain themselves. The staple diet which has thus a great deal to do with the marked difference between the physique and the growth of the people has also its effect on their susceptibility to disease. For example, a glance at the leprosy figures of India show that the greatest prevalence of this disease is amongst the people who use the poorest food whilst it is least where people eat the most nutritious food Madras and Bengal have the largest number of lepers and Punjab the smallest. Similarly the death rate from cholera in Madras is 40 times greater than in Punjab.

The races and nations living in India have solved their food problem with reference to the climate and the agricultural condition of the tracts which they inhabit and no great changes are possible or perhaps desirable in the matter of diet which has reference to the kinds of food which can be produced in each tract. But science can come to our rescue and Col. McCarrison's researches are valuable in that they show where the deficiencies lie and how they can be supplied. According to Col. McCarrison by consuming more milk and green vegetables the races that have rice as the staple diet can at least attain a reasonable state of physical efficiency. He attaches very great importance to the free use of milk. Too much of pulse or choll is

useless, as the bodies cannot deal with it. Any excess of protein cannot be assimilated which means that it will remain in the intestines and will produce other diseases. In this connection, the opinion of Dr. C. A. Bentley, Director of Public Health Bengal is of special value as affording independent testimony to the conclusions arrived at by Lt. Col. McCarrison.

Referring to the question of present dietary of Bengal, he is of opinion that a very large proportion of the people of the province are at present suffering from the result of taking inadequate diet. It was not that Bengalis are too poor to take proper diet, but it was their ignorance as to what was good food for them. Instead of taking cheaper and better food, they were wasting considerable amount of their very small income on unsuitable, expensive and improper food. It was a matter of the utmost importance for the future of Bengal that steps should be taken to improve the milk supply of the country and to ensure above all that growing children should get an increased and adequate supply. The present people of Bengal including the wealthy, Dr. Bentley emphasized, have in a very large proportion taken to a dietary, on which even rats could not live for more than a few weeks. That was why the death-rate of Bengal was so high and why the Bengalis were physically weaker than their up-country neighbours. Their vitality being undermined by inadequate diet, they could not stand the infection of foul diseases.

New Year Honors.

Madras figures well in the new year's honors, the announcement of which was made this year on the first of March instead of as usual on the first of January owing to the illness of His Majesty the King. Sir Annamalai Chettiar to whose princely gift we have the Chidambaram University becomes a Rajah, a well merited distinction. The Knighthood conferred on the Hon'ble Mr. Justice V. Ramesam Pantulu has been expected for some time and is in the fitness of things. As an eminent judge and scholar and as one who has contributed a great deal to stimulating thought on matters affecting national weal, Sir Vepa Ramesam Pantulu has eminently deserved

the distinction conferred on him. Our pages have frequently been enlivened by his contributions on dietetics which have been much appreciated by our readers. Mr. H. A. B. Vernon who gets a C. I. E. will be remembered as the Member of the Board of Revenue in charge of Forest Panchayats. He was taking great interest in the movement and during his regime, several drastic changes were made in the constitution and working of the Forest Panchayats. Whether they have all been for the good of the movement remains to be seen. The C. I. E. conferred on Mr. N. N. Gangulee is the reward for his services as a Member of the Royal Commission on Agriculture. We heartily congratulate the recipients on the distinctions that have been conferred upon them.

Notes and Comments.

THE RIGHT HON'BLE V. S. SRINIVASA SASTRI: When eighteen months ago, we bade farewell to Mr. Sastri to take up his appointment as Agent in South Africa we said that India was sending an ambassador who was worthy of the highest traditions of Indian culture and civilization and a practical idealist. The task which Mr. Sastri had to face was admittedly a difficult one but with characteristic optimism, high ability and fairness he has achieved conspicuous success and on the sound foundations he has laid down his worthy successor Sir. K. V. Reddi will not find it difficult to build. We heartily welcome back Mr. Sastri to the scene of his former labours in which his wise counsel and sane leadership will be requisitioned to the fullest extent just at present when questions of great import are on the anvil.

