

Rural Enquiries at Appuneri (Tinnevely Dt).

BY G. JAGANNATHA RAO, B. A.,

Assistant Cotton Station, Koilpatti.

The village.—Appuneri, the agricultural practices of which village are detailed in the following paragraphs, is situated about three miles to the north of the Cotton Breeding Station, Koilpatti and is otherwise known as Palaya Appuneri to distinguish it from one of its hamlets of the same name. Lakshmiammalpuram is the second hamlet attached to the village. 250 houses with a total population of 2,100 souls, of which nearly half the number consists of Kammavar Naickers and the other half of Maravas, Shepherds and Pallars, constitute the entire village. The hamlet, Lakshmiammalpuram, is solely inhabited by Pallars. A small school of a type common in most villages is situated just outside the village proper.

2. *Cultivated area and crops grown.*—2,250 acres, consisting of 1,500 acres of 'Karisal' lands, 350 acres of 'Veppal' lands, 300 acres of red soil and 100 acres of garden land are under cultivation. The village possesses no wet-lands. In the major portion of the dryland area are grown cotton, cumbu and fodder cholam. Pulses such as red-gram, black-gram, horse-gram, green-gram, Bengal-gram, cowpea and lab-lab (and coriander) are grown to a small extent, mostly as mixture. Cholam, ragi, tobacco, chillies and onions are among the chief garden crops of the village. Last year, according to the inquiry, there were 800 acres under cotton, 600, under cumbu, 550 under fodder cholam, 100 under garden crops and the remaining area under miscellaneous minor crops such as samai (*Panicum miliare*), varagu (*Paspalum scrobiculatum*) and red-gram. Ordinarily, a ryot owning about twenty five acres of black soil, apportions about thirteen acres for cotton, six, for cumbu, and the remaining area for irungu cholam (*Audropogon sorghum* var. *irungu*) fodder. A pair of cattle is said to command in this tract, either about twenty-five acres of dryland or twenty acres of dryland and one of garden land.

3. *Rotation followed and the principles involved in it.*—A four course rotation, i. e., cumbu, cotton, fodder cholam, cotton, is the one generally followed. The principles involved in the rotation are:—

(1) By changing the crop, year after year, the ryot aims at getting the maximum yield from his lands without detriment to the fertility of the soil,

(2) He grows a cereal, i.e., cumbu for his food, a fodder crop, i.e., cholam for his cattle and an industrial or money crop, i.e., cotton for his other expenses,

(3) He utilises the interval after the harvest of cumbu or for ploughing and manuring the land for the succeeding crop.

This rotation is not strictly adhered to, in some cases, as its observance depends mostly upon the economic status of the ryot. For instance, a ryot owing three or four acres of land, crops cotton year after year on the same land, little caring for the deterioration of the soil fertility of his holding.

4. *Pulse crops, season for their sowing and their yields.* Pure pulses find no place in the rotation. They are, however, grown as mixtures with one crop or another. Black-gram, horse-gram, or Bengal-gram (or coriander) is sown mixed with cotton, and green-gram, cowpea or lab-lab is sown with cumbu. Lab-lab or cowpea is also sown with cholam. These pulses are usually dibbled in furrows, six to eight feet apart, in the midst of the main crops. Red-gram is mixed with varagu (*Paspalum scrobiculatum*). The ryot cares little for a pulse crop since he prefers to grow a fodder crop for his cattle. Besides, the pulse crops often fail to produce good returns. These two factors account for the fact that the ryot grows pulse crops only as mixtures the yields of which suffice for his household requirements. The economic status of the ryots, the seasonal rains and the nature of the soil are also factors determining the growth of pulses as pure crops. One or two ryots owning large holdings of from fifty to hundred acres occasionally allocate a few for a pure pulse.

If sufficient rains are received in May or June, red-gram is sown pure in red soils as well as in 'Veppal' lands and if the rains are delayed till July or August, it is sown mixed with varagu. The other crops are grown with the north-east monsoon rains; if they are received in September, black-gram is sown as a mixture with cotton; and if the rains are delayed still further, Bengal-gram is preferred.

