

Agriculture in the Vizagapatam District.*

Vizagapatam is the largest district in India and the most thickly populated, as far as the coastal tracts are concerned, in this Presidency. Its people are strong, hardy and prolific, and its land presents a most interesting variety of conditions. Emigration is a most marked feature, however, and large numbers move yearly into the deltaic tracts of Godavari and Krishna, and across to Rangoon for work in the Burmese rice fields. Most of this emigration is due to a desire to evade the clutches of the money lenders, mainly Komatis and Marwaris who are the only agricultural bankers in this Presidency. Reference may be made to the District Manual for accredited instances of the most exorbitant rates. In one case a ryot 50 years ago borrowed Rs 20. He paid back Rs. 50 in instalments, worked the whole of his life and died in harness. His son took on this debt and he too worked for the whole of his life, eventually dying in bondage and leaving two small sons whose services were also claimed for an alleged arrear of Rs. 3. Co-operative credit, could it become established, should do much to make such cases impossible.

The District may be roughly divided for agricultural purposes into 3 tracts:—

1. The strip of land along the coast consisting of a series of salt and sandy swamps.
2. The inland plains which drain into the Bay of Bengal by means of a series of rivers and jungle streams.
3. And the hilly tracts, the Agency, the most thinly populated in the Presidency.

The littoral tract is narrow and sandy and is agriculturally unimportant, except that salt pans, casuarina and coconut plantations are seen here and there.

* Summary of paper read at the last Agricultural Conference, by Mr. D. Balakrishna Murthi Pantulu, Farm Manager, Anakapalle.

It is the second division, the submontane plains, that is the most important and typical agriculturally and this paper refers mostly to the agriculture in those plains. These are made up of an undulating expanse of very fertile soil, mostly red but changing to black, in the basins of rivers and other alluvial spots and the Anakapalle Agricultural Station is fairly typical of a strip of alluvial land along the Sarada river.

Still more important is the Agency, but it is almost inaccessible, owing to the hilly nature of the country and the prevalence of malaria. The cultivation here is in the hands of hill tribes, the Sanaras, Koyas etc, and is therefore rude and primitive. The "Podu" cultivation is a clear instance of the rude and destructive nature of the cultivation practised. A strip of land is cleared and the cleared scrub is set fire to and the seed broadcasted in the ashes. After a crop or two are taken the land is abandoned and a fresh piece taken, cleared and treated similarly. In most of the Agency tracts weights and measures are still unknown, and the produce is disposed of in heaps and sometimes the grains are measured by baskets or pots and sold. The soil in the agency is most fertile and is not fully and properly cultivated, chiefly for want of labour. The hill produce that is coming to the plains is more a natural product produced without much effort and cultivation and this supplies more than three fourths of the trade in the district. The Raipur—Vizianagaram Railway is mainly intended to tap these rich Agency tracts and the line is now working up to Parvatipur and will improve matters to a very considerable extent when fully opened. The construction of the Vizagapatam harbour has the same object in view. The hill produce is brought down the hills on backs of cattle in big caravans and the whole is monopolised at ridiculously cheap prices by the few merchants of a few important places that are situated just at the entrance of the openings of the Agency into the plains.

Nearly 9/10 of the district is Zemindari for which no agricultural statistics are available. The area of the cultivated crops noted in the statistical returns are only for the tenth of the district which belongs to the Government for which regular cultivation accounts are maintained.

The rainfall in the district varies considerably. The average for the plains is 41 inches, the rainfall in the Agency tracts being 57 inches. This again varies very much with the elevation and aspect, from 75 inches to 44. In the Agency tracts generally, the S. W. Monsoon brings most of the rain; in the plains the rainfall is more evenly distributed, though the S. W. Monsoon is the more important.

Soils present an equal variety. The prevailing colour is red but black soils are found in the alluvial strips bordering the rivers. The Agricultural year is divided into three seasons, the *Punasa* or the early season, May to August, the period of the S. W. Monsoon, when the staple dry crops are cultivated in all classes of soils, the *Peddapunta*, the regular wet crop season, August to December and the *Payra*, the period from November to April. The *Punasa* crops are by far the most important as they comprise cumbu and ragi, the staple food of the mass of the people and a failure of the S. W. Monsoon is a serious calamity.

