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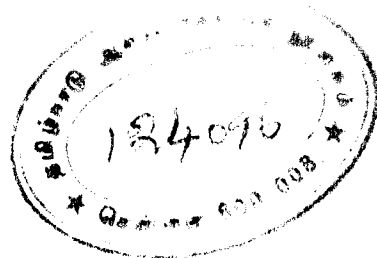
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JOURNAL
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VOL. XI

JULY, 1942

No. 3.

Agriculture and Food Problem in Madras*

By

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Like all other parts of India, Madras is an essentially agricultural province and over 80% of her population is almost entirely dependent on cultivation for livelihood. The Madras cultivator is a hard working man and knows his job fairly well. He has begun to realise the advantages of improved methods of cultivation and is willing to adopt any improvement provided it does not involve the payment of cash for any purchase. His economic condition is very unsatisfactory and he suffers from the disadvantages of fragmentation of holdings and want of subsidiary industries such as dairying, poultry-keeping, sheep fattening, etc., to occupy his spare time in slack seasons. He now moves in a vicious circle; Unless his economic condition is bettered he cannot produce better crops and unless he produces better crops his economic condition cannot be improved. In any case, on a cultivator of this kind we depend for all our industrial and food crops and it is he who is

*Valedictory Address delivered at the Cosmopolitan Club, Annamalai University, on 13th February 1942.

now called upon to increase the production of food crops to make good the shortage due to the fall of rice imports into our province from Burma and other foreign countries. Let us now examine the war time agriculture of our province.

The total area under cultivation in the province is about 3 crores and 60 lakhs of acres of which about 86 lakhs are under irrigation while the rest of the area is dependent on rainfall. Nearly three-fourths of the total cultivated area or about 2 crores and 75 lakhs of acres are under food crops like paddy, cholam, ragi, different kinds of pulses, etc., and the remaining area, namely about 85 lakhs of acres is devoted to industrial crops like cotton, groundnut, tobacco and sugarcane.

Madras stands in a very fortunate position in regard to agricultural raw materials, though it has very few industries worth mentioning besides spinning and weaving. Most of the provincial governments and States are now seriously concerned with the difficulty of finding markets for their short-staple cotton and I am sure that most of you are already aware of the amount of attention which the Government of India are paying to this question in recent months. The Government of India have been seriously considering ways and means by which the grower of short staple cotton could be helped to obtain reasonable prices for his cotton and have even imposed recently an import duty of 1 anna per pound or Rs. 25 per bale of cotton imported from other countries with a view to utilise this income for the benefit of the cultivator. Japan which was our best customer for this cotton has now become involved in war against us and is no longer in our market to purchase this cotton. Japan's takings of our cotton amounted to about 15 lakhs of bales every year of mostly short-staple cotton and with the loss of the Japanese market the Indian cotton grower is at his wits' ends. Fortunately for us in Madras, the problem of short-staple cotton is of little consequence. The production of our cotton of all types is about 5 lakhs of bales and not more than 20 thousand bales of this cotton is of the type which is under serious consideration of the Government of India. Even of this small quantity as many as 19 thousand bales are of special quality, being red-coloured and have as good a demand as any staple cotton. The quantity of cotton that comes under real inferior short staple cotton is only about one thousand bales which are produced in the Vizagapatam district. The staple lengths of our cotton varies

from about 3/4 to 1 1/8 inches and the best of our cottons are capable of spinning up to 60s. Our best cotton is almost entirely consumed by our local mills and the rest has a fair demand both in Madras and other provinces in India. Thus our cultivator is quite safe so far as cotton is concerned.

Our position of groundnut is, however, unsatisfactory. Madras is the largest producer of groundnut and has about 36 lakhs of acres under this crop. About 50% of our groundnut was consumed in India prior to the war and all the rest was exported to foreign countries. But due to want of shipping space there was a big fall in exports last year with a consequent crash in prices. Luckily the Food Ministry in England came to our rescue by offering a suitable price for a fairly large quantity of this commodity. This timely assistance, coupled with the reduction of area under groundnut upto about 30% due partly to intensive propaganda by the Revenue and Agricultural Departments and partly to the unfavourable season, has been very helpful for maintaining the present level of prices. But the danger is not over. If the cultivator thinks that the present prices would be maintained and he increases the area under production, he will have again to face lower prices. He is, therefore, well advised to take note of the propaganda by the Revenue and Agricultural Departments and adjust the acreage. Every effort is, however, being made by Government to increase the local consumption of groundnut and if the cultivator co-operates with the efforts of Government by reducing the area he may not have cause for repentance. The area so reduced can very well be utilised for food crops which are now selling at a fair price. There is, of course, enormous scope for increasing the consumption of groundnut in India provided a suitable lamp is designed for using this oil in the place of kerosene for the purpose of lighting. A lamp, in fact, has been prepared but I am not sure if it is good enough for putting on the market.

In the case of tobacco, Madras holds a virtual monopoly for the cultivation of Virginia or cigarette tobacco. This crop has a fair market even now and requires no special attention except in the direction of the improvement of its quality. Steps have been taken for its improvement through better cultivation and the elimination of pest attacks and it would be enough if the cultivator does not unduly increase the area under this variety. Local varieties of tobacco are usually consumed in this country itself and require no particular attention for the present.

One other crop that is likely to affect the agricultural economy of our cultivator is sugarcane. The number of sugar factories in our province is too inadequate to deal with all our sugarcane but so long as there is a reasonable demand for jaggery there is no trouble with this crop.

So much for the commercial crops.

Now I should like you to turn your attention to food crops which are at present much more important than the commercial crops. I have already mentioned that the average area under food crops in our province is roughly 2 crores and 75 lakhs of acres. Of this area, about 85 lakhs of acres are under semi and fully irrigated paddy; but if the second crop also is taken into account the area under paddy would come to a little over 1 crore acres. The remaining 1 crore and 90 lakhs are under dry unirrigated crops like cholam, cumbu, ragi, etc. The normal annual production of all these crops is about 80 lakhs of tons of cleaned grain. Three-fifths of this quantity or 50 lakhs of tons are rice and the remaining 30 lakhs represent all other grains. This total quantity is not enough to feed our population in normal years and we are therefore obliged to import rice from Burma, Siam, etc., to the extent of 9 lakhs of tons per year. But we also exported our finer rice to Ceylon, Mysore, Hyderabad and Bombay roughly 2 lakhs and 50 thousand tons. Our net imports were, therefore, 6 lakhs and 50 thousand tons. Now we all know that the imports of foreign rice have very greatly diminished and are likely to stop altogether. The question, therefore, is "How can we meet this deficit and what steps have been taken by the concerned Government Departments to produce more food crops not only for ourselves but also to meet the demand of our army abroad." There are two ways of increasing the production, viz., by extensive and intensive methods. That is to say, by increasing the area under food crops and by increasing the yield per acre.

Considering first the question of extensive cultivation it should be clearly understood that in our province there is little or no waste-land available which can be brought immediately under cultivation without irrigation. Every acre of land that can be cultivated is already under cultivation except the strips of land adjoining the railway lines and the railway stations. Government have already taken steps to utilise these lands for growing food crops as during the last year. The only possibility is to divert for food crops a portion of the land which was hitherto

cultivated with commercial crops. I have already mentioned the steps taken in this direction by reducing the area under groundnut to the extent of 10 lakhs of acres last year. Information is not yet available as to what proportion of this area was utilised for food crops. It is possible that at least 30% of this area or about 3 lakhs of acres was devoted to these crops. This was what was achieved last year and propaganda will be continued for growing more food crops in the place of groundnut till the war is over.

The area under irrigated paddy also has, to a little extent, increased due to the facilities offered by the Irrigation Department for more water. The total irrigated area of the province is, as I have already mentioned, about 86 lakhs of acres and including the second crop it comes to about 1 crore and 2 lakhs of acres. The increase due to the efforts of the Irrigation Department is about 5 lakhs of acres so that the total acreage under paddy in the year 1940-41 went up to 1 crore and 7 lakhs of acres.

For intensive cultivation, dry lands do not offer much scope as the success of cultivation in these lands depends upon rainfall which is often uncertain and precarious particularly in localities where this sort of cultivation is most important, e.g. Ceded Districts. Further, the methods of cultivation in dry land districts have already reached a fairly high level of efficiency and the only possible improvements that could be suggested are the distribution of improved implements, better yielding seed and proper preservation of cattle manure. Propaganda has already been going on in these directions and seed and implements are always available for sale in agricultural depots and with the approved cultivators and implement manufacturers.

If we think of intensive cultivation, our thoughts naturally turn to wet or irrigated lands, for it is in these lands that we can have control over moisture in the soil. Moisture is the main factor on which the success of agriculture depends and wherever, therefore, there is the possibility of irrigation, the cultivator should be able to raise the crop yield if he only takes the necessary trouble.

The average yield of paddy in our province is estimated at 1,200 lb. per acre. This is low compared with the yield in other paddy growing countries. But the low yield is due to a number of adverse factors which cannot be easily remedied. The following are the factors that affect adversely:

About one-third of the total irrigated area (or acres) is grown with paddy under semi-irrigated conditions for want of sufficient water-supply. Under this system the crop is sown with the help of rains and allowed to grow like any dry crop such as cholam up to a certain period and it is then irrigated and treated as an irrigated crop. The yield obtained from this crop is naturally low. Paddy is essentially a wet crop and gives satisfactory yields only when it is grown as a wet crop from the very start.

The present practice of annual lease is another cause for low yields. The landlord cares very little beyond his annual income and is not interested in the improvement of the land. The tenant in turn is concerned only with extracting as much from the land as possible with little or no application of manure. The result is the deterioration of the land with a fall in its yielding capacity. This evil can be remedied only if the minimum period of lease is extended and the landlord is made to pay a share of expenditure on any improvement effected on the land by the tenant. All this does not, however, appear to be possible without necessary legislation and there is, therefore, no use of discussing this point now at any great length. The only thing that can be done is to induce the cultivators to use better seed and adopt improved methods of cultivation.

The third cause is the necessity for cultivating short duration varieties which are by nature low yielders. These varieties are grown in many localities for want of sufficient water-supply for irrigation. No such varieties are grown in other countries where there is only one season for paddy crop and where only long duration varieties are cultivated. Long duration varieties have a long period of growth and usually give a much heavier yield. In Madras also, wherever long duration varieties are grown, their yields compare quite favourably with those in other countries.

The Department of Agriculture has produced over 70 varieties of improved seed suitable for different soils and seasons all over the province. They yield up to 15% more than local paddy besides being superior in quality; and the seed is within easy reach of every cultivator. These varieties are now grown over an area of more than 20 lakhs of acres or one-fourth of the total paddy area. If the remaining 75% of the area also is planted with these varieties there will be a general

increase of paddy yield by at least 7-8%. These new varieties have also the capacity of responding better to manurial and cultural treatments than local varieties.

The cultivator is unfortunately still in the habit of using a high seed rate per acre which results not only in waste of seed but also in lower yield. The local seed rate in most of the paddy growing areas varies from 50 to over 100 lb. or 20 to 40 Madras measures per acre. The best results are obtained by reducing the seed rate to about 25 lb. or 10 M.M. per acre. This saving in seed rate alone comes to about 2% of the total yield of paddy all over the province.

One other defect in the local method of cultivation of paddy is raising nurseries very thick and transplanting the seedlings in bunches of 10-12 into each hole. The cultivators sow 50-100 lb. of seed in a small plot of 5-6 cents. The result is that the seedlings are unhealthy and undergrown. When these seedlings are planted in bunches they grow slow and also yield low. The best way of raising seedlings is to sow 25 lbs. or 10 M.M. in a 10 cents plot and transplant the seedlings 2-4 per hole at a distance of 4-10 inches depending upon the soil fertility. If the land to be transplanted is fertile, wider spacing is necessary to allow the plant to tiller freely. In poor land close spacing is better.

The most important part of paddy cultivation is manuring and it is very necessary that every cultivator should know why it is so important. Any crop requires for its proper growth and yield of grain, nitrogen, phosphoric acid and potash in large quantities. It requires other substances also such as Calcium, Magnesium, Sulphur, etc., to a small extent; but they are present in such large quantities in the soil that they need not be replaced in the form of manure. A good crop of paddy removes from the soil 48 lb. of Nitrogen equivalent to 600 lb. of ground-nut cake or 2 cwts. of Ammonium sulphate, 23 lb. of Phosphoric acid equivalent to 1 cwt. of bone meal or superphosphate and 43 lb. of potash. This will give an idea of the amount of manurial substances removed by paddy crop each time and it is only a matter of commonsense that unless these substances are returned to the soil in some form or other the yielding capacity of the land goes down year after year. We are, however, lucky that our soils are rich in potash by nature and it is unnecessary to replace it except in Nilgiris where the soils are not so well furnished with this plant food. Thus the only substances that we should return to the soil are nitrogen

and phosphoric acid. But even of these two substances our soils contain a fair amount of Phosphoric acid and it is enough if bone meal or superphosphate is applied at the rate of 1 cwt. per acre to every alternate crop. It should also be understood that bone meal, if applied by itself does not respond well. It gives satisfactory results only when it is used in conjunction with green leaf or any other organic matter.

Nitrogen can be applied in the form of inorganic manure such as oil-cake, dried fish, green leaf, etc. or in the form of inorganic manure like Ammonium Sulphate. But the cheapest of all these is green leaf which the cultivators can grow in their own fields at a very little cost. A good crop of green manure grown in one acre of land is sufficient to manure 2-3 acres. Green manure is grown at present in our province over an acre of about 5 lakhs of acres and it has not been possible to extend it more widely for want of water supply. It does not ask for more than two irrigations, but it is found difficult to find water even for two wettings. Most of the green manure is at present grown by the aid of rains. The cultivator knows the value of green manure and is eager to grow it if water is available. But water is not available. Fortunately now groundnut cake is selling cheap and is not much beyond the reach of many cultivators. Vigorous propaganda was carried on during the past two years with the result that unusually large quantities of this manure were applied to the paddy crop. There is not much use in applying cattle manure to paddy crop. It gives better results when applied to dry crops. But if it is available and the cultivator has no dry land it can be used for paddy crop.

I do not think that I need dwell on cultural operations such as ploughing, weeding, etc., and every cultivator knows these operations. The only suggestion I could make is that there is a good deal of labour-saving if iron ploughs are used in place of country wooden ploughs. The number of ploughs sold during the last year due to the efforts of the Agricultural Department was over 7,000 which is a record figure.

Thus the important factors that contribute to the increase of paddy yield are, sufficient water-supply, high yielding varieties, low seed rate to raise healthy seedlings, transplanting of seedlings not more than 2-4 per hole at proper distance according to the fertility of the soil, use of iron ploughs and application of proper manures. These will raise our present yield, irrespective of the duration of the crop by not less than 25%.

Well, now you will naturally ask me "Yes. We quite understand what all you have said. We are now confronted with the shortage of rice up to 6½ lakhs of tons owing to the stoppage of rice imports from Burma and what are your achievements to fill this gap?" I am glad to be able to tell you that due to the intensive propaganda of the Agricultural Department and the increase of area under paddy cultivation, the yield of rice obtained in 1940-41 was about 6 lakhs of tons more than normal. We had to make up only ½ lakh of tons but imports received that year were greater than this quantity. The results of 1941-42 are not yet known but crop forecasts show that there is a fall in area under paddy crop by a little over 2% but the yield expected is about the same as last year. That is to say, our shortage is about ½ lakh of tons which is more than counter-balanced by the extra yield obtained from 3 lakhs acres of dry land as a result of the decrease in area under groundnut. Thus you find that there will be no shortage of food grains this year. There is also no reason to believe that the cultivators will slacken their effort if they are offered loans for the purchase of manures and seed and the Government are doing everything possible to help the cultivators.

A Criterion for the Purity of Bromine

By

S. V. ANANTAKRISHNAN

Annamalai University

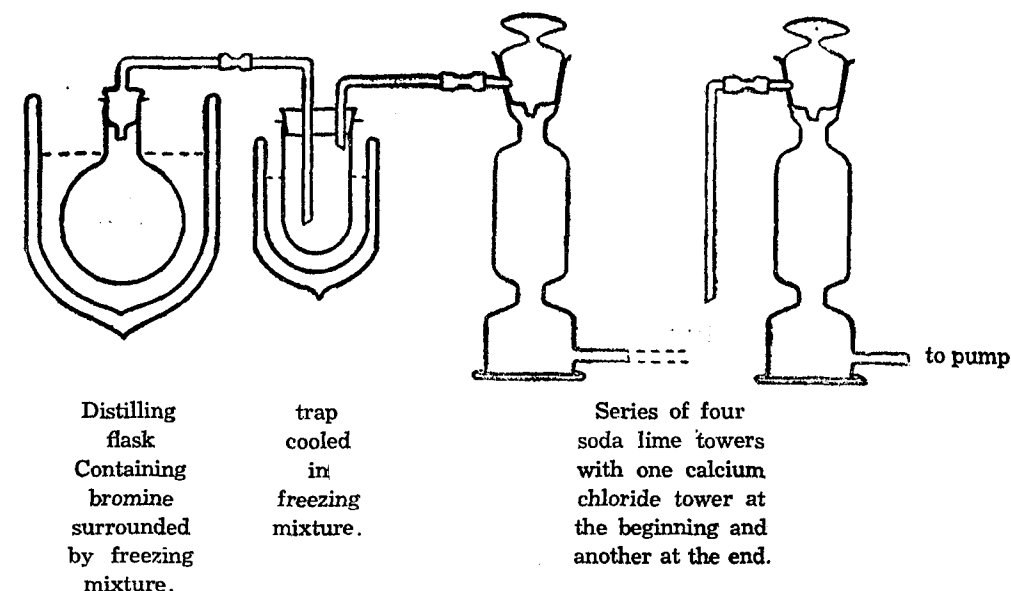
In the course of investigations on the Kinetics of the olefin-bromine reactions, it was found necessary to prepare bromine in a very pure state. Neither "A. R. Bromine" nor "Bromine distilled over sodium" gave satisfactory results and this was traced to the presence primarily of hydrogen bromide and moisture. After eliminating these, the bromine had to be tested for its purity. The reaction kinetic studies indicated that the induction period that is obtained may be used as a convenient criterion since this was highly sensitive to the impurities mentioned. With the same solvent and working at a constant temperature, the induction period for the olefine bromine reaction was found to be the same for any one olefin within the limits of experimental error. This criterion has served in our laboratories as a safe guide in determining the purity of bromine.

Experimental

Preparation of pure bromine:—A. R. bromine was shaken with concentrated sulphuric acid (A. R.) and left in contact with the acid for three hours. The process was repeated twice, the bromine being finally kept over concentrated sulphuric acid (A. R.) overnight. The bromine layer was carefully tapped into a clean dry flask and repeatedly frozen and melted, carefully avoiding access of moisture. The fractions melting first and freezing last were eliminated, about 25% being lost thus. The bromine thus obtained was distilled in an all glass apparatus over fused A.R. potassium bromide, large head and tail fractions being rejected. A further 25% was lost in this process. The middle fraction was taken in a distilling flask in a vacuum system frozen in solid carbondioxide and methanol and the pump started. The evacuation was carried on for about 6–10 hours and the residual bromine freed thus from moisture and hydrogen bromide was fractionated the middle fraction alone being

taken. The bromine is stored in clear dry amber coloured bottles in a desiccator.

Testing for purity:—A M/30 solution of the bromine in pure glacial acetic acid purified by the method of Orton is allowed to react with M/30 crotonic acid also in acetic acid, in the dark at 35.5°C. An induction period of 24 minutes is invariably obtained.



A Note on the Orienting Influences in Benzene

By

S. V. ANANTAKRISHNAN

(Annamalai University.)

The systematic study of substitution in benzene derivatives has brought out in recent years a close correlation between the nature of the substituent and its orienting influence. Hammick and Illingworth³ have brought out the influence of the position of components of a substituent group on orientation but this generalisation is more or less of an empirical nature. Sutton and coworkers⁶, from an examination of the dipole moments of a series of aliphatic and of aromatic compounds have evolved the orientation rule:

"If $\mu_{ar}-X-\mu_{aliph}-X$ is positive the compound is ortho para orienting and if the difference is negative, meta orienting". This generalization has been tested in a large number of cases considering for the purpose only reactions with electrophilic reagents. With nucleophilic reagents, the position should be reversed.

Careful investigation has revealed that apart from the position taken up by the new entrant group, a substituent also affects the relative velocity of reaction and the relative proportion of the different isomers formed in the course of the reaction. Ingold and coworkers⁴ have demonstrated this for nitrations at ordinary temperatures. Recently, Eyring and Ri² have shown that the relative velocity of nitration as well as the proportion of isomers are closely related to the dipole moment of the compounds.

It must be mentioned at the outset that all dipole moment measurements as well as orientation studies have been mostly at ordinary temperatures. Both Sutton's generalization and Eyring's calculations based on the kinetic studies of Ingold on aromatic nitrations hold good generally for ordinary temperatures. For higher temperatures, quantitative data are not available for nitrations, but the limitations of both conclu-

sions are clearly brought out by examining experimental data on other electrophilic reagents. Wibaut and coworkers⁷ have examined carefully the chlorination and bromination of halogeno benzenes and have obtained the interesting result that at high temperatures both the halogens become essentially meta orienting.

TABLE I.

Bromination of Bromobenzene and chlorination of chlorobenzene.

Temperature °C	% isomers with Bromobenzene			% isomers with Chlorobenzene		
	ortho	meta	para	ortho	meta	para
400	20	23	57			
450	20.5	54.5	25			
500	20.9	55.7	23.4	21	54	24
585	19.6	58.8	21.6			
600				15	60	24
630	18.9	59.9	21.2			

These results clearly lead to the conclusion that either Sutton's rule based on dipole moment values is untenable at higher temperatures or the dipole moment itself changes at higher temperatures. Eyring (loc. cit.) has shown that it is possible to calculate the dipole moment if the relative amounts of the ortho, meta and para disubstitution products are known. The relevant equations that he uses for the purpose are the following:

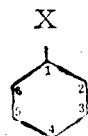
$$\frac{(\epsilon_p - \epsilon_m) \epsilon_n}{rD} = -kT \ln \frac{2x_p}{x_m} \quad \dots (1)$$

$$\frac{([\epsilon_o] - \epsilon_m) \epsilon_n}{rD} = -kT \ln \frac{x_o}{x_m} \quad \dots (2)$$

$$\mu = \epsilon_x(r_x + r_b) + (\epsilon_1 - \epsilon_m)r_b \quad \dots (3)$$

$$\mu_{ali} = -6\epsilon_m(r_b + r_x) \quad \dots (4)$$

$$(\epsilon_o) = \epsilon_p + \frac{\epsilon_1 - \epsilon_r}{15} = \epsilon_p + \frac{\epsilon_1 - \epsilon_m}{8} \quad \dots (5)$$



r_b = C—C bond distance in aromatic compounds.

r_x = C—x bond distance.

Using these and applying to Wibaut's results, the dipole moment values for bromo benzene and for chlorobenzene are found to be as in Tables II and III below. The available data for chloro benzene are not as accurate as for the bromo compound but the results are none the less striking.

TABLE II

Dipole moment of bromobenzene at different temperatures.

Temperature °C	μ debyes
Ordinary temperatures	—1.68
400	—1.72
450	—2.18
500	—2.22
555	—2.26
630	—2.29

TABLE III

Dipole moments of Chlorobenzene at high temperatures

Temperature °C	μ debyes
Ordinary temperatures.	—1.54
500	—2.18
600	—2.21

It is significant that at the high temperatures at which these reactions have been carried out, the calculated values for the aromatic halogen compounds do not differ greatly from the observed values of moments for the corresponding aliphatic compounds at ordinary temperatures of the type chosen by Sutton for his comparisons. Plotting temperature against dipole moment it will be seen that the transition from an aromatic to an aliphatic value is not a gradual one. The change takes place sharply at a temperature which is probably characteristic of the halogen substituent.

Now, when one considers the genesis of the orienting influences in terms of the electronic theories of organic reaction the halogens belong to the group (I+T)^{4a}, the inductive effect as is well known, is essentially related to the state of polarization of the molecule and as such may be expected to remain constant over range of temperatures in which the molecule is stable; the tautomeric effect, on the other hand, is essentially a polarizability factor and as such temperature dependent. Where a group influence depends on both these factors or on the T effect alone, it is reasonable to expect that the dipole moment varies with temperature and with this assumption, Sutton's rule becomes generally applicable.

In interpreting the influence of temperature on the nuclear reactivity of the halogenobenzenes, two factors have to be borne in mind. A rise in temperature results in a general increase in the activity of all three positions, ortho, meta and para. Using a two dimensional formula, the proportion of molecules for which the kinetic energy is greater than

the energy of activation E is given by $e^{-E/RT}$. An examination of Table IV shows the rapid rate at which this increase takes place:

TABLE IV

$E(\text{kilocalories})$	$\frac{e^{-E/RT}}{100} (T=27^\circ\text{C})$	$\frac{e^{-E/RT}}{100} (T=427^\circ\text{C})$	Ratio of second and third column.
30/)	ca 10^{-21}	ca 10^{-8}	10^{13}
20	9.0×10^{-16}	6.4×10^{-5}	10^{11}
17.5	2.2×10^{-11}	3.8×10^{-4}	10^7
15	1.4×10^{-9}	2.3×10^{-3}	10^6
12.5	9.5×10^{-8}	1.4×10^{-2}	10^5
10	6.5×10^{-5}	8.0×10^{-2}	10^3

For the reactions under consideration, however, no values of E are available but a close correlation though of a qualitative nature may be obtained by comparison with the additive reactivity of ethylene derivatives. Groups which activate benzene substitution are known to activate addition of bromine to the ethylenic linkage if one considers electrophilic reagents. For the addition reaction, the influence of an activating group leads to a diminution of the energy of activation¹ and the converse may be reasonably be expected for a deactivating group. Sherman⁵ has calculated the energy of activation for the ethylene bromine reaction to be 20.0 kilocalories and in the case of vinyl chloride and bromide this value is likely to be exceeded. For the substitution reactions of the type specified earlier, with chloro and bromo benzenes, an energy of activation of the same order of magnitude may be expected. Also, since the position that is most deactivated is meta to the halogen atom, substitution here may be expected to involve a higher energy of activation than in other positions and the influence of temperature arising from increased collisions and thermal activation will be most noticeable.

Though this large increase in the number of activated molecules may account for some increased substitution, this by itself cannot explain the apparent reversal in the behaviour of halogen in orientations. Considering the nature of the T effect, one has to conclude that in the region of transition, it ceases to be operative and the inductive effect leads to meta orientation. Before a proper explanation of this abnormality can be given

further data on other reactions and also the behaviour of other properties of the C—X link depending on polarizability with higher temperatures is necessary.

Other orientation rules not having a physical basis can be expected to hold good only to a limited extent and it is not surprising that they all fail in the present instance.

Summary

The electronic theory of benzene substitution has been given a physical basis recently and has been correlated with dipole moments. Experimental results at high temperature above 400°C require that either existing generalizations are not valid or dipole moments should vary with temperature in the case of some classes of compounds. An extension of Eyring's calculations shows that the latter is probably true.

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Our Musical Heritage

By

M. L. SITARAMAN,

Part I

The music of the *Yajur Veda* has been handed down to us through posterity intact, without embellishments and without mutilations, by careful processes of faithful repetition. Clements⁵ gives the considered opinion according to Ethel Rosenthal^{13a} that "Indian music has probably undergone less change than any other during the past 2000 years." The chant is a monotonous tritone very carefully camouflaged from the earliest times. This trichord, as it may be styled in modern parlance, taken, usually two notes at a time has been sought to be interpreted for us by earliest Sanskrit, Buddhist, Jain and Tamil scholars and by Bashyakaras including Sri Sankara, Sri Ramānuja and Sri Mādhva Ācāriās. Seshagiri Sastri's¹⁶ most recent interpretation is quoted in N. S. Ramachandran's^{12a} research thesis.

It is not surprising as to how this simple *Yajur Veda* chant has, however, eluded rigorous analysis till now. It is well known that the mode of a group of notes comprising either a diapason or tetra chord could easily be identified. The trichord is relatively more difficult to analyse. We have also found that the trichord does not commence from the C Major. *Yajur Veda* chant commences from the B minor (Bb) and stops with the D minor (Db). Thus we can say that the religious music of the whole of the *Yajur* and *Atharva Vedas* can be described as the simplest but at the same time very perplexing, truncated raga in the key of the B minor (Bb).

Firstly nobody has up to the present measured the exact frequencies or the frequency ratios of the three notes. Measurement of frequencies of European musical scales has evolved a standard scale viz., the major diatonic scale or our Sankarābarana^{15a} and at least two chromatic scales^{8a} which, however, are not standard since they are not acceptable either to acousticians or to our Indian musicians. The first scientific Indian

musician was the late A. M. Chinnaswamy Mudaliar⁴ of the Madras Secretariat who in 1893 sought to extend European staff notation to the sacred songs of Sri Thiagaraja Ayyah in Telugu and to the sacred songs of Gopalakrishna Bharathi and of Vedanayagam Pillai in Tamil. I consider him as a genius since he was the first to anticipate the later theories of Sabesa Iyer¹⁴, P. Sambamoorthi^{15b} and C. Subrahmanya Iyer¹⁷, that the European major diatonic scale or diapason, was our *Sankarābarana* or a slight variation of the 29th *melakarta* of Venkatamakhin. Though Mr. Mudaliar opined correctly that our *Todi* derived from *Hanumattōdi* the eighth *melakarta*, took the D, E, A and B notes flat, he was unfortunately in error with regard to the frequencies and their frequency ratios. The rational numbers representing frequency ratios are called musical intervals. However, our measurement of frequencies for Indian ragas with improved technique though differing from Chinnaswamy Mudaliar's values, do not detract in the least from the boldness and originality of his views or the validity of his mode of reasoning. Another remarkable musician who sought to interpret our Indian and Carnatic musical scales is A. H. Fox Strangways^{7a}, who, I understand, was a leader of an orchestra in England. In his book "The Music of Hindostan" published in 1914 after touring India, he refers to A. M. Chinnaswamy Mudaliar's book^{7b}. Ethel Rosenthal^{13b} in her book, quotes very freely from the same source.

The first All-India Music Conference was held in Baroda in 1916^{13c}, under the patronage of the late Gaekwar of Baroda and considerable spade work in the classification of our ragas and modes has been done from 1928 to 1942. However, no exact measurement of frequencies for our Indian and Carnatic modes seem to have been undertaken, though in the vast amount of literature about Indian music, published in our press from 1928 and especially from 1937, by Swami Vipulanandaji¹⁹, Mahamahopadhyaya U. V. Swaminatha Iyer, P. Sambamoorthi^{15c}, C. Subrahmanya Iyer¹⁷ⁱ, N. S. Ramachandran^{12b}, Ramachandra Dikshitar¹¹, S. Subrahmanya Sāstri^{18a} and others, a relationship to the works of A. M. Chinnaswamy Mudaliar and A. H. F. Strangways can be established. For example, C. Subrahmanya Iyer and Sambamoorthi Iyer have tacitly accepted the theory of Fox Strangways with regard to Indian musical intervals and both (15 and 17 i & ii) quote A. H. F. Strangways to prove the validity of their deductions.

Coming to the second point as to how such a simple trichord in *Tōdi* could be so effectively coded, so as to escape detection, we must point

out that a musician whether vocalist or instrumentalist has till now been an artiste or artist only, and not a physicist or an acoustician. The Indian musicians, one and all of them, have learnt music only by the characteristically oriental processes of faithful repetition (*Santhai* and *Tiruvai*). In a recently published article in the *Times of India Weekly*, Bombay, it was pointed out by an unknown author⁹ that *Yukar*, the Veda of an aboriginal race, Ainus of Japan has been handed down for ages (2000 years) by processes very akin to the Indian processes of *Santhai* and *Tiruvai*. It seems that "to chant *Yukar* in its entirety requires several weeks" and that the Ainus or Ainu⁶ a tall and stalwart race "flat faced, copper coloured and hairy but of distinctly Aryan origin" have not cared to read or write. Also we have now in our midst two old vocalists, Mr. Lakshmana Pillai of Trivandrum and Mr. M. S. Ramaswamy Iyer of Madura. It is remarkable that both men at their old age have still preserved their carefully cultivated voice. Lakshmana Pillai teaches at present the modern *kritis* and *kirtanas* in our University by these same processes of faithful repetition and rehearsals.

To clinch a theory the modern scientist relies upon experiment and reproducibility of result. Also Dirac, a great Mathematician has pointed out that the scope of Physics is to take measurements. Physics has mainly relied upon ocular evidence and measurements for its progress. "What we can see, we can measure" has been its fundamental principle. It was Helmholtz⁸ in his classical book "On sensations of tone," who showed for the first time in Europe that physicists or acousticians can measure what is spoken or what we can hear. The fact that in preserving our Vedas and music, experiments, measurement and reproducibility of result have been the criteria of our forefathers, makes our heritage all the more precious for us. We can understand the loss of monetary heritage of an individual or of a nation but not the loss of the superb intellectual and artistic heritage of a nation, as ours is, based as they have been on the solid experimental foundations such as *Veena* or the *Yal* and upon faithful and almost religious rehearsals.