It is no doubt desirable to include a pure pulse crop in the rotation. If it can be demonstrated that a cotton crop after a pure pulse gives an increase of about 50 per cent. out-turn i. e., if the extra income from cotton grown after a pure pulse more than recompenses or at least recompenses the loss sustained by growing a pure pulse instead of cotton, the ryots will be inclined to introduce a pure pulse crop in their rotation.

All the pulses yield about two kotahs or one hundred and ninety-two M. M. when sown as pure crops and about an eighth of this quantity when sown as mixtures.

5. *Farm Yard manure.*—Farm yard manure is the only manure in general use and its application to crop depends mainly upon its availability and the importance of the crop to which it is intended. Garden crops, for instance, are given preference. The grain crop, i. e., cumbu, stands next in importance; it is manured only when there is any surplus left after manuring the garden crops. Anything between ten to twenty cart loads of farm yard manure per acre is applied to garden lands. Little or no manure is applied to the fodder crop and cotton is usually sheep-penned.

A ryot owning a pair of bullocks, and an extra animal or two, may be buffalo or cow, obtains about twenty carts loads of farm yard manure every year. This quantity is mixed up with tank silt by some ryots at different stages and in some instances may come up to about one hundred cart loads per pair in the case of individual ryots.

It is said that, as matters stand, the Indian ryot gets the benefit of only 50 per cent of the total manure produced and the Appuneri ryot is no exception to this statement. The method of preparing farm yard manure is, in most cases, unsatisfactory. No ryot takes care to preserve the urine of cattle. Cattle dung and sweepings are thrown in heaps or pits exposed to sun and rain. Tank silt when put in is added in alternate layers to the manure so collected under exposure. All waste fodder is utilised for feeding the buffaloes. What little is left over by them is added to the manure. The ryots admit that urine is more valuable than dung and any litter added to absorb the urine increases the manurial value. Owing to the scarcity of fodder the ryot would prefer spreading a layer of fine earth to absorb the urine, instead of litter though no one seems to advocate it. The following are the ryots' objections to adopting the loose-box system:—

(1) Their poor economic condition which makes them live in small dwellings wherein there is no moving space for them,

(2) their reluctance to tie their animals outside their houses for fear of theft,

(3) their apprehended belief that the animals will suffer from the attacks of ticks and mosquitoes when they are made to constantly stand on the manure, and

(4) the scarcity of fodder

All efforts in making the ryots realise the importance of the proper storing and preservation of farm yard manure according to scientific methods are to be made with great enthusiasm.

No green leaves are added to the manure pit. No cakes are used as manure as there are no wet-lands. As regards prickly-pear compost the ryots seem to have no objection. Cotton stalks are their valuable fuel stuff and decaying them for synthetic manure is out of the question. They make use of their cumbu straw for feeding their animals and for thatching purposes.

6. *Sheep and sheep-penning.*—A few ryots of the village own sheep and goats represented in units of 'Moi.' Each 'Moi' consists of about fifteen sheep with sometimes one or two goats and a ryot owns one or more 'Mois' according to his status. A number of such 'Mois' go to make up what is called a 'Kedai' for purposes of joint ownership and business. The village boasts of two 'Kedais' or flocks of sheep, one consisting of about seven hundred sheep and the other of about five hundred. As noted before, the 'Kedais' are mixed flocks of sheep and goats; the latter constituting a very small proportion. The two flocks are collectively owned by some of the ryots of the village and penning is conducted on a co-operative basis. The owners, individually, maintain a cooly to look after the grazing of their sheep during the daytime. Charges on this account are usually about Rs. 50 per annum and three 'Cunjees' (whatever is prepared in the master's house) per day. For purposes of manuring, a 'Kedai' of seven hundred sheep folded on one acre of land for one night is found sufficient. The charges

for the watchman for the night are Re. 1 besides about $\frac{2}{3}$ M. M of grain for every Moi.' For purposes of cash payment, when it is found necessary, 6 M. M. of grain are taken to be equivalent to a rupee. This works out to about Bs. 6 to Rs. 7 per acre. The flocks are folded in each ryot's fields in turn and in proportion to the number of 'Mois' he contributes to the flock.

