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FARMING IN CEYLON.

BY A. M. RICHARDS.

The island of Ceylon contains vast stretches of uncultivated lands and possesses irrigation facilities, yet it depends almost entirely on Burma and India for its rice, so much so that when its export was stopped during the war, the people of this island were on the verge of starvation. The Jaffna Peninsula alone imports every year over two hundred thousand bags of paddy and an equal quantity of mill rice.

A few years ago the Government of Ceylon sold out forest lands under what is known as the Irrannamaddu Irrigation Scheme. Having tasted the bitter fruits of lean years many in Ceylon eagerly purchased several blocks so that they might introduce paddy and augment the supply. In a country where labour is very dear, it is expensive to convert within a short time a land, much less a forest, into an arable field fit for paddy growing. Even after one has expended a lot of energy and money in having the forest cleared, the lands bunded, the plots fenced and channels cut, one is faced with the formidable obstacle of stumps. The most serious problem with the Ceylon

farmer is how to have the stumps and roots removed to make the land ploughable at a minimum cost. From reliable accounts maintained by settlers it is ascertained that in one representative case bunding and fencing two hundred acres of land cost Rs. 45,000. This was exclusive of the cost to be incurred in removing the stumps and of the price of the land paid to Government. Uprooting of stumps is an expensive operation in villages under this scheme, where labour is dear and coolies of the right type are not available. This will be evident from the fact that, though Irrannamuddu is situated within forty miles from Jaffna Peninsula and is connected by rail and a good road, the Irrigation Department had to depend on coolies from South India for the construction of the tank there.

Some wrongly imagine that if the lands are properly bunded and water is held in plenty the stumps will decay. This is not the case. If one walked along the Kilinochy tank bund, one would be struck by the number of dead trees, mostly *palus*, with their heavy branches standing aloft which by their appearance seem to have been there for the last twenty years or more. The preparation of fields contributes much towards the success of paddy cultivation. The Jaffna farmer is accustomed to cultivate paddy on lands which entirely depend on rain. The method of preparation of such rainfed lands is quite different from that for lands under tank irrigation. There are two ways of raising paddy in rainfed lands. One is known as 'Puluthy Vithaippu' where seed is sown broadcast after having reduced the soil into tilth. The other is known as 'Era Vithaippu' when the seed is sown on moist soil. Any failure of the second method results in poorness of the crop owing to the unavoidably late preparation of the soil.

When fields are under tank irrigation the preparation of the beds is known as 'Swamp or Puddle system'. For this operation of puddling the fields must be free from sharp stumps or spikes lest they should cause punctured wounds to men and beasts. After preparation of the fields either seedlings are transplanted or sprouted seeds sown broadcast.

Unlike the river water, the tank water that flows into the fields is free from silt, it having been deposited in the bottom of the tank. Easily available manures for a farmer are farmyard and green manures. The latter may either be collected from the nearer forests or grown in the field itself about two and a half months before the land is required for manuring. This practice is not yet common and needs to be popularised. Some friends of the farmer are labouring under the idea that cattle can be replaced by motor tractors in ploughing and other preparations; yet one thing is certain, tractors

cannot produce farm-yard manure and milk and we should keep cattle at least for milk and manure. The former is essential for the growth and vitality of man as it contains the necessary vitamins, the latter is the best plant food. Chemists like Pharaoh's magicians have tried and are trying several methods to convert the farm by-products into useful manure. McCarrison has shown that food has much to do with the growth and vitality of man and the crops raised by using farm yard manure give more nutritive food for man and beast than artificial manures. He has confirmed the results of the series of experiments conducted in this line by Dr. Norris till lately Chemist of the Coimbatore Research Institute on permanent manurial plots of the local College, the enzymes secreted by the digestive glands of cattle have the power of converting the bye-products of farm into suitable plant food. Cattle are thus indispensable for Ceylon.

There are suitable areas in Ceylon in the Northern Province for breeding cattle especially of the Indian Type. The point at issue is whether we should aim at a purely milk producing type or a purely draught type or a breed in which both qualities are combined. In European and American countries they have horses and machinery to do the draught work, the aim in cattle breeding there being to bring into existence a dual purpose breed fit for milk and meat. In this they have almost succeeded with their breed of Shorthorns. Extensive experiments are being carried on in this line in South America and in Java with Ongole cattle imported from India for this purpose. But a country like the little Island of Ceylon lying at the foot of the Mother Country, India, inhabited by people emigrated from there, with more or less the same religious sentiments, depending on her for all necessaries except for luxuries, requires a breed fit for *work* and *milk*.