Clements⁵ studied theoretically the chant of the *Yajur* and *Sama* Vedas and musicians like Haug^{7c} and A. H. Fox Strangways⁷ also have studied them in India itself. For example, Strangways quotes Haug and Macdonell^{7a} in his book and also a sloka from the first chapter of the *Atharva Veda* beginning with "*Sam no de vir abishta ye etc.*" Strangways agrees with the views of Clements and Haug but differs only

slightly from the Mimamsa of Macdonell, in the elucidation of the grace notes viz., *Udattam*, *Svaritam*, *Anudattam* and *Prachayam*, which are derivable from a tritone chant. However, it must be pointed out to the credit of these European scholars that they correctly recognised the *Yajur Veda* chant as a simple tritone melody. To Indian scholars on the other hand, these four grace notes have till now been a moot problem^{12c}. Also, the European scholars have concentrated their attention more upon *Sama Veda* which according to them takes more notes of a diapason and therefore is relatively more easy to tackle. A. H. F. Strangways comes to the conclusion that the tune of *Sama Veda* should be related to *Abogi*, a raga in turn derived from *Karaharapria mela*. He quotes the views of Seshagiri Sastri¹⁶ of Mysore in this connection. P. Sambamoorthi, who I understand has had discussions with T. S. Sabesa Iyer¹⁴ ex-principal of our Music College, opines that the music of the *Sama Veda* is related to *Karaharapria*, the 22nd *mela* of Govinda Dikshitar and Venkatamakhin^{18b}. We must mention here that this moot point about the tune has not been elucidated or cleared up, but only made more vague. *Abogi* is a definite mode or raga whereas *Karaharapria* is a *melakarta* raga and includes many allied ragas, which could be derived from it by a modal shift of tonic. I am not at present interested in *Sama Veda* sufficiently, to suggest a precise theory with regard to its mode. I have not learnt even a chapter of the *Sama Veda* as I have done in *Yajur Veda*. I think, however, that the *melakarta* cannot be *Karaharapria* but more allied to the *mela Hanumattodi* or *Gana Sama Varali*.^{18c} I hope to learn *Sama Veda* vocally and to reproduce the melody in the monochord, an improvised siren and in the *Veena* before clinching the issue of its *mela*.

For the second time after thirty years I practised to chant *Purushasukta*, learning it through our well-known methods of *Santhai* and *Tiruvai*. The correctness of the acquired knowledge was checked on different occasions and at different places in India. Yet, I have been as much puzzled as these scholars by the extreme difficulty in putting such a simple melody to tune. Accidentally, I found that if the chant is rendered devoid of words as when it is sung in *alaphana* fashion or when it is taken on the whistle, the musical aspect becomes more prominent and the chant relatively easier to decipher. For example, Nicholson and Koch¹⁰ in their book on "Bird Music" have supplied two gramophone records of European bird-music. In one of these on the same side is recorded the music of the wonderful vocalist among birds, viz.,

the nightingale and the monotonous and apparently simple music of the cuckoo. The name of the latter bird is related to its two tone, monotonous music which, however, in our opinion has not been put in European staff notation for the simple reason that it is not a commonly recognised European musical interval. The musical interval in this dischord has been established by us to be an ancient Indian musical interval viz., 7/6, by synchronising it on the whistle and reproducing it exactly with a improvised siren. This is the interval between *Shadja* (*Mandara*) and *Sadhāraṇa Ghāṇḍāra* or between *Panchama* and *Kaisiki Nishada*. Helmholtz^{8b} in his treatise on "Sensations of tone" had worked up the acoustics of what he called the 16 upper partial tones or overtones of the tensed vibrating string. This ratio 7/6 works out as the musical interval between the 7th and 6th upper partials or between the 14th and 12th upper partials or overtones, but not however recognised by European musicians. Thus Banister's music,^{3a} a classical work on European music quoting Helmholtz's work points out that musicians have flouted acoustics in a sort of way and consonance deliberately, by taking six out of the eight notes of the octave or group, flatter or sharper for the simpler melodies of their relative scales.

Let us consider Haug's rendering of 'Sam no devir abse ye etc.,' (page 247, exercise 340 in "Music of Hindostan" by A. H. F. Strangways).

(EXAMPLE FROM) HAUG.

EX. 340.

Notes in European notation
vibration frequencies
Added by author.

(OUR RENDERING)

GENERAL PRAYER Atharva Veda
STYLE OF EXECUTION. GRAVE

CHANT, STYLE. YAJUR VEDA
without waver

MELA Hanumattōdi.

RAGA Punnaga Varāli.

CHANT Tritone melody in
the relative scale of Bb
Bb=126 vibration frequencies.

TALA. Common time: Adi.

EX. 1.

Notes in European notation
Steady Notes, vibration frequencies

It is to be seen that "in the Poona form of rendering taken down by Haug from the lips of Marāta Brahmins" the notes of the tritone are in minims or crotchets, dotted or otherwise; but are without the signs for sharps or flats. Even a cursory inspection tells us that the notes belong to the major diatonic scale commencing from E (*Antara ghāṇḍhāra*) in the F clef or bass register. Using modern standardized frequency for the tonic, C the fundamental note will have a frequency (pitch value) of 128. E, F, E, D., the notes used in Ex. 340 will then have the following frequencies and musical intervals.

Notes and Musical Intervals.	E $1\frac{1}{15}$	F $1\frac{1}{16}$	E $\frac{9}{10}$	D
Vibration Frequencies.	160	170.6	160	144.

Remembering that *Udātta*¹ (high, elevated, lofty) stands for tonic frequency or *shadja*, the tonic frequency should have a pitch value of 144. *Anudātta*^{1a} has been defined by Pānini (6th century B.C.) the grammarian as a "grave accent which immediately precedes the *Udatta*" etc. So, *Anudātta*, as its name implies must connote a lower frequency. Now if the frequencies indicated by Haug are however, exactly reproduced on instruments like Savart wheels, siren, piano, veena or violin they will be seen to belong to quite a different raga, viz., *Sankarābarana* and not to the characteristic chant of *Yajur Veda*. However, if Bb, C, Db in Tōdi are taken with the vibration frequency of 144=C the tonic, the mode, of course, becomes different from Haug's representation but the chant is exactly reproduced.

We give (vide Ex. I Supra) our rendering of the first verse in *Atharva Veda*. The Poona version was recited by Marāta Brahmins

nearly 70 years ago. It is interesting to note that the orthodox Brahmins of the last century chose this relatively general prayer which could be chanted by any Hindu instead of a genuine specimen from their Vedic philosophy. Reciting a hymn from the other three Vedas, to an European like Haug or Clements would have been in their view a sacrilege. European scholars must have been puzzled by the simplicity of these orthodox Brahmins of the last century. This prayer also occurs in the Brahmin's daily *Madhyānika karma* and an orthodox Brahmin is supposed to chant daily at noon this prayer asking his (Devas or powerful ancestors) to give the world and himself pure water in plenty. Also vide the prayer to Varuna: *Imam Me Varuna Sruti Havam* etc., given below.

EX. 2.



Here $\flat$ or Bb (*Kaisiki Nishada*), $\natural$ or, C (the tonic frequency) and $\sharp$ or Db (*Sudda Rishaba*) will have respectively 126, 144 and 156 vibration frequencies. Also *Udāttam* and *Anudāttam* become standard frequencies or steady notes representing 144 and 126 vibrations respectively. *Prachayam* becomes a sort of *appoggiatura* or an *Arohana* from *Anudāttam* to *Udāttam*. *Svaritham* which follows *Udāttam* becomes firstly an *Arohana* to Db secondly, a fall or cadence generally to *Udāttam* and to *Anudāttam* in certain cases. Thus *Prachayam* and *Svaritham* may be looked upon broadly as grace notes proper or *Gamaka* notes and *Svaritham* particularly does also have a steady vibration frequency of 156 with a frequency ratio of 13/12 from the tonic. Sometimes *Svaritham* in *Rig Veda* has a quaver rest but usually the note is lengthened at Db as a dotted crotchet. This interpretation is also in accordance with our theory of whole number of vibration frequencies^{2b}. It is well known and it can also be shown, that fractional frequencies as 138.6 though understandable, cannot be realised in practice. Our example from *Brahmayagyam* given above has been proved also by experiment with three beakers filled partially with water and tuned to the octaves of the three notes.

I have taken care to steer clear of recent polemical literature by not attempting to enter into the interpretations of the *Yajur Veda*. However, the first 72 verses alone of *Yajur Veda Purushasuktam*, belong to *Rig Veda* and are chanted in temple worship for propitiating the deity. A. H. F. Strangways opines that *Yajur* and *Sama Vedas* are musical developments of the *Rig Veda* and that the accent of the simple *Rig Veda* "was originally a mark of musical pitch and became a mark of stress," with *Rig Vedins* only after the beginning of our era. I entirely concur with this profound view of Strangways since I have had opportunity to hear *Rig Veda* recited in many places and also at Trichūr where most of the Nambūdris are *Rig Vedic Brahmins*. Sri Vāni Vilās Press at Srirangam has recently published "*Rig Veda Purushasuktam*" alone as a small booklet of four pages costing about two annas. That *Yajur* is a musical development of the *Rig Veda* can be shown from purely internal evidence from this booklet. Thus the 5th verse (*Purusha ye vedam sarvam*) becomes in *Yajur Veda* "*Purusha ye vedagum sarvam*," the 10th verse "*Athojiayamschapurūshaha*" is rendered as "*Athojiayam gischa purūshaha*." Also, "*ritham satyam*" is rendered as *Rithagum satyam* etc., to suit the exigencies of rhythm.

I must not forget to mention that rigorous acoustical evidence has been adduced to show that *Hanumattōdi* is a symmetrical raga and that it is a natural scale with consonant musical intervals². Though the partials above the 12th in the string instrument or the human voice, are extremely feeble and almost inaudible, the tones corresponding to these musical intervals are however present in the music of many birds and animals. Frequency ratios such as 8/7, 13/12, 14/13 etc., are thus consonant intervals since they are of the form $\frac{n+1}{n}$ where n can have

any integral values^{7a} from 1 to 15. Also 8/7 interval of 58 savarts is more nearly double the so-called semi tone interval=28 Savarts than 9/8=51.1 Savarts. It is not a moot point to say that upper partial tones above the 4th or 8th cannot be heard even by the best musically trained ear. However, these over tones with their Helmholtzian musical intervals can be reduced within the octave, that is, reproduced within a musical group, especially with our mobile instruments like the Veena or the European violin. We can style the Indian musical intervals, therefore, as ancient harmonic musical intervals and our music as the ancient *natural* harmonic scales. Karnatic music of Tōdi which is

relatively recent and about 700 years old, has in practice sharpened Eb and Bb notes by the maximum of one beat in *Arohana* and flattened by the same amount in *Avarohana*, to relieve the monotony of an otherwise perfectly consonant musical scale^{20a}.

In another article it will be shown as to how at least 48 *melas* out of Venkatamakhin's 72 *melakartas* could be derived from 2 *melakartas* alone viz., *Hanumattōdi* (a symmetrical raga) and *Sankarabarana* (an unsymmetrical raga)². P. Sambamoorthi¹⁵ and Ramachandra Dikshitar¹¹ opine from historical evidence of early trade between the south of India and Greece, that about the age of Silappadikaram our *Sankarabarana* became the later Grecian consonant scale. In our opinion the so-called enharmonic scales^{6a} (Encyclopaedia Britannica) probably connote the oldest Greek music rather than our consonant Indian scales. Then, if *Sankarabarana* may be considered as a musical product of ancient Tamilian civilization, given first to Greece and later developed according to Banister^{3b}, after the 10th century in Europe, we may infer with truth that *Tōdi* is a product of probably an equally, if not more, ancient Samskritic civilization. Also the existence of harmonious and harmonic melodies from about the time of Bharata (5th century) till the time of Sarangadeva (13th century) must point out to only one conclusion viz., that the fusion of these two great cultures must have taken place long before the time of Bharatā the author of *Nāṭya Sāstra*. We need not trouble ourselves much about the age of *Yajur* and *Sama Vedas* so long as there is internal evidence available to show that these *Vedas* may be considerably more ancient than the *Mahābāratha* and the *Ramāyana*. Griffith's translation of *Sama Veda* (1893) gives us an insight into a remarkably and scientifically developed civilization of a period earlier than the literary period of our myths and legends, when the people of the epoch asked of Indra and Agni just the full span of 100 years of life, prosperity to their cattle and rain for their crops. If asked to suggest an age for our *Vedas* I could unhesitatingly put it at a period when there were no castes, when there were no invidious distinctions as whitemen, blackmen, copper coloured men or yellow men but when there were only sages or *Rishis*, people, cattle, birds and primeval forests. If asked to be less vague and more precise, I would put the age of our glorious past at an epoch when the most vital process of deliberately producing fire by friction was practised and demonstrated for the whole world in their *Somayagas* by these ancient *Rishis*.

Personally, though unable to fix the age of our civilization definitely, I would gladly concur with a sympathetic historian who is able to give us a date earlier than the ancient Egyptian or Sumerian civilization.

SUMMARY

Indian musical intervals have been shown to have a scientific basis. *Yajur Veda* chant has been found to be an independent ancient, natural, musical scale and unrelated to the other ancient Tamilian scale, viz., *Sankarabarana* or the major diatonic scale. Both scales seem to be closely connected with bird and animal music with perfect harmonic intervals.

Modern European modes and Indian (northern Indian and Karnatic) ragas take only six or lesser number of notes excluding the tonic and the octave. Modern music may be looked upon as developments of the two distinct natural scales, in the sense that at least two notes of any raga or diapason are taken in Gamaka. Gamaka notes may be defined as either sharpened or flattened tones with a maximum difference of one beat from the consonant intervals. In European music the canons are entirely different; the Gregorian or Plagal system generate the chromatic scale by the fourths and Hauptmann's system by the fifths. Tempering of the scales by European musicians, in these and other ways, had not, however, found favour with acousticians. Horace Lamb^{20b}, for example, says about the so-called tempering of the musical scale as "Tampering" with it.

In conclusion, we must point out that that we owe a deep debt of gratitude, on two counts, to our ancient civilizations; firstly for our glorious and scientific musical heritage; secondly for the fusion of two great cultures, viz., Tamilian and Sanskritic civilizations which must have taken place in India at a very early epoch. That there could not have been any unhealthy repercussions or any clash between these two cultures, is also evident. Sir S. Radhakrishnan addressing women students recently in Bombay (February 1942) pointed out that oriental civilizations knew at all times how to adapt themselves to environments since their democracies were not so much based on mere forms or conventions, fear or jealousy but had deep roots in the two universal principles of "live and let live" and love of humanity.

In Part II we propose to put *Yajur Veda Purushasukta* in European staff notation.

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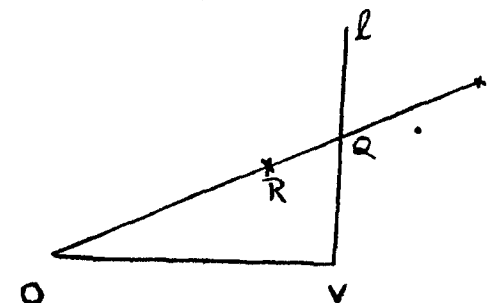
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On a Projective Transformation

By

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1. The focal properties of conics are usually studied by means of projections involving the circular points and the circular lines. This paper is mainly an attempt to study those properties by a simpler projective transformation in a single plane. The transformation is then extended to spaces of higher dimensions.



Let O be a given point and l a given line. Take any point P in the plane determined by the point O and the line l . Let OP intersect l in Q and let R be the harmonic conjugate of P with respect to O and Q.

If P moves along a curve C, R will move along a curve Γ which we shall call the 'transform' of C.

As an immediate consequence of the definition of the transformation we have.

Theorem 1. All straight lines through O transform into themselves.

Let V be the foot of the perpendicular from O on l . Then since P, R divide OQ harmonically, it follows that l bisects the angle PVR. Hence we have

Theorem 2. A straight line through V transforms into its reflection about the line l .

As a corollary to the above theorems we get

Theorem 3. The transformation preserves the angles at O in magnitude and sign and the angles at V in magnitude but changes the sign.

It is clear that the transform of any point on the perpendicular bisector of OV is at infinity; conversely, the transform of any point on the line at infinity lies on the perpendicular bisector of OV. Therefore we get

Theorem 4. The perpendicular bisector of OV transforms into the line at infinity; and conversely, the line at infinity transforms into the perpendicular bisector of OV.

2. Next we shall discuss the equations of the transformation. Taking O as origin and OV as the initial line, we have, if (r, θ) , (r', θ) be the points P and R respectively and $OV=2c$, then

$$\frac{1}{r} + \frac{1}{r'} = \frac{2}{OQ} = \frac{\cos \theta}{c} \quad \dots (1)$$

If (x, y) , (x', y') be the cartesian coordinates of P, R respectively, then dividing both sides of (1) by $\cos \theta$ and $\sin \theta$ respectively, we get.

$$\frac{1}{x} + \frac{1}{x'} = \frac{1}{c} \quad \text{and} \quad \frac{1}{y} + \frac{1}{y'} = \frac{x}{cy} = \frac{x'}{cy'}$$

so that

$$\left. \begin{aligned} x &= \frac{cx'}{x' - c}, \quad y = \frac{cy'}{x' - c}; \\ x' &= \frac{cx}{x - c}, \quad y' = \frac{cy}{x - c}. \end{aligned} \right\} \quad \dots (2)$$

Hence we have the

Theorem 5. The transformation is projective, so that the transformation of an algebraic curve of the n^{th} degree is a curve of the same degree. In particular, straight lines transform into straight lines and conics into conics.

Also, from (1) we have

$$\frac{r'}{r} = \frac{x' - c}{c} = \frac{c}{x - c} \quad \dots (3)$$

Let the transforms of the points $P_i (x_i, y_i)$ be $P'_i (x'_i, y'_i)$ ($i=1, 2, 3$) and let the radii vectors OP_i, OP'_i be denoted by r_i, r'_i respectively.

If, further, Δ, Δ' denote the areas of the triangles $P_1P_2P_3, P'_1P'_2P'_3$ respectively, then

$$\begin{aligned} \Delta' &= \frac{1}{2} \begin{vmatrix} x'_1 & y'_1 & 1 \\ x'_2 & y'_2 & 1 \\ x'_3 & y'_3 & 1 \end{vmatrix} \\ &= \frac{1}{2} \begin{vmatrix} \frac{cx_1}{x_1 - c} & \frac{cy_1}{x_1 - c} & 1 \\ \frac{cx_2}{x_2 - c} & \frac{cy_2}{x_2 - c} & 1 \\ \frac{cx_3}{x_3 - c} & \frac{cy_3}{x_3 - c} & 1 \end{vmatrix} = \frac{1}{2 \prod_{i=1}^3 (x_i - c)} \begin{vmatrix} cx_1 & cy_1 & x_1 - c \\ cx_2 & cy_2 & x_2 - c \\ cx_3 & cy_3 & x_3 - c \end{vmatrix} \\ &= \frac{-c^3 \Delta}{\prod_{i=1}^3 (x_i - c)} = -\frac{r'_1 r'_2 r'_3}{r_1 r_2 r_3} \Delta \quad [\text{by (3)}]. \end{aligned}$$

Thus we get

Theorem 6. If P_1, P_2, P_3 be three points with transforms P'_1, P'_2, P'_3 respectively, and Δ, Δ' be the areas of the triangles $P_1P_2P_3$ and $P'_1P'_2P'_3$ respectively, then

$$\frac{\Delta'}{OP'_1 \cdot OP'_2 \cdot OP'_3} + \frac{\Delta}{OP_1 \cdot OP_2 \cdot OP_3} = 0.$$

Consider a circle with centre O and radius a . Putting $r=a$ in (1) we see that its transform is the conic

$$\frac{a}{r'} = \frac{a}{c} \cos \theta - 1,$$

having O as a focus, the initial line as the transverse axis and whose semi latus rectum is a and the distance of the directrix from the focus is c . Hence we get the

Theorem 7. Circles with centre at O transform into conics with a focus at O and the corresponding directrix common, the semi latera recta being equal to the radii of the corresponding circles. Conversely, a system of conics having a focus and the corresponding directrix common, can be transformed into concentric circles by a proper choice of O and the line l .

3. A number of interesting deductions can immediately be made. We give a few as illustrations.

Since the chords of a circle subtending a constant angle at the centre envelop a concentric circle, the point of contact of a chord with the envelope being on the bisector of the angle subtended by the chord at the centre, we get on transformation (using Theorem 3) the

Theorem 8. Chords of a conic subtending a constant angle at a focus envelop a conic having that focus and the corresponding directrix common with the given conic. Further, the point of contact of a chord

with the envelope lies on the bisector of the angle subtended by the chord at the focus.

If a polygon be inscribed in a circle and circumscribed to a concentric circle, then the sides of the polygon subtend a constant angle at the common centre. Correspondingly we have the

Theorem 9. If a polygon be inscribed in a conic and circumscribed to another having one focus and the corresponding directrix Common with the former then the sides of the polygon subtend a constant angle at the common focus.

Moreover, the necessary and sufficient condition that a polygon of n sides be circumscribed to a circle of radius a and inscribed in a concentric circle of radius b is

$$a = b \cos \frac{\pi}{n}$$

Therefore we have

Theorem 10. The necessary and sufficient condition that a polygon of n sides may be circumscribed to a conic of semi-latus rectum a and inscribed in another conic having one focus and the corresponding directrix common with the former and whose semi-latus rectum is b is

$$a = b \cos \frac{\pi}{n}.$$

If in theorem 6 we take P_1, P_2, P_3 on a circle with centre O and radius a , the area of the triangle $P_1P_2P_3$ will remain constant if the sides subtend constant angles at the centre. Hence we immediately deduce

Theorem 11. If P_1, P_2, P_3 be three points on a conic such that the sides of the triangle $P_1P_2P_3$ subtend constant angles at a focus, O , and if Δ denotes the area of the triangle $P_1P_2P_3$, then

$$\frac{\Delta}{OP_1 \cdot OP_2 \cdot OP_3} \text{ is constant.}$$

Since the maximum triangle inscribed in the circle is equilateral, it follows that the maximum value of $\frac{\Delta}{OP_1 \cdot OP_2 \cdot OP_3}$ is attained when the sides

of the triangle subtend the same angle at O, and is then equal to $\frac{3\sqrt{3}}{4a}$ where a is the semilatus rectum.

A circle with centre at the midpoint of OV has its equation in the form

$$(x - c)^2 + y^2 = a^2.$$

This by (2) transforms into

$$\left(\frac{cx'}{x' - c} - c \right)^2 + \left(\frac{cy'}{x' - c} \right)^2 = a^2$$

i.e., into the hyperbola

$$\frac{(x' - c)^2}{c^4/a^2} - \frac{y'^2}{c^2} = 1, \quad \dots (4)$$

which has the midpoint of OV as its centre, the semilatus rectum and the conjugate axis equal to a and c respectively, and the x -axis for the transverse axis. Thus we get

Theorem 12. Circles having a common centre can be transformed into concentric hyperbolas whose conjugate axes coincide and are equal in length, and whose latera recta are equal to the radii of the corresponding circles. [We have only to choose O, V such that the common centre is the midpoint of OV.]

The converse is also true.

Since O, V are fixed points for all hyperbolas of the system (4) being the points where the circle, concentric with the hyperbolas and

having its radius equal to the common semi-conjugate axis, meet the transverse axis, it is clear that we can obtain from theorem 12, theorems analogous to theorems 8, 9 and 10. The actual statement of the theorems is left to the reader.

It may be remarked here that circles having centre at V transform into conics having a focus at V and the corresponding directrix common, the semi latera recta being equal to the radii of the corresponding circles.

4. The method of transformation given above can easily be extended to spaces of higher dimensions. For the transformation in n dimensions we have simply to replace the line l by an $(n - 1)$ -flat. If $2c$ be the distance of the $(n - 1)$ -flat from the origin O it follows, exactly as in the case of two dimensions, that the relation connecting OP and OP' is

$$\frac{1}{r} + \frac{1}{r'} = \frac{\cos \theta}{c}. \quad \dots (5)$$

If we take OV as the x_1 -axis we get the following transformation scheme in cartesian coordinates.

$$x_i = \frac{cx'_i}{x'_i - c}$$

$$x'_i = \frac{cx_i}{x_i - c} \quad (i = 1, 2, \dots, n) \quad \dots (6)$$

The content Δ of an $(n + 1)$ -simplex formed by the points $P_r (x_{r1}, x_{r2}, \dots, x_{rn})$ ($r = 1, 2, \dots, n + 1$) being

$$\frac{1}{n!} \times \begin{vmatrix} x_{11} & x_{12} & \dots & x_{1n} & 1 \\ x_{21} & x_{22} & \dots & x_{2n} & 1 \\ \dots & \dots & \dots & \dots & \dots \\ x_{n+1,1} & x_{n+1,2} & \dots & x_{n+1,n} & 1 \end{vmatrix}$$

we have, if Δ' denotes the content of the transformed simplex, analogous to theorem 6, the

Theorem 13

$$\frac{\Delta}{OP_1 \cdot OP_2 \dots OP_{n+1}} + \frac{\Delta'}{OP'_1 \cdot OP'_2 \dots OP'_{n+1}} = 0.$$

We can also write down without difficulty the analogues of the other theorems.

The Indian States and the Paramount Power

By

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The problem of the Indian States is as old as Indian history. We find 'Samantas' or local rulers in the Old Hindu Empires occupying a position more or less analogous to that of the princes of modern India. These local rulers became practically independent sovereigns with the decline of the Mughal empire, and their allegiance to the Delhi throne was only very nominal. When the English established their first trading settlements in India, they found these rulers *de-facto* sovereigns in their own states. But the different circumstances that led to the establishment of British power strongly influenced the fortunes of these princes also: the problem of Indian states as we find it to-day is essentially the result of these circumstances.

The East India Company was purely a trading corporation during the first century and a half of its existence. The charter of the crown had no doubt authorised the company to wage war with non-Christian powers and to enter into treaties or alliances with them. But the company at that time was struggling for its bare existence and its directors had instructed its agents to concern themselves as little as they could with the politics of India. Their policy was clearly outlined in the preamble of the Pitt's India Bill of 1784 which declared that "to pursue schemes of conquest and dominion in India are repugnant to the wish, the honour and the policy of this nation." During this period the company had little confidence of its own strength, and it was anxious to avoid both annexations and alliances. But the battles of Plassey and Buxar convinced the British of the weakness of the Indian princes. In 1764 Oudh lay at the feet of Major Munro, and the company found itself committed to the task of controlling the administration of an important Indian state. But the company's position at that time was not strong enough to permit the annexation of Oudh. Therefore an alliance was concluded with the Navab Wazir guaranteeing his absolute independence in internal administration.

The reign of Wellesley marked a striking departure from the policy of his predecessors. His "subsidiary alliance" was a bold assertion of the company's superior rights over the Indian states. A treaty of subsidiary alliance required the prince to surrender his "right of negotiating with foreign nations and with states in alliance with the company". This was the first serious encroachment on the independence of the Indian princes in general. But Wellesley's policy was soon reversed by his immediate successors. 'Non-intervention' was the key-note of British policy till 1813. One striking characteristic of this policy was the general recognition of the equality of status between the states and the company. The company recognised the sovereign position of the states in all their treaties and alliances. They were treaties of 'mutual amity, friendly co-operation and reciprocal obligations.'

The company's position and status had entirely changed under the governor-generalship of the Marquis of Hastings. The East India Company was no more one of the powers of India, it was the paramount power. It had scattered the power of its European rivals and it no longer required the support of the Indian states for its existence. On the other hand the Indian states stood in need of the company's support. The British policy towards the states during this period is described as one of 'subordinate isolation'. The Marquis of Hastings was an avowed champion of British sovereignty and it was clearly asserted in all his treaties with Indian states. In the former period treaties were negotiated with Indian princes for mutual security, and the treaty obligations were reciprocal. But Hastings' treaties declared the states to be in complete subordination to the Government of India. This principle is clearly seen in his treaty with the Maharana of Udaypur (1818). Article 3 lays down that "the Maharana of Udaypur will always act in subordinate co-operation with the British Government, and acknowledges its supremacy, and will not have any connection with other chiefs or states." Hastings however was prepared to recognise the independence of these princes in internal administration. He was anxious to preserve the apparent sovereign status of the Indian princes and was definitely against any policy of annexation.

But the governor generalship of Dalhousie marked a distinct step further. Dalhousie asserted that the relationship between the princes and the company was of a 'feudal' nature and therefore he could claim

'suzerain' rights over them. This was his justification in enunciating his famous 'doctrine of lapse and escheat.'

The great Mutiny and the assumption of direct sovereignty by the crown opened a new chapter in the history of British relations with Indian states. The failure of the mutiny was the recognition of the de-facto and de-jure sovereignty of the British in India. Lord Canning declared that "the crown of England stood forward the unquestioned ruler and paramount power in all India" and that "there was a reality in the suzerainty of England which was acknowledged by the Indian chiefs." The introduction of a new factor, viz., the crown, in the politics of India radically altered the constitutional position of the Indian States. In the Queen's Proclamation there was an attempt to define British policy towards the princes. The princes were assured that there would be no further encroachment on their territories. The Queen also promised that she would "respect the rights, dignity and honour of native princes as her own." The princes were no doubt greatly relieved to secure a formal guarantee of their rights from Her Imperial Majesty. But assumption of direct sovereignty by the crown brought about a subtle change in the nature of these 'rights' of the Indian princes. From that time onwards their 'rights' were to be dependent upon the goodwill of the British crown. The Government of India Act of 1858 established beyond doubt the feudatory character of the states and completed the imperial structure with the crown as its apex. The Queen's Proclamation was followed by Lord Canning's issue of 'sanads' to the Indian princes. These sanads demanded loyalty to the crown as one of the essential conditions for its fulfilment. Canning asserted also that these sanads did not "debar the Government of India from stepping in to set right such serious abuses in a native government as may threaten any part of the country with anarchy or disturbance, nor from assuming temporary charge of a native state when there shall be sufficient reason to do so." These rights of paramountcy and feudal overlordship were formally acknowledged by the Princes of India when they attended the Imperial Durbar at Delhi.

Having broadly traced the policy of the paramount power towards the states in different stages, let us examine the rights claimed by the Government on the basis of this paramountcy. The Viceroys, Governors and other agents of British Power in India have from time to time

enunciated in theory and asserted in practice their various rights over the Indian states, which they call 'suzerain rights'. But these suzerain rights have never been wholly accepted by the princes. Neither do they affect all the princes equally. They have been widely influenced by the treaty rights, customs and traditions of different native states. The following are the important rights claimed by the paramount power.

(1) The paramount power directs the relations of the states with foreign powers. This right has been claimed by the British Government even in its very early treaties with Indian princes. In course of time specific restrictions were imposed on the princes in their dealings with foreign powers. Princes are not entitled to receive consular agents in their territories. They cannot employ foreigners in their service without the sanction of the British Government. All foreign interests of the states like trade negotiations, extradition of a criminal etc., are secured through the paramount power. Even pass-ports for state subjects for travel abroad are issued by the British Government. The princes cannot accept any honour or title from any foreign power without the consent of the paramount power. The obligations of the Imperial Government to foreign powers both in times of war and peace are binding on the states also.

(2) The British Government protects the rights of British and foreign nationals in native states and establishes extra-territorial jurisdiction. Many of the local rulers have recognised the claim of European nationals to be tried by European judges. The Residency in a native states has been declared inviolable. Cantonments and military stations, and in many states railway territories also, are under the jurisdiction of the British Government.

(3) The paramount power conducts the relations between one state and another. The states have surrendered their external authority and as such have no international status. All inter-statal disputes are to be settled by the award of the paramount power. "If a boundary question is to be adjusted, an amicable arrangement made for the mutual surrender of criminal or joint action taken to complete a line of railway or canal that passes from state to state, the British Government must arrange the business and its arrangement must be binding upon the parties concerned" (Imperial Gazetteer Vol. IV). There are

numerous instances where the central government has exercised its right of settling inter statal disputes. (Eg. disputes between Travancore and Cochin over the Koodalmanikkiyam Devasthanam. Territorial disputes between Patiala and Nabha).

(4) The paramount power settles all questions relating to succession in the native states. This right was originally claimed only in the case of dependent states. But now all the states have recognised it as a right associated with suzerainty. The Secretary of state for India declared in his despatch of July 1891 that "it is admittedly the right and duty of the Government to settle successions in the protected states of India generally." The Government of India declared in plain terms that "every succession must be recognised by the British Government and no succession is valid until such consent has been given."

