

Physical vigour born of healthy meals is valuable, not only for itself but for its power of enhancing one's earning capacity. Then again, we have to take into account the immense importance of our rural economic life whose course has been cruelly obstructed by the iron monster robbing our village women of some of their natural means of livelihood and the labouring class of its right to gather its simple living out of the gleanings from the people's own green field of life. It has gone on for long, this tampering with the time-honoured irrigation of living, in this country causing large desert tracks of privation in our villages.

Would it be too much to expect a body of volunteers to form a league whose members should take a solemn vow to use *dhenki*-hulled rice for their meals not allowing its nourishment to be stupidly thrown away by wasteful cooking? Could they not realize that it is the perpetuation of a national calamity to which most of us are daily helping by instituting in our homes an insidious method of suicide? (Dr. Rabindranath Tagore in the *Harigan*.)

## AGRICULTURAL JOTTINGS

BY THE DEPARTMENT OF AGRICULTURE, MADRAS

1. **Cotton Strains.** Cotton, though occupying only 6.3% of the total cropped area, forms one of the important crops of this Presidency on account of Madras producing more long staple than any other part of India and also of the relatively high value got for the produce. It is mainly grown on the black soils.

There are five distinct tracts in this Province, each growing a commercial type entirely different from one another. The Department of Agriculture has opened farms in each of them and is making intensive studies for more than a decade with the object of improving the local varieties. As a result of these investigations it has evolved more paying strains, the seeds of which are being multiplied and distributed to the cultivators.

For the Tinnevely tract comprising the districts of Madura, Ramnad and Tinnevely, two strains viz. C. 7 and A 10 were isolated from Karunganni cotton at the Koilpatti Agricultural Research Station. They are being grown over 70,000 acres. The former type is being grown in the southern taluks of the tract while the latter is preferred in the northern part. They have a mean fibre length of  $\frac{7}{8}$ " with a ginning percentage of 30 as compared with  $\frac{3}{4}$ " staple and a ginning percentage of 27 of the local mixture. In yield it is as good as the local Tinnies. The lint fetches a premium of Rs. 5 per candy of 500 lb. It is declared suitable to spin 24's to 30's warp yarns.

Recently another strain called Koilpatti 1 has been isolated. It has an efficient plant body, a ginning percentage of 31 and a spinning value of 28's to 32's. It is able to withstand better the untimely February rainfall which causes a high shedding of buds and bolls in the other strains. Its average yield is therefore higher. The distribution of the seed was started only recently.

Cambodia Co. 2 is the strain recommended by the Department for cultivation in the Cambodia tract. Though it thrives best only on red and mixed soils, it is able to tolerate wide range of climatological conditions. It is a vigorous type with broad leaves and big bolls and is being grown over 75,000 acres. There is a very great demand for its seeds, which often secures a premium of 40% over the bazaar rate. It has a staple of  $\frac{9}{10}$ " and ginning percentage of 35. It gives an increased yield of 15% over the local unselected type. It is suitable to spin 28's and is offered a premium of Rs. 8 per candy of lint.

For Bellary and Anantapur districts—called Western tract in commerce—strain H. 1 evolved at the Hagari Agricultural Research Station has been found to be very suitable. It is being cultivated over an area of 200,000 acres. Its



staple length and the ginning percentage are  $\frac{7}{8}$ " and 29 respectively. Compared with the local Jawari cottons its ginning percentage is higher by 3%. Its lint fetches a premium of Rs. 12 per candy of 50 lb. It is capable of spinning 26's to 30's yarns.

In the Northern tracts, seeds of strain N, 14 was under distribution for a long time. It has a staple of  $\frac{7}{8}$ " and can spin up to 40's. It is highly valued by commerce on account of its fine and strong fibre. In certain years it fetched the very high premium of Rs. 70 over the local market rates, and was cultivated over more than 30,000 acres. But of late its acreage has fallen on account of its low ginning percentage and its unsuitability to soils other than red and mixed. Attempts are already on foot to evolve a strain suited to the black soils of this tract.

'Cocanadas' is the name given to the cotton grown in Guntur, Kistna, Nellore and Godavari district. Unlike other cottons, it has a deep brown lint and is much wanted by the traders for its keeping colours fast. As a result of the breeding work done at Guntur, a strain No. 171 has been isolated. It has a length of  $\frac{7}{8}$ " and a ginning percentage of 26. It yields 10% more than the locals. It spins up to 26's while the cotton from which it was selected spins only 16 to 18's. Its distribution has been started only recently. It is hoped that it will be grown over very large areas before long.

