

**Farming will never be a success unless the farmer
had more voice in the disposal of
his produce—P. Morrel.**

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**To Sell Sugarcanes to a Factory or to Convert
them into Jaggery-Which is Better?**

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It is well known that sugarcane cultivation cannot be spread through the country as extensively as paddy. It is a long duration crop requiring a good deal of attention in all its stages. Besides it is an expensive crop to grow, and therefore is beyond the reach of the poor man. It is partial to well drained soils and being an exhaustive feeder requires large quantities of manure. It should also be grown within easy reach of road communications. All these and similar factors control and limit the area under this important crop. In this country sugarcane is chiefly grown for the manufacture of jaggery. In certain localities situated in proximity to large towns canes are grown for chewing purposes, but the area under this must indeed be very small. However, the idea of growing canes in large areas to supply to factories for making sugar has been brought to the fore front especially by the recent Sugar Commission under the Presidentship of Mr. MacKenna.

Three such factories are being run at Aska in Ganjam district, Samalkota in Godavari district and Nellikuppam in South Arcot district. In the last place there has been of late a growing tendency on the part of the ryots to plant large areas under sugarcane and cultivate it intensively, applying at the rate of 7-8 candies of ground-nut cake per acre. Such people fall into the temptation of growing canes every other year in the same land. The deterioration of cane is the obvious result but is at present masked by the heavy doses of manuring given to it. The Nellikuppam factory itself grows large areas under it besides the very large number of ryots who grow solely for selling as canes to the company. There are now several thousands of acres of cane in the vicinity of the factory. It has come to the notice of the writer that even Rs. 1,000 gross income is obtained off an acre. The result is that after the opening of the factory, the practice of jaggery making was given up so that today with the solitary exception of the Palur Government Agricultural station there is practically nobody who makes jaggery in that neighbourhood.

Owing to the inauguration of a series of manurial, varietal and rotational experiments in sugarcane in the farm some 3 years ago, the area under this crop nearly trebled itself. It was therefore impossible in the circumstances to crush the canes and prepare jaggery out of 6 or 7 acres under cane as there was no power mill at the time. Incidentally the question of finding a sale for a large quantity of jaggery in that out-of-the-way place had also to be considered. Therefore steps were taken to sell a large area of canes to the factory, the rest being prepared into jaggery. This gave us an opportunity to study the profits obtained under each system (i. e.) by selling canes to the factory and by making jaggery and selling it on the spot. Palur farm is situated at a distance of 5 miles from the factory and this may be taken as an average distance from which canes are taken to the factory by ryots although in some cases it is even 10 miles. The canes were carted on hired carts as is often done by the cultivator.

Whether canes are sold to the factory or jaggery is made from them the cost of cultivation up to harvest is the same so that little comment is necessary on this. The same variety of cane is compared in both cases, namely, Fiji B, which is still the favourite cane of the locality as well as of the district.

The following are the average acre figures under separate heads of 7 fields grown under cane at Palur in the year 1923-24.

Details.	Cost.	Percentage of expenditure to total.
(1) Preparatory cultivation ...	14 13 2	3.90
(2) Manures and manuring ...	112 9 7	30.20
(3) Seeds and sowing ...	50 8 11	13.55
(4) After cultivation ...	38 6 8	10.30
(5) Irrigation (by engine) ...	65 11 9	17.65
(6) Topping, cutting, cleaning canes and removing trash from the field.	18 8 6	5.00
(7) Bundling and transporting to the milling yard ...	15 3 8	4.10
(8) Milling and collecting juice to pans.	32 1 6	8.60
(9) Weighing and supplying juice to pans.	2 3 4	0.60
(10) Preparing Jaggery ...	16 8 11	4.45
(11) Transporting Jaggery to stores and weighing ...	0 15 9	0.25
(12) Drying megass and supplying trash to furnace ...	5 2 7	1.40
Total Rs. ...	372 14 3	100.00

If the depreciation, interest and repairs to the mill pan and accessories are added, the total cost would be increased by Rs. 15 per acre. It is also found that it costs Rs. 5-3-0 to manufacture one candy of jaggery out of Fiji B cane. It will be observed that expenditure incurred in growing the crop is 75% of the whole, while the balance of 25% is made up of items under harvest and manufacture. Now taking the case where canes are sold to the factory—and as we have already assumed the cost of growing in this case also is the same—the details of the remaining items are as follows:—

Cutting, trashing, bundling, loading in carts at 4 annas
per cart load of 500 canes ... 11 7 7

Cart hire from farm to factory at $10\frac{1}{2}$ annas
per cart load of 500 canes ... 30 9 6

With regard to cart hire it is the practice of the factory to give back to the parties, up to a definite distance from the factory from half to a third of the expenditure incurred in order to encourage the cultivators to bring the produce to it. The $10\frac{1}{2}$ annas rate quoted above is the net cost per cart from Palur as the normal cart hire is Re. 1 in this neighbourhood. Half of cart hire is borne by the company calculated at 8 pots (each pot 5 gallons) of juice per cart.