As a necessary corollary to this right of settling succession, the British Government reserves the right of permitting or disallowing adoption. No doubt, the princes' right of adoption has been recognised in the Queen's Proclamation ("I hereby convey to you the assurance that on failure of natural heirs, the adoption by yourself and the future ruler of your state of a successor according to Hindu Law and the custom of your race will be recognised and confirmed"). But in all cases adoption becomes valid only when it is sanctioned by the paramount power. It may be pointed out here, that a prince cannot adopt an heir superseding the claims of the legal heir. The right of adoption has been recognised only "on failure of natural heir". (Ref. Kashmir case of adoption).

(5) The paramount power exercises the right of setting up regencies and minority administrations. The Government of India maintain that "they are the trustees and custodians of the rights interests and traditions of the states during a minority administration." But this trusteeship has been exercised not only in cases of minority administration. Instances are not rare where rulers have been deposed for charges of maladministration and regency governments set up in their places.

The suzerain power has also claimed the right of wardship over minor princes. The British Government has made provisions for the education of the Indian princes and separate institutions have been set up for this purpose.

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(6) The Paramount power controls the use and grant of all titles, honours and salutes relating to the Indian princes. Titles claimed by a prince in addition to those mentioned in his 'Karita' are not recognised by the suzerain government. The right to confer titles on ruling princes is the privilege of the king Emperor, and princes are not allowed to receive titles or honours from foreign powers without his consent. The princes are not generally allowed to confer on anybody any of the titles which are usually given by the Viceroy. In a controversy of this kind the Political Agent informed the Begum of Bhopal (letter dated Aug. 19, 1919) that "the grant of the title of Rai Bahadur was wholly inadmissible under general rule" and that "titles similar to those given by the Viceroy should not be given by ruling chiefs even to their own subjects."

(7) The suzerain power undertakes to protect the states from external aggression and from internal disorder. This right of protection places the states in such a degree of dependence that they are rendered absolutely powerless against the central government. Serious restrictions have been imposed on the number, armament and equipment of the state forces. The native rulers are not allowed to "construct factories for the production of guns and ammunition" or "to fortify posts in the interior." Princes are expected to surrender all their resources to the central government in times of war or other emergencies.

(8) The paramount power exercises its jurisdiction over railways, posts and telegraphs, coinage and currency and customs and fiscal policy in the Indian states. Many of the princes have surrendered all rights over the railway lines passing through their territories. The states cannot construct railways without the permission of the British Government, unless they are for purely local purposes. The telegraph offices in native states are exclusively controlled and managed by the officers of the British Government (Kashmir has a separate telegraph system of its own). The right of independent coinage has been denied to many native states. The policy of the British Government has always been to universalise the British coinage. Some states like Hyderabad and Travancore have their own coins. But the British rupee is legal tender every where.

Indian states which have seacoasts have practically surrendered their rights of sea customs to the paramount power (Travancore has entered into an interportal convention with the British Government).

(9) The suzerain government can depose an Indian prince or compel him to abdicate in exercising its right of punishment. Princes may be deposed either for charges of gross misrule or for disloyalty. We find leading instances of deposition in prominent states like Mysore, Baroda, Alwar and Indore. But the paramount power has found it convenient to induce the native ruler to abdicate 'voluntarily' in many cases. The government has often resorted to this policy of veiled deposition 'to avoid the odium of public punishment.'

(10) The most important of all the rights claimed by the paramount power is the right to interfere in the internal affairs of a state. This has always been resented by Indian princes; but as Sir George Campbell observed as early as 1852 "there is in fact almost no state with the internal affairs of which the British have not had something to do." Sir W. L. Warner mentions two kinds of cases in which the suzerain power may interfere. "The Government of India may interfere in the interests of a state protected by it or a sovereign recognised by it, or it may interfere mainly in the interests of British subjects and of the Empire as a whole". But this is too vague and elastic a statement and any case may fall under either of these categories. This almost tantamounts to an indefinite right of intervention. In fact this seems to be the claim of the suzerain government. Lord Reading in his letter to the Nizam dated 27th March 1926 declared that "the right of the British Government to intervene in the internal affairs of the Indian states is another instance of the consequences necessarily involved in the supremacy of the British crown." It is not possible to estimate the actual extent of the exercise of this right in different states. But the paramount power has observed very little distinction between smaller and bigger states in the exercise of this right. They have interfered in the affairs of "His Exalted Highness and our faithful ally the Nizam" as often as they have done in the case of a minor prince of Kathiawar.

The chief agency through which the British Government interferes in the affairs of the state, is the British Resident. The main duty of the Resident, no doubt, is to give 'advice' to the prince. But as Mr. K. M. Panikkar says the advice of the resident is usually an order or a command. "The whisper of the Residency is the thunder of the state and there is no matter on which the Resident does not feel qualified to give advice." In many native states the Residents are the 'masters' of the

princes rather than their 'advisers'. They interfere in the day-to-day affairs of the state and often exert their influence in the appointment of the state officers. There was a time, when even in such a major state as Travancore no appointment carrying a salary of Rs. 500 or above could be made without the sanction of the Resident. Princes have many a time complained about the high-handedness of the Political Agents in their states, but often with no results. On the other hand, the complaints of the Residents against the princes have often induced the suzerain power to exercise their right of punishment. The Raja of Satara was deposed and his state was annexed on the basis of the charges brought against him by the Resident. Another method by which the paramount power controls the administration of the states is by appointing its own nominees as dewans or ministers. Princes are not allowed to appoint their ministers without the sanction of the British Government. They are to be guided by the advice of the British Government in the choice of their dewans. Sometimes they are forced to forego their own preference in the matter, and to appoint the nominee of the paramount power.

The services of British officers may be 'lent' to the states for a stipulated period. These 'lent' officers also provide a convenient means for the British Government to interfere in internal affairs.

The British Government can interfere in the administration of the state to some extent by virtue of its right of controlling legislation. In many native states legislation even on ordinary matters of importance requires the previous sanction of the British Government. The paramount power can further interfere in state affairs at the instance of direct petitions from the state subjects. This right is based on the claim that the state subjects owe direct allegiance to the suzerain power. The people in the states have only been too glad to avail themselves of this privilege of seeking redress of their grievances at the hands of the paramount power. In the recent political agitations for responsible governments in many of the states, we find instances of popular organisations submitting petitions and memorials to the Viceroy demanding direct intervention.

We have enumerated above the various rights claimed by the paramount power over the states; now it is not difficult to see that the 'sovereignty' of the Indian states is but an empty phrase. Some writers

hold that the states have not surrendered their "internal sovereignty" even though they have no sovereign status in international law. This argument of 'partial sovereignty' of the state may be accepted as a theory. We may agree with Mr. Panikkar when he says that sovereignty is divisible and that the undivided sovereign of the Austinian school is a meaningless metaphysical conception. But so far as the Indian princes are concerned it is doubtful whether they retain even this partial degree of sovereignty. No doubt there are all the outward symbols of sovereignty in the Indian states. The Chamber of Princes is said to be composed of ruling princes of India exercising "full sovereign powers." But in actual practice, sovereign power is being exercised by the paramount power. Lord Curzon was not enunciating any new theory when he declared in his famous Bhawalpur speech that "the sovereignty of the crown is everywhere unchallenged. It has itself laid down the limitations of its own prerogative."

Lord Reading's letter to the Nizam emphasised the principle again:—

"The sovereignty of the British Crown is supreme in India and therefore no ruler of an Indian state can justifiably claim to negotiate with the British Government on an equal footing." In spite of these clear enunciations repeatedly made by the viceroys, the princes have again and again demanded a clearer definition of Paramountcy. The Indian states committee has given the answer in very plain terms "Paramountcy must remain paramount."

Bharati and Tamil Music

By

C. R. MYLERU, M.A.,

It is likely that some people might be surprised to see this title, and might begin to wonder whether it is our late poet Sir C. Subrahmania Bharati who has spoken about "Tamil music", and if so where. Yes, it is he who has expressed his views on this subject so long back as 1920, or earlier, long before any one ever even dreamt of the Tamil music movement. We who follow in his footsteps in other matters, could follow him even in this respect; his words are so eminently reasonable and appealing. He says:—

Only those who are able to sing some of the compositions of Muthuswami Dikshatar, Thyagayyar, and Patnam Subrahmanya Ayyar, with many "Sangathies" are first-rate musicians. All these songs are either in Sanskrit or Telugu. Therefore the vast majority of the singers do not know the meaning of the songs they sing. They swallow the letters and words of the songs, and thus murder the meaning of the compositions. When a musician does not know the meaning of a song, he cannot know its "rasā".

I have also been carefully observing the state of affairs in music from my birth up to this moment. The performance begins; the singer begins with "Vāthāpi Ganapathim Bhajē"; then "Rama nē samāna-mevaru", Mariyātha kāthurā", "Varamulasaki" Oh God! the same story from beginning to end!

Go wherever you want, to any district, any village, let any "vidwan" sing, it is the same thing over and over again. It is only because the people of Tamil Nad have iron ears that they have been hearing again and again and again and again, the same seven or eight songs for years together. People who have good ears in any country would not have put up with this infliction.

I don't mean to say that we should forget songs written by our great predecessors. They must be sung with a knowledge of their meaning. The words should be pronounced well; they should also be enounced well, and not swallowed. Music should not be made an endurance-test, by singing the same twenty or thirty songs over and over again.

New songs must be written and published. The foremost among the musicians at the present-day should try to compose new songs in Tamil. They should learn all about the nine "rasās", and also how they can produce what "rasā" they want by singing a particular "rāgā" in a particular way etc.

"Do not say that there are no good patrons of music in the land. Do not keep telling me that you should try to learn a few songs within a short period, and earn a precarious livelihood by singing them, and that otherwise you will starve."

You should trust the common people. Henceforth you will get support and patronage for fine arts only from the common people. It is your duty to teach them the correct way of appreciating good music. Then you will get good encouragement. If only the people were so minded, they could easily collect four annas per head, and give you Rs. 1,000 per month. You should consider the people as your patrons, as your masters. If only you give proper training to the common people at the beginning to appreciate good things, they would patronise and encourage all arts and learning.

Musicians usually sing only the compositions of Muthuswamy Dikshatar, or Thyagayyar or Patnam Subrahmanya Ayyar in performances. Among these, Dikshatar's songs are in unalloyed Sanskrit. They have a flow and a movement comparable to the majesty and beauty of the river Ganges. They have also got some other good points. But, since they are written in Sanskrit, they are unsuitable for our common people to sing them with a full understanding of their meaning and "rasā".

Thyagayyar was a divine person; he was an ocean of "rasā". He is the main cause for the present position and condition of Carnatic music. Like the sages of old, he made an offering of his "ātma" to his favourite deity, was entirely free from all thoughts of self, and shone as the very

embodiment and personification of his art. Though the singers of the present day spoil his songs by introducing too many "sangathies", by neglecting their "rasābhāvā", and by swallowing sounds and words or by mispronouncing them, yet the old beauty of the compositions still shines.

We do not find this beauty in the music of composers like Patnam Subrahmanya Ayyar and others. For example if we take a song like "Varamulasaki", we find that there is no relationship between the music and the meaning of the song.

The words mean "Is it difficult for you to give me a boon?"; but the music does not coalesce with the words. Then.....

It is necessary for the musicians to learn old songs and master traditional ways of singing. But they must give up the habit of always singing songs in languages other than Tamil in Tamil Nad. It is a vicious practice. If we should go on at this rate, ultimately we might even lose our taste for music."¹

With what wonderful foresight has Bharati said everything pertinent to this problem! All true poets are "seers"; in the Greek language a poet is called "vates", which means "one who can foresee and prophesy". It is difficult to find arguments more appropriate or telling than those given by Bharati in favour of Tamil music.

But let us make an attempt and examine some other reasons also for Tamil music. At the present day there is a Renaissance in Tamil; new literature in the shape of novels, short stories, poems, essays etc., books on science, economics, philosophy and history are coming out every day. The people of Tamil Nad enthusiastically welcome these attempts and encourage authors to produce more and more. No one has said that all this is detrimental to Tamil culture or advancement! Again there was an agitation for vernacularising all studies in high schools excepting the language subjects; this has been carried out into practice in many schools in the presidency. When this spirit for "Tamilization" is encouraged in

all other spheres, why should there be opposition in the field of music alone? In this direction also the Renascent spirit of the Tamils is being exhibited; people are just now waking up from their long sleep of centuries, and demanding their rights. It is curious that there should be people to oppose it, instead of supposing it.

The support given to this movement by Rājāji is very important. Ordinarily he does not openly give his support to anything. But, if he is fully convinced of the correctness of a certain point of view, he would not mind proclaiming it, even if he should happen to oppose his own "guru" Mahātmāji, while so doing. (The recent discussions of the Congress Working Committee at Bardoli, where Rājāji opposed and carried his point, bear ample testimony to this). Therefore, his declaring that Tamil Music is desirable, just, and worthy of patronage and encouragement is a great thing.

Again, this movement provides a good opportunity for musicians to learn many new Tamil songs, which they can sing to ardent listeners and earn a good name and a lot of money. They would also understand that they should gather a large stock of songs, and sing such songs as their audiences want, and not such ones, as they (the musicians) want ignoring the audience'.

Some people think that this movement means, that from beginning to end only "Kavadichinthu", "Thiruppugazh", and "Thēvāram" should be sung in a performance! They also wonder how a concert would be attractive with such fare. Nothing of this sort need be done, nor even thought of.

The concert should proceed in the same order and manner as at present with "Varnam" at the start, then some slow timed pieces followed by some in quick time, "pallavi" minor songs etc. But, the one important proviso is, the language of the songs, especially of the ones before the "pallavi" should be Tamil. Some people might say that there are not enough good songs in Tamil to be sung before the "pallavi". This is not true; there are a number of fine songs available; many more have been found out, and written in the proper musical notation by a special committee of "Vidwans"; they will also be published shortly. Arrangements have been made to teach some of these songs at important

1. Translated from Bharati's remarks in his essay "சங்கீத விஷயம் இசைகள்".

centres in Tamil Nad. What else need be done? Our land should be deeply indebted to Raja Sir Annamalai Chettiar who has come forward to do this noble piece of work. His work can be compared to that of our old Tamil Kings who encouraged the three forms of learning: literature, music and drama. (இயல், இசை, நாடகம்). If he should take up the cause of drama also which too is in a backward state in Tamil Nad, his work would be complete and comprehensive.

GENERAL EDITOR

Professor B. V. NARAYANASWAMY NAIDU

THE PROBLEM OF RURAL CREDIT IN THE MADRAS PRESIDENCY



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It is advisable for central banks to open branches if facilities could be afforded to societies for disbursement of loans as well as collection of dues from them. Ordinarily these functions could be left to good urban banks. These branches should act only as transmitting agencies to central banks. It should however be noted that opening of branches is only a matter of convenience and not of principle. The number of branches of central banks at present is only 12, the largest being five branches in Cuddalore. These branches are in charge of paid employees of the bank called "managers". The business done by these branches is not stimulating. In the survey of the credit institutions in South Arcot District, the writer had an opportunity of visiting an out-agency of central bank at Vadalur. The manager had practically no work and the out-agency was not working satisfactorily. Another out-agency was opened at Chidambaram. It worked only for four months and as it was not able to do sufficient business to maintain an office at Chidambaram, it was closed very soon. Hence branches of central banks in the various taluks should be established only if there is a chance of such branches doing good business.

Capital: The central banks derive their capital from the share capital, deposits, and other borrowings. Share capital is raised by the issue of shares to individuals and societies. Society shareholders are generally required to take one share for every Rs. 1,000 they wish to borrow from the central banks and unlimited liability societies are required to take as many as their own share capital will permit.

Central banks derive the bulk of their working capital from deposits from individual members and non-members, from local boards, municipalities and similar sources with the sanction of the Government and the reserve fund deposits of primary societies. The various kinds of deposits from individual members and non-members are fixed deposits, current deposits, recurring deposits and savings deposits. Fixed deposits are received for not less than 6 months and not more than three years. They form a very important part of the resources of the central banks and the period of such deposits limits the period of loans to societies. The rates of interest allowed on these deposits are low. For fixed deposits the rate varies from $1\frac{1}{2}\%$ to $4\frac{1}{2}\%$, savings deposits 2% to 3%, current deposits 1% to 2%, recurring deposits 3% to $6\frac{1}{4}\%$.

The local boards and municipalities have been permitted by the Government to invest their funds in the Madras Provincial Co-operative

Bank and Central Banks. Besides local and municipal funds Government authorised several kinds of security deposits to be invested in the Provincial and Central Co-operative banks (e.g., toll gate contractors and local fund engineering contractors). To prevent competition among banks for the attractive local board deposits and to prevent accumulation of idle surplus, the Registrar placed certain restrictions on the acceptance of these deposits. Chief among them are that the total amount of deposits lodged by local bodies with co-operative central banks should not exceed their paid up share capital; the Registrar has however power either to raise the limit to any amount not exceeding twice the paid up share capital or to relax in the case of individual deposits on certain conditions. Out of a total working capital of all central banks amounting to Rs. 523·54 lakhs, the total fixed deposits of local bodies held by all central banks on 30th June, 1938, amounted to Rs. 34·36 lakhs and the paid-up share capital Rs. 49·79 lakhs. *Thus central banks can take fixed deposits of local bodies up to the paid-up share capital amount. Some of the central banks however had surplus funds on 30th September, 1938 from 1 to 4 lakhs.

Central banks also borrow money either by taking a loan from the Madras Provincial Co-operative Bank or by means of an overdraft from it or from the Imperial Bank of India. The loan applications of Central Banks for loans from Provincial Bank are sent through the Registrar of Co-operative Societies. Cash credits are also granted to central banks by the Provincial Bank to run for one year at a time but terminable at a month's notice. The central banks lodge with the Provincial Bank pronotes of unlimited liability of societies as collateral security. The Imperial Bank grants overdrafts against Government and other authorised securities. The undrawn portion of cash credit is counted for the purpose of fluid resource.

The borrowing power of a central bank is fixed with reference to its paid-up share capital and reserve fund and is limited to ten times the sum of these two items. The Madras Provincial Co-operative Bank is permitted to borrow up to twelve times the sum of its paid-up share capital and its reserve fund.

Vide Appendix II. Table 50.

The maintenance of fluid resources:—

Banks and societies receiving deposits must keep a certain proportion of their assets in liquid form to meet the claims made from time to time by depositors. According to present rules central banks have to maintain fluid resources in the following proportions* :—

- (i) Full amount of fixed deposits matured and not claimed.
- (ii) Full amount of recurring and provident fund deposits which matured for payment.
- (iii) Fifty per cent of fixed deposits falling due within the next thirty days.
- (iv) Fifty per cent of current deposits.
- (v) Twenty-five per cent of savings deposits.
- (vi) Fifty per cent of the amount of cash credits allowed to other societies as cover for deposits in them. In the case of the Madras Provincial Bank the proportions are the same as those of central banks except for current deposits for which the Bank has to maintain 40% fluid resource.

The forms of fluid resource to be maintained are:—

- (i) Cash balance on hand and with banks.
- (ii) Amount deposited in the post office savings bank which is readily withdrawable without notice.
- (iii) The entire purchase value of post office cash certificates held by the bank.
- (iv) Undrawn cash credit with the Imperial Bank of India.
- (v) Government promissory notes—80% of the market value (as quoted in daily papers and unencumbered).
- (vi) Debentures of the Madras Co-operative Land Mortgage Bank purchased by the bank out of its general funds. The bank

*The Madras Co-operative Manual—Vol. I. Revised Edn. 1937.

is permitted to reckon these debentures for the purpose of fluid resource up to a limit of one third of the standard required to be maintained by it, the debentures being taken at 80% of their market value.

- (vii) The undrawn portion of cash credit allowed by the Madras Provincial Co-operative Bank.

In the matter of fluid resources a distinction is made between liabilities to the outside public and those due to co-operative societies. Items i to v of the paragraph referring to the standard of fluid resources should maintain forms of fluid resources described in items i to vi. The undrawn portion of cash credit given to central banks by the Madras Provincial Co-operative Bank on securities other than co-operative paper (on the security of Government paper, fixed deposits and the debentures of the Central Land Mortgage Bank) has been permitted to be reckoned as fluid resource for the purpose of meeting outside liabilities as in the case of inside liabilities. The overdraft granted to central banks by the Provincial Bank on the security of co-operative paper can be counted against fluid resource for their inside liabilities only.

The Townsend Committee recommended that the standard of fluid resources in central banks should be 30% of fixed deposits falling due within the next six months or 50% of those falling due within the next thirty days, whichever is from time to time higher. Regarding the maintenance of the fluid resources, the Committee recommended that if Central banks agreed, it would be safe for them to concentrate their cash credit with the Provincial Bank and that the undrawn cash credit of the central banks with the Provincial Bank should be included in their fluid resources. The President and two other members did not approve of the practice of relying largely on cash credit as fluid resources and also of the proposal to concentrate the fluid resources in the Provincial Bank. They felt very strongly that the holding of appreciable tangible liquid assets by the central banks was very necessary.

The position as on 30th June 1938 was that all central banks had to maintain fluid resources to the extent of Rs. 36.14 lakhs as cover for deposits from individuals and institutions other than co-operative societies.

Against this they had resources amounting to Rs. 72.25 lakhs which were composed of as follows:—

	LAKHS Rs.
(a) Cash on hand, post office savings bank deposits and cash certificates ..	20.10
(b) Undrawn cash credit with the Imperial Bank ..	25.18
(c) Undrawn cash credit with the Madras Provincial Bank obtained on the security of Government paper, fixed deposits and the debenture of Central Land Mortgage Bank ..	11.08
(d) 80% of the Market value of Government paper ..	10.10
(e) 80% of the market value of the debenture of the Madras Central Land Mortgage Bank purchased out of general funds up to a limit of 1/3rd of the fluid resources required to be maintained ..	5.79

This strong position is due to the plethora of funds with the central banks. The central banks had also to maintain 5.53 lakhs as cover for the undrawn portion of each credits allowed to societies. The central banks had also Rs. 12.03 lakhs as undrawn cash credit with the Provincial Bank as security against co-operative paper. Thus for a total fluid resource of Rs. 41.67 lakhs, which the Central banks had to maintain on 30th June, 1938 as cover for both outside and inside liabilities, they had resources amounting to about 84.27 lakhs.

The Madras Provincial Bank had to maintain fluid resource on 30th June, 1938 for Rs. 31.70 lakhs to meet both outside and inside liabilities; these were amply covered and there was an excess of fluid resource of Rs. 60.96 lakhs. As it stands at present the position of fluid resources both in Central banks and the Madras Provincial Bank is very satisfactory.

Principle and Test for sanction of loans

The funds of central banks are generally utilised for the purpose of granting loans to primary societies. Generally loans are sanctioned to societies on their past history based on audit and inspection reports and the information furnished by societies and supervisors or bank

inspectors as regards adequacy of security, income, repaying capacity, etc. The application forms for loans sent to the central banks contained the following information.

Admission number; name; net assets; outside debts, mortgage debts, other debts-total dues to society (long term and short term); overdues (long term and short term); loan now applied for, purpose; security for new loans; if mortgage security is offered-survey number-extent-value; if surety loan, surety's admission number-name-net assets; period of loan; date of repayment proposed; applicant's income from agriculture and other sources; applicant's expenses-cultivation and other household expenses; saving capacity; signature of member.

In many cases financing banks disposed of loan applications without proper enquiry. The writer in his investigation in the South Arcot District found out that the central bank of Cuddalore gave loans to many societies without properly scrutinising the loan applications. In fact favouritism played a great part in the sanction of loans. The Karunguli Society, South Arcot District, was granted loans by the Central bank even though that society was in heavy overdues to the Central bank. The president of the society was also the President of the Central Union and the supervisors did not trouble themselves to examine the accounts of the society. The result was benami transactions grew up and overdues swelled up and, about the beginning of last year, the society was almost on the verge of liquidation.

Again, in assets and liabilities and in arriving at the repaying capacity, the society bases its estimation on the property statement prepared by itself and supposed to be checked by the supervisors. The executive staff of the Central Bank should be very careful in the scrutiny of the property statement, for on it is based the fixation of normal credit of the society. Central banks may scrutinise applications for loans in much the same way as the Central Land Mortgage Bank does in regard to applications received from primary land mortgage banks. The individual normal credit should be carefully examined in the bank by the secretaries and executive officers competent for the business and on the basis of such meticulous examination the borrowing limits of both individual members and societies should be based.

The present policy of central banks is to confine themselves to short-term loans not exceeding twelve months or, in some cases, eighteen

months and intermediate loans extending to a period of about six years. In the earlier years, central banks and societies were granting loans for periods extending to ten years but, with the inauguration of Central Land Mortgage Bank and the spread of primary land banks, the present policy of Central banks confining themselves to short-term and intermediate credit has been evolved. It is very necessary that loans given by central banks should be only short-term and intermediate because the funds of central banks are derived for the most part from short-term deposits and cannot for obvious reasons be locked up in long-term loans. The outside deposits (exclusive of deposits within the movement and deposits on current and savings bank account and recurring and provident fund deposits) held by Central banks are classified according to the date of maturity in the quarterly financial statements. For the quarter ended 30th June 1938, the position was as follows:—

	Deposits and debentures falling due in the next 30 days			
	In the next 11 months.	In the next 11 months.	In the next 11 months.	
	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
30th June, 1938	8.98	75.21	85.64	18.39
	In the subse- quent years 11.22			

These figures show that the bulk of the deposits matures for repayment in a period of two years. So according to sound banking principles undue reliance should not be placed in the renewal of deposits to make long-term investments out of short-term deposits. Taking into account deposits of all kinds including reserve fund and other long-term deposits, the position is as follows (30th June, 1938)*

*Prepared from tables given in the Evidence Report of the Madras Co-operative Committee, Vol. I. 1939.

Deposits	Rs.	Percentage to
Short Term loans	Thousands 18,997	total deposits 51.3
Intermediate		
(a) Between 1 and 3 years	6,716	18.2
(b) Between 3 and 6 years	1,198	3.5
Long Term	9,840	27
Total	36,751	100.0

The deposits classified long-term and which form 24% of the total deposits are generally for periods over six years and except reserve fund deposits of societies, they represent only a very small proportion of the borrowing of central banks. But the main long-term funds available with central banks, viz., share capital and reserve fund deposits of societies are already locked up to meet overdues of societies which correspond to long-term investments. Hence central banks should confine themselves to short-term and intermediate loans. It is suggested by some that ten year loans for the purpose of discharging prior debts should be given to small ryots. In the first place the deposits of central banks are not for such long periods. Secondly such loans will conflict with the operations of land mortgage banks.

The Reserve Bank of India suggested in its preliminary report "Loans must be strictly limited to cultivation finance. This should ordinarily mean the expenses in connection with the cultivation operations like ploughing, sowing, weeding, etc.; but may also include the sums ordinarily required for the maintenance of the farmer's family till harvest, or other urgent purposes like the replacement of cattle or implements, provided such loans can be repaid out of the proceeds of the harvest in a normal year. If loans have to be issued which cannot be repaid in one year, e.g., for the replacement of cattle, such loans should not extend beyond two years and provision should be made for their repayment in equal instalments. Such loans should also be clearly distinguished from annual loans and should not exceed a comparatively

small proportion of the societies' business." Though the purposes specified by the Reserve Bank for limiting all loans by societies to two years are reasonable, it is doubtful if the loan taken for the purchase of cattle or implements could be repaid within two years. Intermediate loans, payment of kist, purchase of cattle, improvement of land etc., form a fairly big proportion of the loans taken by the societies. The following table shows the purpose of borrowing:—*

	1936-37		1937-39	
	Amount Rs. Lakhs	Percent	Amount Rs. Lakhs	Percent
Cultivation expenses	28.82	23.1	54.35	30.8
Purchase of cattle	8.08	6.5	9.92	5.6
Payment of kist	12.25	9.9	20.07	11.4
Improvement of lands	6.36	5.1	10.57	5.9
Purchase of raw materials	1.34	1.0	1.45	0.8
Trade	16.19	12.9	22.09	12.5
Education	0.14	0.1	0.15	0.1
Building, buying or repairing houses	4.35	3.4	4.99	2.8
Manufacture and purchase of carts	0.31	0.3	0.36	0.2
Purchase of lands	3.62	2.9	4.19	2.4
Purchase of food, etc.	10.47	8.4	20.12	11.5
Total Productive purposes	91.94	73.6	148.28	84.0
Paying off prior debts	30.94	24.9	25.26	14.4
Marriages & ceremonies	1.26	1.0	1.43	0.8
Litigation and other non-productive purposes	0.55	0.5	1.37	0.8
Total unproductive purposes	1.81	1.5	2.80	1.6
Grand total	124.69	100.0	176.34	100.0

*Prepared from the Report of the Working of the Co-operative Societies Act 1936-37, 1937-38.

The table indicates that productive loans for other purposes than cultivation are so large that their importance cannot be minimised. A better idea could be formed if loans classified according to periods are studied.

Period	1936-37		1937-38	
	Amount Rs. Lakhs	Percent	Amount Rs. Lakhs	Percent
(1) Loans not exceeding one year ..	110.20	32.0	150.43	40.2
(2) Loans exceeding one year but not exceeding two years ..	18.71	5.5	18.11	4.8
(3) Loans exceeding two years but not exceeding five years ..	159.72	46.5	155.54	41.6
(4) Loans exceeding five years ..	55.07	16.0	50.07	13.4
	343.70	100.0	374.15	100.0

Short-term loans up to two years form 45% in 1937-38 and 37.5% in 1936-37. Next in importance come loans varying from two to five years—the percentage being 46.5% in 1936-37 and 41.6% in 1937-38. If these intermediate loans which are popular are dropped out from the agricultural societies, then there will be a big gap in credit which some other agency should come forward to fill up. Hence the recommendation of the Reserve Bank to limit loans to two years cannot be adopted without great inconvenience to ryots who would be driven to moneylenders by such action.

One important factor that should be observed by central banks is a proper regulation of lendings with reference to borrowings. The working capital for the financing of intermediate loans from two to six years may be derived from the ordinary short-term deposits, but the bulk of such capital must be obtained by long-term deposits repayable in convenient instalments not exceeding 6 years, by provident deposits, by issue of cash certificates and the like.

Table No. 56 of Appendix II will show the position of borrowings in relation to investments in Central banks on 30th June, 1938. The percentages of short-term investments to total investments in the Central banks of Anantapur, Vellore, Cuddalore, Ramachandrapuram, West Godavari, Vizianagaram, Kistna, Srivilliputtur, Tanjore, Tinnevely and Vizianagaram are 70.80, 64.40, 65.90, 70.00, 84.00, 91.50, 77.40, 71.70; 84.67, 65 respectively. In these banks the investments in short-term loans exceed the short-term deposits. Such increase of short-term loans to deposits is not detrimental to the Central banks. In fact the Central Bank is safe in indulging in such business.

In the Central Banks of Hospet, Kurnool, Malabar and Salem the percentages of intermediate loans to societies against total investments are 74, 83, 80 and 74.49 respectively. Intermediate loans in these banks exceed the total borrowings of societies. Evidently these banks have been using short-term deposits for intermediate loans in addition to the reserve funds, share capital and other owned capital of the banks. Such investments will result in grave danger to the banks.

In the Conjeevaram Central Bank the investment in long-term loans is 63% of the total investments. The long-term loans far exceed the long-term borrowing. If the loans are given out of short-term and intermediate deposits, then the central bank should have been adopting a very imprudent policy.

The short-term deposits of the Madras Provincial Co-operative Bank as on 30th November, 1938 are composed of

	Rs.
Current account ..	55,18,471
Prudential deposit account ..	14,66,694
Fixed deposits ..	64,63,724

Short-term loans on 30th November, 1938:—

	Rs.
To Central banks ..	17,69,285
Unencumbered Government securities ..	64,49,402

Much of the money in the Provincial Bank is lying idle.

It must be the first principle of a central bank to use short-term borrowings only for short loans. Where the demand for short-term loans is greater than the short-term borrowings, then deposits for longer periods may be utilised for the grant of such loans. But when there is a greater demand for intermediate loans, such transfer from short-term deposits should not be easily made without reference to the amount of short-term deposits.

Reserves

Central Banks set apart 25% of their net profits towards the reserve fund and the balance is distributed as dividend, honorarium, etc. Not more than 9% per annum is paid as dividend on paid-up share capital. Central banks are permitted to invest one-half of their total reserve funds in the Madras Central Land Mortgage Bank. In addition to the reserve fund there is found to be a need for creating bad debt reserves in Central banks as a second line of defence. Some central banks carry a portion of the net profits to the bad debts reserve according to their by-laws.

Rectification and Consolidation of Societies

The huge increase of dormant societies necessitated the Registrar in 1930-31 to launch upon a system of rectification and consolidation of societies. The principal features of the scheme are—

“(i) Examination of loans (classification)—In order to see whether or not all the loans in each society are adequately secured and to see whether any immediate action is called for, a detailed examination in each outstanding loan is necessary.

A classification of loans may be made as follows:—

(a) Loans which stand on good security and the borrowers of which can be expected to pay the loans out of their income within the given period or within the period to be extended.

(b) Loans which stand on inadequate security but the borrowers of which can give and are willing to give additional security and to repay their loans within the given period or within the period proposed to be extended.