**2. Dry farming practices in Ceded Districts.** In parts of the Bombay Presidency where the average rainfall does not exceed 22 inches per annum it has been shown that as much as fifty per cent. of the rainfall may be lost to the crop. This is due to what is common experience viz. that quantities of rain water run off the land, some is lost by the drying effect of the sun, and a further quantity is lost through natural causes inherent in the physical qualities of the soil.

In recent years special attention has been given to this problem in the Ceded districts. The main effort has been directed towards increasing by means of improved tillage firstly the penetration of rain water and secondly its retention by the soil. In the case of clay soil penetration of rain water is generally far less than is generally believed. In a type of black cotton soil in the Coimbatore district it has been shown, for example, that rain water does not enter the soil to a greater depth than 2 ft. from the surface. Similarly, in Egypt on land irrigable from the Nile it has been shown that if certain of the land is flooded for 30 days it is possible for the water to penetrate only 2 ft. in depth.

The problem in the dry tracts of this Presidency therefore, as elsewhere, is to examine the efficiency of dry farming practice in respect of water penetration and retention. In the Ceded districts the ryots generally are well aware of the usual methods of arresting excessive run off of water, but such are expensive. Further, over large areas there is no material with which to erect embankments against rainwash.

The Department of Agriculture have overcome this difficulty by designing a special implement which is capable of throwing up a field bund. The implement which costs Rs. 7-8-0 can be drawn by medium sized bullocks.

At Sanganakallu  $3\frac{1}{2}$  miles from Bellary an area of land was ploughed at the beginning of the present season with an iron plough costing Rs. 32. This is in contrast to the local practice of tillage with a country plough or *guntaka*. It is claimed that the use of this improved implement results in more even tillage and therefore better conditions for the penetration of water. Before the sowing of cotton the land was protected against rain wash by the erection of bunds. Part of a holding was treated in this way and part was cultivated by local methods. The harvest of cotton has started and the first pickings show that the improved dry farming practice has given about fifteen per cent. more kappas than the local practice. Similar plots have been laid down in several centres of



demonstration work in Bellary and Anantapur districts. In some cases there are early sown crops and in others *hingari*. The results will be known later.

3. **Improved seed of Ragi and Gante (*cumboo*) for the Vizagapatam District.** On the Anakapalle Agricultural Research Station, two strains of early Ragi Nos. 525 and 355 have been evolved, the former having been found to grow well in the late season also. During the past 3 years, these have been tried and distributed where found promising. In these three years, No. 525 gave over 139 plots, an increase in yield, over the local bulk, of 273 lbs. (24.7 %) of grain valued about Rs. 5-8-0 per acre. Judging from the results of the plots in the different taluks the strain appears to be more suited to the southern taluks of the district than to the northern ones, the degree of suitability being also dependent on the seasonal conditions. Wherever paddy is to be planted late this strain will prove very useful, and ryots are advised to replace the local seed with it as early as possible.

Ragi No. 355 has during the past 3 years given on an average over 89 plots an increased yield of 224 lbs. (19.2 %) of grain per acre valued Rs. 4-8-0 over the local bulk. The success of this strain in the different taluks has been more varied, any delay in planting this strain, which is earlier than the other, affecting the yield. Where paddy is intended to be planted early, this would be a suitable strain to take up.

Next to ragi, *gante* (*cumboo*) forms an important part of the ryots' food in the Vizagapatam District. It occupies over 2 lakhs of acres in this district, which possesses the largest *gante* growing area in the Telugu districts. During the past 3 years two new varieties of *gante* one from Bombay and another from the Punjab were tried at Anakapalle and released for trial in the District during the last season.

In spite of the adverse season, the Punjab *gante* gave, on an average of 9 plots, an increased yield of 288 lbs. of grain (39%) valued about Rs. 5-12-0 per acre over the local. The Bombay *gante* gave an increased yield of 221 lbs. (30%) valued Rs. 4-4-0 per acre over the same number of plots. If the strains continue to prove superior in further trials, as it is hoped they will, they will be of great help to the ryots of the southern taluks of the district especially the coastal ones where the rainfall is lower, and where this crop is largely grown in preference to Ragi, or which requires heavier rain to cultivate. (By Courtesy of Director of Agriculture.)

