SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION

Code: GR1/80
Cat.No.: 1234

TITLE: SEED TREATMENT (SHAKASKRAAL)

1. Particulars of the project

This crop	:	Plant
Site	:	Shakaskraal - Field 33
Region	:	North Coast Coastal
Soil system	:	Berea
Soil form/series	:	Longlands/Waldene
Design	:	Randomised block - 4 replications
Variety	:	NCo 376

Fertilizer kg/ha:	N	P	K
In furrow: 3.1.80	-	17	100
Topdress: 21.2.80	141	-	141
	141	17	241

Soil analysis: Date: 25.5.81

pH	OM%	Clay %	PDI
5,7	-	-	-

ppm

P	K	Ca	Mg	Zn	Al
17	50	377	95	0,7	-

Age: 16,7 months Dates: 3.1.80 to 25.5.81

Rainfall: 1 303 mm LTM: 1 033 mm

Irrigation: 406 mm

2. Objectives:

To test the effect of treating seed with "Seed Treat +", a cytozyme formulation supplied by Union Carbide.

3. Treatments:

1. Control
   (a) Setts dipped in Benlate
   (b) Setts not dipped in Benlate
2. "Seed Treat +"
   (a) Setts dipped in Benlate
   (b) Setts not dipped in Benlate

NOTE:
- Benlate concentration 7,5 g/10 ℓ water
- "Seed Treatment +" was sprayed by knapsack onto the setts at 150 mℓ/ha in 100 ℓ water

4. Results at harvest:

Treatment	Cane t/ha	Ers % cane	Ers t/ha	Stalk popn. ($x10^{-3}$)	Stalk length (cm)	Mass g/stalk
Control with Benlate	126	12,0	15,1	109	216	1 006
Cytozyme with Benlate	130	12,1	15,7	116	222	973
Control no Benlate	146	12,1	17,6	119	230	1 106
Cytozyme no Benlate	146	12,2	17,8	119	231	1 083
Mean	137	12,1	16,5	116	225	1 042
SE of treatment mean ±	2,7	0,26	0,48			31,5
CV %	4,0	4,3	5,9			6,0
LSD (P = 0,05)	8,8	0,84	1,5			10,1

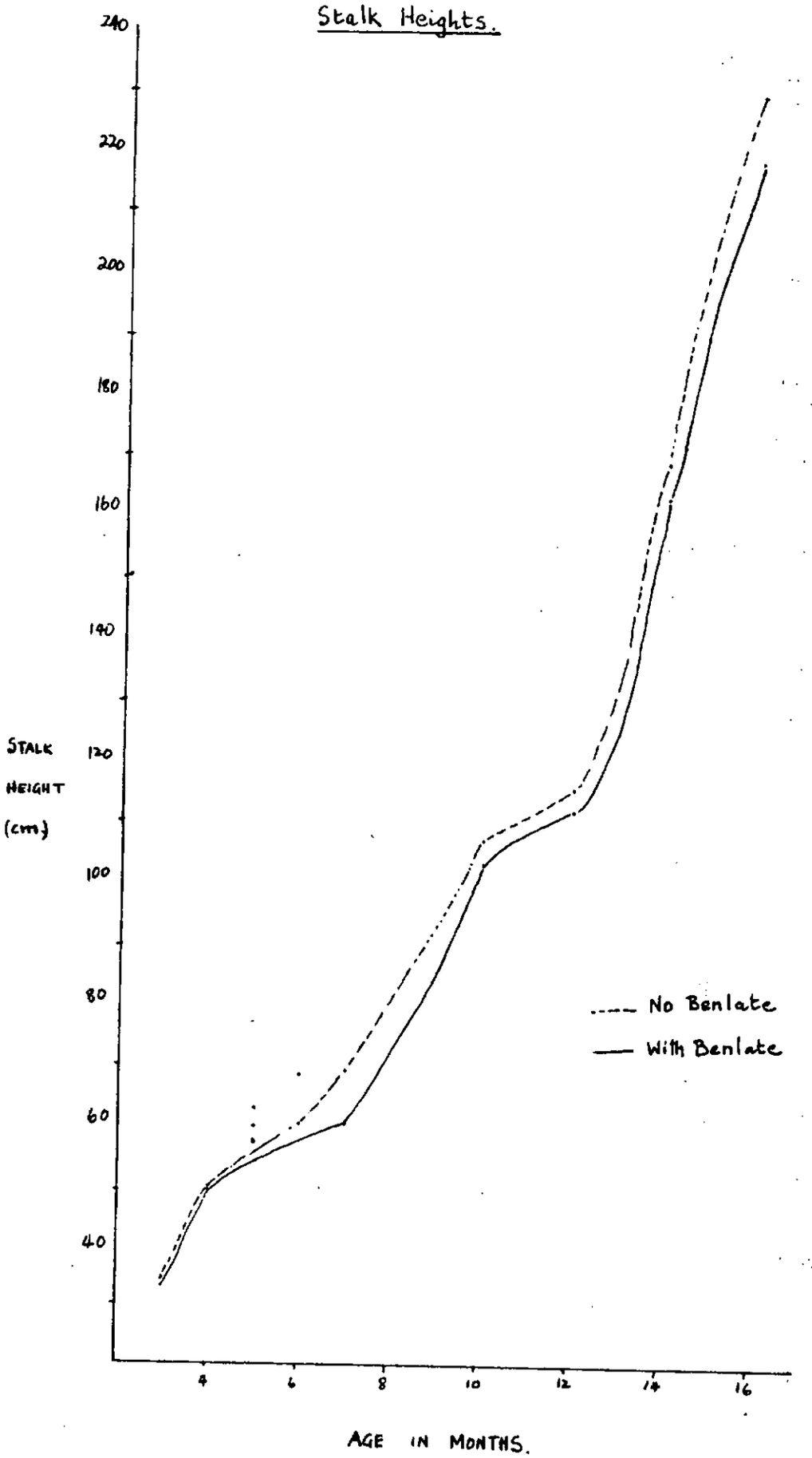
5. Comments:

5.1 The small initial increase in stalk population and height due to the treatment with Cytozyme persisted through to harvest although yield was not affected.

5.2 The adverse effect from using Benlate was reflected in stalk population and stalk length from an early stage and resulted in a substantial yield depression. This is surprising and cannot logically be explained.

RAD/HDN
4/8/81

Stalk Heights.



Stalk elongation.