The need of a country can be found out from its demand. An agricultural country like the Northern Province imports every year at Katys a large number of Indian draught bullocks but less than two per cent of milk kine. Thus Jaffna definitely wants work cattle for cultivation more than milch cows. She is more in need of Kanji than milk.

It is interesting to learn that the Government of Ceylon is going to open a Dairy at Peradeniya this year. The point is whether they are going to import foreign breeds or going to build up a Dairy herd by selection from suitable local or Indian breeds. The latter is certainly a rather long and laborious process, but I do not think it is anything like as long as 30 or 40 years, as some imagine. Animals can be bred down to the fifth generation in the period of about two decades.

Some of the well-known Indian cattle breeders have cows which are equal to the best half-breds in yield of milk. By selection from such country cows it is possible to develop a dual purpose breed. The Pattagar of Palayakottai has a few such cows amongst his well known Kangayam breed.

When the Agricultural Department starts Dairy Farming or Cattle Breeding in the experimental station at Tinnevely, Jaffna, the farmers will expect the Department to select a breed whose bull calves will be useful for agricultural purposes and whose heifers are good milkers. From the point of view of Jaffna the former requisite is of far greater importance than the latter, as their statistics of cattle importation will clearly show.

I may be pardoned for saying right at the start that it will be a waste of time and money if attempts are made to breed half-breds. An animal is known as half-bred when its mother is a country animal and its sire a foreign breed like Ayrshire, British Frisian, Shorthorn, Jersey etc. The first generation of heifers invariably do well at the buckets, but the second generation is generally a failure and very rarely one in five among these may prove as good as the first. For Jaffna farmers the bull calves will not be of any use for agricultural purposes and they are without hump and they pant for breath in the sun even at Coimbatore which is at an altitude of 1400 ft. above sea level, and 12° N. latitude, and much more so in the tropical heat of Jaffna plains. Pure-bred foreign animals and these half-breds are more susceptible and vulnerable to contagious diseases than Indian cattle. Their upkeep costs are comparatively very high. There appear to be more cases of sterility and abortion amongst them. It is through foreign cattle that some diseases unknown in India have been introduced such as contagious abortion, pleuro-pneumonia contagiosa and tuberculosis.

There is a vast contrast as one travels in Ceylon and in India. In the former, nothing but thick jungles are seen on both sides of the railway line for miles and miles and in the latter country extensive plains either with dry or wet cultivation or pasture grounds lie stretched out. History tells us that Ceylon once had a vast area of paddy lands and that she was also exporting paddy even to Bengal. The very plains must have been converted into high forest by successive foreign invasions. It is not out of place to compare both the countries as to why paddy cultivation has not been pushed on in this little island when the inhabitants of it do require rice every day, it being their staple food. Great Britain having herself converted her wheat fields into hunting paths depends on other countries for food

for man and beast. England is quite different from Ceylon for she has power and command of a great fleet. Provincial Governments in India might stop the export of grains to Ceylon at any time. Unless Ceylon opens her eyes and produces articles of food herself, she is in danger of starvation.

It is over a century since Ceylon came under the British flag and there have been no wars and peace has prevailed uninterruptedly, yet the inhabitants do not appear to have made any effort to raise their own food grain and have even allowed the great part of the island to be overgrown with jungle or have their attention turned to commercial crops and coconut plantations. The progeny of planters invariably hunt after luxury and their sphere of usefulness is very limited to their country and people. It is high time that serious consideration is given to this problem.

In Ceylon:—

- (1) Only a rich man can attempt to cultivate in the forests.
- (2) The price of the land has to be paid in lump.
- (3) It will take some years to bring the lands into order.
- (4) Labour is very dear and the available coolies are incapable of standing any strain.
- (5) Malaria incapacitates coolies to do work.
- (6) It is very expensive to clear the forests, fence the area and watch the crops.
- (7) There are a number of enemies to the paddy crops, different kinds of insects invading from the surrounding forests not to speak of beasts and birds.
- (8) The branding ordinance not only ruins the hide trade of the island but has driven many a domesticated animal wild. It is by this branding system people allow their cattle to roam about in jungles to eke out their existence by their own efforts. Most of them when they grow fat retain their liberty in jungles and become a menace to cultivation. Numbers of bulls and cows can be seen even in day time in the jungle of Sankatharval and a large herd of buffaloes roam about at night to graze the crops of Kilinochy.

Thus Ceylon is in a comparatively less advanced stage of farming than Southern India, but would with South India's help go forward as she is making strenuous efforts in this direction and her agricultural department has been reorganised though it is unfortunate that she lost the chance of having the Tropical College of Agriculture located within her limits.