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It is obvious that in this case the items of expenditure are few and the actual cost is less than half of what it is in producing jaggery. In other words while the total cost of manufacturing jaggery out of one acre is over Rs. 385, the cost of delivering the canes at the factory is fully Rs. 85 less per acre.

Let us now consider the receipts. At the farm we were able to sell at nearly Rs. 42 per candy of 500 lb. which is by no means a high value. This is because Palur is situated about 10 miles from Cuddalore and 6 miles from Panruti so that few merchants care to come all the distance to purchase the stuff. Besides it being not a jaggery centre, the prices offered are always on the low side. Even with all this the Jaggery produced per acre at $17\frac{1}{2}$ candies fetched at that rate Rs. 735 excluding Rs. 80 obtained in the shape of setts. Whereas in the case of canes sold to the factory, the farm obtained at the rate of Rs. 34 per candy of jaggery. This is arrived at in the following way:—

All the canes are milled in the presence of the cultivator. Three pots (15 gallons) of juice are taken and boiled down to jaggery and the actual weight is recorded. This forms the basis of their calculation. From this the approximate quantity expected from the whole quantity of cane brought is calculated and paid for. This comes to Rs. 595 per acre, which is Rs. 140 less than what was obtained by making jaggery at the farm itself.

We have already seen that it was dearer to manufacture jaggery than sell canes by about Rs. 85 per acre, so that the net profit by the former process is Rs. 55 per acre. In favourable years the company pay in addition a bonus on the profits obtained. If the price of sugar falls the cultivators are denied this bonus. For example in 1924 over and above the rate of Rs. 34 per candy, the company paid at the end of the season Rs. 8 which was the difference between the initial and final prices of jaggery. The final price was worked out at the rate of 6 annas in the rupee of the average price obtained for white sugar during the crushing period. In 1925 no bonus was paid. From the above figures two things are obvious. Firstly since the sale of canes is less irksome and saves a deal of labour of the cultivator it should be encouraged so long as the price paid by the factory does not go lower than what it is paying at present. If conditions are such that better rates are offered, there is no doubt that growing of canes in large blocks will greatly increase to the advantage of the factory.

Secondly as at present constituted jaggery making appears to be slightly more profitable. But it is very doubtful whether it is worth while to undertake the laborious task of making jaggery which is so difficult to keep long in this climate and which does not fetch a proper price.

It may be argued that in other localities where factories do not exist ryots obtain more handsome profits than they do by selling to the factory and that such a state of affairs may also come into being in this area. But the fact is that only on account of the existence of the factory the area under canes has increased beyond one's original expectations, and in this area as long as the present conditions remain jaggery making is not likely to replace the sale of canes to the factory. It will be interesting to know how in other farms where sugarcane is cultivated the several items of expenditure range and what proportion they bear to the total cost of production.

The "Pollu" Disease of Pepper.

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Pepper (*Piper nigrum*) is a characteristic crop of the West Coast—especially of Malabar. A native of the damp ever-green zone of the forests of the Western Ghats, it flourishes in all suitable situations in the moist rainy tract of Malabar. In almost every compound in Malabar the vine may be found trained on the stems of tall trees, the produce being usually intended for the consumption of the household, but as a regular crop, however, Pepper is found cultivated mostly in the interior valleys of the sub-montane region and in Wynaad above the Ghats. Here hillsides are cleared and standards mostly of *Erythrina* are first planted, and the pepper vines are later on trained on them. These pepper gardens are often of large extent and in good seasons bring in a plentiful harvest. Pepper is a spice characteristic of moist tropical regions like Malabar and in ancient days it was a valuable commodity that formed the main medium of barter for goods imported from outside and was, therefore, appropriately termed "the money of Malabar."

Pepper is however subject to the attacks of certain pests and diseases which combine to reduce the profits of cultivation considerably. A good many of the pests and diseases are usually of minor importance and of casual occurrence, but there are some which are of a serious nature of which the Wilt of the Pepper Vine studied by Dr. Barber in Wynaad is one, and the "Pollu" disease of North Malabar—the subject of the present paper—is another. "Pollu" lite-