

CANE PRACTICES AND PRODUCTIVITY

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I was asked to submit a paper for this year's meeting and this I have done, not in the light of posing as a cane expert, but in the hope that this paper may form the basis of a discussion from which points of mutual benefit may arise.

With the post-war rise in the price of cane-lands, and the almost daily rise in the costs of production, it is exceedingly clear that, at the present price of cane, which has not been increased in proportion to production costs, we must increase the productivity of our soil if we wish to maintain a reasonable margin of profit.

The S.A. Sugar Association has inaugurated a Fertilizer Advisory Service and when this is really functioning properly, and soil and leaf testing become general throughout the industry, I feel that the overall increase in yields will be considerable. This service is, however, still in its infancy, and without resorting to these technical aids there are certain field practices which, if carried out, can assist us in increasing productivity. I will attempt here to explain some of these practices.

Previously the mills started up in May or June and it became general practice to start the season off by cutting fields which were down to be ploughed out. Rightly so, too, June being, as it is, the worst month in the year for germination. In later years, however, conditions have changed and the emphasis seems to be on early starting, some mills getting off in the first weeks in April.

Owing to habit acquired over many years, a great number of planters and miller-cum-planters still abide by this practice of starting the season on old fields for ploughing out. This I feel is bad practice as one gets into one's better cane in the bad germination (or ratooning) month of June, instead of taking advantage of the month or month and a half of growing weather before winter. On the other hand by cutting good vigorous fields and taking advantage of the remaining growing weather one can, almost without fail, cut that cane again at the end of the following season as age 19—20 months, thus increasing productivity by cutting two crops in three years.

I have found too that my vigorous cane gives, over those early months, better sucrose than the old cane.

Last season, for instance, I decided to go against all known practice and cut in April-May a field of plant Co.301, twenty one months old. In spite of

having had 7½ in. of rain during those two months it yielded 1,024 tons (39 tons per acre) at an average sucrose of 13.58 per cent. as against second and third ratoon fields of N:Co.310 and Co.301, which averaged 12.56 per cent. sucrose.

These fields were cut over the same period as I was operating two separate cutting gangs.

I have also had good results cutting and ploughing one-year old fields in December, when the sucrose is dropping. This is not too late to plant a cover crop of sunnhemp since by planting early the following season one is thus able to re-establish in a very short period and you still have the advantage gained by a nitrogenous cover crop.

Another old and established practice is one which almost reached the proportions of a *must* and that is that one should complete one's planting by December or at latest mid-January. In the last few years, however, it has been proved that very successful results can be, and have been, achieved, by planting in March and even early April. This practice, I feel, will become increasingly popular, obviating as it does the necessity of short-fallowing, which in my opinion should never be done unless absolutely necessary, and then only if one is able to compost heavily.

By adopting this method, one is able to plough out in June, plant sunnhemp in October (or velvet beans earlier), plough the green crop in in January, and re-establish cane in March. This cane is ready for cutting at the end of the following season and one has again thus obtained the benefit of a nitrogenous cover crop, and only lost a few months in re-establishing, instead of a whole season under the old method with the land lying for months unprotected against the elements.

A further advantage of this cane planted in March is that, if it becomes necessary to leave it over till the next season, it can be left with very little, if any, deterioration.

This late or early planting has slight disadvantages, in that one probably requires a little more seed for supplying misses, though this is not always the case. Then again it requires a little more weeding to keep it clean over the winter months. These, however, I feel, are offset by the fact that, by the time your early rains come your field is already established and the cane goes away with a bang.

While on the subject of re-establishment of cane, I would like to add one thing further on the times of planting. It is my opinion that canes which are susceptible to arrowing should not be planted too early in the season. By observation over the last four seasons, I have come to the conclusion that the said canes, when planted in August, September, usually arrow twice. By planting in November, December one escapes, to a large extent, the first arrowing, and this cane when cut has very much fewer dead sticks, with the resultant drop in tonnage, than the canes planted early in the season. This is true of cane planted in March, April.

In conclusion just a word on compost.

I mentioned earlier that short-fallowing should be avoided at all costs unless one is able to give the field a heavy application of compost. It is my experience that fields which have been short fallowed never really give of their best, irrespective of one's post-planting treatment. By heavy application of compost I mean a minimum of 20 tons per acre.

I think that most of us are inclined to try and make one's compost, or filter press cake, go too far, instead of doing a lesser acreage well. By this malpractice we get a depressing effect instead of increasing our yields and productivity.