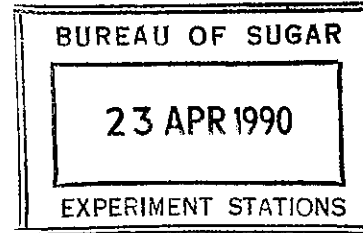PROJECT REPORT

Volume 6 of 7

PROJECT 409

BUNCH FAMILY SELECTION

Efficiency of bunch-planted and single-
planted seedlings for selecting
superior crosses in sugar cane

by

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1989

Table 87. T values for multiple regression analyses using backward elimination (Draper and Smith, 1981). Y values are for the Re type, PR crop, trial Te.

Seedlings	Ts crop	Y	TCH	CCS	TSH	NMGYOT	SEL8	KG/STALK	STALKS (No.)	Plot NMG_B	Plot NMG+B	Visual NMG	%var~
Bs	P	TSH	-1.71	-1.32		1.50		1.23	1.44	1.10			41.6
Bs	R		4.19	3.58		-3.44		-2.16	-1.80				69.4
Bs	PR		2.44	1.93		-1.52		-2.27	-1.95				58.4
Ss	P		-2.61	2.51		-1.71			3.27	3.22		-2.04	76.9
Ss	R		1.06		1.94	-2.36	1.29	-1.66		-1.80	2.69	-1.42	83.8
Ss	PR			-1.24	3.32	-1.73		-2.11	-1.49	-1.36	2.49	-1.91	85.5
Bs	P	NMGYOT	-2.00	-1.74		1.94		1.26	1.37	1.24			44.5
Bs	R		4.07	2.15		-2.69		-2.59	-2.33	-1.02	1.24		59.6
Bs	PR		2.97	2.63				-2.78	-2.79	1.19			56.0
Ss	P		-1.66	-1.38	2.02			-2.48		2.11		-1.50	58.6
Ss	R			-1.46	3.14	-2.39	1.78	-1.36	-1.29	-1.70	1.65		75.5
Ss	PR		-2.86		3.08			-2.34	-1.98	-2.21	2.88	-1.99	72.2
Bs	P	SEL8		-1.07	-3.98	3.60	-2.16	1.69	1.58	2.62	-2.05		62.9
Bs	R		2.40	1.55		-1.51		-2.05	-1.76		1.50		41.6
Bs	PR		3.17	2.88	-2.51			-3.10	-2.86				55.1
Ss	P			2.13	2.20	-1.84	2.43		1.96	2.27	-2.21	-1.54	59.5
Ss	R		2.01		2.76	-2.99	2.24	-3.61	-3.08				64.8
Ss	PR		1.59		1.86	-2.04		-2.60	-2.33		1.47		61.2

~ Percentage variance accounted for

Table 88. T values for multiple regression analyses using stepwise regression` (Draper and Smith, 1981). Y values are for the Re type, PR crop, trial Te.

Seedlings	Ts crop	Y	T value for X TCH	CCS	TSH	NMGYOT	SEL8	KG/ STALK	STALKS (No.)	Plot NMG_B	Plot NMG+B	Visual NMG	%var~
Bs	P	TSH				3.44		-1.28					43.9
Bs	R		2.23					-2.00	-1.65		1.49		55.6
Bs	PR										4.79		48.9
Ss	P		0.47		2.15			-2.90			3.12	-2.53	74.0
Ss	R				4.67	-3.76					3.50		83.3
Ss	PR		3.27								2.40		78.5
Bs	P	NMGYOT				4.35							43.8
Bs	R		2.77					-2.51	-2.33		1.59		48.2
Bs	PR										4.42		44.6
Ss	P								1.72		3.66		55.6
Ss	R				3.77	-3.30	2.17			-2.16	2.49		75.4
Ss	PR		1.63								2.41		64.5
Bs	P	SEL8				3.80							36.9
Bs	R							-1.58			3.81		35.2
Bs	PR									3.98			39.3
Ss	P		5.13					-1.55					54.9
Ss	R								1.55		3.90		51.4
Ss	PR		5.26										53.7

` The same results were obtained by the Genstat Best (forward selection) and Minimise directives. That is, none of the added X variables were subsequently eliminated.

~ Percentage variance accounted for

The last X variable chosen automatically was omitted if this did not reduce "percentage variance accounted for" by more than 1.5%

Table 89. T values for multiple regression analyses using two fixed sets of X variables chosen from Table 88. Y values are for the Re type, PR crop, trial Te. For each item, the first X set is on line 1, the second set on line 2.

Seedlings	Ts crop	Y	TCH	TSH	NMGYOT	KG/STALK	Plot NMG+B	%var`
Bs	P	TSH	1.28			-0.75	1.44	32.5 (43.9)`
				-0.88	1.27		0.23	39.3
Bs	R		2.06			-1.80	0.69	51.7 (55.6)
				2.35	-2.23		1.85	54.1
Bs	PR		1.57			-1.34	1.53	50.6 (48.9)
				0.64	-0.46		1.51	46.8
Ss	P		2.87			-1.46	2.22	68.1 (74.0)
				2.41	-1.82		1.95	66.8
Ss	R		3.17			0.13	3.20	75.6 (83.3)
				4.67	-3.76		3.50	83.3
Ss	PR		3.20			-0.27	2.35	77.5 (78.5)
				4.27	-3.50		2.52	82.7
Bs	P	NMGYOT	0.37			0.29	1.69	33.3 (43.8)
				-1.01	1.38		0.43	42.2
Bs	R		1.64			-1.01	0.37	36.7 (48.2)
				1.86	-1.68		0.96	41.3
Bs	PR		0.88			-0.27	1.47	41.6 (44.6)
				0.31	-0.11		1.16	42.5
Ss	P		1.74			-1.33	2.27	54.9 (55.6)
				1.14	-0.70		1.64	52.3
Ss	R		1.92			0.39	2.94	64.1 (75.4)
				2.38	-1.72		2.41	68.7
Ss	PR		1.60			-0.30	2.37	62.9 (64.5)
				1.88	-1.37		1.76	65.5

Table 89 continued   (2/2)

| Seedlings | Crop | Y | T value for X | | | | | $100*R^2$ |
			TCH	TSH	NMGYOT	KG/STALK	Plot NMG+B	
Bs	P	SEL8	1.35			-0.70	1.15	29.5 (36.9)
				-0.75	1.09		0.25	33.0
Bs	R		0.74			-1.66	1.34	33.8 (35.2)
				0.94	-1.04		2.28	29.0
Bs	PR		1.07			-1.69	1.71	40.1 (39.3)
				0.10	-0.12		1.86	31.5
Ss	P		3.60			-1.51	-0.03	52.6 (54.9)
				2.62	-1.80		-0.00	48.1
Ss	R		1.33			-1.36	2.51	52.0 (51.4)
				1.96	-1.89		2.62	52.4
Ss	PR		2.53			-0.94	0.78	52.0 (53.7)
				2.56	-2.06		0.84	51.9

` Percentage variance accounted for. The corresponding value in Table 88, is shown in ()

Other sets of X variables were tested, namely
   Plot NMG+B
   Plot NMG+B, TCH
   Plot NMG+B, TSH
   Plot NMG+B, NMGYOT
Overall, they were inferior to the two sets presented above, and were not included in the table.

Table 90. T values for multiple regression analysis comparing Bs and Ss seedlings. Y values are for the Re type, PR crop, trial Te.

Character	Ts crop	Y = TSH Bs	Ss	%var~	Y = NMGYOT Bs	Ss	%var~	Y = SEL8 Bs	Ss	%var~
TCH	P	−0.08	4.10	59.7	0.63	2.53	44.2	0.33	3.11	50.0
TCH	R	0.81	3.90	65.7	0.86	2.77	52.0	−0.32	2.87	37.2
TCH	PR	−0.01	4.87	72.6	0.61	2.90	55.5	−0.43	3.50	51.9
TSH	P	0.26	3.36	58.4	0.87	2.30	49.7	0.65	2.16	43.5
TSH	R	0.02	4.19	65.9	0.06	3.59	58.7	−0.63	2.81	35.1
TSH	PR	−0.18	4.29	69.9	0.29	3.12	60.0	−0.37	2.79	44.1
NMGYOT	P	0.79	2.22	51.0	1.25	1.59	47.4	1.26	1.11	37.6
NMGYOT	R	0.20	2.86	51.9	0.04	2.87	49.6	−0.46	2.22	26.3
NMGYOT	PR	0.23	2.76	58.0	0.44	2.33	53.4	0.07	1.84	34.2
NMGPlot+Br	P	0.26	3.62	57.0	0.87	2.72	51.1	1.29	1.22	31.0
NMGPlot+Br	R	1.24	3.92	67.4	0.47	3.83	59.7	0.67	2.77	46.9
NMGPlot+Br	PR	0.26	3.72	67.7	0.32	3.10	60.2	0.99	1.44	40.6

~ Percentage variance accounted for

Table 91. T values for multiple regression analysis comparing seedling crop classes. Y values are for the Re type, PR crop, trial Te.

Character	Ts type	Y = TSH			Y = NMGYOT			Y = SEL8		
		P	R	%var'	P	R	%var'	P	R	%var'
TCH	Bs	0.91	2.41	43.1 (44.3)	1.13	1.94	38.2 (40.6)	2.06	0.33	27.3 (27.3)
TCH	Ss	2.56	3.23	73.0 (73.9)	1.57	2.42	55.5 (56.8)	2.63	1.11	52.5 (53.7)
TSH	Bs	1.50	1.67	43.5 (46.1)	1.75	1.32	41.9 (44.2)	2.49	-0.20	31.0 (26.8)
TSH	Ss	1.85	2.98	70.7 (71.2)	1.23	2.72	61.5 (61.7)	1.99	0.87	44.4 (46.3)
NMGYOT	Bs	1.96	1.21	43.5 (45.3)	2.23	0.90	43.3 (44.0)	2.87	-0.50	34.7 (27.0)
NMGYOT	Ss	1.77	2.06	58.1 (59.8)	1.36	2.15	53.7 (55.1)	1.71	0.75	34.7 (37.2)
NMGPlot+Br	Bs	1.36	2.69	48.1 (48.9)	1.94	1.72	42.0 (44.6)	1.53	1.67	34.8 (37.7)
NMGPlot+Br	Ss	1.72	2.92	69.3 (69.1)	1.30	2.68	62.3 (61.8)	-0.02	2.80	45.8 (40.6)
SEL8	Ss	2.64	0.54	38.0 (31.2)	2.51	1.24	45.2 (38.8)	1.84	0.61	23.7 (21.2)

' Percentage of variance accounted for. The corresponding value for the simple regression, with X = TsPR crop, is given in ()

Table 92. Realized gains from selection of families in the Ts trial with evaluation based on the Re type in trial Te. Selection in Ss and Bs seedlings was based on three replicates (KLM).

Character	Number of families selected	Realized gain as per cent of General Mean				
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
B3STp	12	p	6.1	.2	.5	.8	1.4
		r	19.0	5.6	-.1	5.6	5.3
		pr	16.3	3.1	.2	3.3	3.2
B3STp	6	p	-14.6	-6.2	-1.3	-7.7	-8.0
		r	-3.8	.9	-1.3	-.4	-2.7
		pr	-16.3	-2.5	-1.3	-3.9	-5.6
B3STp	4	p	-27.8	-7.2	-2.8	-10.1	-11.7
		r	4.7	2.1	-2.3	-.3	-6.3
		pr	-11.6	-2.3	-2.5	-5.0	-9.3
B3STr	12	p	7.2	4.3	1.2	5.7	6.2
		r	29.9	8.6	.9	9.6	10.7
		pr	24.2	6.6	1.1	7.7	8.2
B3STr	6	p	-1.5	.8	-2.0	-1.3	-3.8
		r	29.9	9.9	-1.3	8.5	6.0
		pr	11.7	5.6	-1.6	3.7	.6
B3STr	4	p	11.6	-1.7	-3.2	-5.1	-8.1
		r	11.8	10.3	-2.8	7.2	4.2
		pr	2.4	4.6	-3.0	1.2	-2.5
B3STpr	12	p	1.8	.7	.6	1.4	1.6
		r	22.7	6.5	.2	6.8	6.6
		pr	10.1	3.8	.4	4.2	3.8
B3STpr	6	p	5.1	.2	-1.1	-1.0	-2.6
		r	37.1	13.7	-.8	12.9	12.7
		pr	21.0	7.3	-.9	6.2	4.3
B3STpr	4	p	11.6	-1.7	-3.2	-5.1	-8.1
		r	11.8	10.3	-2.8	7.2	4.2
		pr	2.4	4.6	-3.0	1.2	-2.5
B3G_Bp	12	p	8.3	4.5	1.8	6.3	7.3
		r	26.3	3.9	.8	4.7	5.4
		pr	21.0	4.2	1.3	5.5	6.4
B3G_Bp	6	p	11.5	7.9	4.8	13.2	16.7
		r	37.1	7.0	3.8	11.0	15.8
		pr	36.6	7.5	4.3	12.1	16.3
B3G_Bp	4	p	31.2	10.3	6.5	17.4	22.4
		r	33.5	5.8	4.6	10.7	17.2
		pr	44.4	7.9	5.6	13.9	20.1

Table 92   continued   2/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
B3G_Br	12	p	11.6	4.5	.5	5.1	5.2
		r	23.8	6.8	.0	6.7	5.4
		pr	24.2	5.7	.2	5.9	5.3
B3G_Br	6	p	15.9	7.4	2.7	10.3	12.7
		r	22.7	5.3	1.9	7.1	9.5
		pr	33.4	6.3	2.3	8.7	11.2
B3G_Br	4	p	31.3	8.1	1.2	9.5	10.5
		r	22.7	7.1	.2	7.2	7.4
		pr	34.9	7.6	.7	8.3	9.1
B3G_Bpr	12	p	2.8	3.3	.5	3.9	4.2
		r	23.9	4.0	-.2	3.8	2.2
		pr	14.8	3.7	.2	3.8	3.3
B3G_Bpr	6	p	15.9	7.4	2.7	10.3	12.7
		r	22.7	5.3	1.9	7.1	9.5
		pr	33.4	6.3	2.3	8.7	11.2
B3G_Bpr	4	p	28.0	11.6	3.0	15.1	18.0
		r	22.7	6.1	2.2	8.1	10.6
		pr	39.7	8.7	2.6	11.5	14.7
B3GBp	12	p	5.0	3.4	2.7	6.3	8.0
		r	21.5	2.5	1.8	4.6	6.0
		pr	10.2	2.9	2.3	5.4	7.1
B3GBp	6	p	13.7	7.1	4.5	12.0	15.6
		r	44.3	6.5	2.8	9.5	13.4
		pr	39.7	6.8	3.7	10.7	14.6
B3GBp	4	p	34.4	9.1	6.0	15.6	20.6
		r	44.4	5.0	3.1	8.4	13.6
		pr	49.0	6.9	4.6	11.9	17.5
B3GBr	12	p	2.8	4.0	.7	4.8	5.5
		r	28.7	5.0	.1	5.0	3.8
		pr	22.6	4.5	.4	4.9	4.7
B3GBr	6	p	15.9	7.4	2.7	10.3	12.7
		r	22.7	5.3	1.9	7.1	9.5
		pr	33.4	6.3	2.3	8.7	11.2
B3GBr	4	p	-4.8	2.8	1.5	4.2	5.8
		r	15.4	6.7	1.5	8.2	11.1
		pr	16.3	4.8	1.5	6.2	8.2
B3GBpr	12	p	-1.5	3.7	2.1	5.9	7.7
		r	33.5	6.4	1.6	8.2	9.5
		pr	17.9	5.2	1.8	7.1	8.5

Table 92   continued   3/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
B3GBpr	6	p	18.1	6.5	5.0	11.8	15.6
		r	29.9	5.1	3.5	8.9	13.9
		pr	36.6	5.8	4.3	10.3	14.8
B3GBpr	4	p	21.4	11.2	5.4	17.2	21.7
		r	29.9	2.3	3.9	6.1	9.9
		pr	49.0	6.5	4.6	11.5	16.4
B3WSp	12	p	11.5	2.5	1.7	4.3	5.3
		r	22.7	3.9	.4	4.4	4.6
		pr	17.9	3.2	1.0	4.3	5.0
B3WSp	6	p	2.8	5.9	4.6	11.0	14.6
		r	39.5	7.3	3.4	11.1	14.5
		pr	27.3	6.7	4.0	11.0	14.6
B3WSp	4	p	28.0	9.5	6.1	16.2	20.6
		r	40.7	9.1	4.0	13.5	21.2
		pr	39.7	9.3	5.1	14.8	20.9
B3WSr	12	p	8.3	2.2	2.6	5.0	6.9
		r	11.8	.7	1.7	2.7	5.2
		pr	5.5	1.4	2.2	3.8	6.1
B3WSr	6	p	22.4	2.5	2.6	5.6	7.7
		r	3.4	-4.8	.9	-3.6	-2.9
		pr	5.6	-1.4	1.8	.9	3.0
B3WSr	4	p	37.8	2.0	1.8	4.6	5.9
		r	-9.8	-5.3	.3	-4.6	-4.8
		pr	7.1	-1.8	1.1	-.1	1.1
B3WSpr	12	p	11.5	.7	2.4	3.3	5.2
		r	8.2	.0	1.3	1.6	4.0
		pr	4.0	.4	1.9	2.5	4.7
B3WSpr	6	p	7.2	3.2	2.8	6.6	9.2
		r	17.8	-3.4	1.4	-1.8	-1.5
		pr	14.9	-.3	2.1	2.3	4.4
B3WSpr	4	p	11.5	6.9	4.3	11.9	15.7
		r	37.1	-.1	1.8	1.8	1.6
		pr	21.1	3.2	3.0	6.7	9.3
B3TCHp	12	p	6.1	2.0	1.2	3.3	4.0
		r	26.3	6.1	.4	6.5	6.6
		pr	13.3	4.1	.8	4.9	5.2
B3TCHp	6	p	5.0	3.5	3.3	7.2	9.4
		r	37.1	6.7	2.1	9.1	11.4
		pr	18.0	5.2	2.7	8.2	10.3

Table 92   continued   4/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
B3TCHp	4	p	34.4	6.7	4.8	12.0	15.7
		r	37.1	6.9	2.7	9.8	15.2
		pr	49.0	6.8	3.8	10.9	15.5
B3TCHr	12	p	13.7	3.3	2.1	5.6	7.5
		r	16.6	5.0	1.3	6.4	7.4
		pr	14.9	4.2	1.7	6.0	7.5
B3TCHr	6	p	18.2	5.1	1.6	7.1	8.4
		r	17.8	7.0	.5	7.4	7.7
		pr	11.7	6.1	1.0	7.3	8.1
B3TCHr	4	p	18.2	5.1	.8	6.2	7.3
		r	26.3	7.6	-.4	7.3	5.5
		pr	20.9	6.4	.2	6.8	6.5
B3TCHpr	12	p	6.1	2.2	1.4	3.8	5.1
		r	25.0	6.4	.7	7.2	7.8
		pr	13.3	4.5	1.1	5.6	6.3
B3TCHpr	6	p	13.8	4.7	3.2	8.2	11.0
		r	27.5	8.0	1.9	10.3	13.1
		pr	21.0	6.5	2.6	9.3	11.9
B3TCHpr	4	p	18.1	7.3	6.1	14.1	19.2
		r	37.1	6.3	4.0	10.8	15.2
		pr	30.4	6.8	5.1	12.4	17.4
B3CCSp	12	p	5.0	3.7	1.6	5.4	6.6
		r	25.1	4.4	.6	5.1	4.9
		pr	22.6	4.1	1.1	5.3	5.8
B3CCSp	6	p	-12.5	1.3	1.9	3.2	4.0
		r	41.8	9.8	2.1	12.3	13.2
		pr	18.0	5.8	2.0	7.9	8.2
B3CCSp	4	p	-27.8	1.4	2.4	3.9	5.5
		r	62.3	12.1	2.7	15.3	15.4
		pr	30.4	7.1	2.5	9.8	9.9
B3CCSr	12	p	-8.1	-1.7	1.1	-.6	.0
		r	11.8	.6	.8	1.7	2.5
		pr	-2.2	-.5	1.0	.6	1.1
B3CCSr	6	p	-3.7	.7	2.1	2.6	4.3
		r	39.5	6.7	1.4	8.4	10.7
		pr	24.1	3.9	1.8	5.6	7.2
B3CCSr	4	p	-4.8	2.9	2.9	5.7	8.3
		r	44.3	11.1	3.0	14.4	18.7
		pr	39.7	7.2	2.9	10.2	13.0

Table 92 continued 5/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
B3CCSpr	12	p	1.7	1.8	2.0	3.9	5.4
		r	23.8	3.4	1.1	4.7	5.7
		pr	14.8	2.6	1.6	4.3	5.5
B3CCSpr	6	p	-21.2	.9	2.0	3.0	4.5
		r	41.8	9.5	2.3	12.2	13.7
		pr	11.7	5.5	2.2	7.7	8.7
B3CCSpr	4	p	-27.8	1.4	2.4	3.9	5.5
		r	62.3	12.1	2.7	15.3	15.4
		pr	30.4	7.1	2.5	9.8	9.9
B3TSHp	12	p	2.8	.9	1.6	2.6	3.7
		r	21.5	2.5	.1	2.8	2.6
		pr	14.8	1.8	.9	2.7	3.2
B3TSHp	6	p	5.0	3.5	3.3	7.2	9.4
		r	37.1	6.7	2.1	9.1	11.4
		pr	18.0	5.2	2.7	8.2	10.3
B3TSHp	4	p	11.6	6.0	4.1	10.5	13.4
		r	47.9	10.1	2.5	13.1	15.0
		pr	25.7	8.2	3.3	11.9	14.1
B3TSHr	12	p	12.7	3.5	1.9	5.6	7.2
		r	25.0	6.7	1.1	7.9	9.0
		pr	21.0	5.2	1.5	6.7	8.0
B3TSHr	6	p	13.8	3.1	3.7	7.1	10.6
		r	25.0	5.4	2.3	8.0	10.6
		pr	24.1	4.3	3.0	7.6	10.6
B3TSHr	4	p	21.5	3.8	4.3	8.5	11.7
		r	37.1	7.3	2.0	9.8	12.1
		pr	25.7	5.6	3.2	9.2	11.9
B3TSHpr	12	p	8.3	2.0	1.7	3.9	5.4
		r	21.4	5.1	1.0	6.2	7.4
		pr	14.8	3.6	1.4	5.1	6.3
B3TSHpr	6	p	9.4	4.5	4.8	9.6	13.5
		r	32.3	5.5	3.1	8.9	12.6
		pr	27.3	5.0	4.0	9.3	13.1
B3TSHpr	4	p	18.1	7.3	6.1	14.1	19.2
		r	37.1	6.3	4.0	10.8	15.2
		pr	30.4	6.8	5.1	12.4	17.4
B3GYOTp	12	p	3.9	2.6	1.6	4.3	5.3
		r	29.9	4.7	.4	5.1	4.9
		pr	25.7	3.7	1.0	4.7	5.1

Table 92   continued   6/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
B3GYOTp	6	p	2.8	5.9	4.6	11.0	14.6
		r	39.5	7.3	3.4	11.1	14.5
		pr	27.3	6.7	4.0	11.0	14.6
B3GYOTp	4	p	11.6	6.0	4.1	10.5	13.4
		r	47.9	10.1	2.5	13.1	15.0
		pr	25.7	8.2	3.3	11.9	14.1
B3GYOTr	12	p	12.7	3.5	1.9	5.6	7.2
		r	25.0	6.7	1.1	7.9	9.0
		pr	21.0	5.2	1.5	6.7	8.0
B3GYOTr	6	p	13.8	3.1	3.7	7.1	10.6
		r	25.0	5.4	2.3	8.0	10.6
		pr	24.1	4.3	3.0	7.6	10.6
B3GYOTr	4	p	21.5	3.8	4.3	8.5	11.7
		r	37.1	7.3	2.0	9.8	12.1
		pr	25.7	5.6	3.2	9.2	11.9
B3GYOTpr	12	p	6.1	3.4	2.1	5.6	7.3
		r	28.6	6.5	1.4	8.0	9.7
		pr	19.5	5.0	1.7	6.8	8.4
B3GYOTpr	6	p	9.4	4.5	4.8	9.6	13.5
		r	32.3	5.5	3.1	8.9	12.6
		pr	27.3	5.0	4.0	9.3	13.1
B3GYOTpr	4	p	18.1	7.3	6.1	14.1	19.2
		r	37.1	6.3	4.0	10.8	15.2
		pr	30.4	6.8	5.1	12.4	17.4
B3SELSTp	12	p	8.3	2.8	.8	3.7	4.3
		r	-2.6	-.7	.7	.0	1.5
		pr	8.6	.9	.8	1.8	3.0
B3SELSTp	6	p	11.5	8.8	3.9	13.1	16.4
		r	20.2	3.2	3.1	6.2	10.8
		pr	24.1	5.8	3.5	9.6	13.9
B3SELSTp	4	p	28.0	8.8	4.8	14.2	18.5
		r	15.4	3.0	3.0	5.9	12.5
		pr	20.9	5.7	3.9	9.9	15.8
S3STp	12	p	14.9	4.3	.7	5.1	5.5
		r	29.9	8.5	-.2	8.3	8.9
		pr	24.1	6.5	.3	6.7	7.0
S3STp	6	p	22.5	5.3	.9	6.4	7.3
		r	39.5	11.6	.5	12.1	13.7
		pr	45.8	8.6	.7	9.3	10.2

Table 92 continued 7/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
S3STp	4	p	37.8	6.6	1.0	7.9	9.0
		r	40.8	13.4	.0	13.5	14.4
		pr	58.2	10.2	.5	10.8	11.4
S3STr	12	p	13.8	4.7	.9	5.7	6.1
		r	26.3	8.8	.4	9.0	10.1
		pr	22.6	6.9	.6	7.4	7.9
S3STr	6	p	29.1	5.8	.6	6.6	6.9
		r	29.9	11.2	.1	11.3	10.8
		pr	36.6	8.6	.4	9.0	8.7
S3STr	4	p	14.9	.4	-1.6	-1.4	-2.9
		r	26.3	15.4	-1.1	14.4	13.1
		pr	21.1	8.3	-1.3	6.7	4.3
S3STpr	12	p	13.8	4.7	.9	5.7	6.1
		r	26.3	8.8	.4	9.0	10.1
		pr	22.6	6.9	.6	7.4	7.9
S3STpr	6	p	35.6	4.7	.7	5.6	6.6
		r	20.3	10.8	.0	10.7	11.7
		pr	33.4	8.0	.3	8.3	8.9
S3STpr	4	p	37.8	6.6	1.0	7.9	9.0
		r	40.8	13.4	.0	13.5	14.4
		pr	58.2	10.2	.5	10.8	11.4
S3G_Bp	12	p	8.3	5.6	.5	6.2	6.3
		r	27.5	6.8	.6	7.5	8.6
		pr	28.8	6.2	.6	6.8	7.3
S3G_Bp	6	p	9.4	8.6	.8	9.5	9.8
		r	34.7	4.8	.4	5.1	6.9
		pr	30.4	6.6	.6	7.3	8.5
S3G_Bp	4	p	14.9	11.0	4.0	15.5	17.8
		r	55.1	8.8	2.5	11.3	16.1
		pr	44.3	9.8	3.3	13.3	17.1
S3G_Br	12	p	14.9	5.3	.2	5.5	5.4
		r	19.0	8.4	.3	8.7	9.8
		pr	27.3	6.9	.3	7.2	7.4
S3G_Br	6	p	33.5	8.6	-.3	8.4	8.2
		r	22.7	11.2	.0	11.2	13.2
		pr	49.0	10.0	-.1	9.9	10.4
S3G_Br	4	p	54.2	10.9	-2.0	9.0	8.1
		r	-9.7	6.5	-1.6	4.7	4.9
		pr	44.3	8.6	-1.8	6.8	6.7