(c) Loans which stand on inadequate security the borrowers of which are not either in a position to repay the loans out of this income or to furnish additional security. The history of each loan should be noted and suitable action suggested in each case. In the course of investigation the amount of debt which may prove bad or is doubtful of recovery should be ascertained and noted.

(ii) Lines of work—In respect of loans classed under (c) action should be taken at once. The Panchayat should be advised to file references under section 51 against defaulters and awards should be obtained and executed quickly through the department. Penal interest on loans, if any, may be waived. If the circumstances of a borrower justify further concessions, such as a reduction in the original contract rate of interest etc., the question should be examined by the general body of the society and suitable by-laws passed. In very bad cases, if a society pays a central bank loan in full collecting the amount proportionately from the borrowers the balance of money due may, with the sanction of the Deputy Registrar, be written off. Where the interests of the Central bank will be affected, the consent of the bank will have to be obtained.

For loans which do not stand on adequate security but which may be secured borrowers should be required to produce fresh security. Wherever necessary, production of encumbrance certificate should be insisted on. The additional security may be taken by means of a supplemental bond without varying the original conditions.

Extensions may be given in deserving cases. Borrowers who can raise credit elsewhere or who can sell their property of their own accord should not ordinarily be given extensions.

The scheme should be worked in compact areas; when the work in an area is completed, another area should be selected.”*

The central banks of Trichinopoly, Calicut, Coimbatore, Hospet and Mangalore, completed the examination of loans in a number of societies. The results of the examination up to the end of the year 1937-38 according to the Report of the working of the Madras Co-operative Societies Act for 1937-38 are:—

*The Madras Co-operative Manual, Vol. I, pp. 104-105.

(1) Number of societies in which examination was conducted	7105
	Rs. Lakhs.
(2) Total amount of loans including interest involved in them	.. 303.01
(3) Of the above sum the amount which stands on adequate security	.. 211.30
(4) The amount which stands on inadequate security	.. 91.71
(5) Of this, the amount for which additional securities have been obtained and the amount collected	.. 20.01
(6) Balance still ill secured	.. 71.70
(7) Estimated bad debts in these societies	.. 39.86
(8) Of this the amount that will affect the Central Banks.	9.2
(9) Amount of loans collected during rectification work..	59.61
(10) Reserve fund of Central Banks	.. 33.49
(11) Bad debt reserve of Central Banks	.. 19.69

In his report for this year 1937-38, the Registrar has remarked on the progress of rectification work as follows:—

“The Central Banks are taking steps to collect or secure the loans on inadequate security but this is proceeding at a rather slow pace. They have been exhorted to make systematic and sustained efforts to push through this stage in the rectification work. The special concessions suggested for D class societies were continued during the year to the members of all classes of societies under certain conditions. It is hoped that Central banks will avail themselves of the opportunity and realize a good portion of the ill-secured debts. It is no doubt inevitable that central banks will have to write off a portion of their dues as bad and irrecoverable; but this will not affect their financial equilibrium as they hold strong reserves.”

Owing to depression and the consequent inability of borrowers to repay their loans regularly, societies were forced to obtain decrees or take out execution proceedings against defaulters. The number of decrees and the amount involved as on 30th June, 1938, are 52,871 and Rs. 62.32 lakhs respectively. Certain concessions have been extended to Societies and to their members in order to recover the arrears without

undue hardship and to place the societies again on an active working basis:—

(1) Reduction in the lending rates of Central banks and primary societies on new loans.

(2) Waiving of penal interest by Central banks on overdue instalments of interest and the complete deletion of penal interest from the by-laws of primary societies.

(3) Collection of interest by central banks and societies at $6\frac{1}{2}\%$ and $7\frac{1}{2}\%$ respectively on all outstanding loans.

(4) Examination of every loan in the “D” class societies and an accurate estimate of their assets and liabilities. The guiding principles for arriving at this are—that no member shall be asked to pay more than double the principal; or that no member shall be asked to pay more than the principal plus interest calculated at $6\frac{1}{4}\%$ from the date of disbursement of the loan; or 25% of the amount outstanding may be remitted; to induce members to repay, a further remission of the principal at a fixed percentage of the loan has been suggested to be offered to those who pay their loans either immediately or within three months. To those who cannot pay in this manner, time is allowed up to one year. In the case of loans referred for arbitration, the arbitrators should be asked to allow interest at only $6\frac{1}{4}\%$ on decretal debts.

In cases where the debts seem absolutely impossible for collection (e.g., cases where the mortgaged or other properties of the defaulters have already been sold in auction and which, therefore, stand without any security whatsoever, cases where the borrowers and sureties have either no properties or are no more; cases where loans have been allowed to be time-barred) and the only course seems to be writing them off, central banks should not hesitate to use their bad debt reserve for such purposes. In cases where borrowers furnishing additional security accept to repay the loans in instalments over a long period, the loans should be transferred to the land mortgage banks in the area. Wherever it is possible to realize a portion of the dues immediately, central banks should give as much concession to the borrowers as possible. Effective coercive steps should be taken wherever necessary. It would be in the fitness of things if central banks employed special staff for this purpose whose duty should be to take up society after society, examine each ill-secured loan

and suggest the course of action that should be adopted to realise or secure the loans.

The quarterly progressive report of rectification (30th September, 1938) in the Conjeevaram Central Bank is very encouraging. It is said that the Central Bank completed rectification work and every loan in every society was examined and action taken thereon by getting either additional securities or taking coercive action or allowing the loan to continue without action for a further period in accordance with instructions contained in the circular of the Registrar. Regarding the present condition of societies in the District it was proposed to work up the new scheme by which lands that came into possession of societies in the course of execution of decrees will be disposed of by conveying them to original owners or other villagers. For this it was requested to address the Government to get for the bank a loan of Rs. 5 lakhs and the matter is still pending. It is really encouraging that at least a central bank is taking a bold step in the right direction. It would be better if the Conjeevaram Central Bank and other Central Banks which have finished the rectification work in societies adopt the Burmese method of rent purchase system of lands in the case of those whose lands were lost to societies. The Burmese rent purchase system will be examined in a later section.

Banking unions and central banks: Of late, there has been a talk of the introduction of banking unions both by the Reserve Bank of India and some co-operator. In Bulletin No. 1 of the Reserve Bank of India, working of the Union at Kodinar (Baroda State) is given. The author of the bulletin stresses the importance of starting multi-purpose societies and small banking unions working in limited areas and confining their membership to primary rural societies and discharging all the functions of financing, supervision and education. The Reserve Bank realizes that the organization of such unions in place of central banks would be more difficult because of the opposition of the banks. But it has been suggested that central banks might still continue financing such unions formed by sub-division and might take up urban co-operative banking.

As regards the finance of the banking union, the Reserve Bank thinks that though the elimination of individuals from being members would deprive the banking union of the necessary men available to command the confidence of the public and attract local deposits, the con-

nection with Government would infuse confidence in the public to deposit with the unions. But the capacity of a Central Bank which has a wide area to tap, which has the reputation of being connected with the Government and which has influential members on the board will be far above the capacity of a banking union which will have to tap the finances from only a small local area. The result will be the banking union will have to turn to Provincial Bank for loans and the Provincial bank's rates are always higher than the rates at which central banks are able to raise funds locally.

Again the directorate of a banking union consisting as it does of representatives of the borrowing societies only is likely to overfinance and show undue leniency in the matter of recovery to particular societies. At present in the board of directors of central banks individual members are included and other members representing banking and commercial interests are co-opted as members. This system acts as a check against the system of overfinancing. In spite of such safeguards there was overfinancing by Central Bank of Cuddalore in the case of certain societies. Hence the case is all the more against banking unions composed of societies only.

Supervising unions composed of representatives of primary societies are a great failure in this Presidency because supervisors appointed by members who represent the societies they have to examine cannot do full justice to their business. Banking unions which boast of combining supervision and financing will not be better in intensive supervision than supervising unions.

The introduction of banking unions in each taluk will only multiply the cost of administration at the same time minimising the chance of getting sufficient funds. The MacLagan Committee was of opinion that a Central bank should cover as large an area as is compatible with convenience and efficiency. The Indian Central Banking Enquiry Committee was of opinion "generally speaking central banks should operate over fairly large areas with a good number of societies affiliated to them and should not be too small". The Punjab Provincial Banking Enquiry Committee did not appear quite enthusiastic about these unions. The Committee states "Financially, the unions are much less important than the banks, and as we made no special enquiry about them, we need only say that they mostly operate within a radius of 10 or 15 miles, their mem-

bers are all societies, and none of them has a working capital of more than five lakhs. On the other hand the biggest central bank has a working capital of 78 lakhs." The Bengal Provincial Banking Committee stated "A central bank should ordinarily expect to deal at once or within a reasonable time with at least 200 or 250 societies. We agree with this view and unless its area of operation is too large or the means of communication exceptionally bad, no central bank could be split up before the number of affiliated societies reaches 300, and even then no new central bank should be formed until a sufficient number of men of intelligence, influence and knowledge of co-operation can be found in the locality to form its directorate."

Hence there is no need for the formation of banking unions. It would be very difficult to oust the long-established central banks and even if attempts in that direction are successful, they are not conducive to the best interests of co-operation.

Mr. Prakasam, former Minister for Revenue of the Government of Madras, opening the Multi-purpose societies at Alamaru said that the Multi-purpose societies should form into banking unions, which should form as branches of the Provincial Bank. Even the statutory Report of the Reserve Bank of India did not suggest the abolition of central banks. The Reserve Bank intended the banking unions in their turn to be federated into central banks. There is no precise indication in the scheme of Mr. Prakasam of the relations between the Provincial Bank and the banking unions. The question whether banking unions with their own membership and independent constitution can be branches of the Provincial Bank is a baffling one.

Central banks as branches of Provincial Bank.

Another suggestion put forward is that the existing central banks may be abolished and in their place branches of Provincial Bank can be opened. It is contended that such a step would eliminate intermediaries between the provincial bank and the primary societies and would thereby cheapen credit to the ultimate borrower. In Bombay where side by side with central banks branches of Provincial Bank operate, it has been recognised that there is a greater need of an intervening link between the Provincial Bank and the primary societies. So the Bombay Provincial Banking Enquiry Committee recommended the creation of

central banks in place of branches of Provincial Bank. The central banks attract deposits locally, the rates on such deposits being half per cent lower than the rate at which they borrow from the Provincial Bank. The central banks in Madras are now able to supply all the credit needs of the societies, assisted by the Provincial bank to maintain adequate fluid resources to meet their commitments to their creditors. The following table will show what an insignificant part loans from Provincial Co-operative Bank pay in the loaning operations of central banks with their societies:—

*Year.	Working capital of central banks. Rs. lakhs.	Loans borrowed from the Provincial Bank. Rs.	Loans repaid to the Provincial Bank. Rs.
1931-32	576.28	19,20,580	66,56,871
1932-33	588.74	5,52,005	34,37,563
1933-34	553.21	10,414	5,55,094
1934-35	511.13	7,44,250	4,00,882
1935-36	501.43	11,87,500	12,77,894
1936-37	526.00	9,22,625	9,73,959

This table is enough to prove how unfounded is the plea that money is made costly to village societies, because of the intervention of central banks. Even where the central banks have borrowed from Provincial Bank, such borrowings represent only a very small proportion. Again abolition of central banks and the establishment of branches of Provincial Bank will not in any way lessen overhead costs, for it would be necessary to incur the same expenditure to run the branches. So it will not be possible to supply money cheaper to ultimate borrowers. Excessive centralisation of finance in a province where the economic conditions are not equal, has its own disadvantages. The connection of the apex bank and the branches will be so close and intimate that the defects and faults

*Madras Co-operative Journal April, 1938. Co-operative Credit Structure by Ramadas Pantulu.

in one part of the structure will react on the whole, bringing the entire structure to grief. The proposal will kill local enthusiasm and initiative and will keep away the vast body of honorary workers in the field. To abolish a system of central banks, which is the envy of other provinces is the greatest disservice that could be done to the movement. The defects in the co-operative movement are not due to the financing agencies. They are due to causes such as depression, accumulation of overdues as a result of the diminished repaying capacity of the peasants, defective marketing facilities and lack of enthusiastic panchayatdars in the villages. So the movement can be rectified not by abolishing the independent central banks, but by rectifying the various faults in the economic system.

V. Defects of Primary Credit Societies.

The Co-operative movement in this Presidency has not developed on sound and efficient lines. While the principles laid down in the by-laws of co-operative societies which we examined in the previous sections are sound and afford facilities for the development of the whole life of the villager including moral and spiritual, those principles are not correctly observed by the men who are actually in charge of the societies. Selfless men who could work patiently in little unknown villages are rare in India. In the villages where the majority of the population are illiterate and lack civic spirit and cannot assimilate the principles of co-operation, the panchayats are usually composed of a greedy few and they continue to cling to office for years and mismanage the affairs. In the survey conducted in the South Arcot District such cases were often found. In one society at Karunguli, South Arcot District, the Presidency of the Panchayat was first held by the father, and then by the son, and when the society was superseded, the father was acting as Manager. The Panchayatdars themselves were in heavy arrears and a large amount was due from the President. On enquiry in the village, it was found that benami transactions were prevalent in the society. In the name of his "Pannayal", the President had taken loans. Moreover in the grant of loans to the society the central bank was very liberal, for the President of the society was a friend of the President of the Central bank. Cases of the Panchayatdars being defaulters and at the same time continuing in office were common in many societies. The supervisors and auditors should have brought such cases to the notice of the Central bank and the Registrar, and both the bank and the Department should

have taken immediate action. In another society, an illiterate member was acting as the secretary. He was not able to count more than hundred. Though the supervisor might write the books of account once in a month, a society with an illiterate secretary cannot expect to flourish for long, for there will surely arise some dispute regarding the payment of instalments by members. The society at Kottavacheri did not take any loans from the Central Bank nor lend to the members since 1930. This can mainly be attributed to the lethargy of the managing committee. In many societies factions between two village parties were common. So what is needed in the first place is an effective system of supervision and audit. Besides, the offices of the President and Secretary should not be held by the same persons for a long time. Under existing rules there are certain disqualifications prescribed for membership of Committees. To safeguard against mismanagement in the society, it must be laid down that a President or Secretary should not be continuously in office for more than two years. The Registrar should have power to remove undesirable men from office after due enquiry.

Supervision and Audit.

Supervision has been relegated to non-officials in the Madras Presidency. Managing bodies of unions were mostly composed of primary societies. To take only one instance, the President of the Karunguli Society, South Arcot District, was for a long time President of the local union with the result that the supervisors appointed by the Union and who were under his control dare not point out the defects of the society or the President. The supervisors colluded with the management of the society in their misdemeanours. The property statement on which the whole credit of the society is to be based is prepared by the society and it is bound to be the most unreliable statement as it is prepared by borrowers. The duty of the supervisors is to check the property statement periodically and rectify the defects. Rarely supervisors bother about the property statement. In the Karunguli society when I asked for the property statement, I was told that that book was missing. And yet the borrowing capacity of the society was based on this important statement. It is important, therefore, that supervision should be vested in the hands of a disinterested and independent agency. Financing banks are not suited for such control because representatives of the societies are on the board of management of control banks. In the present state of affairs, it is important that the co-operative department should take up the

supervision work though it may be an added burden on the Government. The money spent in this direction would be money well spent. The failure of the co-operative movement is mainly due to a vigorous policy of deofficialism in a country where the sense of public spirit has not yet developed as in the West. Hence selfish motive and personal interest were given free play in a movement which could only thrive in an atmosphere of mutual good will, free from greed and jealousy.

Another reason why the department should take up supervision is this. Audit is carried on by the department and the defects pointed out in the audit report can be effectively carried out if supervision of societies is vested in the same agency. When the societies are based on an efficient footing and when the villagers realise sense of responsibility, the work of supervision can be vested in a non-official body. Specialised public auditors in co-operative accounts may be recruited on a provincial scale under the Provincial Co-operative Union or Institute, which may pool the audit fees levied on all societies in the Province, appoint a graded and competent staff to audit and to advise on the lines of the continental co-operative auditors. At present it is necessary that a separate chief auditor who is immediately responsible to the Registrar of Co-operative Societies should control the auditors of societies. The Deputy Registrar who controls the auditors in his district is responsible for the proper conduct of the societies in his district. Hence it is not conducive to efficient working if the auditors are controlled by him.

Liability.

As we found in an earlier section most of the co-operative societies in the province are based on unlimited liability. The liability can no longer be enforced against any society so long as it retains its corporate character. It comes into operation only after liquidation of the society and for the purpose of issuing contribution orders even against non-defaulting and non-indebted members with assets when the loans cannot be recovered from the borrowers themselves. Liability enforced in this manner scares away good and solvent residents in the villages from joining the society and many good non-indebted members left the society. The vigilance and mutual knowledge of each other's affairs are fundamental principles of unlimited liability and they are absent in the present day villages. The plea that if societies are limited in character.

central banks will not lend them does not hold good because, urban banks and sale societies based on limited liability are financed by the central banks. Unlimited liability has not yielded at any rate in our country, the moral and material results that were expected of it. In practice it is not easy of enforcement. It has not proved a greater guarantee to creditor against loss than limited liability. In fact it has kept out intelligent and propertied men who would have been invaluable in managing the societies efficiently. Hence unlimited liability in the Madras Presidency should become the exception and not the rule especially when societies of a multi-purpose character comprising a wide area are becoming popular. In Great Britain and the United States of America,, liability is strictly limited. As Catrill says "the question of unlimited liability is not a matter of principle but of expediency." Wherever unlimited liability is properly understood and voluntarily accepted as in Denmark, Holland and Finland where members chose unlimited liability in spite of their being allowed to have any kind of liability, it is best to leave such societies undisturbed. In general it is best to adopt a less rigorous and less abstract liability with more substantial safeguards. In a joint memorandum by some members of the co-operative committee it is rightly said "if it is considered that the confidence of the money market can be retained only by having some more security for the creditors than the paid-up share capital and reserves of the society, then we may provide for a fixed reserve liability, say twice or thrice the paid-up share capital. Here every member knows the extent of his liability and the co-operative contribution he has to make to the common deficit of the society."

Property Statement.

The property statement is a very important document to be maintained by an unlimited liability society. The Townsend Committee remarked that they observed a general lack of thoroughness in the preparation and revision of property statements. Recently the circular passed by the Registrar regarding the maintenance of property statement is a little encouraging. According to the circular the property statement should not only include figures showing the assets and liabilities of the members but should also indicate clearly their repaying capacity mentioning accurately the income of the members. In the matter of new societies, central banks should be asked to instruct the supervisors to examine the correctness of the property statement very carefully and

to test its accuracy by independent enquiries in the village. The supervisors should collect reliable and correct information from the village officers. The information so obtained should be tested by independent enquiries in the villages. The periodical revision of the statement should also be made more systematic and thorough. The property statements so revised with the help of supervisors should be sent annually to the financing banks and unions. The supervisors should be asked to certify to the correctness of the statements whenever they are prepared. The Registrar considers it necessary, that the Central Bank should appoint special officers who will go round the cities soon after the revised property statements have been received by the banks and check the correctness of the statements. At least he expects that a test check of some statements should be made. Regarding the checking of the correctness of the statements by the department during audit, the Registrar believes that the statement if it is to be accurate, should not be prepared by the general body but by the office bearer. The auditor should gather as many members as possible, read out the statements to them and verify the correctness. The auditor should also make independent inquiries in the villages and satisfy himself of the accuracy of the particulars.

The circular of the Registrar lays down clearly the need for proper checking of the property statements. If the numerous checkings of the statements are properly carried out, there is every possibility of correct property statements being placed on record. It is because of false statements that societies are overfinanced more than their real borrowing power and individuals too are overfinanced. The result is with the economic depression they have increased the arrears in societies.

The Problem of overdues.

This leads us to the question of overdues and the problem of effectively tackling them. In the scheme of reorganization of rural co-operative credit society, the question of the accumulated debts of members presents a real difficulty. Reference has already been made to the increasing amount of overdues in agricultural societies.* The position is not quite encouraging as may be seen from the following statement (In this statement the overdues of land mortgage banks, credit societies,

*Vide Appendix II—Table 47 on overdues.

purchase and sale and other agricultural societies are taken into-consideration).

Year .	Percentage of balance (principal overdue) to demand by members to agricultural societies.
1927-28	42.71
1928-29	40.72
1929-30	46.00
1930-31	65.16
1931-32	62.95
1932-33	67.09
1933-34	70.28
1934-35	68.12
1935-36	65.35
1936-37	58.76
1937-38	55.45

The principal reasons for the overdues have been examined while we examined the working of the primary credit societies and central banks and the defects of the societies. The main reasons have been summarised by the Townsend Committee. They are,

- (1) Bad harvests;
- (2) Illiteracy and ignorance of co-operative principles in primary societies, and indifference of Panchayatdars who are in many cases themselves defaulters;
- (3) The lack of proper supervision due to ill-paid and ill-equipped non-official staff;
- (4) The sudden withdrawal, without due notice, of the department from supervision;
- (5) Failure to recognize the financial and co-operative responsibility on the part of Central Banks;
- (6) An exaggerated sense of security in the minds of financing institutions, which is based on a wrong impression of the implications of unlimited liability; and failure to realise the seriousness of the results of enforcing that liability;
- (7) The lack of proper attention to the granting of extension;

(8) The granting of loans without proper consideration of their purpose, and of the repaying capacity of members;

(9) Benami transactions;

(10) The fact that, even when penal interest is levied the rate of interest charged is lower than the market rate in many districts, and members who have also borrowed from money-lenders in consequence repay the latter first. Decree interest is also lower than the market rate; execution proceedings present much difficulty, and the low rate of interest encourages defaulters to raise every possible obstacle;

(11) The failure to take prompt and sufficient steps for the recovery of overdues."

As already described, in many societies examined in the South Arcot District, overdues were due to bad management and the benami transactions of the Panchayatdars. A case in point is the Karunguli Co-operative credit society. In recent years the continued fall in agricultural prices has reduced and even wiped out the margin of profits.

The endeavours of central banks and societies to lighten the burden of overdues and recover the loans from members took several forms. The concessions given to borrowers are enumerated in an earlier section. Briefly they are the reduction in lending rates, waiver of penal interest, examination of every loan in the D class societies and an accurate estimate of their assets and liabilities, writing off bad debts and grant of long-term instalments. Execution of decrees in the case of members who are in arrears is another method of collecting overdues. The progress with regard to the departmental execution of the decrees and awards for the past five years is as follows:—

	Number of execu- tion petitions.	Amount involved Rs. (Lakhs)	Amount collec- ted. (Rs. lakhs)
1933-34	14783	28.40	3.65
1934-35	27807	51.97	10.65
1935-36	39433	72.35	14.76
1936-37	42631	73.99	17.01
1937-38	43527	70.56	16.40

There appears to be inordinate delay in the execution proceedings. There has not been very appreciable reduction of overdues by depart-

mental execution. Such action taken against members defaulting deliberately will be both salutary and effective. But where arrears are the result of the poor repaying capacity of the members such drastic action has no effect. Execution of awards has led to the conversion of the overdue loan into owning of immoveable property by the bank. Purchases for cash at sale held by the departmental officers are very rare. Cash purchases take place only when the adjacent owner of the properties, or some one interested in the particular property knows and feels that he is purchasing the property for a mere song. In all such sales for cash, the amounts realized bear a small proportion to the worth of the property. The departmental officer's execution is not popular with the people though the same may be acceptable to the societies. He identifies himself more often with the society as against the debtor and is not able to shake off the impression that he is there to protect the interests of the society. Thus departmental execution in the reduction of overdues is not satisfactory.

Many solutions have been put forward for the collection and scaling down of overdues. When loans given for short and medium periods have unfortunately become long-term loans by non-payment, but the borrowers have some assets to offer as security for these loans, they may be scaled down to the extent possible and the balance put on a long-term basis by obtaining fresh mortgage bonds for such periods as may be decided upon in each case, having regard to the size of the loan and the repaying capacity of the borrower. The creditors should be assured about the repayment of their deposits by smaller collection on the new basis. So it has been proposed by some that the central banks concerned should provide themselves with some long-term funds either in the form of actual long-term money raised, or in the form of assurance of provision for such funds from the Provincial Bank. It is said that the most suitable way of dealing with the question is for the Provincial Bank to raise when necessary funds needed by the central banks, by floating debentures at 3½ or 4 per cent. But the question is whether it would be wise for the Central bank and the Provincial Bank to deal in long-term loans when there is another agency to deal with such loans.

The Reserve Bank in its Statutory Report recommended "that the overdues and long-term loans should be separated and put on a proper footing" and stated that "these overdues should be brought down to a

level at which there was a reasonable prospect of repayment out of profits of agriculture within a reasonable period, say twenty years, partly by writing them off from reserve and other funds and partly from recovery from sale of part of the member's assets and spreading out the remainder into instalments and transferring them to some special agency equipped to deal with long-term credit facilities such as a land mortgage bank." The Reserve Bank realises the fact that it would be difficult to follow this course when the funds of the societies are not sufficient to cover the losses. The Statutory Report says "Where this is the case it is better to face the facts and decide what agency can best bear the losses. Liquidation of the society is by itself no solution as even after selling up the members, the result may only be the acquisition of land by the society and the losses may still be left uncovered. Liquidation also not only kills the society but brings the movement into disrepute and leaves a void in the structure of agricultural finance. It is better to follow the bolder policy of deciding at the outset what losses are inevitable and make provision for recovering the rest in easy instalments. Side by side with this reconstruction, it is necessary that the societies should be reformed."

There has not been any satisfactory progress till recently regarding the transfer of loans of members of village credit societies to the primary land mortgage banks. The following statement will give an idea of the progress:—

Year.	Amount of loans issued by primary land mortgage bank.	Amount of loans of mem- bers of village societies trans- ferred to mort- gage banks.	Amount of long term loans out standing against members of vil- lage societies at the end of the year.	Of the amount in column (4) amount over- due.
	Rs. lakhs.	Rs. lakhs.	Rs. Lakhs	Rs. lakhs.
1936-37	38	1.75	224	125
1937-38	35	1.73	215	115

More loans could not be transferred because there has not been a systematic and exhaustive examination of the loans of members of the

village credit societies in order to transfer such loans to land mortgage banks; the test applied by land mortgage banks regarding title, valuation, repaying capacity, net income etc. was not adhered to by primary societies in the grant of loans; indebtedness of many members far exceeds the amount the land mortgage bank can easily and reasonably give with reference to the extent of land owned and offered by them as security; in some cases societies and central banks are rather anxious to retain their business which might possibly suffer to the extent to which the transfer of debts is made; in some of the old village credit societies which seem to be just like small land mortgage banks there is provision for accommodation even upto Rs. 2,000; the heavy share capital to be paid in a lump to land mortgage banks, and the impression amongst the villagers that land mortgage banks, will not sanction small loans below Rs. 1,000 and that they accommodate only the comparatively well-to-do. An enquiry was undertaken by the Central Land Mortgage Bank during the year 1932-33 to see if the long-term loans in ordinary village credit societies could be transferred to the Central Land Mortgage bank. The suggestions made to overcome the difficulties in the matter of transfer are:—(1) Co-ordination between the local co-operative unions, the land mortgage banks and the central banks either by securing more or less identical area of operations for the land mortgage bank and the local co-operative union or by having the same set of office-bearers for the two institutions or by posting suitable land mortgage bank supervisors who will work in close co-operation with union supervisors or bank inspectors. Systematic and vigorous propaganda should be carried on by the staff of these institutions; (2) Employment of additional staff by primary land mortgage banks to expedite the disposal of loan applications for small amount; (3) Extension of the period of repayment from twenty to thirty years so as to reduce the amount of equated instalments; (4) limitation of individual maximum borrowing power to Rs. 500 in places where land mortgage banks are working. Village societies should confine themselves to short term and intermediate loans and refuse loans for discharge of prior debts exceeding Rs. 100 or any other prescribed limit; (5) smaller value of shares in land mortgage banks; (6) the effacing of the impression that small loans would not be favoured by land mortgage banks by encouraging applications for small loans; (7) The adoption of a more liberal policy in respect of the ceded districts by accepting rainfed lands as security up to 50% of their market value and making provision for extension of time

for repayment of instalments during years of acute famine. If these suggestions are closely followed, there is every possibility of transferring a great number of loans to land mortgage banks and the problem of overdues would be effectively tackled.

It has been found that, in the execution of awards for the recovery of arrears, societies and liquidators have come into possession of a vast extent of lands. The following statement will give a rough idea of the position.

		Wet Acres	Dry Acres	Houses	Value Rs. (lakhs)
Societies	..	4254	9248	2654	15.65
Liquidators	..	750	2528	463	2.69
Total	..	5004	11776	3117	18.34

The management of the lands either by societies or central banks has been found to be extremely difficult. The Karunguli Co-operative Society which had acquired lands for arrears of payment, was not able to manage the lands profitably. A proposal was made for the creation of a Trustee Bank for clearance of overdue debts and for management of lands, but it did not find general favour. Another proposal was that the lands in the possession of societies should be transferred to the Provincial Bank for a period of five years while the Central Banks should manage the lands in their possession till such time as they are disposed of when there is a rise in prices. In 1938 the Board of Management of the Provincial Bank decided to help the Central banks financially in the process of transfer of lands in their possession to original owners or their relatives on the rent-purchase system with equated payments as in Burma, spread over twenty years. For that purpose the Bank was authorized to raise long-term money for twenty years by the issue of uncovered debentures bearing interest not exceeding $4\frac{1}{2}\%$ to the extent of five lakhs. The scheme was recommended for trial in some select areas. The Central Land Mortgage Bank did not favour the proposal of the Provincial Bank because it might result in a conflict of interests and there would be a competition in the floatation of debentures. Moreover, the Provincial Bank is intended for the supply of short-term

finance and it will be against the principle of co-operative banking to lock up the funds of the Provincial Bank needed for short-term purposes.

Just about this time, the Reserve Bank of India published its third bulletin on "the Recent Developments in the Co-operative Movement in Burma with suggestions for their applicability to India." The Burmese scheme of dealing with overdues may be briefly described here. The Registrar first scaled down debts to what could be recovered from the income of the members within a reasonable period, say fifteen to twenty years. In this connection Government co-operated and was prepared to bear any loss in scaling down as this afforded a chance of recovering the rest. Moreover, Government paid off all the depositors of the Provincial Bank and was the sole creditor to the Bank. A thorough enquiry was made into the financial condition of all societies and the assets and liabilities of each member. Lands in the possession of members and societies were valued and the repaying capacity of members ascertained. Only loans equal to the present market value of the lands were left outstanding against each member and the rest which could not be recovered written off. Loans reduced to the market value of the lands were then spread out into ten or fifteen instalments according to the paying capacity of the members. The Registrar asked the members to surrender their lands to societies and the lands were in turn leased to the members on a hire-purchase system by which the rents due each year should equal the instalment fixed. At the end of the stipulated period when all instalments were regularly paid the lands were returned to the original owners on a nominal payment of a rupee to satisfy legal formalities. Members who defaulted did so at the risk of losing the lands. The scheme was very popular and members who lost their lands and left the societies joined them again. Even outsiders joined the societies and took leases of the lands in the possession of societies. Thus the societies and central banks saddled with lands were able to get back their lands and the members who thought that their lands were lost for ever got them back. Instalments were allowed to be paid in kind and the marketing of the produce was carried on in a very easy way by negotiating with brokers at the threshing floor if a godown was not available. Besides many other reforms were introduced into the co-operative society and we need not discuss them here.

Some modification has been suggested for the adoption of the Burmese scheme by India. In Burma where the Government was the cre-

ditor of the Provincial Bank, it was easy to reduce debts. But in India where the Central bank has to repay the depositors, the only possible method is the utilisation of share capital, reserves and deposits of societies and the reserves and share capital of the banks for debt conciliation. As far as possible it must be observed that the depositors of central banks are not put to any loss. In India as Government does not supply funds, the question of long-term funds arises where the financing bank does not possess sufficient capital or long-term deposits. The Reserve Bank suggests that the question of raising funds by debentures and paying off short term deposits should be considered. When the purpose of such debentures is revealed there is every likelihood of such debentures not being subscribed or a high price may be asked for them. The Reserve Bank rightly believes that these disadvantages could be counteracted if the Government guarantee the debentures. Another method is to convert the existing deposits into debentures. In hard cases the permission of the Registrar may be taken to repay the deposits in full. Though the Central Land Mortgage Bank is the proper agency to finance this scheme, it cannot do so because the Bank can lend only up to 50% of the market value of the property. Hence either Government should supply the finance necessary or guarantee the debentures. An amendment in the Land Mortgage Bank Act to lend in such cases to the full market value of the lands is desirable. But then the problem of tackling variation in the prices of lands arises. To get over the difficulty of a member losing his instalments if in the middle he defaults, it has been proposed that after every one-fourth of the total number of instalments has been paid the member should be returned one-fourth of his land.

