

examined about a fortnight later. Of course this only meant that some of the very young seedlings had been overlooked and that some more of the thorns lying on the surface of the soil had sprouted. It only led to a more decided and repeated effort. The plants were on the whole picked out, off and on about 5 or 6 times during the year. The results have not been as satisfactory as they might have been if conducted on more organised lines. Yet it is a fact that the thorns around the building and in the adjoining maidan have considerably been lessened and the pickers do not now draw long faces in picking tennis balls.

Just as the look of a clean whitewashed wall is marred by bills stuck on by haphazard advertisers, in a very similar way is the beauty of any play ground or open maidan impaired by the tree growth of this weed. In as much as it can be readily removed with some little trouble, it would not reflect much credit on the body of persons using the ground or the *maidan*, if this weed were allowed to grow unchecked.

Y. Ramachandra Rao.

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### Farmers and Improvements.\*

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The country of Alangudi is a low lying plain of gravelly laterite soil with a water-level high enough to make direct flow irrigation from wells possible. As such the dry lands are being converted into wet wherever possible by lowering their levels and bunding. Thus the existence of such surface springs has given rise to the increasing of the *ayakat* of several tanks and ponds which in ordinary seasons would hardly contain water to irrigate half the area at the most. Paddy was grown successfully in good seasons on such lands called *achakattu*. But of late the rains have not been certain, timely and sufficient. Thus failure of Paddy in *achukattu* lands, mostly rainfed, was frequent.

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\*Based on experiences in dealing with them in the Alangudi Taluk of the State of Pudukotah.

To meet the situation, the ryot is now sowing Paddy mixed with a cereal-varagu-and often succeeds in getting Paddy in a good season varagu in a poor season, and occasionally both. The variety of Paddy used for this is called *Kalakottan*. Formerly when farmers were far from forests plenty and near, no difficulty was felt in obtaining leaf-manure. Later on each had to reserve a plot of ground for growing green manure crops such as *Virali* and *Aavarai*. As time wore on and the population increased this area was encroached upon for growing food crops leaving the poor and rocky soil for the growing of green leaves. Since this area is not cultivated, and receives no manure, the yield is naturally poor. Leaves from 2 to 3 acres are barely sufficient to manure one acre of wet-land. Moreover the supply is inadequate since there are only 7400 acres of *Virali* and *Aavarai* for a total irrigated paddy of 34880 acres. After the forest acts were passed, no one is allowed to enter the forest and take leaves free. The right of collecting leaves is auctioned. To bid in public auction is utterly impossible for the small holders. The industrious *Nathambadis*—a class of practical cultivators—overcame this difficulty by growing redgram as a green manure crop on the wet land itself. It is usually grown mixed with Cumbu or Gingelly. It is surprising to note that this practice has not been sufficiently followed by the other classes in close proximity. Hundreds of ryots may go week after week to the town market to dispose of their raw produce travelling over miles of cultivated areas where crops different from theirs may be cultivated, practices entirely different from theirs may be followed, implements quite foreign to them may be used, and a prodigious output obtained; and yet beyond a casual glance at them and perhaps a momentary surprise and a look of admiration at the strange and superior sight nothing in the nature of a permanent impression is left in their minds, and no interest is created to prompt them to observe and enquire about the practices and about the excellence of the crops they meet with. This is more or less entirely due to the conservative nature of our ryots, to their want of education and to the entire absence of training in observation, and to their exclusiveness. Last year in *Tiruvarangulam* village, there was a splendid sight to be seen with a striking contrast—a green patch on one side, and a desolate waste of ground on the

h a other side of the road. The *Nathambadi* cultivators by ploughing season or 4 times, one after each earlier summer showers were able to conserve moisture, and at a subsequent small shower sowed *Dhall* and *Paddy*, *Cumbu*, *dhall* for its green leaf. On the other side, the *Kalla* ryots did not plough after the earlier showers thinking of sowing once for all after a heavy rain in the season. But the *pattam* or seasonal rains failed, and the Paddy nursery dried up. But for a few passing showers, the monsoon failed completely. But those who suffered were certainly not the *Nathambadis*. The redgram sown in the wet-land during summer grew and gave a fine harvest. The chances of success in the agriculture are always with the industrious.