Table 92 continued 8/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
S3G_Bpr	12	p	13.7	4.9	.2	5.2	5.1
		r	26.3	8.0	.2	8.1	8.9
		pr	28.8	6.5	.2	6.7	6.8
S3G_Bpr	6	p	13.8	8.8	2.0	11.0	12.1
		r	34.7	9.1	1.8	11.1	16.0
		pr	36.6	9.0	1.9	11.1	13.9
S3G_Bpr	4	p	14.9	11.0	4.0	15.5	17.8
		r	55.1	8.8	2.5	11.3	16.1
		pr	44.3	9.8	3.3	13.3	17.1
S3GBp	12	p	1.7	4.3	1.5	6.0	6.9
		r	35.9	7.0	1.1	8.3	8.6
		pr	24.2	5.7	1.3	7.2	7.6
S3GBp	6	p	.7	6.3	3.9	10.6	13.2
		r	51.5	9.5	2.9	12.7	16.0
		pr	27.3	8.0	3.4	11.7	14.5
S3GBp	4	p	-14.7	4.1	3.7	7.9	9.8
		r	55.1	12.4	3.6	16.4	22.9
		pr	21.1	8.5	3.7	12.3	15.7
S3GBr	12	p	15.9	5.2	1.7	7.1	8.5
		r	23.8	7.7	1.1	8.7	10.4
		pr	25.7	6.5	1.4	7.9	9.4
S3GBr	6	p	24.7	7.6	4.1	12.1	14.6
		r	39.5	9.2	2.8	12.2	17.8
		pr	39.7	8.4	3.5	12.1	16.0
S3GBr	4	p	28.0	10.9	5.8	17.2	21.3
		r	58.8	11.1	3.8	15.1	22.2
		pr	63.0	11.0	4.8	16.1	21.7
S3GBpr	12	p	1.7	4.3	1.5	6.0	6.9
		r	35.9	7.0	1.1	8.3	8.6
		pr	24.2	5.7	1.3	7.2	7.6
S3GBpr	6	p	9.4	8.3	4.4	13.0	16.0
		r	53.9	10.5	3.3	14.0	19.1
		pr	49.0	9.5	3.8	13.5	17.4
S3GBpr	4	p	28.0	9.5	6.1	16.2	20.6
		r	40.7	9.1	4.0	13.5	21.2
		pr	39.7	9.3	5.1	14.8	20.9
S3WSp	12	p	.7	5.4	.5	5.9	5.9
		r	23.9	3.5	.0	3.5	3.0
		pr	16.4	4.4	.2	4.7	4.6

Table 92   continued   9/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
S3WSp	6	p	9.4	10.2	2.9	13.4	15.9
		r	27.5	4.0	1.6	5.5	5.1
		pr	33.5	6.9	2.3	9.4	11.0
S3WSp	4	p	-31.1	4.2	3.3	7.7	10.4
		r	22.6	1.1	3.6	5.0	5.7
		pr	-2.1	2.5	3.4	6.3	8.3
S3WSr	12	p	9.4	3.1	.9	4.1	4.6
		r	-7.4	-2.3	.8	-1.3	-.5
		pr	.9	.2	.8	1.3	2.3
S3WSr	6	p	-3.7	-1.7	.7	-.9	-.8
		r	-6.3	-3.4	.9	-2.1	-2.2
		pr	-13.0	-2.6	.8	-1.5	-1.4
S3WSr	4	p	-1.6	-2.0	.1	-1.6	-2.3
		r	-20.7	-6.9	.7	-5.7	-6.9
		pr	-30.0	-4.6	.4	-3.7	-4.4
S3WSpr	12	p	2.9	4.3	.2	4.6	4.3
		r	11.8	1.6	.1	1.8	2.1
		pr	10.2	2.9	.1	3.2	3.3
S3WSpr	6	p	2.8	8.9	1.8	10.9	12.5
		r	13.1	1.6	1.8	3.5	4.5
		pr	21.1	5.0	1.8	7.1	8.9
S3WSpr	4	p	-31.1	4.2	3.3	7.7	10.4
		r	22.6	1.1	3.6	5.0	5.7
		pr	-2.1	2.5	3.4	6.3	8.3
S3TCHp	12	p	1.7	5.8	.2	6.1	6.0
		r	35.9	7.6	-.2	7.3	5.3
		pr	24.2	6.8	.0	6.8	5.7
S3TCHp	6	p	20.3	12.8	1.0	14.1	14.8
		r	37.2	9.8	.3	9.8	10.2
		pr	49.0	11.2	.7	11.9	12.7
S3TCHp	4	p	44.4	14.4	1.5	16.3	18.2
		r	22.7	9.7	-.4	8.9	9.4
		pr	58.2	11.9	.6	12.5	14.2
S3TCHr	12	p	17.1	5.0	.8	5.8	6.4
		r	20.3	7.8	.2	7.9	8.5
		pr	24.2	6.5	.5	6.9	7.3
S3TCHr	6	p	18.2	6.8	1.8	8.7	9.7
		r	44.4	11.5	1.2	12.9	14.9
		pr	42.7	9.3	1.5	10.9	12.1

Table 92 continued 10/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
S3TCHr	4	p	41.1	7.2	2.5	10.0	12.2
		r	33.5	12.7	.9	13.9	17.5
		pr	48.9	10.2	1.7	12.0	14.6
S3TCHpr	12	p	13.8	5.4	.8	6.3	6.6
		r	26.3	8.9	.3	9.2	10.4
		pr	22.6	7.2	.6	7.8	8.3
S3TCHpr	6	p	24.7	9.6	1.0	10.7	11.4
		r	34.7	9.8	-.3	9.3	10.2
		pr	45.8	9.7	.4	10.0	10.9
S3TCHpr	4	p	37.9	14.4	-.9	13.7	13.1
		r	51.6	15.4	-2.1	12.9	10.1
		pr	76.8	15.0	-1.5	13.3	11.8
S3CCSp	12	p	-10.3	.0	1.4	1.5	2.3
		r	13.0	.6	1.2	2.1	2.9
		pr	.9	.3	1.3	1.8	2.5
S3CCSp	6	p	-23.4	4.1	3.3	7.5	9.7
		r	44.3	7.5	3.5	11.4	13.7
		pr	18.1	5.9	3.4	9.5	11.5
S3CCSp	4	p	-21.3	1.4	4.8	6.4	10.5
		r	33.4	6.4	4.4	11.3	14.7
		pr	11.9	4.0	4.6	8.9	12.4
S3CCSr	12	p	-8.1	.0	1.5	1.5	2.7
		r	15.4	1.8	1.2	3.1	3.4
		pr	7.1	1.0	1.3	2.3	3.0
S3CCSr	6	p	-21.3	2.8	1.9	4.8	6.4
		r	29.9	1.5	1.8	3.5	3.7
		pr	-3.7	2.1	1.9	4.1	5.2
S3CCSr	4	p	-18.0	-.6	2.8	2.4	5.6
		r	11.8	-2.7	1.9	-.6	-.3
		pr	-20.8	-1.7	2.3	.8	2.9
S3CCSpr	12	p	-5.9	-.3	1.6	1.4	2.8
		r	5.8	-.7	1.3	.9	2.0
		pr	.9	-.5	1.5	1.1	2.4
S3CCSpr	6	p	-23.4	4.1	3.3	7.5	9.7
		r	44.3	7.5	3.5	11.4	13.7
		pr	18.1	5.9	3.4	9.5	11.5
S3CCSpr	4	p	-34.4	4.7	2.3	7.2	8.3
		r	40.7	4.3	2.8	7.4	8.0
		pr	-2.1	4.5	2.6	7.3	8.1

Table 92 continued 11/17

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
S3TSHp	12	p	-.5	5.4	.6	6.1	6.6
		r	32.3	6.1	.2	6.2	5.1
		pr	22.6	5.8	.4	6.2	5.9
S3TSHp	6	p	7.2	10.5	2.2	13.1	14.4
		r	39.5	6.1	1.1	7.1	6.6
		pr	33.5	8.2	1.7	10.0	10.9
S3TSHp	4	p	34.5	14.5	2.9	17.8	19.8
		r	47.9	9.0	.6	9.2	11.0
		pr	67.6	11.6	1.8	13.4	15.8
S3TSHr	12	p	7.2	4.7	1.0	5.8	6.6
		r	22.7	6.8	.5	7.3	7.5
		pr	19.5	5.8	.8	6.5	7.0
S3TSHr	6	p	22.5	8.1	3.1	11.5	14.5
		r	34.7	10.5	2.3	12.9	17.9
		pr	42.7	9.4	2.7	12.2	16.0
S3TSHr	4	p	28.0	10.9	5.8	17.2	21.3
		r	58.8	11.1	3.8	15.1	22.2
		pr	63.0	11.0	4.8	16.1	21.7
S3TSHpr	12	p	1.7	5.5	1.2	6.8	7.8
		r	32.3	8.2	1.0	9.2	9.6
		pr	25.7	6.9	1.1	8.1	8.6
S3TSHpr	6	p	7.2	10.5	2.2	13.1	14.4
		r	39.5	6.1	1.1	7.1	6.6
		pr	33.5	8.2	1.7	10.0	10.9
S3TSHpr	4	p	34.5	14.5	2.9	17.8	19.8
		r	47.9	9.0	.6	9.2	11.0
		pr	67.6	11.6	1.8	13.4	15.8
S3GYOTp	12	p	-.5	5.6	1.0	6.7	7.3
		r	40.7	8.2	.5	8.7	8.0
		pr	28.8	7.0	.8	7.8	7.6
S3GYOTp	6	p	-3.7	8.7	3.4	12.6	15.0
		r	44.3	5.1	2.7	8.0	9.2
		pr	33.5	6.8	3.1	10.2	12.4
S3GYOTp	4	p	5.0	8.7	4.0	13.4	16.4
		r	51.5	5.9	2.5	8.5	10.2
		pr	35.1	7.2	3.3	10.9	13.6
S3GYOTr	12	p	9.4	2.8	1.5	4.4	5.6
		r	17.9	5.4	1.1	6.7	7.8
		pr	14.9	4.2	1.3	5.6	6.6

Table 92 continued 12/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
S3GYOTr	6	p	20.3	5.4	3.4	9.1	11.8
		r	37.1	7.3	2.2	9.6	14.2
		pr	39.7	6.4	2.8	9.4	12.9
S3GYOTr	4	p	41.0	8.7	6.6	15.9	22.0
		r	19.0	5.3	4.3	9.8	18.6
		pr	39.7	6.9	5.5	12.8	20.5
S3GYOTpr	12	p	3.9	5.3	1.2	6.6	7.8
		r	33.5	6.9	.6	7.5	7.1
		pr	28.8	6.1	.9	7.1	7.5
S3GYOTpr	6	p	9.4	5.7	4.3	10.5	14.2
		r	37.1	6.9	3.1	10.3	14.3
		pr	27.3	6.4	3.7	10.4	14.2
S3GYOTpr	4	p	5.0	8.7	4.0	13.4	16.4
		r	51.5	5.9	2.5	8.5	10.2
		pr	35.1	7.2	3.3	10.9	13.6
S3SEL7p	12	p	-5.9	2.1	2.1	4.4	6.0
		r	29.9	3.4	1.4	4.9	5.9
		pr	16.4	2.8	1.7	4.7	5.9
S3SEL7p	6	p	20.3	6.0	4.4	10.8	14.6
		r	29.9	4.8	2.6	7.6	12.5
		pr	24.1	5.4	3.5	9.1	13.7
S3SEL7p	4	p	21.4	9.2	4.2	13.9	17.1
		r	40.7	2.7	1.8	4.5	7.6
		pr	30.3	5.7	3.0	9.1	12.8
S3SEL7r	12	p	14.8	5.1	1.1	6.3	7.0
		r	27.5	7.0	.5	7.4	8.0
		pr	27.2	6.1	.8	6.8	7.5
S3SEL7r	6	p	37.7	4.3	3.8	8.5	11.8
		r	10.6	3.8	2.3	6.2	11.3
		pr	30.4	4.1	3.1	7.3	11.6
S3SEL7r	4	p	41.0	8.7	6.6	15.9	22.0
		r	19.0	5.3	4.3	9.8	18.6
		pr	39.7	6.9	5.5	12.8	20.5
S3S7p1r	12	p	5.0	3.2	1.6	4.9	6.2
		r	31.1	6.7	1.1	7.8	8.7
		pr	22.6	5.0	1.3	6.4	7.3
S3S7p1r	6	p	20.3	6.0	4.4	10.8	14.6
		r	29.9	4.8	2.6	7.6	12.5
		pr	24.1	5.4	3.5	9.1	13.7

Table 92 continued 13/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
S3S7p1r	4	p	41.0	8.7	6.6	15.9	22.0
		r	19.0	5.3	4.3	9.8	18.6
		pr	39.7	6.9	5.5	12.8	20.5
S3SEL7pr	12	p	8.3	4.0	1.8	5.9	7.2
		r	31.1	5.9	.8	6.7	7.1
		pr	25.7	5.0	1.3	6.3	7.2
S3SEL7pr	6	p	20.3	6.0	4.4	10.8	14.6
		r	29.9	4.8	2.6	7.6	12.5
		pr	24.1	5.4	3.5	9.1	13.7
S3SEL7pr	4	p	34.4	9.1	6.0	15.6	20.6
		r	44.4	5.0	3.1	8.4	13.6
		pr	49.0	6.9	4.6	11.9	17.5
S3SEL8p	12	p	5.0	3.2	1.6	4.9	6.2
		r	31.1	6.7	1.1	7.8	8.7
		pr	22.6	5.0	1.3	6.4	7.3
S3SEL8p	6	p	5.0	5.1	4.1	9.6	12.7
		r	41.9	5.4	2.4	8.2	10.3
		pr	18.0	5.3	3.3	8.9	11.6
S3SEL8p	4	p	28.0	9.5	6.1	16.2	20.6
		r	40.7	9.1	4.0	13.5	21.2
		pr	39.7	9.3	5.1	14.8	20.9
S3SEL8r	12	p	21.4	4.6	1.5	6.2	7.2
		r	14.2	4.8	.5	5.2	5.7
		pr	18.0	4.7	1.0	5.7	6.5
S3SEL8r	6	p	37.7	5.9	4.6	10.9	15.1
		r	15.4	2.6	2.5	5.2	10.3
		pr	30.4	4.1	3.6	8.0	12.9
S3SEL8r	4	p	54.1	8.6	5.1	14.3	19.2
		r	-6.3	-.3	2.9	2.4	9.1
		pr	30.3	3.9	4.1	8.2	14.7
S3S8p1r	12	p	8.3	3.9	1.7	5.7	6.8
		r	28.7	5.2	.8	6.1	6.2
		pr	19.5	4.6	1.3	5.9	6.6
S3S8p1r	6	p	15.9	4.7	3.2	8.2	10.4
		r	41.9	5.9	1.5	7.5	10.3
		pr	30.4	5.3	2.4	7.9	10.3
S3S8p1r	4	p	34.4	6.7	4.8	12.0	15.7
		r	37.1	6.9	2.7	9.8	15.2
		pr	49.0	6.8	3.8	10.9	15.5

Table 92   continued   14/17

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
S3SEL8pr	12	p	8.3	4.0	1.8	5.9	7.2
		r	31.1	5.9	.8	6.7	7.1
		pr	25.7	5.0	1.3	6.3	7.2
S3SEL8pr	6	p	29.0	6.4	4.3	11.1	14.1
		r	29.9	5.1	2.3	7.7	12.0
		pr	30.4	5.7	3.3	9.3	13.2
S3SEL8pr	4	p	34.4	9.1	6.0	15.6	20.6
		r	44.4	5.0	3.1	8.4	13.6
		pr	49.0	6.9	4.6	11.9	17.5
S3S10p	12	p	2.8	.5	1.5	2.2	3.2
		r	22.7	3.4	.5	4.0	4.5
		pr	8.6	2.1	1.0	3.1	3.8
S3S10p	6	p	-3.7	1.2	1.9	3.4	4.8
		r	29.9	1.5	.6	2.0	1.7
		pr	21.0	1.4	1.2	2.7	3.4
S3S10p	4	p	5.0	8.7	4.0	13.4	16.4
		r	51.5	5.9	2.5	8.5	10.2
		pr	35.1	7.2	3.3	10.9	13.6
S3S10r	12	p	21.4	4.6	1.5	6.2	7.2
		r	14.2	4.8	.5	5.2	5.7
		pr	18.0	4.7	1.0	5.7	6.5
S3S10r	6	p	24.6	4.6	2.2	7.2	8.5
		r	25.0	2.1	.6	2.6	4.0
		pr	24.1	3.3	1.4	4.8	6.5
S3S10r	4	p	41.0	9.4	4.6	14.6	17.8
		r	15.4	3.5	2.6	6.1	11.8
		pr	30.3	6.3	3.6	10.2	15.1
S3S10p1r	12	p	13.7	3.8	1.3	5.3	6.1
		r	27.5	6.5	.3	6.9	6.9
		pr	19.5	5.3	.8	6.1	6.5
S3S10p1r	6	p	15.9	4.2	2.4	6.9	9.0
		r	25.0	1.7	.9	2.5	4.5
		pr	17.9	2.9	1.6	4.6	7.0
S3S10p1r	4	p	28.0	8.8	4.8	14.2	18.5
		r	15.4	3.0	3.0	5.9	12.5
		pr	20.9	5.7	3.9	9.9	15.8
S3S10pr	12	p	8.3	3.9	1.7	5.7	6.8
		r	28.7	5.2	.8	6.1	6.2
		pr	19.5	4.6	1.3	5.9	6.6

Table 92 continued 15/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
S3S10pr	6	p	11.5	5.4	2.2	8.0	9.5
		r	34.6	5.8	1.4	7.0	10.2
		pr	27.2	5.6	1.8	7.5	9.8
S3S10pr	4	p	14.9	11.0	4.0	15.5	17.8
		r	55.1	8.8	2.5	11.3	16.1
		pr	44.3	9.8	3.3	13.3	17.1
S3VISGp	12	p	-2.7	4.2	1.5	5.8	7.1
		r	35.9	6.8	1.3	8.2	8.8
		pr	21.0	5.5	1.4	7.1	7.9
S3VISGp	6	p	11.5	7.0	3.0	10.3	12.8
		r	39.5	4.5	1.6	6.1	9.1
		pr	27.2	5.7	2.3	8.2	11.1
S3VISGp	4	p	21.4	9.2	4.2	13.9	17.1
		r	40.7	2.7	1.8	4.5	7.6
		pr	30.3	5.7	3.0	9.1	12.8
S3VISGr	12	p	11.5	4.1	1.4	5.6	6.6
		r	23.9	6.0	1.0	7.0	8.2
		pr	21.0	5.1	1.2	6.3	7.3
S3VISGr	6	p	20.3	4.5	3.6	8.4	11.3
		r	25.0	6.0	2.4	8.5	13.6
		pr	24.1	5.3	3.0	8.4	12.3
S3VISGr	4	p	34.4	6.0	3.5	10.1	13.6
		r	11.8	.8	1.7	2.2	6.5
		pr	30.3	3.2	2.7	6.0	10.4
S3VISGpr	12	p	10.5	4.1	1.0	5.2	5.9
		r	28.7	7.2	.3	7.4	7.4
		pr	22.6	5.7	.6	6.3	6.6
S3VISGpr	6	p	15.9	7.2	4.2	11.8	15.1
		r	39.5	8.8	3.1	12.1	18.2
		pr	33.4	8.1	3.7	12.0	16.5
S3VISGpr	4	p	28.0	8.8	4.8	14.2	18.5
		r	15.4	3.0	3.0	5.9	12.5
		pr	20.9	5.7	3.9	9.9	15.8
S3GVARr	12	p	18.1	3.8	1.0	5.0	5.1
		r	22.7	4.4	.2	4.6	5.0
		pr	21.1	4.1	.6	4.8	5.1
S3GVARr	6	p	24.6	4.6	2.2	7.2	8.5
		r	25.0	2.1	.6	2.6	4.0
		pr	24.1	3.3	1.4	4.8	6.5

Table 92   continued   16/17

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
S3GVARr	4	p	41.0	9.4	4.6	14.6	17.8
		r	15.4	3.5	2.6	6.1	11.8
		pr	30.3	6.3	3.6	10.2	15.1
S3GVARpr	12	p	8.3	.9	1.3	2.4	3.1
		r	10.6	.1	.3	.5	.2
		pr	8.7	.4	.8	1.4	1.8
S3GVARpr	6	p	29.0	4.8	3.5	8.7	10.8
		r	25.0	6.4	2.1	8.6	13.1
		pr	30.4	5.7	2.8	8.6	11.9
S3GVARpr	4	p	41.0	9.4	4.6	14.6	17.8
		r	15.4	3.5	2.6	6.1	11.8
		pr	30.3	6.3	3.6	10.2	15.1
S3STVr	12	p	9.4	4.1	-1.4	2.6	1.2
		r	14.3	7.6	-1.0	6.5	5.4
		pr	21.1	5.9	-1.2	4.6	3.1
S3STVr	6	p	7.2	2.3	-2.6	-.5	-2.8
		r	8.3	9.8	-1.0	8.7	7.3
		pr	11.8	6.3	-1.8	4.2	1.8
S3STVr	4	p	11.6	3.9	.1	4.0	3.8
		r	22.7	14.3	.8	15.3	15.1
		pr	16.5	9.4	.4	9.8	8.9
S3STVpr	12	p	9.4	4.1	-1.4	2.6	1.2
		r	14.3	7.6	-1.0	6.5	5.4
		pr	21.1	5.9	-1.2	4.6	3.1
S3STVpr	6	p	-1.6	-2.7	-1.4	-4.1	-5.5
		r	5.8	6.9	-.4	6.5	5.6
		pr	2.5	2.4	-.9	1.4	-.5
S3STVpr	4	p	14.9	.4	-1.6	-1.4	-2.9
		r	26.3	15.4	-1.1	14.4	13.1
		pr	21.1	8.3	-1.3	6.7	4.3

Table 92   continued   17/17

The prefixes B2, S2, B3, S3, and Re are defined as follows:

	D1X rep KLM	D1X rep KL	A5 RANDOM
Single	S3	S2	Re
Bunch	B3	B2	

p = plant crop   r = ratoon crop
pr = (p+r)/2 where p,r are plot values
p1r = (p+r)/2 where p,r are values for each seedling or clone

SEL7, 8, 10 = Number of clones with visual NMG 7+, 8+, 10+
NMG = Visual net merit grade, GYOT = NMGYOT
Visual net merit grade of whole plot, omitting brix = G_B
                                        including brix = GB
ST = stalks   WS = weight per stalk (kg)
GVAR = within-plot variance for NMG
STV = within-plot variance for number of STALKS

Table 93. Realized gains from selection in Ss and Bs seedlings, with 25 per cent (6/24) of the families selected. Selection and evaluation are both based on the PR crop. Gains are expressed as per cent of the mean for each Te character.

| | | Realized gain in the Te trial | | | |
| | | No. selected (SEL8) | | NMGYOT | |
Seedling class selected Character		Ss	Bs	Ss	Bs
Plot grade including brix		49.0	36.6	17.4	14.8
Plot grade omitting brix		36.6	33.4	13.9	11.2
TSH		33.5	27.3	10.9	13.1
NMGYOT		27.3	27.3	14.2	13.1
SEL7p1r		24.1		13.7	
SEL8p1r		30.4		10.3	
SEL8pr		30.4		13.2	
SEL10p1r		17.9		7.0	
SEL10pr		27.2		9.8	
Visual NMG per seedling		33.4		16.5	
NMG variance		30.4		11.9	

pr = mean of plot values for P and R crops
p1r = selection based on mean of P and R crops for each seedling

Table 94. Realized gains from family selection in Bs or Ss seedlings, with different selection rates. Selection was made in the TsP crop, evaluation being based on the TePR crop. Gains are expressed as per cent of the mean for each Te character.

Character selected	Seed-lings	Gain in the evaluation trial					
		Number of selections			NMGYOT		
		Per cent selected			Per cent selected		
		50	25	17	50	25	17
Visual plot grade~	Bs	10.2	39.7	49.0	7.1	14.6	17.5
Visual plot grade	Ss	24.2	27.3	21.1	7.6	14.5	15.7
NMGYOT	Bs	25.7	27.3	25.7	5.1	14.6	14.1
NMGYOT	Ss	28.8	33.5	35.1	7.6	12.4	13.6
Selectable stalks	Bs	8.6	24.1	20.9	3.0	13.9	15.8
Selections (SEL8)	Ss	22.6	18.0	39.7	7.3	11.6	20.9
Mean	Bs	14.8	30.4	31.9	5.1	14.4	15.8
	Ss	25.2	26.3	32.0	7.5	12.8	16.7
	Bs+Ss	20.0	28.3	31.9	6.3	13.6	16.3
Mean from Arcsin`	Bs	14.1	30.2	31.3	4.9	14.4	15.8
	Ss	25.2	26.0	31.7	7.5	12.8	16.6
	Bs+Ss	19.3	28.1	31.5	6.2	13.6	16.2

` mean from arcsin is in actual units, calculated using arcsin√%
~ Brix was included in the visual plot grade.

Table 95. Effect of crop class (plant = p, ratoon = r) on realized gains from selection of Bs and Ss seedlings. Selection rate = 25 per cent.

| | | Realized gain as per cent of the General Mean | | | | | |
| | | Number selected (SEL8) | | | NMGYOT | | |
Crop evaluated	selected	p	r	pr	p	r	pr
Bs	p	0.9	29.1	16.3	7.0	9.2	8.0
	r	7.4	22.1	20.0	6.0	6.0	7.1
		pr,ppr,rp,rpr >> pp					
		rr > pp					
		ppr >> pr					
		pr > rp			pr > rp		
Ss	p	3.0	38.2	29.7	11.8	9.1	10.7
	r	14.8	22.1	21.9	8.6	9.0	8.8
		pr,ppr >> pp					
		rp,rr,rpr > pp					
		pr > rp					
		pr > rr					
		pr > ppr					
Bs + Ss	p	2.0	34.5	24.0	9.8	9.1	9.6
	r	11.6	11.8	21.1	7.5	7.7	8.1
		pr,ppr,rp,rr,rpr >> pp					
		pr >> ppr,rp					
		ppr,rpr > rp					
		pr > rr					

Means were computed using arcsin√% and reconverted to per cent for this table.

Significance of differences between means was tested using paired t-tests.
Number of observations = 8 for Bs, 12 for Ss, 20 for Bs + Ss
> difference significant (P < 0.05), >> highly significant (P<0.01)
e.g. ppr > rp = selection in plant crop with evaluation in (p+r)/2 gave a significantly higher gain than selection in ratoon and evaluation in the plant crop.

Table 96. Comparison of realized gains from selection in the current experiment (= New) with the old experiment conducted at Meringa from 1976-79.

Character selected (plant crop)	Seed-lings	Experiment[‵]	F[~]	Gains in the Te trial in crop		
				P	R	PR
TCH	Bs	Old	2.6**	4.1	4.4	4.2
		New	5.1**	3.5	6.7	5.2
	Ss	Old	2.3**	10.6	6.8	9.1
		New	7.0**	14.4	9.7	11.9
CCS	Bs	Old	3.2**	7.2	1.5	3.8
		New	2.4**	1.9	2.1	2.0
	Ss	Old	2.7**	11.9	2.6	6.5
		New	5.5**	3.3	3.5	3.4
TSH	Bs	Old	2.0*	-1.1	7.7	3.1
		New	6.3**	7.2	9.1	8.2
	Ss	Old	1.5	2.6	9.1	5.8
		New	9.1**	13.1	7.1	10.0
NMGYOT	Bs	Old	1.6	-2.9	5.0	1.0
		New	6.5**	14.6	14.5	14.6
	Ss	Old	1.2	1.6	7.6	4.5
		New	9.7**	15.0	9.2	12.4

Selection rates were 20% in the Old experiment and 25% in the New.
Gains are for the character selected. They are expressed as per cent of the mean of that character.

[‵] Number of replications in seedling trial = 2 in old and 3 in new experiment
[~] F values (variance ratios for families) are for the seedling trial, plant crop.

Table 97. Realized gains from selection of families in the Re type in trial Te, with evaluation based on performance of Ss seedlings in three replicates (KLM) in trial Ts.

