



Rainfall (mm)

Months	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Total
1987-88	29	34	94	92	123	32	9	29	14	19	16	491 mm
LTM	58	77	117	86	74	42	20	9	8	16	25	532 mm
IRRI	61	61	61	122	61	61	61	61	-	61	-	610 mm

2. OBJECTIVES

To assess the phytotoxic effects of new products when applied as pre-emergence treatments on heavy soils of NCo376 plant cane.

3. MOTIVATION

Standard phytotoxicity programme

4. TREATMENTS

Rate Kg or l product ha<sup>-1</sup>

T1	Pree	2,5
T2	Pree	5
T3	Butisan S	2
T4	Butisan S	4
T5	Pree + atrazine	5 + 4
T6	Lasso + atrazine	6 + 2
T7	Lasso + atrazine	12 + 4
T8	Control (unsprayed)	Nil

4.1 Details of herbicide used

Product Name	Formulation	Active ingredients
Lasso 3,84	384 g/l ec	Alachlor
Gesaprim 500	500 g/l	Atrazine
Pree	400 g/l sc	Metazachlor
Butisan S	500 g/l sc	Metazachlor

5. Results: Heights and stalk counts  $\times 10^3 \text{ ha}^{-1}$  at 2,5, 4,3 and 5,9 months of age

Table 1:

Treatments	Rate kg or 1 Prod $\text{ha}^{-1}$	Heights (cm)			Counts $\times 10^3 \text{ ha}^{-1}$		
		2,5 m	4,3 m	5,9 m	2,5 m	4,3 m	5,9 m
T1 Pree	2,5	79	195	237	195	208	143
T2 Pree	5	73	188	243	186	233	151
T3 Butisan S	2	79	195	241	180	235	143
T4 Butisan S	4	78	187	235	179	227	138
T5 Pree + atrazine	5 + 6	76	179	247	174	237	117
T6 Lasso + atrazine	6 + 2	76	193	241	176	261	140
T7 Lasso + atrazine	12 + 4	75	191	243	170	246	131
T8 control	(unsprayed)	77	195	242	179	252	140

Table 2: Visual ratings of % leaf scorch (Chlorosis + Necrosis), stunting, and germination % on 11/12/87, 14/12/87 and 18/1/88

Treatments	Rates kg or 1 Prod $\text{ha}^{-1}$	11/12/87 Germination %	32 days 14/12/87		66 days 18/1/88	
			% Scorch	Stunting	% Scorch	Stunting
T1 Pree	2,5	10	1,0	4,6		4,7
T2 Pree	5	12	2,2	4,0		4,6
T3 Butisan S	2	16	1,8	4,5		4,8
T4 Butisan S	4	15	2,3	4,1		4,5
T5 Pree + atrazine	5 + 6	12	0,3	4,0		4,6
T6 Lasso + atrazine	6 + 2	10	1,5	4,3		4,8
T7 Lasso + atrazine	12 + 4	12	2,0	4,3		4,7
T8 control	(unsprayed)	15	1,5	4,3		4,8

Stunting 1 = Severe 5 = No stunting

Table 3: Yield and other crop characteristics at harvest

Treatments	Rate kg or l Prod ha <sup>-1</sup>	t ha <sup>-1</sup> cane	Sucrose % cane	t ha <sup>-1</sup> Sucrose	Stalk counts X 10 <sup>3</sup> ha <sup>-1</sup>	Stalk length (cm)
T1 Pree	2,5	126	11,29	14,3	146	261
T2 Pree	5	119	11,35	13,4	150	264
T3 Butisan S	2	124	11,49	14,2	140	271
T4 Butisan S	4	126	11,15	14,0	150	269
T5 Pree + atrazine	5 + 6	121	11,63	14,1	146	260
T6 Lasso + atrazine	6 + 2	132	11,19	14,7	154	271
T7 Lasso + atrazine	12 + 4	125	11,70	14,6	156	271
T8 control	(unsprayed)	119	11,56	13,7	158	264
Mean		124	11,42	14,1	150	266
C.V. %		10,6	4,7	9,1	11,8	
S.E. Treatment mean		± 5,35	0,22	0,52	7,22	
L.S.D. (0,05)		15,36	0,62	1,50	20,72	
(0,01)		20,60	0,84	2,01	27,79	

Third leaf % dm analysis at 2,8 months on 9/2/88 showed all nutrients levels adequate.

## 6. COMMENTS

### Pree and Pree + Atrazine

Pree + atrazine at 5 l and 4 l/ha respectively appeared to reduce stalk populations up to harvest but had no influence on yields. Similarly, up to 5 l/ha of Pree on it's own had minimal effect on the crop.

### Butisan S

Cane treated with 4 l/ha of Butisan S was slightly stunted and displayed some degree of scorch (2,3%). Damage however was insufficient to effect yields, which were non-significantly different compared to the unsprayed control for both rates tested.

### Lasso + Atrazine

Besides possibly suppressing germination slightly, both the standard and double the standard rate had no further effect on the crop.