These two flocks are not able to meet the demands of the village which has about eight hundred acres under cotton. The villages of Maniyachi and Moopanpatti, two neighbouring villages, possess flocks in excess of their requirements and these are engaged to meet the surplus demand at Appuneri. Usually, about seven hundred acres of the area intended for cotton are sheep-penned and other one hundred acres are left out as their owners cannot afford. Besides, about thirty to forty acres of the garden land, especially when a third crop like chitra cholam is intended to be grown, are also sheep-penned in addition to the application of farm yard manure, according to the status of the ryot.

Except for mutton and for penning, the sheep are not reared for other purposes i. e. as for the production of wool. The sheep are washed and sheared a month before the cold season as otherwise, they are said to lose condition in the cold weather. The sheared hair is, however, mixed with the farm yard manure on account of its manurial properties.

The increase in yield of Kapas (Seed cotton) from a sheep penned area over the produce obtained from a land not so treated is estimated to be from $\frac{1}{4}$ to $\frac{1}{2}$ a 'pothie' of cotton per acre (1 'pothie' is 250 lb).

7. *Trend of cultivation and labour.*—The trend of cultivation is becoming more and more intensive on the garden lands as the crops grown therein are more remunerative. The area under garden cultivation is slowly but steadily increasing. The number of wells about sixty-five years ago is said to have been about fifty. Some ten years back, the number seems to have gradually increased to one hundred and now the village boasts of one hundred and twenty wells.

Enough labour is available in the village both from the Naicker and the Pallar castes. The wages for a man are two

M.M. of grain or R. 0-5-4 to R. 0-6-0 per day of about eight hours, those for a woman cooly being one M.M. of grain or R. 0-2-8 to R. 0-3-0 per day of the same number of hours. Cotton picking is usually paid in kind. So far as hired labour is concerned, there is not much to say about the grain or loss in efficiency. Of late, the owner of the land has, himself in many cases, ceased to work in his holding. Formerly, the ryot's sons used to be trained by stages, first being put to graze sheep and cattle, next to drive carts, then trained to plough and so on. The present day tendency is different. The ryot's children have no inclination to attend seriously to their hereditary industry. In this sense, it may be remarked that there is a definite loss in the efficiency of labour.

8. *General.*—In the history of the village, one finds that cotton has gained ground of late and cumbu, once the boasted cereal of the villagers, has gone down in area. This is due to the high prices fetched by the cotton crop.

“During the past quarter of a century or two, owing to the rapid communication and dispersal of world ideas, labour has become restless, demands better comforts, less working hours, higher wages and greater freedom from control.” As an accompaniment of the growing craze for ease and town life and its consequent changed outlook towards the agricultural industry, the Appuneri ryot, like his brethren in most villages, has taken to a fairly luxurious method of living and this has entangled him in debts. (Perhaps the report of the Royal Commission which is turning the attention of the country towards agriculture and a love for rural life may bring about a change in them.) Sometimes, he borrows at such a high rate of interest as 24 to 36 per cent per annum and becomes the slave of the village money-lender. The villagers feel the necessity for a co-operative credit society.

Time was, before the advent of the power gin when there were six private agencies for hand ginning cotton, each providing work for from fifty to sixty women coolies in the off-season. But, the introduction of the power gin has replaced them completely thus depriving the labourers of their bread in the slack-season.

There are only thirty to forty acres under Uppam cotton the rest being under Karunganni.

[NOTE.—The above inquiry was conducted in the month of November 1927 with a view to get acquainted with the local agriculture of the tract with special reference to, the problem of manuring and the place of pulses in the local ryot's cropping scheme. The original report which was based on a series of answers to set questions was drafted jointly by Messrs. A. Ramalinga Ayyar, Farm Manager and V. Krishna Rao, Probationer, at the Cotton Breeding Station, Koilpatti and C. Jagannatha Rao. The last alone is however responsible for this string connecting the answers as it appears now though the inquiry was done jointly. Thanks are due to M. R. Ry., V. Ramanatha Ayyar Avl., Assistant Cotton Specialist, Koilpatti, for his thoughtful and well-arranged questionnaire and guidance, to Mr. Saadat-Ullah Khan, Deputy Director of Agriculture for his kind perusal and advice and to Mr. G. R. Hilson Cotton Specialist, Coimbatore, for his suggestion to have this published in this Journal.—C. J.]