

RECENT DEVELOPMENTS IN CANE HARVESTING IN NATAL

(An Illustrated Talk)

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Mr. Crookes: I consider grab loaders can be successfully adapted to Natal conditions. In Chirundu most of the cane was brought in by Broussard loader at seventy tons an hour, for twenty-four hours a day.

A bonus payment system was difficult to apply while a grab-loading system was in use.

Cleaning and trash lining added to costs, particularly when operating at night.

A serious draw-back was the introduction of dirt and stones into the factory.

The cane was set up on a ridge six or eight inches high both to enable the gram loader to get underneath and also to pick up a cleaner load.

We eventually converted to the Mascane loader as used by Tongaat.

Mr. Bartlett: I think we must try and retain our system of individual payment for the weight of cane cut by each cutter and this has been achieved in our trials to date.

Unless we go for chopper harvesters we will certainly bring some dirt into the mill when we mechanise; however this can be minimised by sound field planning, correct selection of equipment, operator technique and adequate infield management.

Mr. Turner: When we first started machine loading at Isipingo we achieved only forty tons a day. The second week was sixty and eventually we reached three hundred tons a day. We had to sell the idea to the field labourers and we did not achieve results easily.

We have developed a trailer that has decreased the effect of crabbing on slopes.

Mr. Bartlett: I have weekly figures from Tongaat for tons loaded per hour. In the first week it averaged 5.46 tons per hour and at the end of the season it had reached an overall average of 21 tons per hour, the limiting factor being hours worked per day. At peak loading periods it averaged 36 tons per hour over the entire week.

Dr. Cleasby (in the chair): Infield grab loading worries the agronomist from the point of view of compaction.

Mr. Bartlett: A rear-mounted loader causes less compaction than a front-mounted one by virtue of the larger wheels having to carry the load. By using multi-wheeled vehicles, tyre pressures can be brought down to about 20 p.s.i.

Mr. Tucker: Farmers who are mechanically minded find loaders and tractors easy to handle and relatively cheap to operate.

One farmer in the Nkwaleni area, however, experienced bad compaction from infield loading and his crop did not ratoon.

Mr. Bartlett: In Australia we found that the majority of growers were using old tractors for front-mounted grabs, probably because this proves to be more economical than when using a new tractor.

I think that the case of compaction mentioned by Mr. Tucker was due mainly to the fact that the type of loader being used necessitated that very large bundles be loaded, which increased ground compaction considerably.

Mr. Cownie: Mr. Bartlett says that the human element limits the usefulness of these machines. What efforts can be made to overcome this and what is the target of efficiency that should be aimed at?

Mr. Bartlett: Management must be determined to make mechanisation work, and must be prepared to persevere with it, and this idea must be put across to the field workers.

Our drivers on the whole are good and with sound training there would be no serious problems. The degree of efficiency will depend on the type of loader being used, the availability of transport, terrain, etc.

Mr. de Robillard: These machines take into account the decreasing availability of labour and its increasing cost. But there are other aspects such as compaction, loss of trash blanket, weed control and destruction of stools which must be considered.

Mr. Bartlett: The Mechanisation Committee's task is to endeavour to produce within certain practical limits a suitable machine to meet the needs of the industry as they arise. Various ways of avoiding consequent damage to cane stools have already been mentioned. Tongaat has demonstrated that mechanical loaders can operate under trash conditions, but, of course, the extra cost of trashing cane must be taken into account.

Fields should be laid out and suitable machines used so that the damage to stools is kept to a minimum, while weed control can be adequately achieved at a reasonable cost.