DIWAN BAHADUR T. RAGHAVAYYA C. S. I. The appointment of Dewan Bahadur T. Raghavayya as President of the Council of Regency, Pudukottah State is eminently a suitable one. By his long and varied administrative experience in British India and as a successful dewan of an important Indian State in the enjoyment of overflowing finances, Mr. Raghavayya brings to his new task an equipment which should prove a valuable asset to the Pudukottah State. We congratulate Mr. Raghavayya on his appointment and the Government on the wise choice they have made. It will be remembered that it was when Mr. Raghavayya was a member of the Board of Revenue, Madras considerable impetus was given to the Forest Panchayat Movement. He was subsequently a coopted member of the Royal Commission on Agriculture along with Rao Bahadur B. Muniswami Nayudu, President of the Forest Panchayats Association and later, served on the Central Committee set up by the

Government of India to give effect to the recommendations of the Linlithgow Commission. We confidently trust that his intimate knowledge of the agricultural conditions and requirements of this country will be fully utilised for the benefit of the State.

ECONOMIC ENQUIRY. In pursuance of the resolution passed in the Madras Legislative Council, the Government of Madras have passed orders on the constitution of a committee of the members of the Council to enquire into the economic condition of Godawari and Kistna Districts in which the re-settlement rates of assessment are about to be introduced. The Committee consists of Mr. D. Narayana Raju as its convener and Messrs. T. M. Narayanaswami Pillai, B. Venkatarathanam, K. V. R. Swami, Diwan Banadur P. C. Ethirajalu Nayudu, Diwan Bahadur R. N. Arogyaswami Mudaliar and B. Ramachandra Reddi as other members. This is probably the first occasion in which a nonofficial committee is being set up to make economic enquires before finally giving effect to the settlement rates fixed by the Government. In order to render the recommendations of the committee authoritative and to serve as a model for similar committees that may be set up in future, it would seem desirable to add one or two experts and economists as members of the committee.

SLAUGHTER OF MILCH COWS. Mr. Seth Govindas had done a service by again raising a discussion in the Legislative Assembly on this subject. If it is recognised that there is fearful infant mortality in this country due to insufficiency of milk and milk products, it will be readily conceded that the restriction of the slaughter of milch cows becomes a question of first rate importance requiring urgent solution. The milch cows slaughtered for the use of the army in India are between three and nine years of age and are therefore useful cattle. If beef constitutes an essential food for the soldier, it would seem sound policy calculated to serve the best interests of the country that other arrangements should be made for example by substituting imported beef if necessary even if it be more costly. Although the resolution moved by Mr. Seth Govindas was lost we expect that those who are interested in the economic well being of this country will not allow matters to rest there.

THE CO-OPERATIVE IDEAL. Co-operation knows no distinctions of caste, creed or community. True co-operative ideal is based on the desire for the satisfaction of the common economic needs of all those who associate together on a voluntary basis. It is well that the Hon'ble Mr. V. Ramadas Pantalu stressed this aspect of the co-operative movement in his presidential address to the Dadar Co-operative Conference, Bombay. Any falling from the ideal will result in giving the movement a distinct setback. We are obliged to make this observations in view of the remarks made by the Registrar of Co-operative

Societies, Bombay Presidency, in his Report for 1927-28. He has stated that in the management of nonofficial organisations "Considerations other than those of business efficiency and qualifications are still allowed to have an undue sway", and that questions connected with such management "provide the most fruitful occasions for quarrelsome intrigues amongst members of the managing Board" as observed by Mr. Ramadas, in this country especially where the co-operative movement is still a tender plant there is great danger of the roots being destroyed if the virus of communalism or class antagonism is allowed to invade the movement.

