AGRICULTURE WITH RESPECT TO SOUTH INDIA

VOLUME II

NATESAN MADRAS

G. F. F. FOULKES

With the compliments of

Mr. G. F. F. Foulkes,

VOLUME II

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G. F. F. FOULKES

of Salem

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MADRAS

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PREFACE

HIS little book is issued as a second volume to the book called Local Autonomy which was published in November last.

I am much indebted to Janab S. Muhammad Ibrahim Bahadur, the Manager of the Salem Zamin, for his experienced and skilled help in dealing with the figures given in this volume. And I am grateful to M. R. Ry. P. S. Venkatachari Avergal, the Head Clerk of the Salem Zamin Office, and to the Karnams who have assisted in compiling the figures relating to the Villages specified.

Similarly, I must thank the Manager and the Karnams of the Fischer Estate in Ramnad and Madura Districts for their assistance in compiling the figures connected with the villages which are included in their administration.

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G. F. F. FOULKES,

of Salem.

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CHAPTER I

THE RURAL PROBLEM

In agriculture the tendencies governing the prices of its products differ from those governing prices in all other human activities. This is due to the inexorable economic law which makes the products of the soil dependent on the climate and the weather. Carried one step further, there are certain crops which can only be grown successfully in certain regions and nowhere else. such as cotton. Nor is the weather which is suitable for any given crop the same all the world over at the same time. Further, the means of marketing agricultural products differ from those adopted in other industries, although those who market badly will naturally receive a less price for their products than those who market expertly.

In the case of widely grown staple crops in general demand such as tobacco, cotton, wool, oil seeds, etc., the surplus in any part of the world has to be sold in the world market and the prices made react quickly on those of the

home market. But in times of depression, the products of a farm cannot be curtailed so quickly nor in the same manner as those of a factory.

With few exceptions land crops are not a matter of daily or weekly output as in the case of many factories. They are annual and may be triennial or longer. In a year of bad prices a farmer cannot easily switch from one crop to another, although in favoured circumstances and in suitable localities good farmers are always on the alert to do this. After a cycle of low prices, agricultural production cannot be so speedily revived as is the case with most manufactured products.

In South India, the majority of the rural population is made up of small peasant proprietors who (in 1984-5) possessed 5,797,807 holdings on ryotwari tenure with an average size for each holding of 4'8 acres. There is also a corresponding peasantry of small holders who hold land in Zamindari tracts, but no collected figures are available as to the number of holdings nor the average area of each holding. As a rough guess, it may be estimated that there are about 2,750,000 holdings in Zamindari areas with an average of 4 to 5 acres each.

Up to the outbreak of the late War, this peasantry from time immemorial formed an inchoate mass, who each grew their small individual

output and marketed it as best they could. Correspondingly in the long course of time a purchasing agency had grown up everywhere, which consisted of locally self-organised middle men in the shape of grain merchants, banias, and village shopkeepers. These middle men not only bought the crops when offered for sale but acted as bankers in advancing money to the peasantry for the expenses of cultivation or for the standing crop or by advancing still larger sums on the mortgage of landed property. At the same time these money-lenders were ready to grant loans for non-agricultural and extravagant purposes, such as wasteful expenditure on marriages and funerals. In the course of years, the peasantry became very heavily indebted to these middle men This indebtedness rapidly increased from 1860 onwards on account of the rigid maintenance of law and order; the introduction of railways and steamships which brought about a swift and enormous expansion of trade; and a multifold increase in the value of land as the result of internal security which prevailed everywhere which facilitated and increased the credit which a peasant proprietor could obtain.

Towards the end of last century (Sir) Frederick Nicholson, I.C.S., who was a close student of the rural problems of the Madras Presidency, foresaw that such a state of affairs, if permitted to continue, could only end in a

national disaster economically and politically. Fortunately for the country, Nicholson saw with equal clearness that the remedy for the rapidly culminating evil of universal rural indebtedness. was the introduction of the co-operative movement among the peasantry on the same or similar lines as those which had been introduced into-Italy, Sir Frederick went to Italy, studied matters on the spot (together with co-operation in other countries) and published his views in a book of the first importance. The response was lethargic in the extreme, but nothing on earth could daunt Sir Frederick Nicholson. By degrees the value of his ideas become so widely recognised as to ensure the introduction of the co-operative movement into Madras. In the hands of those able administrators, Sir P. Rajagopalachari and R. Ramachandra Rao, I.C.S., the movement became firmly established and is destined to prove the salvation of the country.

After his long and strenuous life, Sir Frederick Nicholson only passed to his well-earned rest last (1937) year. Future generations of Indians, not in Madras only but throughout India, will realise that Nicholson was one of the greatest benefactors that India has ever had.

Since the War, Government has given its solid support to the co-operative movement and has supplied the framework necessary to ensure its smooth and efficient working in the future.

Another phase of the rural problem is the question of the education of the peasantry in order to prepare their minds to be receptive of the use of improved methods in their operations. It seems to be agreed that a rural bias shall be given to the fourth, fifth, and sixth forms of High Schools in rural areas. It is not the intention to attempt to teach agriculture to the boys at this stage but rather to apply their minds to those particular subjects on which success in agricultural practice is based. In this phase of learning, the application of the Project Method of teaching will be invaluable in giving a practical turn to the instruction of the boys. We may be sure, too, that the views and interest in their work of the children will have an effect in rousing and broadening the minds of their parents.

It will be found, too, that the practice of Drawing everything possible will be a valuable adjunct to the Project Method of teaching. When the occasion arises, drawings should be made by the young scholar of all natural objects. Geography can be made really interesting to a small boy or girl, if everything that lends itself to be drawn is illustrated by a drawing made by the child. The working of every

implement can best be understood by making a drawing of it to illustrate how the parts of the implement fit together and cause it to do its work efficiently. Drawings train the eye and the brain of the child, and make him more observant and able to differentiate the essential things from those which are less essential. Lastly, and possibly above all, the practice of making drawings is of great help to the memory and tends to wean the child from relying solely on his memory and learning unintelligently by rote in order to reproduce his learning.

By the time each school generation of boys reach the end of their high school career, it should be an easy matter to select those boys who display personality and a grasp of agricultural matters. These selected boys can then be trained on in special schools which will lead to entry intothe agricultural, veterinary, co-operative departments and for the more advanced teaching of the principles underlying health, hygiene, and the various branches of village self-government. The balance of boys who have no desire to enter one of the Provincial departments, will have thus received a good educational grounding, which will make them valuable members of the Village Panchavat Boards. when they become older and the time comesfor them to serve their community. As matters improve and become more efficient, the villagepanchavat boards will thus receive a continuous. stream of members who will bring trained minds to their work. When that day arrives, Madras can then claim to have attained to self-government but not until then. Self-government, then, depends not so much on what is given to Madras from outside, but it depends much more on the manner the educational and administrative system is designed to foster and utilise the intelligence and common sense inherent in every individual citizen. It is an old saying that 'every country has the government it deserves.'

Crops grown on the land are divisible into three main categories:—

1. Food Crops.

- (a) Cereals.
 - (b) Pulses.
 - (c) Condiments and spices.
 - (d) Sugars.
 - (e) Fruits and Vegetables, including root crops.
 - (f) Oil Seeds.

2. Commercial Crops.

- (a) Fibres.
- (b) Dyes.
- (c) Drugs and Narcotics, e.g., Tobacco.
- 3. Fodder Crops for Livestock.

Of the above, Food and Fodder crops are of the first necessity to the farmer, in order to keep himself and his family alive and his working animals in good condition.

On the lowest and laziest scale a farmer can grow just sufficient for subsistence, or, with hard work, knowledge, and intelligence he can, on the same land, improve his methods and raise a surplus beyond his own immediate domestic requirements. He can then sell this surplus and obtain an income in cash.

Commercial (money) crops are grown and produced for sale. A farmer can produce enough of this kind of crop to obtain the cash to meet his lowest needs, such as money to pay his land tax if a pattadar, or his land rent if a tenant. and other primary necessities such as minimum amount of clothing required for his family. Or, intermediately, he may raise enough of commercial crops to pay for marriage and burial expenses, and for the celebration of festivals in order to avoid the necessity of going into debt to meet these expenses. Or, best of all, a farmer, by hard work and improved methods, can, on the same land, raise much larger crops. By this means he can raise his standard of living and can procure the money for the better education of his children. He can improve his land and keep himself clear of debt

One of the chief puzzles of the rural problem is to devise encouragements and means by which a man can raise himself and his son after him from a subsistence level of farming to the economic level of a high standard of living. One very simple and inexpensive form of encouragement has been adopted on the continent of Europe. Diplomas and Parchment certificates are granted to the best farmers of a locality. On each is recorded the name of the recipient and the reason, i.e., that branch of agriculture in which the recipient excels, why the certificate has been issued. These marks of appreciation are very highly valued by the recipient. They are framed and hung on the wall of the best room of the house. The children see and admire them, and they serve as a continual reminder and ambition to the children to follow the example of their father. If these Certificates and marks of appreciation and esteem are signed by His Excellency the Governor of Fort George, they can be issued by the Collector of the District to the recipients in local Durbar. The recipients of these certificates should include that type of farmer who displays public spirit and does his best to advance the interests of his country by voluntarily adopting improved methods in the cultivation of his land and thereby sets an example to his neighbours.

AGRICULTURAL INCOME

Among all human activities and industries. the problem facing an agriculturalist are quitedifferent from those which face men engaged in all other industries. One effect of this is seen in the meaning of the term "income". The income of a townsman and trader is expressed in terms of money. The income, i.e., the relative means of livelihood of a farmer can he adequately expressed in terms of money. The proof of this is seen in the fact that farmers are not charged income tax on their farming operations, although Chancellors of the Exchequer in England have time and again been pressed to bring agricultural incomes within the assessment of the Income-Tax. Consequently those political economists, statisticians and other well meaning persons are merely beating the air when they endeavour, first, to calculate a cultivator's income in terms of money and, then, to show that the cultivator is on the brink of ruin and in a chronic stage of semi-starvation, because the calculators are unable to work out any income comparable to that of a townsman. They cannot understand how a cultivator with little apparent income is able to maintain himself and a family of five, while a townsman with little income in terms of money is quiteunable to do so.

The same basic difference governs the-"costing" expenses of a farmer and an industrialist. Any trader or manufacturer can or should beable to say what his "costing" expenses are, and from the figures derived from a number of men in any trade an average can be struck. But this cannot be done in the case of farmers. In England, after the War, when agriculture could. in the belief of some doctrinaires and theorists. be "rationalised" and organised on "Factory lines", some of the keenest brains in the country tried to arrive at agricultural costings. There were many farmers who kept accounts which they freely placed at the disposal of the newly created Minister of Agriculture; but we hear nothing of the results obtained because the attempt was a failure.

Before any permanent measures can be taken for the improvement of any locality, it must first be ascertained what the conditions are in that locality. And the rural problem, like all other problems, can be solved by taking it in hand in a methodical and organised manner culminating in an appreciation of the situation. The appreciation can only be arrived at afterrecording all the facts of the case. The record can best be made by means of what are now

called Regional Surveys. This term, however, is a misnomer because a region gives rise to the idea of a large area whereas the survey, or inquisition as it used to be termed in Norman English land records, must be made village by village. In fact, all the information concerning every village should be ascertained and written down under specified heads in a standardised record for the whole Province. Nearly all the information which is necessary is already available and only requires bringing to light and co-ordinating.

The main headings of the record for every village should specify the following items:—

The district, taluk, and firka in which the village lies.

The population and the various categories into which the population is divided.

The area of the land cultivated, the area of the culturable waste, the area of the unculturable waste and the area of the village site.

The nature of the holdings, their number and their area under each kind of tenancy. The fertility of the soil.

The number and area of holdings under (a) wet, (b) dry, and (c) garden lands.

The number of wells in the village (a) in wet ayyacut or (b) dry land, and the area of land irrigated by each kind of well. The depth

variations of the water-table, i.e., the underground water supply.

Of the lands held on patta, how much land is sublet to tenants with the area and percentage of land sublet together with the rent paid or melwaram imposed.

Of the lands sublet, how much land is again sublet with its area and percentage sublet and the cash rent or melwaram paid by the (second category of) sub-tenants.

Of the tenants, (a) how many are landless men with the area and percentage taken on lease by them; and (b) how many are pattadars cultivating their own land who take up tenancies also with the area and percentage of land so taken.

Of the pattadars in the village, how many are (a) resident and (b) non-resident in the village; how many of them cultivate the whole of their own land and how many sublet a part of their land with the area and percentage sublet.

What is the average kist paid throughout the village for (a) wet, (b) dry, (c) garden land. N.B.—It will take time to arrive at this average with accuracy and this item may be taken up after all of the above information has been collected and recorded.

The nature and yield of the crops grown in the village.

The foregoing list looks formidable, but the Karnam of each village can look up and record the information within 7 days' time.

The cattle census of the village must be added to the village survey.

The land records have hitherto only been used for taxation purposes instead of being used as a live standing record for the purpose of ascertaining and watching the weak and strong spots in the social and economic life of every village.

Besides the foregoing, there are a number of other factors which must find place in a village survey, and they are of a nature which it is easy to collect but require time and special enquiry to do so. These are:—

The state of primary education in the village.

The status and prospects of the various coordinated co-operative societies in the village with the name and distance to the unitary centre.

Details of the village communal grazing ground, the arrangements for rotating the grazing, and the measures necessary to regulate the numbers of the livestock to be grazed, and to improve the quality and yield of the grazing

especially during the four or five hot weather months of the year.

Whether there are any established village or cottage industries.

A statement of the village communications with a scheme for their repair and annual maintenance.

A description of the minor irrigation works (if any) in the village and the measures to be taken for their annual upkeep. The number of tanks and the area of the ayyacut of each.

A register of the library books in the village library with a scheme for the addition of some new books every year and exchange of other books from the Central (Taluk) library.

An enumeration of the more pressing agricultural improvements required, e.g., pedigree seed and of what crops required, the growth of green manure in situ in the fields and so on.

An annual scheme for the selecting and sterilising of the inferior scrub bulls in the village. by means of the Burdizzo clamp.

Arrangements for selecting the 100 best milking cows in the village, and consideration for procuring the best dairy bull to serve them until animals become available for distribution from the Government Stud Farms.

Sheep Survey .- (a) How many sheep are there by sex and age classes, (b) is the flesh

eaten by the villagers, (e) is the wool used, (d) if sheared, how often and when, (e) length of the wool staple, (f) weight of the fleece shared.

Poultry survey including Ducks and Geese.

List of the nearest local markets, what products can be sold in them, and distance to them by road together with any obstacles in the way, and the cost of transport?

Facilities for storage of grain and other products grown in the village, so as to escape having to sell at harvest time and to await better prices later.

Fishing grounds and improvement or introduction of fish into tanks and wells for local food supply.

A budget statement of the finances of the Village Panchayat Board with a copy of the Annual Audit.

The Sanitation of the Village site and surroundings to include :—

Enumeration of the drinking water wells, whether they suffice for the needs of the village, whether they are protected or not, e.g., by steening, covering in, with a chain or other kind of water lift, i.e., draw wells to be forbidden eventually.

Whether bore hole or trench latrines are in use and where situated

Enumeration of depressions to be filled in where mosquitoes can breed.

Enumeration of manure heaps and whether they are covered with earth or straw to prevent flies breeding in them.

Steps taken to war against rats and fleas.

In a country where the rainfall may fluctuate in a most disconcerting manner, it is of the first importance to know the rainfall in each village. In order to secure this record, it will be necessary to install a rain gauge in every village.

Drawing of a map of the village showing all the foregoing features by means of a standardised colour scheme for the whole Province.

A copy of the village survey to be kept with the Secretary of the Village Panchayat Board, the Schoolmaster, the Munsiff, the Karnam, and each member of the Village Panchayat Board.

Whenever the Health Inspector, Co-operative Inspector, Agricultural Demonstrator, Veterinary Inspector, Educational Sub-Inspector, Public Works Overseer, or Forester goes to the village, they can scrutinise the survey so far as it concerns their branch of knowledge, so as to render what assistance they can and keep the Record complete and up to date.

The survey for each village can be made in the village by the village on the responsibility of the President of the Village Panchayat Board, and the work can proceed simultaneously in every village throughout the whole Province.

The preparation of the Record will present little difficulty to the villagers. For the most part of the work the experience of the villagers, as the result of the mere fact of examining and recording the situation in writing, will suggest the proper policy to be followed as soon as each part of the rural problem of the village has been written down. Solvitur ambulando.