The Burmese scheme of rent-purchase has been adopted in a modified form in the Central Provinces and Berar and Bombay. It is very essential that in the Madras Presidency this system of rent-purchase should be adopted by banks which are saddled with lands.

In order to reduce overdues it has been suggested that repayments may be made in kind. The Maclagan Committee on co-operation was of opinion that grain payments should be confined to the strictest possible limits as it would complicate accounts and afford opportunities for loss and fraud. Mr. W. R. S. Satyanathan in his Report on Agricultural Indebtedness said that if only societies accept payments in kind, the overdues would be reduced rapidly. In Burma, in the process of reconstruction of societies, one of the conditions imposed is that repayments

of instalments should be made in kind as in the case of money-lenders. The Society unlike the moneylender took only just the quantity of produce necessary to meet the long-term instalments. Moreover payments in kind enable the societies to sell the produce of the members in bulk. The contention that variation in prices of commodities would upset calculations is met by the Reserve Bank which states "The member should be given to understand that though for convenience the amount of produce he has to pay is fixed before hand, what the society needs is the amount of instalment equivalent in value to the long-term instalment and the crop loan he has to repay and therefore if the amount previously fixed does not come up to this, he has to make additional payments. On the other hand, if the produce given by him fetches a higher price than what is needed, the excess will be refunded to him.... The scheme is intended to educate the members in the advantages of joint sale and to ensure this, repayment in kind should not be absolute but relative to the price obtained, so that the member realises exactly how joint sale benefits him." The question of storage accommodation came up for consideration of the Burma Land and Agriculture Committee 1938, and it was found that the cost of a society godown was small and the loan required for its construction would probably be easily repaid in three or four years. At present in the Madras Presidency loans are advanced to sale societies for the construction of warehouses though in a few cases village societies have also been granted a subsidy from the Government of India grant for rural reconstruction to enable them to build up village hall which will serve the purpose of godown also. This problem is fully discussed in the chapter on Marketing. It is however necessary that the villagers should be given an opportunity to pay their dues in kind and the difficulties in the way can be easily obviated as the Reserve Bank has suggested.

Where every attempt is necessary to scale down overdues and collect the arrears, it must not be forgotten that the chief aim should be to reconstruct societies so as to prevent further accumulation of overdues. This leads us to the question of starting multi-purpose societies and controlled credit.

VI. Multi-purpose societies and controlled credit.

The idea of the multi-purpose society is not a new one. Even Raiffeisan's societies aimed at "promoting material well-being and also

preparing the ground for the moral and religious activity". Raiffeisen stressed the fact that the "bank, directly or indirectly, should be the centre of village life." Catrill in his Report on Agricultural Credit and Co-operation says "As contemplated by Raiffeisen, the local society was apparently to represent a co-operative organization which primarily furnished credit to its members but which also bought their agricultural requisites, sold their produce, provided machines for common use, and even engaged in production. In the society were to be concentrated in effect the economic forces of the village community. Experience proved that while especially the supply of agricultural requisites may be suitably carried on as a department of the village bank, other co-operative undertakings involving technical skill in their management and considerable capital liabilities are best taken in hand by societies independently constituted." Nicholson in his report on Land and Agricultural Banks speaks of the ability of village banks to act as agents and brokers for their members in the sale of produce and purchase of necessities. The model by-laws of credit societies in India have as their main object the borrowing of funds from members or others to be utilized for loans to members for useful purposes and for their secondary object the following (1) to act as agent for the joint purchase of the agricultural, domestic and other requirements of its members and for the joint sale of their produce; (2) to purchase all implements, machinery or animals for hire to its members; (3) to disseminate the knowledge of the latest improvements in agriculture, handicrafts and weaving, and encourage its members to adopt them; and (4) generally to encourage thrift, self-help and co-operation among the members. But these secondary aims however imposing on paper are not at all attended to by the credit societies. There is no statement of the number of credit societies participating in non-credit work. Regarding the purchase of implements, machinery etc., for the members and the dissemination of knowledge of the latest improvements in agriculture, handicrafts, weaving etc., by the credit societies no information is available from the reports of the co-operative Department. But in the matter of joint purchase and sale, in the year 1937-38, the societies bought on behalf of their members agricultural and other requirements to the value of Rs. 10,434 and sold agricultural produce to the value of Rs. 1,318. When we consider the average buying and selling by the 10,450 credit societies in 1937-38, the figures are ludicrously low being less than a rupee of buying by each society and .13 of a rupee of selling by each society! It almost amounts to saying that the

credit societies did not undertake this kind of business. As regards the encouragement of thrift the following table will throw some light.

		Rs. Lakhs.
Share capital	..	51.46
Deposits from members	..	8.50
Loans and deposits from non-members	..	16.62
Loans from other societies	..	258.48
Loans from Government	..	3.07
Reserve fund	..	77.46
Other funds	..	21.53
Total working capital on 30-6-1938	..	437.12

Deposits of members constitute the real voluntary savings of members. Share capital represents the compulsory savings of members. The average voluntary savings of a member amount to Rs. 1.70, if the share capital also is taken into consideration. The savings amount to Rs. 12 nearly. Considering the starting of the co-operative credit society in the Madras Presidency more than three decades ago, the savings of the members speak very poorly of the capacity of the village credit societies in the matter of encouraging thrift. The conclusion is that though credit societies were allowed to take up non-credit work, they absolutely neglected that side of co-operation. During the examination of some of the co-operative societies in the South Arcot district, the writer found that in all cases the provisions relating to joint purchase and sale and those relating to thrift were actually scored off the bye-laws. The weakness of the co-operative movement and one of the main reasons for the accumulation of overdues is too much concentration on the credit side of the societies. Hence sufficient stress should be laid on the importance of activities other than credit in the village society.

Criticism.

One of the main criticisms against the formation of multi-purpose societies is that the multi-purpose functions that could be taken by the village credit societies were not discharged properly not because of want of power under the by-law but due to want of human material and other factors. "When there is a dearth of men to run simple credit societies, can it be anything more than a pious wish to see comprehensive multi-

purpose societies set up in every village?" The answer to this question is, because of dearth of men to man single credit societies, multi-purpose societies are advocated. The incomes of the present credit societies are very low, nearly Rs. 50 per annum. In some societies there is no income at all. Hence these small societies are very weak and are unable to maintain a paid staff. Most of them depend on the supervisors and bank inspectors to help them in the maintenance of accounts. Too much work cannot be expected of honorary workers. Hence it has been suggested that a well-paid clerk for a group of societies within a reasonable area should be appointed to carry on the routine work. At present there are many educated unemployed in the Presidency and with a little training in co-operative account keeping, these young men will readily take up this work. A multi-purpose society which has a wide area of operation can easily appoint a clerk because the income of that society with its multifarious activities is bound to be substantial. Moreover in a wide area comprising a few villages it is more easy to find honorary workers willing to carry on the work of the society than in a single village. The Deputy Governor of the Reserve Bank of India in a recent statement on the subject remarked "Even those who object to the multi-purpose society are in favour of the Co-operative principle being applied to marketing, purchase etc. They advocate a separate society for each such function. The need for co-ordinating the activities of these societies is recognised but it is thought that this can be done in something like the following manner. Thus, a member who has taken a loan from a credit society would be advised to take his crop to a marketing society which would deduct his dues to the credit society before paying the member for his produce. It would be easy to see how cumbrous and impracticable such co-ordination will be. The most important single cause for the failure of the co-operative movement so far has been the lack of enough good co-operators. When it is difficult to find enough men to run credit societies in villages it would be the height of optimism to expect to find enough men to run a number of co-operative societies. On this ground alone the idea of multi-purpose societies is justified."

Another criticism levelled against multi-purpose societies is that "if the society takes upon itself a multiplicity of functions with financial responsibility for some or all of them, the failure of one line might affect

*Mr. K. C. Ramakrishnan—Indian Co-operative Review, January-March, 1938—p. 70.

other lines too".* In the first place the multi-purpose society which is formed will not in the initial stage take up dairying and other co-operative undertakings requiring technical management and considerable capital. Those special functions will be taken only when the society is fully prepared for such technical management. Moreover it is common knowledge that separate accounts should be maintained for separate functions. So there is no question of financial risk happening to the society. As regards the trading activities, the society will purchase all important requisites on indent system for the benefit of members, but will not trade on the society's account. This system is prevalent in Germany. As Catrill says "In most cases, however, the society confines itself to collecting orders from members, transmitting them to central trading society, advising members of the arrival of goods, carrying out the necessary book keeping and recovering the payments from members on receipt of goods".

The introduction of multi-purpose societies in other countries shows that they are not bound to fail. In Japan and France many of the societies took on themselves varied functions and served as multi-purpose societies over a wide area.

Working of a multi-purpose Society.

A description of the detailed working of such a multi-purpose society is given in Bulletin No. 2 of the Reserve Bank of India entitled "The Co-operative Village Bank." A short summary of the scheme of a village Bank with multi-purpose activities with slight modifications in essentials may be given here.

The old idea of one society for a village will not be helpful for the development of the multi-purpose society for reasons given in the previous pages. Societies should be formed on a group basis by comprising villages situated within a convenient distance of a radius of two to four miles. The size and operations of existing societies are too small to run them on business lines by employing the necessary staff and building up sufficient reserves.

The aim of the society should be the enlarging of membership so as to bring every family residing in the area of operations under its

*Mr. K. C. Ramakrishnan—Indian Co-operative Review, January-March, 1938, p. 69.

control. The whole of the village life—not only credit but marketing of crops, supply of necessities on indent system, supply of manure, seed and implements, supply of cheap mechanical and electrical power on collective basis and improving social and religious customs—must be embraced. As the Reserve Bank says “Every avenue of waste should be checked and production must be developed.” The object of the Bank must be to raise the lowest to the level of the most efficient. Proper control and supervision by the financing banks and the Department and the inculcation of co-operative spirit will prevent big members dominating the societies and appropriating large loans to themselves. The societies should as far as possible try to tap the idle capital of the locality by distributing hundi-boxes to the various families in the villages and explaining to them the importance of thrift. Thrift days should be held once in a month and the members should go from house to house collecting money. Such encouragement of savings will, in the long run, result in the thrifty habit of the members. The village bank should aim at the controlled expenditure of their members through recognised stores. The requirements of the members can be met by the society through these stores thus leaving little chance for members to handle actual cash. This will certainly lessen the chances of loans being misapplied. It is very necessary for the village bank to keep in constant touch with the members so that the latter may feel the existence of the bank. In the formation of the village banks care should be taken that they are not started in all places at once. As the Reserve Bank says, they must not be brought into existence “by mere mechanical means but must develop out of a felt want.” So the first bank that is started as an experiment should be done so carefully in a proper area, for any failure of such banks in the first instance will give a bad reputation to the scheme.

The bigger societies with larger functions of the kind envisaged cannot be worked on the basis of unlimited liability. They must be based on limited liability or guaranteed liability, i.e., provide for a fixed reserve liability for each member. For unlimited liability is based on the fundamental idea of the members of a village society possessing mutual knowledge of each other's affairs and exercising some control over their fellow members both in the matter of borrowing and punctuality of repayment of loans. Village life has now completely changed and the new society operating over a number of villages cannot adopt this form of liability.

When a multi-purpose society is formed in a certain area, it should first fix the amount of credit that could be given to a ryot member by determining his credit-worthiness. The property statement prepared and revised annually is the basis on which it is determined. We found in an earlier section that the property statement usually gives an exaggerated account of the assets of the members because they are prepared by the borrowers themselves. The property statement should be checked often by the financing agency and the correctness of the document established. The ‘karnam’ or the village clerk should play an important part in the preparation of the document. Having established the assets of the ryot, it will be more difficult to determine his liabilities. Separate enquiries should be made of the ryot, the village officer and the leading men in the villages. If some debt is not revealed by the ryot, it will be known by and by when the society which takes charge of the produce of the ryot regulates his spending and discharges instalments of loans. The agricultural demonstrator and the supervisor should visit the villages where the society operates well in advance of the cultivation season and in consultation with the Panchayatdars and the village officers should determine the amount required for cultivation expenses and the yielding capacity of the land of each member and his domestic expenses. It is on the credit-worthiness and repaying capacity of each member that loans should be distributed by the society. The loans required by all the members should be consolidated by the society and a joint application should be made to a central bank for such funds as could not be provided by the society itself. The central bank should provide the funds on a cash credit basis. Loans will be disbursed to members as and when necessary to carry on their agricultural operation. The grant of loans by Central banks on cash credit basis will avoid undue delay in the disbursement of loans to members. As soon as loans are disbursed to members by the society, the supervisor should visit the society to inspect the proper utilisation of the amount by members. It is common in the villages for members to use loans taken for the ostensible purpose of cultivation to a quite unproductive purpose.

When the harvest is over, the produce should be entrusted to the sale section of the village society and any immediate need for money like domestic expenses or payment of kist should be lent out on the security of the produce. The method of marketing of produce has a great influence on the income of the ryot. The most cheap and easy method of

marketing for small holders is to get their produce sold in the village or a nearby centre to agents or firms or big merchants. The village bank can undertake the selling in bulk and can obtain a better price. For those rich members who can afford to pay rents for godowns, the village banks should provide godowns in marketing centres. In the building of these godowns, Government and the financing banks can help with funds. Goods can be stored in these godowns till better prices are available. Advances can be made to members on the pledge of goods in godowns. When the produce of the ryot is sold, the sale section will first clear the cash credit loan of the ryot in the village bank for the year and then disburse other instalments due from the ryot. The surplus, if any, should be encouraged to be deposited in the village bank. His domestic expenses can be met by the stores to which the society is affiliated and adjustments may be made with the society with the result that he will have no necessity of handling cash.

Better farming alone will increase the income of the ryot and make him creditworthy. The Bank can purchase wholesale from the Agricultural Department chemical manure, better seeds, and farm implements and supply them to members at profitable rates. Among the many activities the bank can take up the important question of consolidation of holdings. Joint farming on a co-operative basis can be tried profitably wherever possible. Subsidiary occupation will go a long way to augment his income. He can pursue profitably those occupations which are closely connected with his avocation. The village bank can provide the ryots with small loans to undertake these occupations and can organize the sale of these articles on a co-operative basis.

The village bank can deal only with short-term and intermediate credit. For liquidation of debts and improvement of land, the help of the land mortgage bank should be sought. The Reserve Bank rightly believes that the former function should be undertaken wherever necessary to make the latter possible. Liquidation of debts of a ryot should be taken up only when the village bank certifies to his credit-worthiness and his habits of thrift and sincerity.

Government Aid.

Measures that should be adopted by the Government to help the village bank in addition to the regulation of moneylending and prohibi-

tion of usury by the Madras Agriculturists' Relief Act of 1938 are as follows: The societies must be given a first charge on the produce raised with the help of the loans advanced, subject to the charge of land revenue. Then only can the co-operative societies hold their position firmly against the onslaught of other creditors, who are naturally more vigilant and more prompt in seizing the produce of the agriculturists for their own dues. In Egypt and the Punjab, the cultivator cannot be sold up entirely for his debts. It is necessary to prohibit attachment and sale by creditors of the agriculturist homestead and a minimum holding should be prescribed by law in all parts of India. A rural insolvency law on the lines suggested by the Royal Commission on Agriculture and the Indian Central Banking Enquiry Committee should be introduced. If the creditors refuse to submit themselves to the conciliation board within a year of the passing of the Debt Conciliation Act, they must be compelled to present their case to a Court for adjudication and if they fail to do so the debts must be deemed to have been discharged.

Finance.

Regarding the financing of the multi-purpose societies it has been suggested by the Revenue Minister of Madras, Mr. Satyanarayan or Alamaru, and the Reserve Bank that small banking unions of societies should be formed. Though the Reserve Bank does not suggest the scrapping of central banks and replacing them by banking unions, the former two suggest such drastic methods. On this question the Deputy Governor of the Reserve Bank said "It the central banks as at present organized are found fit to exercise these functions, well and good. We have nowhere advocated that district central banks should be scrapped and replaced by banking unions If, on the other hand, it is proved that by its very size and organization, the district bank is incapable of fulfilling these functions, then it will have to be replaced by a banking union. It is far too early to come to any categorical conclusion on this matter." It has been already pointed out that the replacement of the central banks, which are the envy of other provinces, by some other agency will be a step in the wrong direction. The defects in the movement are not at all due to the central banks. The multi-purpose societies can very well be financed by central banks and inspected and supervised by them.

Some promising societies

Already in the Madras Presidency, in G.O. No. 2633, Development, dated 27th November, 1937, Government agreed to the Registrar's sug-

gestion that provision might be made in the bye-laws of select credit societies for better farming, better business and better living and have ordered that the Registrar should see that these objects are always kept in view and worked for by societies. Certain amendments were made to the by-laws of certain societies which are working well.

The first society that was started on the lines of the Reserve Bank of India's scheme of co-operative village bank is the Alamaru Co-operative Rural Bank, Ltd., opened by the Hon'ble Mr. T. Prakasam, Revenue Minister, on the 27th February, 1938. A description of the bank is given in the Administration Report of the Co-operative Department for 1937-38. "The society is on limited liability basis with the ten villages in its area of operations. Its object is to undertake all activities conducive to better farming, better business and better living. During the year the society was engaged in credit activities only. It proposes to undertake non-credit activities also during the current year. Propaganda is carried on in the villages by organizing public lectures to agriculturists. The All India Spinners Association has opened a branch in this society, to supply khaddar to its members. Cloth to the value of Rs. 200 was supplied to members during the year". Co-operators in this province look to this Alamaru Rural Bank managed by a veteran co-operator as a beacon light in the progress of co-operation.

Examination of some of the files in the Co-operative Department on the working of the co-operative societies revealed that some credit societies in Salem, Coimbatore, West Godavari, Cuddappah and Trichinopoly introduced multi-purpose objects in the by-laws and were actually carrying out those objects. Such societies can easily be turned into multi-purpose societies operating on a wider area.

The two important societies in the Salem District descriptions of which are necessary here are the Mallasamudram and Mallur Co-operative societies. About the middle of 1937, the Reserve Bank of India wanted the Registrar of Co-operative societies to send them a description of the best co-operative credit society in the Presidency. The Deputy Registrars of Co-operative societies sent a description of the best societies in their districts and from that list the Reserve Bank arrived at the conclusion that the best society in the Madras Presidency was the Mallasamudram Co-operative credit society.

The Mallasamudram Co-operative credit society:—Started about the end of 1919, the society has now 446 members on rolls with a paid-up

share capital of Rs. 7,452. The society has a maximum borrowing power of Rs. 50,000. The most important feature of this society is that it works purely on the deposits of the members and non-members and gives the lie direct to the feeling that deposits from villagers cannot be used in the transactions of a society. It has an overdraft account with the Salem Co-operative District Bank. The loans outstanding against members amount to Rs. 11,588 under short term and Rs. 38,672 under long term. The overdues of members, Rs. 3,688, is a trifling amount to the business carried on by the society. Even here Rs. 18 only is overdue for more than a year and this amount is covered by decree. This is enough to show that when deposits are raised locally, loans will be granted carefully and recovered punctually. The reserve funds of the society amount to Rs. 7,256 and are invested in the Salem District Urban Bank. The society has taken shares in the Salem District Urban Bank to the value of Rs. 2,200, in the Imperial Bank to the value of Rs. 500 and in the Tiruchengode sale society to the value of Rs. 100. The society gets strains of seeds and other agricultural requirements of members elsewhere and sells them to the members at a cheap rate. It has a sugar cane crusher and four iron ploughs which are given to the members on a monthly rent. It maintains a library and is constructing a godown for stocking the members' produce and a village hall and reading room attached to the godown. The society also conducts a chit fund. There is no delay at all in the granting of loans. The society conducts a ryots' conference when officers of the various departments—Co-operative, Agricultural, Veterinary and Public Health—visit the village.

The members of this society are of opinion that the field of operation of the society may be usefully extended. An increase in its area of operation will not only increase the field of successful co-operation, but also will prove necessary to the society itself. For honorary work is subject to various difficulties and this society has only one clerk on Rs. 12 per mensem and peon Rs. 7. Should a few more surrounding villages be added to it, the society might have enough funds to have a better paid staff.

Mallur Society:—This is one of the oldest and best societies in the Salem union. This society has taken up the work of thrift through the homesafe deposits and it is working very well. To make the hundi-box movement popular and to provide incidentally recreation for the villagers every month on the hundi-box opening day, entertainments in the

shape of gramophones and local music are arranged by the society. From the very introduction of controlled credit the scheme is working very well in this society. This is one of the societies distributing high quality seeds to the members. In 1937, seventy-five bags of good cotton seeds were distributed among the members. A sum of Rs. 375 from the common good fund was spent to deepen a well for public use. The society has planned to build a godown-cum-office-cum-village hall. Planting of trees is encouraged and on the tree-planting day, fifty-four members planted 640 trees. The success of the society is due in a great measure to the enthusiasm of the President.

The Pannimadi co-operative society of Coimbatore started in 1917 was classified as an A class society during the audit in 1936. It had 216 members on rolls, the majority of them being agriculturists. The paid-up share capital of the society amounted to Rs. 7,552 and the reserve fund Rs. 9,193. Loans to the extent of Rs. 21,742 were outstanding at the end of the year out of which Rs. 1,466 was overdue. The loans due to the district bank amounted to Rs. 1,654 on 30th June, 1937. Deposits including homesafe deposits from members and non-members were obtained to the extent of Rs. 12,851. The society distributed foodstuffs and clothes to members on joint purchase. It has an improved variety of plough for the use of agriculturist members and has a correct weighing machine to weigh the produce of members.

The Tittle co-operative society of Tanjore undertook joint purchase of the requirements of the members and joint cultivation of lands and also selected a few families for introducing better living principles.

These are some of the important co-operative credit societies which can at once be developed into multi-purpose societies by extending the area of operation. The good and honest panchayatdars of these societies will be very useful to the villages surrounding the society if the area of operation is extended. The millenium can be achieved only if there is a change in rural leadership. Multi-purpose societies are capable of producing such philanthropic men and men of character. The Royal Commission on Agriculture sounded a true warning when it remarked "If co-operation fails there will fail the best hopes of rural India."

CHAPTER 10.

MARKET FINANCE WITH SPECIAL REFERENCE TO CO-OPERATIVE SALE SOCIETIES

In this chapter the financial difficulties of the agriculturist in marketing his crops and the agency that would provide him credit to market the crops to his best advantage would be discussed.

General Survey

The disabilities under which the Indian agriculturist suffers in the matter of marketing his produce are not a few. The principal crops grown in the Madras Presidency are paddy among the food crops, and groundnut and cotton, among commercial crops. Tobacco, Coffee, Tea and Sugarcane and the growing of fruits are also becoming important. The area of paddy in a normal season has been estimated to be 10,200,160 acres and the area of groundnut and of cotton are 3,075,230 and 2,284,670 acres respectively.*

Tanjore, South Arcot, Nellore, Kistna, Godavari and Guntur are the important areas where paddy is grown on a large scale. There are various kinds of paddy grown. In Tanjore there is the short crop of three months' duration and the long called 'samba' of six months' duration. In the South Arcot there are different kinds of 'samba' and 'kuruva' paddy. Nellore 'samba' paddy is famous and commands a higher price than most other paddy. The main paddy harvest is from December to February though one or other form of paddy is being harvested from September to March. It will be curious to note that in some dry parts of South Arcot paddy is grown throughout the year—the main source of water supply being rain. It is generally during the main harvest between January and February that the Government's kist and the landlord's rent fall due. Moreover, the crop is grown in most cases out of short-term loans from the local moneylender or a small merchant or

*A note on the Economic Resources of the Province of Madras —L. B. Green—
Director of Industries.

fellow ryot or the co-operative society. As soon as harvest is over, these creditors should be paid. Hence the inability of the farmer to sell as and when he likes. He has to sell earlier than he would like at a time when the market is glutted with the same produce as soon as the harvest is over. The reason is the difficulty of finding proper financing agencies for the marketing of crops and the lack of storage facilities.

In some parts of South Arcot, the grain merchant visits the village and knocks off the paddy at a very low price at the doors of the villager who is not aware of the ruling prices near the village or in the town. In the Kistna District the cultivator himself takes the crop in his cart to the market town and sells it to the merchant for cash on the spot. The anxiety of the villager to return to his village as evening draws near and the expenses that would be incurred by him if he were to stay in the town for a day more force the ryot to sell his produce at a great disadvantage. Sometimes the sale is made through a commission agent, who makes a commission on both sides and a profit on the sale. In places where ryots take advances to grow their crops, the shop-keeper or the moneylender who is the creditor stipulates that the crop should be handed over to the creditor at a rate pre-arranged. Sometimes repayments are made at a pre-arranged rate in kind. The interest in these cases is as high as 50% for only a few months. The result is the villager sows for others to reap. In addition to these, various deductions are made for charges for measuring, for charity etc., not to speak of the illegal weights and measures used.

The trade of paddy is mainly internal and unlike other commodities the number of varieties of paddy is many. Being bulky the problem of transport is an important question in the marketing of paddy. In Nellore where there are the large cultivators, the question of storage is solved by the fact that rice mills in big villages have storage accommodation. So they are able to hold up for a better price.

Of the large commercial crops in this Presidency groundnut comes first. Most of the groundnut grown is exported to foreign countries. The large European exporting firms have their local agents all over the country at the principal groundnut centres during harvest season. While they do not advance towards the growing of groundnut crops, they buy for cash locally. There are no organized markets for this important commercial crop. The ryot themselves bring their produce to the towns in their own carts after decortication by mill or hand or as raw produce,

and sell them to the exporting firms at the price offered by them. As regards prices, a few important European firms who get their private instructions from abroad control prices. The smaller middlemen who buy from the ryots, sell them to bigger merchants who have forward contracts with shipping firms. The forward contracts are generally entered into in July or August for deliveries in November and December. Prices in July and August fall down and they rise up, sometimes even 50% in December with the result that the merchants are hard hit. The exporting firms try to buy up as much as they can at the harvest when there is a rush of groundnuts in the market and a depression in prices in local markets. There is no agency to inform the ryot whether a depression in the prices of groundnut is local or general, nor are there storage facilities afforded to him to enable him to sell at a favourable time. The part played by Co-operative Sale Societies in this connection will be discussed later on. Another factor that contributes to the large divergence between the price paid by the foreign consumers and the money received by the cultivator of groundnuts is the concentration of the produce in a number of local markets before it is concentrated at the port of export.

In South Arcot there is a system of selling groundnuts known as unfixed contracts. The seller takes his produce to the office of the buying firm and receives nearly 80% advance at the day's price. The price will not be fixed. If the price of groundnut goes up, the firm will keep quiet and if it falls the seller will be asked to make good the difference in the advance made. If the seller asks the buying firm to fix the price at a time when the prices increase, the buying firm will evade him by saying that only a limited quantity of bags was asked to be purchased by the foreign importer and so the firm would fix the price for only a portion of the quantity pledged with it. If the price should fall the next day the seller would lose. In Salem there is a time limit of two or three months for the unfixed contract, at the end of which period, the firm demands of the seller to fix the price. If the price is low on that day, the seller stands to lose heavily. The clever agent by his subtle methods keeps the price low. Even before the price of the groundnut is fixed, the produce would have been shipped to the foreign country without the knowledge of the seller. The evil under this unfixed contract is that while the seller should dispose of his produce at a favourable price, the firm that advances money usually does that at a time when the price is favourable to it.

Writing about the exploitation of the ryots by false weights, Mr. Adinarayana Chettiar in his book on the Co-operative Marketing of Agricultural Produce says "In the V. zagapatam District 'garce' is theoretically 13 bags but in actual transactions it is 14 or even 15. In Arkonam Taluk (North Arcot District) I was given instances of groundnut being sold by the ryot at so much per cart-load. In one instance, forty bags were sought to be taken away by the middleman for the price of one 'cart-load'—there being no branch of the S.P.C.A. in that village."

The problem of marketing cotton bristles with the same difficulties as that of groundnut. The principal markets in the Ceded Districts are Adoni, Bellary and Nandyal. In the South, in Coimbatore and Tinnevely, the principal places of market are Tiruppur, Koilpatti, Sattur, Sivakasi, Virudhunagar and others. In the Circars, the principal areas are Guntur and Kanchigacherala. Except in places like Tiruppur where there are Co-operative Sale Societies operating, the produce is usually sold through the middleman. The middlemen used to purchase on the field itself or the ginning factory owners used to send out their agents to the ryot's villages and buy cotton. Sometimes the ryots take cotton to the weekly markets which are attended by the buyers. Small lots of cotton used to be sold at the local ginning factory for whatever they would fetch. In Adoni loans are granted either by the merchant direct or through the village moneylender but much of lending is from one ryot to another. When the lender was the merchant, the sum lent was on the express understanding that the crop was to be sold to him. In Bellary the 'dallals' or commission agents dominate the market and give considerable advance to cotton growers on condition that the produce should be sold through them. The 'dallals' themselves borrow from the Marwaris at a high rate of interest but occasionally at a lower rate from the Imperial bank. The dallals usually pay the seller less than the current price in addition to the commission they receive both from the buyer and the seller. The rate of interest charged by the dallals is very high. The weights used not only in towns but in villages are notoriously inaccurate. In addition there is the common deduction for charity, weighing charges etc. In Coimbatore ryots sell direct to consumers as well as through commission agents.

Regarding other crops, the marketing of tea, tobacco, coffee and perishables is important. The principal places where tobacco is grown are the districts of Madura, South Arcot, Tanjore, Kistna, Godavari,

some parts of Salem and Coimbatore and Guntur. Tobacco can be sold only after curing. The ryots cure the tobacco and sell it locally as other produce. But in Guntur where the Imperial Tobacco company tried to raise the crop locally but failed, the bulk of the trade is the monopoly of this one firm which handles a major portion of the trade in tobacco both in India and England. This firm advances to ryots for building barns and for purchases of coal stipulating that the tobacco cured in the barns should be sold to it. The tobacco is sorted into four standard grades by the firm. The complaint of the ryots was that they were kept waiting for a long time at the place where tobacco was inspected and in the end the price offered to them might be reasonable or lower than the reasonable rate. As there is no open market for the type of tobacco grown there, and as there are no rivals to the firm operating in Guntur, the price is fixed by the Imperial Tobacco Company which has its own limits of purchase. When that limit is reached, the ryots find it difficult to dispose of their produce profitably. In many cases there are several intermediaries between the ryot and the exporter. European market quotations of prices are not available to the ryots. Moreover the grades of Indian Tobacco are not standardised.

Coffee is confined to Coorg, Nilgiris and Shervaroys. The larger producers are the European planters. A large portion of the crop is exported to London and the planters have to depend on London firms. The industry needs large advances. The big tea estates have their own factories and ship the produce to London themselves or through agents. The small grower of tea has to sell his produce to the factory.

Jaggery is an important article of commerce in Madras, and the Anakapalle co-operative society does good business in it. As the price of jaggery goes up after harvest, it is better to provide storage facilities for jaggery.

In the marketing of perishables, plantains, potatoes, mangoes, betel-leaves and onions are important. The main difficulty in the marketing of these products is their perishable nature and the difficulty of controlling distant markets. The mussalman merchants in Mettupalayam and Nilgiris advance money to the ryots growing potatoes on the condition that the crops should be sold through them. The two problems are the high rate of interest charged by these mussalman moneylenders and the difficulty of storing potatoes without allowing them to perish. The same difficulty of storage presents itself in the case of onions.

Many varieties of cheap fruits like pears grown on the hills of South India do not fetch adequate prices to producers because of want of organisation. Transport charges of these fruits from the hills to the plains are prohibitive. Mangoes which are important are sent in a large quantity to North India. The fruit is packed in baskets and despatched in wagon loads to avoid pilferage. But this method of packing mangoes is not satisfactory. Organisation in marketing of mangoes will result in putting some additional money into the pockets of the poor ryots. In Vellore and Chittoor the prices of mangoes are ridiculously low because of the middlemen who advance small sums to the growers and get the whole produce into their hands. The trade in betel-leaves is a very lucrative one, and the difficulty of getting a reasonable price is the absence of sale depots in distant purchasing centres.

The Middlemen.—From the brief description of the marketing of produce in this Presidency it is evident that the middleman dominates the market. In the existing order of things the middleman has certainly played an essential part in placing the produce before the consumer. But the difficulty arises when there appear far too many middlemen on the scene than are warranted. The middlemen just like the money-lender have wrested all the profits from the ryots. In many cases the middleman or trader lends to the ryot for cultivation purposes with the main aim of getting the business. The result is the ryot is at the mercy of the middlemen to whom he must sell. The rate of interest charged is very high. As Mr. Satyanathan says, "This type of middleman makes a double profit. He profits by lending as well as by buying, if such a term as buying can be used for the coercive methods adopted by this wily class in forcing the needy and ignorant ryot into parting with his produce." Lack of warehousing facilities and cheap credit on the security of produce compel the ryot, soon after the harvest when there is a great demand on his resources, to part with his crops to the middlemen.