## Crop and Trade Reports.

### Cotton Raw Receipts at Presses and Spinning Mills.

Loose Cotton.	Bales (against an estimate of 445,600 bales).	Figures for corresponding period in previous year.	
1-2-35 to 20-12-35.	455,523.	580,022.	
" 27-12-35.	458,876.	584,031.	
" 3-1-36.	462,558.	586,712.	
" 10-1-36.	466,742.	588,722.	
" 17-1-36.	470,479.	592,005.	
" 24-1-36.	472,935.	597,224.	
" 31-1-36.	478,597.	599,497.	
Pressed Cotton.	Receipt in Mills.	Export by Sea.	Import by Sea.
1-2-35 to 20-12-35.	290,319.	133,844.	43,218.
" 27-12-35.	292,099.	134,454.	43,571.
" 3-1-36.	297,183.	139,759.	47,017.
" 10-1-36.	300,788.	141,324.	47,199.
" 17-1-36.	304,446.	142,842.	47,855.
" 24-1-36.	310,306.	143,339.	49,049.
" 31-1-36.	317,371.	147,224.	49,525.

(Bale = 400 lbs.).



**Paddy—Final forecast report—1935-36.** The average of the areas under paddy in the Madras Presidency during the five years ending 1933-34 has represented 13·5 per cent. of the total area under paddy in India. The area sown with paddy in 1935-36 is estimated at 11,000,000 acres as against 10,828,000 acres for the corresponding period of last year and the finally recorded area of 11,055,587 acres in 1934-35. The present estimate falls short of the final area by 0·5 per cent. and the area of 11,381,660 acres in an average year by about 3·4 per cent. 1,403,000 acres have been reported as sown since the last December forecast was issued. The extent so sown was large in Ganjam (125,000 acres), East Godavari, Chingleput (118,000 acres), South Arcot, North Arcot, Madura (103,000 acres) and Ramnad (152,000 acres). The area sown in December and January was greater than that sown in the corresponding period of last year by 286,000 acres or by about 26 per cent. The area under second crop paddy is expected to be generally below normal. The harvest of paddy is in progress. The yield is expected to be normal in Kistna, Guntur, Kurnool, Bellary, Cuddapah, North Arcot, Madura, and the Nilgiris, slightly above normal in South Kanara and below normal in the other districts. The yield was the lowest in Ganjam (84 per cent.). The seasonal factor for the Presidency works out to 94 per cent. of the average as against 96 per cent. in the season and crop report of last year. On this basis, the yield works out to 98,090,000 cwt. of cleaned rice. This represents a decrease of about 1·6 per cent. when compared with the estimate of 99,622,000 cwt. in the season and crop report of last year. The yield in an average year is estimated at 107,776,000 cwt.

The wholesale price of paddy per imperial maund of 82-2/7 lb. as reported from important markets towards the close of January 1936 was Rs. 2-12-0 in Nellore and Erode, Rs. 2-10-0 in Vizianagaram and Cuddapah, Rs. 2-9-0 in Nandyal, Rs. 2-8-0 in Berhampore, Rs. 2-6-0 in Madura and Tinnevely, Rs. 1-11-0 in Kumbakonam and ranged from Rs. 1-15-0 to Rs. 2-4-0 in the other markets. When compared with the prices reported in the previous month, these prices are stationary in Berhampore, Vizagapatam, Erode and Tinnevely and are lower by 27 per cent. in Kumbakonam and Salem, 24 per cent. in Trichinopoly, 18 per cent. in Vellore, 15 per cent. in Cuddapah, 14 per cent. in Madura, 9 per cent. in Cocanada, 8 per cent. in Negapatam, 6 per cent. in Guntur, and 2 to 4 per cent. in the other markets.

**Sugarcane—Third or final report, 1935.** The average of the areas under sugarcane in the Madras Presidency during the five years ending 1933-34 has represented 3·7 per cent of the total area under sugarcane in India. The area planted with sugarcane up to the 25th December 1935 is estimated at 131,120 acres. When compared with the area of 122,470 acres estimated for the corresponding period of last year, it reveals an increase of 7·1 per cent. The estimate of the previous year was less than the final area of 125,310 acres by about 2·3 per cent. The present estimate of area exceeds the second forecast by 5,730 acres. The excess occurs mainly in Ganjam, West Godavari, Guntur, Bellary, South Arcot, North Arcot, Salem, Coimbatore, Trichinopoly and South Kanara. The increase in area in comparison with the final forecast of 1934 occurs in all districts outside Ganjam. Guntur, Anantapur, Salem, Coimbatore, Madura and Ramnad. The harvest has just commenced and normal yields are expected in all districts outside the Circars (Guntur excepted) Anantapur, Salem and Coimbatore where the yield is expected to be below normal. The seasonal factor for the Presidency is calculated at 97 per cent of the average as against 91 per cent in the previous year. On this basis, the yield is estimated at 360,410 tons of Jaggery as against 320,940 tons estimated in January 1935, an increase of 12·3 per cent. The final estimate for 1934-35 was 351,100 tons.