CHAPTER II

AGRICULTURAL CONDITIONS IN THE PAST IN SOUTH INDIA

Nothing is certain regarding Dravidian origins nor can it be proved where the Dravidians came from before their appearance and settlement in South India. There is admittedly a wealth of Dravidian literature which displays a high degree of intellectual vigour and creative thought. Moreover, women have taken a share in contributing towards this intellectual feast. But there has been a dearth of Dravidian scholars who have devoted their leisure time to the investigation of their literary heritage and subjected it to an organised continuity of critical analysis. And it must, unfortunately, be many years yet before Tamil literature can be placed in its proper and well merited niche among the world's cultures.

In the meantime enough is known of the history of the past to warrant the belief that the village has unfailingly been the communal unit of Dravidian society. And this has always been the case until the advent of the British who, with a well meaning but misdirected policy, have endeavoured, though fortunately without success, to destroy this keystone of South Indian Polity.

The village was a self-contained and self-sufficing unit in itself. Once the village had furnished its dues to the ruler of the country, it turned back on itself and minded its own affairs regardless of the passage of this or that ephemeral overlord. The village structure has always stood firm in spite of all repercussions in the outside world.

In days when the population was sparse and the land available was so large as to be had for its occupancy a clan or even a large joint family was free to look for and select those portions of land where the soil was fertile and the rainfall reliable. There was no necessity in those days to farm the shallow or rocky dry soils nor to settle in localities where the rainfall was uncertain. In such circumstances the villager wanted help from no man and learned to keep himself aloof from a troublous world and be a self-sufficient law unto himself in dependence on his own resources to maintain his village system.

The village crystallised into an entirely selfabsorbed community based on agriculture as its major activity, supplemented and implemented by various primitive necessary trades which tend to become hereditary and free from vexatious or disturbing competition.

Side by side with the agricultural life of the farming community, a village service grew up until it reached such a wide scope as to include

menials, such as sweepers, watermen, washermen. barber; craftsmen such as carpenter, potter, smith, weaver, tailor, leather worker, shoemaker. For the religious needs of the village there were the priest, the drummers and the singers. The Intellectuals were represented by the Vydian (medical practitioner), the schoolmaster, the astrologer. There were the village messengers who acted mainly as postmen with the outside world and maintained the hue and cry from a police point of view besides other duties.

In short, the ideal of village life was a subsistence level of livelihood and of culture where everybody had his recognised place and well defined position. The majority of the inhabitants were thoroughly content with the place into which it had pleased God to call them and would have fiercely resented any attempt to meddle with, much less alter, the existing state of affairs.

The village system at its best gave peace and contentment to the bulk of the population, and this happy state of affairs seems to have endured throughout century after century. Indeed, it is probably on account of this very peace and contentment that village life became crystallised on fixed lines, which in time no man could break. It may be that thus was gradually and imperceptibly established the rigid caste system, the formularies and ritual which took the place

of religion, the hereditary means of livelihood, the mechanical feast days, the prolonged marriage observances, the expensive death ceremonial, and that colossal blot on South Indian civilisation—"Untouchability"..... which is to be met with nowhere in the world except in India.

Communications, as we know them to-day, have only been opened up since the advent of the British regime. Until that recent period, the movement of commodities was very restricted and local. Goods were carried by pack animals (donkeys, bullocks, and ponies) as is still the case in some parts of the country to-day. Travellers either walked or rode on horseback or were carried in closed Palanquins by relays of human bearers. In and out of the larger towns there were primitive roads carrying cart traffic in good weather but these roads did not extend far. Elsewhere, men passed from one village to another by means of earth tracks or footpaths. Very rarely we can find the remains of an old paved packway such as that passing through the jungles of Cuddapah District where the surfacing consists of large natural stones laid orderly on the earth and kept in place by their own weight.

At so late a period as that of General Wellesley (Duke of Wellington) that General beat the Marathas in the field, because in a country devoid of communication in the modern sense

of the term, he relied for the transport of his supplies, ammunition, and baggage entirely on the pack bullocks of the Presidency, which had to be gathered from far and near to make up the numbers required. The fact that the country had to be combed to obtain a sufficiency of pack animals indicated how small was the internal trade of the Province at that period. In the absence of bridges, he relied solely on coracles in order to move freely about the country of large rivers in which his army operated.

For millennia each village was a self-supporting and a self-governing community, and many of them were almost wholly cut off from much intercourse with the outside world. And no matter what the great ones of the outside world were doing or how they were faring, the little village communities outlasted them all as small imperia in imperio. Among them the standard of living was a self-contained subsistence standard with which everybody was content. The few wants in life which the village could not produce from within itself, such as salt and iron, were supplied by small caravans of Lambardies and other roving petty traders with their animal pack-borne wares.

The village communities were ruled by Councils of Elders supported by a rigid and conservative public opinion. Their jurisdiction comprised all branches of the village system such as education, maramats, law and order, regulation of the grazing and fuel areas, etc., and was an exact replica on a small scale of the government of the overlord or king in whose territory the villages were situated.

Although published more than 30 years ago, the late Mr. R. C. Dutt's "Civilisation in Ancient India" seems to be the best popular book for the general reader of India prior to the Christian era. He divides the evolution of India into 3 epochs, namely: The Vedic Period B. C. 2000 to 1400; the Epic Period B. C. 1400 to B. C. 1000; the Rationalistic Period B. C. 1000 to B. C. 320. From a documentary point of view, the last period is covered by the Sutra literature. This is admittedly of human composition and it is during this period that the arrest of Indian civilisation and culture seems to have originated.

So far as Agriculture is concerned, irrigation from wells and channels was known in Vedic times, and it is mentioned that the rope used for raising the water from wells was made of leather. The adoption of tanks for the storage of water for irrigation seems to have come into use at such an early period that the date of their origin is unknown.

For the Epic Period, a timely article has appeared in the July 1987 number of the Quarterly Journal of the Mythic Society. It is written by Prof. P. C. Dharma, M.A., under the caption "Social Life in the Ramayana". The following

items have been extracted from that article: In the days of Epic India, the well-to-do classes and their retainers lived on a well-balanced diet, of which the following sorts of food were permissible and consumed :-

> Meat.—Deer, buffalo, boar, porcupine, iguana, sheep, goats and hare.

Game.-Pea-fowl, jungle-fowl.

Fish.-Inland water fish, both fresh and dried.

Grain .- Rice boiled and mixed with curd, milk or ghee; puffed rice with enrd.

Pulses.—Green gram, chick pea, horse gram, black dhal, made into porridges with milk.

Fat. Gingelly oil and ghee.

Sugar.—Honey, sugar (cane and palmyra), sweetmeats.

Fruit.—Plantain, mango, jack, pomegranate, eugenia jambolana, limes, woodapple.

Drink .- Water, fruit-juices.

Fermented drinks.-From honey, and manufactured liquors prepared from fermented grains and plants.

From the above description it may be deduced that Agriculture during the Epic period had become diversified, and the cultivators had reached the stage where they had learned how to maintain soil fertility by rotating pulses with grain and other crops. From the general use of honey, it seems reasonable to suppose that bees had become domesticated at an early stage of agricultural life.

THE TRANSITION STAGE

After a very lengthy but indeterminate period of the subsistence type of static livelihood in village communities, which lived and flourished in their own isolation from the remainder of the world, a transition stage made its appearance. This stage may be regarded as first coming into existence with the appearance of rail roads. In old days, famines brought with them not only a scarcity of food but death from starvation, because those villages included in the areas decimated by famines were, on account of their isolation, unable to obtain timely supplies of food from the next adjacent areas free from famine. This state of affairs arose because the country was devoid of the means of large scale transport.

Railways made their appearance in the 1860's of last century and, for the first time in the history of India, transport of goods on a large and speedy scale became possible. Shortly after this came the terrible famine which over-ran

the Mysore plateau in 1876. It was accompanied with such dreadful results that one-third of the population is believed to have perished of starvation and disease. This catastrophe made it apparent that although rain failure made shortage of local food supply inevitable, no one need die of starvation if there was sufficiency of transport to convey food from a distance to the starving people. Railway transport fulfilled this condition. This knowledge gave a great impetus to railway construction and gave rise to two types of railway, viz., (a) Commercial lines which would give a financial return on the capital spent to construct them, and (b) part of the Famine Fund was used to build famine lines into and through those areas where the rainfall is precarious.

This activity in railway construction was the means of introducing enormous sums of money in the form of wages paid in cash into villages along and adjoining the lines as their construction progressed. In the case of many villages, this was the first time that money payment had ever been made in them and at the same time their isolation began to be broken down.

About the same time, the great perennial irrigation schemes came into being. They were more local than railways, but they took years tocomplete and brought large numbers of villagers.

from different and distant villages into close and daily contact with each other.

The building of the Buckingham Canal had the same effect on the coastal taluqs of the eastern side of the Presidency, and much of the labour required to construct the canal came from the inland villages.

Besides these large schemes, many "minor" works were provided in the inland districts as famine mitigation works, each of which had some effect in opening up villages which, up to that time, had lived in a state of detachment from the world around them.

Similar to the railways but on a much smaller scale, the opening up of many new roads and the improvement of existing roads throughout the Presidency had the effect of bringing detached villagers together. The large fairs, festivals, and sacred places for pilgrimage had always attracted villagers, but the introduction of railways, and of new and improved roads, gave a tremendous and much farther reaching impetus for villagers to mingle together and meet their fellows. How greatly this was appreciated is evident from the fact that the rural population were not deterred by the serious outbreaks of cholera, which usually accompanied huge but unorganised gatherings of human beings who were devoid of all ideas of sanitation.

In all cases, the Government paid in money for the expenditure which they incurred. had its repercussion on the social economy of the country-side. Formerly all wages of agricultural labourers were and in some case still are paid in truck. Parallel with the Government's cash payment, labourers began to insist on receiving some cash from agricultural employers if only one anna a day in cash and the remainder in truck. In other words, subsistence labour began to be displaced by economic labour process is still going on; in fact the change has been so recent as to have occurred in the lifetimeof people still living.

Apart from railways and public works, largeprivate industries began to be established by the enterprise of foreign capital. The gold field of Kolar in the State of Mysore may be cited as a leading case of this kind of development of the country. So much labour of various sorts was required that the adjoining or even the near-by villages were unable to supply the demand which had to be satisfied by villagers from a distance. Another large scale instance is furnished by the opening up of the "planting" districts in South India. Here foreign capital and enterprise have opened up back areas with scarcely any inhabitants into whole regions of flourishing estates producing coffee, tea, rubber, etc. On these estates labour from various villages in the low country meet and live together during the working season and

then return to their homes in the plains, not only with their surplus wages but with minds expanded by contact with fellow-agriculturalists from places which are divergent from their own home experience. There are 9 of such "planting districts"; and it is because they are scattered that they are of more benefit and suitability to a wide-spread labour economy of the Presidency than is the case with a single highly concentrated labour demand such as Kolar offers. Nor can it be denied that there is, on the whole, a strong feeling of mutual confidence between employer and employed. Any person who attempts to disturb this friendly state of affairs is acting in an impatriotic manner and should be suppressed.

Prior to this period, there had always been some migration of labour, and the most notable instance of this has been the steady stream of labour from the old port of Kalingapatam to Burma, so much so that the east coast people of South India are still called Klings by the Burmese.

In modern British times there used to be very large movements of labour to the West Indies and other areas over sea. This was known as Indentured labour. In fact, at one time Tamil was one of the most diffused languages in the whole world owing to the wide dispersions of South Indians over seas. The money sent back to their villages by these migrants amounted in the aggregate to large sums, and the return

of these labourers naturally affected the old isolated mentality of those who stayed at home.

In the recent years since the War, the advent of the motor bus in large numbers and regular services, which are growing annually throughout the Province, marks an important step forward in the evolution of village life.

And now the appearance of the pedal bicycle in increasing numbers outside the large towns, during the last three years, shows that the multiplication and improvement of the surface of village roads is appreciated by the people and is bearing fruit already.

The villager is now provided with a much quicker means of reaching his market town and even his Taluk headquarters. Loans and Sale Co-operative Societies will henceforth be able to reach and benefit villages they could not have touched even ten years ago.

The event of the immediate future will be the introduction of the Radio Broadcast and Loudspeaker into every village of the Presidency. This will solve the problem of Adult Education. provided that Politics are unequivocably debarred from broadcasting. It has been said that a fool-proof short wave Receiver actuated by an electric dry battery has been evolved. As, however, this Receiver has not made its appearance, it must be presumed that the rumour is nothing hetter than a false statement. This is a matter

where the Government will be fully justified in heavily subsidising the Institute of Science in Bangalore with a view to encouraging the rising generation of Indian research workers to strain every nerve in solving this problem which has now attained to the status of national importance.

ECONOMIC FARMING

The foregoing vaious encroachments, during the transition phase of the past seventy-five years. on the four thousand year old ideas of subsistence farming and self-contained village isolation are leading to the next phase in the evolution of farming and of the farming communities in South India and is ushering in the dawn of Economic Farming, i.e., the carrying on of agricultural operations with a view of passing beyond the raising of a bare sufficiency of food crops for the mere subsistence of human life. The idea is gaining ground that an overplus of production should be grown by every cultivator in order that he may not only provide for the needs of his family but he may obtain a cash income in addition, in order to furnish the means for an increasing family expenditure and village communal expenditure so as to enhance the amenities of his life. But it has to be remembered that the ingrained thoughts of millions of small cultivators. very many of whom are still in a state of isolation, can only be overcome and changed very gradually.

In the days when the rapid extension of railway construction was being carried out by the Government as an insurance of human life in famine areas, the cry was raised by many politicians that India was being exploited and drained of its wealth which was being taken out of the country for the benefit of foreigners. At first the agitation was a genuine one raised by people who were unable to realise the important implications involved in what was to them novel idea of railway transport. Later, the outery was taken up by professional agitators, whose leaders knew perfectly well that the bulk of the capital raised by the foreigners, and the bulk of the annual maintenance expenditure on the railways, was spent in the country to the great economic advantage of India. The half-yearly dividends, it is true, went abroad for the most part. But dividends paid to shareholders are only a small part of the annual expenditure. Moreover, the shares, then as now, were quoted in the open market and could and can be bought up by any Indians who choose to do so.

In the same manner to-day, the cry is raised that a change over from raising food crops to raising money crops will result in a insufficiency of the food supply; although in the same breath it is averred that the market prices of food crops are so low that the cultivator can barely make a living, and the Government must reduce its Land Tax by 33 per cent. It is also asseverated that the rapid growth in the population is overtaking the growth of the food supply necessary to feed it.

Nevertheless and apart from the two foregoing statements, there are two major problems with regard to the agricultural outlook in the immediate future. First, how can the dry lands situated in the regions of precarious rainfall be protected? Second, how is it possible to teach the farming community to augment the outturn of food and commercial crops per acre?

As regards the first problem, the region which most urgently requires protection is that of the Ravalascema, i.e., the Madras districts of Bellary, Anantapur, Kurnul and Cuddapah. The Tungabadhra project has been designed for the protection of this large upland area. The project has been delayed on account of the long and protracted negotiations which have been necessary in order to arrive at an understanding regarding the water rights of the great Native States of Hyderabad and Mysore, who are interested in this river as well as the population in British territory. It is said that these negotiations have now been satisfactorily concluded and the area which will come under the protection of the river, has been calculated to amount to upwards of 500,000 acres.

If, however, the whole Presidency is to be taxed for the benefit of the people in these four districts, it is only right that the question of the national damage done by goat browsing should now be dealt with and the browsing of goats in the Reserve Forests of this region should be very strictly regulated with a view to the gradual but ultimate exclusion of the goat altogether. The goat prefers to eat the leaves of shrubs and small trees rather than eat the grass available and, as it is very natural, they have a particular partiality for the growing and succulent shoots. In any forest and especially in dry upland localities. the object of forest protection is to allow these shoots to grow so as to get the soil completely covered and kept covered with vegetation as fast as may be. Goats have inherited a habit of standing up on their hind legs in order to bite off the shoots they desire and no part of a shrub below 7 feet is safe from damage by them. To make matters worse, the goatherds carry knives fastened to poles in order to hack the lower branches of trees and bend them down so as to be within the reach of their goats: and a branch when treated like this has no chance to grow again. Owing to the lack of adequate regulation, the numbers of goats have increased very much during the past 40 years and the denudation of the forest vegetation must progressively become more serious. And, especially in arid tracts, this denudation will make the

livelihood of future generations of cultivators much more difficult, because they will have to live in a parched and treeless land. The goat question is the outstanding agricultural problem in the arid Ceded Districts. Goats militate against the interests of all those other cultivators who do not live (like the goat owners) on the borders of the reserved forests. The gradual drying up of the country will adversely affect them and will render the existing difficulties of their agriculture more difficult still.