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReFIBREp	12	p	-16.1	1.4	-1.6	-.6	-2.1
		r	-11.1	3.2	-1.8	1.3	-.5
		pr	-8.2	2.3	-1.7	.4	-1.2
ReFIBREp	6	p	14.0	10.2	1.2	10.9	11.7
		r	-15.2	6.8	.5	7.1	5.6
		pr	14.3	8.4	.8	8.8	8.5
ReFIBREp	4	p	35.9	13.0	1.1	13.5	15.6
		r	2.6	7.0	.9	8.0	7.2
		pr	45.8	9.9	1.0	10.5	11.1
ReFIBREr	12	p	-10.2	3.3	-1.2	1.7	.7
		r	-7.6	3.2	-1.3	1.8	.8
		pr	-6.4	3.3	-1.2	1.8	.7
ReFIBREr	6	p	-13.0	9.5	-3.4	5.6	2.5
		r	-29.5	4.1	-4.3	-.3	-4.1
		pr	-19.8	6.7	-3.8	2.4	-1.0
ReFIBREr	4	p	-5.8	8.0	-2.7	4.8	2.2
		r	-43.3	3.1	-4.9	-1.9	-7.1
		pr	-30.7	5.4	-3.8	1.1	-2.8
ReFIBRpr	12	p	-17.4	3.2	-2.1	.7	-1.2
		r	-21.4	4.3	-2.4	1.7	-.5
		pr	-15.5	3.8	-2.3	1.2	-.8
ReFIBRpr	6	p	6.8	10.1	-.6	9.1	8.9
		r	-23.4	3.8	-1.6	2.3	-1.2
		pr	8.2	6.8	-1.1	5.4	3.5
ReFIBRpr	4	p	21.2	11.9	1.2	12.5	13.0
		r	-9.6	4.0	.8	4.6	3.2
		pr	25.8	7.8	1.0	8.2	7.8
ReTCHp	12	p	7.3	8.7	-.2	8.3	8.3
		r	3.2	5.7	-1.1	4.6	3.5
		pr	9.4	7.1	-.7	6.3	5.7
ReTCHp	6	p	24.0	16.0	.9	16.9	18.4
		r	10.4	6.4	-.5	6.1	4.6
		pr	36.3	10.9	.2	11.0	11.0
ReTCHp	4	p	-2.9	15.9	-2.7	12.8	9.9
		r	-9.5	5.6	-4.0	1.5	-2.3
		pr	.3	10.5	-3.4	6.7	3.4

Table 97 continued 2/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReTCHr	12	p	19.4	7.7	1.5	8.6	9.9
		r	6.2	7.5	.4	7.6	8.2
		pr	12.4	7.6	.9	8.1	9.0
ReTCHr	6	p	26.4	9.2	.7	9.3	10.5
		r	-2.0	8.7	-.3	8.3	7.6
		pr	19.1	8.9	.2	8.8	9.0
ReTCHr	4	p	19.7	5.9	1.4	6.9	8.6
		r	-3.5	10.4	.3	10.7	10.8
		pr	7.5	8.3	.8	9.0	9.8
ReTCHpr	12	p	17.6	8.9	1.2	9.8	11.2
		r	5.2	5.9	-.3	5.6	4.8
		pr	14.9	7.3	.4	7.5	7.8
ReTCHpr	6	p	28.3	13.1	.5	13.1	13.8
		r	16.5	11.5	-.3	11.2	11.7
		pr	27.6	12.3	.1	12.1	12.7
ReTCHpr	4	p	36.1	20.6	.2	20.4	20.7
		r	16.5	13.1	-.5	12.6	12.7
		pr	33.1	16.7	-.1	16.2	16.4
ReCCSp	12	p	24.4	1.7	1.9	3.7	5.1
		r	20.1	2.5	1.8	4.2	5.4
		pr	21.0	2.1	1.8	4.0	5.3
ReCCSp	6	p	39.2	2.3	2.4	5.2	7.9
		r	41.0	1.0	2.9	4.1	6.5
		pr	41.1	1.6	2.7	4.6	7.2
ReCCSp	4	p	44.2	2.2	1.6	4.7	6.9
		r	53.3	1.8	1.7	4.0	6.0
		pr	60.6	2.0	1.7	4.3	6.4
ReCCSr	12	p	32.9	2.8	2.9	6.0	8.5
		r	21.1	2.3	2.8	5.1	6.2
		pr	28.9	2.5	2.9	5.5	7.3
ReCCSr	6	p	13.1	-3.6	2.3	-.4	1.0
		r	2.1	-1.9	2.1	.3	-.1
		pr	9.5	-2.7	2.2	.0	.4
ReCCSr	4	p	11.8	-8.3	-.6	-7.6	-7.6
		r	27.1	-1.1	.7	.0	1.0
		pr	33.3	-4.5	.1	-3.5	-3.0
ReCCSpr	12	p	24.4	1.7	1.9	3.7	5.1
		r	20.1	2.5	1.8	4.2	5.4
		pr	21.0	2.1	1.8	4.0	5.3

Table 97   continued   3/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReCCSpr	6	p	29.3	.3	1.0	2.1	3.1
		r	32.8	1.8	1.0	2.9	4.0
		pr	33.8	1.1	1.0	2.5	3.5
ReCCSpr	4	p	44.2	2.2	1.6	4.7	6.9
		r	53.3	1.8	1.7	4.0	6.0
		pr	60.6	2.0	1.7	4.3	6.4
ReTSHp	12	p	23.5	6.4	2.3	8.5	10.5
		r	23.1	5.9	1.5	7.4	8.1
		pr	29.5	6.1	1.9	7.9	9.2
ReTSHp	6	p	51.8	13.2	5.2	18.2	22.4
		r	28.8	6.1	3.1	9.2	10.4
		pr	49.6	9.5	4.1	13.3	16.0
ReTSHp	4	p	47.0	20.7	3.5	24.2	27.1
		r	41.1	7.8	2.5	10.3	11.9
		pr	67.9	13.9	3.0	16.7	19.0
ReTSHr	12	p	33.8	9.5	2.6	12.0	14.2
		r	10.3	6.5	1.4	7.8	8.3
		pr	27.1	7.9	2.0	9.7	11.0
ReTSHr	6	p	32.7	5.9	2.5	8.0	10.6
		r	-6.1	6.5	.7	7.2	6.4
		pr	8.2	6.2	1.6	7.5	8.4
ReTSHr	4	p	53.3	7.5	3.4	10.5	14.2
		r	-2.0	10.0	1.0	11.0	10.4
		pr	27.6	8.8	2.2	10.8	12.1
ReTSHpr	12	p	22.1	8.2	1.8	9.8	11.4
		r	12.9	7.0	.8	7.7	8.0
		pr	22.2	7.6	1.3	8.7	9.6
ReTSHpr	6	p	61.6	12.5	4.8	17.3	22.2
		r	32.8	9.3	2.6	12.0	13.9
		pr	50.8	10.8	3.7	14.4	17.8
ReTSHpr	4	p	81.9	14.5	6.3	21.0	28.0
		r	62.5	12.0	4.2	16.4	19.7
		pr	95.2	13.2	5.2	18.5	23.6
ReNMGYp	12	p	29.3	6.2	3.1	9.2	11.9
		r	32.9	4.7	3.0	7.7	9.9
		pr	34.4	5.4	3.1	8.4	10.8
ReNMGYp	6	p	51.8	13.2	5.2	18.2	22.4
		r	28.8	6.1	3.1	9.2	10.4
		pr	49.6	9.5	4.1	13.3	16.0

Table 97   continued   4/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
ReNMGYp	4	p	67.1	13.5	6.4	19.9	25.4
		r	50.3	8.9	4.0	13.0	15.7
		pr	75.2	11.1	5.2	16.2	20.2
ReNMGYr	12	p	30.6	7.5	2.3	9.6	11.8
		r	21.1	6.9	1.6	8.4	9.7
		pr	26.5	7.2	2.0	9.0	10.7
ReNMGYr	6	p	67.9	13.5	3.7	17.1	21.6
		r	38.0	10.9	1.7	12.7	14.4
		pr	65.4	12.2	2.7	14.7	17.7
ReNMGYr	4	p	79.0	8.6	6.6	15.3	23.2
		r	34.8	7.7	4.1	12.1	13.5
		pr	82.5	8.2	5.3	13.5	18.0
ReNMGYpr	12	p	31.5	6.7	2.1	8.7	10.6
		r	24.7	6.5	1.7	8.2	9.5
		pr	30.7	6.6	1.9	8.4	10.0
ReNMGYpr	6	p	59.9	11.6	6.9	18.6	24.7
		r	25.7	6.8	4.4	11.3	12.4
		pr	50.8	9.1	5.6	14.6	18.1
ReNMGYpr	4	p	79.2	11.9	6.4	18.3	24.7
		r	61.0	7.8	3.7	11.5	15.0
		pr	77.0	9.7	5.0	14.6	19.5
ReSEL7p	12	p	12.3	4.1	.0	3.5	4.3
		r	30.3	2.9	.3	3.1	4.7
		pr	28.3	3.4	.1	3.3	4.5
ReSEL7p	6	p	40.1	10.4	1.8	11.7	13.8
		r	60.5	8.4	1.2	9.6	12.7
		pr	65.4	9.4	1.5	10.6	13.2
ReSEL7p	4	p	48.1	10.3	2.1	11.5	12.9
		r	61.1	10.1	1.1	11.0	13.6
		pr	60.4	10.2	1.6	11.3	13.3
ReSEL7r	12	p	40.5	9.3	2.3	11.5	13.9
		r	21.1	5.8	1.5	7.1	8.6
		pr	34.4	7.5	1.9	9.1	11.1
ReSEL7r	6	p	62.5	11.6	3.0	14.2	17.5
		r	27.8	8.5	1.6	10.0	11.3
		pr	43.4	10.0	2.3	11.9	14.2
ReSEL7r	4	p	73.8	11.6	5.1	16.6	21.9
		r	47.2	8.3	4.0	12.3	15.1
		pr	62.3	9.9	4.6	14.3	18.3

Table 97 continued 5/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
ReS7p1r	12	p	37.0	8.6	2.3	10.6	13.2
		r	24.7	4.7	1.5	6.1	7.2
		pr	33.2	6.6	1.9	8.1	10.0
ReS7p1r	6	p	67.1	14.6	4.4	18.9	24.1
		r	51.2	7.6	3.5	11.1	14.1
		pr	76.4	10.9	4.0	14.7	18.8
ReS7p1r	4	p	69.7	16.9	3.7	20.3	24.5
		r	67.1	11.1	2.1	13.3	16.7
		pr	93.4	13.8	2.9	16.5	20.3
ReSEL8p	12	p	-14.3	1.7	-1.6	-.6	-2.1
		r	9.4	5.3	-1.8	3.4	3.5
		pr	-7.6	3.6	-1.7	1.5	.9
ReSEL8p	6	p	5.1	7.9	-1.2	6.1	5.3
		r	35.0	5.3	.4	5.6	7.3
		pr	22.8	6.5	-.4	5.8	6.4
ReSEL8p	4	p	13.2	12.5	-1.7	10.0	8.2
		r	51.9	8.6	-1.0	7.3	9.1
		pr	38.6	10.4	-1.4	8.6	8.7
ReSEL8r	12	p	36.9	8.9	2.7	11.3	13.3
		r	7.8	5.3	1.8	6.9	7.6
		pr	23.4	7.0	2.2	8.9	10.2
ReSEL8r	6	p	68.8	9.7	5.0	14.4	19.5
		r	27.8	5.2	3.2	8.3	9.3
		pr	44.6	7.3	4.1	11.1	14.0
ReSEL8r	4	p	73.8	11.6	5.1	16.6	21.9
		r	47.2	8.3	4.0	12.3	15.1
		pr	62.3	9.9	4.6	14.3	18.3
ReS8p1r	12	p	22.1	7.3	1.3	8.2	8.9
		r	16.5	5.7	1.1	6.7	7.7
		pr	19.7	6.5	1.2	7.4	8.2
ReS8p1r	6	p	44.5	13.1	3.0	15.6	18.1
		r	12.4	9.7	1.1	10.7	10.9
		pr	26.4	11.3	2.0	13.0	14.3
ReS8p1r	4	p	45.5	17.7	3.3	20.8	23.7
		r	16.5	8.2	1.9	10.0	9.6
		pr	34.9	12.7	2.5	14.9	16.2
ReSEL10p	12	p	2.8	1.7	-.5	.7	.1
		r	9.4	1.5	-1.2	.2	.4
		pr	1.5	1.6	-.8	.4	.3

Table 97 continued 6/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReSEL10p	6	p	28.4	8.0	-.6	6.7	6.6
		r	37.0	4.5	-1.3	3.0	3.6
		pr	32.5	6.1	-1.0	4.7	5.0
ReSEL10p	4	p	61.7	14.0	2.6	15.9	18.5
		r	51.8	7.4	2.0	9.2	12.1
		pr	60.4	10.5	2.3	12.2	15.0
ReSEL10r	12	p	35.1	6.6	2.7	9.1	11.8
		r	25.2	6.8	2.1	8.9	11.0
		pr	34.4	6.7	2.4	9.0	11.4
ReSEL10r	6	p	26.6	9.3	.5	9.8	10.1
		r	18.6	8.8	1.0	9.8	11.0
		pr	16.7	9.0	.7	9.8	10.6
ReSEL10r	4	p	40.1	15.6	.8	16.2	17.5
		r	31.9	12.5	1.6	14.2	16.6
		pr	34.9	14.0	1.3	15.1	17.0
ReS10p1r	12	p	14.0	5.0	.9	5.5	6.4
		r	8.8	5.1	.5	5.5	6.2
		pr	12.4	5.1	.7	5.5	6.3
ReS10p1r	6	p	43.6	8.9	.9	9.5	10.5
		r	19.6	11.6	-.3	11.3	11.4
		pr	34.9	10.3	.3	10.5	11.0
ReS10p1r	4	p	56.1	13.4	3.1	16.1	19.0
		r	25.7	14.2	1.1	15.3	16.5
		pr	40.4	13.8	2.1	15.7	17.7
ReSTp	12	p	10.0	6.0	-1.0	4.6	4.1
		r	17.5	5.3	-1.3	3.8	4.1
		pr	18.6	5.6	-1.2	4.2	4.1
ReSTp	6	p	13.1	10.1	-.7	8.7	8.1
		r	10.4	8.6	-1.3	7.1	7.3
		pr	11.8	9.3	-1.0	7.8	7.6
ReSTp	4	p	11.6	6.4	.5	6.1	6.5
		r	-12.7	6.3	-.7	5.5	4.7
		pr	-1.5	6.3	-.1	5.8	5.6
ReSTr	12	p	1.0	5.1	-1.4	3.3	2.7
		r	4.2	7.3	-1.9	5.2	4.9
		pr	12.5	6.2	-1.7	4.4	3.8
ReSTr	6	p	6.7	5.2	-.2	4.4	4.4
		r	-3.0	10.3	-.7	9.4	10.0
		pr	5.7	7.9	-.5	7.1	7.4

Table 97 continued 7/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReSTr	4	p	10.3	4.4	-.8	2.7	1.9
		r	8.7	9.3	-1.0	8.1	9.8
		pr	13.0	7.0	-.9	5.6	6.1
ReSTp1r	12	p	5.0	7.5	-1.6	5.6	4.7
		r	7.3	7.7	-2.0	5.7	5.4
		pr	16.1	7.6	-1.8	5.6	5.1
ReSTp1r	6	p	15.7	8.9	.2	8.5	9.0
		r	2.1	9.2	.0	9.1	9.6
		pr	20.3	9.1	.1	8.8	9.3
ReSTp1r	4	p	10.3	4.4	-.8	2.7	1.9
		r	8.7	9.3	-1.0	8.1	9.8
		pr	13.0	7.0	-.9	5.6	6.1
ReBRIXp	12	p	.6	-1.2	.9	-.2	.2
		r	16.0	2.6	1.2	3.8	5.0
		pr	8.8	.8	1.0	2.0	2.7
ReBRIXp	6	p	20.4	1.8	1.1	2.9	3.9
		r	40.0	8.9	.0	8.7	11.2
		pr	38.7	5.5	.5	6.0	7.8
ReBRIXp	4	p	53.6	5.0	5.2	9.9	15.2
		r	65.6	7.6	2.8	10.5	14.5
		pr	73.4	6.4	3.9	10.2	14.8
ReBRIXr	12	p	40.1	5.9	4.7	10.4	14.9
		r	15.5	1.5	4.0	5.4	6.8
		pr	30.7	3.6	4.3	7.7	10.6
ReBRIXr	6	p	62.5	10.1	6.2	16.2	22.8
		r	29.7	3.8	5.0	8.7	11.8
		pr	60.6	6.8	5.6	12.1	16.9
ReBRIXr	4	p	75.0	7.7	8.9	16.9	26.0
		r	30.2	6.3	6.3	12.8	16.2
		pr	71.6	6.9	7.6	14.7	20.8
ReBRIXp1r	12	p	30.7	5.0	3.2	8.1	10.9
		r	30.8	3.8	3.0	6.8	8.8
		pr	34.4	4.4	3.1	7.4	9.8
ReBRIXp1r	6	p	41.0	5.3	6.1	11.3	16.1
		r	27.8	3.8	3.5	7.3	9.0
		pr	36.3	4.5	4.8	9.1	12.3
ReBRIXp1r	4	p	53.6	5.0	5.2	9.9	15.2
		r	65.6	7.6	2.8	10.5	14.5
		pr	73.4	6.4	3.9	10.2	14.8

Table 97 continued 8/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
ReHARDp	12	p	2.4	4.5	-1.2	2.9	1.6
		r	5.8	2.8	-1.3	1.2	.6
		pr	4.5	3.6	-1.3	2.0	1.1
ReHARDp	6	p	-11.2	1.3	-.8	-.1	-1.2
		r	-10.0	-.1	-2.1	-2.3	-5.1
		pr	-8.8	.6	-1.5	-1.3	-3.3
ReHARDp	4	p	-19.3	1.6	-3.6	-2.8	-5.2
		r	-21.9	.0	-5.3	-5.4	-9.7
		pr	-14.3	.8	-4.5	-4.2	-7.6
ReHARDr	12	p	-5.3	2.6	-1.6	.4	-1.2
		r	-7.1	4.1	-2.0	1.8	1.0
		pr	-5.2	3.4	-1.9	1.2	.0
ReHARDr	6	p	-19.2	-1.5	-2.3	-4.2	-6.6
		r	-19.3	1.2	-3.0	-1.9	-4.6
		pr	-12.5	-.1	-2.7	-2.9	-5.6
ReHARDr	4	p	-21.9	-1.8	-1.0	-3.2	-4.3
		r	-38.7	-2.1	-3.4	-5.6	-10.6
		pr	-32.5	-2.0	-2.2	-4.5	-7.7
ReHARDp1r	12	p	-15.6	2.7	-2.4	-.1	-2.3
		r	-14.7	2.6	-2.4	-.1	-1.5
		pr	-14.9	2.6	-2.4	-.1	-1.9
ReHARDp1r	6	p	-21.0	1.0	-2.5	-1.8	-4.5
		r	-24.4	1.3	-3.5	-2.3	-6.0
		pr	-17.4	1.2	-3.0	-2.1	-5.3
ReHARDp1r	4	p	-21.9	-1.8	-1.0	-3.2	-4.3
		r	-38.7	-2.1	-3.4	-5.6	-10.6
		pr	-32.5	-2.0	-2.2	-4.5	-7.7
ReVISGp	12	p	11.8	6.8	-1.8	4.6	3.5
		r	26.7	6.7	-1.7	4.8	6.0
		pr	25.3	6.8	-1.7	4.7	4.8
ReVISGp	6.	p	40.1	10.4	1.8	11.7	13.8
		r	60.5	8.4	1.2	9.6	12.7
		pr	65.4	9.4	1.5	10.6	13.2
ReVISGp	4	p	48.1	10.3	2.1	11.5	12.9
		r	61.1	10.1	1.1	11.0	13.6
		pr	60.4	10.2	1.6	11.3	13.3
ReVISGr	12	p	39.6	10.1	2.6	12.4	15.1
		r	17.5	6.2	1.4	7.4	8.7
		pr	30.1	8.1	1.9	9.7	11.7

Table 97 continued 9/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReVISGr	6	p	56.2	10.6	4.1	14.4	18.1
		r	22.6	6.9	2.5	9.3	10.9
		pr	28.8	8.6	3.3	11.6	14.3
ReVISGr	4	p	65.6	10.5	6.1	16.5	22.0
		r	25.7	9.2	3.4	12.8	13.5
		pr	42.2	9.8	4.7	14.4	17.4
ReVISGp1r	12	p	35.6	10.3	1.5	11.4	13.4
		r	21.1	6.9	.8	7.5	8.9
		pr	34.4	8.5	1.2	9.3	11.0
ReVISGp1r	6	p	56.2	12.0	4.3	15.9	20.1
		r	26.7	5.7	3.1	8.7	10.0
		pr	41.0	8.7	3.7	12.0	14.7
ReVISGp1r	4	p	56.1	15.5	3.5	18.5	21.9
		r	31.8	12.5	1.9	14.5	15.2
		pr	58.6	13.9	2.6	16.3	18.3
ReSTVp	12	p	-1.3	.8	-3.1	-1.9	-4.5
		r	-1.3	.4	-2.2	-1.6	-3.3
		pr	-4.6	.6	-2.6	-1.7	-3.8
ReSTVp	6	p	-30.0	-6.7	-4.8	-10.3	-14.4
		r	-50.0	-7.0	-4.4	-10.8	-16.0
		pr	-53.8	-6.8	-4.6	-10.6	-15.3
ReSTVp	4	p	-38.1	-4.9	-5.8	-10.2	-15.3
		r	-47.9	-6.4	-5.8	-12.1	-17.5
		pr	-67.2	-5.7	-5.8	-11.2	-16.5
ReSTVr	12	p	-9.8	1.8	-3.6	-1.9	-4.7
		r	-5.5	1.3	-2.3	-1.3	-2.1
		pr	-10.7	1.5	-2.9	-1.5	-3.3
ReSTVr	6	p	-38.1	2.4	-7.0	-5.1	-11.2
		r	-17.3	7.5	-6.4	.8	-1.0
		pr	-27.1	5.1	-6.7	-1.9	-5.7
ReSTVr	4	p	-60.9	-1.7	-9.1	-11.0	-18.8
		r	-26.5	6.1	-8.5	-2.7	-6.4
		pr	-45.4	2.4	-8.8	-6.5	-12.2
ReSTVp1r	12	p	-16.0	.5	-4.8	-4.0	-8.2
		r	-10.6	1.0	-3.8	-2.7	-4.7
		pr	-18.6	.8	-4.3	-3.3	-6.4
ReSTVp1r	6	p	-29.1	-4.4	-5.4	-9.3	-14.0
		r	-20.3	-2.0	-3.6	-5.6	-8.0
		pr	-39.2	-3.2	-4.4	-7.3	-10.8

Table 97   continued   10/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
ReSTVp1r	4	p	-23.3	1.8	-5.1	-3.5	-8.2
		r	-31.1	3.3	-6.1	-3.0	-6.7
		pr	-43.5	2.6	-5.6	-3.2	-7.4
ReBRVp	12	p	-14.7	-3.8	.8	-3.1	-2.7
		r	-20.8	-4.3	.0	-4.2	-5.2
		pr	-25.2	-4.1	.4	-3.7	-4.1
ReBRVp	6	p	-13.9	-4.7	-1.4	-5.6	-6.5
		r	-27.4	-4.7	-1.9	-6.1	-9.0
		pr	-24.7	-4.7	-1.7	-5.9	-7.9
ReBRVp	4	p	-9.8	-10.3	.0	-9.6	-10.2
		r	-15.6	-8.7	.3	-8.0	-8.5
		pr	-23.4	-9.5	.1	-8.7	-9.3
ReBRVr	12	p	-1.2	.1	.9	.4	1.2
		r	-1.4	.5	.0	.3	.2
		pr	-5.2	.3	.4	.4	.7
ReBRVr	6	p	-4.0	2.1	-1.0	.6	.4
		r	14.5	4.9	-1.3	3.7	3.5
		pr	.8	3.6	-1.2	2.3	2.0
ReBRVr	4	p	-4.6	-4.8	2.5	-2.9	-.4
		r	13.3	3.2	2.9	6.2	8.2
		pr	-1.6	-.6	2.7	2.0	4.2
ReBRVp1r	12	p	-17.0	-.7	1.1	.0	.7
		r	-14.2	-.3	.5	.1	-.4
		pr	-16.7	-.5	.8	.1	.1
ReBRVp1r	6	p	-32.7	-7.2	.2	-7.5	-7.5
		r	-8.0	-2.5	-1.1	-3.6	-4.5
		pr	-31.9	-4.7	-.5	-5.4	-5.9
ReBRVp1r	4	p	-48.9	-5.9	-3.2	-9.6	-12.0
		r	-6.4	-1.5	-3.7	-5.1	-7.8
		pr	-38.0	-3.6	-3.4	-7.2	-9.8
ReHVp	12	p	14.1	5.2	.3	5.7	6.7
		r	-9.6	-.5	.3	-.1	-.8
		pr	5.8	2.2	.3	2.6	2.7
ReHVp	6	p	1.5	5.7	-1.1	4.2	3.5
		r	-28.5	-.7	-2.1	-3.1	-6.2
		pr	-22.2	2.3	-1.6	.2	-1.7
ReHVp	4	p	-16.5	3.2	-1.7	1.2	-.1
		r	-51.0	-2.2	-3.6	-5.8	-12.1
		pr	-34.4	.4	-2.6	-2.6	-6.5

Table 97   continued   11/13

Character	Number of families selected	Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReHVr	12	p	-20.6	-2.0	-.2	-2.4	-3.3
		r	-16.7	-2.0	-.5	-2.6	-4.0
		pr	-26.5	-2.0	-.4	-2.5	-3.7
ReHVr	6	p	-23.7	-1.6	1.0	-.9	-.7
		r	-18.2	-1.6	-.2	-1.9	-3.7
		pr	-30.7	-1.6	.4	-1.4	-2.3
ReHVr	4	p	-48.9	-5.9	-3.2	-9.6	-12.0
		r	-6.4	-1.5	-3.7	-5.1	-7.8
		pr	-38.0	-3.6	-3.4	-7.2	-9.8
ReHVp1r	12	p	6.4	5.3	.9	5.8	6.6
		r	-5.5	1.9	.3	2.1	1.5
		pr	.3	3.5	.6	3.8	3.9
ReHVp1r	6	p	18.5	4.1	3.0	6.7	8.5
		r	-11.0	1.4	1.7	2.8	2.3
		pr	-5.1	2.7	2.3	4.6	5.2
ReHVp1r	4	p	11.8	1.3	2.8	3.8	5.6
		r	-6.4	-.9	1.9	.7	-1.0
		pr	.3	.1	2.3	2.1	2.0
ReGVp	12	p	-7.9	-3.1	-.7	-3.8	-4.8
		r	12.4	-1.2	.0	-1.2	.3
		pr	-7.0	-2.1	-.3	-2.4	-2.1
ReGVp	6	p	-30.0	-10.0	-1.9	-11.7	-14.0
		r	8.4	-1.7	-.7	-2.0	-.7
		pr	-24.7	-5.6	-1.2	-6.5	-6.9
ReGVp	4	p	-26.0	-15.9	-2.1	-17.4	-19.7
		r	15.1	-7.0	.1	-6.4	-4.8
		pr	-14.3	-11.3	-1.0	-11.4	-11.7
ReGVr	12	p	25.7	7.3	2.3	9.5	11.8
		r	14.9	3.9	1.8	5.6	7.2
		pr	25.3	5.5	2.0	7.4	9.3
ReGVr	6	p	40.1	12.1	1.4	13.5	14.9
		r	15.5	8.2	.8	8.9	9.1
		pr	38.5	10.1	1.1	11.0	11.8
ReGVr	4	p	44.2	11.3	.1	11.6	12.2
		r	27.3	11.1	-.3	10.8	10.4
		pr	47.6	11.2	-.1	11.2	11.2
ReGVp1r	12	p	10.4	3.2	.7	3.6	4.2
		r	6.3	2.7	.0	2.6	2.9
		pr	3.9	2.9	.3	3.1	3.5

Table 97 continued 12/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
ReGVp1r	6	p	-2.1	-.9	.1	-1.2	-1.6
		r	40.1	2.6	1.2	3.7	6.9
		pr	19.1	1.0	.7	1.5	3.0
ReGVp1r	4	p	21.3	4.4	-1.6	2.7	.9
		r	70.4	8.8	.9	9.6	13.7
		pr	45.8	6.8	-.3	6.5	7.7
ReWSp	12	p	11.4	5.5	2.0	7.5	9.2
		r	8.3	2.2	1.0	3.2	3.4
		pr	11.3	3.8	1.5	5.1	6.1
ReWSp	6	p	12.4	3.1	4.5	7.3	10.2
		r	16.5	.8	3.4	3.9	6.1
		pr	3.3	1.9	4.0	5.5	8.0
ReWSp	4	p	15.9	9.0	5.0	13.9	16.5
		r	12.0	5.3	3.3	8.4	9.9
		pr	5.7	7.1	4.1	10.9	13.0
ReWSr	12	p	35.6	6.6	4.1	10.3	13.7
		r	21.1	3.7	3.4	7.0	8.5
		pr	25.2	5.1	3.7	8.5	10.9
ReWSr	6	p	55.5	10.9	5.4	16.1	20.3
		r	11.5	.9	3.7	4.2	5.2
		pr	22.8	5.6	4.5	9.7	12.2
ReWSr	4	p	50.9	7.5	6.0	13.4	18.2
		r	-5.0	-2.3	4.7	1.9	2.7
		pr	16.7	2.3	5.3	7.2	9.9
ReWSpr	12	p	23.5	5.0	3.6	8.3	11.2
		r	17.6	2.2	3.1	5.1	6.5
		pr	16.1	3.5	3.3	6.6	8.7
ReWSpr	6	p	31.2	9.4	5.3	14.7	18.7
		r	14.5	3.7	4.3	7.9	9.6
		pr	17.9	6.4	4.8	11.0	13.8
ReWSpr	4	p	53.8	13.4	5.7	19.1	23.0
		r	22.7	1.9	4.8	6.3	8.9
		pr	29.5	7.4	5.2	12.1	15.5

Table 97 continued   13/13

The prefixes B2, S2, B3, S3, and Re are defined as follows:

	D1X rep KLM	D1X rep KL	A5 RANDOM
Single	S3	S2	Re
Bunch	B3	B2	

p = plant crop   r = ratoon crop
pr = (p+r)/2 where p,r are plot values
p1r = (p+r)/2 where p,r are values for each seedling or clone

SEL7, 8, 10 = Number of clones with visual NMG 7+, 8+, 10+
NMG = Visual net merit grade, GYOT = NMGYOT
Visual net merit grade of whole plot, omitting brix = G_B
                                          including brix = GB
ST = stalks   WS = weight per stalk (kg)
GVAR = within-plot variance for NMG
STV = within-plot variance for number of STALKS

Table 98. Realized gains from selection of families in the Be type in trial Te, with evaluation based on performance of Ss seedlings in three replicates (KLM) in trial Ts.