In the marketing of commodities like cotton although the seller may be present during the actual sale, he is ignorant of the offers made by the buyer or his agent as the allowance for dirt is usually settled by the agent of the seller. Usually this middleman has a secret understanding with the buyer or his agent and if he gives him a good allowance, he favours him. Thus the interests of the seller are sacrificed by the very person whom he trusts.

In South India it is common for the ryots to meet obstinate 'mandi-owners' who force them to sell the produce to them at ridiculously low prices. Mr. Satyanathan in his report on Agricultural Indebtedness in Madras recounts the following common occurrence—"An officer of the Agricultural Department and some others went incognito to a road, along which the ryots were in the habit of taking their produce from a group of villages to town. They watched near a mandi, as the shop of a certain class of middlemen is known. A cart containing bags of groundnut came by. The middleman and his minions came out of the shop with sticks in their hands. While two or three engaged the driver and his companions in conversation, the others commenced removing the bags of groundnut from the back of the cart. The cartman and his fellows soon spotted this and protested, saying they wished to sell their groundnut in the town. Their protests were in vain. By persuasion and by threats and even by use of force, this middleman and his men, who might as well be called dacoits, forced the poor ryots to sell their produce to them. The price they paid was fixed by them. No protest by the ryots was of avail. So the ryots with a little money in their pockets turned their empty cart and went back to their villages."

The use of false weights and cheating at the time of weighing is common with the middlemen. Buying in the villages some merchants represent that they would buy at current town market rates but they make up for their cost of transport and profits by a clever manipulation of the weights. There are a bewildering variety of weights and measures in the country. The middlemen generally have various sets of measures and have also a proper set of measures and weights for inspection. The tops of the measures alone are stamped by the stamping party and often the middlemen tamper with the bottom of the measure. In the countryside there are very many experienced measurers who even with the correct standard measures are capable of measuring grains either to the advantage of the middlemen or the ryots in spite of the closest watch. These measurers are previously engaged by the middlemen. Various other methods of cheating are employed by the middlemen in the matter of weighment or measurement. During the survey conducted in the South Arcot District I personally came across mandi-owners of groundnut using the balance to their advantage. While they would be pointing to the unsophisticated ryot the needle of the balance they would press with their legs the side where the weights are placed and thus would knock off the produce for a very low price. Mr. Satyanathan estimates

the loss to the agriculturist by false weightment and measurement at from 5 per cent to 30 per cent.

In addition to these illegal deductions, in South Arcot there is the practice known as 'thallupadi,' i.e., knocking off a good quantity at each lot handled.

Adulteration either by damping the produce or mixing the cheaper variety with a superior variety or mixing the produce with some other stuff is mainly resorted to by the middlemen. The Indian Cotton Committee in their investigations found that this was rampant in the ginning factories. This undoubtedly brings down the value of our commercial crops in foreign markets and it will ultimately affect the poor ryot.

The abuses which have crept into this system of marketing where the middleman plays an important part are so great and injurious that they should be eliminated. As the middleman should perforce continue before any other suitable system is evolved, attempts should be made to replace him by a controlled and organized market. That can be achieved by the Co-operative sale societies as will be described presently.

Lack of Transport Facilities.—One of the essential functions of marketing is efficient transport of commodities from the village areas to the railway station and from there to the terminal point. Any credit facilities for marketing without an efficient system of transport will be of no avail. For instance, the Central Banking Enquiry Committee in referring to the bad system of transport in India, observe. "At the time of our report the freight per maund of wheat from Australia to Calcutta is six annas while the railway freight from Lyallpur to Calcutta is Rs. 1-3-3."

Although the road system in India is improving rapidly, village roads are in a very bad state. During the survey conducted in the South Arcot District, I had an opportunity of visiting some of the remote interior villages. There are practically no roads connecting the villages to the marketing centre. During summer the country carts run across the fields and during the rainy season the villages are practically isolated from the towns. Usually the country carts cross the rivers during the summer but when the rivers are in floods there are no means of crossing them. The up-keep of these roads is the function of the district boards; and the condition of the roads in the South Arcot District is the worst

in the Madras Presidency. Of course some villages are connected to the main roads by metalled roads but such roads are not many. "The total mileage of roads in India is 201,000 miles of which 31% is metalled and 69% unmetalled. Compared to the United States of America, per 100,000 population India has 23 miles of surfaced roads as against 383 miles of U.S.A. and the corresponding figures for unsurfaced roads are 55 and 2167 miles. With same territory as New Zeland and 10 times her population the Central Provinces has one-seventh of her surfaced road mileage,"* Moreover, the roads in the Madras Presidency are very unevenly distributed and in many cases communications—road and rail—are duplicated with the result that there is competition. The following table will give an idea of the lack of distribution of roads.**

Number of villages with a population of 1000 and over not on the public road—

North Arcot	..	309
Kistna	..	185
West Godavari	..	213
Guntur	..	417
Coimbatore	..	230

One of the main features of the increased cost of road transportation is the increase of the rate of freight with the distance, seasonal changes, nature of the road and time taken to load and unload goods by the cartman. The following table will give some idea of the Cost.*

Madras Presidency (Madura)

Distance	Charges Rs.	Commodity	Condition of the road
10 Miles	0-4-0 per cart	Paddy	Metalled
6 Miles	2-0-0 for 6 Bags	Cotton	do.
Bellary			
9 Miles	2-4-0 for 6 Bags	do.	do.

*Agricultural Marketing in India—B. B. Mukerjee.

**Ibid.

*Ibid.

It must be noted that the cost of transport is higher on unmetalled than on metalled roads. Moreover, it increases the depreciation charges of the carts and bullocks. The Indian Road Development Committee and the Royal Commission on Agriculture emphasised the need for better communications for marketing agricultural produce. The former committee said "good communication in any area will bring new crops within the range of profitable cultivation." The latter remarked "defective communications between the point of production and the local market hinder the movement of goods and make primary marketing costly, the additional charge ordinarily falling upon the shoulders of cultivators." As the Madras Provincial Banking Committee says, much is spent on the maintenance of through trunk roads (e.g., the trunk road from Madras to Chittoor), but for trade purposes it is essential that railway feeder roads should also be sufficiently numerous and in good order. Though at present motor transport is not cheaper than country carts, it is anyhow quicker and much safer than the slow country carts. Hence the development of feeder roads will place a cheaper system of vans and lorries at the disposal of the ryots.

Railway transport is also important for the internal and external trade of India. The principal railways of the Presidency are the Madras and the Southern Mahratta Railway and the South Indian Railway. The M. & S. M. Railway cuts through the deltas of the Pennar, Kistna and Godavari with branches to the ports of Masulipatam, Cocanada and Vizagapatam. Another line of this Railway that goes north-west crosses the cotton areas of Bellary and Kurnool. In the South, the South Indian Railway connects Chingleput, the groundnut areas of South Arcot, Tanjore, Trichinopoly and Madura with Ceylon. North Arcot and Chittoor Districts, Malabar and the groundnut and cotton areas of Salem and Coimbatore are tapped by this Railway. Many big stations on these railways have covered goods sheds and the carts can go close to the goods sheds. Very often in small stations either due to the small sheds or lack of sheds, vegetables, baskets of fruits, cotton and rice are heaped up on the open platform. The marketing of fruits is very much limited by the facilities which the railways offer. With greater facilities, fruits like mangoes and plantains and betel leaves can be carried to long distances. Moreover, the diversity of gauges not only in Madras but in the whole of India causes delay as the goods are to be transhipped often. Regarding the question of freight it is said that in India railway trans-

port costs 50% more on wheat than in the U.S.A. While it costs Rs. 7.5 to move one ton of wheat for 200 miles in U.S.A., on the M.S.M. and the G.I.P. Railways, the charge amounts to Rs. 10.3 and Rs. 11 respectively. Of course the export of rice to Ceylon gets some concession in the South Indian Railway, but those concessions are not very helpful. The Royal Commission on Agriculture rightly remarked that "freight rates are ordinarily the heaviest single addition to the prime cost of produce exported by rail from the area of production. In a competitive market, they amount to a heavy charge on the gross price ultimately paid for the produce, and to the cultivator who is selling his commodity at a distance, they amount to a substantial portion of the price he realises at the place of sale." Hence in the organization of marketing the prime necessity is a suitable, cheap freight rate for the various commodities.

The canals in Madras are also useful means of transport. The Buckingham canal connects Madras with the Kistna delta and runs 60 miles south of Madras. Firewood, paddy, shells and salt are some of the important commodities brought to Madras by this canal. The Northern Districts of Godavari and Kistna are connected with a net-work of canals and they are navigable though not all the year round. Vast amount of paddy is taken to the markets and ports and rail centres. For instance the canal Yeluru, a branch of Godavari touches many villages and market centres in the District of Godavari. There is great scope for the development of waterways in this Presidency.

Finance.—The method of financing the villager to market his crops has already been described. The middlemen, the merchants, the moneylenders and the indigenous bankers undertake to finance the ryot with the result that the ryot's margin of profits has dwindled very much. The defects of this system of financing have been described in the previous pages. The system of advances on crops with high rates of interest and the condition imposed upon the ryot to sell his crops at a disadvantage to his creditor are the most serious defects in marketing. The petty village dealers obtain credit mostly from town merchants, shroffs and commission agents who charge high rates of interest. The resources of the middlemen are supplemented by short-term credit from Joint stock banks which discount hundis and bills. The indigenous bankers and moneylenders lend money either by discounting hundis or on pronotes on personal credit. A detailed description of transaction in hundis has already been given in the chapter on Indigenous Banking. The

hundis of indigenous bankers can be discounted with the Imperial Bank of India, which also grants loans on produce in places where they have branches. A great deal of the produce loans is in the hands of the Imperial Bank of India while the indigenous bankers do not lend much in this direction since the rate of interest charged by the Imperial Bank is much lower than that of the indigenous bankers. While the Imperial Bank grants loans and cash credits to merchants two signatures and pronotes are required.

The financing of the movement of paddy when it reaches the merchant is done by the Imperial Bank which grants short-term loans on rice and paddy in godowns and the indigenous bankers who facilitate remittances by the grant of hundis and lend on personal credit. There is a large coastwise seaborne trade in paddy. The millowners or the small merchants, after shipping the goods, draw hundis or bills of exchange on the consignee, which after being accepted are discounted by local banks. The shipping documents are sent to the banks at the port of consignment for delivery to the consignee on payment. Trade in paddy is not organized or controlled because of the various strains of grains, lack of storage facilities and defective weights and measures. "There is only a medley of merchants, big and little, each trading on his own personal credit, borrowing from Marwaris, Multanese and moneylenders on pronotes or on produce or jewels or from the big exporting firms and generally at rates which constitute a heavy tax on trade. A curious further practice is followed by some of the Marwari bankers who lend to small merchants and collect not only interest but also commission at three to six pies per bag on all goods purchased by that merchant with the loans so taken."*

In the marketing of groundnut, as we have already described, the grower takes his produce in his own cart and sells it at the mandi for cash or to the agent of the merchant who tours the village as soon as the harvest is over. In moving the produce to the ports the merchants sometimes despatch it to ports direct to exporters and payments are made to them by hundis on sale to exporters or they may obtain accommodation from the local bankers who will lend on personal credit covered by a hundi which will be sent to the port for collection on the sale of

* The Madras Banking Enquiry Committee Report, p. 122.

the goods. The exporting agents may themselves buy direct from the ryots, and they obtain funds from the branches of the Imperial Bank of India by arrangement on the security of their own funds or in some cases by sending the money direct by insured post. When the goods are purchased they are put in godowns and funds are raised to make further purchases. The exporting firms on shipping the commodity get advances from foreign exchange banks on the strength of the shipping documents, or if their credit is sound on clean bills. The large exporting firms like Ralli Brothers and the Japanese firms by their own organisation try to eliminate the middlemen by supplying short-term finance for the movement of produce. The system of unfixed contract under which temporary accommodation is provided to the seller has been described in the foregoing pages.

In the marketing of cotton the crop passes from the ryot to the merchant who advances him for domestic and agricultural expenses; or the ryot takes it to the market and sells it to the merchant through the commission agent who may hold the produce in the godown giving an advance to the ryot. If the merchant despatches the cotton to Bombay or other market, payment is made by the drawing of hundi which is collected by the local banker's agent at the place of the sale. When the cotton is not immediately exported a produce loan may be taken on it from the Imperial Bank or other banks.

Co-operative Marketing.—Co-operative marketing of produce is of late becoming very popular in the Madras Presidency though it has not developed much. In the West, Co-operative marketing has been a considerable success and the line of improvement can be adopted in India to prevent the various evils of marketing.

Foreign Countries.—It has been found that in the United States of America about 23% of the total farm-produce is marketed through co-operative organizations. The system of co-operative marketing is of three distinct classes—(1) the Federated Association with groups of marketing organisations as members (2) the Centralised Association having no intermediate link between it and the growers; and (3) the Federated Exchange which is a selling agency formed by local associations. The Federated type is well illustrated by the California Fruit Growers' Exchange formed in the year 1905. The growers first organis-

ed into local associations which were grouped into District Exchanges and they in their turn formed the Central Exchange. As Mears and Tobriner say "the grower picks, the local association packs, the District Exchange bills and the Central Exchange sells the fruit."* As opposed to this is the centralised association of the California Prune and Apricot Growers' Association in which the growers have direct contact with the Association. The members enter into a contract with the associations to supply them with a stipulated quantity of produce and this ensures the associations a definite supply for Co-operative marketing. There are two types of contracts—(1) the Agency contract by which the Co-operative Association is merely an agent of the grower who is the owner of the produce; (2) the more popular type is the sale and resale contract by which the title of goods passes to the association which guarantees a good share to the grower. In the marketing of grain there are the co-operative grain elevators at different centres where cash payment is made to growers on delivery instead of after sale. In the matter of marketing of cotton the Oklahoma Cotton Growers' Association started in 1920 had no share capital but only enlisted members for the securing of their produce under a seven years' contract. A separate association organised on a share basis arranged for the warehousing of the member's cotton. The State Associations have been grouped into the American Cotton Growers' Exchange.

The co-operative banks have been financed by the state. When the Agricultural Credits Act was passed in 1923, the federal intermediate credit banks were authorised to advance to co-operative marketing associations on the security of warehouse receipts, bills of lading etc., up to 75% of the value of the produce. Under the Agricultural Marketing Act of 1929 the Federal Farm Board was created to cater to the needs of co-operative associations. With the establishment of the Farm Credit Administration, the Federal Farm Board was dissolved and the former was entrusted with the task of providing credit for Cooperative Associations. Under the Farm Credit Administration a central bank and twelve regional banks have been set up to advance loans to co-operative associations both long-term and short-term. In addition to providing finance the Farm Credit Administration placed financial and business experts at the disposal of co-operative associations to help them in the

*Principles and Practice of Co-operative Marketing—Mears and Tobriner.

management and organization problems and to develop sound financial policies. The first Report of the Farm Credit Administration rightly remarks "This work is closely related to the credit functions of the banks, since such service makes borrowing co-operatives a better credit risk, and assistance to new and non-borrowing associations is a factor in determining the ultimate success of the whole co-operative movement." This reveals the determination of the Government to see that co-operative associations of farmers are successful. In India where the farmer has not developed to the same extent as his brother in America the need is greater for government control and supervision of co-operative associations. Marketing requires great business tact and it is absolutely necessary for the co-operative sale societies to be guided by experts either from the Reserve Bank or from the Government. If the Reserve Bank takes up this task it can easily develop a first class agricultural paper.

Though Australia prefers the technique of state control to that of cooperation in the marketing of her produce especially wool, wheat, butter, meat and fruits, there are some lessons to be learnt from the co-operative marketing in West Australia. Co-operatively organised primary producers in Australia are represented in London by the Overseas Farmers' Cooperative Federations Ltd., the shareholders of which Association are the Australian Producers' Wholesale Co-operative Federation and the Federated Farmers Co-operative Association of South Africa. The Federation allocates shipments to selected centres and makes delivery to selected salesmen at the points of sale. "The Federation has no monopoly of cooperative business, but it claims to handle about 60 per cent of the wheat, 30 per cent of the butter, 60 per cent of the dried fruits and 20 per cent of the green fruits coming from co-operative organizations in Australia. Its turnover from all sources was £ 85.6 millions for the fifteen years 1920-35 and the year ending March 1935, £ 6.6 millions."*

Except in West Australia, in other states it is difficult to distinguish state marketing schemes from co-operative organizations. The majority of butter in Australia is produced co-operatively and there are regional organizations for the marketing of eggs, fruit and other products. The Westralian Farmers Ltd., started in 1914 deals in the supply of agricul-

*C. R. Fay—Co-operation at Home and Abroad.

tural requirements and the marketing of wool, livestock, skins, fruits and other produce. The other co-operative bodies in the State are off-shoots of it. By the supply of warehousing facilities and direct sale system by the Westralian Farmers the voluntary Wheat Pool was kept in tact. It is interesting to note that these two associations along with certain other states have a co-operative selling agency on the London Market and with South Australia Farmers' Co-operative Union, own the shipping organisation "Australian Outturns Ltd." Again the Westralian farmers market the dairy produce in conjunction with the co-operative dairy farmers who control the manufacture. This co-operative association with the Producers' Markets Co-operative Ltd. handle fruits, vegetables, poultry and eggs. In India when sale societies develop on a large scale the Australian method of federation can be usefully adopted.

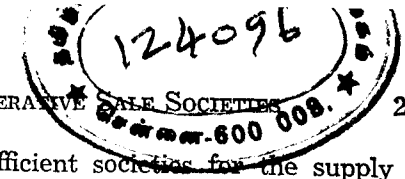
In Canada the Wheat Pool was started as a war measure and the Wheat Board was given a complete monopoly of the marketable crop with sole powers to arrange for its distribution. The Pool was very successful and hence even after the discontinuance of compulsion there was a demand for its continuance on voluntary lines. Vast acres of land were secured by it under contract and elevators and other handling facilities were being acquired by it gradually. It has representatives in all leading countries and 75% of the wheat handled is exported direct. A contract for five years is entered into with the members and the members receive a part price on delivery and the balance on sale of the produce. The Pool sold through a Central Selling Agency styled Canadian Co-operative Wheat Producers and paid to all its members the average price received for the commodity, grade for grade over the marketing period. The greatest change which pooling brought to the farmer was that it relieved him of the difficult task of deciding when to sell. The Pool sold the grain as evenly as possible throughout the year. When standardisation of products is attained in India it is desirable to adopt the method of the Canadian Wheat Pool in marketing important crops.

In the matter of co-operative Marketing in Europe, pride of place should be given to Denmark which, after reorganising her agricultural economy, on a co-operative basis, has built up her marketing organisation with state aid. The strength of Denmark lies in the marketing of dairy produce and the economically allied bacon and eggs, such organi-

sation being buttressed with very efficient societies for the supply of agricultural requirements, with consumers' stores, insurance, stock-breeding, milk control and testing societies. The high degree of specialization,—societies confining themselves to a single function and handling a single commodity,—characterises the Danish movement. Primary societies are grouped into the Commodity Associations which are in turn federated into the Central Co-operative Council. The Commodity Associations have no share capital but are on the principle of unlimited liability and are able to borrow capital from the banks on their unlimited liability. The stability of the associations is assured by the members entering into a contract for marketing their entire produce through the associations for a long period. The produce is pooled before marketing. In 1937 there were in Denmark "1362 Co-operative dairies and sixty-two Co-operative bacon factories receiving over four-fifths of the milk and bacon pigs of Denmark."

In Germany primary credit banks in villages undertake the selling of grain while a group of banks in the country pool their commodities and start grain elevators. Specialised regional marketing societies on commercial lines are developing. The state has stepped in and has made the societies handling different commodities like wheat, dairy produce, fruit and vegetables, part of a state-marketing scheme. The dairy societies have been rapidly increasing and, under the State milk regulation scheme, are becoming a form of marketing monopoly for milk and its products.

India,—Bombay and the Punjab.—In India not much headway is made in the sphere of co-operative marketing. Before discussing in detail the sale societies in Madras, the Co-operative marketing of Cotton in Bombay and the commission shops of Punjab may be briefly described here. The cotton sale society at Hubli, started as a seed store to push on the cultivation of improved varieties, was assisted by the Department of Agriculture in the proper gradation of raw cotton. As the grower takes the cotton to the society, sample is taken and it is weighed and receipt issued. Superior quality cotton is sold by auction, and inferior quality by private transaction. The society grants an advance not exceeding 60% on the cotton deposited in its godown. The Gadai Sale Society started in 1917 has a number of rural credit societies affiliated to it, and these societies grant short-term loans to their members on con-



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dition of marketing their crop through the sale society which in its turn gives an advance on the security of the produce deposited in its godown upto 75% of the market value. Sales during the season are by fortnightly auction. Prices are received telegraphically and on the radio. The Dharwar Central Bank has given a cash-credit accommodation to the society upto a lakh and quarter of rupees and the rate of interest charged is 6¼%. Besides in the off-season the society uses its share capital in advancing selected seeds to cultivators. Grading is done by the officers of the agricultural Department. The society also deals in groundnuts, wheat, javari etc. The Sonsek Sale Society of Surat has its cotton ginned at the Purushottam Co-operative Ginning Factory started by it, at a lower cost with improved quality of ginning. Cotton is graded and the cotton of different members belonging to the same quality is pooled and sold as a lot to buyers. A sales union has been started in Surat with the Cotton Sale Societies and ginning factories as members. The Union organises new sale societies, arranges for better type of seeds, looks after the grading of cotton and above all markets the pooled cotton. The Union by collective bargaining is able to get good prices and sell to the best advantage.

The objective of the co-operative commission shops in the Punjab is the purchase and sale on commission of the seed and other requirements of members, sale on commission of agricultural produce of the members and the promotion of the use of improved varieties of seeds. Membership is drawn both from individuals and co-operative societies. Advance is given to members up to 75% of the estimated market value on delivery of the produce and the balance shall be cleared on the sale of the produce. It is incumbent on the members to deliver for sale the whole of the produce to the shop but the loyalty of the members is at a discount. Though the shop has enabled the cultivator to market his produce instead of depending on the village dealers, it does not put itself in touch with exporters but sells only to local merchants. The reason is the absence of pooling or grading of the produce of the members.

Loan and Sale Societies of Madras

The loan and sale societies are of comparatively recent growth in the Madras Presidency and considering their recent origin some of the societies—e.g. cotton and paddy—have developed satisfactorily. While

there were only thirty-eight loan and sale societies in 1927, the number has increased to 118 in 1938. The number of individual members is 17,276 and societies 1660 and their paid-up share capital amounted to Rs. 1.84 lakhs. Between 1937-38 the loans advanced to members are Rs. 62.12 lakhs as against 26.16 lakhs in 1936-37. But the loan and sale societies have confined themselves mostly to the issue of loans on the pledge of produce and have not developed marketing seriously. In the opinion of the district officers of the Co-operative Department the factors which retard the progress of co-operative marketing are as follows:—

- “(1) Lack of quick transport facilities and good rural communications to ensure the movement of crops from villages to marketing centres ;
- (2) the influence of middlemen (merchants) with the ryots on account of the advances they make to them and the consequent obligation of the producers to dispose of their produce to them ;
- (3) want of adequate storage facilities in certain areas and the difficulties felt by sale societies in owning granaries or godowns ;
- (4) lack of facilities for or difficulties involved in pooling, grading etc., of the different varieties of crops raised (e.g. paddy) ;
- (5) lack of propaganda and the consequent ignorance of the ryots about the existence of sale societies, their objects and usefulness to them, their methods of work etc. ;
- (6) a general lack of business talent in the personnel of the committees of management of sale societies or lack of businessmen even among the paid employees of the sale societies (whom, by the way, the societies cannot afford to employ in many cases owing to the inadequacy of their financial resources) ;
- (7) want of loyalty on the part of the members of sale societies to sell their produce to the society for one reason or another (in some cases, it is stated, due to the absence of any

marked difference between the village and market prices, or doubtful increase in prices of such produce as paddy, by holding it up) ;

- (8) location of headquarters of sale societies in places other than marketing centres ;
- (9) dependence of sale societies practically on the local markets owing to the smallness of their transactions, which does not permit of their undertaking real marketing ;
- (10) difficulties felt by the societies in competing with long-established exporting firms which have practically a monopoly of the market particularly in commercial produce ;
- (11) lack of direct contact between sale societies and big consuming centres and of knowledge of internal and external markets."

Hence, the working of some of the representative sale societies may be examined.

The Tiruppur Cotton Sale Society.—Possibly the biggest society in the Presidency, it is situated in the important cotton market of the Coimbatore District. The area of operations is the Coimbatore District. Originally started as an agriculturists' supply society it gradually undertook the introduction of Cambodia 2 cotton and the marketing of members' produce. Its members are both individuals and village credit societies numbering nearly 70. Crop loans are supplied by the village societies on condition that the borrowing ryots bring to the sale societies a stipulated amount of cotton. Recently an auxiliary organization of the sale society called the Cotton Growers' Society which gives short-term loans to individual members of the village credit societies are usually on the basis of unlimited liability. The Sale Society does not undertake to gin cotton and sell it as lint. It has a manager experienced in cotton trade and an agricultural officer to look after the agricultural side of its business. The total quantity of produce handled by the society in 1934 is as follows* :—

*T. Adinarayana Chetty—Co-operative Marketing of Agricultural Produce in South India.

Karunganni cotton	..	164 pothis
Cambodia	..	1502 „
Lint from non-seed farm	..	175 candies 248 lbs.
Karunganni	..	96 candies 96 lbs.
and seed farm	..	483 candies 334 lbs.
Ragi	..	484 bags
Coriander	..	237 bags
Chillies	..	201 bags

The society is allowed a cash-credit by the Coimbatore Central Bank but it has few occasions to use it as it is able to attract deposits at a lower rate of interest. The society agreed to sell 'kappas' only to three dealers and such a limitation of market obviously tempts buyers to combine. It also employs a broker as an intermediary in selling and thus defeats the object of eliminating middlemen.

The society has undertaken to work the seed multiplication scheme for the expansion of Cambodia 2 cotton area in this Presidency and thus to facilitate pooling and grading. The scheme was worked from 1932 to 1937. Six agricultural demonstrators and a business manager were in charge of the scheme and the cost was met partly by Government and partly by the Indian Central Cotton Committee. Each society through which the seed was supplied to the members should be a member of the sale society and loans for cultivation expenses were given by the societies. Every member was expected to take his produce to the sale society. The ryots were expected to bring their kapas at the ginning factory selected by the society and they might either sell the kapas to the dealers selected by the society or gin the produce and stock the lint in the godown and sell the seeds to the society. The dealers who purchased the seed from kappas should get them ginned at the society's factory and sell the seeds to the society if necessary. The Indian Central Cotton Committee ceased to finance the scheme in 1937 and the society is carrying on the work with the help of the Agricultural Department, the Co-operative Department and District Urban Bank. This scheme is expected to introduce an improved strain of seeds in the area and this will help in grading and pooling the produce for marketing.

Koilpatti Co-operative Society Ltd.

Started in 1926 the area of operations of this society is Koilpatti, Tinnevely, Sankarankoil and Srivaikuntam Taluks of Tinnevely District and Sattur, Srivilliputhur, Aruppukkottai Taluks of Ramnad. The number of members according to the Departmental inspection report of January 1939 was 39 societies and 638 individuals, including 39 ryot merchants. The authorized share capital is Rs. 1 lakh made up of shares of Rs. 5 each. The aggregate indebtedness of the society shall not exceed 70% of the value of the produce pledged to, and in the custody of, the society or the amount of loan given to members on the security of such produce, whichever is less. The Central Bank allowed a cash-credit of Rs. 1,25,000 to the society under open loan system.

The Society undertakes to advance loans up to 70% on the pledge of the produce and sells them at a favourable market. The rate of interest on loans to members is $5\frac{1}{2}\%$ while the rate charged by the Central Bank is 4%. The commission charged on sale of produce is 12 annas per cent and the insurance charges on sales are at 0-1-3 per month for every Rs. 100. The society owns a godown built with the help of a loan from Government and from the free grant from the District Economic Council and another on a leasehold land in a local ginning factory. No rent is charged for storing in godowns if the produce is sold within four months. If the period of storage is exceeded, the rate charged is 0-0-6 per borah for the first four months and 0-1-0 for the remaining period. Out of the seven directors of the society five are merchants and the Department is keeping a careful watch on the sales of the society to detect any misusing of powers by the directors. This feature of domination of merchants in the management of the society detracts from the otherwise efficient working of the society.

Controlled credit scheme has been introduced in ten societies within the area of operations of the Sales Society. A sum of Rs. 10,525 has been disbursed as loans to members. The area brought under the scheme is 1040 acres and 1050 'pothis' of cotton kappas to an estimated value of Rs. 15,750 is expected to be handled.

The produce transactions between 1-4-38 and 51-1-39 are as follows:—

	Kappas		Lint		Cotton seeds		Value Rs.
	Pothi	Thulam	Candies	lbs.	Pothi	Thulam	
Opening balance on							
1-4-38 ..	37	6	358	9	—	—	70980
Received during the							
period ..	3774	5	970	558	787	8	151352
Released and sold							
during the period ..	3811	11	1037	17	787	8	173360
Balance as on..							
31-3-39 ..	nil		291	550		nil	49589

It is estimated that the society is responsible for marketing of about 25 per cent of cotton arriving at the local market. A statement of the progress of the society from 1933-34 is given in Table 56, Appendix II.

Tapeswaram Crop Loan and Sale Society:—The Society was started in March 1935 and operates in 34 villages within an area of ten miles from Tapeswaram. The objects of the Society are (1) to advance loans to members on the security of their produce (2) to arrange sale of produce of the members to the best advantage (3) to rent or own godown to facilitate the grant of loans to members and sale of their produce and (4) to act as agent of those members which are affiliated societies in the matter of receiving for safe custody in the godowns or elsewhere the produce pledged to such societies by their individual members. The members of the Society consist of ten societies and 204 individuals.

The commodities dealt in by the society are paddy, jaggery and pulses (green gram, black gram and red gram, horse gram, gingeli etc.). Loans are given up to 75% of the market value of paddy, 60% of that of jaggery and 60% of that of pulses. The following statement will give the nature of business done:—

	Paddy	Jaggery
Nature of produce pledged as on 30-6-38		
Quantity	.. 33454 bags	1276 baskets
Value	.. Rs. 1,25,534	Rs. 4,016
Amount of loans	.. Rs. 88,674	Rs. 2,280
Loans disbursed from 1-7-1938 to 8-1-1939		
Quantity	.. 10173 bags	—
Value	.. Rs. 40,589	—
Amount disbursed	.. Rs. 29,616	—
Loans realised from 1-7-1938 to 8-1-1939		
Quantity	.. 31240 bags	1276 baskets
Value	.. Rs. 1,19,429	Rs. 4,012
Amount	.. Rs. 82,669	Rs. 2,280
Outstanding on 8-1-1939		
Quantity	.. 12387 bags	—
Value	.. Rs. 46,694	—
Amount	.. Rs. 35,527	—

The society issued loans on the pledge of produce stocked in the godowns either owned by the members or rented, under the lock and seal of the society. The pledged stock is duly insured against fire, the policies standing in the name of the society. The society has recently constructed a jaggery godown with state aid.

The loanable fund of the society consists of loans from the Ramachandrapuram Central Bank for Rs. 29,722 and cash-credit from the same Central Bank up to Rs. 10,000. The rate of interest charged on borrowing is 4%. The amount disbursed to members between 1-7-1938 and 8-1-1939 is Rs. 29,616 at 5½% rate of interest.

The affairs of the society are managed by a Board of Directors. An executive committee of three members including the President and the

Secretary generally scrutinise all the loan applications and decide to advance loans. Marketing of produce commenced from October 1938 and from 12-10-1938 to 8-1-1939 the position was as follows:—

Name of the Produce	Quantity	Sale price on the date of sale	Value as on date of loan
		Rs.	Rs.
Paddy	.. 1664 bags	7195-8-0	66077
Jaggery	.. 839 baskets	3539-9-0	25177

The marketing of the members' produce is not done to any appreciable extent when compared with the quantity of produce released in the same period. Even the produce so far marketed by the society seems to have been done to the local merchants. Effort should be made in this direction on a more satisfactory basis.

The Nellore Paddy Sale Society.—This is the first attempt made for marketing of paddy in the Province. The area of operations comprises the whole district and the objects are to advance loans to members on security of produce, to sell members' paddy to the best advantage, to act as agents of member societies and to prevent adulteration. The membership of the society includes 21 agricultural societies and 89 individuals. The sale society has made a special arrangement with a private rice mill to get its paddy milled at a lower cost than the market rate. The Society pays the ryot an advance up-to 60% of the market value of paddy deposited and supervises its milling and arranges for the sale, making a commission of 12 annas per putti. Though the business is well managed the turnover of business is not great because of the absence of loyalty on the part of co-operative stores which are lured away by the slightly lower prices offered by the merchants. The merchant is able to undersell the society by adulterating the famous Nellore 'Molaguru-kulu' rice with inferior varieties. If some arrangement can be made with the Triplicane co-operative stores and other stores for taking the produce of the society, it can have a stall at Madras with the reduced freight offered by the M. & S. M. Ry. Propaganda work may be undertaken by supervisors if a subsidy is given by the Provincial Bank.