The gradual restriction and ultimate suppression of goat browsing in the reserved forests of the Four Districts will cause loud outcries from the short-sighted and selfish goat owners and will be the subject of intensive lobbying in the M. L. A. But the Government will have to face the clamour and stand firm, or it will be failing in its duty as the Trustee of the living, and the Guardian of the interests of unborn generations.

CHAPTER III

AGRICULTURAL POLICY

The effect of the change of life among the villagers during the past 75 years has paved the way for a third stage in the evolution of South Indian farming, namely, the growing of crops over and above that of family requirements with a view to securing definite cash income from the surplus sold, so as to raise the standard of living above that of a subsistence level of existence.

The agricultural policy of the country will thus have two main objectives: First, Broad Reforms in the Legislative, Economic and Social aspects of the agricultural activities of the country. Second, the introduction of improvements in the agricultural operations and usages of the rural population.

There is a book called "Salem: An Indian Collectorate", by J. W. B. Dykes of the Madras Civil Service. This book was published in London in 1853 after Dykes had retired from the M. C. S.

The book is interesting at the present time, because it gives an account of the revenue system of the Hindus as inherited and carried on by Hyder Ali and Tippu Sultan in pre-British days; and it gives the history of the rise of

the ryotwari system of tenure as it was gradually evolved by Colonel Read and Sir Thomas Munro in the settlement of the District of Salem, which was the place of origin of the system.

In 1792, Peace was concluded with Tippu Sultan, and Salem district (less Hosur taluk) was transferred to the British, and the 16th March of that year was the date from which the revenues of the transferred district were to be collected. Later, the Balaghat (Hosur taluq) came under British rule after the fall of Seringapatam and death of Tippu Sultan in 1799.

Captain Read, supported by troops, had been engaged in procuring supplies from the Salem area for the forces in the field arrayed against Tippu Sultan. With the cession of the district, its revenue settlement was entrusted to Captain (later Colonel) Read as the man who knew most about the district, and he dealt with the Board of Revenue as his immediate official superiors. He was given three Assistants, one of whom afterwards became the famous Sir Thomas Munro.

In December 1792, Captain Read received instructions, approved by Government (as an interim measure), to lease out the villages of the District for a term of 5 years. If the village elders gave any trouble, he was to farm the lease of small groups of villages to strangers.

And it was expected that Captain Read would be able to complete the real assessment and

settlement of the District during this breathing space of 5 years. Such a proposal was possible, because in pre-British days the Council of Elders in every village had maintained village accounts. To use Dyke's own words: "In each village, from time immemorial, accounts had been kept showing accurately the amount of produce which each field, each successive year had yielded; what crops had been grown on these lands and by whom cultivated; how much had been the ryots' share, how much had been surrendered to the Government (i.e., the tax-farmer), and what had been the extent of contributions levied thereon for all the wants, spiritual and temporal, of the villagers."

Dykes then points out that such village registers were an "invaluable assistance" but that the entries were difficult to reconcile (i.e., check) because there were no maps available nor any land measurement of the area under cultivation in each village to test the accuracy of the entries in the village Registers.

Dykes says:-"There was an accurate system of accounts in the village communities, showing all these particulars, and in most villages giving all other particulars regarding the land for a number of years past, that could possibly be required. Under the (pre-British) village management, these accounts were carefully scrutinised

by the other villagers and might really be depended upon."

Dykes proceeds:—"Under native rule it was usual for the villages of the country to be handed over in lots to the highest bidders for a certain rent or to some favourite under easier conditions. After these terms between the Government and the renter had been finally settled, the latter would proceed to his villages and make arrangements with their several headmen (sic) (council of elders); and this amount would again be apportioned amongst themselves by the inhabitants. It was this system of internal management that enabled the cultivators of the soil to contribute so largely to the Government."

And again:—"No head of the village durst venture to ride roughshod over his neighbours. But in the village the elders were gathered together under their wide-spreading council-tree and no arbitrary orders were given there. After full deliberation what each man had to contribute would be publicly fixed."... "The rights of every man were respected in the old village system."

As regards assessment, Dykes says:—"It was generally understood throughout India, where the cultivating ryots held direct of the Government, a half share of the produce was the assessment payable to the State, which was also supposed to be the average scale of division when made

between the ryot and any other parties through whom he might hold his land. From the annual division of crops in the course of time, a fixed quantity of the produce of each field had gradually, with reference to the fertility of the soil and expense of cultivation, been mutually agreed upon (by the villagers themselves) as the amount of fixed assessment thereon and over much of the Salem district this had again been commuted from a payment in kind to a moncy assessment."

And again:—"In this (Salem) district the arable lands have always been divided into two great classes—the irrigated lands on which rice is grown and those that produce all other grains for which the moisture of the skies is sufficient. The former which, of course, in general only constitute, from the difficulties of irrigation, a very small portion of the extent of cultivation in each village are usually called 'the wet' and the latter, on the other hand, are styled the 'dry' lands; for which Nunjee and Poonjee are the two peculiar Indian phrases.

"The Government share or, in other words, the assessment (on wet lands) was estimated at three-fifths of the produce and was gradually decreased according to the supply of water through eight classes till it was only a fourth.

"Dry lands were divided into four classes according to the kind of crop which the soil

could support. The best kind of soil being assessed at four times the (money) rate fixed on the fourth and lowest class land that could only be cultivated with inferior grains."

Dykes adds:—"When the temporary ruler (i.e., the tax farmer) of the village arrived from the native court, the only accounts usually produced were those which gave the general state of the arable lands in his villages; and to fix the amount of assessment payable to him, it was simply shown how much was cultivated that season of the 'wet land' of each class and, similarly, the extent of cultivation in each of the four subdivisions of the 'dry' arable. On this information which doubtless was scrutinised by the eye of self-interest, the bargain was struck between the renter and the villagers for the current season or perhaps for a short term of years."

So we see that the Hindu rulers of South India had adopted the system of "farming" the land tax exactly as it had been in force among the Babylonians at the period when the earliest historical documents (c. B.C. 8000) throw light on their methods. The Romans in their turn farmed their taxation to tax farmers who were called Publicani. Indeed, so general and widespread was this method of taxation that it was in use in England to farm the tolls for the upkeep and annual maintenance of the main roads of the country.

When the British took charge of the Salem District, Dykes says:-"This system (i.e., the self-governing village system) was not, however, understood at first by the Company's Government; and when the heads of the village (i.e., the Karnam and Munsiff) were recognised as the sole authorities, the whole fabric (of the selfgoverning village system) was destroyed. And, again, when Government commenced treating with each individual ryot, a fatal blow was struck at that system of joint revenue responsibility which had before been so sure a check againstthe over-assessment of the weak."

And again :- "The total revenue paid by thevillage was well known but who, save the ryotsthemselves, could detect alterations proportions of the several shares, unless by a long. (outside official) investigation (i.e., the annual jamabandi) for which time could not be spared."

"The rights of every man were respected in the old village system." And these rights were respected by means of two checks. First. the immemorial village registers showed the reputed area and outturn of produce of each man's fields by which he could be assessed for land tax by the scrutiny and judgment of the Council of Elders in open session, and thesetotal assessments added together made up the land tax payable by the village; Second, the annual fluctuations in the season and the cropwere allowed for by an annual jamabandi conducted by the Council of Elders held in open court.

In the hegemony of the self-governing village system, the village paid the land tax as a lump amount for the village. In order that this lump amount could be collected, the Council of Elders called upon every individual cultivator in the village to pay his share. This share was not arbitrarily fixed. It was determined by the entries in the immemorial village register checked again by the annual revision of the register or jamabandi as it is now called. The entries in the register were published and the details of the annual revision were publicly discussed in the village court. What might be hidden and excluded from the register was any cultivation of outlying land. Such clandestine cultivation still occurs every year in our own time and is called Sivaiamai. In addition to his share of the land tax, every cultivator was called on to pay a further contribution which was retained in the village and used by the Council of Elders as the income or fund wherewith to pay for the expenses of the village administration, festivals, and so on. The only doubtful item in the whole business was the lump amount the village had to pay the tax farmer of the ruler. This was a matter of bargaining and was, of course, the weak point in the fiscal system.

According to their own ideas, the British were confronted by two difficulties, namely, the difficulty

of commuting the outturn of the produce foreach field, as shown in the village register, intoa money value for the purpose of easily collecting the land tax; and the difficulty of checking the correctness of the reputed and accepted cropcapacity of each field in the absence of maps, which had never before been used for this purpose.

The intention underlying the settlement of the district was that it was to be a permanent settlement. How then could the value of the crops be computed in terms of money when the exigencies of the Mysore War had so largely inflated prices? Further, the idea of surveying, plotting and mapping every cultivated field in every village was an entirely new idea in thosedays. The magnitude of the work staggered the mind; the paucity of surveyors available was a serious consideration; and it is a matter of small wonder that the authorities shrank from pursuing the matter to its logical conclusion. In Bengal, the matter was solved by means of a Permanent Settlement through the agency of large estates. But, in Madras, men of the calibre of a Read and a Munro, the fathers of the ryotwari system, were not to be deterred from pursuing their conception of an equitable land settlement by the magnitute of the work, the difficulty of securing surveyors, nor the reluctance of a timid Government at headquarters.

When the Company's Government took over the administration of Salem District, they made

two cardinal blunders :- First and for the first time in the whole of the known history of South India, the authorities at Fort St. George refused to recognise the Council of Elders in the villages. They set up the village Karnam and the Munsiff as the only two headmen whom they would recognise in dealing with the affairs of the village. And they next proceeded to destroy the old immemorial joint responsibility of every member of the village community in the assessment and payment of the land tax by dealing with each pattadar direct instead of dealing with the village council and leaving the council to deal with the individual cultivator as had been the immemorial practice for hundreds if not thousands of years on end. Colonel Read quite rightly desired to secure each pattadar in his rights and make his patta inalienable so long as he paid his kist. This could have been done by using, checking, and perfecting the village register and making it a record of rights (a step which has not been taken up to this day) of every man. Beyond this it was not necessary for the Government to deal with the individual. That should have remained with the village council, and the Government should have continued, as before their time, to deal only with the village council. To-day rural reconstruction is very much to the front. present circumstances no rural reconstructions will be of any practical nor lasting value unless the old village system of self-government

restored, so far as is compatible with modern conditions.

There is one aspect of the ryotwari system which may yet give rise to much difficulty and may seriously militate against the endeavours of Government, to induce the husbandmen to improve their methods by producing larger crops. This aspect of the ryotwari system is the increasing practice of sub-letting the land.

Apart from any advantages or disadvantages accruing to the general community by the practice of sub-letting, Colonel Read undoubtedly contemplated the possibility of doing so. On December, 1796, Colonel Read issued to the "agriculturalists. merchants, and other inhabitants of the District of Tirupatoor" (which was at that time included in the district of Salem), a general circular proclamation, defining in extenso the position and rights of the ryots. The proclamation has been called the Ryots' Charter. At the end of his Rule 3 of the Charter, he said:-"Upon these principles you may rent out your lands which you may raise in value by tillage and manure, at rates greatly exceeding the Circar rates, if there be a demand for them, while you will continue to pay the fixed rates of the Circar for ever." The inclusion of and the wording of this permission makes it evident that

sub-letting had not been in vogue prior to the appearance of the British. Nor had it been necessary because the population had been small and the area of land available was very large in most if not in all villages.

Munro, on the other hand, seems not to have been in favour of sub-letting. In his letter 18th July, 1797, sub-heading 4th on the subject of favoured castes, he says:—"It is want of stock rather than of personal labour that usually occasions failures. If a Brahmin has it, he may manage his farm and pay his rent as well as them (i.e., Sudras); if he has it not, his only remedy is to get land at an under-rate; but as he furnishes neither stock nor labour, it is evident that whatever he receives is in fact a gratuity and a deduction from revenue which the cultivator gives to him instead of paying to Government."

However that may be, in 1869 the policy of the Board of Revenue was "to stimulate extension and improvement of cultivation, to admit of accumulation of capital in the hands of the ryots to lead to the creation gradually of a class of landlords between the Government and the actual cultivators of the soil, and to give stability to the land revenue and contentment of the people".*

^{*} Salem District Manual, Volume 1, A.D. 1883, page 464 foot-note, and again, Ibid page 471 foot-note quoted from Volume LXV of Selections from the Records of the Madras Government, page 140.

It is difficult to understand how sub-tenancies can stimulate any one of these expectations. Sub-letting has not even yet given stability to the land revenue which is now in the melting pot, ranging from the report of the Marjeribanks Committee to the demand for a general omnibus reduction of the whole of the land revenue by 33% per cent. !

In 1874, Dharmapuri Taluk of Salem District quoted as being remarkable for the large proportion of melvaram tenure as compared with other parts of the district. "This tenure which is that of a sub-tenant holding under a pattadar and paying him more than he pays to Government as tax." "The existence of such a tenure establishes unanswerably that the Government demand leaves more margin to the cultivator." *

In Boards Standing Orders, Part III, Title to Land 28 (2) rights and obligations under a patta. Government expressly contemplate the condition that the pattadar may sublet the land granted to him. Government, therefore, recognises and approves the possibility of there being a middleman (the original ryot) between Government and the actual cultivator of the land. Further, if there is one middle-man, there is no logical nor legal reason why there should not be 2 or even 3 middle-men if the financial situation of the land admits of them.

^{*} Salem District Manual, Volume 1, page 470 foot-note.

The census of 1981, Volume XIV, Madras, Part I, page 198, gives the following distribution for every 1,000 persons engaged in agriculture:—

Agricultural labourers ... 429
Cultivating owners ... 390
Cultivating tenants ... 120
Non-cultivating owners ... 34
Non-cultivating tenants ... 16

This classification shows that there is now a proportion of nearly one cultivating tenant to every three cultivating owners. But the proportionate area cultivated by each class is not stated. Part II Madras of the Census for 1931, page 107, gives the numbers of cultivating owners as 4,767,516 and cultivating tenants as 1,518,191. This latter figure indicates what an immense number of tenants there are in the Presidency. Nevertheless, from other sources, it must not be taken to mean that they cultivate one-third of the area cultivated in the Presidency. The area cultivated by them is certainly very much less.

In the Census of 1931, it is stated there are 204,833 non-cultivating tenants without further specification. In the absence of any explanation regarding these people, it is to be presumed that they are men who have taken land on lease from a pattadar and have again sublet a part or whole of it to a sub-tenant. If this is the case, this class of non-cultivating tenant will probably

be found in the great delta areas which are under perennial irrigation.

In the Budget debates in the M. L. C., now M. L. A., it has been frequently asserted that the land tax is excessive. We find the same statement made in the columns of the daily press and we hear similar complaints from speakers at public meetings. All this agitation has one thing in common; the complainants make general assertions but do not support their statements by adducing facts to prove their case. Moreover, the language used is vague and loosely worded, and, to add to the confusion of thought, the word "ryot" has unfortunately come to have two meanings. In its broader sense a ryot means any man who cultivates the land. In its more restricted, but original sense, it means the pattadar who pays land tax to Government: hence the term ryotwari system. When a politician complains when championing the cause of the "ryot", does he mean to draw attention to the difficulty the pattadar meets with in paying his kist or land tax to the Government, or does he mean the difficulty the tenant has in paying his lease amount or rent to the pattadar who has sublet his land to him? He cannot logically mean the former. For, if the land tax is too high and excessive for the pattadar to pay, how is it possible for the pattadar to sublet his land to a tenant for a higher price than that which is demanded by Government from the pattadar?

So we can see that the land tax is not toohigh since a pattadar (and especially in wet lands) can, as a rule, find a tenant who will lease someor all of his land at a sum or rent higher than the land tax paid to Government by the pattadar.

Further, we can see that neither a permanent reduction nor a temporary remission of the land tax by 33 per cent. will benefit anybody. Although a pattadar can find a tenant for wet land and, therefore, cannot honestly ask for a remission of his land tax thereon,* it is not so easy for a pattadar to find a tenant for dry land.

If a pattadar pays a land tax for dry land, of any sum varying between 4 annas an acre to two rupees an acre and if the average size of a holding is between 4 and 5 acres, of what material benefit will it be to the pattadar to pay one anna 4 pies to 10 annas less per acre for his land than he is paying now? As this proposed reduction of 38 per cent. is put forward as a plea to help the "poorer ryots", the artificiality of the plea at once becomes apparent.

When it is demonstrable that the ryotwariland tax as a whole is not too high and that

^{*}Water rate is a different matter and it is wrong to attempt to confuse the incidence of the land tax and the incidence of the water rate.