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
BeFIBREp	12	p	-16.1	1.4	-1.6	-.6	-2.1
		r	-11.1	3.2	-1.8	1.3	-.5
		pr	-8.2	2.3	-1.7	.4	-1.2
BeFIBREp	6	p	1.4	7.8	-1.9	5.3	5.0
		r	-21.4	2.9	-2.5	.4	-3.0
		pr	5.7	5.2	-2.2	2.7	.7
BeFIBREp	4	p	11.7	7.2	-2.2	4.6	4.5
		r	-17.3	4.3	-3.3	1.2	-2.5
		pr	14.8	5.7	-2.7	2.8	.8
BeFIBREr	12	p	-11.6	2.6	-1.5	.7	-.7
		r	-10.6	3.2	-1.7	1.4	-.2
		pr	-7.0	2.9	-1.6	1.1	-.4
BeFIBREr	6	p	11.3	7.3	-1.6	5.1	4.7
		r	4.3	4.2	-2.0	2.3	.3
		pr	22.8	5.7	-1.8	3.6	2.4
BeFIBREr	4	p	11.7	7.2	-2.2	4.6	4.5
		r	-17.3	4.3	-3.3	1.2	-2.5
		pr	14.8	5.7	-2.7	2.8	.8
BeFIBRpr	12	p	-11.6	2.6	-1.5	.7	-.7
		r	-10.6	3.2	-1.7	1.4	-.2
		pr	-7.0	2.9	-1.6	1.1	-.4
BeFIBRpr	6	p	1.4	7.0	-3.3	3.4	1.4
		r	-10.1	5.6	-3.3	2.3	-.5
		pr	14.2	6.3	-3.3	2.8	.4
BeFIBRpr	4	p	11.7	7.2	-2.2	4.6	4.5
		r	-17.3	4.3	-3.3	1.2	-2.5
		pr	14.8	5.7	-2.7	2.8	.8
BeTCHp	12	p	2.7	2.1	-1.5	.2	-.9
		r	12.4	7.0	-1.8	5.1	5.1
		pr	5.7	4.7	-1.6	2.9	2.3
BeTCHp	6	p	3.2	1.1	.0	.5	.3
		r	27.8	8.2	.0	7.9	10.3
		pr	11.8	4.8	.0	4.5	5.7
BeTCHp	4	p	14.4	.4	1.6	1.4	2.1
		r	27.3	9.8	-.6	8.9	10.6
		pr	14.8	5.4	.5	5.5	6.6

Table 98 continued 2/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
BeTCHr	12	p	8.6	5.5	-1.1	4.2	4.0
		r	16.5	8.2	-1.4	6.8	7.2
		pr	16.7	6.9	-1.2	5.6	5.7
BeTCHr	6	p	40.9	10.8	1.2	11.6	13.2
		r	17.5	11.0	-.2	10.8	11.0
		pr	31.3	10.9	.5	11.1	12.0
BeTCHr	4	p	21.3	15.6	-.7	14.6	14.3
		r	16.5	12.7	-1.0	11.6	12.1
		pr	18.5	14.1	-.9	13.0	13.1
BeTCHpr	12	p	1.4	3.3	-1.6	1.3	.1
		r	14.5	7.9	-1.7	6.1	6.2
		pr	5.7	5.7	-1.7	3.9	3.3
BeTCHpr	6	p	19.4	9.4	.1	9.1	9.1
		r	11.4	12.7	-1.0	11.5	12.1
		pr	13.0	11.1	-.5	10.4	10.7
BeTCHpr	4	p	41.4	10.5	2.5	12.7	15.4
		r	31.8	12.1	1.3	13.5	14.6
		pr	44.0	11.3	1.9	13.1	15.0
BeCCSp	12	p	11.8	-2.9	1.8	-1.0	.3
		r	20.1	-.2	1.7	1.4	3.4
		pr	14.3	-1.5	1.8	.3	2.0
BeCCSp	6	p	34.6	-3.9	4.5	1.1	5.1
		r	25.7	-3.4	3.8	.5	2.5
		pr	26.5	-3.6	4.1	.8	3.7
BeCCSp	4	p	21.3	-5.0	2.5	-1.5	1.2
		r	36.5	-6.4	3.6	-2.6	.0
		pr	33.3	-5.8	3.1	-2.1	.6
BeCCSr	12	p	15.8	-2.7	3.0	.5	3.0
		r	8.3	-4.0	3.3	-.8	.7
		pr	10.1	-3.4	3.2	-.2	1.8
BeCCSr	6	p	17.6	-4.7	.9	-3.0	-1.7
		r	23.6	-.9	2.3	1.5	3.2
		pr	22.9	-2.7	1.6	-.6	.9
BeCCSr	4	p	26.5	-5.3	1.5	-2.9	-.3
		r	39.4	-2.2	3.6	1.8	4.8
		pr	44.2	-3.7	2.6	-.4	2.4
BeCCSpr	12	p	11.8	-2.9	1.8	-1.0	.3
		r	20.1	-.2	1.7	1.4	3.4
		pr	14.3	-1.5	1.8	.3	2.0

Table 98 continued 3/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
BeCCSpr	6	p	34.6	-3.9	4.5	1.1	5.1
		r	25.7	-3.4	3.8	.5	2.5
		pr	26.5	-3.6	4.1	.8	3.7
BeCCSpr	4	p	26.5	-7.9	2.0	-5.0	-2.6
		r	48.7	-3.1	2.7	.0	2.2
		pr	46.1	-5.3	2.4	-2.3	.0
BeTSHp	12	p	14.0	2.4	.5	2.5	2.9
		r	17.0	6.8	.2	6.8	7.8
		pr	10.6	4.7	.3	4.9	5.5
BeTSHp	6	p	5.9	-.9	-.4	-1.6	-2.4
		r	29.8	8.8	-.2	8.4	10.8
		pr	15.4	4.2	-.3	3.9	4.7
BeTSHp	4	p	14.4	.4	1.6	1.4	2.1
		r	27.3	9.8	-.6	8.9	10.6
		pr	14.8	5.4	.5	5.5	6.6
BeTSHr	12	p	19.9	5.8	.9	6.5	7.7
		r	21.1	8.1	.5	8.5	9.8
		pr	21.6	7.0	.7	7.6	8.9
BeTSHr	6	p	19.4	9.4	.1	9.1	9.1
		r	11.4	12.7	-1.0	11.5	12.1
		pr	13.0	11.1	-.5	10.4	10.7
BeTSHr	4	p	29.2	10.7	-.4	9.6	9.1
		r	30.3	12.8	-1.5	11.2	12.9
		pr	24.0	11.8	-.9	10.5	11.1
BeTSHpr	12	p	19.4	3.7	.6	4.0	4.9
		r	29.3	7.7	.4	8.0	9.9
		pr	28.3	5.8	.5	6.2	7.5
BeTSHpr	6	p	22.1	7.5	.7	7.8	8.9
		r	25.7	11.1	.9	11.9	13.8
		pr	26.4	9.4	.8	10.1	11.5
BeTSHpr	4	p	15.8	7.3	-.7	5.9	5.0
		r	28.8	12.9	-1.8	10.7	12.2
		pr	20.3	10.2	-1.3	8.5	8.9
BeNMGYp	12	p	22.5	2.8	1.6	4.1	5.9
		r	29.3	6.1	1.2	7.2	8.8
		pr	28.9	4.5	1.4	5.8	7.5
BeNMGYp	6	p	5.9	-.9	-.4	-1.6	-2.4
		r	29.8	8.8	-.2	8.4	10.8
		pr	15.4	4.2	-.3	3.9	4.7

Table 98 continued 4/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
BeNMGYp	4	p	14.4	.4	1.6	1.4	2.1
		r	27.3	9.8	-.6	8.9	10.6
		pr	14.8	5.4	.5	5.5	6.6
BeNMGYr	12	p	18.1	3.0	-.8	2.4	2.1
		r	22.7	6.1	-.5	5.7	6.9
		pr	24.6	4.6	-.6	4.2	4.6
BeNMGYr	6	p	32.9	6.7	.4	7.2	8.3
		r	56.3	9.4	1.3	10.7	14.5
		pr	58.1	8.1	.9	9.1	11.6
BeNMGYr	4	p	37.3	4.3	2.7	6.9	10.9
		r	53.2	6.6	3.4	10.1	14.9
		pr	62.4	5.5	3.1	8.6	13.0
BeNMGYpr	12	p	19.4	3.7	.6	4.0	4.9
		r	29.3	7.7	.4	8.0	9.9
		pr	28.3	5.8	.5	6.2	7.5
BeNMGYpr	6	p	6.8	3.7	-1.9	1.5	-.4
		r	30.8	10.8	-1.0	9.7	11.8
		pr	19.1	7.4	-1.4	5.9	6.1
BeNMGYpr	4	p	33.3	7.8	.6	7.8	8.7
		r	51.8	10.5	1.4	11.9	15.5
		pr	44.0	9.2	1.0	10.0	12.3
BeSEL7p	12	p	7.3	2.6	-1.4	.8	.0
		r	24.2	6.5	-1.7	4.7	5.6
		pr	17.3	4.6	-1.5	2.9	3.0
BeSEL7p	6	p	18.6	3.9	1.2	4.8	6.5
		r	63.6	5.0	2.0	7.0	11.3
		pr	48.4	4.5	1.6	6.0	9.1
BeSEL7p	4	p	15.9	.6	1.2	1.3	2.0
		r	65.8	4.8	2.3	7.1	11.4
		pr	34.9	2.8	1.8	4.4	7.0
BeSEL7r	12	p	27.0	5.0	2.0	6.8	8.5
		r	15.0	6.2	1.5	7.5	9.0
		pr	13.6	5.6	1.7	7.1	8.8
BeSEL7r	6	p	57.9	7.0	4.7	11.5	16.2
		r	6.2	4.7	3.1	7.6	9.0
		pr	27.6	5.8	3.9	9.4	12.4
BeSEL7r	4	p	49.3	6.6	5.7	12.0	17.0
		r	-6.6	8.5	3.3	11.7	13.0
		pr	16.7	7.6	4.5	11.9	14.9

Table 98   continued   5/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
BeS7p1r	12	p	38.7	6.4	1.9	8.1	10.2
		r	32.9	6.6	1.6	8.0	10.2
		pr	35.6	6.5	1.7	8.0	10.2
BeS7p1r	6	p	42.0	11.2	-.4	10.8	11.3
		r	47.2	9.5	.2	9.7	12.5
		pr	54.5	10.3	-.1	10.2	11.9
BeS7p1r	4	p	72.6	15.6	2.5	18.1	22.2
		r	74.8	8.5	2.9	11.4	15.7
		pr	93.4	11.9	2.7	14.5	18.7
BeSEL8p	12	p	11.8	1.7	.1	1.5	1.9
		r	29.8	4.1	.1	3.9	6.0
		pr	21.0	2.9	.1	2.8	4.1
BeSEL8p	6	p	18.6	3.9	1.2	4.8	6.5
		r	63.6	5.0	2.0	7.0	11.3
		pr	48.4	4.5	1.6	6.0	9.1
BeSEL8p	4	p	15.9	.6	1.2	1.3	2.0
		r	65.8	4.8	2.3	7.1	11.4
		pr	34.9	2.8	1.8	4.4	7.0
BeSEL8r	12	p	39.2	7.4	3.4	10.6	14.0
		r	24.1	5.9	2.5	8.2	10.5
		pr	28.9	6.6	2.9	9.3	12.2
BeSEL8r	6	p	66.9	9.3	6.1	15.2	20.8
		r	15.5	6.4	3.4	9.8	10.4
		pr	38.5	7.8	4.7	12.3	15.3
BeSEL8r	4	p	58.7	3.7	8.8	12.4	20.0
		r	-6.6	3.5	5.6	9.1	10.0
		pr	18.5	3.6	7.1	10.6	14.7
BeS8p1r	12	p	16.7	5.3	.4	5.4	6.5
		r	11.4	6.1	-.6	5.4	5.6
		pr	14.3	5.7	-.1	5.4	6.0
BeS8p1r	6	p	27.5	5.8	1.8	7.2	9.0
		r	33.9	9.7	.0	9.5	12.0
		pr	32.6	7.8	.9	8.4	10.6
BeS8p1r	4	p	30.6	10.2	-.1	9.4	8.6
		r	22.7	15.0	-2.0	12.6	14.1
		pr	16.7	12.7	-1.1	11.1	11.5
BeSEL10p	12	p	18.1	2.2	.3	2.1	2.7
		r	27.8	5.3	-.2	5.0	6.6
		pr	28.9	3.8	.0	3.7	4.8

Table 98 continued   6/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
BeSEL10p	6	p	40.1	4.9	2.7	7.3	10.3
		r	39.0	8.0	.6	8.4	10.4
		pr	48.4	6.5	1.6	7.9	10.4
BeSEL10p	4	p	46.7	2.6	3.3	5.2	8.2
		r	36.5	7.2	.7	7.9	8.9
		pr	42.2	5.0	2.0	6.6	8.6
BeSEL10r	12	p	35.2	9.6	1.9	11.2	13.6
		r	22.1	5.6	1.8	7.2	9.4
		pr	30.7	7.5	1.8	9.0	11.3
BeSEL10r	6	p	53.6	12.8	4.0	16.5	20.1
		r	5.3	6.9	1.8	8.5	8.8
		pr	21.6	9.7	2.9	12.2	14.0
BeSEL10r	4	p	54.9	17.2	1.2	18.1	19.9
		r	18.1	12.3	-.3	12.0	11.6
		pr	38.6	14.6	.4	14.8	15.5
BeS10p1r	12	p	26.2	5.0	2.0	6.8	9.3
		r	12.4	3.6	.5	3.9	4.3
		pr	19.2	4.2	1.2	5.2	6.6
BeS10p1r	6	p	32.8	2.6	3.1	5.2	7.6
		r	16.5	6.8	.7	7.2	8.5
		pr	20.3	4.8	1.9	6.3	8.1
BeS10p1r	4	p	41.5	5.4	3.8	8.8	11.9
		r	24.3	3.9	1.6	5.2	6.7
		pr	29.4	4.6	2.6	6.8	9.1
BeSTp	12	p	-18.3	-1.7	-3.6	-5.4	-8.6
		r	-4.0	3.4	-3.1	.3	-.2
		pr	-13.1	1.0	-3.4	-2.3	-4.1
BeSTp	6	p	-1.3	5.1	-2.5	1.9	.4
		r	6.3	5.5	-3.1	2.4	1.3
		pr	8.1	5.3	-2.8	2.2	.9
BeSTp	4	p	22.5	8.3	-2.1	5.3	4.1
		r	24.2	8.7	-3.7	5.1	4.5
		pr	33.0	8.5	-2.9	5.2	4.3
BeSTr	12	p	-10.7	-.1	-2.4	-2.4	-4.1
		r	1.6	4.5	-1.9	2.7	2.8
		pr	.9	2.3	-2.2	.4	-.4
BeSTr	6	p	-20.1	.6	-3.9	-3.0	-6.3
		r	-23.4	4.0	-3.0	1.1	.0
		pr	-19.8	2.4	-3.4	-.7	-2.9

Table 98 continued   7/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
BeSTr	4	p	-23.3	6.1	-4.4	.9	-3.3
		r	-8.1	10.0	-3.7	5.8	6.5
		pr	-16.1	8.1	-4.0	3.5	2.0
BeSTp1r	12	p	-8.9	1.5	-3.2	-1.8	-4.3
		r	-5.0	4.9	-2.7	2.3	1.5
		pr	-5.8	3.3	-2.9	.5	-1.2
BeSTp1r	6	p	-14.8	-2.6	-3.6	-6.3	-9.8
		r	-14.2	4.1	-3.4	.8	.6
		pr	-16.2	.9	-3.5	-2.4	-4.2
BeSTp1r	4	p	-30.0	-2.4	-6.3	-8.4	-14.1
		r	-21.9	-.2	-4.5	-4.3	-5.2
		pr	-25.3	-1.3	-5.4	-6.2	-9.3
BeBRIXp	12	p	-1.6	-3.3	1.2	-2.0	-1.3
		r	18.6	-.8	1.4	.5	2.4
		pr	5.2	-2.0	1.3	-.6	.7
BeBRIXp	6	p	-3.0	-9.0	.8	-7.6	-7.1
		r	24.7	-3.9	1.7	-2.2	-.3
		pr	13.2	-6.4	1.2	-4.6	-3.5
BeBRIXp	4	p	-24.5	-12.9	-2.1	-13.7	-15.2
		r	16.4	-5.6	-.2	-5.5	-5.1
		pr	5.9	-9.1	-1.1	-9.3	-9.8
BeBRIXr	12	p	27.1	3.2	2.6	6.2	8.5
		r	13.5	-.5	2.5	2.0	2.4
		pr	19.8	1.3	2.5	3.9	5.2
BeBRIXr	6	p	48.3	6.2	5.1	11.8	17.0
		r	21.5	1.2	4.5	5.6	8.1
		pr	38.7	3.6	4.8	8.4	12.3
BeBRIXr	4	p	36.1	4.0	3.5	7.9	11.2
		r	8.8	2.0	3.9	5.7	7.8
		pr	22.2	3.0	3.7	6.7	9.4
BeBRp1r	12	p	26.2	1.4	2.4	4.1	6.6
		r	14.5	-2.3	2.3	-.1	.8
		pr	21.6	-.5	2.3	1.8	3.5
BeBRp1r	6	p	48.3	6.2	5.1	11.8	17.0
		r	21.5	1.2	4.5	5.6	8.1
		pr	38.7	3.6	4.8	8.4	12.3
BeBRp1r	4	p	49.7	5.4	3.8	9.7	13.8
		r	44.0	.6	4.1	4.5	9.3
		pr	57.0	2.9	4.0	6.9	11.4

Table 98   continued   8/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
BeHARDp	12	p	-5.4	-1.9	.5	-1.8	-1.4
		r	1.1	2.6	.2	2.9	2.4
		pr	.3	.5	.3	.7	.6
BeHARDp	6	p	-14.8	-4.3	-3.3	-8.2	-10.8
		r	8.4	1.6	-3.4	-1.9	-3.1
		pr	2.1	-1.2	-3.4	-4.8	-6.7
BeHARDp	4	p	-15.2	-6.0	-2.4	-9.1	-10.7
		r	2.8	-1.5	-4.1	-5.6	-8.3
		pr	-10.7	-3.6	-3.3	-7.2	-9.4
BeHARDr	12	p	17.6	2.0	1.4	3.1	4.5
		r	4.2	1.9	1.3	3.2	3.4
		pr	13.0	2.0	1.3	3.1	3.9
BeHARDr	6	p	-.4	4.8	-1.6	3.1	1.9
		r	-21.4	4.1	-2.1	2.1	-1.2
		pr	2.1	4.4	-1.8	2.6	.3
BeHARDr	4	p	6.3	7.7	.2	7.8	8.5
		r	-41.8	2.3	-2.1	.4	-5.4
		pr	-10.7	4.9	-1.0	3.8	1.1
BeHp1r	12	p	6.3	-.6	1.3	.3	1.4
		r	-1.4	2.1	.8	2.9	2.7
		pr	5.1	.8	1.0	1.7	2.1
BeHp1r	6	p	-.4	4.8	-1.6	3.1	1.9
		r	-21.4	4.1	-2.1	2.1	-1.2
		pr	2.1	4.4	-1.8	2.6	.3
BeHp1r	4	p	-3.1	6.2	-2.1	3.5	1.9
		r	-29.5	1.2	-3.4	-2.2	-6.4
		pr	-5.2	3.6	-2.8	.4	-2.6
BeVISGp	12	p	3.7	1.0	-1.0	-.4	-.7
		r	21.6	4.8	-1.2	3.4	4.0
		pr	16.1	3.0	-1.1	1.7	1.8
BeVISGp	6	p	8.6	-.7	-.4	-1.7	-1.8
		r	36.0	4.5	-.9	3.6	4.8
		pr	17.9	2.0	-.7	1.2	1.7
BeVISGp	4	p	3.6	.3	-1.0	-1.4	-2.1
		r	15.0	5.3	-3.7	1.7	.3
		pr	5.7	2.9	-2.4	.3	-.8
BeVISGr	12	p	36.1	7.5	2.1	9.4	11.6
		r	18.5	6.4	1.1	7.3	8.8
		pr	27.1	6.9	1.6	8.3	10.1

Table 98   continued   9/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
BeVISGr	6	p	57.1	10.9	3.6	14.1	17.6
		r	13.4	9.1	1.2	10.3	10.2
		pr	30.1	9.9	2.4	12.0	13.7
BeVISGr	4	p	45.5	15.6	2.9	18.4	20.8
		r	10.4	9.9	1.1	10.9	10.9
		pr	16.7	12.6	2.0	14.3	15.6
BeGp1r	12	p	10.0	4.3	−.9	3.2	3.0
		r	14.4	7.3	−1.4	5.8	6.2
		pr	16.7	5.9	−1.2	4.6	4.7
BeGp1r	6	p	36.4	8.7	.1	8.2	8.4
		r	25.7	11.4	−.5	10.6	12.4
		pr	26.4	10.1	−.2	9.5	10.5
BeGp1r	4	p	62.9	12.3	1.6	13.2	14.7
		r	31.9	12.5	−.8	11.5	12.5
		pr	44.0	12.4	.4	12.3	13.5
BeSTVp	12	p	15.8	3.5	.8	3.7	4.5
		r	−.4	2.9	−.6	2.0	1.9
		pr	.3	3.2	.0	2.8	3.1
BeSTVp	6	p	−7.5	−.3	−2.4	−3.4	−4.8
		r	−5.0	.7	−3.0	−2.7	−3.7
		pr	−6.4	.2	−2.8	−3.0	−4.2
BeSTVp	4	p	28.0	5.9	−.4	4.8	5.2
		r	14.9	3.7	.0	3.1	4.6
		pr	25.8	4.7	−.2	3.9	4.9
BeSTVr	12	p	5.1	3.7	.3	3.7	4.3
		r	10.8	3.2	.3	3.2	4.6
		pr	14.3	3.4	.3	3.4	4.5
BeSTVr	6	p	−11.1	5.3	−2.4	2.2	−.4
		r	12.4	8.9	−2.5	6.1	7.4
		pr	−1.6	7.2	−2.5	4.3	3.7
BeSTVr	4	p	−1.6	10.6	−3.3	6.6	3.6
		r	27.3	11.7	−2.6	8.6	10.3
		pr	20.3	11.2	−3.0	7.7	7.2
BeSTVp1r	12	p	3.8	2.2	−.1	1.6	1.5
		r	1.7	2.0	−.3	1.3	2.3
		pr	1.5	2.1	−.2	1.5	1.9
BeSTVp1r	6	p	10.6	6.1	−.7	4.8	3.9
		r	22.7	6.4	−.7	5.3	7.7
		pr	10.6	6.3	−.7	5.1	5.9

Table 98   continued 10/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
BeSTVp1r	4	p	13.2	13.5	-2.7	10.1	7.2
		r	21.2	13.8	-2.9	10.5	12.2
		pr	16.7	13.7	-2.8	10.3	9.9
BeBRVp	12	p	3.2	1.5	.0	1.2	.9
		r	-10.1	-1.6	-.9	-2.5	-3.2
		pr	-5.8	-.1	-.5	-.8	-1.3
BeBRVp	6	p	18.5	.2	2.2	2.8	3.8
		r	-15.2	-4.2	1.5	-2.5	-3.5
		pr	-5.2	-2.1	1.8	-.1	-.1
BeBRVp	4	p	37.3	8.1	4.5	12.2	15.3
		r	5.7	1.8	3.6	5.2	6.0
		pr	24.0	4.8	4.0	8.4	10.4
BeBRVr	12	p	-5.7	-.3	.8	.5	1.2
		r	.1	-1.4	1.2	-.2	.6
		pr	-2.1	-.9	1.0	.2	.9
BeBRVr	6	p	-7.5	-2.4	-.3	-2.1	-2.4
		r	-6.0	-2.3	-1.0	-3.0	-3.4
		pr	-3.9	-2.3	-.6	-2.6	-2.9
BeBRVr	4	p	-21.8	-9.9	-1.7	-10.6	-11.8
		r	-1.9	-3.7	-2.0	-5.3	-5.0
		pr	-5.0	-6.6	-1.9	-7.7	-8.2
BeBRVp1r	12	p	8.2	3.5	-.1	3.5	3.3
		r	-.4	1.5	-1.2	.3	-.2
		pr	.9	2.4	-.6	1.7	1.4
BeBRVp1r	6	p	-5.7	-2.8	1.2	-1.3	-1.3
		r	-22.4	-7.3	.9	-6.2	-7.5
		pr	-23.4	-5.2	1.1	-4.0	-4.6
BeBRVp1r	4	p	-36.8	-6.7	-1.2	-7.3	-10.1
		r	-41.8	-7.0	-1.4	-7.9	-11.0
		pr	-38.0	-6.9	-1.3	-7.6	-10.6
BeHVp	12	p	18.5	3.9	1.0	4.7	5.7
		r	25.7	4.6	.5	5.1	6.0
		pr	26.5	4.3	.8	4.9	5.8
BeHVp	6	p	22.1	3.5	3.5	6.8	10.1
		r	38.0	2.8	3.6	6.5	9.0
		pr	37.5	3.1	3.6	6.6	9.5
BeHVp	4	p	48.2	7.2	5.0	12.2	16.8
		r	38.1	2.1	3.6	5.7	7.1
		pr	58.9	4.5	4.3	8.7	11.6

Table 98 continued 11/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
BeHVr	12	p	13.6	1.5	-.2	1.5	.9
		r	4.3	-.5	.0	-.4	-.5
		pr	3.9	.4	-.1	.5	.1
BeHVr	6	p	30.1	.5	1.2	1.9	2.2
		r	15.6	1.4	.1	1.9	1.4
		pr	21.6	1.0	.7	1.9	1.7
BeHVr	4	p	45.4	6.9	4.7	11.2	13.8
		r	44.3	7.9	2.9	10.8	12.6
		pr	42.2	7.4	3.8	11.0	13.1
BeHVp1r	12	p	-4.0	-3.1	-.5	-3.5	-4.5
		r	-10.5	-2.7	-1.2	-3.8	-5.2
		pr	-13.7	-2.9	-.9	-3.7	-4.8
BeHVp1r	6	p	26.6	6.2	3.9	9.8	12.2
		r	24.8	4.3	2.5	6.7	7.9
		pr	20.4	5.2	3.2	8.1	9.9
BeHVp1r	4	p	44.2	10.7	2.9	13.2	14.6
		r	36.7	6.0	1.6	7.4	7.7
		pr	40.4	8.2	2.2	10.1	10.9
BeGVp	12	p	23.5	2.9	3.7	6.2	9.4
		r	16.5	1.8	2.3	3.9	6.0
		pr	24.7	2.3	3.0	5.0	7.6
BeGVp	6	p	20.2	-1.6	2.8	.5	2.8
		r	2.1	4.5	1.0	5.1	6.4
		pr	13.0	1.6	1.9	3.0	4.7
BeGVp	4	p	7.6	-6.4	4.3	-2.7	.2
		r	-5.0	4.1	1.6	5.3	7.1
		pr	-8.9	-.9	2.9	1.6	3.9
BeGVr	12	p	17.2	2.8	.8	3.7	4.8
		r	19.6	2.2	.8	2.9	4.2
		pr	16.8	2.5	.8	3.3	4.5
BeGVr	6	p	32.1	7.5	4.1	11.6	15.7
		r	26.7	6.9	2.4	9.2	11.6
		pr	37.5	7.2	3.2	10.3	13.5
BeGVr	4	p	9.2	3.3	2.1	5.0	5.9
		r	15.1	6.4	.3	6.3	8.3
		pr	2.1	4.9	1.2	5.7	7.2
BeGVp1r	12	p	27.5	2.6	2.6	4.7	7.3
		r	28.8	2.1	1.7	3.6	6.3
		pr	33.8	2.3	2.1	4.1	6.8

Table 98   continued 12/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
BeGVp1r	6	p	31.2	4.8	2.3	6.7	8.7
		r	20.6	3.3	1.1	4.0	5.9
		pr	17.9	4.0	1.7	5.2	7.2
BeGVp1r	4	p	9.2	3.3	2.1	5.0	5.9
		r	15.1	6.4	.3	6.3	8.3
		pr	2.1	4.9	1.2	5.7	7.2
BeWSp	12	p	14.9	1.1	3.1	3.9	5.9
		r	8.9	4.9	1.6	6.3	6.7
		pr	6.3	3.1	2.3	5.2	6.3
BeWSp	6	p	16.7	3.0	5.1	8.0	12.0
		r	10.4	3.4	3.1	6.5	7.7
		pr	3.3	3.2	4.1	7.2	9.7
BeWSp	4	p	32.1	3.8	5.5	9.0	12.9
		r	16.6	1.4	2.9	4.1	6.0
		pr	7.5	2.6	4.2	6.4	9.2
BeWSr	12	p	12.7	7.1	.8	7.5	8.4
		r	13.5	3.4	.8	4.0	4.4
		pr	13.0	5.1	.8	5.6	6.3
BeWSr	6	p	40.1	9.1	2.6	11.4	13.9
		r	29.9	6.6	1.8	8.3	9.5
		pr	37.3	7.8	2.1	9.7	11.6
BeWSr	4	p	69.7	14.9	5.0	19.8	24.8
		r	21.2	8.3	2.9	11.2	11.9
		pr	51.3	11.4	3.9	15.1	17.9
BeWSpr	12	p	24.3	2.5	4.1	6.3	9.4
		r	13.0	3.3	2.5	5.6	6.7
		pr	10.6	2.9	3.3	5.9	7.9
BeWSpr	6	p	36.5	6.9	3.9	10.5	13.9
		r	33.0	6.4	2.6	8.9	10.5
		pr	33.7	6.6	3.2	9.6	12.1
BeWSpr	4	p	54.9	10.8	5.1	15.8	20.1
		r	44.3	7.6	4.0	11.6	14.3
		pr	49.5	9.1	4.5	13.5	17.0

Table 98   continued   13/13

The prefixes B2, S2, B3, S3, and Re are defined as follows:

	D1X rep KLM	D1X rep KL	A5 RANDOM
Single	S3	S2	Re
Bunch	B3	B2	

p = plant crop   r = ratoon crop
pr = (p+r)/2 where p,r are plot values
p1r = (p+r)/2 where p,r are values for each seedling or clone

SEL7, 8, 10 = Number of clones with visual NMG 7+, 8+, 10+
NMG = Visual net merit grade, GYOT = NMGYOT
Visual net merit grade of whole plot, omitting brix = G_B
                                     including brix = GB
ST = stalks   WS = weight per stalk (kg)
GVAR = within-plot variance for NMG
STV = within-plot variance for number of STALKS

Table 99. Realized gains from selection of families in the Se type in trial Te, with evaluation based on performance of Ss seedlings in three replicates (KLM) in trial Ts.