THE MADRAS BUDGET AND RURAL DEVELOPMENT. The provision made in the Budget which was presented in the Madras Legislative Council the other day for rural development is out of all proportion to rural needs and conditions. Out of a total anticipated expenditure of Rs. 1821'60 lakhs, only 5½ lakhs are provided for rural water supplies which is quite insufficient having regard to the woeful condition of most of our villages in the matter of clean drinking water supplies. The sum of Rs. 9 lakhs provided for the improvement of village roads and communications cannot be regarded as adequate nor the provision made for increasing the rate of subsidies for rural dispensaries. If it is recognised that medical relief should be made available to our villages, it would seem necessary to afford greater inducements to medical practitioners, be they the followers of allopathic or indigenous systems to encourage their settling in villages and this can be achieved only by the grant of more liberal subsidies. Veterinary dispensaries are woefully few and provision has been made for the opening of only three new dispensaries and the employment of three new assistant surgeons. No wonder that cattle mortality due to preventable causes is on the increase every year.

AGRICULTURAL CO-OPERATIVE SOCIETIES. There is infinite scope for the application of the co-operative principle to agriculture; but unfortunately the formation of the agricultural co-operative societies is not proceeding as quickly as one could wish in a predominantly agricultural region like the Madras Presidency. As pointed out by the energetic Director of Agriculture, Mr. R. D. Anstead, in his recent visit to the newly formed agricultural co-operative society at Sedinipuram in the Nannilam Taluk of the Tanjore Dt., the formation of these societies should be encouraged to the utmost extent as they help the Agricultural Department in a very practical way to spread its message far and wide among the ryots. Better farming societies are now functioning in the delta villages of the Tanjore and Trichinopoly Districts where they endeavour to demonstrate on their own farms the advantages derived by adopting the improved grains of paddy seed and improved method of cultivation by the use of improved ploughs.

economic planting and the judicious use of manures. There are also seed societies and they distribute the improved seed which they produce to their members and the neighbouring ryots. Some of them stock improved ploughs and fertilisers for sale to members. Too much importance cannot be attached to the development of the co-operative movement on these lines.

STATE FORESTS AND DEPRESSED CLASSES. The Government of Mysore have sanctioned a scheme for the grant of lands in the State Forests for the cultivation by Adikarnatakas and also other landless and depressed classes subject to the following conditions: (1) that the family will carry out under the direction of the forest department both planting and sowing to the extent of 1000 plants per year in the forest adjoining the land given to them for cultivation, (2) that it will fence, protect and tend the plants till they are well established, (3) that the lands will be formally registered in the name of the family at the end of ten years provided it has satisfied the conditions one and two above, (4) that Kandayam will be payable from the eleventh year onwards to the Forest Department, (5) that the family should work for wages in the forests on departmental works during the noncultivation season.

THE HANDLOOM WEAVING INDUSTRY. In an agricultural country like India with a large agricultural population forced to remain idle for a part of the year, Cottage Industries are an essential economic necessity. The extremely small holdings which prevail in this country hardly provide sufficient income even in years of plenty and this fact emphasises the importance of subsidiary occupations in the form of some handicraft. As a cottage industry suited to the genius of the people and capable of providing wholtime occupation to the village artisans and parttime occupation to the agriculturists, handspinning and weaving of cotton was and continues to be a paying village industry. We have made these observations in view of the efforts though belated and tardy that are now being made by the Government of Madras to revive the handloom weaving industry. Recently a conference was held at the instance of the present Development Minister, the Hon'ble Mr. M. R. Sethurathnam Ayyar, to constitute the textile section of the Industries department as a separate department by itself. It appears to have been very nearly decided at the Conference that the handloom industry had no future before it and any thought bestowed on it was so much waste of time and but for the timely memorandum which the textile expert, Mr. Amalsad was asked to submit to the Conference, the handloom industry would have had a decent burial. We do not know what the contents of the memorandum are but we presume it may be somewhat on the lines of the inaugural address which Mr. Amalsad gave to the Textile Institute in which he has succinctly surveyed the present position of the handloom industry, and forecasted its future. Mr. Amalsad had no difficulty in ex-

pressing the economic fallacies that have held the field so long about the future of the handloom industry. What is required now is to reorganize the industry on sound lines in order that the two million weavers engaged in it may be relieved from poverty and the agriculturists helped to find a supplemental source of income and the growing unemployment mitigated. We have no doubt that the industry will be placed on sound lines more especially as the Royal Commission on Agriculture has recommended its development for the reasons we have stated above. We shall publish in a future issue Mr. Amalsad's informing address to the Textile Institute.