[†] Here, again, there must be no confusion between ordinary dry land and garden land which is dry land improved by the pattadar into irrigable land. But as the pattadar is not charged for any improvements made by him, he only pays the land tax charged for ordinary dry land.

a permanent reduction of 33 per cent. of the land tax of the dry lands of the "poorer ryots" will not be of real benefit to them, it is clear that there must be some other reason which is the true cause of the agitations which are made at recurring intervals in certain districts regarding the incidence of the land tax.

Although it is not so specifically stated, it may be that the real reason lies in connection with the question of the Unearned Increment in the value of agricultural land.

As a consequence of an assured state of internal security together with an enormous increase in the volume of trade during the past 100 years, all land in the Presidency has risen very much in value. This value is called the unearned increment value of the land. It is so called because the people who hold the land have not brought about this improved value by any action of their own, since the value has risen as the result of the general improvement in the prosperity of the whole community.

So far as each pattadar is concerned, the value of the whole of this unearned increment belongs to him, because the Government, rightly or wrongly, have never taken steps for any part of this value to be shared with the pattadar by the Government, i.e., by the whole community.

When, therefore, a pattadar sells his land voluntarily, he is selling the unearned increment

value of his land as well as the actual agricultural value of the land. And, conversely, any voluntary purchaser is paying more than the cultivation value of the land, because he is also knowingly buying the value of the unearned increment which has accrued on the land.

But the Government has nothing to do with the private sales and purchases of rvotwari land. So long as the purchaser takes care to have himself properly registered as the new pattadar by paying the stamp and registration fees required by the transaction and thereafter pays his land tax regularly, the Government has no further cognisance of the transaction. When any purchaser voluntarily buys ryotwari land and if for any emotional or social or speculative or other reason, he expends a larger capital sum on his purchase than will afford him the current rate of interest on his capital by letting the land, he has no one to blame but himself. The transaction was a voluntary one and the purchaser knew quite well beforehand what sum he would have to pay every year as land tax. By what process of reasoning can such purchasers pretend that they have a genuine grievance and how can they, with truth, in any way implead the Government as having any responsibility in the matter?

It has become fashionable at the present time to demand a Permanent Settlement for rvotwari lands. What is meant by a Permanent Settlement?

If it means that the total revenue from the ryotwari land tax is not to be increased and if the Government acquiesces in this agitation, they will be betraying the interests (of which they are the Guardian) of the future generation of taxpayers and of the income necessary to improve the economic situation of the countryside, and for social services. With a rapidly increasing population consequent on internal security and a greatly improved mode of life, and with an immense area of vacant land which is fit for future cultivation, the total revenue from the ryotwari land tax of the Presidency will become higher every 5-years owing to the amount of the assessment on all new pattas issued for new land taken under cultivation.

Alternatively, if Permanent Settelment of ryotwari lands is intended to mean that all existing pattadars are permanently to pay their present assessment, the pattadars will lose by the bargain. The pattadar will have to take the bad with the good. At present a pattadar can and does receive remissions of part of his land tax for good reason adduced. With a permanent settlement, the pattadar will not receive any

remission at all—a state of affairs greatly to his disadvantage.

To revert once more to the important subject of sub-letting. Although the Government is apparently in favour of sub-letting, no steps have been taken to protect the tenant nor even to recognise in a practical manner that he exists. In the ryotwari system, the pattadar is not taxed on his own improvements. But there is no such guarantee nor encouragement for the tenant. Although Government recognises him and approves of his existence, the tenant is unknown to the ryotwari revenue system of the Presidency. If a tenant holding on an annual tenure makes an improvement, his improvement is used against him. His lessor enhances his lease or, if he refuses to pay enhancement, he is turned out to make room for a new lessee

The number of tenants is increasing rapidly.*
If this rapidly increasing class of cultivator is, in practice, discouraged from making improvements in his lease land, by so much that amount will the prospects of ever improving the agricultural methods of the people be diminished. And

^{*} Which is clear proof that the ryotwari land tax is not too high, much less that it is excessive.

to that extent is the Government shackling its own efforts of raising the standard of agriculture.

There is another point where confusion is apt to arise in connection with the ryotwari tenure. The confusion has arisen because the pattadar has been allowed to acquire the benefit of the whole of the uncarned increment, which has enhanced the sale value of land and towards which the pattadar has contributed nothing. When a pattadar sublets his land, he can only lease out the cultivation value of the land. But when a pattadar sells his land, he is selling both the agricultural value of the land and, in addition, he is selling the uncarned increment value which has become attached to land.

Considerable attention is being concentrated on the Sub-division and Fragmentation of agricultural holdings all over the Presidency.

In accordance with Hindu and Muhammadan laws of inheritance, the landed property of the father must pass in equal shares to the sons in the case of Hindus and to the daughters (a half share each) as well as the sons in the case of Muhammadans.

If the division of the property was governed by area only, it would involve the division of the property into as many smaller sub-divisions as there are heirs. But it is necessary in law that the division of the property must also be as nearly equal in quality shares as it is possible to apportion them. This involves the division of the property into as many sub-divisions as there are heirs and each of the sub-divisions must be similarly divided to fulfil the condition of apportionment according to the quality values of the soil. This latter apportionment is called Fragmentation.

Without entering upon the controversial ground as to what constitutes an Economic Holding, it is here stated, as a datum point, that a family can earn a subsistence means of living by cultivating three acres of dry land, or, in the Ceded Districts 6 acres. Manifestly, then, according to this premiss any holding of 2 acres or less is insufficient for a man to provide for himself and his family. Nevertheless there are tens of thousands of such plots of land in the Presidency and, although it is theoretically impossible to cultivate these lands with economic success, all of these lands are being cultivated very contentedly throughout the whole Province. The town-bred man asks: How then can this be done? And the answer is to be found in every village in South India: so wide-spread is the custom and the practice.

There are two classes of persons, namely, (a) pattadars and (b) landless labourers who take up these lands and there are three ways by which they can be cultivated; (i) they may be cultivated by the owner himself if the fragmentation is not too scattered or, more usually, (ii) those pattadars who wish to cultivate more land than they hold under their own patta are glad to lease plots of land however small which adjoin or are quite close to their own land. Moreover, these men cannot be rack-rented because, being cultivating owners themselves, they know to a nicety how much the land will yield and what will be a fair and reasonable sum to pay for the lease, or (iii) landless labourers are glad to take up small plots to cultivate as tenants. Primarily these landless men live on daily wages but, as a side line, they have the time and inclination to cultivate a small area of land because of its smallness. If successful, such men gradually increase the acreage they lease and depend less upon the receipts of their daily wage until the time comes when they can become whole time cultivators and darkhast for land of their own. According to the Census of 1931, there are 5,313,311 landless labourers in the Province. all of these, of course, wish to become farmers, but there is always a large number of this class of men who try their hand at cultivation. Some succeed and become farmers. Others fail and remain labourers.

It has to be remembered, however, that every death of the father of a family necessitates a readjustment in the family itself. When the sub-division of his land diminishes to an acre or less as the share of each surviving son, one brother can buy out his other brothers and thereby keep the holding intact. If this cannot be arranged, each son must sell his sub-division to whomsoever will offer a price for it and the son now becomes a landless man and can remain on in the village as a landless labourer or migrate elsewhere to find work for wages. But even so, the son is subjected to the disability of a forced sale which never realises the worth of a voluntary sale. From actual figures, the loss of patrimony amounts to 10 to 20 per cent, of the real worth of the land sold

Hitherto the industrialisation of the country has proceeded fast enough to absorb the men who are thrown off the land by the Hindu and Muhammadan laws of inheritance. But the more the population increases, the more, pro rata, will be the number of landless men thrown on the labour market. If the increase in industry is not quick enough to absorb these men, a serious situation may arise. Consequently the more village industries, in contradistinction from centralised town factories, can be fostered, the better for the internal security of the Province of Madras.

Although the practice of sub-letting, as at present carried out in South India, has certain disadvantages both to the tenant and to the Government, it has two very great advantages. Owing to the Hindu and Muhammadan laws of succession to landed property, the land is continually subject to sub-division and fragmentation and this custom militates against economic farming as contrasted with subsistence farming. Indeed. it is evident that, from a purely theoretical point of view, this sub-division of land after every generation of ownership would lead eventually to the break-down of the whole agriculture of the Province. In practice, however, nothing of the kind happens. This is accounted for by the fact that the smaller sub-divisions of land readily attract tenants, who are glad to cultivate them for reasons which have been stated in a preceding paragraph of this chapter.

The second great advantage which flows from sub-letting is that it gives the landless labourer the opportunity of bettering himself and rising in the social scale as the result of leasing some land and becoming a cultivator with the possibility, often fulfilled, of eventually becoming a small owner of land of which he is his own master. Latterly, thanks to the advent of

co-operative societies, the landless labourer has better facilities for taking up land on lease and later on, if he is successful, of purchasing land in dry land villages. Further, a hard working and ambitious man may, in time, not only be able to acquire a small consolidated piece of land but he may be able to improve it by digging a well and converting his dry land holding into garden land. This, however, is not the case in the perennially irrigated wet land tracts, where no actual cultivator of the land will pay the fantastic prices which are necessary to buy land in these areas. Here the purchasers are Vakils, merchants, and retired officials who wish to acquire land and in doing so are not, at the time, altogether guided by the economic aspect of the purchase. In these tracts the agriculturalist is content to take up a lease of whatever land he wishes to cultivate without any intention nor desire of purchase.

The area of land which is subject to subdivision and fragmentation is always in a state of flux as it depends on the number of deaths of pattadars in any one year. Nevertheless, the total area of this land, although always fluctuating, tends to become and remain stabilised over a number of years. For there is a parallel process of puchase always at work by men who desire to acquire more land than they actually possess or who wish to round off their own land

whenever small adjoining plots become available for purchase. In an immense number of other cases, a time arrives in the career of a landless labourer (who has been successful first as a part time tenant of land and next as a whole time tenant) when the feeling of land-hunger begins to work in him; and in dry land villages he is actuated by the desire to cease being a lessor of land on a precarious annual tenancy. He wishes to become an owner of land and gain the double advantage of (a) a rise in the social scale, and (b) of being able to obtain security of tenure which includes the benefit that any improvement he makes in the land will belong to himself and not to the man who rents out the land.

Hence there are always men of small means whether they are existing pattadars or whether they are landless tenants, who are glad to buy those small plots of land in dry land villages which are always becoming available owing to sub-division and fragmentation. Just as a landless labourer has the opportunity of becoming a substantial tenant by renting larger and larger areas each year, so the smaller pattadar as well as ambitious and knowledgeable tenants are given the opportunity of acquiring substantial ownership by means of gradually puchasing small plots which they can afford to buy, although their means will not allow them to buy land in larger plots at a time without running serious risk to their future prospects.

Here, too, the co-operative movement comes to the aid of the poor but ambitious and hard working man. By taking a short term loan, the landless labourer can obtain the means for growing his crop and is thereby enabled to take more land on lease than he could otherwise do. By taking a long term loan the small pattadar is enabled to buy more land and in a shorter time than he could do if he had to rely on accumulating his own capital. Moreover, and because these small pattadars are men who can obtain legitimate credit in a legitimate manner, this ability raises their self-respect and makes them more sturdy minded than they otherwise would be. And such men are very desirable citizens for a country to have.

It is probable that most persons will agree that the advantages resulting from sub-letting far outweigh the disadvantages. Nevertheless, the situation of the tenant should be made the subject of an enquiry, because it is to the interest of the whole community that the land of the country should be as highly cultivated as possible. The enquiry should be divided into two parts: (a) the situation of the tenant in wet lands, and (b) the situation of the tenant in dry lands. If it is found that compensation should be paid to the tenant, on quitting the land, for any improvements he may have made in the land leased to him, the nature and terms of the compensation should be determined and placed upon a legal basis.

Among other legislative and economic items in the agricultural policy of the country, which requires to be dealt with on a national scale, is the standardisation of Weights and Measures.

In Madras, as in all other countries, there are merchants who are notoriously and hereditarily dishonest and there are certain trades which by their very nature lend themselves to dishonest practices. In branches of some trades, merchants rely on their dexterity in dishonesty to make any profit at all.

The multiplicity of weights and measures of capacity in the grain trade is a matter affecting every living soul in rural areas, and it affects every merchant and retailer who wishes to live in an honest and reputable manner.

The railways have successfully introduced standard weights and measurements on which to base their charges for the supply of transport. The chief safeguard required for the public in their case is the construction of weighing machines which cannot be tampered with.

Thanks to the Cadastral Survey which has penetrated to every village in ryotwari tracts and in surveyed proprietory estates, measures of length and square measure have become standardised and are in use everywhere. It only

remains now to make a legal enactment that all sales of land shall be conducted according to the standard measurements and not according to any local measures.

The general change-over from local measures to standard measures should be done gradually. It will be sufficient if the change-over of the various types of weights and measures be made every 2 years beginning with a standardised Maund and with grain measures such as Kalams. It would be advantageous to publish a programme of the complete scheme beforehand stating in which years the change-overs are to come into force legally, and from the dates advertised it should be made illegal for a merchant or retailer or any one clse to make any transaction contrary to the standardised scale.

There are so many dishonest merchants, and these merchants make such large profits and they form such an immense and powerful vested interest that the Standardisation of Weights and Measures will cause a loud outery; and any confusion which may at first result from the adoption of the standard will be ruthlessly exaggerated in order to obstruct and if possible wreck this long overdue and necessary reform. Nevertheless all those who wish to raise the standard of honesty in this country and who wish to save the poorest and most helpless persons in the community from being any longer exploited should give their support to the reform in no uncertain manner.

Chapter XIII, Sections 264-267 of the Indian Penal Code will have to be modified as present, under this Section, the use of weights and measures standardised by Government is optional and is not compulsory. Although this is a matter which seems to have escaped the notice of the Government of India, the Government of Madras should have no difficulty in moving the Government of India to make the change in the above Sections of the Indian Penal Code and have the changes ratified by the Central Legislative Assembly.

It seems to be the desire among a certain section of reformers to abolish the Zamindary system in the Madras Presidency by the acquisition of the permanently settled estates and thereby effect the elimination of the proprietors. It is quite probable that there may be a number of Zamindars who would be willing to have their land acquired by the State, provided that they were paid the fair market value of their property. Moreover, there is no necessity to expropriate the Zamindars by any unfair measures. because their estates can be acquired without any direct expense to the taxpayer as is demonstrated by an example given below. A beginning could be made by taking the simplest cases, i.e.,

those estates which are surveyed and settled and where the kist is paid in money by all the pattadars. Here the difference between the money received by the Zamindar from his pattadars and the sum paid to Government as peishcush and P. E. V. S. by the Zamindar represents the Zamindar's net income from his Estate, and this sum is the basis on which compensation will have to be paid to the Zamindar if his Estate is to be acquired.

Suppose that the Zamindar receives Rs. 15,000 from his pattadars and pays Rs. 10,000 peishcush to Government. His net income is Rs. 5,000. The present rate of interest is 3 per cent. The problem consists in calculating what capital sum is necessary to produce an annual income of Rs. 5,000 at 3 per cent. together with an annual Amortisation which is needed for eventually extinguishing the income of Rs. 5,000. The Annuity Tables show that it will require a capital sum of Rs. 1.66.666 to do this and that it will take 30 years to complete the transaction. In order to acquire the Estate, it will be necessary for the Government to raise a loan at 3 per cent. in the open market to buy out the Zamindar The Government then takes possession of the Estate and receives from it Rs. 15,000 a year. Out of this sum the Government will have to set aside Rs. 8,500 a year for 30 years according to the loans table when the loan will be paid

off and the transaction be completed. The Government, however, when raising the loan in the open market will have to guarantee the loan. But this will involve no risk to the taxpayer, because the loan will be received, administered, and paid off by Government agency throughout. The management of the Estate will not cause extra expenditure, because the village establishments of the Estate are paid by Government and the villages will fall under the management of the Tahsildar of the taluk in which they lie. There will, of course, be a very small annual expenditure necessary for pen, ink and paper and postage stamps to deal with the village staffs, but such small sums may well be left out of the accounts of the acquisition proceedings in view of the benefit which the Reformers' claim will accrue to the country by the abolition of the Zamindary system.

In addition to the foregoing, in every Zamin there is likely to be some miscellaneous revenue over and above that paid by the sums included in the pattas issued, e.g., lease of tank fish, grazing in tank beds, right of removal of sand in stream beds, etc. There will also be sums paid by some pattadars only, such as water rate. Suppose that the income derived from these miscellaneous items amount to Rs. 500 a year, a capital sum yielding that amount at 3 per cent. interest will also have to be paid to the Proprietor of the Estate in order to buy him out.