Implements. The wooden country plough is the only agricultural implement worth the name. Levelling board is also used to level the wet lands after puddling, and the garden and wet lands after the seed is sown and covered with the country plough. Lolla is the next implement of importance used for moving soil from higher to lower places. The picottah is the universal water lift, and mhote is almost unknown. The picottah consists of a whole palmyra partially hollowed out, the hollowed out stump of a palmyra used as the lever, and a bamboo and a big bucket being bound round with hoop iron.

Very high seed rates are used invariably with all the crops. Considerable thinning is done after the crops are growing, leaving still very thick crops. A very excessive seed rate is used for paddy. I may be permitted to quote a curious instance that happened in the Anakapalle farm last year. 20 acres of land were to be under paddy for which the previous ryots used to sow 400 Kunchams (1 Kuncham= $6\frac{1}{2}$ lbs) of seed at 20 Kunchams per acre, the local seed rate in the neighbourhood of Anakapalle. I sowed 70 Kunchams in the same seed bed prepared for 400 Kunchams. I was laughed at and three neighbouring cultivators went to the extreme of sowing special and extra seed beds with a view

to sell the seedlings to me at exorbitant rates, as they thought that I could not transplant the whole area of 20 acres with the seedlings I raised and that I should be put to the necessity of purchasing their seedlings at the time of transplanting. When the seed beds were half grown they began to feel their folly. I leave you to imagine their surprise when the Dy. Director of Agriculture offered the very same ryots seedlings to transplant about 2 acres after I completed the transplanting of 20 acres on the farm!

The chief sources of irrigation are the river channels, tanks and wells. They are better in the northern portion of the district, especially under the Nagavalli where rice is the principal food crop. In the central portion cumbu and ragi are grown more, as the irrigation facilities become less secure and in the south gingelly and millets are the chief crops as the sources of irrigation are scanty and doubtful. In the Agency tracts the conditions are quite different. Land is fertile and plentiful and the rainfall is heavy and unfailling. Almost all the rivers are provided with anicuts and channels spring from them. Formerly they were all temporary dams but the present tendency is to replace them by masonry constructions by which the channels at the tail end of the rivers get little or no water in adverse seasons and generally after the rains cease. Tanks are very small, except a few with no regulators, the ryots getting water by cutting the embankments. As already stated 9/10 of the District is Zemindari and the irrigation sources are disgracefully neglected. There are no proper arrangements for the regular distribution of water but time does not permit me to detail this evil. There are few or no pukka wells in the district. The existing ones are simply big earthen pits with crumbling sides. Nowadays a few well-to-do ryots are trying to improve them by providing masonry wells.

As there is a very rapid fall in the district in the lay of the land, from the hills towards the coast, the district is very beautifully drained though no care is taken by the ryots regarding drainage.

A suitable waterlift that can lift water economically is to be tried and demonstrated. Even on very large holdings of well-to-do ryots,

picotta is the only means of lifting water. In an area of 40 acres acquired for the farm there used to be 16 wells worked with picottahs by 64 coolies costing about Rs. 12/ per day and irrigating hardly 2 acres of land on the whole. There is abundant supply of subsoil water and the lift is about 20 feet. By improving one well and working a centrifugal, with an oil engine, the whole farm can be irrigated. The cost of the engine will not exceed the value of land reclaimed by filling the useless wells and water can be lifted at a much cheaper cost. But it is too premature for me to detail on the subject till the work is started. The Archimedian Screw may prove very useful for low lifts.

A word about the improved implements and I am done. The soils are ideal to be worked with iron ploughs. Gallows, Turnwrest and other smaller ploughs are doing excellent work on the farm but the cost is rather prohibitive to be in the easy reach of the ordinary ryots. There are a good number of rich landlords who own good cattle and these can go in for them. Agricultural Co-operation, as is found in the Ceded Districts, is the only method to popularise these costly implements. Trials are also being made with Ceded Districts implements.

Agriculture and its Improvements.*

Introductory.

India has, from time immemorial, been a great agricultural country with its teeming millions dependant mostly on it. Agriculture is the basic industry of the country, the industry on which most of the other industries depend. We should always bear this fact in mind and foster both simultaneously. We should produce raw materials of our industries. Without the former the latter becomes handicapped. We must produce them in quantities enough for home consumption, and then export to foreign countries what we do not want at home. Our Indian ryot at his best is as good as, and in some respects

* Summary of paper read at the last Agricultural Conference by Mr. M. Ganga Raza Pantula, Secretary, District Agricultural Association, Berhampore.