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
SeFIBREp	12	p	3.2	3.0	.9	3.4	4.3
		r	-8.0	1.0	.2	1.0	.2
		pr	-.9	1.9	.5	2.1	2.1
SeFIBREp	6	p	21.1	4.4	.7	4.6	6.0
		r	2.2	2.7	-.4	2.3	1.4
		pr	19.1	3.5	.1	3.4	3.6
SeFIBREp	4	p	11.7	7.2	-2.2	4.6	4.5
		r	-17.3	4.3	-3.3	1.2	-2.5
		pr	14.8	5.7	-2.7	2.8	.8
SeFIBREr	12	p	-7.1	3.8	-1.3	2.1	1.1
		r	-13.7	2.3	-1.4	.8	-.7
		pr	-7.0	3.0	-1.3	1.4	.1
SeFIBREr	6	p	13.1	10.6	1.0	11.1	12.0
		r	-10.1	5.3	.9	6.1	4.8
		pr	19.1	7.8	.9	8.4	8.2
SeFIBREr	4	p	21.2	11.9	1.2	12.5	13.0
		r	-9.6	4.0	.8	4.6	3.2
		pr	25.8	7.8	1.0	8.2	7.8
SeFIBRpr	12	p	1.5	5.0	.3	4.8	5.3
		r	-15.7	1.4	-.3	.9	-.2
		pr	-5.8	3.1	.0	2.7	2.4
SeFIBRpr	6	p	6.8	10.1	-.6	9.1	8.9
		r	-23.4	3.8	-1.6	2.3	-1.2
		pr	8.2	6.8	-1.1	5.4	3.5
SeFIBRpr	4	p	35.9	13.0	1.1	13.5	15.6
		r	2.6	7.0	.9	8.0	7.2
		pr	45.8	9.9	1.0	10.5	11.1
SeTCHp	12	p	.5	1.6	-.2	1.0	1.1
		r	9.8	4.5	-.8	3.6	3.6
		pr	12.5	3.1	-.5	2.4	2.5
SeTCHp	6	p	6.7	.7	.6	.9	2.0
		r	.2	3.1	-.9	2.3	.7
		pr	-1.6	2.0	-.1	1.7	1.3
SeTCHp	4	p	-4.6	2.3	-1.5	.4	.3
		r	-17.3	5.9	-3.1	3.0	-.2
		pr	-5.3	4.2	-2.4	1.8	.1

Table 99 continued 2/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
SeTCHr	12	p	18.1	5.9	1.6	7.3	8.7
		r	17.0	7.7	.8	8.4	10.1
		pr	19.8	6.8	1.2	7.9	9.4
SeTCHr	6	p	13.1	8.4	-1.4	6.2	4.7
		r	19.6	12.0	-1.9	9.8	11.4
		pr	16.7	10.3	-1.7	8.2	8.3
SeTCHr	4	p	-4.3	12.4	-4.0	7.9	3.9
		r	13.5	13.5	-4.1	8.9	9.6
		pr	-5.2	13.0	-4.0	8.4	7.0
SeTCHpr	12	p	5.0	5.4	-.6	4.5	4.3
		r	11.4	7.6	-1.4	6.1	6.3
		pr	11.3	6.6	-1.0	5.4	5.4
SeTCHpr	6	p	19.4	9.4	.1	9.1	9.1
		r	11.4	12.7	-1.0	11.5	12.1
		pr	13.0	11.1	-.5	10.4	10.7
SeTCHpr	4	p	6.2	2.5	1.1	3.2	4.5
		r	-5.1	10.4	.0	10.2	10.1
		pr	3.9	6.6	.5	7.0	7.5
SeCCSp	12	p	23.0	-.1	2.9	2.9	5.6
		r	9.8	-1.3	2.8	1.4	2.4
		pr	11.9	-.7	2.9	2.1	3.9
SeCCSp	6	p	27.4	-4.4	2.7	-1.3	1.6
		r	38.0	-2.3	3.6	1.5	4.0
		pr	31.4	-3.3	3.1	.2	2.9
SeCCSp	4	p	61.6	4.4	6.3	10.7	17.5
		r	47.1	3.8	5.5	9.4	13.8
		pr	60.6	4.0	5.9	10.0	15.5
SeCCSr	12	p	26.1	1.4	3.0	4.5	7.0
		r	14.5	-.2	2.4	2.1	3.5
		pr	19.8	.6	2.7	3.2	5.1
SeCCSr	6	p	57.1	3.1	4.8	7.6	12.8
		r	48.2	3.3	4.0	7.3	10.5
		pr	56.9	3.2	4.4	7.4	11.6
SeCCSr	4	p	56.1	1.8	4.8	6.4	11.8
		r	77.8	5.5	5.2	10.8	16.9
		pr	80.7	3.7	5.0	8.8	14.5
SeCCSpr	12	p	24.8	-.7	3.4	2.7	5.6
		r	9.8	-2.7	3.1	.2	1.7
		pr	15.0	-1.8	3.2	1.3	3.5

Table 99 continued 3/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
SeCCSpr	6	p	27.4	−4.4	2.7	−1.3	1.6
		r	38.0	−2.3	3.6	1.5	4.0
		pr	31.4	−3.3	3.1	.2	2.9
SeCCSpr	4	p	61.6	4.4	6.3	10.7	17.5
		r	47.1	3.8	5.5	9.4	13.8
		pr	60.6	4.0	5.9	10.0	15.5
SeTSHp	12	p	14.4	2.9	1.6	4.2	6.1
		r	5.7	3.3	.1	3.3	3.1
		pr	13.1	3.1	.8	3.7	4.5
SeTSHp	6	p	40.0	3.9	4.8	8.5	13.5
		r	33.9	4.6	3.4	8.1	10.2
		pr	43.5	4.3	4.1	8.3	11.7
SeTSHp	4	p	64.2	4.5	6.7	11.3	18.5
		r	57.9	7.1	5.1	12.5	16.0
		pr	80.7	5.8	5.9	11.9	17.2
SeTSHr	12	p	23.5	6.0	1.8	7.7	9.5
		r	14.9	7.5	.6	8.0	9.1
		pr	19.2	6.8	1.2	7.9	9.3
SeTSHr	6	p	28.4	10.3	.3	10.3	10.9
		r	34.9	11.7	−.8	10.7	13.1
		pr	36.3	11.1	−.3	10.5	12.1
SeTSHr	4	p	56.3	11.3	3.1	14.2	17.6
		r	59.5	12.8	1.1	13.7	17.3
		pr	71.6	12.1	2.0	13.9	17.4
SeTSHpr	12	p	24.8	4.2	2.4	6.4	8.6
		r	25.2	6.4	1.3	7.6	9.1
		pr	26.5	5.4	1.8	7.1	8.9
SeTSHpr	6	p	28.4	5.2	3.5	8.7	12.6
		r	12.3	6.8	1.9	8.6	9.7
		pr	26.5	6.0	2.7	8.6	11.0
SeTSHpr	4	p	46.7	6.5	4.9	11.5	17.1
		r	25.6	10.3	2.8	13.1	15.2
		pr	55.1	8.5	3.8	12.4	16.1
SeNMGYp	12	p	7.2	−.8	3.2	2.1	5.1
		r	13.9	2.8	2.5	5.3	7.1
		pr	8.2	1.1	2.8	3.8	6.2
SeNMGYp	6	p	40.0	3.9	4.8	8.5	13.5
		r	33.9	4.6	3.4	8.1	10.2
		pr	43.5	4.3	4.1	8.3	11.7

Table 99 continued 4/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
SeNMGYp	4	p	61.6	1.8	6.9	8.6	15.2
		r	56.4	2.9	4.7	7.6	11.2
		pr	62.5	2.4	5.7	8.0	13.1
SeNMGYr	12	p	19.9	4.9	1.1	5.8	7.0
		r	24.2	7.8	.2	7.9	9.0
		pr	22.2	6.4	.7	6.9	8.1
SeNMGYr	6	p	57.2	9.4	3.6	12.8	16.6
		r	35.9	8.2	1.2	9.2	10.8
		pr	50.8	8.8	2.4	10.8	13.5
SeNMGYr	4	p	56.3	11.3	3.1	14.2	17.6
		r	59.5	12.8	1.1	13.7	17.3
		pr	71.6	12.1	2.0	13.9	17.4
SeNMGYpr	12	p	24.8	4.2	2.4	6.4	8.6
		r	25.2	6.4	1.3	7.6	9.1
		pr	26.5	5.4	1.8	7.1	8.9
SeNMGYpr	6	p	40.9	3.5	4.9	8.3	13.2
		r	28.8	6.1	3.1	9.1	11.0
		pr	38.7	4.8	4.0	8.7	12.0
SeNMGYpr	4	p	44.1	3.8	5.0	8.8	13.8
		r	24.1	6.1	2.4	8.3	10.5
		pr	36.9	5.1	3.6	8.5	12.0
SeSEL7p	12	p	18.5	3.0	1.1	3.8	4.8
		r	26.2	5.8	1.2	6.7	8.3
		pr	17.9	4.4	1.1	5.4	6.7
SeSEL7p	6	p	42.9	5.7	1.2	6.7	7.7
		r	43.2	3.2	1.1	4.0	5.7
		pr	34.9	4.4	1.2	5.2	6.6
SeSEL7p	4	p	23.9	-1.4	.7	-.8	-.6
		r	21.2	2.0	.2	2.0	1.9
		pr	14.9	.4	.5	.7	.8
SeSEL7r	12	p	14.0	4.2	.5	4.3	4.5
		r	17.5	8.2	.0	8.0	9.3
		pr	16.1	6.3	.2	6.3	7.0
SeSEL7r	6	p	21.9	3.8	3.8	7.1	10.3
		r	3.1	7.4	2.4	9.9	11.6
		pr	13.0	5.7	3.1	8.6	11.0
SeSEL7r	4	p	-3.1	6.0	.8	6.3	7.1
		r	-.5	8.8	.7	9.5	10.4
		pr	2.1	7.5	.7	8.1	8.9

Table 99 continued 5/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
SeS7p1r	12	p	22.5	3.8	1.8	5.3	6.7
		r	18.1	7.1	1.2	8.1	9.5
		pr	13.6	5.5	1.5	6.8	8.2
SeS7p1r	6	p	33.7	6.1	1.0	6.9	7.4
		r	35.0	11.1	.4	11.5	13.1
		pr	33.7	8.8	.7	9.4	10.4
SeS7p1r	4	p	38.5	3.4	3.5	6.4	9.5
		r	21.1	9.3	2.1	11.4	12.8
		pr	25.8	6.5	2.8	9.1	11.3
SeSEL8p	12	p	28.4	4.3	1.4	5.6	7.6
		r	32.4	4.2	1.1	5.3	6.6
		pr	31.9	4.3	1.2	5.4	7.1
SeSEL8p	6	p	55.4	6.1	2.1	8.1	10.5
		r	63.6	8.5	1.2	9.7	12.5
		pr	72.7	7.4	1.6	9.0	11.6
SeSEL8p	4	p	72.6	13.1	3.1	16.0	19.9
		r	84.1	7.7	2.0	9.6	13.2
		pr	95.3	10.2	2.5	12.5	16.3
SeSEL8r	12	p	15.8	5.0	1.0	5.7	6.4
		r	7.3	7.6	.1	7.5	8.2
		pr	9.4	6.4	.5	6.7	7.4
SeSEL8r	6	p	38.2	10.2	2.8	12.6	15.1
		r	14.5	10.0	1.3	11.3	12.8
		pr	24.0	10.1	2.0	11.9	13.9
SeSEL8r	4	p	50.9	16.3	3.6	19.7	22.7
		r	13.5	10.8	2.0	12.7	14.3
		pr	27.6	13.4	2.8	15.9	18.2
SeS8p1r	12	p	29.3	5.3	2.5	7.6	9.9
		r	25.7	6.4	1.4	7.8	9.3
		pr	27.7	5.9	1.9	7.7	9.6
SeS8p1r	6	p	44.5	3.4	2.0	5.1	6.5
		r	39.1	6.7	.7	7.3	8.3
		pr	37.3	5.1	1.3	6.3	7.5
SeS8p1r	4	p	23.9	-1.4	.7	-.8	-.6
		r	21.2	2.0	.2	2.0	1.9
		pr	14.9	.4	.5	.7	.8
SeSEL10p	12	p	8.6	4.0	-.3	3.5	3.7
		r	19.1	4.2	-1.0	3.1	2.9
		pr	17.3	4.1	-.7	3.3	3.3

Table 99   continued   6/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
SeSEL10p	6	p	19.5	6.1	-.9	5.2	4.9
		r	39.1	4.3	-1.7	2.6	3.0
		pr	32.6	5.2	-1.3	3.8	3.9
SeSEL10p	4	p	29.5	10.8	-1.3	9.4	· 9.6
		r	62.7	5.7	-2.4	3.5	4.6
		pr	58.8	8.1	-1.9	6.2	6.9
SeSEL10r	12	p	13.1	6.3	.2	6.2	6.3
		r	11.9	8.5	.1	8.4	9.5
		pr	13.0	7.5	.1	7.4	8.0
SeSEL10r	6	p	7.6	.9	1.1	2.0	2.7
		r	-4.0	8.1	.4	8.3	8.9
		pr	3.3	4.7	.8	5.4	6.0
SeSEL10r	4	p	34.5	3.7	5.2	8.6	13.5
		r	-.5	6.3	3.5	9.9	11.1
		pr	20.3	5.1	4.3	9.3	12.2
SeS10p1r	12	p	21.6	6.4	1.1	7.2	8.8
		r	23.7	6.0	.2	6.2	6.8
		pr	26.5	6.2	.7	6.7	7.7
SeS10p1r	6	p	37.3	10.1	2.7	12.3	15.1
		r	24.7	9.6	1.2	10.8	11.1
		pr	39.8	9.8	1.9	11.5	12.9
SeS10p1r	4	p	56.1	15.5	3.5	18.5	21.9
		r	31.8	12.5	1.9	14.5	15.2
		pr	58.6	13.9	2.6	16.3	18.3
SeSTp	12	p	9.9	2.0	-.6	1.5	2.0
		r	-4.5	1.5	-.8	.9	.2
		pr	7.0	1.7	-.7	1.2	1.0
SeSTp	6	p	14.8	2.9	.0	2.4	3.8
		r	-15.3	3.6	-1.4	2.3	-.4
		pr	10.6	3.3	-.7	2.3	1.5
SeSTp	4	p	-9.9	-1.1	-2.2	-4.1	-5.0
		r	-18.8	1.7	-3.4	-1.6	-4.2
		pr	-7.1	.4	-2.8	-2.7	-4.6
SeSTr	12	p	-.8	2.9	-.7	2.0	1.9
		r	6.7 ·	6.2	-.8	5.4	5.9
		pr	5.8	4.7	-.7	3.8	4.1
SeSTr	6	p	8.5	3.6	-.7	2.5	2.0
		r	4.1	9.5 ·	-.5	9.0	9.7
		pr	14.2	6.7	-.6	6.0	6.1

Table 99   continued   7/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
SeSTr	4	p	10.3	4.4	-.8	2.7	1.9
		r	8.7	9.3	-1.0	8.1	9.8
		pr	13.0	7.0	-.9	5.6	6.1
SeSTp1r	12	p	13.1	4.1	-.2	3.6	4.4
		r	3.6	4.5	-.4	4.0	3.9
		pr	14.3	4.3	-.3	3.9	4.1
SeSTp1r	6	p	-.5	5.1	-2.0	2.5	1.6
		r	-11.2	7.3	-2.8	4.6	3.2
		pr	-.4	6.3	-2.4	3.7	2.4
SeSTp1r	4	p	10.3	4.4	-.8	2.7	1.9
		r	8.7	9.3	-1.0	8.1	9.8
		pr	13.0	7.0	-.9	5.6	6.1
SeBRIXp	12	p	17.2	-1.5	2.1	.5	2.4
		r	17.5	-.6	2.3	1.6	3.1
		pr	16.8	-1.0	2.2	1.1	2.7
SeBRIXp	6	p	42.8	-.9	1.9	1.5	4.6
		r	36.9	-2.4	3.3	1.0	3.5
		pr	46.0	-1.7	2.6	1.2	4.0
SeBRIXp	4	p	84.6	7.1	5.7	12.7	19.8
		r	54.7	2.7	4.2	6.8	10.4
		pr	84.4	4.8	4.9	9.5	14.8
SeBRIXr	12	p	35.1	4.6	4.5	8.9	13.2
		r	12.9	.0	3.9	3.8	5.5
		pr	32.0	2.2	4.2	6.1	9.1
SeBRIXr	6	p	50.8	4.4	5.4	9.5	14.2
		r	12.4	1.1	4.9	5.8	8.1
		pr	27.6	2.7	5.2	7.5	10.9
SeBRIXr	4	p	50.9	7.5	6.0	13.4	18.2
		r	-5.0	-2.3	4.7	1.9	2.7
		pr	16.7	2.3	5.3	7.2	9.9
SeBRp1r	12	p	35.6	4.0	4.5	8.4	12.6
		r	12.9	2.0	3.6	5.5	7.0
		pr	23.5	3.0	4.0	6.8	9.6
SeBRp1r	6	p	69.7	6.0	5.6	11.4	17.8
		r	44.0	2.2	5.2	7.2	11.7
		pr	64.2	4.0	5.4	9.1	14.5
SeBRp1r	4	p	84.6	7.1	5.7	12.7	19.8
		r	54.7	2.7	4.2	6.8	10.4
		pr	84.4	4.8	4.9	9.5	14.8

Table 99   continued   8/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
SeHARDp	12	p	8.5	2.7	.7	2.9	3.2
		r	-4.0	4.1	-.3	3.7	3.0
		pr	5.7	3.4	.2	3.3	3.1
SeHARDp	6	p	-.4	6.0	-1.2	4.6	3.1
		r	-25.4	2.1	-2.3	-.4	-3.4
		pr	-7.6	3.9	-1.8	1.9	-.4
SeHARDp	4	p	-13.9	5.4	-6.5	-1.4	-6.3
		r	-17.3	4.0	-6.7	-2.8	-7.4
		pr	-3.4	4.7	-6.6	-2.2	-6.9
SeHARDr	12	p	14.5	6.0	.0	5.8	5.9
		r	3.7	3.3	.4	3.5	3.7
		pr	11.8	4.6	.2	4.5	4.7
SeHARDr	6	p	9.5	6.8	-.2	6.2	6.8
		r	-13.2	3.4	-.2	3.3	1.4
		pr	9.4	5.0	-.2	4.6	3.9
SeHARDr	4	p	33.3	9.6	3.8	13.1	16.4
		r	-14.2	4.9	2.8	7.8	6.2
		pr	27.6	7.1	3.3	10.2	11.0
SeHp1r	12	p	14.5	6.0	.0	5.8	5.9
		r	3.7	3.3	.4	3.5	3.7
		pr	11.8	4.6	.2	4.5	4.7
SeHp1r	6	p	-2.2	7.4	-1.7	5.5	4.1
		r	-26.5	4.2	-2.5	1.7	-2.5
		pr	-2.8	5.7	-2.2	3.4	.6
SeHp1r	4	p	-5.8	10.1	-2.4	7.2	5.1
		r	-37.2	1.4	-4.1	-2.8	-8.4
		pr	-12.5	5.5	-3.3	1.7	-2.1
SeVISGp	12	p	30.7	5.2	.9	5.9	7.5
		r	28.3	5.1	.5	5.4	6.5
		pr	31.3	5.1	.7	5.7	7.0
SeVISGp	6	p	48.3	7.6	2.0	9.6	11.7
		r	53.4	5.6	1.2	6.7	8.8
		pr	56.9	6.6	1.6	8.1	10.2
SeVISGp	4	p	43.0	8.5	.6	9.4	10.3
		r	85.7	9.0	1.1	10.0	14.3
		pr	80.7	8.8	.8	9.7	12.4
SeVISGr	12	p	15.8	5.0	1.0	5.7	6.4
		r	7.3	7.6	.1	7.5	8.2
		pr	9.4	6.4	.5	6.7	7.4

Table 99   continued   9/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
SeVISGr	6	p	11.2	2.7	3.1	5.5	7.8
		r	-7.1	8.7	1.3	9.7	10.7
		pr	-6.4	5.8	2.2	7.8	9.4
SeVISGr	4	p	49.3	6.6	5.7	12.0	17.0
		r	-6.6	8.5	3.3	11.7	13.0
		pr	16.7	7.6	4.5	11.9	14.9
SeGp1r	12	p	22.1	4.2	1.7	5.5	6.7
		r	15.5	7.3	.7	7.8	8.9
		pr	15.5	5.8	1.2	6.7	7.9
SeGp1r	6	p	40.0	4.2	3.0	7.1	9.4
		r	35.0	7.8	1.9	9.8	11.0
		pr	34.9	6.1	2.5	8.6	10.3
SeGp1r	4	p	29.4	7.2	.3	7.6	7.6
		r	50.4	10.4	.8	11.2	12.8
		pr	45.8	8.9	.6	9.6	10.4
SeSTVp	12	p	20.4	6.8	3.0	9.5	12.6
		r	10.8	1.6	2.3	3.7	5.3
		pr	21.0	4.1	2.7	6.4	8.7
SeSTVp	6	p	22.2	2.1	4.4	6.1	10.7
		r	23.6	-3.9	3.8	-.3	3.0
		pr	30.2	-1.1	4.1	2.6	6.6
SeSTVp	4	p	11.9	-.4	5.9	5.4	11.1
		r	13.3	-5.1	3.8	-1.4	1.1
		pr	18.7	-2.9	4.8	1.7	5.7
SeSTVr	12	p	15.4	6.1	1.1	7.0	8.2
		r	-1.5	3.7	.5	3.9	4.5
		pr	15.5	4.8	.8	5.3	6.2
SeSTVr	6	p	16.8	3.5	1.4	4.7	6.0
		r	8.2	.8	.9	1.5	3.5
		pr	22.9	2.1	1.1	3.0	4.7
SeSTVr	4	p	3.7	3.7	-1.5	1.8	-.3
		r	-3.5	5.9	-1.2	4.4	4.9
		pr	-5.2	4.8	-1.4	3.2	2.5
SeSTVp1r	12	p	14.5	7.0	1.7	8.4	9.8
		r	9.3	5.0	.9	5.7	7.1
		pr	18.0	5.9	1.3	6.9	8.3
SeSTVp1r	6	p	32.0	7.2	4.0	11.0	15.3
		r	3.1	1.1	2.7	3.8	5.4
		pr	30.2	4.0	3.4	7.1	10.0

Table 99   continued   10/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
SeSTVp1r	4	p	40.1	10.7	2.8	13.2	16.3
		r	24.1	4.9	1.8	6.6	9.3
		pr	40.6	7.6	2.3	9.6	12.6
SeBRVp	12	p	-12.9	.5	-.8	-.7	-1.7
		r	-4.9	.6	-1.5	-1.2	-1.7
		pr	-12.5	.6	-1.2	-1.0	-1.7
SeBRVp	6	p	15.9	10.0	1.7	11.3	12.5
		r	2.2	3.0	.9	3.6	3.7
		pr	4.5	6.3	1.3	7.1	7.8
SeBRVp	4	p	-13.8	5.7	-.3	4.9	4.7
		r	-21.9	-.2	-.4	-.8	-2.7
		pr	-21.6	2.6	-.3	1.8	.7
SeBRVr	12	p	-26.9	-7.5	-1.3	-8.6	-10.4
		r	-23.9	-4.7	-1.3	-5.9	-7.5
		pr	-24.1	-6.0	-1.3	-7.1	-8.8
SeBRVr	6	p	-16.6	-9.8	-2.3	-11.6	-13.9
		r	-23.4	-9.2	-1.2	-9.9	-11.3
		pr	-10.1	-9.5	-1.7	-10.7	-12.5
SeBRVr	4	p	-23.4	-13.4	-4.5	-16.5	-20.9
		r	-28.0	-9.5	-2.8	-11.4	-14.7
		pr	-25.3	-11.4	-3.6	-13.7	-17.6
SeBRVp1r	12	p	-25.0	-4.7	-2.5	-6.9	-9.4
		r	-22.3	-5.3	-2.3	-7.5	-9.7
		pr	-27.7	-5.0	-2.4	-7.3	-9.5
SeBRVp1r	6	p	-21.9	-1.9	-1.9	-3.5	-5.0
		r	-39.8	-7.0	-2.0	-8.9	-12.9
		pr	-40.4	-4.5	-1.9	-6.4	-9.2
SeBRVp1r	4	p	15.8	6.3	4.1	10.0	13.2
		r	-25.0	-2.0	2.6	.3	-.5
		pr	-12.5	1.9	3.3	4.7	5.9
SeHVp	12	p	26.1	7.6	2.8	9.9	12.3
		r	-2.9	2.4	1.7	3.9	4.1
		pr	13.1	4.9	2.2	6.7	8.0
SeHVp	6	p	11.4	4.4	4.3	8.3	11.5
		r	-23.4	-6.2	3.5	-3.0	-2.7
		pr	-5.1	-1.2	3.9	2.2	3.9
SeHVp	4	p	6.5	8.4	2.3	10.5	11.9
		r	-17.3	-2.8	2.6	-.5	-1.5
		pr	-5.1	2.5	2.5	4.5	4.8