The acquisition of the very large Zamins will not be such a simple matter as that given in the example above. If, however, the smallest estates are acquired first, the experience gained will simplify matters when it comes to the turn of the largest Zamindaries.

So far as the general public is concerned, the Agricultural Department may be considered to be divided into two main sections: (a) the Administrative branch. (b) the Research branch. The latter branch never comes into contact with the public. Nevertheless it is or should be the source of all agricultural improvements and methods. Any Government which starves this branch of the funds necessary to carry on its work is committing a crime against the whole people of the Province. Nor can the work of this branch be hurried. In the plant breeding section, for instance, it may take years to evolve an improved plant but when this has been done. the result may add one to ten crores of rupees to the annual income of the peasantry. There is, for instance, an average of 11 million acres under paddy every year. By the use of pedigreeseed, every increased net profit of one rupee an acre means a total annual increase to the peasantry of 11 crores. Consequently, the Research branch

ought to be supplied with adequate funds to carry on its work and it should be left to develop its work without being harried either by the Government or by impatient members of the public. In return it should be insisted that the Research branch issues very full and cheaply priced reports regarding its work and its progress and these reports should be readily and willingly available to those members of the public who are prepared to pay for them. Only in this way will it be possible for the Agricultural Department to receive the intelligent support of the community. How can leading people be expected to support a department of whose work they know nothing?

Further, claims to improvement must be fully covered when issuing a new or an improved type of seed. For example, it is undeniably true that cholam A. S. 29 Periyamanjah gives a considerably larger yield per acre than does ordinary market bazaar seed. But prominence must be given to the fact that it is a six months crop (as compared with the 31-4 months of ordinary cholam), because it is not always convenient nor economic for a small farmer to keep land under cholam for 6 months. Cholam A. S. 29 will be far from being an assured improved crop until its growing period has been reduced from 6 months to 42-4 months. It is likely that as much as 20 years or more Research work will be required before this objective is gained. But

when it has been gained, the crop will add several rupees more income per acre to the grower, and it will go far to solving the shortage of the cattle fodder problem during the 4 months hot weather in the Presidency. Hence it becomes manifest that the necessary improvement of cholam A. S. 29 is one of the most pressing needs of the day. For the few thousands of rupees per annum expenditure required for the next 10 years or the next 20 years will result in an increased annual income of lakhs of rupees a year to the rural population. In addition there will be a milk nutrition value in Child and Maternity value by the improvement in this fodder crop, which cannot be computed in any terms of money as such values can only be regarded from a spiritual point of view, because the present (or any other) Government is the Guardian of an unborn generation.

In any consideration of the Administrative branch of the Agricultural Department, it is reasonable to presume that one of the first duties of this branch is to keep in close touch with the rural population. In fact, however, the only members of this branch of the department, of whom the peasantry are aware, are the Demonstrators, although there are immense numbers of the peasantry who have never yet heard of them. Much less have they had any dealings with them. Hence, so far as the public is concerned the key men of the Agricultural Department are the Demonstrators. It should be the duty of every Demonstrator, every time he goes to a village, to see the President of the Village Panchayat Board in order to discuss the agricultural situation of the village. Next, with the help of the President, the Demonstrator should prepare and maintain a card index of the village in which should be incorporated the salient features of the agricultural situation of the village. The President can, for his part, help the Demonstrator to talk to the villagers and discuss matters with them, by calling together the leading and best cultivators in the village. In this way, the Demonstrator, the Panchavat Board, and the cultivators can plan how to make improvements in their methods and how to carry out and test the proposed improvements by means of sample plots in the fields of the best cultivators in the village. By this means improved seed can be grown in the sample plots and the seed of that seed can be distributed next year among the rest of the village. Similarly, improved implements can be tested by local criticism, and elimination of faults, if any, can be taken in hand. The sterilisation of scrub bulls can be discussed. The growing of green manure crops in situ and the practice of ploughing them in before the main crop is sown or planted can be demonstrated by means of the good will of the leading villagers. And so on according to the agricultural stage of progress to which the village has attained.

The leading villagers of this Presidency are shrewd, intelligent, and quick-thinking men besides being men of practical experience. The Demonstrator should, therefore, keep a careful record of all the questions, objections, and criticisms made by the villagers in the course of his talks and field demonstrations with them. A precis of these remarks of the villagers ought always be sent to the Demonstrator's local superior authorities so that action can be taken on them, and it will be possible for them to be noted and then quickly passed on to the Research branch, so as to keep the Research workers in close and immediate touch with the views of the villagers.

It now becomes manifest from the foregoing that, in addition to his training, the two qualities which a Demonstrator should possess are:
(a) personality in order to secure the good will of the villagers, and (b) personal acquaintance with the President of the Village Panchayat Board and the leading ryots in a village in order to gain and hold the attention of the cultivators.

It is not given to every Demonstrator to possess personality, but he can gain and keep touch with the leading men in the village

comprised in his Circuit. And the obvious way for a Demonstrator to succeed in this is for him to remain in the same locality for years together. In the face of this, the Demonstrators are toooften transferred from one locality to another. They are not given any chance of getting to know the people. For instance, 10 Demonstrators have been sent to Salem Taluq during the past 7 years, i.e., from 1-1-31 to September 1937 inclusive. Salem Taluq consists of 227 villages. How does the Agricultural Department imagine it can improve the agricultural methods in the Taluq when it permits Demonstrators to be posted to and then removed from this Taluq after 1 month and 11 days or, again, 1 month and 6 days, and when no Demonstrator has remained in this Taluq for more than 1 year 1 month and 18 days? If there is no paramount reason for these too frequent transfers, then the transfers are a blameworthy waste of public money and they break the heart of any Demonstrator who is keen on his work. If there is a paramount reason which necessitates these transfers, then there must be something very wrong with the organisation and policy of the Agricultural Department, and the Department should be revised and reorganised from top to bottom. So bad is the present state of affairs that it has become reasonable to be dogmatic and aver that the minimum period that a Demonstrator should stay in one area is not less than 10 years.

Indeed, it is not easy to think of any really good reason why he should be transferred at the end of that period.

The touring procedure suggested for the conduct of Demonstrators, applies with equal force to the local officials of all the Provincial Services. If, say, the local Health Inspector can, through the President, secure the approval and backing of the Panchayat Board for his proposals, is it not palpable that his work will progress much more quickly and surely than if he has to rely on his own sole efforts? Moreover, no one will deny that there is no co-ordination whatever between the officials of the various departments although they ought to be closely interlocked. The waste of efficiency caused by this great blot on the administration is prodigious although unseen. With a better organised administration, the Presidents of the Village Panchavats would act as the link between the representatives of the various departments besides benefiting by their advice. Matters which affect the co-operative department affect the agricultural department. The problem of the improvement of village livestock of all kinds is common to the Panchayat Board, the Veterinary Department, the Agricultural Department, and the Forest Department. On what occasion and for how many times has the Forest Department cooperated with the Agricultural Department in any village in any part of the Presidency? And the same

question may be asked for all the other departments. Of the relatively small number of Panchayat. Boards which are supposed to be in being, how many are working with any approach to efficiency? And is there a single Panchavat Board* in the Presidency which is in close and regular touch with local Provincial officials who ought to be helping them with their advice. In every district of the whole Presidency, how many local heads of departments know or even have a list showing how many Panchayat Boards there are in the district and which they are? On their tours (and with the exception of the co-operative service). how many local heads of departments have ever seen a President of a Village Panchayat Board aud, even informally, discussed village problems relating to his department's special knowledge and sphere of work? These and many other similar questions indicate how inefficient and out-of-date the district administrations have become. Nor can the rural population be blamed for being dissatisfied with the present state of affairs.

It is again repeated that, so far as the public is concerned, the Demonstrator is the key man of the Agricultural Department. In order to enable the Demonstrator to move about more freely than he otherwise would be able to do, he is given an assistant called a Maistry. Once the

^{*} This, of course, excludes the "typical" villages recently selected by the District Economic Councils.

Demonstrator succeeds in inducing a cultivator to adopt a certain course of action, it is the duty of the Maistry to dry nurse that cultivator and keep him on the right lines regarding details. For instance, a D. B. C. 11 (medium) iron plough has proved itself to be undeniably a better plough than the wooden country plough for use on dry land red soils, but its merits fail unless the plough shaft is set at the correct angle to suit the varying heights of the plough bullocks. It is the Maistry's job to see that the cultivator does this and that the cultivator understands that if he does so, the plough is self-balancing and will run of its own accord through the ground and does not require the ploughman to throw his weight on the plough handle as he has to do with a wooden plough, i.e., it requires much less exertion to use an iron plough than a wooden one. Further, the iron plough runs deeper in the soil and turns the furrow right over while the wooden plough merely scratches through the surface soil.

It stands to reason that one Maistry per Demonstrator is quite inadequate, and the more successful the Demonstrator is in his contacts with the people, the more Maistries he requires to follow up and consolidate his efforts to introduce improvements. As a definite rule, there should be a minimum of one Maistry per Firka; if a Demonstrator is a first rate man, he should

have additional Maistries to help him according to the needs of his circuit (i.e., one taluk). But who is there, except the silent peasantry themselves, to decide which Demonstrator is a first class man? With too many transfers it is impossible to discriminate and ascertain which Demonstrator is securing real improvements in the agricultural methods of his circuit and which Demonstrator is failing to make any sufficient impression on the people.

CHAPTER IV

RURAL INDEBTEDNESS

Villagers have fallen into debt on account of Litigation; Betrothals; Marriages; Funerals; sudden loss of cattle owing to Epidemics and not being covered by insurance; ease of Borrowing which has arisen from the greatly increased value of land following on the rigid maintenance of law and order and a vast expansion of trade; a steadily rising Standard of Living.

During the past 4 or 5 years, public attention in the Madras Presidency has been focussed upon rural indebtedness and means have been devised to assist a debtor to procure outside advice to help him pay off his debt if he has any credit left and if it is still possible to save him. Such men can rely upon the bona-fides and the cheapness of the Debt Conciliation Act to clarify and determine the amount of debt he must pay to clear himself altogether; and provided he can furnish the necessary security, he can then seek the aid of a Land Mortgage Bank to advance the sum necessary to rid himself of his creditors. Debt conciliation under the Act must, however, be voluntary, but it has been stated that most creditors will agree to debt arbitrament by means of the Act and some have gone so far as to say

that many creditors will now be glad to accept an arbitrament of half of the formal debt. This means that debt has become a curse to the creditor as well as to the debtor if the creditor is willing to sacrifice half of his legal rights or, indeed, any lesser sum approaching that proportion. This blot upon the administration of Civil Justice must be attributed to the Legislative Chamber well as to the Civil Courts. The dilatoriness of the Civil Courts shows no signs of improving and it was said shortly after the War that the openly agreed rate of interest in Salem district had risen by no less than 3 per cent. as an offset to the creditor to compensate him for this delay and added expense in seeking a decree and in the difficulty in executing a decree when obtained. The Legislature has been responsible for such a state of affairs, because they have indolently been content to watch this serious handicap to the trade of the country. prestige of the Government has very seriously fallen in the estimation of the people because. after all, it is one of the first duties of any form of government to step in and assert itself when justice, i.e., the administration and interpretation of the laws ceases to be quick and cheap.

Owing to the facilities now offered to debtors, it becomes possible to distinguish rural debtors into three classes:—

- (a) those debtors who have incurred debt owing to incompetence or extravagance.
- (b) those debtors whose credit has become exhausted and have now no means of freeing themselves from debt. But even here some of this class of debtors may be saved by agreement with the creditor, thanks to the voluntary Debt Conciliation Act, as compared with the long delay involved in seeking judgment and execution in Civil Court.
- (c) those debtors who have enough credit left to come to terms with their creditors on agreed terms.

It is not sufficient, however, to complete all arrangements possible for dealing with existing debt. It is equally important to complete the machinery by which all thrifty and hard working peasants can be saved as much as possible from incurring a state of hopeless indebtedness in the future.

The agency by which each village can be supervised is the Village Panchayat Board and the means by which cheap credit may be obtained is the Co-operative Society in its various departments dealing with short term loans for cultivation expenses; intermediate term loans for

purchase of cattle, etc; sale and purchase for marketing the crop; and long term loans for improvement of the land.

In South India, there are (a) 8,465 villages with a population of 1,000 to 2,000 and there are 4,582 villages with 2,000 to 5,000 inhabitants which make a total of 18,047 villages. Besides these there are (b) 9,656 villages with a population of 500 to 1,000 inhabitants. This last category is probably too small to support one complete set or unit Co-operative Society which will, at first, require a combination of at least three of this type of village.

There are (c) 28,306 villages with a population of less than 500 inhabitants aggregating 4,996,332 souls, and it will be beyond the present resources of the Presidency to include and combine all these villages into Co-operative societies within the next 5 years.

At the other end of the scale there are 817 towns with over 5,000 inhabitants each but aggregating a population of 9,440,629 persons, Of these 84 have the status of Municipalities which leaves (d) 793 Panchyat Boards.

Adding up these three categories (a), (b) and (d), the total amounts to the formation of nearly 17,000 Village Panchayat Boards, which must be brought into being before Madras can be considered to be a self-governing and democratic Province,

If and when these Village Panchayat Boards have been established, the agency for the prevention of future indebtedness with these villages will be complete. For it will be part of the function of these Boards to watch over the welfare of their fellow-villagers to make sure that those who need credit are able to obtain it in a self-respecting form and as a matter of business. And the machinery for issuing this credit will be the Village Co-operative Society.

No matter how poor a man may be who is cultivating land, he can obtain the means necessary to cultivate his crop by hypothecating the crop as security to the village short term loan When the crop is harvested, he can lodge it with the co-operative village sale society. If he is in immediate need of money, the sale society will advance him money on the value of his crop which will remain in the hands of the sale society until the market price becomes favourable when the crop will be sold and the balance will be handed over to the cultivator. Nor need the transaction end here. The man may next deposit all or part of the money paid over to him in the Thrift branch of the Village Co-operative Society, or he may purchase goods (as if in a shop) obtained for him at favourable prices by the purchase of goods branch of the Village Co-operative Society. In short, the Village Cooperative Society will be the means whereby any villager can obtain credit for his legitimate

agricultural needs, obtain facilities for marketing his crop at prices much more favourable to him than heretofore, obtain his shopping at little above wholesale prices, and have the satisfaction of depositing any savings he may wish or be able to set aside, in safe custody.

Even so there is no such place as Utopia on earth. It is not to be denied that a man, chiefly through a bad season, may find that the crop on which he relied for his security has failed him. In such instances of misfortune the fact that a man is known to be a steady and hard working person will most probably secure him public sympathy in the shape of an extension of time. Or, it may be that the villagers in a collective capacity of joint responsibility might be prepared to stand security in such cases. In fact, this possibility leads to the question whether in selected cases, at any rate, the Village Panchayat Board could run the village co-operative society as a village institution by enrolling one representative per family as members of the society and crediting all profits of the society in the Panchayat Board account as part of the income of the village.

From the foregoing it can be seen that a plan applicable to the whole Presidency for minimising rural indebtedness in the future is a practical one. It depends, however, on the policy of the formation of Panchavat Boards for every

village which has already been promised to the people: for in no other way can this Presidency be made into a democratic self-governing Province: and the policy remains a standing promise until it has been kept. Democracies cannot be made from the top downwards as is being attempted by the Government of India Act. That great statesman, Mazzini, defined a democracy :- Democracy is the government of all, by all, for all, under the leadership of the wisest and best. If Madras is to be a democracy, it must be built from the bottom upwards. Until the people learn how to govern themselves in their own village communities. how can they cease to be credulous and how can they distinguish those who are the wisest and best to guide their destinies as a nation?

Of all the promised reforms which have been made to the people of South India, that of the establishment, under Statutory safeguards, of a Panchayat Board in every village ought necessarily take priority over all other promises. For, this reform is the establishment of self-government, but all other reforms are subsidiary to the promise of self-government, because self-government is the foremost and chief reforms of all others.

For instance, the two other most prominent reforms which have been proposed are: (a) Compulsory education in all areas with a population of 5,000 and over. The answer to this proposal is to remind the Government that it is better, first,

to ensure that compulsory education is honestly enforced in those areas in which it has already been notified. It is only after this has been done and successfully accomplished that the Government can, with honour, recommend the electorate to extend the scope of compulsory education. Otherwise, the people can justly charge the Government with having no sincere convictions in improving education.