In a country where the vagaries of the weather are frequently felt, this kind of cultivation is necessary. But *Dhall* cannot grow on alkaline or low lying lands subject to water logging. *Dhaincha* is advocated and about 500 Madras measures of this seed were sold during the past 2 years. This is grown purely or mixed with summer *ragi* in wet lands. The advantages of growing this are now well known and there is already a keen demand for the seed. Arrangements are being made to grow the plant for seed to meet the local demand without having to go outside.

We now come to consider another case where the ryots have come to realise the necessity for changing their practice to overcome some difficulties that they have to encounter. This is in the case of rotation of crops. *Varagu* after *Dhall* and *Cumbu* is the rotation in dry lands, and the principles that underlie the system are fairly well understood, but now not followed owing to changed economic conditions. The modern farmer often grows crops for the world markets. Such commercial crops put him at the mercy of international commercial fluctuations. By subordinating the rules of practice to the ambition of making money at any cost he grew groundnut year after year on the same land until at last he found the yield too poor to meet even the cost of production. Besides this the land became infested with weeds, and plenty of diseases and pests cropped up. In one place the *Hariyali* grass had spread so much as to make the land unfit for any crop. The owner hence had a number of holes dug on the land to plant coconuts.

As regards Varagu there is a similar tale to tell. The small holder out of sheer necessity put the land under Varagu continuously for years. The result is the devastation of the crop every year by the parasitic weed *Striga*. This increases the cost of weeding. Many have found cultivation on such land unprofitable and had to abandon it to obtain their livelihood elsewhere. The havoc done by this weed can very well be imagined when I say that it has earned the name *kudiviratti poondu*—the weed that scared out the ryot. Inam and *Varam* lands are generally poorly cultivated, and in consequence are full of weeds. It must be noted that not only do the small holder and absentee land lord suffer, but they make others to suffer in as much as these plots, though small are yet big enough to serve as breeding places for weeds and pests which spread rapidly to the adjoining good land. These experiences demonstrate the necessity for co-operation as otherwise the carelessness of one person tells upon the prosperity of his careful neighbour. The farmers were advised not to grow any cereal crop on such lands and to pull out and burn the *Striga* plants preferably before flowering. Since the pest has taken a firm hold, it will be many years before the land is quite free from it.

Another item which equally attracts our notice is the way the ryot disposes off his produce. After harvest all the ryots take their produce to the market simultaneously. Thus there is greater supply than the corresponding demand, and the price naturally falls. In the sowing season immediately after a shower of rain all rush in for seeds thereby creating a keener demand than the possible supply, with the result that they have to pay an exorbitant price for seeds. Moreover they are not well trained in the art of presenting their produce in an attractive manner in the market. All these go to lessen the price of their stock. But the *Nathambadis* especially of Kammangulam are a rare exception. They are very careful in storing grains and in selecting seeds for sowing. They always take care that the grains are cleaned and winnowed before they are taken to the market. This undoubtedly fetches them a higher price and the seed is known in the market as "Kammangulam Paddy." As I have said above, the farmer places himself at the mercy of the traders and merchants first when he buys

articles for his use and again at the time of selling his produce. People combine in ploughing, in irrigating their lands by turns when the water supply is short in the tank, in celebrating temple festival and in cock and bull fights. Can they not co-operate in disposing of their produce and get a larger return? Unlike the manufacturer the farmer can afford to get on for a fairly long time without the necessity of selling his products. The farmer can keep his produce and dictate his own terms. That is possible only when he knows these tricks. There are about ten credit societies working in these parts. The ryots are already appreciating the value of the village banks in as much as they get money cheap and at short notice when needed. Six months ago a "Farmers' Association" registered under the co-operative act was started having for one of its objects the joint purchase and sale of goods on behalf of the members. It has begun to work in right earnest. In his recent visit to the place the Hon'ble Mr. L. D. Swamikannu Pillai, the Registrar of Co-operative Societies, wrote favourably in the visitors book of the association. Another encouraging feature is that His Highness the Raja is taking a keen interest in rural improvement and has lately sanctioned Rs. 10,000 for starting grain banks.