Table 99 continued 11/13

Character	Number of families selected	Crop	SEL8	TCH	CCS	TSH	NMGYOT
SeHVr	12	p	-12.1	-1.1	1.0	-.1	.2
		r	-29.5	-1.2	.0	-1.2	-2.6
		pr	-22.8	-1.2	.5	-.7	-1.3
SeHVr	6	p	-30.0	-1.7	1.4	-.9	-.8
		r	-37.7	-3.0	.2	-3.2	-4.8
		pr	-31.9	-2.4	.8	-2.2	-2.9
SeHVr	4	p	-40.8	-5.1	1.4	-4.1	-4.4
		r	-41.8	-.4	.0	-.7	-3.0
		pr	-50.8	-2.6	.7	-2.3	-3.6
SeHVp1r	12	p	8.2	3.6	2.2	5.4	7.4
		r	-11.2	-.5	2.0	1.3	1.7
		pr	-1.5	1.5	2.1	3.2	4.4
SeHVp1r	6	p	-11.1	-.9	4.1	2.7	5.2
		r	-34.7	-5.7	2.5	-3.4	-4.1
		pr	-21.0	-3.4	3.3	-.6	.2
SeHVp1r	4	p	-16.5	3.5	2.8	5.7	7.1
		r	-46.4	-6.3	1.7	-4.9	-7.2
		pr	-21.6	-1.6	2.2	.0	-.6
SeGVp	12	p	-2.1	1.7	.3	2.2	2.8
		r	-4.5	-1.3	-.1	-1.3	-2.2
		pr	.3	.1	.1	.3	.1
SeGVp	6	p	15.9	6.6	3.9	10.0	12.7
		r	5.3	.0	2.2	1.9	3.3
		pr	7.0	3.1	3.0	5.6	7.6
SeGVp	4	p	13.2	11.8	1.7	13.0	13.8
		r	25.7	6.5	.6	6.9	7.5
		pr	13.0	9.0	1.1	9.7	10.4
SeGVr	12	p	.5	-1.2	.8	-.5	.0
		r	1.6	.8	.5	1.3	1.3
		pr	3.9	-.2	.6	.5	.7
SeGVr	6	p	-4.0	2.7	.7	2.6	2.8
		r	25.7	6.9	-.2	6.6	7.9
		pr	11.8	4.9	.2	4.8	5.5
SeGVr	4	p	-12.6	2.1	.2	1.5	1.5
		r	11.8	7.0	-.3	6.6	7.3
		pr	3.9	4.6	.0	4.3	4.6
SeGVp1r	12	p	-12.5	-1.7	-1.4	-3.2	-4.4
		r	-4.0	.7	-1.7	-1.0	-2.5
		pr	-4.6	-.5	-1.6	-2.0	-3.4

Table 99 continued 12/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
SeGVp1r	6	p	17.6	7.0	1.1	7.9	8.7
		r	25.7	10.5	.5	11.1	11.8
		pr	30.0	8.9	.8	9.6	10.3
SeGVp1r	4	p	23.8	9.6	1.9	10.7	12.0
		r	41.0	10.8	.5	11.3	13.0
		pr	36.7	10.2	1.2	11.0	12.5
SeWSp	12	p	-.3	3.3	1.1	4.2	4.5
		r	12.4	4.3	1.0	5.1	6.1
		pr	3.9	3.9	1.1	4.7	5.4
SeWSp	6	p	-18.4	-2.5	1.5	-1.6	-1.3
		r	9.4	2.9	.7	3.2	4.7
		pr	-11.3	.3	1.0	1.0	1.9
SeWSp	4	p	5.0	-1.2	3.2	1.4	3.3
		r	18.1	-.2	2.3	1.9	4.0
		pr	9.4	-.7	2.8	1.7	3.7
SeWSr	12	p	5.0	2.6	.9	3.6	3.7
		r	1.7	2.6	.7	3.2	2.6
		pr	-.3	2.6	.8	3.4	3.1
SeWSr	6	p	6.9	7.0	1.0	7.5	7.6
		r	29.9	7.5	.4	7.5	9.6
		pr	14.3	7.3	.7	7.5	8.6
SeWSr	4	p	25.3	15.1	.7	15.3	15.2
		r	16.6	9.9	-.3	9.1	10.5
		pr	22.2	12.4	.2	11.9	12.7
SeWSpr	12	p	8.2	5.6	1.6	7.0	7.7
		r	10.9	4.4	1.3	5.5	6.3
		pr	5.1	5.0	1.4	6.2	7.0
SeWSpr	6	p	6.9	7.0	1.0	7.5	7.6
		r	29.9	7.5	.4	7.5	9.6
		pr	14.3	7.3	.7	7.5	8.6
SeWSpr	4	p	25.3	15.1	.7	15.3	15.2
		r	16.6	9.9	-.3	9.1	10.5
		pr	22.2	12.4	.2	11.9	12.7

Table 99 continued 13/13

The prefixes B2, S2, B3, S3, and Re are defined as follows:

	D1X rep KLM	D1X rep KL	A5 RANDOM
Single	S3	S2	Re
Bunch	B3	B2	

p = plant crop   r = ratoon crop
pr = (p+r)/2 where p,r are plot values
p1r = (p+r)/2 where p,r are values for each seedling or clone

SEL7, 8, 10 = Number of clones with visual NMG 7+, 8+, 10+
NMG = Visual net merit grade, GYOT = NMGYOT
Visual net merit grade of whole plot, omitting brix = G_B
                                       including brix = GB
ST = stalks   WS = weight per stalk (kg)
GVAR = within-plot variance for NMG
STV = within-plot variance for number of STALKS

Table 100. Comparison of realized gains from family selection in Re, Be, and Se types in trial Te. Gains from selection in each crop are presented, the value of the selected families being estimated in the Ts trial, PR crop. Selection rate = 25% = 6/24

Crop selected` Character	Type	Estimated value in single seedlings (p+r)/2					
		Number selected (SEL8)			NMGYOT		
		P	R	PR	P	R	PR
TCH	Re	36.3	19.1	27.6	11.0	9.0	12.7
	Be	11.8	31.3	13.0	5.7	12.0	10.7
	Se	-1.6	16.7	13.0	1.3	8.3	10.7
CCS	Re	41.1	9.5	33.8	7.2	0.4	3.5
	Be	26.5	22.9	26.5	3.7	0.9	3.7
	Se	31.4	56.9	31.4	2.9	11.6	2.9
TSH	Re	49.6	8.2	50.8	16.0	8.4	17.8
	Be	15.4	13.0	26.4	4.7	10.7	11.5
	Se	43.5	36.3	26.5	11.7	12.1	11.0
NMGYOT	Re	49.6	65.4	50.8	16.0	17.7	18.1
	Be	15.4	58.1	19.1	4.7	11.6	6.1
`	Se	43.5	50.8	38.7	11.7	13.5	12.0
SEL7	Re	65.4	43.4	76.4	13.2	14.2	18.8
	Be	48.4	27.6	54.5	9.1	12.4	11.9
	Se	34.9	13.0	33.7	6.6	11.0	10.4
SEL8	Re	22.8	44.6	26.4	6.4	14.0	14.3
	Be	48.4	38.5	32.6	9.1	15.3	10.6
	Se	72.7	24.0	37.3	11.6	13.9	7.5
SEL10	Re	32.5	16.7	34.9	5.0	10.6	11.0
	Be	48.4	21.6	20.3	10.4	14.0	8.1
	Se	32.6	3.3	39.8	3.9	6.0	12.9
STALKS	Re	11.8	5.7	20.3	7.6	7.4	9.3
	Be	8.1	-19.8	-16.2	0.9	-2.9	-4.2
	Se	10.6	14.2	-0.4	1.5	6.1	2.4
BRIX	Re	38.7	60.6	36.3	7.8	16.9	12.3
	Be	13.2	38.7	38.7	-3.5	12.3	12.3
	Se	46.0	27.6	64.2	4.0	10.9	14.5
Visual NMG	Re	65.4	28.8	41.0	13.2	14.3	14.7
	Be	17.9	30.1	26.4	1.7	13.7	10.5
	Se	56.9	-6.4	34.9	10.2	9.4	10.3
KG/STALK	Re	3.3	22.8	17.9	8.0	12.2	13.8
	Be	3.3	37.3	33.7	9.7	11.6	12.1
	Se	-11.3	14.3	14.3	1.9	8.6	8.6
Mean (%, from arcsin√%)		27.3	22.7	27.0	6.1	9.5	9.5
Significance (paired t-test)						R > P	
						PR >> P	

` For number selected, PR refers to selection based on the mean of each clone in the Te trial.

Table 101. Effect of selection rate on mean realized gains from family selection in Re, Be, and Se types in trial Te. The value of the selected families was estimated in the Ts trial, PR crop.

Crop selected Selection rate	Type	Estimated value in single seedlings, PR crop					
		Number selected (SEL8)			NMGYOT		
		P	R	PR	P	R	PR
50%	Re	12.7	25.5	22.7	4.4 << 9.6		8.2
	Be	9.9 < 17.5		11.7	2.3 << 5.6		4.3
	Se	14.7	13.0	18.0	4.3 < 6.9		7.2
		Re> Be				Re> Be	Re> Be
		Re> Se				Re>>Se	Re> Se
							Se> Be
25%	Re	36.2	27.5	37.4	9.8	10.6	12.9
	Be	21.4	22.8	20.9	3.8	8.2	6.9
	Se	25.0	18.2	27.1	5.4 << 10.0		8.9
		Re> Be			Re> Be		Re> Be
					Re>>Se		Re>>Se
17%	Re	39.3	40.1	56.9	11.5	11.0	15.4
	Be	20.3	22.4	33.6	2.7 < 11.0		7.2
	Se	40.9	25.1	36.6	6.1 < 12.3		10.7
				Re> Se	Re> Be		Re> Be
Selection rates in	Re	25>>50 17> 50	17> 25	25>>50 17>>50 17>>25	25>>50 17>>50		25>>50 17>>50 17> 25
Selection rates in	Be	25> 50		17> 50 17> 25		25> 50 17>>50	25> 50
Selection rates in	Se			17> 50		25>>50 17>>50 17> 25	

Significant differences involving more than one class (e.g. Be,17%,R > Se,50%,R) are not included in the table.

Mean values for combinations of selection rate, type and crop are were computed using the arcsin√% transformation, then reconverted to per cent. Each mean is based on 11 observations (11 characters).

Table 102. Effect of crop selected on mean realized gains from family selection in Re, Be, and Se types in trial Te. The value of the selected families was estimated in the Ts trial, PR crop.

Crop selected Type selected	Estimated value in single seedlings (p+r)/2					
	Number selected (SEL8)			NMGYOT		
	P	R	PR	P	R	PR
Re	28.4	30.9	38.6	8.3	10.4	12.0
Be	16.9	20.9	22.3	2.9	8.1	6.1
Se	26.2	18.5	26.9	5.2	9.6	8.9
Significance						
between types	Re > Be Re > Se	Re > Be Re >> Se	Re >> Be Re >> Se	Re >> Be Re >> Se		Re >> Se
between crops in						
Re	PR >> P			PR >> P		
Be				R >> P, PR PR > P		
Se				R,PR >> P		

Significant differences involving more than one class (e.g. Re plant vs Se ratoon) are not included in the table.

Mean values for combinations of selection rate, type and crop were computed using the arcsin√% transformation, then reconverted to per cent. Each mean is based on 33 observations (11 characters * 3 selection rates).

Table 103. Mean` realized gains from family selection in trial Te in Re, Be, and Se types. The value of the selected families was estimated by performance in the PR crop, trial Ts.

Table 103a. Evaluation based on three replications (KLM) in the Ts trial.

	Estimated value in Ss seedlings, PR crop					
	Number selected (SEL8)			NMGYOT		
Selection rate	50%	25%	17%	50%	25%	17%
Type selected						
Re	18.6 <<	33.6 <<	45.4	7.2 <<	11.1	12.6
Be	13.7 <<	21.7	25.3	4.0 <<	6.2	6.5
Se	15.2 <	23.3 <	34.0	6.1 <<	8.0	9.5

Significance between types	Re>>Be Re> Se	Re>>Be	Re>>Be Re> Se Se>>Be	Re>>Be Re>>Se	Re>>Be

| For Re , Se | 50<<17 | | 50<<17 | |
| Be | 50<<17 | | 50< 17 | |

Table 103b. Evaluation based on two replications (KL) in the seedling trial.

	Estimated value in single seedlings (p+r)/2					
	Number selected (SEL8)			NMGYOT		
Selection rate	50%	25%	17%	50%	25%	17%
Type selected						
Re	18.6 <<	31.5	40.3	6.6 <<	10.1 <	12.0
Be	14.3	18.9	18.6	3.4 <	5.3	5.6
Se	15.8 <<	25.2 <	36.8	5.5 <	7.1	8.3

Significance between types	Re>>Be	Re>>Be Se> Be	Re>>Be Se>>Be	Re>>Be Re> Se	Re>>Be

For Re	50<<17		50<<17	
Be			50< 17	
Se	50<<17			

` Mean values were computed using the arcsin√% transformation, then reconverted to per cent. Each mean is based on 33 observations (11 characters * p, r and pr crops).

Significant, > P ≤ .05, >> P ≤ .01
Significant differences involving more than one class (e.g. Re P vs Se R) are not included in the table.

Table 104. Theoretical gains from selection in trial Ts. Selection rate = 25%

Character	Crop	Type	General mean	F	Differential Actual	%	GCV	h²	GAIN% (Realized%)
Visual NMG	P	Ss	5.40204	11.04	1.1518	21.32	16.67	.9094	19.39
Visual NMG	R	Ss	5.18556	9.04	.8617	16.62	12.85	.8894	14.78
SELST	P	Bs	5.43056	2.45	3.0087	55.40	34.93	.5916	32.77 (24.1)
SEL8	P	Ss	6.19444	5.42	4.7393	76.51	56.63	.8154	62.38 (18.0)
SEL8	R	Ss	5.44444	5.72	3.8760	71.19	53.01	.8252	58.75 (30.4)
TCH	P	Bs	59.32312	5.08	16.8848	28.46	20.91	.8030	22.86 (5.2)
TCH	P	Ss	64.37624	6.95	12.8279	19.93	15.11	.8562	17.06 (11.2)
TCH	R	Bs	72.38718	3.31	18.4042	25.42	17.40	.6974	17.73 (6.1)
TCH	R	Ss	71.24220	5.22	11.1133	15.60	11.50	.8083	12.61 (9.3)
CCS	P	Bs	14.26922	2.42	1.0458	7.33	4.60	.5870	4.30 (2.0)
CCS	P	Ss	13.59787	5.48	1.2184	8.96	6.64	.8175	7.33 (3.4)
CCS	R	Bs	14.95819	1.95	.9465	6.33	3.62	.4861	3.08 (1.8)
CCS	R	Ss	14.62446	10.61	1.1111	7.60	5.93	.9058	6.88 (1.9)
TSH	P	Bs	8.48379	6.31	2.6375	31.09	23.38	.8415	26.16 (8.2)
TSH	P	Ss	8.78401	9.13	2.0899	23.79	18.40	.8904	21.19 (10.0)
TSH	R	Bs	10.90728	3.41	3.1210	28.61	19.71	.7065	20.22 (7.6)
TSH	R	Ss	10.42396	6.35	1.8322	17.58	13.22	.8424	14.81 (12.2)
NMGYOT	P	Bs	5.89900	6.51	2.0876	35.39	26.69	.8464	29.95 (14.6)
NMGYOT	P	Ss	5.85529	9.70	1.7577	30.02	23.30	.8970	26.93 (12.4)
NMGYOT	R	Bs	7.26809	3.37	2.3927	32.92	22.62	.7030	23.14 (10.6)
NMGYOT	R	Ss	6.71406	6.99	1.4801	22.05	16.73	.8570	18.89 (12.9)
STALKS	P	Bs	52.18056	4.98	8.0943	15.51	11.37	.7993	12.40
STALKS	P	Ss	6.17543	19.24	.9512	15.40	12.29	.9480	14.60
STALKS	R	Bs	40.87500	4.81	8.4403	20.65	15.06	.7920	16.35
STALKS	R	Ss	7.05250	9.49	1.1683	16.57	12.84	.8946	14.82
KG/STALK	P	Bs	.59361	2.59	.1295	21.82	14.02	.6146	13.41
KG/STALK	P	Ss	.93884	4.87	.1399	14.90	10.89	.7946	11.84
KG/STALK	R	Bs	.93119	3.00	.1999	21.47	14.37	.6669	14.32
KG/STALK	R	Ss	.95114	4.48	.1089	11.45	8.27	.7770	8.89
BRIX	P	Bs	21.62639	2.42	.9297	4.30	2.70	.5869	2.52
BRIX	P	Ss	21.02954	5.48	1.0832	5.15	3.82	.8175	4.21
BRIX	R	Bs	22.23889	1.95	.8415	3.78	2.16	.4861	1.84
BRIX	R	Ss	21.94219	10.61	.9878	4.50	3.51	.9058	4.08

Table 104   continued   (2/2)

Character	Crop	Type	General mean	F	Differential Actual	%	GCV	h²	GAIN% (Realized%)
NMGplot_BR	P	Bs	6.61806	2.14	1.2670	19.14	11.44	.5317	10.18
NMGplot_BR	P	Ss	7.51389	9.92	2.0596	27.41	21.31	.8992	24.65
NMGplot_BR	R	Bs	7.78472	2.14	1.3940	17.91	10.72	.5333	9.55
NMGplot_BR	R	Ss	7.71111	3.92	1.3813	17.91	12.67	.7446	13.34
NMGplot+BR	P	Bs	6.00694	3.09	1.5139	25.20	16.99	.6761	17.04
NMGplot+BR	P	Ss	6.60278	10.35	2.1979	33.29	25.93	.9034	30.07
NMGplot+BR	R	Bs	6.78611	1.98	1.4036	20.68	11.93	.4955	10.25
NMGplot+BR	R	Ss	6.60417	6.21	1.5042	22.78	17.10	.8390	19.11

Character	Crop	Type	EMS~	F	Differential	GCV	h²	GAIN%
Mean (n = 19)		Bs	4.055	3.36	20.8%	13.8	.674	13.8
		Ss	1.946	7.92	19.3	14.4	.862	16.3
			Bs>>Ss	Ss>>Bs	ns	ns	Ss>>Bs	ns

Realized gains are presented above for 9 comparisons of bunch and single seedlings. Significant differences for this group (n = 9) are the same as those presented for n = 19. Bs and Ss did not differ significantly for realized gains.

~ Means were computed for error mean squares (EMS) instead of general means. For number of stalks, the EMS for single was multiplied by the square of the ratio of the general means. Transformations were used for all items except F, as follows:-
LOGe(EMS+1.0)
$Z = (LOGe(1+X) - LOGe(1-X))/2$ for h²
Arcsin √% for Differential, GCV, and GAIN%
Means were transformed back to the original units for presentation in the table.

` Realized gains from selection, as %GM, are shown in () for some characters. The gains were evaluated by the PR crop of the Re type in the Te trial.
Selection was based on all three replicates of the Ts trial.
Differential = Selection differential in actual units of measurement = $i\sigma_f$
i   = Selection differential in standard units of measurement = 1.22
σ_f = the standard deviation of observed family means = √(families/error MS)
h²   = broad sense heritability on a 3-replicate basis
Gain%   = $i\sigma_f * h^2$
GCV   = Genotypic coefficient of variation

Table 105. Theoretical gains from selection in trial Te. Selection rate = 25%

Character	Crop	Type	General mean	F	Differential Actual	%	GCV	h²	GAIN%	(Real-ized%)
SEL8	P	Re	2.54167	1.93	1.4027	55.19	31.39	.4815	26.57	(22.8)
SEL8	P	Be	3.11111	2.42	1.9693	63.30	39.77	.5875	37.19	(48.4)
SEL8	P	Se	3.19444	1.30	1.2515	39.18	15.44	.2313	9.06	(72.7)
SEL8	R	Re	2.30556	2.51	1.4829	64.32	40.91	.6020	38.72	(44.6)
SEL8	R	Be	3.05556	2.26	1.5849	51.87	31.73	.5571	28.90	(38.5)
SEL8	R	Se	2.83333	2.13	1.5590	55.02	32.85	.5307	29.20	(24.0)
SEL8	PR	Re	1.79167	1.81	1.1428	63.78	34.94	.4467	28.49	(26.4)
SEL8	PR	Be	2.36111	2.61	1.4486	61.35	39.51	.6172	37.87	(32.6)
SEL8	PR	Se	2.31944	2.36	1.3433	57.92	36.05	.5768	33.40	(37.3)
TCH	P	Re	66.02329	2.36	9.4295	14.28	8.89	.5764	8.23	(10.9)
TCH	P	Be	73.82091	3.76	12.0412	16.31	11.46	.7341	11.97	(4.8)
TCH	P	Se	69.35999	2.20	8.5634	12.35	7.48	.5456	6.74	(2.0)
TCH	R	Re	74.28323	2.76	12.9224	17.40	11.39	.6381	11.10	(8.9)
TCH	R	Be	83.98996	2.21	13.9102	16.56	10.04	.5466	9.05	(10.9)
TCH	R	Se	78.71157	3.49	13.6239	17.31	11.99	.7137	12.35	(10.3)
TCH	PR	Re	70.15326	2.88	10.2521	14.61	9.68	.6525	9.54	(12.3)
TCH	PR	Be	78.90543	3.03	11.5672	14.66	9.84	.6703	9.83	(11.1)
TCH	PR	Se	74.03577	3.25	10.0831	13.62	9.29	.6927	9.43	(11.1)
CCS	P	Re	14.75361	2.96	.8074	5.47	3.65	.6619	3.62	(2.7)
CCS	P	Be	14.78569	4.15	.8984	6.08	4.34	.7592	4.61	(4.1)
CCS	P	Se	15.12528	4.20	.6888	4.55	3.26	.7619	3.47	(3.1)
CCS	R	Re	13.92375	1.07	.5984	4.30	.91	.0671	.29	(2.2)
CCS	R	Be	13.95042	2.59	.8867	6.36	4.08	.6146	3.91	(1.6)
CCS	R	Se	14.40319	3.24	.8010	5.56	3.79	.6910	3.84	(4.4)
CCS	PR	Re	14.33868	2.17	.6768	4.72	2.84	.5397	2.55	(1.0)
CCS	PR	Be	14.36806	4.84	.8467	5.89	4.30	.7932	4.67	(4.1)
CCS	PR	Se	14.76424	4.47	.7162	4.85	3.50	.7763	3.77	(3.1)
TSH	P	Re	9.74872	2.85	1.6136	16.55	10.93	.6495	10.75	(13.3)
TSH	P	Be	10.92699	3.41	1.9638	17.97	12.38	.7065	12.70	(3.9)
TSH	P	Se	10.48303	2.34	1.3308	12.69	7.88	.5733	7.28	(8.3)
TSH	R	Re	10.33250	2.83	1.8384	17.79	11.72	.6461	11.50	(7.5)
TSH	R	Be	11.67585	2.64	1.8696	16.01	10.35	.6216	9.95	(10.4)
TSH	R	Se	11.32246	4.12	2.0104	17.76	12.66	.7572	13.45	(10.5)
TSH	PR	Re	10.04062	3.40	1.5692	15.63	10.76	.7058	11.03	(14.4)
TSH	PR	Be	11.30143	3.62	1.7272	15.28	10.66	.7235	11.06	(10.1)
TSH	PR	Se	10.90274	3.74	1.5135	13.88	9.74	.7324	10.17	(8.6)
NMGYOT	P	Re	7.49671	3.11	1.4294	19.07	12.87	.6787	12.94	(16.0)
NMGYOT	P	Be	8.46167	3.45	1.7052	20.15	13.92	.7103	14.31	(4.7)
NMGYOT	P	Se	8.19075	2.45	1.1161	13.63	8.60	.5923	8.07	(11.7)

Table 105   continued   2/3

Character	Crop	Type	General mean	F	Differential Actual	%	GCV	h²	GAIN%	(Real-ized%)
NMGYOT	R	Re	6.16513	2.14	1.1956	19.39	11.60	.5321	10.32	(17.7)
NMGYOT	R	Be	7.02087	3.03	1.4127	20.12	13.50	.6696	13.47	(11.6)
NMGYOT	R	Se	6.89812	3.00	1.3698	19.86	13.29	.6667	13.24	(13.5)
NMGYOT	PR	Re	6.83092	3.27	1.1960	17.51	11.95	.6938	12.15	(18.1)
NMGYOT	PR	Be	7.74127	4.02	1.4011	18.10	12.86	.7510	13.59	(6.1)
NMGYOT	PR	Se	7.54444	3.28	1.1156	14.79	10.10	.6949	10.28	(12.0)
Visual NMG	P	Re	6.24228	2.68	.9648	15.46	10.03	.6272	9.69	
Visual NMG	P	Be	6.86574	3.06	1.1280	16.43	11.05	.6730	11.06	
Visual NMG	P	Se	6.76057	2.97	.8582	12.69	8.47	.6634	8.42	
Visual NMG	R	Re	5.96063	3.96	1.2390	20.79	14.73	.7475	15.54	
Visual NMG	R	Be	6.56269	4.74	1.1508	17.53	12.77	.7892	13.84	
Visual NMG	R	Se	6.44020	4.85	1.3077	20.31	14.83	.7939	16.12	
Visual NMG	PR	Re	6.10950	4.04	.9344	15.29	10.87	.7524	11.51	
Visual NMG	PR	Be	6.71923	4.58	.9149	13.62	9.87	.7817	10.64	
Visual NMG	PR	Se	6.60231	6.28	.9495	14.38	10.81	.8408	12.09	
STALKS	P	Re	17.62461	1.54	2.4176	13.72	6.67	.3516	4.82	
STALKS	P	Be	17.19618	3.44	2.4898	14.48	9.99	.7092	10.27	
STALKS	P	Se	17.65895	2.41	2.0843	11.80	7.40	.5847	6.90	
STALKS	R	Re	23.72266	4.30	4.1071	17.31	12.43	.7674	13.29	
STALKS	R	Be	23.53260	7.10	4.0653	17.28	13.13	.8592	14.84	
STALKS	R	Se	24.38561	9.80	4.2975	17.62	13.69	.8979	15.82	
STALKS	PR	Re	20.68918	2.93	2.9803	14.40	9.58	.6586	9.49	
STALKS	PR	Be	20.38021	5.27	2.9774	14.61	10.78	.8101	11.83	
STALKS	PR	Se	21.02228	6.43	2.8821	13.71	10.33	.8446	11.58	
BRIX	P	Re	23.68005	2.05	.9116	3.85	2.26	.5113	1.97	
BRIX	P	Be	23.62091	1.98	.8396	3.55	2.05	.4957	1.76	
BRIX	P	Se	24.12022	2.10	.7861	3.26	1.93	.5231	1.70	
BRIX	R	Re	20.01733	2.61	.8371	4.18	2.69	.6166	2.58	
BRIX	R	Be	19.74919	6.07	1.0290	5.21	3.90	.8352	4.35	
BRIX	R	Se	20.29290	5.00	.9764	4.81	3.53	.8000	3.85	
BRIX	PR	Re	21.85476	1.89	.6848	3.13	1.76	.4706	1.47	
BRIX	PR	Be	21.68572	3.16	.7516	3.47	2.35	.6836	2.37	
BRIX	PR	Se	22.20521	3.54	.7797	3.51	2.44	.7176	2.52	
HARDNESS	P	Re	5.03974	3.36	.5025	9.97	6.85	.7020	7.00	
HARDNESS	P	Be	5.24248	3.62	.5901	11.26	7.85	.7241	8.15	
HARDNESS	P	Se	5.22290	3.60	.5258	10.07	7.01	.7220	7.27	
HARDNESS	R	Re	5.09397	2.82	.4891	9.60	6.32	.6453	6.20	
HARDNESS	R	Be	5.08333	5.02	.5871	11.55	8.47	.8010	9.25	
HARDNESS	R	Se	5.19078	3.89	.5234	10.08	7.12	.7428	7.49	
HARDNESS	PR	Re	5.06827	4.19	.4617	9.11	6.52	.7615	6.94	
HARDNESS	PR	Be	5.16358	5.10	.5496	10.64	7.82	.8040	8.56	
HARDNESS	PR	Se	5.20587	4.61	.4891	9.40	6.81	.7830	7.36	

Table 105   continued   3/3

Character	Crop	Type	General mean	F	Differential Actual	%	GCV	h²	GAIN% (Realized%)
FIBRE	P	Re	13.42125	3.44	1.0487	7.81	5.39	.7090	5.54
FIBRE	P	Be	13.40611	3.33	1.1915	8.89	6.09	.6999	6.22
FIBRE	P	Se	13.53819	2.89	.9714	7.18	4.76	.6541	4.69
FIBRE	R	Re	14.17306	3.32	1.1700	8.26	5.66	.6989	5.77
FIBRE	R	Be	14.13819	4.42	1.2709	8.99	6.48	.7737	6.95
FIBRE	R	Se	14.31792	3.63	1.2030	8.40	5.86	.7247	6.09
FIBRE	PR	Re	13.79715	4.66	1.0612	7.69	5.59	.7856	6.04
FIBRE	PR	Be	13.77215	5.29	1.2025	8.73	6.45	.8109	7.08
FIBRE	PR	Se	13.92806	4.12	1.0102	7.25	5.17	.7572	5.49

Character	Crop	Type	EMS~	F	Differential	GCV	h²	GAIN%
Mean (n = 30)		Re	2.1415	2.86	15.2%	9.4	.628	8.9
		Be	2.1043	3.81	15.6	10.5	.722	10.6
		Se	1.7754	3.72	13.8	9.0	.705	8.9
		Re>>Se	Be>>Re	Re>>Se	Be>Re	Be>>Re	Be>>Re	
		Be>>Se	Se>>Re	Be>>Se	Be>Se	Se>>Re	Be >Se	
Mean (n = 15)		Re	3.7068		21.1	12.5	.585	11.5 (12.9)
		Be	4.1841		21.4	13.8	.677	13.6 (11.3)
		Se	3.3579		18.3	11.2	.652	10.6 (13.1)
		Re >Se		Re>Se	ns	Be>Re	ns	ns
		Be>>Se		Be>Se				
		Be >Re						

~ Means were computed for error mean squares (EMS) instead of general means.
Transformations were used for all items except F, as follows:-
   LOGe(EMS+1.0)
   $Z = (LOGe(1+X) - LOGe(1-X))/2$ for h²
   Arcsin √% for Differential, GCV, and GAIN%
Means were transformed back to the original units for presentation in the table.
The second group (n = 15) has realized gains from selection.