MANURES. Wherever one goes in the villages, the cry is heard which is becoming more and more insistent that there is not a sufficiency of farmyard manure to go round, and that concentrated manures are very expensive owing to large export to foreign countries. Mr. Anstead we are glad to notice has been giving sound practical advice to ryots during his tours on the subject of the use of manures which the ryots would do well to follow. He advises that chemical manures should not be used alone but should be used in conjunction with organic manures such as farm-yard manure and green leaves. Bone-meal could, with advantage, be used with green leaves but bone meal is becoming more expensive, as it is largely exported out of the country and as the attempts to stop or at least restrict the export have all been unsuccessful. Even as it is, it appears that the usual method of using cattle manure was more expensive than it need be. For an acre of land, the use of 20 cart-loads of cattle-manure is general. If instead of this six cart-loads of cattle-manure were used with forty pounds of Sulphate of Ammonia and one hundred weight of superphosphate there would be a substantial saving of expenditure: and the yield per acre would also be increased.

THE FIRST PUTTUR TALUK VILLAGE PANCHAYATS CONFERENCE. South Kanara, held under the presidency of Mr. A. B. Shetty M. L. C., in December 1928 passed a number of resolutions the more important of them being:—

That in order that panchayats may function efficiently they should have a permanent source of income and accordingly urges upon the Government to make over to panchayats at least one anna in the rupee from land revenue collections in each village to form a nucleus for village reconstruction work: that pending legislation creating a nucleus of fund to panchayats, the District Board should make an annual recurring grant of at least Rs. 5,000 to panchayats in the taluk for the present, to be dealt with as a separate fund for rural development; that pending legislation creating the nucleus of a fund to panchayats, this conference requests Government to allot annually twice the sum ear-marked from the District Board funds for rural development to be spent by Panchayats in this taluk: that

forest supervision work may be entrusted to village panchayats wherever they exist, as contemplated by Sec. 17 of the Act instead of creating Separate Forest Panchayats; that in villages where both Panchayat Courts and Village Panchayats exist, this conference requests Government to hand over to the latter all the fines levied by Courts under the Indian Penal Code: that teaching grants given for Panchayat schools may be raised from Rs. 180 to 240 per annum per teacher: that teaching and equipment grants may be given to panchayat night schools also as is done in the case of panchayat day schools: that the Registrar-General be requested not to restrict the liberty of panchayats in the matter of providing themselves with the necessary initial equipment and respectfully invites his attention to the needless trouble and expense involved in the arrangements said to have been made with a Madras Firm to supply to the panchayats with articles which can be conveniently and easily got locally: that government may be pleased to encourage the starting of provident funds for panchayat school teachers by grant of special contributions to Panchayats for the purpose: that Government may be pleased to sanction the free supply of village Supplements of District Gazette to panchayats: that the Registrar General be requested to give the full equipment grant on account of additional teachers in Panchayat Schools without imposing a condition that Panchayats should contribute half.

Reviews and Notices.

Hindi-English self Instructor by M. Satyanarayana, Avadanandan (published by the Dakshina Bharat Hindi Prachar Sabha, Madras, 1928 Price Re. 1.)

The Indian renaissance is not merely a political but is also a cultural movement. For some time, the minds of the intelligentsia of this country were exercised as to the supreme need of a common language which could serve not merely as the medium of International commerce but also secure the political and cultural unity of India. English being the language of the Government and the Law Courts would, it was thought serve both these ends. Latterly however, the opinion came to be generally held that while English would suit better as the language of International commerce, Hindi which is spoken by nearly half the number of people inhabiting this country being essentially an Aryan language believed to have its origin in Prakrit and which is capable of being learnt more easily than English

