

**SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS ASSOCIATION**

Code : RVT(NI)9/90
Cat. No.: 1816

TITLE: Released variety trial-N21 and N22 : Pongola/Spring cycle.

1. Particulars of the crop:

<table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 30%;">This crop</td><td colspan="3">:Plant</td></tr> <tr><td>Site</td><td colspan="3">:Blk 1102 Pongola</td></tr> <tr><td>Region</td><td colspan="3">:Northern area</td></tr> <tr><td>Soil system</td><td colspan="3">:Komatipoort</td></tr> <tr><td>Soil form/series</td><td colspan="3">:Hutton/Shorrocks</td></tr> <tr><td>Design</td><td colspan="3">:Split plot</td></tr> <tr><td>Variety</td><td colspan="3">:see treatments</td></tr> <tr><td>Fertilizer</td><td>: N</td><td>P</td><td>K</td></tr> <tr><td>kg/ha - in furrow</td><td>15</td><td>49</td><td>0</td></tr> <tr><td>t/d</td><td>84</td><td></td><td>200</td></tr> <tr><td>Total</td><td>99</td><td>49</td><td>200</td></tr> </table>	This crop	:Plant			Site	:Blk 1102 Pongola			Region	:Northern area			Soil system	:Komatipoort			Soil form/series	:Hutton/Shorrocks			Design	:Split plot			Variety	:see treatments			Fertilizer	: N	P	K	kg/ha - in furrow	15	49	0	t/d	84		200	Total	99	49	200	<table style="width: 100%; border-collapse: collapse;"> <tr><td colspan="6">Soil analysis: Date:11/6/85</td></tr> <tr><td>pH</td><td>O.M.%</td><td>Clay %</td><td colspan="3">P.D.I.</td></tr> <tr><td>6.81</td><td></td><td>>30</td><td colspan="3"></td></tr> <tr><td colspan="6" style="text-align: center;">ppm</td></tr> <tr><td colspan="6"><hr/></td></tr> <tr><td>P</td><td>K</td><td>Ca</td><td>Mg</td><td>Zn</td><td>Al</td></tr> <tr><td>40</td><td>110</td><td>686</td><td>181</td><td></td><td></td></tr> <tr><td colspan="6">Age:14.2 mths</td></tr> <tr><td colspan="6">Dates:12/9/90-19/11/91</td></tr> <tr><td colspan="6">Rainfall:980mm L.T.M.:843mm</td></tr> <tr><td colspan="6">Irrigation: 61mm/25d</td></tr> </table>	Soil analysis: Date:11/6/85						pH	O.M.%	Clay %	P.D.I.			6.81		>30				ppm						<hr/>						P	K	Ca	Mg	Zn	Al	40	110	686	181			Age:14.2 mths						Dates:12/9/90-19/11/91						Rainfall:980mm L.T.M.:843mm						Irrigation: 61mm/25d					
This crop	:Plant																																																																																																														
Site	:Blk 1102 Pongola																																																																																																														
Region	:Northern area																																																																																																														
Soil system	:Komatipoort																																																																																																														
Soil form/series	:Hutton/Shorrocks																																																																																																														
Design	:Split plot																																																																																																														
Variety	:see treatments																																																																																																														
Fertilizer	: N	P	K																																																																																																												
kg/ha - in furrow	15	49	0																																																																																																												
t/d	84		200																																																																																																												
Total	99	49	200																																																																																																												
Soil analysis: Date:11/6/85																																																																																																															
pH	O.M.%	Clay %	P.D.I.																																																																																																												
6.81		>30																																																																																																													
ppm																																																																																																															
<hr/>																																																																																																															
P	K	Ca	Mg	Zn	Al																																																																																																										
40	110	686	181																																																																																																												
Age:14.2 mths																																																																																																															
Dates:12/9/90-19/11/91																																																																																																															
Rainfall:980mm L.T.M.:843mm																																																																																																															
Irrigation: 61mm/25d																																																																																																															

2. Objectives:

To evaluate N21 and N22 in irrigated conditions where harvesting is done in spring.

To test the effects of ripeners on N21 and N22.

3. Treatments:

Varieties: NCo376, N14, N21, N22

Ripener : Fusilade Super - 396 ml/ha on 17 September 1991

4. Results:

Table 1: Data from unripened cane

Variety	NCo376	N14	N21	N22			
Yield component	Stalk data at harvest				Mean	LSD 05	CV %
Pol% c	12.74	12.85	11.80	13.44	12.71	1.3	1.2
Ers% c	10.64	10.94	9.74	11.56	10.72	1.7	0.97
Fibre% c	15.1	13.0	14.7	12.9	13.90		
Purity%	83.5	84.2	82.2	85.3	83.8	4.0	1.5
Pop. x1000/ha	120	113	112	112	114	6.9	7.0
Height cm	284	309	285	255	283	15.3	3.9
Mass g/stalk	1116	1477	1329	1329	1313	97.6	5.9
Yield data							
Cane t/ha	150	174	123	145	148	12.1	8.2
Ers t/ha	16.0	19.0	12.1	16.8	16.0	2.4	8.5
As % of NCo376							
Cane	100	116	82	97	99	8.2	
Ers	100	119	76	105	100	15.0	

Table 2: Effects of Fusilade Super (Fus. S - Con)

30 days after spraying						
Component	NCo376	N14	N21	N22	Mean	SED±
ers % c	+ 1.41	+1.21	-1.26	-0.18	+0.30	0.64
g/stalk	+ 33	-10	-23	-44	-11	81.8
ers g/stk	+ 16.6	+13.3	-17.0	-7.8	+1.3	13.8
53 days after spraying						
ers % c	+0.77	+0.75	+1.29	+0.49	+0.83	0.29
g/stalk	-48	+147	+117	+11	57	56.3
ers g/stk	+2.3	+28.2	+31.4	+6.9	17.2	8.2
64 days after spraying						
ers % c	+1.2	+0.36	-0.39	+0.71	+0.4	0.1
g/stalk	-34	-89	-60	-88	-68	43.3
ers g/stk	+9.4	-4.8	-10.7	-1.3	-1.9	
t cane/ha	-8.6	-9.9	-7.7	-3.8	-7.5	6.8
t ers/ha	+0.8	-0.4	-1.2	+0.5	-0.3	0.78

Comments:

- * While the crop was well supplied with moisture for twelve months, the Et exceeded moisture received during the final two months. According to the P & L account moisture was probably only freely available for short periods during