` Realized gains from selection, as %GM, are shown in () for some characters. The gains were evaluated by PR crops of Ss seedlings.

Differential	= Selection differential in actual units of measurement = $i\sigma_f$
i	= Selection differential in standard units of measurement = 1.22
σ_f	= the standard deviation of observed family means = √(families/error MS)
h²	= broad sense heritability on a 3-replicate basis
Gain%	= $i\sigma_f * h^2$
GCV	= Genotypic coefficient of variation

Table 106. Phenotypic correlations between various statistics vs theoretical or realized gains from selection in trials Ts and Te.

Item	Seedling trial Theoretical		Realized		Evaluation trial Theoretical			Realized		
	Bs	Ss	Bs	Ss	Re	Be	Se	Re	Be	Se
(a) 5 Characters,	n = 9				n = 15					
Error mean square	0.258	0.184	0.005	0.329	0.013	-0.043	0.065	-0.009	0.022	-0.083
Variance ratio (F)	0.594	-0.204	0.249	-0.341						
Heritability	0.655	-0.200	0.272	-0.294	0.242	-0.496	-0.301	0.189	-0.620	-0.761
Selection differential	0.960	0.997	0.946	0.771	0.956	0.992	0.914	0.887	0.934	0.776
Genotypic CV	0.992	1.000	0.910	0.791	0.992	0.998	0.980	0.922	0.918	0.649
Theoretical (T), Random					1.000	0.917	0.838	0.933	0.875	0.745
Bunch	1.000	0.763	0.868	0.959	0.917	1.000	0.754	0.855	0.899	0.880
Single	0.763	1.000	0.943	0.788	0.838	0.754	1.000	0.808	0.713	0.506
Realized (R), Random					0.933	0.855	0.808	1.000	0.757	0.638
Bunch	0.868	0.943	1.000	0.885	0.875	0.899	0.713	0.757	1.000	0.901
Single	0.959	0.788	0.885	1.000	0.745	0.880	0.506	0.638	0.901	1.000

(b) All characters, n = 19

Item	Bs	Ss
Error mean square	0.376	0.266
Variance ratio (F)	0.632	0.008
Heritability	0.673	0.045
Selection differential	0.964	0.994
Genotypic CV	0.993	0.999
Theoretical (T), Bs		0.759

n	df	Correlation significantly different from zero P ≤ 0.05	P ≤ 0.01
9	7	0.666	0.798
15	13	0.514	0.641
19	17	0.456	0.575

Table 107. Variance among families of the Re, Be and Se types in trial Te compared with that of Ss seedlings. Phenotypic variance is estimated by the range (best six - worst 6 families), and the genotypic variance is computed from analysis of variance. Character = NMGYOT

| Variance | SsP seedlings | Evaluation trial type, PR crop | | |
		Re	Be	Se
Phenotypic				
Effective (range)ˋ	2.99	1.69	0.26	1.04
Actual (range)ˋ	3.51	2.47	2.85	2.29
Genotypic variance (G^2)	1.8618	0.6667	0.9905	0.5810
General mean (GM)	5.8553	6.8309	7.7413	7.5444
GCV = (100 x G)/GM	23.3	12.0	12.9	10.1

ˋ For actual phenotypic variance among families, the range between group means (Best 6 - Worst 6) was measured in the trial and type in which the families were allotted to the groups. For example, the range of 2.85 in the Be type is the difference between the best 6 and worst 6 families in that type.

For effective phenotypic variance, the groups were defined and measured in different trials, as follows:-

Effective variance for	Groups defined in trial	Range measured in trial
Ss seedlings	Te (Re)	Ts (Ss seedlings)
Te types	Ts (Ss seedlings)	Te (Re, Be,Se)

Table 108. Realized gains from selection of families in the Re group in trial
Te, with evaluation based on performance of Ss seedlings in two replicates (KL)
in trial Ts.

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
ReFIBREp	12	p	-10.3	1.2	-1.2	-.3	-1.1
		r	-12.2	2.0	-1.5	.4	-1.2
		pr	-3.8	1.6	-1.4	.1	-1.2
ReFIBREp	6	p	24.9	9.6	1.8	11.1	13.0
		r	-14.5	5.6	1.2	6.6	5.9
		pr	20.3	7.5	1.5	8.7	9.2
ReFIBREp	4	p	47.5	11.2	2.0	12.7	15.5
		r	-.4	7.2	1.4	8.6	8.6
		pr	49.5	9.1	1.7	10.5	11.8
ReFIBREr	12	p	-4.3	2.6	-1.4	1.0	-.1
		r	-5.6	2.7	-1.5	1.1	.1
		pr	-2.1	2.7	-1.4	1.1	.0
ReFIBREr	6	p	-12.3	8.1	-3.4	4.4	1.7
		r	-30.7	2.3	-3.9	-1.7	-5.2
		pr	-22.7	5.1	-3.6	1.1	-2.0
ReFIBREr	4	p	-6.3	4.6	-2.7	1.8	-.3
		r	-49.1	-.6	-4.2	-4.8	-9.9
		pr	-35.6	1.9	-3.5	-1.8	-5.3
ReFIBRpr	12	p	-12.9	2.8	-2.0	.6	-1.0
		r	-21.1	3.5	-2.4	1.0	-1.2
		pr	-12.4	3.2	-2.2	.8	-1.1
ReFIBRpr	6	p	14.3	8.9	-.1	8.6	9.4
		r	-24.8	2.3	-.8	1.6	-1.2
		pr	11.7	5.4	-.5	4.8	3.8
ReFIBRpr	4	p	27.6	11.3	2.0	12.7	14.7
		r	-18.1	2.0	1.4	3.1	2.3
		pr	21.1	6.4	1.7	7.5	8.2
ReTCHp	12	p	3.7	8.1	-1.2	6.9	5.9
		r	8.4	5.7	-1.2	4.4	3.4
		pr	7.4	6.8	-1.2	5.5	4.6
ReTCHp	6	p	20.9	16.2	.7	17.0	18.5
		r	25.4	6.4	.4	7.0	6.4
		pr	39.2	11.0	.6	11.6	12.1
ReTCHp	4	p	-16.3	15.6	-2.8	12.4	10.2
		r	-9.3	3.2	-2.9	.4	-2.7
		pr	-12.4	9.1	-2.9	5.9	3.4

Table 108   continued   2/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
ReTCHr	12	p	17.6	7.1	.4	7.0	7.2
		r	2.5	8.4	-.1	8.1	8.6
		pr	7.4	7.8	.2	7.6	7.9
ReTCHr	6	p	30.2	7.3	.2	7.0	7.5
		r	.3	9.5	-.7	8.6	7.6
		pr	22.0	8.5	-.3	7.9	7.5
ReTCHr	4	p	25.6	4.9	-.3	4.0	4.0
		r	6.2	12.9	-.7	12.0	11.2
		pr	18.6	9.1	-.5	8.3	7.8
ReTCHpr	12	p	13.6	8.3	.1	8.2	8.4
		r	9.1	6.3	-.4	5.9	5.1
		pr	11.7	7.2	-.2	6.9	6.7
ReTCHpr	6	p	23.6	12.2	-.7	10.8	10.5
		r	22.4	13.3	-.7	12.4	12.6
		pr	25.4	12.7	-.7	11.7	11.6
ReTCHpr	4	p	27.6	18.6	-.5	17.6	17.6
		r	23.9	14.6	-.4	14.1	14.6
		pr	28.9	16.5	-.5	15.7	16.0
ReCCSp	12	p	20.9	1.5	2.0	3.6	5.0
		r	20.2	1.4	1.9	3.3	4.3
		pr	19.4	1.5	2.0	3.4	4.7
ReCCSp	6	p	27.6	2.6	2.5	5.3	7.6
		r	47.5	2.0	3.2	5.4	7.4
		pr	34.0	2.3	2.9	5.3	7.5
ReCCSp	4	p	33.6	2.4	1.8	4.5	6.4
		r	61.5	2.6	2.2	5.2	7.0
		pr	52.1	2.5	2.0	4.9	6.7
ReCCSr	12	p	30.2	2.6	2.7	5.5	7.7
		r	23.9	1.8	2.7	4.5	5.4
		pr	30.6	2.2	2.7	4.9	6.5
ReCCSr	6	p	6.3	-2.5	1.7	-.1	.8
		r	10.6	-2.0	1.7	-.3	-1.5
		pr	11.7	-2.3	1.7	-.2	-.4
ReCCSr	4	p	11.6	-7.6	.1	-6.5	-6.4
		r	37.2	-1.1	.6	-.2	.0
		pr	39.2	-4.2	.4	-3.1	-3.0
ReCCSpr	12	p	20.9	1.5	2.0	3.6	5.0
		r	20.2	1.4	1.9	3.3	4.3
		pr	19.4	1.5	2.0	3.4	4.7

Table 108   continued   3/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
ReCCSpr	6	p	14.3	.4	.4	1.1	1.2
		r	38.6	2.3	.7	3.2	3.5
		pr	25.4	1.4	.6	2.3	2.4
ReCCSpr	4	p	33.6	2.4	1.8	4.5	6.4
		r	61.5	2.6	2.2	5.2	7.0
		pr	52.1	2.5	2.0	4.9	6.7
ReTSHp	12	p	20.9	6.2	1.3	7.4	8.4
		r	26.8	6.0	1.2	7.1	7.7
		pr	28.9	6.1	1.3	7.2	8.0
ReTSHp	6	p	36.9	13.9	4.0	17.7	21.0
		r	37.2	7.2	3.1	10.2	11.3
		pr	40.9	10.4	3.5	13.6	15.8
ReTSHp	4	p	37.6	22.2	3.2	25.4	28.5
		r	57.1	8.1	3.2	11.2	13.7
		pr	62.4	14.8	3.2	17.8	20.7
ReTSHr	12	p	28.9	9.3	1.4	10.7	11.8
		r	15.8	7.1	.9	7.8	7.9
		pr	26.3	8.1	1.1	9.1	9.7
ReTSHr	6	p	30.2	3.8	1.0	4.4	5.2
		r	-4.1	7.9	-.2	7.5	5.9
		pr	8.2	5.9	.4	6.1	5.6
ReTSHr	4	p	57.5	3.5	2.6	5.8	8.5
		r	-2.7	10.1	.6	10.6	9.3
		pr	31.4	7.0	1.6	8.4	8.9
ReTSHpr	12	p	18.3	7.8	.6	8.2	8.6
		r	18.0	7.5	.4	7.7	7.8
		pr	20.3	7.6	.5	7.9	8.2
ReTSHpr	6	p	50.2	11.3	3.2	14.4	17.5
		r	44.5	12.0	2.2	14.3	15.7
		pr	47.8	11.7	2.7	14.3	16.5
ReTSHpr	4	p	77.4	14.3	5.1	19.3	24.7
		r	81.4	14.5	4.2	19.1	22.2
		pr	98.5	14.4	4.6	19.2	23.4
ReNMGYp	12	p	28.3	6.7	2.7	9.3	11.7
		r	40.1	5.1	3.0	8.0	10.2
		pr	38.3	5.8	2.9	8.6	10.9
ReNMGYp	6	p	36.9	13.9	4.0	17.7	21.0
		r	37.2	7.2	3.1	10.2	11.3
		pr	40.9	10.4	3.5	13.6	15.8

Table 108   continued   4/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReNMGYp	4	p	57.5	14.4	5.0	19.3	23.9
		r	63.7	9.2	4.3	13.5	16.0
		pr	70.1	11.7	4.6	16.2	19.7
ReNMGYr	12	p	30.2	6.8	2.0	8.5	10.3
		r	26.8	7.0	1.8	8.6	9.8
		pr	28.0	6.9	1.9	8.5	10.1
ReNMGYr	6	p	64.8	11.1	3.0	13.9	17.3
		r	46.0	11.8	1.8	13.6	15.2
		pr	63.2	11.5	2.4	13.8	16.2
ReNMGYr	4	p	87.4	7.0	6.3	13.5	20.2
		r	48.2	8.8	4.2	13.3	14.7
		pr	93.3	7.9	5.2	13.4	17.3
ReNMGYpr	12	p	29.6	6.0	1.5	7.3	8.7
		r	30.5	6.5	1.5	7.9	8.9
		pr	32.3	6.2	1.5	7.6	8.8
ReNMGYpr	6	p	50.2	12.0	5.0	17.0	21.5
		r	40.1	8.4	4.1	12.6	13.4
		pr	51.2	10.1	4.6	14.6	17.2
ReNMGYpr	4	p	57.5	11.8	4.7	16.2	20.4
		r	70.4	10.3	3.5	13.9	16.6
		pr	62.4	11.0	4.0	15.0	18.4
ReSEL7p	12	p	13.6	4.7	.6	4.9	6.1
		r	32.7	3.3	.7	4.0	5.8
		pr	28.9	4.0	.7	4.4	5.9
ReSEL7p	6	p	35.6	10.7	1.5	11.7	13.4
		r	66.7	9.6	1.6	11.0	14.2
		pr	61.5	10.1	1.5	11.3	13.8
ReSEL7p	4	p	35.6	8.8	2.0	9.9	11.6
		r	52.7	9.6	1.6	11.1	13.6
		pr	46.9	9.2	1.8	10.5	12.7
ReSEL7r	12	p	36.9	9.1	1.5	10.5	11.9
		r	27.6	6.9	1.0	7.7	8.8
		pr	34.9	7.9	1.2	9.0	10.3
ReSEL7r	6	p	60.8	9.0	2.5	11.0	13.8
		r	31.3	8.6	1.5	10.0	11.0
		pr	42.6	8.8	2.0	10.5	12.3
ReSEL7r	4	p	71.5	11.1	4.3	14.9	19.4
		r	59.3	9.8	3.9	13.6	16.1
		pr	67.5	10.4	4.1	14.2	17.6

Table 108 continued 5/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReS7p1r	12	p	34.2	8.5	2.0	10.1	12.2
		r	29.1	5.9	1.5	7.1	8.1
		pr	33.2	7.1	1.7	8.5	10.1
ReS7p1r	6	p	66.1	15.1	4.4	19.4	24.1
		r	68.1	9.6	3.9	13.5	16.8
		pr	82.1	12.2	4.1	16.2	20.2
ReS7p1r	4	p	57.5	17.1	3.5	20.2	23.8
		r	77.0	12.7	2.7	15.4	19.1
		pr	83.0	14.8	3.1	17.6	21.3
ReSEL8p	12	p	-15.6	1.3	-1.6	-.9	-2.3
		r	5.5	5.1	-1.6	3.4	3.5
		pr	-11.5	3.3	-1.6	1.4	.8
ReSEL8p	6	p	2.3	9.4	-.7	8.1	8.0
		r	32.7	5.4	.9	6.1	8.1
		pr	18.6	7.3	.1	7.0	8.1
ReSEL8p	4	p	5.7	12.4	-2.0	9.5	7.9
		r	50.4	8.6	-.6	7.7	9.9
		pr	28.9	10.4	-1.2	8.5	9.0
ReSEL8r	12	p	33.6	8.4	1.9	10.0	11.6
		r	7.7	5.5	1.3	6.6	6.9
		pr	22.0	6.9	1.6	8.2	9.1
ReSEL8r	6	p	60.8	7.9	4.0	11.6	15.5
		r	31.3	5.8	2.9	8.6	9.1
		pr	40.9	6.8	3.5	10.0	12.1
ReSEL8r	4	p	71.5	11.1	4.3	14.9	19.4
		r	59.3	9.8	3.9	13.6	16.1
		pr	67.5	10.4	4.1	14.2	17.6
ReS8p1r	12	p	20.3	7.2	.6	7.4	7.9
		r	19.5	6.3	.8	6.8	7.5
		pr	21.1	6.7	.7	7.1	7.7
ReS8p1r	6	p	30.2	11.5	1.5	12.5	13.7
		r	15.0	11.6	.6	12.1	11.8
		pr	18.6	11.5	1.1	12.3	12.7
ReS8p1r	4	p	27.6	17.1	1.8	18.5	20.1
		r	23.9	10.3	1.6	12.0	11.7
		pr	26.3	13.5	1.7	15.0	15.7
ReSEL10p	12	p	-6.3	.3	-.8	-.9	-1.8
		r	8.4	1.5	-1.2	.1	.1
		pr	-4.6	.9	-1.0	-.4	-.8

Table 108 continued 6/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
ReSEL10p	6	p	22.3	6.8	.1	6.3	7.0
		r	34.2	3.5	-.4	3.1	3.9
		pr	27.1	5.1	-.2	4.6	5.3
ReSEL10p	4	p	51.5	13.9	2.7	15.9	18.6
		r	54.9	8.0	2.3	10.0	12.9
		pr	52.1	10.8	2.5	12.7	15.6
ReSEL10r	12	p	33.6	6.0	1.8	7.7	9.3
		r	25.4	7.6	1.6	9.2	11.1
		pr	32.3	6.8	1.7	8.5	10.3
ReSEL10r	6	p	17.0	7.9	-.4	7.4	7.0
		r	25.4	9.5	.5	9.9	10.7
		pr	15.1	8.7	.1	8.7	9.0
ReSEL10r	4	p	37.6	13.6	.6	13.8	15.0
		r	41.6	13.4	1.8	15.2	17.9
		pr	36.6	13.5	1.2	14.6	16.5
ReS10p1r	12	p	8.3	3.8	.1	3.5	3.4
		r	7.7	5.4	.3	5.4	6.1
		pr	6.5	4.6	.2	4.6	4.8
ReS10p1r	6	p	38.2	5.7	-.1	5.4	5.4
		r	19.5	10.8	-.7	10.0	9.6
		pr	30.6	8.4	-.4	7.9	7.6
ReS10p1r	4	p	47.5	10.8	1.4	11.5	13.0
		r	30.5	15.8	.6	16.4	16.9
		pr	36.6	13.4	1.0	14.1	15.1
ReSTp	12	p	4.3	6.1	-1.3	4.4	3.7
		r	16.5	5.9	-1.3	4.5	4.5
		pr	13.4	6.0	-1.3	4.5	4.1
ReSTp	6	p	3.7	10.7	-1.7	8.2	7.0
		r	7.7	10.0	-1.6	8.0	7.6
		pr	1.4	10.3	-1.7	8.1	7.3
ReSTp	4	p	5.7	6.9	.3	6.6	7.0
		r	-20.4	7.9	-1.0	6.5	5.0
		pr	-7.2	7.4	-.4	6.5	6.0
ReSTr	12	p	7.0	4.3	-1.5	2.7	1.7
		r	6.2	7.3	-1.8	5.5	5.2
		pr	15.1	5.9	-1.7	4.2	3.6
ReSTr	6	p	17.0	4.6	-.7	3.2	2.8
		r	.3	11.9	-.9	10.7	11.0
		pr	13.4	8.4	-.8	7.3	7.2

Table 108   continued   7/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
ReSTr	4	p	15.6	3.8	-1.8	.9	-.4
		r	4.0	11.4	-1.8	9.2	10.0
		pr	10.8	7.8	-1.8	5.4	5.1
ReSTp1r	12	p	5.7	7.8	-1.7	5.8	4.9
		r	11.4	8.4	-1.8	6.6	6.3
		pr	16.8	8.1	-1.7	6.2	5.6
ReSTp1r	6	p	22.3	8.5	-.3	7.5	7.6
		r	4.7	11.4	-.4	10.8	11.0
		pr	25.4	10.0	-.4	9.3	9.4
ReSTp1r	4	p	15.6	3.8	-1.8	.9	-.4
		r	4.0	11.4	-1.8	9.2	10.0
		pr	10.8	7.8	-1.8	5.4	5.1
ReBRIXp	12	p	-1.6	-.9	.7	-.2	.1
		r	18.0	2.4	1.2	3.5	4.5
		pr	6.5	.8	1.0	1.8	2.4
ReBRIXp	6	p	14.3	1.0	.9	1.8	2.4
		r	49.0	8.6	.1	8.6	10.6
		pr	35.7	5.0	.5	5.5	6.7
ReBRIXp	4	p	41.5	4.0	4.2	7.9	11.8
		r	77.0	9.0	2.7	11.8	15.2
		pr	64.9	6.6	3.4	10.0	13.6
ReBRIXr	12	p	42.2	6.9	4.8	11.6	16.0
		r	19.5	2.0	4.0	5.8	7.2
		pr	37.5	4.3	4.4	8.5	11.4
ReBRIXr	6	p	68.8	11.7	6.1	17.9	23.7
		r	44.5	6.3	4.7	11.0	14.2
		pr	75.3	8.9	5.4	14.2	18.7
ReBRIXr	4	p	81.4	9.2	7.6	17.1	24.1
		r	46.0	9.6	5.5	15.4	18.4
		pr	88.1	9.4	6.5	16.2	21.1
ReBRIXp1r	12	p	28.3	5.0	3.2	8.1	10.8
		r	40.1	4.1	3.0	7.0	8.9
		pr	39.2	4.5	3.1	7.5	9.8
ReBRIXp1r	6	p	26.3	5.2	4.5	9.5	13.0
		r	37.2	4.8	3.1	7.8	8.7
		pr	28.9	5.0	3.8	8.6	10.7
ReBRIXp1r	4	p	41.5	4.0	4.2	7.9	11.8
		r	77.0	9.0	2.7	11.8	15.2
		pr	64.9	6.6	3.4	10.0	13.6

Table 108 continued 8/13

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
ReHARDp	12	p	1.0	3.7	-.8	2.5	2.1
		r	1.8	1.4	-1.1	.2	-.4
		pr	1.4	2.5	-.9	1.3	.8
ReHARDp	6	p	-11.0	-1.0	.1	-1.2	-1.2
		r	-15.9	-3.2	-1.4	-4.5	-7.0
		pr	-10.7	-2.1	-.7	-3.0	-4.3
ReHARDp	4	p	-22.2	-2.0	-2.3	-4.7	-6.3
		r	-29.2	-2.7	-4.5	-7.0	-11.1
		pr	-22.7	-2.4	-3.5	-6.0	-8.8
ReHARDr	12	p	-1.6	1.6	-1.3	.0	-1.2
		r	-7.1	3.0	-1.9	.8	-.2
		pr	-3.8	2.3	-1.6	.4	-.6
ReHARDr	6	p	-16.3	-3.5	-2.0	-5.6	-7.3
		r	-24.8	-1.9	-2.8	-4.6	-7.7
		pr	-14.1	-2.6	-2.4	-5.1	-7.5
ReHARDr	4	p	-22.2	-4.7	-.8	-5.6	-6.3
		r	-42.5	-6.2	-2.9	-9.0	-14.1
		pr	-35.6	-5.5	-1.9	-7.4	-10.4
ReHARDp1r	12	p	-11.6	2.6	-1.9	.4	-1.1
		r	-15.2	1.5	-2.2	-.9	-2.4
		pr	-13.2	2.0	-2.1	-.3	-1.8
ReHARDp1r	6	p	-22.9	-.9	-2.1	-2.9	-4.9
		r	-26.3	-2.0	-3.2	-5.2	-9.0
		pr	-19.2	-1.5	-2.7	-4.1	-7.0
ReHARDp1r	4	p	-22.2	-4.7	-.8	-5.6	-6.3
		r	-42.5	-6.2	-2.9	-9.0	-14.1
		pr	-35.6	-5.5	-1.9	-7.4	-10.4
ReVISGp	12	p	13.0	6.4	-1.3	4.8	4.0
		r	29.8	6.6	-1.2	5.3	6.7
		pr	25.4	6.5	-1.3	5.0	5.4
ReVISGp	6	p	35.6	10.7	1.5	11.7	13.4
		r	66.7	9.6	1.6	11.0	14.2
		pr	61.5	10.1	1.5	11.3	13.8
ReVISGp	4	p	35.6	8.8	2.0	9.9	11.6
		r	52.7	9.6	1.6	11.1	13.6
		pr	46.9	9.2	1.8	10.5	12.7
ReVISGr	12	p	37.6	9.9	2.0	11.7	13.5
		r	23.9	7.4	1.2	8.4	9.7
		pr	30.6	8.6	1.6	9.9	11.5

Table 108 continued 9/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReVISGr	6	p	46.2	9.2	2.7	11.5	14.0
		r	29.8	8.8	2.0	10.6	11.6
		pr	27.1	9.0	2.3	11.0	12.7
ReVISGr	4	p	47.5	9.2	3.7	12.4	15.5
		r	30.5	11.5	2.7	14.3	14.0
		pr	34.0	10.4	3.2	13.4	14.7
ReVISGp1r	12	p	35.6	9.7	1.4	10.7	12.3
		r	26.8	8.1	.9	8.8	10.2
		pr	34.0	8.9	1.1	9.7	11.2
ReVISGp1r	6	p	46.2	11.7	3.5	14.7	18.0
		r	34.2	7.6	2.8	10.3	11.3
		pr	39.2	9.5	3.2	12.3	14.4
ReVISGp1r	4	p	47.5	14.5	2.5	16.4	19.0
		r	37.2	13.9	1.9	15.8	16.5
		pr	54.6	14.2	2.2	16.1	17.7
ReSTVp	12	p	-5.6	-.9	-2.6	-3.2	-5.3
		r	-3.4	-.6	-2.0	-2.3	-3.9
		pr	-7.2	-.8	-2.3	-2.7	-4.6
ReSTVp	6	p	-34.9	-8.2	-5.0	-12.2	-16.4
		r	-48.4	-6.3	-4.7	-10.3	-15.9
		pr	-51.9	-7.2	-4.9	-11.2	-16.1
ReSTVp	4	p	-52.2	-7.0	-5.6	-12.3	-17.5
		r	-53.5	-6.9	-5.7	-12.2	-18.1
		pr	-76.8	-7.0	-5.6	-12.3	-17.8
ReSTVr	12	p	-7.6	1.2	-2.5	-1.4	-3.5
		r	-6.3	.4	-1.9	-1.7	-2.4
		pr	-10.7	.8	-2.2	-1.6	-2.9
ReSTVr	6	p	-32.2	1.5	-6.7	-5.5	-11.1
		r	-18.9	6.6	-6.1	.3	-1.5
		pr	-26.1	4.2	-6.4	-2.4	-6.0
ReSTVr	4	p	-56.1	-1.8	-8.7	-10.5	-18.1
		r	-22.6	3.7	-8.0	-4.3	-7.9
		pr	-40.7	1.1	-8.4	-7.2	-12.7
ReSTVp1r	12	p	-20.9	-.6	-4.4	-4.7	-8.5
		r	-12.2	-.1	-3.6	-3.5	-5.5
		pr	-24.4	-.3	-4.0	-4.0	-6.9
ReSTVp1r	6	p	-36.2	-5.7	-4.6	-9.9	-14.1
		r	-21.8	-3.3	-3.5	-6.6	-9.4
		pr	-41.6	-4.4	-4.0	-8.1	-11.6