would be a more suitable common language, the *lingua franca* of Modern India. The Dakshina Bharat Hindi Prachar Sabha, Madras which has been taking great interest in the movement of spreading a knowledge of Hindi in Southern India has with commendable promptitude arranged to prepare a fresh and improved manual on the lines on the old Hindi Self-Instructor of Sjt. Harihar Sharma and Shivaram Sharma to supply the needs of those who wish to learn Hindi without the help of a teacher. The object aimed at is to help those who desire to pick up a working knowledge of the language in a short time. We have perused the arrangement of the lessons and the exercises and feel convinced that students, teachers and others for whom it has been specially written would find them very useful. Having been got up in some hurry there are some typographical errors which we trust will be set right in the next edition. The Appendix and Glossary at the end of the manual have been prepared on an intelligent plan and with great care.

First aid in child-birth: by the Hon'ble Dr. U. Rama Rao. (Sri Krishnan Bros.) 328 Thambu Chetti St., G. T. Madras 1929, price annas six-Telugu).

The Hon'ble Dr. U. Rama Rao who has already published a popular guide for rendering first aid in accidents has followed it up by issuing a hand book of First Aid in child birth. Within the space of 79 pages he has given very useful information on the subject, presented in easy popular Telugu. Separate chapters, suitably illustrated, are devoted to a description of the signs of pregnancy, health and disease during pregnancy, normal and abnormal parturition and the after care of the mother and the child. The author takes care to point out that the hints given in the book are to be strictly regarded as first aid only before the arrival of the midwife and the doctor. A knowledge of first aid is absolutely essential for our women-folk as that is the only way of preventing avoidable deaths which are unfortunately often caused owing to ignorance and bad management. Dr. U. Rama Rao has done a service in issuing this useful little book.

The Saint Durgacharan Nag: (The life of an ideal householder) published by Sri Ramakrishna Math, Mylapore Madras.

It is a common saying that the world does not know its greatest men. Whatever it be in other spheres of human endeavour, in the field of spirituality, the truth of the saying is abundantly proved. God-men who regardless of self but ever and anon mindful of the good of those among whom their lot is cast have lived, worked, prayed and died leaving the world ignorant of their sojourn, but all the better owing to the contact with such great souls. Of all the nations of the world, India has been blessed in owning such God-men who by their lives have brought solace and comfort to millions of humanity and showed the path to realisation. The last century, witnessed the appearance of such a great soul in the person of Sri Ramakrishna Paramahansa whose advent "Set up a new epoch of national life in India and set free a vast store of spiritualising energy for the whole world". These great men who may be regarded in a way as *avathars* do not come alone in the world. For the fulfilment of their ideal, they bring with them helpers and workers. Saint Durgacharan Nag was one of Sri Ramakrishna Paramahansa's intimate and trusted disciples and helpers. The life of the saint appeared some time ago in Bengalee and the English rendering given in the neatly got up volume before us shews how it is possible even in this most materialistic and complex society with its worldly outlook and environments, for one to lead the life of *sangasa*, a life of selfless service and sacrifice regardless of praise or blame. Such was the saint the subject of this sketch.

The Journal of the Madras Geographical Association

Vol. III No. 3. Published by the Madras Geographical Association, Gopalapuram, Cathedral Post, Madras. Price Rs. 2.

The entire number is taken up by "Notes on the maps of old Madras preserved in the Madras record office" by Prof. C. S. Sreenivasa Chari M. A. of the Pachaiappa's College. The notes are intended to elucidate the Professor's article entitled "Historical stages in the evolution of Madras", published in Vol. II No. 3 of the Journal. The value of the notes is enhanced by the illustrative plans and maps beginning from 1673 when Dr. Fryer visited the settlement down to 1822 when the city might be regarded as having grown fully to its present dimensions. The various stages in the growth of the original Factory House into the White Town and its subsequent enlargement into the present Fort St. George can be traced in these maps and plans. Also the gradual growth of the city, the shifting of the site of the Black Town (now George Town) and the inclusion of suburbs like Triplicane which was the earliest to be acquired can be seen. Students of old Madras have enough material in the notes and the plans and the maps which will give them an idea of the gradual expansion of the city of Madras into its present size.