As regards the other reform (b) Prohibition, no man can say that enforcement will fail in Madras until it has been tried, although we know that everywhere else the attempt to force Prohibition has been a failure. At the best, Prohibition can only benefit a relatively small minority, whereas self-governing village panchayats working the cooperative movement will directly benefit the whole rural community.

The two reforms cannot be made simultaneously because the financial strain will be too great. From the point of view of the benefit to the greatest number, the formation of village boards should have the priority. When established, there is not only the real prospect of minimising rural indebtedness in the future but, if Prohibition be taken in hand then, with the genuine approval of the rural population, the Government will have behind it everywhere throughout the Presidency the support of all the organised village communities: whereas who can say whether this support is forthcoming now.

CHAPTER V

VILLAGE INDUSTRIES

The agricultural population of South India have idle periods during the year, varying from six months downwards according to the climate in which they live and the crops which they grow. These periods are called idle periods, because little or no agricultural work can be performed during these intervals. In the scheme of rural development, the problem which requires solving is the best means for keeping the people occupied during those times when there is no agricultural work to be done.

There are three ways of solving this problem:

First, to introduce new but subsidiary minor activities of an agricultural nature among the villagers, e.g., milk production; vegetable growing; poultry farming including ducks and geese; bee keeping; fruit growing; cotton and wool spinning and hand weaving; mat making; basketry; coir making; Keith (cocoanut leaf) weaving; palmyraleaf-working; rattan work; jaggery making; rope and string-making.

Where a crop is required to be grown on a large scale, jute is an alternative crop to paddy in delta irrigation areas, the fibre of which may be used for village industries such as durree and carpet making, and rope making.

In those villages through which the electric grid passes, it should be possible to develop cotton and wool spinning and weaving into a village industry with the addition of a cotton ginning machine. Seed decorticators presses can also be introduced into these villages.

Second, to encourage villagers to work at what is called cottage industries at such times as they are unable to spend on their agricultural work. Cottage industries have been defined to mean :- Industry carried on by workers in their own homes as distinct from those carried on in factories. The distinction is important, because a cottage industry is exempt from and outside the purview of Factory Acts and so on. Cottage industries would include such work as button-making; embroidery; lace-making; metal and wood working; toy making and so on.

Third, to induce villagers to occupy some of their enforced leisure time in self-improvement culturally. Here is the opportunity for developing the village centre with a view to making it the meeting place for social intercourse; attending lectures; listening to music records both instrumental and vocal; witnessing magic lantern displays; attending portable cinematograph demonstrations: hearing broadcast speeches bearing on the various branches of technical improvement in agricultural

methods, health, nutrition, etc., and speeches designed to broaden and interest the minds of the listeners; and the exchange of books of which it is hoped that every village may become a branch of the Taluk lending library at no very distant date.

In point of fact, the agriculturalist is not always so lazy or idle as he is represented to be by town-bred reformers.

Wherever there are mills or mines, e.g., mica, magnesite, manganese, chrome, the labour is supplied by adjoining villages. The labour force does not always consist of the same persons; the various members of the family, male and female, take it in turns to work for the industrial wage. This is a very sensible arrangement, because each individual is able to vary the nature of his work and the extra wages earned in cash are earned by the family and not by any particular individual; so that the labour remains primarily agricultural with no tendency to become whole-time factory labour. In theory, this is not the most economic way of employing factory labour, but a system which works to the satisfaction of the labourers is not to be despised in practice. The same remarks apply to road maintenance labour and other examples occur to the mind according to local conditions.

Even so the labour absorbed by the foregoing demands is only a small percentage of the total idle, i.e., unoccupied agricultural population.

Quite an appreciable number of labourers are migratory and others are semi-permanently employed on the coffee, tea, etc., estates in the planting districts. Many villages in the plains have become accustomed to meet this steady demand by sending a fairly steady quota of workers every year to the hills. The steady oversea demand for labour by Burma and Ceylon also gives semi-permanent work to quotas from the agricultural villages of the East Coast and Southern Districts of the Presidency.

Of the remainder of the agricultural population, quite a number are and have been steady workers at certain cottage industries during their spare time, and there has been no general complaint that the demand for their wares is in excess of the supply. In other words if, (as is so often suggested) a number of other villagers are taught to produce the same articles, the market may be in danger of immediately becoming overstocked; the new comers would find great difficulty in selling a tithe of their newly organised industry and output, and the existing workers would find

that the price of their goods had become unremunerative as the result of a glutted market.

The question then of teaching cottage industries to agriculturalists is not so easy nor so simple as it at first sight appears to be.

The first step to be taken in the solution of this problem is to include in all regional surveys the number of villagers in each village already engaged in cottage industries or other spare time work and the balance of men and women left who do no work and why not. It should be noted, too, whether electric power is or will be available under the electric grid scheme. These regional surveys fall within the province of the District Economic Councils, and it was presumably with a view to a speedy commencement and completion of work of this nature that so many Revenue Officials have been included in each Council. But, so far, it does not appear that a single District Council has even made a beginning with this important and nation-wide matter.

The next step which is indicated, is to make a list of industries which could be practised on a small village scale such as bone meal crushing, oil seed extraction, sugar production, etc. Owing to the prohibitive cost of transport of raw materials to large central factories, the only alternative is to develop village scale conversion of local raw materials for sale within reasonable

local distances. That is to say small village industries should be evolved locally in order to work up local raw materials for consumption in local markets. The growth of factories and slums and labour strikes and of unscrupulous and irresponsible professional agitators will thus be minimised.

The development of village industries seems to be within the province of the Honourable Minister of Development. As soon as the regional survey of every village of each Firka is completed. a list of the local village and cottage industries. which can be started or expanded if already existent, should be furnished to the Minister for action by his department. For, manifestly, the banks will be only too pleased to finance the larger Factories and other industrial schemes if they are on a sound basis. In fact, any advances made by Government agency to large or medium sized concerns, or to any registered companies is an interference with the business of the banks. and any such intervention by the department of Industries is unsound economically. And particularly so in any case where the banks have declined to make a loan. If, after the scrutiny of any proposition, the bank managers refuse to adventure the money of their shareholders and depositors. it cannot be a business-like action for the State to utilise the money of the taxpayer for such propositions.

CHAPTER VI

LIVESTOCK

The number of cattle, buffaloes, sheep and goats in the Presidency reach the prodigious total of 43,308,020 head or not far short of one animal per head of the human population.

The numbers are :-

 Cattle
 17,790,855

 Buffaloes
 6,816,965

 Sheep
 11,938,824

 Goats
 6,761.876

Of the above number of cattle and buffaloes, a very large number of animals are kept, which are apparently quite useless and are a serious economic drain on the country:—

- (a) Bulls and bullocks over 3 years not kept for breeding or for work ... 655.170
- (b) Cows over 3 years old not used for breeding or for work ... 578,535
- (c) Buffaloes over 3 years old not kept for breeding or for work ... 130,678
- (d) She-buffaloes over 3 years old not used for breeding, milking, or work... 221,899

Total ... 1,580,782

The infant mortality among the cattle and she-buffaloes is terribly wasteful. If a cow or a she-buffalo is to be kept in milk she must have a calf, yet the number of young stock under one year old is as follows:—

	(a)	Breeding cows over 3 years old kept	
		for breeding or milk production	4,295,273
a	(i)	Young males under 1 year old	966,892

(11)	топпа	remares un	der 1 year o	old	1,231,589
		Total	a (i) and	a (ii)	9 109 401

	Discrepancy			2,096,792
Breeding	she-buffaloes	kept	for	

breeding or milk production ... 2,398,944 b (i) Young males under 1 year old ... 496,239

(ii) Young females under 1 year old ... 854,280

Total b (i) and b (ii) ... 1,350,469 Discrepancy ... 1,048,475

Thus there appear to be 2,096,792 fewer births among cows and 1,048,475 fewer births among she-buffaloes than there ought to be.

Further, taking the actual births registered, there ought to be twice the number of young animals of 1—3 years old than there are animals under one year old.

Instead of this we find:-

Male Cattle.

(i)	Under 1 year old	 966,892
(ii)	1 to 3 year old	 1,286,279
	Shortage	 647 503

Famale Cattle.

(i)	Under 1 year old	 1,231,589
(ii)	1 to 3 years old	 1,319,254
	Shortage	 1,143,924

Buffaloes.

(i)	Under 1 year old	 496,239
(ii)	1 to 3 years old	 408,201
	Shortage	 584,277

She-buffaloes.

	Under 1 year		 854,230
(ii)	1 to 3 years	old	 778,910
	Shortage		929.550

The total shortage is

Cattle ... 1,791,427 Buffaloes ... 1,513,827

3,305,254

of young animals 1 to 8 years old than the number of births would warrant.

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For practical purposes, the livestock of South India fall into 5 classes:—(a) Working (cart, plough, and lift) cattle; (b) dairy cattle; (c) village herd cattle; (d) sheep; (e) poultry, i.e., fowls, geese, and ducks.

Cattle for working purposes are bred locally everywhere, but the best types of such cattle are bred in special areas, the chief of which is the western portion of the Mysore State.

The relatively small quantity of milk which is consumed in the Province is obtained from two sources: cows and she-buffaloes; but the milk of the she-buffaloes is usually used for the purpose of being converted into ghee. The yield of milk from the cows is so small that the supply from each animal could and should be doubled, though it will require a concerted effort on a national scale before this can be done.

The term "village herd cattle" is meant to include all those animals of both sexes which are kept by the village population and are sent out every day and all day in charge of small boys and girls to obtain a precarious living by picking up what food they can find in the fields lying fallow, in the village waste and, if there is one, the adjoining Reserved (State) Forest.

The sheep of a country are of national importance. They are the main source of the wool which every country ought, as far as possible,

to grow for itself. This is particularly the case in South India where, in the drier upland parts of the country, the peasantry have little or no agricultural work to do for six months in the year; and it is desirable to discover additional occupation and means of livelihood for them in the shape of village industries. The production and working of wool into a rough but finished product has for thousands of years in other countries been a congenial occupation besides being to-day a source of income for both men and women of the country-side.

Although a few fowls may be found in most villages, poultry are held in such low esteem that they have never been included in the quinquennial census of the livestock of the Presidency. The maintenance of geese and ducks should also be encouraged. Geese have the advantage that they are long-lived; they forage for themselves and can live on grass; when kept in flocks they will graze anywhere and enrich the ground upon which they graze; when kindly treated they become very tame and contented and can be easily controlled by a small girl.

Ducks, too, are friendly birds who like to move in small flocks. They are more prolific egg layers than are hens and they lay a larger egg. Shoranur in Cochin State and Namakkal taluk in Salem district, abutting on the Cauveri river, have been for forty years and more large duck distributing LIVESTOCK] . [CHAPTER VI

centres. In Namakkal taluk it has become customary for the ducks to be driven to a market in small crowds along the roads when the metalled surface has become softened by rain. They can move long distances in this manner for sale. It is even said that some of these ducks are taught to fly back again to their breeders after being sold!

Goats are not mentioned here as being of economic value to a country. They do incalculable damage to tree and shrub growth and this is most true in the plateau dry scrub jungles where tree conservancy is a matter of national necessity. In South India, goats have increased in large numbers during the past 50 years, and in some parts their numbers have become excessive. It is one of the lessons of applied history that countries which have allowed themselves, heedless of the future, to be overrun by goats have gradually lost their forests which have become replaced by bare and barren rocky hills. Greece, Spain, and the southern half of Italy are modern examples of the irreparable economic damage which goats will do to a country if they are short-sightedly permitted to do so. It is, therefore, a matter of national importance that goats should be replaced everywhere in the Presidency by sheep.

Thanks to the propaganda work of the Health Department in the districts and by means of Communiques issued through the Press, an increasing interest is being taken in Child and Maternity welfare by some members of the general public, and in Dietetics in the shape of a better balanced dietary for the population of South India by other members of the public. As a result of this, there is a growing belief that an insufficient quantity of milk is being used by all classes and by all ages in the community. It will take time to convince forty-six million people of this defect in their national diet sheet. Nevertheless it is felt that a beginning can be made by persuading nursing and expectant mothers to drink a certain quantity of milk from the period of known conception to the period when the child is weaned.

In the Census of 1931, it is stated that 1,313,280 human babies were born during the year. This means that there were roughly the same number of mothers who gave birth to these children and Dietarians say that a nursing mother ought todrink not less than 1 pint of milk a day in addition to her ordinary food.

Pro rata, there would be roughly 1,818,280 expectant mothers in the same year who would, in the course of nature, give birth to a child in the following year. They, too, should have 1 pint of milk per day to keep their stamina and that of the unborn growing child.

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Further, there were 5,517,269 children aged 1 to 5 years old. Each of these children ought to drink 1 pint of milk a day in addition to their ordinary food.

Lastly, there were 6,069,809 children 5 to 10 years old and 5,474,237 children 10,"to 15 years old who ought each to drink ½ pint of milk per day.

The quantity of milk required to supply the above milk dietary amounts to 515,062,541 gallons of milk per year. In order to supply this quantity of milk, those cows which are recognised as milk or dairy cows are calculated to yield an average of 250 gallons or less of milk in 12 months.

Hence it requires 2,060,250 cows to supply 515,062,541 gallons of milk per year at the rate of 250 gallons per milch cow.

The above calculation is concerned only with child and maternity welfare. It makes no allowance for the milk required in the preparation of ghee nor for the milk drunk or used in cooking for the remaining 28,759,507 inhabitants of the country who are above the age of 15 years. The milk yield of she-buffaloes cannot be taken into this calculation as their milk is never given to children to drink but it makes excellent ghee.

A properly bred and fed dairy cow ought to yield not less than 500 gallons of milk a year, and it

can be seen that 1,000,000 cows should be able to supply the milk which will require 2,000,000 cows, at their present rate of yield, to supply the 515,062,541 gallons which are necessary for the Child and Maternity Welfare of the Presidency.

There seem to be no breeders in the Madras Presidency who specialise in the production of dairy cows with a milking pedigree. Indeed, the problem of establishing a standard strain of pedigree milking cows is further complicated by the fact that it is not yet known what breed or established mixture of breed, with a known record, constitutes the best type of bull to sire the dairy herds of the future.

Forty years or more ago, dairy cow breeders in some of the counties in the warmer Southern States of the United States of North America imported selected Indian stock to help build up their pedigree herds there. Some of this stock will have passed its 6th generation by this time; and it is probable that, by now, the characteristics aimed at by those breeders who imported the Indian cattle will have become "fixed" and the herd owners will have maintained reliable milk records. If this should be the case, here is a source from which dairy bulls (and, if possible, cows) may be obtained in order to take their part in building up the foundation stock of the future dairy herds of Madras.

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The same thing is said to have happened in the case of buffaloes. It is said, too, that the buffaloes of Ceylon are much superior to those of South India.

In addition to the foregoing considerations, the milk problem is complicated by the enormous scale on which the dairy herds of this country must be built up. The animals required must be produced in hundreds of thousands. It is not known yet what is the milking life of a milch cow in South India, and it will not be safe to count on that life lasting longer than 8 years. Bulls of good pedigree milking strains, at the rate of 1 bull for every 100 milking cows, will be required in thousands in a huge province like that of Madras.

The milk supply of the Province has a twofold importance:—First, on account of the demands
of Child and Maternity Welfare and Nutrition
and, second, in its economic sequence as an
essential branch of the agricultural activities of
every locality. The problem thus becomes a
national problem, and it can only be solved
on a national scale, i.e., it is incumbent on the
Government to make it a part of their agricultural
policy and take the matter in hand by seeking
out the foundation stock, multiply this stock,
and make an annual distribution of the resultant
bulls throughout the length and breadth of the
country. It stands to reason that those small

farmers who rear and maintain well cared for money-earning and saleable livestock are in a stronger position economically and financially than those who depend only on the raising of crops, because they have a twofold source of profit. And the care of livestock diversifies a man's life and mind much more than is the case with a farmer who grows field crops only.

In a matter of national necessity there can be no half measures. As soon as the annual output of young males become sufficiently mature for stud purposes, i.e., 42 years old, they must be issued free of charge at the general expense of the whole community. The proper recipients of the pedigree bulls would seem to be the Village Panchavat Boards. It certainly seems to be a part, too, of the duty of these local self-governing bodies to select and make lists of the best milch cows within the limits of their village and to arrange for these animals to be sired every year by the pedigree bull at the rate of one bull to one hundred cows. The female calves of these unions can, as they grow up, take the place of their mothers for the continuance of the breed and so on for each improving generation. There is no danger in placing the daughter to the sire for one generation from an in-breeding point of view, as it has been amply proved that such unions do not result in any loss of stamina but help to fix the qualities of the sire. But the bull must

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be changed after one generation of service on a daughter, *i.e.*, the bull must not be allowed to serve the daughter's daughter.