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Godowns in groups of villages may be recognised and loans issued as in the case of Chidambaram Paddy Sales Society.

Chidambaram Paddy Sales Society.—Though the Society has not developed the marketing side of paddy there are certain admirable features of this society which can be profitably followed by other sale societies dealing in paddy or other grains.

Started in 1936 the area of operation of the Society is the Chidambaram Taluk and the number of members is 717. Unlike most other co-operative sale societies in the Province dealing in paddy which were unsuccessful owing to heavy incidental charges for the borrowers to cart the paddy to the society, to provide gunny bags and to pay godown charges, etc., besides the interest charged on loans, the Chidambaram Sale Society has minimised cartage and dispensed with other charges by establishing branches in various big villages to which the borrowing ryot has to deliver the paddy. Paddy is stored at these centres of the society in mud granaries called 'ser' so common in village parts. Each centre is placed in charge of a responsible Committee of three to five members residing in the area and they execute an indemnity bond to the society in respect of security. A common watch is provided at a cheap cost. The success of the scheme can be gauged when we consider the progress of the sale society. The number of centres in 1937 was 21 and the amount lent out to members was Rs. 34,893 of which Rs. 33,049 was recovered leaving a balance of Rs. 1,849 on unsold paddy. In 1938 and 1939 the numbers of centres increased to 32 and 39 respectively and the amount lent out and recovered were 74,048 and 73,106 and 1,57,746 and 1,55,365 respectively. The loans taken from the Central Bank for the three years are Rs. 33,987, Rs. 52,535 and Rs. 1,27,996 and the rate of interest charged during the three years went down gradually from 5% in 1937 to 4½% and 4% in 1938 and 3% in 1939. The rate of interest charged to members correspondingly went down from 6% in 1937 to 5% in 1939. The gain to the members by pledging the produce to the society and selling it at favourable time is remarkable. In 1939 when paddy was pledged to the society the price was Rs. 1-12-0 per 'kalam'. When the loan was discharged by the members the price of paddy ranged from Rs. 1-15-6 to Rs. 2-3-6. The value of paddy estimated on the day of the pledge in 1939 was Rs. 1,89,580 and its value when the loan was disposed of was Rs. 2,31,811. The aggregate profit to members is Rs. 42,231.

The net gain of the agriculturist after deducting the interest on loan, insurance charges etc., is Rs. 20,264.

The one chief defect of the society is that it does not combine marketing with credit to a great extent. The paddy pledged in the various centres is sold by the ryots themselves at what they consider favourable time for selling. The society does very little in finding the buyer to the ryot. The reason is the lack of storage facilities in the town and the difficulty in handling a heavy commodity like paddy. Moreover, the society has not attempted to supply to members improved grains of a few variety and this stands in the way of pooling and grading the produce. Anyhow attempts are being made to sell the whole produce of the members through the society. The sale of the produce will be from the town where warehousing facilities will be offered to members who will have to bring their own produce from the various centres in the carts of the Sale Society. Gunny bags and other requisites will be supplied by the society. Sealed tenders will be issued and the produce will be sold by auction to the highest bidder on the particular date. If the price does not suit the ryot he may hold the produce in the godown for a longer time. The godown rent and the commission on sale will be very moderate. If this scheme is put into operation it is expected that most of the members will sell through the society. Already funds are being collected for erection of a godown.

It is necessary that the society should launch on a system of controlled credit described under the chapter on co-operation. Already loans are being issued by the society on standing crops.

The success of the society is mainly due to the educated and enlightened office-bearers of the society. Dr. B. V. Narayanaswamy Naidu, Professor of Economics, Annamalai University, is the President of the Society and the Secretary and some of the members of the Board of Directors are either lawyers or engineers or enlightened mirasdars. Much depends on the directorate for the proper working of a society.

Suggestions.

The various defects in the working of the sale societies have been analysed. Some of the suggestions for the proper working of sale societies may be given here. The area of operations of the sale societies varies with the kind of produce dealt in and with reference to local

conditions. The area of a paddy sale society is generally a taluk with branches in the firkas while in the case of groundnut and cotton the area extends to a whole district or the tract in which the crop is grown. The Reserve Bank of India envisaged the formation of large central sale societies with village societies taking up marketing. In the fixing of the area of operations for a sale society three things must be taken into consideration—scope for business, availability of persons to manage the societies and the nearness to big markets.

At present a margin of $1\frac{1}{2}\%$ between borrowing and lending rates of societies is allowed. The Madras Provincial Bank lends at 3% to Central Banks for financing sale societies if the latter lend to the borrowers at 5%. The establishment of sale societies has brought down the rate charged by commercial banks which have opened branches in rural areas and lend out at low rates of interest. In view of the competition from commercial banks, sale societies should try to make money available to the ryots more quickly and provide for storage and transport of produce. The difference between borrowing and lending rates should be only sufficient to cover expenses. To bring down interest charges on borrowings the share capital of the society should be increased.

The by-laws of sale societies provide for the grant of loans up to 70 to 75% of the market value in the case of food crops and 60% in the case of commercial crops placed in the custody of societies. The factors that should be guarded against are that loans should not be given for very large amounts, as that would benefit only a few. A limit of Rs. 5,000 may be fixed but the factors that should determine the loan should be the liability to damage and deterioration of quality in storage, charges for godowns, insurance against fire etc., and market risk of fluctuation in prices.

The Problem of Storage.

The construction of godowns by sale societies is not encouraging in spite of the grant and subvention by Government. Twenty-five per cent of the estimated cost of the godowns is given as a free grant and the balance is given as a loan at $3\frac{1}{2}\%$ repayable in thirty years. In deserving cases Government have also been giving similar grants to village societies for the construction of godowns. On the 1st January 1939 out of 128 sale societies in the Presidency only twelve societies constructed godowns the cost of which was a little over $1\frac{1}{2}$ lakhs. Thirty-three

societies have had proposals on hand for construction of godowns at an estimated cost of Rs. 2.75 lakhs. The reasons for this poor progress are that a good many sale societies are not financially strong and cannot afford to meet three-fourths of the cost of construction of the godowns. In such cases government should be prepared to bear 50% of the cost. Difficulties are felt in the purchase or acquisition of sites and in such case Government land (Poramboke) should be freely assigned to sale societies.

In this connection it will be useful to discuss briefly storage facilities. There is a general inadequacy of storage facilities in some of the districts like East Godavari, West Godavari, Guntur, Nellore, Bellary, Anantapur, South Kanara, Malabar etc. The argument against the construction of godowns is that the small ryot has not enough grain to take to the godowns and has not the capacity to meet the cartage and godown charges. It must be noted that the co-operative sale societies can easily accommodate these small ryots in their godowns or the village credit societies can afford them such facilities, when cheap and small godowns are constructed in the villages. Facilities for warehouses in shandies, where a large number of small ryots meet weekly to sell their produce, may be provided. The rich cultivator who has a large quantity of produce can easily afford to store his produce in the godowns in the towns and profit out of the facilities of such storage. The question of grading and mixing of stock will not arise in the case of warehouses used by these rich ryots.

The Central Banking Enquiry Committee (Report) recommended that the question of providing warehouses by private agencies, licensing them and affording financial assistance to them should be taken up by the Provincial Governments. The United States of America in 1916 enacted the United States Warehouse Act with the object of encouraging the proper storage of agricultural produce and sound business practice and of making the warehouse receipts negotiable, which is a boon to cultivators. Public warehouses which stored agricultural produce were licensed under this Act. The warehouseman should furnish a bond of an amount fixed by the Government. The warehouse must have facilities for correct weighment and measurement and should allow itself to be inspected by Government. On depositing his produce in the warehouse, the cultivator will receive a receipt giving details of the weight and grade of the commodity and the receipt could be used as collateral

security against loans issued by banks. The Act was extended to many commodities and the storage of produce increased very swiftly. Mr. B. F. Madon's Bill published by the Central Banking Enquiry Committee (Report) is intended to introduce such independent warehouses based upon American model in this country. It is essential that at the outset every help should be given by Government e.g., guaranteeing a moderate dividend to start such independent warehouses, and facilities should be provided by Government for the inspection of such godowns which wish to be licensed. The warehouse receipts will become first class credit instruments which could be rediscounted by the Reserve Bank.

It has been suggested that the Reserve Bank through its Agricultural Credit Department and in collaboration with the Imperial Council of Agricultural Research undertake the starting of suitable warehouses. The cost of such warehouses, it is pointed out, should be met out of the profits accruing to the Issue Department of the Reserve Bank of India.

Another suggestion is that railway companies should construct warehouses in important railway stations and place them at the disposal of the sale societies and the public for a nominal rent in the initial stages. Railway receipts should be made negotiable and the receipts should give full description of the goods. Municipalities or local boards may consider the advisability of constructing godowns and of giving them on rent. Closely connected with warehousing facilities are pooling and grading, the importance of which has been discussed in the foregoing pages.

Returning to the suggestions for improving Co-operative Sale Societies, it must be the aim of sale societies to get better prices for the producers by conducting the business on a large scale. A central Co-operative union staffed by businessmen should be started for the smaller societies for the disposal of produce in the distant markets. There should be a by-law in the society compelling every member to sell all his marketable produce through the society. Such a provision for compulsion is made in the Bombay societies. The success of a sale society depends upon expert business management. The persons employed should be thoroughly honest and possess previous business experience. A sale society should as far as possible pool members' produce on the basis of standard grades under the Agricultural Produce Grading and Marketing Act.

State Aid.

In addition to Cooperative marketing, other methods of promoting marketing in foreign countries are by state aid. Among the methods by which the state helps the agriculturist are "tariff protection, financial aid to Joint Stock Companies for effecting the purchase and sale of the produce, valorisation, centralisation and regulation of exports, supporting a high inland price by the state monopoly of sale and international agreement and bilateral and multilateral treaties." India having no political and economic freedom is not in a position to adopt these methods. Some of the measures passed by the Government in this country to assist marketing are the Agricultural Produce Act of 1937 by which grade standards are being drawn up according to specifications. Grading of tobacco, rice, oranges, mangoes etc. is being gradually undertaken. Regulated markets are being introduced under the Madras Commercial Crops Markets Act of 1933 and the Act is being extended to such agricultural commodities as cotton, groundnut and tobacco. A Provincial Marketing Society has been started to co-ordinate the work and stimulate marketing activities and to ensure the direction of supplies of primary sale societies. A Central Marketing Board has been organised and a large staff of marketing officers appointed both in the centre and the provinces. Investigation is carried on by these boards under which the principal commodities like cereals, oilseeds, tobacco, fibres, fruits and animal husbandry products are at present being examined. Demonstration of any improvements suggested as the result of marketing studies is undertaken. Assistance is given to the establishment of grades and standards. These measures by Government do not compare favourably with the measures in foreign countries.

Conclusion.

Above all The Reserve Bank of India Act should be so amended as to make provision for the supply of intermediate credit to agriculture through its Agricultural Credit Department for periods varying from nine months to three years. The Federal Intermediate Credit system of the United States of America makes loans for periods not less than six months and not more than three years. In 1925 the Commonwealth Bank of Australia Act was so amended as to create a Rural Credit Department and to authorise the Bank to make advances through this Department to co-operative associations and other prescribed bodies.

upon the security of primary produce, or land for periods not exceeding a year. The object was to introduce orderly marketing and to enable the cultivators to withhold their produce to improve the process of distribution throughout the year in the interests both of producers and consumers. The salient features of the American system and the Australian system should be adopted in the advance to agriculture through the Agricultural Credit Department.

Mere financing of agricultural marketing alone will not bring about an increased price for the producer. The many defects in marketing should be first rectified and attempts should be made to eliminate the middlemen by the formation of co-operative sale societies, by the construction of godowns and by encouraging pooling of crops. Such improvement will create a first class agricultural paper which will be easily rediscounted by the Reserve Bank.

CHAPTER 11.

LONG-TERM CREDIT-LAND MORTGAGE BANKS.

Need for Long-Term Credit Institution.

In a former chapter, we have referred to the need for long-term credit to agriculture in addition to short-term and intermediate credit. The long-term loans are to be repaid in small instalments out of the profits of agriculture without crippling the resources for current agricultural operations. The greatest difficulty confronting the agriculturist is the lack of financial accommodation for fairly long periods. The loans given by village moneylenders are not for sufficiently long periods, nor can those loans be returned in instalments. The only system of institutional credit is the Co-operative Land Mortgage Bank.

Land Mortgage Banks are of three types-the Co-operative Land Mortgage Bank, which is an association of borrowers, the Commercial Land Mortgage Bank which is a purely commercial concern working for profits and declaring dividends and the quasi co-operative land mortgage bank which partakes in varying proportions the ideals of co-operative and commercial institutions.

Examples of Mortgage Credit in some Foreign Countries.

The *Landschaften* of Germany are long-term mutual credit banks started in the 18th century. They are co-operative banks the members of which are land-lords. The security on which the bonds were sold was on the collective mortgage of land furnished and on the unlimited liability. The new *landschaften* are ordinary mortgage banks possessing no share capital but are merely syndicates of land-owning borrowers acting as intermediaries in providing capital on the basis of the guarantee which is granted after proper testing of the credit of the borrower and the value of the security. The commission charged for this service is very low. The banks are confined to definite places and thus knowledge of men and land values throughout the district was possible. Loan is granted to a limited percentage of the value of the land. Debentures based on lands are sold through these agencies. The period of loans

repayable in instalments is usually about 53 years. The banks are empowered to take possession of the property and sell the lands without resort to judicial proceedings. The Central Landschaften created in 1893 buys the debentures of provincial associations and issues its own debentures. At present the postal service and some of the social funds invest their funds in mortgage bonds. In addition to the landschaften, mortgage companies are organised and they grant real estate loans.

Even as long as 1800 the United States of America realised the importance of agriculture but until 1863 no serious attempt was made to establish banks to finance agriculture. It is not necessary here to discuss the chaotic condition of banking before 1916. Various commissions in 1908, 1910 and 1913 interested themselves in long term credit facilities to farmers and out of this interest was born the Federal Farm Loan Act of 1916. Two distinct systems of long term credit were provided by this Act. To satisfy the individualists a system of federal joint stock land banks was created. A group of ten persons with a capital of not less than \$ 250,000 could obtain a federal charter to operate a land bank subject to the supervision of the Federal Farm Loan Board. It was allowed to sell bonds not exceeding fifteen times its capital and surplus. The bonds however were not guaranteed by Government. They could lend on first mortgage upto \$ 50,000 to any one borrower, but not more than 50% of the value of land and 20% of the value of permanent improvements. Instalments were spread over a period of not less than five and not more than forty years. The rate to borrowers should not exceed 1% more than that paid on the bank's last issue of bonds, and in any case not more than 6%. All these banks suffered acutely from the severe decline in farm income and land values and their bonds were quoted very low in the market. Some of them were granted loans by the Reconstruction Finance Corporation. The Federal Farm Mortgage Act of 1933 prohibited these banks from making new loans and made provision for their liquidation. This left the field open for the federal land banks of the co-operative type.

The Act of 1916 created a Federal Farm Loan Board which divided the United States into twelve districts in each of which was established a federal land bank. The initial capital was provided by the Treasury in addition to public subscriptions. This initial capital was to be replaced by the subscriptions of the national farm loan associations. These associations consist of ten or more farmers who desire to borrow on the

security of their farms and are prepared to give a first mortgage to the association and subscribe to the stock to the extent of 5% of the loan. The association sells the mortgage to the federal land bank of its district and subscribes for stock in the land bank to the extent of 5% of all loans obtained. The borrower can obtain a loan from \$100 to \$50,000 but the loan must not exceed 50% of the value of his land and 20% of the value of the improvements. The twelve land banks are jointly liable for the bonds issued and are limited to twenty times its capital and surplus. Thus the land banks hold 1/3 of the mortgage debt outstanding. By the Act of 1933 the Farm Loan Board was abolished and a department of Farm Credit Administration assumed responsibility. Under the Emergency Farm Mortgage Act, a farmer can obtain loans direct from the land banks if he is not served by a farm loan association. It granted interest reduction for the federal farm loan borrowers for a period of five years. It allowed federal land bank borrowers to postpone principal payments on farm mortgage loans and allowed the land banks to grant extensions to really worthy borrowers and reamortize such extensions. It enabled farm mortgage loans to be made for as much as 75% of the value of farm improvements and personal property mortgaged. Provision was made for loans to be granted on second mortgage to the extent of 75% of the value of property offered as security. It was enacted that these funds should be made by the Land Bank Commissioner from the funds placed at his disposal by the Reconstruction Finance Corporation. Thus by Roosevelt's recovery programme agricultural borrowers have been given rates which compare very favourably with those in industry.

The Credit Foncier of France started in 1852 acts as an apex bank for the mortgage banks. It is supervised by Government and enjoys special legal privileges. Government treasuries are used for the receipt of its dues, deposits and surplus funds. It pays reduced stamp duty on deeds of registration, transfer of debentures etc. The debentures can be floated up to fifty times the nominal capital. By a system of 'purges' the bank can bring to light any hidden claims on lands and free the title of the real estate from claims of third parties. The debentures of the Bank are repayable to bearer with no fixed time of maturity but repayable with bonuses. For the recovery of loans no ordinary legal procedure is necessary, for its loans are the first charge on land. It can make any system of loaning for agricultural improvement. At present the provision of long-term credit is made through the regional

banks which guarantee the loan and on the mortgage of land the loan is made repayable within 25 years. In addition to lending to societies private individuals can receive loans directly.

The savings and state banks of Australia afford to primary producers financial assistance by means of long-term loans out of the investment of small savings. The Commonwealth Savings Bank of Australia acquired from the state institutions which it absorbed more than £2 million worth of mortgages. It assists the Rural Bank of New South Wales by financing its operations. The State Savings Bank of Victoria is controlled by Commissioners appointed by the Governor in Council. The reserves which the Bank built out of its capital are its capital. Repayment of the deposits with the bank are guaranteed by Government. While the Savings Bank Department engages in the ordinary business of a savings bank, the Credit Foncier Department which issues debentures and stock, of which 60% is held by the Savings Bank Department, lends money repayable in regular instalments over a long period. Farm loans which are for a maximum period of 31½ years are limited to £4,000 (Rs. 42,000 nearly) and cannot exceed 75% of the valuation. Conditions vary for loans on homes and for persons with a certain income. In South Australia the State Bank is controlled by five members appointed by the Governor in Council. It was first established as a mortgage bank upon the credit foncier principle but its activities have been extended. A general banking department was also added. The advances in this department are upon over-draft. A borrower can arrange for a mortgage, which covers a fixed loan from the Credit Foncier Department and an overdraft from the Banking Department. In New South Wales, the Rural Bank was established in 1933 to take over the Rural Bank Department and the Advances for Homes Department carried on by the Government Savings Bank of New South Wales up to 1931. It is controlled by three commissioners appointed by the Governor in Council. The inscribed stock and debentures of the Rural Bank were issued to the Commonwealth Savings Bank. The proportion of longterm loans is about 40% of the total loans and advances. The State Advances Corporation in Queensland, the Agricultural Bank of Tasmania and the Agricultural Bank of Western Australia, which are analogous to the State banks in other states, are State Government Departments. Besides these State Banks for long-term credit, the pastoral finance companies provide both short-term and long-term capital for

primary producers, mainly to wool-growers. The greater proportion of their funds is provided by share or debenture capital and reserves. The life insurance societies or companies invest their large funds in mortgages. A recent development is the combination of a mortgage loan with life policy. The trustee companies invest the trust funds usually in Government securities and mortgages. Thus in Australia the longterm credit needs of agriculture are supplied by different institutions but the state banks are the most important of them all.

History of Land Mortgage Banking

As early as 1863 the Land Mortgage Bank of India limited based on the type of the credit foncier of France was registered in London and started its operations in the three principal cities of Calcutta, Bombay and Madras. The length of loans was only 7 years and the rate of interest was 7 or 8%. For twenty years the bank was working and at the end of that period died away. Sir Frederick Nicholson, however held in 1895 that land banks were not needed by the ryots of the Madras Presidency. But the Committee on co-operation in 1915 realised the need for the establishment of land mortgage credit associations on the model of those in the European countries. The Finance member of the Government of India in 1919 supported the formation of such banks but was against Government taking up the establishment of such banks on a large scale.

In the same year Mr. Himingway, then Registrar of Co-operative Societies in Madras, proposed a scheme for the raising of long-term money by the issue of debentures based on the mortgages of unencumbered immoveable property from the members of rural societies through the same co-operative machinery which dealt with short-term lending. The Provincial Bank is to issue debentures on the security of mortgages transferred by primary societies. As this involved the mixing up of long-term and short-term business a modified scheme suggesting the issue of debentures by central banks and dividing the business of central banks and primary societies into two separate departments was suggested. This scheme was however not tried. Mr. J. Gray the then Registrar drew up a scheme for the starting of the primary land mortgage banks and Government sanctioned this scheme in 1925. The principal features of these banks were "(i) limited liability, (ii) restriction of the area of operations to compact groups of villages within six or

seven miles from their headquarters so as to ensure on the part of the directors intimate knowledge of the borrowers and the lands offered as security, (iii) limitation of the borrowing power of the banks to 8 or 10 times their paid-up capital, (iv) floatation of 20 year debentures carrying a rate of interest not exceeding 7% and a fixed charge on the concerned mortgages, (v) fixation of the maximum loan for an individual borrower at Rs. 1,000 with a further restriction that it should not exceed 50% of the market value of the mortgage land, (vi) interest on loans not exceeding 9%, (vii) fixation of the period of loan at 17 years, the margin of three years being provided for against possible defaults of borrowers and (viii) appointment of the Registrar as the Trustee for these banks to safeguard the interests of the debenture-holders." In order to encourage the public to invest in these debentures, Government undertook to purchase an amount equal to that issued to the public subject to a maximum of Rs. 50,000 from any one bank and Rs. 2½ lakhs for the whole Presidency. The formation of these banks was confined to wet districts. A few banks were started in 1925 and soon they began to spread. The Townsend Committee on co-operation and the Royal Commission on Agriculture were of opinion that for the proper working of the bank, a Central Land Mortgage Bank should be started to float debentures. The various kinds of debentures floated by the primary banks militated against the whole scheme. At a certain stage competition among purchasers would raise the rate of interest, the security offered would be low and the whole system of debentures would be brought into disrepute by the mismanagement of a single institution. The main recommendations of the Townsend Committee for the formation of a Central Land Mortgage Bank were "(1) constitution of the bank on a limited liability basis with primary land mortgage banks and individuals as share-holders, the latter for attracting capital and providing business talent and organising capacity to run the bank efficiently, (2) fixation of the dividend on the share capital at a rate not exceeding 7½%, (3) fixation of borrowing power, not exceeding 25 times the paid-up capital, (4) appointment of a trustee to ensure that the bank fulfilled its obligations to its debenture-holders, (5) raising of working capital by the issue of debentures only, which should have a floating charge on all the assets of the bank, (6) guarantee of interest by Government on the debentures issued by the bank in the first five years, (7) debentures to be made trustee securities, (8) fixation of the maximum period of debentures and of the maximum period of loans at

25 or 30 years, (9) loans to be confined only to land mortgage banks, (10) lending rate not to exceed 7%, (11) provision to be made for the disposal of collections either by the creation of a sinking fund or by the bank purchasing the debentures at par in the open market or by periodical redemption of debentures by drawing lots after due notice, and (12) representation of debenture-holders on the Board of Management." Based on the recommendations of the Townsend Committee, the Madras Central Land Mortgage Bank was formed in 1929 with primary banks, and individuals as members. The bank was given the right to issue interest-bearing debentures on the security of the mortgages executed by borrowers in primary land mortgage banks and assigned to it by them. From the beginning Government gave many facilities to the Central Land Mortgage Bank by guaranteeing debentures and by placing the service of certain officers at its disposal to inspect primary mortgage banks. The Co-operative Land Mortgage Banks Act of 1934 has given powers to the bank for the speedy recovery of arrears and certain legal powers for the sale of mortgaged land without the intervention of the Court and some privileges in paying to the creditors of mortgagors direct.

Organisation

The membership in a primary bank is confined to persons who own agricultural land in the area of operations of the bank. These banks are based on share capital and limited liability. The present jurisdiction of a bank is generally a revenue taluk. The executive management of the affairs of the bank vests in a board of directors consisting generally of seven elected members and members nominated to the board. The nominated members have the same rights and privileges as an elected member. The villages in the jurisdiction of the bank are divided into convenient groups and a member residing in each group is elected to the Board. In all new banks the first set of directors is nominated by the Registrar. The ultimate authority in all matters relating to the administration of the bank will be the general body of the members who will meet at least once a year.

The administration of the Central Mortgage Bank vests in a Board and is subject to the control of, and delegation from, the Board in an executive committee. The Board consists of fifteen members of whom the Registrar of Co-operative Societies shall, ex-officio, be one. Six members of the Board will be elected from among the individual mem-

bers and six from among the representatives of the share-holding mortgage banks, and two will be nominated by the Registrar with the approval of the Government. The anomaly in the Registrar nominating two members lies in the fact that the Registrar himself is a member of the Board. The Board will settle all details in regard to the period of repayment of loans granted by them, the instalment for repayment, the rate of interest, the penal interest to be charged on overdue instalments etc., and will be in charge of the general administration of the bank. The entire administration of the bank will be vested in an executive committee consisting of six members under the control of the Board. The executive committee will deal with all applications for loans received from mortgage banks, obtain from the Registrar full information regarding such banks and see that loans are granted to them with due care and caution. The ultimate authority in all matters will rest in the general body consisting of ex-officio and nominated members of the Board, individual members and delegates representing mortgage banks.

Loans of the primary Banks

The funds of the bank are composed of share capital, loans from the Central Mortgage Bank and entrance and other fees. The share capital of each bank is fixed and is composed of A class shares of Rs. 10 each and B class shares of Re. 1 each. The holders of the latter have no power to vote. The liability of the members of the bank is to be limited to the share capital subscribed by them. The total borrowings of the banks should not exceed twenty-times the paid-up share capital and reserve fund.

Loans are given generally for the following purposes: redemption of mortgages, discharge of other prior debts, improvements of land and of methods of cultivation; and purchase of lands in special cases on condition that such purchase will enable the ryot to round off his holding and work it more economically. In practice all loans advanced are for the discharge of the old debts of the borrowers. The maximum amount of loan that a member can take is Rs. 10,000. Subject to this maximum a member is eligible for a loan not exceeding 20 times his paid-up share capital. Again the loan given to a member on the mortgage of his land should not exceed three-fourths of the estimated net income from that land during the period of the loan. Every loan is to be secured by a mortgage of lands and should not exceed 50% of the estimated market

value of such lands. The mortgage is to be without possession. The land mortgaged to the bank as security should have no prior encumbrances except the mortgages to be redeemed by the loan given by the bank. The period for which the loan is granted should not exceed 20 years. The loan may be repaid either in equated instalments or in annual instalments together with interest due on the amounts outstanding from time to time. A loan granted should be applied for the purpose for which it was given. Misapplication will at once entail the closing of the loan account. The board of directors may call in a loan at any time they like irrespective of the term for which the loan was granted if they think that in the interest of the bank the loan should be closed.

Procedure in regard to sanction of the loans.

Normally applications have to pass through various stages before the loans are granted. A loan application in the prescribed form is first referred to the directors for investigation as to title, valuation, repaying capacity etc. The applicant should send with his application all available documents of title; two members of the Board of Directors will inspect the lands proposed to be mortgaged and will submit an accurate estimate of the market value of the lands and the income from the lands and the repaying capacity of the borrower. In actual practice, in many banks, the directors do not inspect the lands. The preliminary investigation conducted by the supervisor is usually taken by the directors as correct. When a loan application appears to be a fit case, an encumbrance certificate for 23 years in respect of the lands to be mortgaged is obtained from the office of the Sub Registrar. There is a legal adviser to each bank and the papers are then sent to him for legal opinion regarding the applicant's rights to the property offered as security. The Hindu law is so complicated that it is necessary that before granting the loan the rights to property are properly defined. When the legal adviser returns the record to the bank with his remark a final report is prepared by the bank for submission to the Sub Deputy Registrar who is in charge of the bank. The Sub Deputy Registrar after scrutiny of the papers and inspection of the lands will submit a report. In fact the Sub Deputy Registrar's report is an important one, for the Directors usually assent to the report of the Sub Deputy Registrar. The report of the Sub Deputy Registrar should contain the following information:—

1. The purpose for which the loan is required. If the loan is for the purpose of discharging prior debts, he should satisfy himself that the amount of the loan applied for is sufficient to discharge the prior mortgage debt. The prior mortgagee should be questioned and the exact amount due ascertained from him. In the case for liquidating other prior debts, very careful scrutiny is to be made as to the purposes for which the debts were contracted and evidence should be secured. In the case of improvements of land, he must fully satisfy himself that they are desirable.

2. The adequacy of the security offered for the loan.

3. The applicant's title to the lands offered for mortgage.

4. The encumbrances on them—The encumbrance certificates for 23 years should be carefully examined to find out whether all prior mortgages (except the one to be redeemed by the loan) had been discharged. All the available discharged documents should be filed with the application and in cases where they are lost or are not available, the written declaration of the prior mortgagee that his mortgage was duly discharged should be obtained. It is generally in this enquiry that much of the delay is caused.

5. Verification of village accounts relating to them.

6. The basis on which he has estimated the value of, and income from, lands:—As the report in respect of loans is to be based on this report, this has to be very carefully prepared. The market value of that land should be determined after ascertaining the price of that land or a portion of it in recent years, the rise or fall in the value of the land in the neighbourhood since the date of the purchase of the land, the price paid for adjoining lands which are of a similar type and quality and the points of difference between those lands and the lands to be offered as security (i.e., wells or trees in the lands which appreciated the value of the lands sold), the net annual income from the land, the opinion of the local credit society or of disinterested respectable persons of the locality and the sale value of similarly situated property in Court or revenue auction. As the amount of the loan should be only three-fourths of the total net income of the land mortgaged during the period of the loan, it should be carefully assessed. An examination of the supply of irrigation source will be very useful in this case.

7. The repaying capacity of the applicant—As the annual net income from land will go to cover the annual instalments, the borrower's income from his other lands or from other sources must be ascertained for the purpose of judging his capacity to meet the ordinary needs of his family and special needs of an inevitable nature such as marriages. The principle is that no loan should be granted unless the produce from the applicant's lands is sufficient to cover both his living expenses and the instalments due to the bank.

8. Whether the officer himself inspected the land; and

9. Whether the loan may be sanctioned.

The application for loans with all the records is placed before the Board of Management and the consolidated loan application is sent to the Central Land Mortgage Bank through the Deputy Registrar for Land Mortgage Bank. The Executive Committee of the Central Land Mortgage Bank then examines the application. The legal section of the Bank scrutinises the loan applications very carefully. The decision is conveyed to the primary banks and in cases where loans are sanctioned, registered mortgage deeds are to be obtained in the prescribed form. These deeds will be assigned to the Central Land Mortgage Bank. In addition an assignment deed stating that the primary bank will adopt the same system of repayment as adopted by the borrowers concerned in the mortgages transferred to it should be sent to the Central Land Mortgage Bank. The latter will then place the funds for disbursement to applicants at the disposal of the primary banks. The money will not be paid to the borrowers direct but will be paid to the creditors of the borrowers.

Sub Deputy Registrar's enquiry into an application.

An enquiry made by the officer in a loan application No. 15/1937-1938 of the Chidambaram Co-operative Land Mortgage Bank will be interesting to recount here.* The applicant is Sellagovinda Pillai of Pinnaloor. His family consists of his wife and minor baby, brother and his wife and his mother. He is a cultivating agriculturist. The applicant is not a member of any unlimited co-operative society but is a member of the Chidambaram Paddy Sales Society from which he has

*From the file in the Central Land Mortgage Bank.

borrowed Rs. 250. A loan from the land mortgage bank would be conducive to the economic benefit of the applicant.

Purpose

The statement of indebtedness has been filed. Originally he applied for loan of Rs. 950 to discharge the debts on four promissory notes shown in the statement. He has since discharged one note and he now requests the sanction of Rs. 650 only. The total amount of loan payable to all creditors on date comes to Rs. 722-7-6. The debt to the Paddy Sales Society will be cleared by the sale of produce pledged. The extra debt over Rs. 650, the amount for which a loan is applied for, will be cleared from his private resources. The loan from the land mortgage bank will bind his minor son.

Hypotheca.

The applicant offers as security 5.09 acres wet land situated in Pinnaloor. The assessment paid is Rs. 46-6-0. On inspection, the fields were proximal to irrigation channels. All lands were irrigated by second class sources of irrigation and hence acceptable as hypotheca.

Title

Three pieces of lands are ancestral to the applicant—one is self-acquired and the other pieces were got by the applicant's mother through a settlement deed. At the time of the death of the father of the applicant, the sons were minors and the "pattas" stood in the name of the mother. She has joined in the execution of the document to the Bank. The encumbrance certificates are filed. There are no subsisting encumbrances. The title is safe.