The wholesale price of Jaggery per imperial maund of 82-2/7 lb., as reported from important markets towards the close of December 1935 was Rs. 6-14-0 in Nandyal, Rs. 6-6-0 in Tuticorin, Rs. 5-15-0 in Kumbakonam, Rs. 5-12-0 in Calicut, Rs. 5-9-0 in Madura, Rs. 5-4-0 in Bezwada, Rs. 4-15-0 in Masulipatam, Guntur, Bellary and Cuddapah, Rs. 4-8-0 in Rajahmundry, Rs. 4-7-0 in Salem, Rs. 4-6-0 in Vellore, Rs. 4-4-0 in Cocanada and Ellore, Rs. 4-2-0 in Vizagapatam, Rs. 3-14-0 in Coimbatore, Rs. 3-13-0 in Trichinopoly and Rs. 3-1-0 in Tinnevely. When compared with the prices of the previous month, these prices reveal a fall of 19 per cent in Ellore, 14 per cent in Vizagapatam, Masulipatam, Nandyal and Trichinopoly, 13 per cent in Coimbatore, 10 per cent in Guntur, 9 per cent in Bezwada, 8 per cent in Bellary, 5 per cent in Rajahmundry and 4 per cent in Cocanada and a rise of 4 per cent in Cuddapah and Tuticorin. The price remained stationary in Vellore, Salem, Tinnevely, Kumbakonam and Madura.

**Groundnut—Final report—1935.** The average of the areas under groundnut in the Madras Presidency during the five years ending 1933-34 has represented 48.2 per cent. of the total area under groundnut in India. The area sown with groundnut in the Presidency in 1935 is estimated at 2,492,500 acres. When compared with the corresponding estimate of 2,323,300 acres for the previous year and the actual area of 2,350,934 acres according to the season and crop report of the previous year, the present estimate reveals an increase of 7.3 and 6 per cent. respectively. The estimated area for this year is less than the normal area of 3,317,650 acres by about 25 per cent. The increase in area is general outside Ganjam, Vizagapatam, East Godavari, Bellary, Anantapur, Coimbatore, the South (Tanjore excepted) and Malabar. The increase is marked in the central districts (Coimbatore excepted). The area in Bellary and Anantapur has fallen from 412,600 acres to 292,000 acres due mainly to an increase in the area under cotton and other dry crops. The harvesting of the summer and early crop of groundnut was finished by October. The harvesting of the winter or main crop is proceeding. The crop is expected to be below normal in Vizagapatam, Guntur, Cuddapah, South Arcot, the Central districts, Tanjore, Tinnevely and Malabar. The seasonal factor for the Presidency works out to 92 per cent. of the average as against 78 per cent in the previous year according to the season and crop report. On this basis, the yield is expected to be 1,143,400 tons of unshelled nuts as against 920,260 tons in the previous year, an increase of about 24 per cent. The yield in an average year is estimated at 1,660,990 tons.

The wholesale price of groundnut shelled per imperial maund of 82-2/7 lbs. as reported from important markets towards the close of December 1935 was Rs. 5-14-0 in Tinnevely, Rs. 5-13-0 in Cuddalore, Rs. 5-8-0 in Vizagapatam, Rs. 5-5-0 in Berhampore, Rs. 5-4-0 in Negapatam, Rs. 5-2-0 in Guntur, Rs. 5-0-0 in Vizianagaram and Cocanada, Rs. 4-15-0 in Nandyal and Cuddapah, Rs. 4-12-0 in Adoni, Vellore and Salem, Rs. 4-11-0 in Coimbatore, Rs. 4-8-0 in Madura and Rs. 3-12-0 in Ellore. When compared with the prices for October 1935, these prices reveal a rise of 21 per cent. in Cuddalore, 1 per cent. in Ellore, 5 per cent. in Vizagapatam, Guntur and Nandyal and 4 per cent. in Cuddapah and a fall of 14 per cent. in Coimbatore, 7 per cent. in Berhampore, 6 per cent. in Vellore, 5 per cent. in Vizianagaram, 4 per cent. in Madura and 3 per cent. in Adoni and Salem. The price remained stationary in Tinnevely.

**Gingelly—Intermediate report—1935-36.** Sowings of late gingelly are in progress in most districts. The condition of the crop is generally satisfactory.