Not only must this reform be dealt with on a large scale, but it must be solved as soon as possible as being essential for the stamina and happiness of the forty-six million people of each coming generation.

And the difficulty in equipping the population of this Province with an adequate milk diet both in time and in quantity can be surmounted by resort to the method of multiplication by means of Artificial Insemination. This technic was first tried over 100 years ago. The Italians seem to have been the pioneers in the introduction of the method, and ever since then, animal breeders have resorted more and more to this scheme for supplementing and speeding up natural multiplication. A process which will result in 8 conceptions instead of one conception as the outcome of one ejaculation is to be welcomed and steadily fostered.

It is unnecessary to enter into details of the technic of the method. It is, however, to be added that the Russians are now the exponents of this process on a nation-wide scale; and, no doubt, the Russian Central Ministry of Agriculture would gladly help South India by deputing technicians to establish the technic of Artificial Insemination in stud farms formed for the purpose

of producing pedigree dairy herd bulls in as large numbers and as rapidly as possible.

A large proportion of the livestock of the Presidency comes under the head of Village Herd Cattle. This type of livestock has very largely increased in numbers since the British introduced law and order into the country and firmly maintained a general state of internal security everywhere. The numbers of these cattle have now become excessive and there are no grazing grounds adequate for their support in a proper and humane manner. They serve no proportionate economic purpose in village life and a very much fewer number of animals might be made to yield greater manurial value to the country. presence in such unnecessary numbers has a harmful and debasing effect on the owners of livestock, as it gives them an entirely false idea of the value and use of livestock in the agricultural life of the community.

Although it is not a popular expression of opinion to adduce at the present time, truth compels one to state that the excessive numbers of these animals is caused by the huge areas of communal waste—not to mention the overflow into the Reserved Forests—which is available in so many localities.

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An outstanding example of truth of this statement cannot but be admitted by those who are conversant with the conditions prevailing in the district of Nellore. In the south of this district, the Kancha system of grazing is in force. This is a custom originating in pre-British days by which the cattle belonging to the villages on the eastern half of the plain area are sent west to graze in the Eastern Ghats (the Veligondas). Between these villages and the ghats, there is a wide belt of unoccupied lands covered with scrub jungle which also furnish grazing grounds to these herds of the eastern villagers. Some of these herds are enormous and the owners of them care so little for the value of the cattle that they are unable to say accurately how many they possess. They claim that so many cattle are necessary to manure their fields. These cattle receive no rations beyond the rough grazing at their disposal and their manure is of little or no value. The people are well aware of this as they prefer to pick up and sun dry the dung to burn as bratties, because the bratties have more economic value as fuel to keep up a slow fire rather than as manure for the fields.

The Kancha-fed herds are the extreme case in this Presidency of the uselessness of this type of cattle and the serious economic waste in keeping them. On a lesser scale and to a relatively smaller degree, all villages with a large annexe of waste land illustrate the truth of the maxim that

extensive unimproved communal areas are harmful rather than a blessing to a village.

In contrast to this, the taluk of Ongole lies in the (north of the late Nellore but now) Guntur district. In this taluk there are no reserved forests and the villages have become so intensively cultivated that there is little communal land left in each of them. Hence every animal maintained by the villagers costs money to keep and has a value because it cannot be fed for little or nothing. Consequently the villagers do not keep a single animal over the minimum required. Every animal is under careful management and they are all hand-fed with the result that their manure really has a fertilising value on the fields. Their maintenance forms an important part of the agricultural routine of the taluk. The result has been that the cattle of Ongole, whether for milk or draft, have been famous not only in Madras but all over India. The offspring of these animals command good money and cattle breeding is a profitable adjunct carried on parallel with the farming of the land.

There are two remedies or means for improving the quality of the Village Herd Cattle:—First, to regulate and improve the grazing in communal lands. This, however, can only be efficiently carried out when rural reconstruction has re-introduced home-rule in self-governing villages, each managed by a village panchayat

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board, advised and helped by the local officials belonging to the various provincial departments who are now established everywhere throughout the Presidency.

The other remedy is to render all scrub, i.e., inferior bulls immune from causing further deterioration of the herds by sterilising them by means of the Burdizzo clamp which stops the action of the spermatic cords. The operation is a quick and painless one and does not even put an animal off its food. The villagers who have seen the clamp in use agree that its introduction is a very great improvement on their own cruel method of castration.

If, as in the case of the other provincial departments, the local officials of the agricultural department are placed under the ægis of the District Boards to carry out the agricultural policy of the community to the best advantage, legislation can be introduced by which the District Board can declare the sterilisation of scrub bulls to be compulsory just as they now have the power to declare vaccination to be compulsory or elementary education to be compulsory.

By this simple and inexpensive procedure, one of the causes of the degeneracy of the village herd cattle of this Province can be removed to the great economic benefit of the whole rural community.

If the work of Rural Reconstruction is carried to its promised and logical conclusion, it will then become one of the duties of the Village Panchayat Boards to deal with the sterilisation of the scrub bulls within their village limits in each succeeding generation.

The fourth main category of livestock, which is an economic necessity to any country, is that of sheep.

There are 11,938,324 sheep of all ages in the British territory of the Madras Presidency.

These 12,000,000 animals ought to add greatly to the wealth of their breeders and owners as well as enriching the cultivated fields of the farmers. But examination of the conditions under which these animals exist, demonstrate that they, together with the village herd cattle, have to live for at least 4 months of the year on the scantiest of unnutritious food, that surprisingly little use is made of their wool, and that no appreciable attempt is being made to increase either the weight of the fleece, or the length of the fleece, or the quality of the fibre of the wool.

The majority of the population of South India are not necessarily vegetarians, though there is relatively very little meat eaten by the people. LIVESTOCK] [CHAPTER VI

This indicates that steps taken to improve the sheep of the country should aim at development along fleece improvement lines rather than attempting to ameliorate the meat producing qualities of the sheep.

The wool production industry, such as it is, appears to be confined to a portion of the Bellary district in and adjoining the Adoni taluk, where a definite type of wool producing sheep has been established by the effort of the villagers in that area of the Presidency. The sheep are small but display undoubted quality and will make foundation stock from which to spread the breed to other localities and, gradually, it is to be hoped, to every part of the Presidency which is suitable to the breeding and maintenance of sheep. At present the Bellary sheep yield an average of 3 lbs. of wool or less with a length of 25 inches: though these same animals by more judicious selection from existing stock could vield 4 lbs. of wool. This poor yield is the measure of the improvement which it is necessary to make before the 12 million sheep of the Presidency can become a real economic asset to sheep-masters and to the industry of the country.

Outside Bellary, there are parts of Salem and Coimbatore districts where some attempt is made to keep wool-bearing sheep. Their yield of wool, however, is so little as $1\frac{1}{2}$ lbs. a year and, even so, much of it is little better than hair.

These two districts seem to be better situated than others where the first efforts to establish stud farms on a national scale should be made. Truly, the prospect of trying to effect any improvement with such unpromising material in a reasonably short space of time seems to be downright disheartening! But no reasonable course of action is to be regarded as disheartening to any Government which is determined and resolute in knowing its own mind and sticking to it.

A subject complementary to livestock is that of Fodder. How is it possible to produce or procure a sufficiency of really nutritious fodder to feed the immense animal population of South India and maintain them in a high degree of alimentation? The most difficult part of the problem is this: How can the villagers accumulate enough reserve fodder to feed their animals during the four months (February 15th to June 15th) hot weather before the rains come and start the fresh growth of grass all over the country. Even if the livestock can be fed during the other 8 months of the year, little improvement can be made if the animals are to be allowed to fall away in condition for 4 months regularly every year in the hot weather.

There are various ways of doing this, but the conditions vary in different villages and the same measures may not be applicable in all cases. Some villages will have a village forest to utilise and improve. In others the communal land will offer an abundant supply of grass for fodder, the use of which can be regulated and be cut for ensilage at the right time when it will yield its maximum feeding value. Elsewhere the communal waste will be hilly scrubby ground yielding very little grass even in the wet season; and all fodder for the cattle will have to be grown on the fields and kept in stacks when harvested. In many villages it will be possible to dig pit and trench silos which can be filled with all the green stuff available as the result of one or possibly two cuttings a year. In other localities. the Forest Department ought to co-operate more than it has done by selecting places where the grass grows abundantly and throw these lands open to adjacent villages to cut and bale the grass in portable balers. The bales should be permitted to remain in situ until the villagers find a convenient time to remove it to their villages. If, in the course of time, the grass can be cut systematically, its removal will be of real help in protecting the forest against fire.

CHAPTER VII

A PORTION OF VILLAGE SURVEYS

The villages here dealt with are situated in the Salem, Ramnad and Madura districts. They form part of Proprietory Estates under Permanent Settlement. They have been Cadastral surveyed and settled and the pattadars all pay their kist in cash with the exception of portions of Kondagai, Pallichandai and Pattam villages in Ramnad district which are under Warapat or Melwaram tenure.

In Salem district, Komarasamipatti, Odayapatti, Athigaripatty and Erumapalayam adjoin the east and the south of the town of Salem, and their inner boundaries are conterminous with or are included within those of the Municipality. Masinaikkampatti adjoins and lies to the south of Odayapatti village.

In Ramnad district, the villages of Kondagai, Pallichandai and Pattam lie in one group $7\frac{1}{2}$ miles from Madura town. Karisalkulam is situated 7 miles from Madura town.

In Madura district, the village of Ananjiyur is located 12 miles from the town of Madura.

It is hoped that the annexed Tabular statements are self-explanatory, but a few points

may require some elucidation. For instance, (a) the large number of non-resident pattadars is explained by the close proximity of the towns of Salem and Madura to the villages analysed in the statements; (b) in wet land areas the number of pattadars who sublet their lands is very noticeable. These lands are fed by the large river Vaigai in Madura and by the little Tirumanimuthar or Salem river in Salem. This latter river, although little more than a good sized stream. receives several strong freshes every year. Consequently, a purchase of any of these lands is considered locally to be a pretty good and secure investment for a man's savings, and tenants are always forthcoming for lands which. over a series of years, are sure of water. Thus in Komarasamipatti 85 per cent. of the pattadars sublet, in Kondagai 52 per cent, in Ananjiyur 46 per cent, and in Karisalkulam 70 per cent. sublet: (c) the average kist paid to the proprietor has been computed with accuracy by taking the various qualities of land and their areas in order to arrive at the correct average. The same method has been used to ascertain the average rent paid by their tenants to the nattadars.

The villages of Kondagai, Patam and Pallichandai in Ramnad district occupy a major portion under Varam tenure out of the total cultivable area. The tax derived by the proprietor from the pattadar is taken as the average income calculated on the average sale price of the Melyaram realised.

Pains have been taken to investigate and illustrate the phenomena of small sub-divisions and fragmentation of land, because the actual facts connected with these lands work out so very differently from the theoretical conclusions, which are so frequently announced with respect to them.

In the Table III, Salem District, is given an analysis of holdings of (a) one acre and less and (b) over one acre and up to, i.e, including two acres, expressed in the number of holdings; and the same as expressed in area. A similar Table is also appended for the villages in Ramnad and Madura districts.

Table III, Salem District.—The Table shows that the percentage of the number of these holdings to the total number of holdings in a village may vary between 10'9 per cent. and 33'4 per cent. in the case of those of 1 acre or less; and between 14'0 per cent. and 28'8 per cent. in the case of the number of holdings over one acre and up to (i.e. including) 2 acres.

But the percentage of the area of these small sub-divided holdings to the total cultivated area of a village varies between 1'02 per cent. and 5'77 per cent. for those of one acre and less:

and 3'57 per cent. and 17'53 per cent. for those over one acre and up to and including 2 acres.

It is not pretended that an analysis of five villages of Salem can yield an average figure for the whole Province. Nevertheless the figures obtained tend to indicate that holdings of one acre or less may occupy 2.5 per cent. of the total cultivated area of the Presidency; and holdings of over one acre but up to 2 acres may occupy nearly 7.7 per cent. of the total cultivated area.

And in respect of the five Teervaipattu villages in Madura and Ramnad districts, the figures obtained indicate that holdings of one acre or less may occupy 3'9 per cent. of the total cultivated area and holdings of over one acre, but up to 2 acres may occupy 10 per cent. of the total cultivated area, while the percentage is 4'5 and 9'9 per cent. respectively in respect of Varapathu lands under the same category.

There is no object in trying to amalgamate these small sub-divisions into larger holdings by means of volunteer social workers as is advocated by some reformers in this Presidency, because the process of sub-division will begin again as soon as any of the present pattadars die. The proposed attempt would be as never-ending as the task allotted to Sisyphus. Moreover, as has been explained in Chapter III , the small sub-divisions of land are of very great value in the interior economy of a village.

In respect of most villages, it is not very feasible nor does it seem to be of much practical use to distinguish between what small plots are the result of fragmentation as the result of subdivision, i.e., every fragmented plot must be the result of sub-division, but every sub-division plot need not necessarily entail fragmentation. But an analysis of the sub-divisions and fragmentations in one village has been made to serve as an example of what is happening in every village in the Presidency.

The village of Erumapalayam has been taken, because the Karnam of that village is an ableman. He takes an interest in his work, he has the statistics of his village at his fingers' end and he carries this information in his head. He can directly answer any question put to him and he can prove his statement by an immediate reference to his village registers.

With the help of this Karnam, the following little Table has been prepared:—

SALEM DISTRICT 1937

TABLE-V

Small Sub-divisions and Fragmentations.

Erumapalayam Village.	HOLDINGS OF 1 ACRE AND LESS THAN 1 ACRE.	UP TO
Sub-divisions	31	41
Fragmentations	2	7
(a) Cultivated by owner (b) Cultivated by adjoining pattadar: (i) Purchased and	3	9
cultivates.		10
(ii) Tenancy by lease (c) Influx of landless labourers:		7
(i) by lease	21	8
(ii) by purchase		6
(iii) by assignment(d) Remainder of estate sold for debt	4	1
Total holdings	31	41

N.B.—This Table only holds good for the year 1987. For the next and every subsequent year,

the figures will alter according to the number of deaths of pattadars which occur in that year. It may be of interest to state that the smallest unit of land, which has a survey and sub-division number in the Salem Zamin, consists of '03 acres, i.e., 3 cents or one thirty-third of an acre.

The large number of plots of land purchased by landless labourers is surprising and unusual. It is accounted for by the fact that there is a carpet factory in the village wherein hard workers can obtain employment and save money quickly.

Table V. illustrates the value of small subdivisions to the landless labourer as the means of giving him a start in life as a small farmer. In this particular year (1937) as many as 21 landless labourers were able to purchase small plots of land under one acre in area, while as many as 8 were able to purchase plots of land over 1 acre and up to 2 acres. Had it not been that such very small plots were available, these hard-working and ambitious men would not have had the opportunity to try and better themselves.

With regard to the Cattle Census, it is difficult to ascertain the number of uncastrated males set apart specially for breeding purposes. Some such animals are kept in Salem; but this is not the case for the Madura and Ramnad villages, which are included in this survey, and cattle copulation is promiscuous in these areas.

It is not the practice to castrate buffaloes in Salem, Madura, or Ramnad districts.