Value

The applicant has not valued the hypotheca. The surveying director has valued the hypotheca at Rs. 1645. Sub Deputy Registrar's valuation is Rs. 1,374.

Income.

(a) *From Hypotheca:* The applicant cultivates his own land and, in view of the fact he and his brother work on the land, the cultivation

cost works out to a minimum. The average yield per acre is 30 'kalams' paddy.

	Rs.	A.	P.
The total yield for 5.09 acres is 152.7 kalams and the price at Rs. 1½ per kalam is	..	229	0 0
Cultivation cost		46	0 0
		183	0 0
Kist and Cess	..	40	6 0
		142	10 0
Net income	..	56	11 0
Loan instalments			
		85	15 0
Surplus	..		

(b) *From other sources:* Besides the hypotheca, the applicant owns 3.67 acres wet land in Pinnaloor, .65 acres wet in Thrinjikotti and 2.32 acres dry in Pinnaloor. He is reported to have purchased in a court sale 2.65 acres wet in Pinnaloor which is not taken into consideration. Nor is his wife's property in Sreemushnam taken into consideration. The wet lands are as good as those hypothecated. The average yield is 25 kalams an acre.

	Rs.	A.	P.
Income from wet lands	..	162	0 0
Cultivation cost	..	42	0 0
Kist and Cess	..	29	0 0
		91	0 0
Balance	..	20	0 0
Income from dry lands	..		
		111	0 0
Total	..		

Family Expenses

After investigation it has been found that the applicant's family, who are actual workers in the field, may require about Rs. 165 a year.

Repaying Capacity—

Income			Expenditure		
	Rs.	A. P.		Rs.	A. P.
From hypotheca ..	142	10 0	Family expenses ..	165	0 0
Other sources ..	111	0 0	Instalment of the loan	56	11 0
Total ..	253	10 0	Total ..	221	11 0

There is a surplus of Rs. 31-15-0 and hence there is no doubt that the applicant will have a sound repaying capacity.

The officer gives a summary of his findings in the end and recommends the loan under the following conditions—"The extra debt of Rs. 72-7-6 should be discharged by the applicant from his private resources; (2) the indenture to the Bank should be executed by the applicant, his brother and mother, the applicant executing it for himself and as guardian for his minor son."

The above account by the officer of the Department gives an idea of how thorough and systematic is the investigation on a loan application.

Financing Bank—(a) Issue of Debentures.

As already described, the primary land mortgage banks originally issued the debentures but in 1929 to centralise the debenture issue the Central Land Mortgage Bank was started. With the previous sanction of the Trustee who is the Registrar of Co-operative Societies, the Board of Management may issue debentures of one or more denominations for a period not exceeding twenty-five years on the security of mortgages and other assets transferred by the mortgage banks to the bank. The interest on the debentures payable half-yearly should not exceed 6½%. At present the interest on the debentures is 3% per annum. The total borrowings of the bank by the issue of debentures should not exceed 25 times the paid-up share capital plus the reserve fund. Until the beginning of the Co-operative year 1937-38 debentures were issued on condition that for the first ten years they would not be redeemable except to the extent of principal collections. This clause was deleted as the investors felt that it was inconvenient and the issue of debentures

was made irredeemable for the first ten years. Accordingly debentures of the 24th series were irredeemable for the first ten years. The debentures issued during the year 1937-38 were for Rs. 25,87,000 at 3% rate of interest.* At the end of the year, the debentures outstanding amounted in all to Rs. 1,31,85,700. It was usual to issue debentures in dribblets throughout the year when the money was required. At the instance of the Reserve Bank of India the Government wanted this system to be changed to that of issue of debentures once or twice a year at convenient times when monetary conditions were favourable. The Government agreed to give temporary accommodation to the Bank up to the limit of requirements every month till the debentures were floated. This temporary accommodation was to be charged at the bank rate then prevailing. Owing to financial difficulties, the Government discontinued temporary advance and permitted the bank again to issue debentures in dribblets.

The principal of and the interest on the debentures are guaranteed to a maximum amount fixed by the local Government from time to time. This is to induce confidence in the public about the security of the debentures. The Government have recently raised the guarantee of principal and interest from Rs. 125 lakhs to Rs. 250 lakhs.

Before the introduction of the rule that for the first ten years, debentures would be irredeemable, lots were drawn every six months to the extent of principal collections made and debentures retired. Debenture holders who did not want to be redeemed were allowed to have their debentures drawn and converted into the new 3% debentures irredeemable for the first ten years.

(b) Sinking Fund and Debenture Redemption Fund.

In their order No. 839 dated 29-3-38, Government directed that the maximum amount of guarantee under Section 6 of the Land Mortgage Banks Act would be enhanced only if the Bank would agree to the following conditions.

"(1) The bank should constitute a sinking fund whereto "the bank will throughout the period of currency of each series of debentures issued make an annual equated contribution to a debenture redemption

*Vide Table 60 for a full statement of the issue of debentures.

fund, at such a rate that the contribution accumulating at compound interest at the same rate of interest as that borne by debentures will provide sufficient funds to pay off the debentures at maturity."

(2) The bank should retain "a margin of at least $2\frac{1}{2}\%$ between the rate of interest charged to the ultimate borrower and the rate of interest paid on debentures."

(3) The "rate of dividend paid by the Central Land Mortgage Bank to its share-holders should not hereafter exceed 1% above the rate of interest at which it issues debentures."

As the Central Land Mortgage Bank has issued 20 years' debentures which are non-redeemable for the first ten years, there has arisen the necessity of creating a Fund to invest a certain sum towards the redemption of debentures after the ten years. The Bank itself proposed to put the collection in what they called a Debenture Redemption Fund. By the end of the period the total collections into this fund will be equal to principal and hence there will be no difficulty in redeeming debentures. According to this method during the period of the loan, the money accumulated in the Debenture Redemption Fund should earn interest at the rate at which debentures were floated. If the actual yield is less than this amount there will be a loss to the Bank but if it is greater, the Bank will earn a profit. The Government wanted the Bank to start a Sinking Fund as was recommended by the Reserve Bank. The Bank has to make an annual equated contribution to the Fund so that the accumulated amount might yield at the end of the period of twenty years the principal amount. As the Reserve Bank assumes, if the rate of interest on investment is $2\frac{1}{2}\%$, a sum of Rs. 39·147 should be invested every year for twelve years to accumulate Rs. 1,000 by the end of the period. This sum of Rs. 39·147 can be got only through the annual payments of the borrowers. On a principal of Rs. 1,000 the Central Land Mortgage Bank received from the primary banks an annual equated instalment of Rs. 73·583 for twenty years assuming 4% rate of interest to primary banks. After paying Rs. 30 interest on debentures for Rs. 1,000, the balance will be Rs. 43·583. If Rs. 39·147 was invested in the sinking fund the balance for working the Bank will be Rs. 4·436 for every loan of Rs. 1,000 granted. As this will not be enough for the working expenses of the Bank, an increase in the rate of interest by $\frac{1}{2}\%$ is recommended by the Government. Thus the ultimate borrower has to pay $5\frac{1}{2}\%$. Moreover investment of sinking fund in

Government and such other securities will yield some loss by way of interest, as the Land Mortgage Bank will have to pay a higher rate of interest on debentures. There are some other objections to the Sinking Fund. The collections towards the principal by the bank are not the same every year. They are less in the earlier years and more in the later years. According to the sinking fund scheme more should be invested in the sinking fund than what is collected in some years. This will result in the raising of the rate of interest to borrowers. What with the highly conservative valuation of the mortgaged lands, the lending only up to 50% of the value of the land and the careful scrutiny of the repaying capacity, the working of the Bank has been satisfactory. Thus it disproves the necessity for a complicated system of a sinking fund. Again the share capital and the reserve funds created would cover any defaults by the primary banks. Hence the sinking fund scheme adopted by a public body or Government should not be imposed on the Central Land Mortgage Bank. On these grounds the Central Land Mortgage Bank wanted the simple debenture redemption fund by which the collections from primary banks will be invested in Government securities and debentures will be purchased when available in the open market. But even in the Debenture Redemption Fund, the Land Mortgage Bank will have to bear the loss on account of interest on investment. So either in the case of sinking fund or the Debt Redemption Fund, a special reserve fund, as suggested by K. D. Kothari, for meeting the loss on account of interest on investment of funds should be created. Mr. Kothari gives an example of the working of the scheme. The Central Land Mortgage Bank issues 23 years' debentures of Rs. 10 lakhs at 3%. Assuming that the principal recovery for the first year comes to Rs. 50,000 and assuming that the rate of interest obtainable on investment of funds in Government securities is $2\frac{1}{2}\%$, the Bank will have to pay as interest every year Rs. 1,500 to debenture-holders in respect of this Rs. 50,000 and will be receiving Rs. 1,250 as interest every year for the remaining 19 years, at the end of which period the debentures are to mature. The amount of Rs. 250 which is short every year should be made good out of an investment of fund. "The present value of Rs. 250 on the basis of 19 years at $2\frac{1}{2}\%$ would amount to Rs. 3,750, and this amount should be set aside by the Bank out of the annual profits. Assuming that recovery for principal amount comes to Rs. 50,000 next year also and Rs. 50,000 of that year together with Rs. 50,000 of the

*Madras Journal of Co-operation April, 1938 pp. 605-606.

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previous year are invested at $2\frac{1}{2}\%$, bringing thereby, annual loss of Rs. 500 for the remaining 18 years, the credit balance of the Special Reserve Account should come to Rs. 7,250 which is equal to present value of Rs. 500 for 18 years at $2\frac{1}{2}\%$. If the sum of Rs. 3,750 of the previous year had been also invested at $2\frac{1}{2}\%$, it would have earned interest of Rs. 93-12-0 and so the Bank would be required to make a further provision of Rs. 3,406-4-0 out of the profits of the second year in order to bring the balance of special reserve account to Rs. 7,250. The Bank has to make provision to this fund out of its annual profits for the first 11 years, and that too, on diminishing scale, and after the first 11 years, the Bank can draw against this fund in order to recoup the losses which would arise for the reason that the loan balances earning remunerative rate of interest would become gradually smaller, while investment out of debenture fund giving comparatively smaller yield will become larger year by year." This scheme of the Special Reserve Fund will be very useful to stave off any losses incurred by the Central Land Mortgage Bank and so can be profitably adopted.

In accordance with the Government order, however arrangements have been made to constitute a Sinking Fund for the 24th and 25th series of debentures issued with the condition that they are irredeemable for the first ten years. The rate of interest to ultimate borrowers for loans for which mortgages were executed after 8-4-1938 has been raised to $5\frac{1}{2}\%$ per cent and 6%. The following table will give an idea in the variation of the rate of interest.

Rate of interest (%)			Periods during which the interests were in force
On debentures	On loans to primary bank	On loans to individual borrowers	
6, $6\frac{1}{2}$, $6\frac{3}{4}$	6, 7, $7\frac{1}{2}$	8, $8\frac{1}{2}$	16th September 1930 to 24th May 1933
$5\frac{1}{2}$	7	8	24th May 1933 to 29th August 1933
5	7	8	29th August 1933 to 4th December 1933
5	6	7	4th December 1933 to 1st June 1934
4	$5\frac{1}{2}$	$6\frac{1}{2}$	1st June 1934 to 1st May 1935
$3\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$	1st May 1935 to 19th October 1935
$3\frac{1}{2}$	5	6	19th October 1935 to 13th March 1936
$3\frac{1}{2}$	$4\frac{1}{2}$, 5	$5\frac{1}{2}$, 6	13th March 1936 to 26th August 1936
$3\frac{1}{2}$	4	5	26th August 1936 to 8th April 1938
3	$4\frac{1}{2}$	$5\frac{1}{2}$	8th April 1938 to 13th February 1939
3	5	6	13th February 1939 onwards.

Loans by Central Mortgage Bank.—From its inception the Bank advanced to primary land mortgage banks 8921 loans amounting to Rs. 164.43 lakhs up to 30th June, 1938.

Number of applications and loans according to value 1929 to 1938*.

Value of loan	No. of loans	Amount	Percentage of the numbers of loans to the total number of loans	Percentage of the amount to the total amount of loans
Below 500	766	2.63	8.60	1.6
Rs. 500 to 1000	2048	13.51	23.00	8.2
" 1000 to 2000	2807	35.45	31.5	21.3
" 2000 to 3000	1369	30.21	15.32	18.4
" 3000 to 4000	754	24.06	8.44	14.7
" 4000 to 5000	425	17.84	4.80	10.9
" 5000 to 6000	651	32.58	7.30	19.8
" 6000 to 7000	30	1.85	0.30	1.1
" 7000 to 8000	20	1.44	0.20	0.9
" 8000 to 9000	11	0.90	0.10	0.5
" 9000 to 10000	4	0.36	0.04	0.2
" 10000	36	3.60	0.40	2.2
Total	8921	164.43	100.00	100.0

It may be seen from the above table that loans between Rs. 1,000 to Rs. 2,000 and between Rs. 2,000 to 3,000 constitute the major portion of the loaning operations of the Bank. During the year 1937-38 applications for Rs. 49,62,755 were received by the Bank. Applications for Rs. 1,65,440 were rejected for various reasons and loans for Rs. 44,73,153 were sanctioned. The loan application received and dealt with during the year fell far short of the expectations because transactions were held up for four months on account of the Agriculturists' Relief Bill being discussed in the Legislature. The total amount of loans outstanding on 30-6-38 was Rs. 1,40,79,858-9-2. The value of debentures outstanding at

*From the annual reports of the Central Land Mortgage Bank.

the end of the year was Rs. 1,31,85,700. To cover the amount in excess debentures were issued. According to the valuation of Co-operative Sub-registrars the value of properties mortgaged and assigned to this bank was Rs. 4,29,12,559. The total extent of the property mortgaged is 1,07,041 acres 88 cents.

Progress of the Primary Banks and the Central Land Mortgage Bank.

A study of the growth of the Central Bank for the past three years will be interesting:¹—

	1935-36	1936-37	1937-38
1. Number of members—			
Individuals ..	198	457	478
Primary Land Mortgage Banks ..	79	90	94
2. Share capital ..	3,58,900	5,34,300	6,69,300
3. Borrowings—			
Debentures ..	79,44,400	111,84,400	131,85,700
Deposits ..	4,80,112	2,50,754	6,37,277
Overdraft ..	..	5,115	4,21,296
Loans ..	..	..	1,00,000
4. Loans Outstanding against Primary land mortgage banks ..	78,66,231	1,12,85,968	1,40,79,859
5. Investments in Government Promissory Notes etc.	6,35,045	6,92,426	11,68,638
6. Overdues from Members ..	..	..	..
7. Net profits ..	46,765	64,422	92,962
8. Reserve fund after audit ..	1,12,376	1,28,821	1,58,858
9. Other reserves—	10,000	20,000	40,000
Bad debt reserve ..	..	..	20,000
Depreciation reserve ..	..	20,000	20,000
10. Dividend declared ..	6	5	4

The bank shows a remarkable progress in all respects. There are no overdues at all from members.

1. Evidence of the Committee on Co-operation, Madras 1939.

Table 61, Appendix II gives an idea of the number of primary land mortgage banks in each district in the Province, the number of taluks and villages covered by them etc., and the general expansion. Land mortgage banks are started in all the districts and it is only in some taluks of the districts that there are no facilities for long-term credit. In the South Arcot where there are eight taluks, there are six land mortgage banks and only one taluk is not served by land mortgage banks. There is yet scope in the Presidency for starting new banks. Moreover some portions of the districts may be included in the jurisdiction of the existing banks. In the dry districts there are good portions uncovered by land mortgage banks. The question of starting banks in the dry areas bristles with difficulties. The benefit of the banks has not spread in zamin and inam areas which are not surveyed and settled. On the 1st of April, 1939, there were 109 land mortgage banks in the Presidency and Government permitted the formation of nine more banks during 1939-40.

The banks in all advanced only Rs. 176 lakhs to the ryot. When considering the volume of indebtedness of the agriculturists the loans from mortgage banks have not touched the fringe of the problem. There is yet scope for great expansion of these banks. It is necessary that an effective co-ordination of work should be brought about between Debt Conciliation Boards which are engaged in the scaling down of debts and the land mortgage banks.

The help to big landholders and Zamindars is another problem. Primary land mortgage banks can take such work only with great diffidence. In fact they are incapable of taking this work. These big landholders may require large sums for a long term for developing their estates or for redeeming debts. Only specialised institutions can come to their rescue.

Some suggestions and conclusion.

The usual complaint in the villages is the inordinate delay in the sanction of loans by land mortgage banks. In the survey conducted in the Cuddalore Taluk, a ryot of the Kottuvancheri village said that it took nearly two and a half years for the sanction of a loan. Inspecting some loan applications in the Central Land Mortgage Bank, the writer found some delays in the sanction of loans. For example loan application No. 15-1937-38 of the Chidambaram Land Mortgage Bank was received

by the Bank on 4-3-1938, referred to supervisor for preliminary enquiry on 1-4-1938, encumbrance certificate was applied for in the Sub Registrar's office on 13-7-1938 and was received on 18-7-1938, was referred to the supervisor or group director for final scrutiny on 19-1-1939, the final report from the supervisor or group directors was received on 20-1-1939, was referred to the legal adviser on 23-12-1938 and the report was received on 23-1-1939, was referred to the Sub Deputy Registrar for scrutiny on 27-3-1939 and the remarks were received on 28-3-1939, the meeting sanctioning a loan of Rs. 650 was held on 30-4-1939 and the Central Land Mortgage Bank received all the records on 24-5-1939. After scrutiny by the Central Land Mortgage Bank, the money would have been sent to the primary bank at least after a period of two months. Disbursement of loans would have taken at least another month more. Thus for the sanction of a loan, it has taken nearly 1½ years. But an interview with the supervisor has revealed that usually the time taken from the date of application to that of disbursement of the loan is between four months to one year. According to the Central Land Mortgage Bank, the average time taken by a land mortgage bank from the date of the loan application to the date of sanction is about six months. It takes about one month for a sanctioned loan to be disbursed to the primary bank. In the actual disbursement to the creditors, another month is taken, though, in some cases, owing to the dilatory tactics of an unwilling creditor or for other reasons, a larger time is taken. The reason for the delay, to some extent, is the necessity for a loan application to pass through several stages in a primary bank. The main cause of delay is the difficulty in getting the necessary documents of title. The practice of preserving title deeds, such as sale deeds or discharged mortgage bonds is not common. At least in future, legislation should be introduced for the preservation of such deeds. A great part of the delay is caused in getting the vouchers for discharge of the mortgages which are disclosed on a scrutiny of the encumbrance certificate. After the passing of the Agriculturists' Relief Act, creditors still refuse to take the scaled-down amount under the Act. So many borrowers take time to find money to pay the extra debt due by them. There is no legislative provision enabling the mortgage banks to deposit the amount of debts due in civil courts on behalf of their members. For this reason alone, in some cases loans sanctioned and remitted to the primary banks were returned to the Central Land Mortgage Bank. It is very essential that this serious gap in legislation should be filled very soon.

Some measures were taken by the Government to minimise the delay. A recent amendment to the Madras Co-operative Land Mortgage Banks Act is the enforcement of attendance of any person for giving information or producing documents in his possession or power before the officers or persons authorised by the Registrar. Several measures taken by and in consideration of the Registrar for securing speedier disposal of loan applications are—

“(i) The banks are required to examine loan applications at the outset, hold a preliminary enquiry and reject such of the loan applications as cannot *prima facie* stand the tests of the Central Land Mortgage Bank. In doubtful cases, the co-operative Sub Registrars for Land Mortgage Banks are consulted.

“(ii) With a view to enable the banks to obtain the necessary documents of title etc., quickly from their members, land mortgage banks were advised to make provision in their by-laws for rejection of loan applications on failure to produce documents without satisfactory reasons within three months from the date of intimation and for restoration of such rejected applications only on payment of a penalty.

“(iii) Joint inspection by group directors and by the co-operative Sub-registrars for Land Mortgage Banks is encouraged and undertaken wherever possible.

“(iv) At the request of the Central Land Mortgage Bank, I (Registrar) have, as an experimental measure, authorised about a dozen co-operative Sub Registrars to send direct to the Central Land Mortgage Bank the loan applications of Rs. 500 and below scrutinised by them. The results of this arrangement have to be seen and if this arrangement works successfully, the question of extending the limit of loan applications which may be sent direct to the Central Land Mortgage Bank will be considered.”*

While it is gratifying to note that steps are already taken to eliminate the Deputy Registrar in the case of small loans, the elimination must be complete. For the scrutiny of the land value, repaying capacity etc., is made by the supervisor, director and Sub Deputy Registrar. An efficient staff at the Central Land Mortgage Bank which finances the move-

*Report of the Working of the Madras Co-operative Societies Act. 1937-38.

ment carefully scrutinises the various applications. Hence there is no necessity for a Deputy Registrar. Surprise visits by the Registrar to check the work of the Sub Deputy Registrar will have a salutary effect on him. If the Deputy Registrars' are eliminated and in their place more Sub Deputy Registrars are appointed with jurisdiction over a smaller area, the delay in the sanctioning of loans may be minimised. The delay in securing encumbrance certificates, etc., may be avoided if, as in the case of land revenue or taccavi loans, the land mortgage banks have the first claim on the member's property. The Board of Directors should meet immediately on the application for loans and try to dispose of the applications at one or two meetings.

The general cry is that Land Mortgage Banks are not making small loans to small agriculturists. The statistics provided earlier will show that between 1929 to 1938 the number of loans below Rs. 500 is 766 and the amount Rs. 2.63 lakhs out of Rs. 164.43 lakhs. The percentage of the amount of such loans to total loans forms only 1.6. The difficulties in making loans to small ryots are that they may not satisfy the business tests as to security, repaying power etc., imposed by the bank or the administrative expenses involved in the scrutiny and valuation of lands in connection with the sanction of such loans may not be adequately covered by the fees realised from the applicants for loans. It is however necessary that any difficulty in the way of granting such small loans should be removed. Though the Agriculturists Loans Act is the best agency for the grant of such small loans, land mortgage banks also should aid in the supply of such loans.

It is often said that the land mortgage banks have not done anything to promote agricultural industry except for transferring the burden of unproductive debt from private money-lenders to organised banks. This observation is partly true. Of course the by-laws of primary land mortgage banks provide for the grant of loans to members for redemption of mortgages, redemption of other prior debts, improvements of land and methods of cultivation and for the purchase of land in special cases so as to enable the ryots to round off their holdings and work them more economically. In actual working all the loans advanced by the banks are intended for the discharge of old debts of the borrowers. Hardly any loans were issued for the purpose of land improvements. Moreover the first preference is given for the redemption of mortgages and discharge of prior debts. The Royal Commission on Agriculture and the Central

Banking Enquiry Committee have drawn pointed attention to the grant of loans for land improvement. The Royal Commission on Agriculture has also remarked that part at least of the allotment under the Land Improvement Loans Act should be at the disposal of the land mortgage banks provided that steps are taken to ensure its utilization on objects which fall within the scope of the Act. The Commission also pointed out that whilst there was some demand for facilities to repay old debts or redeem mortgages there was no strong demand for long-term money for land improvements. The Reserve Bank of India rightly observed "though pre-occupation of land mortgage banks with the liquidation of old debts was inevitable in the beginning and was probably a necessary step to clear the ground before any work of a constructive nature could be undertaken, we deprecate too exclusive concentration on that object to the neglect of the more important work of supplying finance for the improvement of land which would be productive of permanent benefit to the agriculturist. It is true that the demand for this kind of loan is small at present. . . . There can be no doubt, however, that there is need for improvement in many directions. For works of permanent improvement such as the erection of bunds, the installation of power units, levelling, fencing etc., on a large scale, the digging of wells, reclamation etc., the expenses of which can only be met out of the return from the increased production over a series of years, long-term loans are necessary and land mortgage banks will be failing in their true purpose if they do not undertake this kind of finance. If people will not come to the bank of their own accord for such assistance, it will be necessary for the banks to carry on propaganda for the purpose. . . . Special efforts might be made in selected areas and help might, in the beginning, be confined to people approved and recommended by the co-operative societies. As the lack of compactness of the holdings often makes land improvement works unprofitable or impossible, land mortgage banks should also directly or indirectly encourage schemes for the consolidation of holdings." The loan given for land improvement should be disbursed in instalments as the work progresses after satisfying that the previous instalment has been properly utilised. The Agricultural Department which is mainly concerned with the improvement of land might co-operate with the land mortgage banks in propaganda and education, assistance to prepare suitable schemes for financing and examination of technical aspects. Regulation under Section 32, clause (2) of the Land Mortgage Banks Act makes clear the term "improvement of agricultural land." Mr. Giri, in his address at the Tenth

Land Mortgage Bank Conference, stressed the need for loans for land improvement and emphasised careful study of the question of the grant of loans by land mortgage banks for utilising the electric power for the promotion of agriculture.

The Central Land Mortgage Bank is of opinion that it is not advisable to start banks in dry districts which are almost rain-fed and where there is no certainty of crops. The present policy is the starting of land mortgage banks in dry tracts where definite sources of irrigation either from tanks or from wells are available and there is certainty of crops. This policy is based on the principle that the success of the mortgage bank movement depends upon the prompt repayment of equated instalments by members because the source of capital is through debentures and nothing should be done to upset the confidence of the investing public. The debenture-holder must be paid on the due date and to ensure this, either there should be no failure of crops or some other institution must bear the burden of such temporary losses. The only remedy for such dry tract is the establishment of land mortgage banks which grant loans over a long period of forty years. The loans should be postponed in the years of failure of crops and collected in years of good harvest. The Committee on co-operation in their discussions suggested a temporary diversion of a portion of the Famine Relief Fund for meeting the obligations on the Central Land Mortgage Bank during periods of distress and failure of crops and for reimbursing the money in good years. This appears to be a sound proposition. The alternative would be for the Government to arrange the finance direct in those areas. Government unlike a bank can afford to bear a loss to improve the lot of a section of unfortunate taxpayers. In fact it is the duty of Government to undertake such business when an organised institution cannot profitably help those agriculturists in the dry areas.

Loans by mortgage banks in America are over forty years. In Europe it is even longer, and in Australia, the period in the Credit Foncier of Victoria is more than thirty years. The Emergency Farm Mortgage Bank Act of America allowed grant of loans for as much as 75% of the value of land; provision was made for granting on second mortgage up to 75% of the value of property; and power was given to land banks to postpone principal payments to worthy borrowers. While such measures are possible in other countries, extension of the period of loans at least to thirty years in the Madras Presidency will not lead to a slackness

in the payment or other complications as the Reserve Bank believes. The Townsend Committee on co-operation, the Indian Central Banking Enquiry Committee and Mr. Sathianathan recommended an extension of the period of loans. Such extension will result in a greater number of borrowers, whose paying capacity is less, taking loans from the land mortgage banks.

It will be in the fitness of things if, after the scaling down of debts by the Madras Agriculturists Relief Act and the Conciliation of debts by the Debt Conciliation Board, land mortgage banks take up the financing of the debts of such borrowers. Before the Madras Agriculturists' Relief Act was passed into law, some of the primary land mortgage banks attempted to scale down the debts of the members by persuasion with varying results. The amounts scaled down by such efforts are—

			Amounts written off by creditors of members of Land Mortgage Banks
			Rs.
1934-35			38.191
1935-36			55.203
1936-37			1.56 lakhs
1937-38 till the passing of the			
Agriculturists' Relief Act			1.08 lakhs.

The scaling down of debts of Rs. 1.56 lakhs in 1936-37 is against Rs. 39 lakhs lent out by the banks. In the Chidambaram Land Mortgage Bank in nine cases with debts amounting to Rs. 10,550 in 1937-38 the amount scaled down was Rs. 141-6-7 only. A co-ordination of debt conciliation boards with land mortgage banks will result in greater achievement. The office-bearers of land mortgage banks should be connected with conciliation boards wherever possible. The Central Banking Enquiry Committee recommended the utilisation of the Co-operative movement for payment to the lender of the amount payable under the terms of settlement. The Reserve Bank of India is also of the same opinion.

As a measure of safety for land mortgage banks and prudence on the part of borrowers, members of land mortgage banks may take endowment life insurance policies and assign them to the bank or take a dis-mortgaging policy. This policy of dismortgaging by means of life insur-

ance has met with favour in Germany and other European countries. This scheme was suggested by Von Hecht, a student of agricultural credit institutions in Europe and adopted by the Landschatt. Insurance was insisted upon by the Central Land Mortgage Bank in all cases of loan applications above Rs. 5,000 prior to 1937. The advantage of this scheme is, where the borrower dies after two or three years of the grant of loan, the insurance company will pay the bank. If he survives, he will at the end of the period, when the policy matures, receive a substantial sum. This scheme can be very easily adopted in Madras for loans above Rs. 1,000. The scheme can be made more easy for adoption if the period of loan is extended to 30 or 40 years and consequently the instalment to be paid to the bank is reduced. It will be sufficient if the borrowers take a policy for half the amount they take as loans and assign it to the bank.

In its Statutory Report, the Reserve Bank of India suggested that the land mortgage banks in their granting of loans should not run the risk of committing the same error as the Co-operative Credit Societies did in the past and thus find themselves with their assets frozen. "A cultivator who is habitually running into debt cannot be saved merely by the grant of longer instalments with lower rates of interest. He must be trained and disciplined in the use of money and if he is living in a deficit economy, attempts should be made to increase his margin of profit. The old co-operative ideal was to make a man undergo a period of probation in a co-operative society and liquidate his old debt only after his fitness for this purpose has been tested. The present system in vogue in many places of taking up debtors without any previous knowledge and looking only to the security offered by them can hardly be said to have any real co-operative element in it. The security of land, as has been demonstrated more than once proves more an embarrassment than an asset when it has to be realised on a large scale so that even a land mortgage bank must look more to the paying capacity of the debtor than to the mere value of his assets. We consider it highly desirable that arrangements should be made for the person whose debt is to be paid by the land mortgage bank to serve a period of probation with a good primary credit society and that even after the land mortgage bank has advanced him a loan, he should continue to be a member of a multi-purpose society so that regular repayment of his instalments may be ensured by proper supervision of his activities.* The recommendation of the Reserve Bank is made with the

*Statutory Report—Reserve Bank of India.

best of intentions but though it is very fine on paper it cannot be adopted practically. The reason is the primary credit society itself is to be reconstructed on sound lines and attempts are being made in that direction. The land mortgage banks should not suspend their business till such time the Co-operative Societies are based on sound lines. That period is indefinite. Hence land-mortgage banks should proceed as they are at present and no clause insisting on probation in primary societies should be included. Moreover the close scrutiny of the security and the repaying capacity of borrowers will stand the land mortgage banks in good stead.

It has been suggested that the Central Land Mortgage bank should try, as early as possible, to free the debentures of Government guarantee. At present Government guarantee of principal and interest is essential and because of such guarantee the Central Land Mortgage Bank is able to attract funds from local bodies, municipalities, co-operative institutions and other trusts. Debentures can be made independent of Government guarantee only when the Central Land Mortgage Bank is able to establish a name in the money market and draw its funds from big commercial firms, insurance companies and other individuals who seek long-term investment. At present, insurance companies which own huge amounts invest only small amounts in debentures and hold the bulk of their investments in Government securities. If the funds of the insurance companies are turned to land mortgage banks it will be a great help to agriculturists. The bank should employ a reputed firm of brokers to transact more business through them for the issue and purchase of its own debentures. Debentures should be floated in one lump sum instead of being floated piecemeal throughout the year. The Reserve Bank of India being quite conversant with the money market can undertake to float the debentures of the Central Land Mortgage Bank at the right time. During the interim period an overdraft should be granted to the Central Mortgage Bank by the Reserve Bank of India. If the Reserve Bank of India can invest a portion of its funds in debentures or advance money on the security of debentures, the popularity of debentures will be enhanced. The Reserve Bank feels that it has to maintain absolute fluidity of its resources and therefore cannot lock up the funds in the debentures. This attitude of the Reserve Bank is very discouraging especially when the debentures are marketable. Above all the Central Land Mortgage Bank should build a strong reserve.

Some other suggestions are that the Central Land Mortgage Bank should deal directly with some big borrowers to whom the primary banks are incapable of lending. Such loans are granted by the Land Banks of the United States of America without the intermediary of the Farm associations. Big loans up to 50,000 dollars by the Land Banks of America and up to 4000 (Rs. 42,000) by the Credit Foncier of Victoria, Australia, are given to borrowers. Such big loans can be given to needy zamindars and big landholders by the Central Mortgage Bank direct. If loans could not be given by the central institutions, well-organized joint stock land mortgage banks should be started. As the Central Banking Enquiry Committee says, Government should take an initiative in the starting of such banks. A credit Foncier Bank on the model of the Victorian institution of Australia may be started by the state and the postal savings bank may invest funds up to 20% of its deposits in the debentures of such a bank. The rest of the amount can be secured by debentures either through the Central Land Mortgage Bank or separately.

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