I have now given a brief sketch of some of the methods of Agriculture employed in my district, and with the knowledge that I have gained of the ryots I can say that some of the methods practised by them appear to be the best suited for their locality and conditions; for example the growing of Dhol and Cumbu in wet land in summer. I would recommend the introduction of this method in similar localities.

It sometimes happens that ryots are no better for the adoption of improved methods because the profits so derived are squandered away in drinking, gambling, litigation &c. Unless those in charge of the other kindred departments co-operate with us in devising practical schemes for the general benefit of the people at large any amount of work done by one department single-handed cannot elevate the Agricultural classes.

It is the general opinion of many, perhaps rightly too, that modern conditions have been directly or indirectly instrumental to the migration of the rural population to the neighbouring towns or distant colonies in search of other remunerative employments than agriculture. The educated classes do not consider agriculture a dignified profession. Agricultural labour is always rated at a discount. A writer in the Pusa Journal observes that in America a farmer worth a lac of rupees could ordinarily be seen at work in his own farm with his family and servants and a man worth ten thousand rupees would work on other farms for wages whenever his farm does not require his services. In our country a farmer worth five thousand rupees never works for himself, but employs poor inefficient cooly labour for his farm operations. Present day agriculture is thus left in the hands of inefficient labour, conservative to the very core and blindly following the traditional path of hundreds of years and incapable of adapting itself to the changing conditions of the times. Such are the people the District Agricultural Officer has to deal with. But the suspicion about new ideas, the fear and dislike of change, the difficulty of believing that things can mend—all these great obstacles, slowly yield to agricultural demonstration when successfully done in his own field. In this connection I shall give an instance of my experiences in persuading the ryots to adopt single planting of Paddy. In September 1914, I visited a village called Kulandirakottai, and spoke for an hour about the advantages of single planting of Paddy. Every one nodded assent to my proposal and agreed to adopt it in his fields the next day. I returned home fully confident of the success of my efforts. But two days later, when I again went to the village to see how far they had given effect to my proposal, to my surprise I found nothing whatever had been done as promised. Of the six ryots that I had addressed, one left the village, another had his lands completely transplanted in his old usual way, the third said he was only a tenant, while the fourth told me that I should convince

his aged father before he could venture on any such innovation, the fifth said he would not try this unless he saw the new method demonstrated to him, and after much persuasion the last man consented to plant half an acre of land just as a matter of personal obligation. He did transplant half an acre with single seedlings. The crop came up well and gave the inevitable increased yield. Next year I found the very same ryot following this new method on 10 acres using only 90 Madras measures for seed i. e., a third of the local seed-rate. If he had followed the usual method the seedlings would have been barely sufficient for planting 3 acres. Owners of neighbouring lands who had witnessed this demonstration were satisfied and adopted this system of planting over 150 acres this year. This and other departmental activities do but quicken the improvements which may be effected in course of time by the ryots themselves.

There is, at present, no line of activity, except perhaps agriculture, which has not been rich in results. Tunnels have been bored, the earth has been dug into to a considerable depth, broad rivers have been spanned with bridges, pearls are got out of the depths of the ocean; new towns are being planned and magnificent buildings being built every day. If a bit of this intellectual activity is directed into the fields of agriculture and when education begins to shed its light on rural darkness, the uplifting of the agricultural population is a certainty of the near future.

*State Farm, Pudukotah.*

K. R. Sankar.

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### **Public Services Commission Recommendations, Agricultural Department.**

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1. Regular services should be established to do the work lying between that done by members of the Imperial Service on the one hand and of the Subordinate service on the other.