SALEM DISTRICT

TABLE I. 1937

-					1911 minus
	Komara- sami- patty.	Masinai- kam- patty.	Odaya- patty.	Athikari- patty.	Eruma. poliam.
1. Area of land cultiva- tion in villages:					NA TO
(a) Dry in acres (b) Wet in acres	251 622	1,182 48	476 3	223 108	1,553 82
Total 2. Number of pattadars:	873	1,230	479	331	1,635
(a) Dry lands only (b) Wet lands only (c) Dry as well as		343	218	51 16	481 12
wet	91	44		68	54
Total 3. Number of pattadars cultivating their	570	390	220	135	547
own land	85	325	195	124	427
have sublet 5. Percentage of pattadars who have	485	65	25	11	120
sublet	85%	16.6%	7.4%	8%	22%
lands of others 7. Resident pattadars	30 70	12 220	200	130	117 368
8. Non-resident patta- dars 9. No. of Varamdars or	500	170	20	5	179
lessees who have sublet					

	Komara- sami- patty.	Masinai- kam- patty.	Odaya- patty.	Athikari- patty.	Eruma- poliam.
10. No. of subwaramdars or sub-lessees who have sublet					
11. Average kist paid to Zamindar Dry per acre	3- 3-0	1- 9-0	1-15-0	3- 0-0	1- 8-0
		4- 5-0	3- 4-0	8- 3-0	4-10-0
13. Average rent paid to pattadars Dry per acre by their tenants	10- 0-0	8- 0-0	16- 0-0	16- 0-0	13- 4-0
 Average rent paid to pattadars Wet per acre by their tenants Wells in dry lands No. 		20- 0-0	32- 0-0 50	32- 0-0 75	15- 0-0 427
16. Wells in Wet lands No. 17. (a) Average area of	92	12	1	50	22
dry land irrigated by each well in acres (b) Largest area of	3	3	3	3	3
dry land irrigated by a well in acres 18. Area of poramboke	4	4	4	4	4
fit for cultivation in acres 19. Area of poramboke		145.60			
unfit for cultivation in acres		316.73	119.64		495-92

RAMNAD AND MADURA DISTRICTS

TABLE I. 1937

	7	CEER	VAI	PATE	I U.
	Kondagai.	Pattam.	Pallichandai	Ananjijur.	Karisal- kulam.
1. Area of land cultiva- tion in villages:					
(a) Dry in acres (b) Wet in acres	267 752	111	96	488	217 772
Total 2. Number of pattadars:	1,019	113	99	488	989
(a) Dry lands only (b) Wet lands only (c) Dry as well as	68 203	$\frac{1}{32}$	38 3	203	3 189
wet					9
Total 3. No. of pattadars cultivating their	271	33	41	203	201
own land 4. No. of pattadars who	130	13	30	108	60
have sublet 5. Percentage of pattadars who have	141	20	11	95	141
sublet 6. Pattadars cultivating	52%	60.6%	26.8%	46.8%	70.1%
lands of others	60	12	25	45	40
7. Resident pattadars 8. Non-resident	190	13	30	53	37
pattadars 9. No. of Varamdars or lessees who have	81	20	11	150	164
sublet					•

	Т	EER	VAII	PATH	U.
	Kondagai.	Pattam.	Pallichandai	Ananjijur.	Karisal- kulam.
10. No. of sub-Varamdars or sub-lessees who have sublet 11. Average kist paid to					
Proprietor Dry per acre 12. Average kist paid to	1-10-4	1-12-0	2- 7-0		1-11-6
Proprietor Wet per acre 13. Average rent paid	4- 8-0	4- 2-0	4- 8-0	5- 6-4	4- 0-6
to pattadars Dry per acre by their tenants . 14. Average rent paid to pattadars Wet per	5- 0-0	6- 0-0	7- 0-0		3- 0-0
acre by their tenants 15. Wellsin dry lands No.	10- 0-0	10- 0-0	10- 0-0	15- 0-0	10- 0-0
16. Wells in wet lands No. 17. (a) Average area of	2			3	i
dry land irrigated by a well in acres (b) Largest area of			3		
dry land irrigated by a well in acres 18. Area of poramboke			4		
fit for cultivation in acres 19. Area of poramboke					30
unfit for cultivation in acres				100	96

RAMNAD DISTRICT

TABLE I. 1937

		WAI	RAPA	THU.
		Konda- gai.	Pattam.	Palli- chandai
1. Area of land cultivation villages:	in			
(a) Dry in acres (b) Wet in acres		1,668	140	176
2. Number of pattadars :		1,668	140	176
(a) Dry lands only (b) Wet lands only		204	24	16
(c) Dry as well as wet		182	1	39
3. Number of pattadars cultivat	ing	386	25	55
their own land		304	21	40
 No. of pattadars who have sub Percentage of pattadars w 	let	82	4	15
have sublet		21.2%	16%	27.3%
6. Pattadars cultivating lands	of	103	12	10
others 7. Resident pattadars		350	19	40
 Non-resident pattadars Number of Varamdars or less 	ees	36	6	15
who have sublet				
O. No. of sub-Varamdars or sulessees who have sublet				
 Average kist paid to Proprie Dry per acre 	tor			
2. Average kist paid to Proprie Wet per acre	tor	10	5	5

	WAI	RAPA	THU.
	Konda- gai.	Pattam.	Palli chandai.
13. Average rent paid to pattadars			
Dry per acre by their tenants			
14. Average rent paid to pattadars			
Wet per acre by their tenants	15	8	8
15. Wells in dry lands No			
16. Wells in wet lands No	4		
17. (a) Average area of dry land			
irrigated by a well in acres.			
(b) Largest area of dry land			
irrigated by a well in acres.			
18. Area of poramboke fit for culti-			
vation in acres	10	3	7
19. Area of poramboke unfit for			
cultivation in acres	100	30	

N.B.—Nos. 12 and 14 are calculated on the average Melwaram paddy received.

SALEM DISTRICT TABLE II. 1937

Eruma- paliam	Per cent.	:	0.19	39.0	!
Eri	No.	284	174	110	373
Athikari- patti.	Per cent.		0.99	44.0	:
Athi par	No.	104	58	46	77
Odaya- patti.	Per cent.	:	54.0	46.0	
po po	No.	146	42	19	141
Masinai- kampatti.	Per cent.	:	0.79	45.0	:
Maskamı	No.	192	65.7 105	87	285
Komara- samipatti.	Per cent.	:	65.7	34.0	1
Korr	No.	379	249	130	321
		1. Total No. of pattas (holdings)	in one name (holdings) 3. Number of joint pattas	in more than one name (holdings)	5

			6	0	7	4	20	4	1	1	1	20	4	1	0	10	L.	1	
Eruma-	Per cent.		10.	14.	13.	00	13.	8	7.	1.	. 83	4.	7.4	3.	1.	.0	1.	1:	
Eru	No.		31	41	39	25	38	25	22	2	9	13	21	6	3	1	5	284	
Athikari- patti.	Per cent.		17.3	28.8	22.1	9.8	4.9	4.8	2.0	3.0		***	5.0	1.0	***	1.0	***	1:	
Ath	No.		18	30	23	6	7	5	22	3			5	1		1		104	
Odaya- patti.	Per cent.		22.5	23.0	24.0	13.0	4.0	2.0	4.0	1.0		3.0	***		1.0	1.0	0.1	:	
Po bo	No.		88	34	35	19	9	4	9	2		4		***	1	1	1	146	
Masinai- kampatti.	Per cent.		8.03	15.1	6.6	6.6	7.2	5.5	5.5	3.6	4.1	2.0	6.6	2.2	1.0	2.2	9.0	1:	
Mas	No.		40	29	19	19	14	10	10	-	00	4	19	9	22	2	1	192	-
Komara- samipatti.	Per cent.		33.4	26.0	17.1	7.3	3.1	2.6	3.0	3.1	1.5	1.0	1.5	0.1				1:	
Kon	No.		126	66	65	28	12	10	11	10	5	3	9	3	1		:	379	
		Number of holdings of one	acre or less	and under	., 2 ,, 3 ,,	**	11	" "	., 6 ,, 7 ,,	**	"	,, 9 ,, 10 ,,	", 10 ", 15 ",	" 15 " 20 "	11	,, 25 ,, 50 ,,	50 and above	Total	

RAMNAD AND MADURA DISTRICTS

ABLE II. 1987

	2 . 1	or at.		95.3	4.7	
	Karisal- kulam.	Per cent.		96	4	1
		No.	191	182	6	19
u.	Ananjiyur.	Per cent.	:	83.4 182	27 16.6	:
TH	Anar	No.	163	136	27	67
IPA	Palli- chandai.	No. Per No.	:	97.5 136	2.5	:
VA	Pe	No.	40	39	1	61
TEERVAIPATHU.	btam.	Per cent.	:	33 100%	1	:
H	Pa	No.	33	33	:	:
	Kondagai. Pattam.	Per No.	:	236 95.5	4.4	:
	Kon	No.	247	236	11	35
			1. Total number of Pattas (holdings)	2. Number of pattas in one name (holdings)	3. Number of joint pattas in more than one name (holdings)	4. Number of pattadars in (3)

	Karisal- kulam,	Per cent.		58 30.4	7 19.3		14 7.3									3 1.6	1 0.2	1	
	-	No.																191	
HО.	Ananjiyur.	Per cent.	33.7		14.1							9.0	3.1	9.0			9.0	:	
	Ana	No.	70	35	23	19	7	11	2	3		1	5	1	:		1	163	
AIPAT	Palli- chandai.	Per cent.		12.	25.0	7	10.	2.	5	2.		5		2.2				1:	
R V.	Pe	No.			10								:	1	:	:		40	
TEE	Pattam.	Per cent.	12.1	21.2	18.1	15.2	6.1	1.9	0.8	9.1	0.8	6.1						1:	
	Pa	No.	4	1	9	9	070	. 12	-10									33	
	Kondagai.	Per cent.			18.6		9.8		0.7		9.1	4.0	7.7		4.0	1.5	7.0	1:	-
	Kon	No.	58	84	46	19	30 0	OT	G		4	1	9		-	00 1	T	247	-
			one acre or less	Z acres	"	"	"			"	"	"	"	"	"	"		Total	- Color
			er of holdings	and under	2000	"	F 10	"		. 00	. 6		15 "	" 06	,, 20 ,, 20 EO	nd oborro			The state of the s

RAMNAD AND MADURA DISTRICTS

TABLE II. 1937.

		A	ANA	WANAFAIDU.		
	Kond	Kondagai.	Pati	Pattam.	Pallic	Pallichandai.
	No.	Per cent.	No.	Per cent.	No.	Per cent.
. Total number of pattas (holdings)	371		25		52	
Number of pattas in one name (holdings)	359	8.96	25	1000%	49	94.2
. Number of joint pattas in more than one name (holdings)	12	3.5		:	က	30
Number of pattadars in (3)	27	:	:		9	:
		Section of the last of the las	The same of the sa	The state of the s		

	andai.	Per cent.	48·1 23·1 9·6	3.0	1.9		6.1	1.9	1.9	: :		:
WARAPATHU.	Pallichandai.	No.	25 12 5	67 69		1:	:-	1	-	: :		52
	am.	Per cent.	8.0 24.0 16.0	8.0	8.0	8.0	4.0		:	::	:	:
	Pattam.	No.	294	10 6J	- 75	101	: -			::		25
	agai.	Per cent.	25·6 24·5 12·7	10.3	9.0	1.6	1.6	4.0	1.6	1.6	0.3	
	Kondagai.	No.	95 91 47	75 00	17	91	9	15	24 6	9	1	371
			:::	::	:	: :	: :			: :	:	
			r less acres	2 2		33	. :		13	"		Total
			Number of holdings of 1 acre or less bove 1 and under 2 acres " " " " 3 ","	4 10	,, 6	. 00	,, 9	" 15			and above	
			dings 1 a 2	20 4	20 %	-	00 00	10	15	25	50 a	
			of hole	33	66	33	"		33	33		
			ber o									
			Numl	2 22	"	11	":	"	"	"		

SALEM DISTRICT

TABLE III.

Analysis of holdings of 2 acres and less, showing particulars of cultivation, 1937.

Extent of cultivable lands.	1 acre and and up to less. 2 acres.	Per cent. of total area. Per cent. of total area. Per cent. of total area.	3.72 1.02 62.55 3.80 7.83 3.61 50.52 10.54 2.26 3.70 41.96 12.60 1.45 44.01 3.67
	cultivated seliivated	873 50° 1,635 16° 479 17° 331 12° 1,230 17°	
HOLDINGS.	Over 1 acre and up to 2 acres.	Per cent. of total holdings.	26.1 14.0 23.0 28.8 15.1
		NO.	99 41 34 30 29
	l acre and less.	Per cent. of total holdings.	33.4 10.9 22.5 17.3 20.8
	l gar	No.	126 31 33 18 40
	to redr	379 284 146 104 192	
		:::::	
	NAME OF VILLAGES.	Komarasamipatti Erumapoliem Odayapatti Athikaripatti Masinaikkampatti	

RAMNAD AND MADURA DISTRICTS

Analysis of holdings of 2 acres and less, showing particulars of cultivation, 1937. TABLE III.

	acre Over and and up to other colless. 2 acres. onling	Per cent. Other total holdings. Note to the total holdings. Total holdings. Total area in the vince to the vince vince vince the vince vi		25.6 91 24.5 1,668	8.0 6 24.0 140	48.1 12 23.1 176	
*	o andmu sgai	o Z		371 95	25 2	52 25	***
	NAME OF		*	Kondagai	Pattam	Pallichandai	

Extent of cultivable lands.	1 0	Total area in the value of value o	0 1,019 48.15 4.7 130.10 12.8	2 113 3.50 3.1 11.36 10.1	5 99 8.40 8.5 9.20 9.3	5 488 28.87 5.1 50.95 10.4	4 989 17-11 1.7 91-18 9-2	
HOLDINGS.	e Over 1 acre and up 2 acres	total holdings. S Ter cent. of total	.5 84 34.0	12.1 7 21.2	30.0 5 12.5	.7 35 21.5	12.0 58 30.4	
OH	ngs. I acre and less.	holdi S Per cent. of	247 53 23	33 4 12	40 12 30	163 55 33	191 23 12	_
	OF	vá "	Kondagai	Pattam	Pallichandai	Ananjiyur 1	Karisalkulam 1	
		4	HH	田田	A	I d	AT	HD



TABLE IV.

SALEM, RAMNAD AND MADURA DISTRICTS,

SALEM DISTRICT.

TABLE IV. 1987.

			CA	тт	L	E.				1			B	U	F	F A	L O	E S.	98			
	MALES.				1	FEMALES.				MALES.					F	ALE	LES.					
	t & &		100	Your				33	You		19.04		ling	You	ng k.			or	You			
NAME OF VILLAGE.	Breeding bulls, i.e., males over 3 years old set apart for breeding. Uncastrated males over	3 years old kept for work. Bullocks, i.e., castrated	Bulls and bullocks over 3 years not in use for breeding or work.	Under 1 year.	rs.	r 3 years	over 3 years for work.	Cows over 3 years not used for work or breeding.	Under 1 year.	I to 3 years.	ling he-lar 3 year	Working he-buffaloss over 3 years old.	He-buffaloes over 3 years old not used for breeding or work.	Under I year.	1 to 3 years.	eec ove	Sle-buffaloes over 3 years used for work.	She-buffaloes over 3 years not in use for work or breeding.	Under 1 year.	1 to 3 years.	Wooden ploughs.	Iron ploughs.
1	2	3	4 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1. Erumapalayam	7	69	93 7	100	68	168	100	3	68	41	5			77	85	251			89		294	2
2. Masinaikkampatti	2	22 3.	23 7	22	38	42	300	13	20	16	3	1	1	2	4	20	2	2	4	4	175	2
Tark .																						
3. Odayapatti group (a) Odayapatti (b) Adigaripatti	7		15 75	87	61		130		211			10		50			and live	27	lom	Tow	365	Chev
4. Komarasamipatti			sus has lands to onging to						bull adjoi	k of ning	the villag	patti	where	the	y h	old p	attas,	and	their	CS	ttle	are

RAMNAD AND MADURA DISTRICTS.

TABLE IV. 1987.

	182	CATTLE.											BUFFALOES.											
		MALES. FEMALES.										MALES.					FEMALES.						-	
	los	2 2		2. 24	You	ing ek.	WS Or			You				ars	You	ck.	196		ers or	You	ing ek.			
NAME OF VILLAGE.	Breeding bulls, i.e., males over 3 years old set apart for breeding.	Uncastrated males over 3 years old kept for work.	Bullocks, i.e., castrated males kept for work,	Bulls and bullocks over 3 years not in use for breeding or work.	Under 1 year.	I to 3 years.	Breeding cows, i.e., cows over 3 years kept for breeding or for milk.	Cows over 3 years old used for work.	Cows over 3 years not used for work or breeding.	Under 1 year.	1 to 3 years.	Breeding he-buffaloes over 3 years old set apart for breeding.	Working he-buffaloes over 3 years old.	He-buffaloes over 3 years old not used for breeding or work.	Under 1 year.	1 to 3 years.	Breeding she-buffaloes over 3 years kept for breeding or milk.	She-buffaloes over 3 years used for work.	She-buffaloes over 3 years not in use for work or breeding.	Under 1 year.	1 to 3 years.	Wooden ploughs.	Iron ploughs.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
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2. Pallichandai		8	32	4	2	5	9	6	5	4	10		4	6	10	16	25	4	10	12	16	48		
3. Pattam		7	23	12	4	7	10	4	3	3	5		50		6	7	10	36	3	5	6	60		
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3. Pattam			10	2	1	3	2	2	1	1	2		14		2	3	2	8	1	2	3	15		
4. Ananjijur		12	108	10	15	8	2	60	8	12	10		50		9	7	4	128	18	30	10	70		
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