

SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION

Cat. No.: 1372

Title: Observations on field scale minimum tillage using Roundup

1. La Mercy

- a) 1978 - 10 l/ha applied from tractor-mounted tank with nozzle over cane rows. Three to four hours after application 3,6 mm of rain fell.

Initial kill was excellent.

Area was spot sprayed, then cultivated to hill up for mechanical harvesting. Regrowth was still apparent at 1 470 stools/ha 5-6 months after initial application.

Conclusion

Acceptable initial kill but regrowth was more than expected but nevertheless manageable with labour.

- b) 1979. Harvested 15 January. Slashed back 30 January.

Applied Roundup on 15 February at rates of 6 l/ha and 10 l/ha to sandy and heavy soils.

Whole area cultivated in May.

Counts in July showed:

	6 l/ha		10 l/ha	
	Clay	Sand	Clay	Sand
Shoots/20 m	14	58	1,3	19
Stool count/20 m	9	22	1	7,3
% regrowth (shoots)	0,009	0,039	0,001	0,013

Conclusion

An excellent kill was achieved. 6 l/ha was not as good as 10 l/ha and both require some follow-up. Although initially sandy soil looked better finally the kill was superior in heavy soils (less regrowth).

- c) Repeated slashing prior to spraying did not materially affect the kill.

2. Natal Estates

1. Planting before spraying vs planting after spraying old cane rows.

Very poor germination was evident from cane planted before spraying old cane rows. Heavy soil.

2. Minimum tillage experiment on Waldene soils showed an increase in cane yield but a decrease in quality due to minimum tillage.

C. rotundus was extremely well controlled and yield differences may have been exaggerated by effects of competition in the conventionally planted plots.

3. Actipron as an additive to Roundup for cane killing decreased the effects using rates of 5 l/ha of Actipron and 3, 5 or 7 l/ha of Roundup.

3. Mhlume

Area sprayed with Roundup and then interrows planted. Subsequently, but prior to cane germination, green patches of old cane were resprayed. Germination in these patches was later poor.

4. South Coast

Poor cane kill results put down to dew on cane foliage at the time of spraying.