Table 108   continued   10/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReSTVp1r	4	p	-38.2	-.7	-6.0	-6.5	-12.1
		r	-33.6	2.4	-6.6	-4.1	-8.7
		pr	-51.0	.9	-6.3	-5.2	-10.3
ReBRVp	12	p	-12.9	-3.7	.3	-3.3	-3.2
		r	-22.6	-4.2	-.3	-4.4	-5.3
		pr	-21.0	-4.0	.0	-3.9	-4.3
ReBRVp	6	p	-9.6	-3.7	-1.7	-4.7	-5.6
		r	-32.2	-4.3	-2.2	-5.8	-8.9
		pr	-15.8	-4.0	-1.9	-5.3	-7.4
ReBRVp	4	p	-8.3	-7.7	-.4	-7.3	-7.7
		r	-29.2	-7.9	-.6	-8.1	-9.2
		pr	-20.1	-7.8	-.5	-7.7	-8.5
ReBRVr	12	p	-3.0	-.4	1.1	.2	1.2
		r	-4.9	-.8	.5	-.5	-.4
		pr	-9.8	-.6	.8	-.2	.4
ReBRVr	6	p	-9.6	2.7	-1.4	.8	.1
		r	6.2	4.5	-1.0	3.6	3.3
		pr	-8.9	3.6	-1.2	2.3	1.8
ReBRVr	4	p	-.3	-2.4	2.0	-.9	1.1
		r	4.0	4.1	2.5	6.4	7.9
		pr	-2.1	1.0	2.3	3.1	4.7
ReBRVp1r	12	p	-14.3	-.3	1.3	.8	1.8
		r	-16.7	-.8	.8	-.1	-.1
		pr	-13.2	-.5	1.1	.3	.8
ReBRVp1r	6	p	-32.2	-6.5	-.4	-7.2	-7.8
		r	-20.4	-2.8	-1.5	-4.3	-5.4
		pr	-33.0	-4.6	-1.0	-5.6	-6.5
ReBRVp1r	4	p	-46.2	-5.0	-3.3	-8.6	-10.9
		r	-22.6	-2.7	-3.2	-5.7	-8.1
		pr	-40.7	-3.8	-3.2	-7.0	-9.4
ReHVp	12	p	19.0	5.9	.8	7.0	8.3
		r	-4.1	-.4	.4	.2	-.3
		pr	13.4	2.6	.6	3.4	3.8
ReHVp	6	p	3.7	5.3	-.7	4.5	4.5
		r	-30.7	-2.6	-1.7	-4.5	-7.5
		pr	-21.0	1.2	-1.2	-.4	-1.9
ReHVp	4	p	-16.3	3.3	-1.4	1.8	1.3
		r	-60.2	-5.7	-2.8	-8.4	-14.6
		pr	-38.1	-1.4	-2.1	-3.7	-7.1

Table 108   continued   11/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReHVr	12	p	-22.9	-1.6	-.5	-2.2	-3.0
		r	-24.8	-2.1	-.8	-2.9	-4.5
		pr	-29.6	-1.8	-.6	-2.6	-3.8
ReHVr	6	p	-21.6	.4	.1	.4	.3
		r	-29.2	-2.7	-.4	-3.1	-4.9
		pr	-29.6	-1.2	-.2	-1.5	-2.5
ReHVr	4	p	-46.2	-5.0	-3.3	-8.6	-10.9
		r	-22.6	-2.7	-3.2	-5.7	-8.1
		pr	-40.7	-3.8	-3.2	-7.0	-9.4
ReHVp1r	12	p	12.3	5.5	.8	6.1	7.1
		r	-10.0	1.6	.3	1.9	1.5
		pr	4.0	3.5	.6	3.8	4.2
ReHVp1r	6	p	19.6	4.2	2.5	6.5	8.4
		r	-21.8	.1	1.3	1.0	.4
		pr	-5.5	2.0	1.9	3.5	4.1
ReHVp1r	4	p	15.6	1.7	3.1	4.5	7.4
		r	-18.1	-3.9	2.3	-1.9	-3.7
		pr	.5	-1.2	2.7	1.0	1.5
ReGVp	12	p	-12.9	-3.8	-1.2	-5.0	-6.4
		r	12.1	-.9	-.4	-1.4	-.1
		pr	-10.7	-2.3	-.8	-3.1	-3.1
ReGVp	6	p	-25.6	-11.5	-1.8	-13.0	-15.0
		r	3.2	-1.7	-1.1	-2.6	-1.4
		pr	-22.7	-6.4	-1.4	-7.4	-7.8
ReGVp	4	p	-20.3	-17.3	-.8	-17.3	-18.1
		r	12.8	-7.8	.1	-7.1	-5.9
		pr	-7.2	-12.3	-.3	-11.8	-11.6
ReGVr	12	p	20.3	6.6	1.7	8.3	9.7
		r	16.5	4.5	1.6	6.0	7.8
		pr	21.1	5.5	1.7	7.0	8.7
ReGVr	6	p	35.6	11.1	.8	11.9	12.6
		r	15.0	7.5	.4	7.9	8.1
		pr	35.7	9.2	.6	9.7	10.2
ReGVr	4	p	39.6	8.4	-.6	7.8	7.7
		r	30.5	9.2	-.4	8.9	8.3
		pr	44.3	8.8	-.5	8.4	8.0
ReGVp1r	12	p	5.0	1.5	.1	1.4	1.4
		r	1.0	2.1	.0	2.0	2.4
		pr	-1.2	1.8	.0	1.7	2.0

Table 108 continued 12/13

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
ReGVp1r	6	p	-8.3	-1.9	.0	-2.3	-2.7
		r	32.7	1.2	1.6	2.6	6.4
		pr	10.0	-.3	.8	.3	2.1
ReGVp1r	4	p	15.6	3.3	-.9	2.2	1.5
		r	68.1	6.4	1.4	7.7	11.9
		pr	41.8	4.9	.3	5.2	7.0
ReWSp	12	p	7.7	6.0	1.2	7.3	8.2
		r	15.8	2.6	.7	3.4	3.6
		pr	13.4	4.2	.9	5.2	5.7
ReWSp	6	p	9.0	4.1	2.9	6.8	8.7
		r	18.0	.7	2.6	3.0	5.0
		pr	1.4	2.3	2.8	4.8	6.7
ReWSp	4	p	7.7	10.9	2.1	12.8	13.6
		r	6.2	4.9	2.4	7.0	8.5
		pr	-4.6	7.7	2.2	9.7	10.9
ReWSr	12	p	34.2	6.5	3.5	9.7	12.7
		r	20.2	3.6	3.2	6.7	8.2
		pr	25.4	5.0	3.4	8.1	10.3
ReWSr	6	p	44.9	11.0	4.2	14.9	18.1
		r	10.6	.2	3.2	3.1	3.8
		pr	15.1	5.3	3.7	8.6	10.5
ReWSr	4	p	57.5	8.3	5.7	14.2	18.9
		r	-4.9	-4.2	4.3	-.3	.5
		pr	23.7	1.7	5.0	6.3	9.1
ReWSpr	12	p	22.3	4.8	3.2	7.7	10.2
		r	18.0	2.0	2.9	4.7	6.2
		pr	16.8	3.3	3.0	6.1	8.1
ReWSpr	6	p	32.9	11.0	3.5	14.4	17.2
		r	20.9	4.4	3.7	7.8	9.7
		pr	23.7	7.5	3.6	10.9	13.2
ReWSpr	4	p	47.5	15.6	4.5	19.9	23.4
		r	28.3	1.4	4.4	5.4	8.0
		pr	28.9	8.2	4.4	12.1	15.3

Table 108   continued   13/13

The prefixes B2, S2, B3, S3, and Re are defined as follows:

	D1X rep KLM	D1X rep KL	A5 RANDOM
Single	S3	S2	Re
Bunch	B3	B2	

p = plant crop   r = ratoon crop
pr = (p+r)/2 where p,r are plot values
p1r = (p+r)/2 where p,r are values for each seedling or clone

SEL7, 8, 10 = Number of clones with visual NMG 7+, 8+, 10+
NMG = Visual net merit grade, GYOT = NMGYOT
Visual net merit grade of whole plot, omitting brix = G_B
                                       including brix = GB
ST = stalks   WS = weight per stalk (kg)
GVAR = within-plot variance for NMG
STV = within-plot variance for number of STALKS

Table 109. Mean realized gains from family selection in the Re type in the Te
trial. The value of the selected families was estimated by performance in the
Ts trial, PR crop, using 3 (KLM) compared with 2 (KL) replicates.

Selection rate Replicates for evaluation	Estimated value in Ss seedlings, PR crop			NMGYOT		
	Number selected (SEL8)					
	50%	25%	17%	50%	25%	17%
KLM (3)	20.0	33.6	45.4	7.2	11.1	12.6
KL (2)	18.6	31.5	40.3	6.6	10.1	12.0
Significance			KLM>KL	KLM>KL	KLM>>KL	KLM>>KL

Significant differences involving more than one class (e.g. KL50% vs KLM25%)
are not included in the table.

Mean values were computed using the arcsin√% transformation, then reconverted
to per cent. Each mean is based on 33 observations (11 characters * 3 selection
rates).

Table 110. Realized gains from selection of families in the Be type in trial Te, with evaluation based on performance of Ss seedlings in two replicates (KL) in trial Ts.

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
BeTCHp	12	P	3.7	.1	-1.4	-1.6	-2.7
		R	12.8	5.8	-1.5	4.2	4.0
		PR	6.5	3.1	-1.4	1.5	.9
BeTCHp	6	P	1.0	.5	-.1	-.3	-.6
		R	31.3	8.0	.1	7.9	9.9
		PR	8.2	4.5	.0	4.1	4.9
BeTCHp	4	P	3.7	-1.7	1.1	-1.4	-1.1
		R	26.1	9.1	-.4	8.5	9.5
		PR	3.1	4.0	.3	4.0	4.5
BeTCHr	12	P	11.0	4.5	-1.3	3.1	2.3
		R	20.9	7.8	-1.2	6.7	7.1
		PR	17.7	6.2	-1.3	5.0	4.9
BeTCHr	6	P	38.2	8.4	-.1	7.7	8.0
		R	19.5	11.5	-.6	10.7	10.4
		PR	27.1	10.0	-.4	9.3	9.3
BeTCHr	4	P	17.6	14.4	-2.6	11.2	9.3
		R	28.3	14.7	-1.6	13.0	13.3
		PR	18.6	14.6	-2.1	12.2	11.4
BeTCHpr	12	P	3.7	1.7	-1.8	-.4	-1.8
		R	12.8	6.8	-1.5	5.2	5.3
		PR	5.7	4.4	-1.7	2.6	2.0
BeTCHpr	6	P	18.3	8.2	-1.1	6.6	5.7
		R	18.0	13.7	-1.2	12.3	12.6
		PR	13.4	11.1	-1.1	9.7	9.4
BeTCHpr	4	P	37.6	10.2	.4	9.9	10.7
		R	41.6	14.0	.7	14.7	15.2
		PR	44.3	12.2	.6	12.5	13.1
BeCCSp	12	P	5.0	-3.3	2.0	-1.4	-.1
		R	20.2	-.4	1.8	1.4	3.3
		PR	10.8	-1.8	1.9	.1	1.7
BeCCSp	6	P	28.9	-3.1	4.2	1.4	4.6
		R	25.4	-2.1	3.4	1.4	2.8
		PR	27.1	-2.6	3.8	1.4	3.7
BeCCSp	4	P	25.6	-3.3	3.6	1.0	3.9
		R	39.4	-5.9	3.7	-1.9	1.1
		PR	41.8	-4.7	3.7	-.6	2.4

Table 110 continued (2/8)

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
BeCCSr	12	P	13.6	-1.3	3.2	2.1	4.7
		R	9.9	-4.0	3.3	-.9	.5
		PR	13.4	-2.7	3.2	.5	2.5
BeCCSr	6	P	13.0	-4.1	1.4	-2.1	-1.0
		R	31.3	-.5	2.1	1.8	2.8
		PR	25.4	-2.2	1.8	.0	1.0
BeCCSr	4	P	31.6	-4.2	3.3	-.3	3.1
		R	50.4	-1.6	4.3	3.0	5.9
		PR	52.1	-2.8	3.8	1.5	4.6
BeCCSpr	12	P	5.0	-3.3	2.0	-1.4	-.1
		R	20.2	-.4	1.8	1.4	3.3
		PR	10.8	-1.8	1.9	.1	1.7
BeCCSpr	6	P	28.9	-3.1	4.2	1.4	4.6
		R	25.4	-2.1	3.4	1.4	2.8
		PR	27.1	-2.6	3.8	1.4	3.7
BeCCSpr	4	P	29.6	-7.7	3.3	-4.0	-.8
		R	52.7	-2.8	3.3	.8	2.9
		PR	52.1	-5.2	3.3	-1.4	1.1
BeTSHp	12	P	11.6	.6	.2	.4	.4
		R	18.0	6.4	.0	6.2	6.7
		PR	10.0	3.7	.1	3.6	3.8
BeTSHp	6	P	1.0	-2.2	-.1	-2.6	-3.2
		R	31.3	7.4	.0	7.2	9.0
		PR	11.7	2.8	-.1	2.7	3.3
BeTSHp	4	P	3.7	-1.7	1.1	-1.4	-1.1
		R	26.1	9.1	-.4	8.5	9.5
		PR	3.1	4.0	.3	4.0	4.5
BeTSHr	12	P	19.0	5.0	.2	5.1	5.3
		R	26.1	8.5	.3	8.7	9.9
		PR	21.1	6.8	.3	7.0	7.7
BeTSHr	6	P	18.3	8.2	-1.1	6.6	5.7
		R	18.0	13.7	-1.2	12.3	12.6
		PR	13.4	11.1	-1.1	9.7	9.4
BeTSHr	4	P	17.6	9.3	-2.4	6.0	3.9
		R	30.5	14.1	-2.1	11.7	12.4
		PR	10.8	11.9	-2.3	9.1	8.4

Table 110 continued (3/8)

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
BeTSHpr	12	P	21.6	2.3	.6	2.7	3.4
		R	35.0	7.4	.5	7.8	9.5
		PR	31.4	5.0	.6	5.5	6.6
BeTSHpr	6	P	24.9	7.4	.4	7.3	8.0
		R	34.2	11.6	1.2	12.7	14.5
		PR	30.6	9.6	.8	10.2	11.4
BeTSHpr	4	P	9.6	7.1	-1.8	4.4	2.7
		R	30.5	13.0	-1.6	11.0	12.0
		PR	10.8	10.2	-1.7	8.0	7.6
BeNMGYp	12	P	21.6	1.8	1.4	3.0	4.3
		R	35.0	6.0	1.2	7.1	8.5
		PR	30.6	4.0	1.3	5.2	6.5
BeNMGYp	6	P	1.0	-2.2	-.1	-2.6	-3.2
		R	31.3	7.4	.0	7.2	9.0
		PR	11.7	2.8	-.1	2.7	3.3
BeNMGYp	4	P	3.7	-1.7	1.1	-1.4	-1.1
		R	26.1	9.1	-.4	8.5	9.5
		PR	3.1	4.0	.3	4.0	4.5
BeNMGYr	12	P	20.9	1.9	-.7	1.4	1.1
		R	27.6	5.9	-.4	5.6	6.7
		PR	28.0	4.0	-.5	3.7	4.1
BeNMGYr	6	P	30.2	7.5	.0	7.5	7.9
		R	68.1	9.9	1.2	11.1	14.5
		PR	58.1	8.8	.7	9.4	11.4
BeNMGYr	4	P	45.5	6.2	2.9	9.0	12.3
		R	70.4	8.7	3.6	12.2	16.7
		PR	72.7	7.5	3.2	10.7	14.6
BeNMGYpr	12	P	21.6	2.3	.6	2.7	3.4
		R	35.0	7.4	.5	7.8	9.5
		PR	31.4	5.0	.6	5.5	6.6
BeNMGYpr	6	P	5.0	3.7	-2.0	1.2	-.7
		R	34.2	9.9	-.8	8.9	10.7
		PR	16.8	7.0	-1.4	5.4	5.3
BeNMGYpr	4	P	27.6	8.0	-.1	7.1	7.3
		R	54.9	11.0	1.4	12.2	15.3
		PR	36.6	9.6	.6	9.8	11.5
BeSEL7p	12	P	7.0	.9	-1.0	-.3	-1.0
		R	26.1	5.4	-1.3	4.1	4.9
		PR	16.0	3.3	-1.2	2.0	2.1

Table 110 continued (4/8)

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
BeSEL7p	6	P	18.3	3.9	1.5	5.0	6.7
		R	74.0	5.5	2.4	7.9	12.3
		PR	49.5	4.8	2.0	6.6	9.7
BeSEL7p	4	P	9.6	-1.4	2.0	-.1	1.6
		R	63.7	3.5	2.9	6.3	10.7
		PR	28.9	1.2	2.5	3.4	6.4
BeSEL7r	12	P	25.6	4.2	1.4	5.4	6.4
		R	15.0	6.2	1.1	7.1	8.4
		PR	13.4	5.3	1.2	6.3	7.5
BeSEL7r	6	P	63.5	5.6	4.2	9.6	13.4
		R	7.7	5.4	2.4	7.6	8.5
		PR	35.7	5.5	3.3	8.5	10.8
BeSEL7r	4	P	51.5	5.7	3.9	9.3	12.5
		R	-4.9	10.9	1.9	12.7	13.0
		PR	26.3	8.4	2.8	11.2	12.8
BeS7p1r	12	P	38.2	5.2	2.1	7.2	9.2
		R	38.6	6.4	1.8	8.1	10.2
		PR	38.3	5.8	2.0	7.7	9.7
BeS7p1r	6	P	38.2	9.3	.0	9.5	10.0
		R	53.4	8.5	.6	9.0	11.9
		PR	49.5	8.9	.3	9.2	11.0
BeS7p1r	4	P	69.5	14.3	3.5	17.8	22.0
		R	83.6	7.6	4.0	11.8	16.8
		PR	85.6	10.8	3.8	14.6	19.3
BeSEL8p	12	P	13.0	1.8	.4	2.0	2.4
		R	35.0	3.7	.3	3.9	5.8
		PR	24.6	2.8	.3	3.0	4.2
BeSEL8p	6	P	18.3	3.9	1.5	5.0	6.7
		R	74.0	5.5	2.4	7.9	12.3
		PR	49.5	4.8	2.0	6.6	9.7
BeSEL8p	4	P	9.6	-1.4	2.0	-.1	1.6
		R	63.7	3.5	2.9	6.3	10.7
		PR	28.9	1.2	2.5	3.4	6.4
BeSEL8r	12	P	38.9	6.9	2.9	9.7	12.3
		R	28.3	6.7	2.4	8.9	11.2
		PR	29.7	6.8	2.6	9.3	11.7
BeSEL8r	6	P	55.5	7.9	4.2	11.8	15.3
		R	12.1	7.2	2.6	9.8	9.7
		PR	30.6	7.6	3.4	10.7	12.4

Table 110 continued (5/8)

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
BeSEL8r	4	P	51.5	4.1	6.2	10.2	15.0
		R	-4.9	6.6	4.0	10.6	10.2
		PR	23.7	5.4	5.0	10.4	12.4
BeS8p1r	12	P	14.3	3.9	.2	3.8	4.3
		R	17.3	6.3	-.4	5.9	5.9
		PR	13.4	5.1	-.1	4.9	5.1
BeS8p1r	6	P	20.9	4.1	1.5	5.2	6.4
		R	41.6	10.4	.1	10.4	12.6
		PR	27.1	7.4	.8	8.0	9.7
BeS8p1r	4	P	19.6	7.6	-.8	6.0	5.0
		R	19.5	14.7	-1.7	12.7	13.7
		PR	3.1	11.4	-1.3	9.6	9.6
BeSEL10p	12	P	19.0	1.1	.8	1.7	2.6
		R	25.4	4.2	.2	4.4	6.0
		PR	27.1	2.7	.5	3.2	4.4
BeSEL10p	6	P	35.6	2.8	2.8	5.3	7.9
		R	43.1	7.3	1.1	8.4	10.2
		PR	40.9	5.2	1.9	7.0	9.1
BeSEL10p	4	P	33.6	-1.4	2.5	.3	2.4
		R	28.3	5.7	.5	6.1	6.2
		PR	23.7	2.3	1.5	3.4	4.4
BeSEL10r	12	P	37.6	9.5	1.8	11.1	13.0
		R	28.3	6.6	1.8	8.3	10.7
		PR	33.2	8.0	1.8	9.6	11.8
BeSEL10r	6	P	42.2	10.7	2.2	12.7	14.4
		R	3.2	7.7	1.0	8.6	8.5
		PR	13.4	9.1	1.6	10.5	11.2
BeSEL10r	4	P	49.5	13.0	.3	12.9	13.8
		R	19.5	11.9	-.3	11.6	11.4
		PR	31.4	12.4	.0	12.2	12.5
BeS10p1r	12	P	24.3	4.5	1.5	5.8	7.4
		R	18.7	4.1	.4	4.5	4.7
		PR	20.3	4.3	.9	5.1	6.0
BeS10p1r	6	P	26.3	.6	2.5	2.6	4.2
		R	9.1	5.7	.5	6.0	6.7
		PR	10.0	3.3	1.5	4.4	5.6
BeS10p1r	4	P	29.6	3.0	2.7	5.3	7.1
		R	15.0	2.6	.9	3.4	4.4
		PR	13.4	2.8	1.8	4.3	5.7

Table 110 continued (6/8)

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
BeSTp	12	P	-18.9	-2.0	-3.5	-5.6	-8.5
		R	-6.3	3.2	-3.2	.1	-.9
		PR	-15.8	.7	-3.3	-2.5	-4.5
BeSTp	6	P	-5.6	6.0	-3.1	2.0	.2
		R	-1.2	6.0	-2.9	3.1	1.5
		PR	-2.1	6.0	-3.0	2.6	.9
BeSTp	4	P	13.6	6.5	-2.4	3.1	2.0
		R	12.8	8.0	-2.9	5.4	4.6
		PR	16.0	7.3	-2.7	4.3	3.4
BeSTr	12	P	-3.0	-.2	-2.5	-2.5	-4.2
		R	6.2	5.0	-2.0	3.3	3.3
		PR	7.4	2.5	-2.2	.7	-.2
BeSTr	6	P	-8.3	.3	-4.1	-3.5	-6.8
		R	-18.9	5.5	-3.3	2.4	1.3
		PR	-10.7	3.1	-3.7	-.3	-2.5
BeSTr	4	P	-12.3	5.8	-4.2	.6	-3.0
		R	-9.3	10.9	-3.5	6.9	7.7
		PR	-14.9	8.5	-3.9	4.0	2.7
BeSTp1r	12	P	-7.0	1.4	-3.3	-1.9	-4.2
		R	-4.9	5.0	-2.7	2.5	1.4
		PR	-4.6	3.3	-2.9	.5	-1.2
BeSTp1r	6	P	-8.3	-3.0	-3.9	-7.0	-10.4
		R	-17.4	5.1	-3.7	1.5	.8
		PR	-15.8	1.3	-3.8	-2.4	-4.5
BeSTp1r	4	P	-22.2	-2.5	-6.9	-9.2	-14.9
		R	-24.8	1.8	-5.4	-3.2	-4.5
		PR	-25.3	-.2	-6.1	-5.9	-9.4
BeBRIXp	12	P	-7.0	-3.4	1.2	-2.2	-1.7
		R	18.0	-1.0	1.5	.4	2.5
		PR	1.4	-2.1	1.3	-.8	.5
BeBRIXp	6	P	-1.6	-8.7	1.3	-6.7	-6.1
		R	28.3	-4.2	1.3	-2.9	-1.4
		PR	20.3	-6.3	1.3	-4.6	-3.6
BeBRIXp	4	P	-24.2	-12.8	-1.0	-12.7	-13.8
		R	30.5	-6.0	-.4	-6.1	-6.2
		PR	13.4	-9.2	-.7	-9.1	-9.8

Table 110 continued (7/8)

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
BeBRIXr	12	P	24.9	4.1	2.4	6.7	8.8
		R	17.3	-.6	2.3	1.7	1.9
		PR	22.9	1.6	2.3	4.0	5.1
BeBRIXr	6	P	48.9	7.9	4.2	12.7	16.4
		R	38.6	3.4	3.6	7.0	9.2
		PR	52.9	5.5	3.9	9.6	12.6
BeBRIXr	4	P	45.5	5.5	2.8	8.9	11.4
		R	21.7	3.0	2.7	5.5	7.3
		PR	44.3	4.2	2.8	7.1	9.2
BeBRp1r	12	P	21.6	1.7	2.4	4.2	6.4
		R	15.8	-2.1	2.3	.1	1.1
		PR	21.1	-.3	2.3	2.0	3.6
BeBRp1r	6	P	48.9	7.9	4.2	12.7	16.4
		R	38.6	3.4	3.6	7.0	9.2
		PR	52.9	5.5	3.9	9.6	12.6
BeBRp1r	4	P	55.5	8.1	3.8	12.8	16.2
		R	61.5	1.8	3.5	5.2	9.8
		PR	72.7	4.8	3.7	8.6	12.8
BeVISGp	12	P	3.7	.5	-.6	-.3	-.5
		R	22.4	3.7	-.8	2.9	3.3
		PR	15.1	2.2	-.7	1.4	1.5
BeVISGp	6	P	2.3	-2.9	.1	-3.4	-3.0
		R	31.3	2.9	-.2	2.9	3.8
		PR	11.7	.1	.0	.0	.6
BeVISGp	4	P	-12.3	-2.7	-1.8	-5.1	-6.5
		R	10.6	4.1	-3.4	1.0	-1.2
		PR	-9.8	.9	-2.6	-1.8	-3.7
BeVISGr	12	P	34.2	7.1	1.3	8.4	9.5
		R	25.4	7.1	.7	7.7	8.8
		PR	28.9	7.1	1.0	8.0	9.1
BeVISGr	6	P	44.9	7.7	2.1	9.3	11.2
		R	12.1	9.8	.7	10.4	9.7
		PR	20.3	8.8	1.4	9.9	10.4
BeVISGr	4	P	27.6	13.3	.7	13.6	14.1
		R	17.3	12.2	.4	12.5	12.1
		PR	8.2	12.8	.5	13.0	13.1

Table 110 continued (8/8)

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
BeGp1r	12	P	11.0	2.8	-.9	1.8	1.4
		R	20.9	6.8	-1.2	5.7	5.9
		PR	18.6	4.9	-1.0	3.9	3.8
BeGp1r	6	P	32.9	5.9	.6	5.8	6.4
		R	20.9	9.8	.1	9.7	11.4
		PR	16.8	7.9	.4	7.9	9.1
BeGp1r	4	P	49.5	7.9	.6	7.7	8.4
		R	21.7	11.3	-.8	10.3	10.5
		PR	23.7	9.7	-.2	9.1	9.5
BeWSp	12	P	11.6	.2	1.9	1.9	3.0
		R	6.2	4.1	1.1	5.1	5.1
		PR	4.8	2.2	1.5	3.6	4.1
BeWSp	6	P	6.3	2.8	2.6	5.1	6.6
		R	10.6	5.4	1.8	7.2	7.8
		PR	-2.1	4.1	2.2	6.2	7.2
BeWSp	4	P	7.7	3.3	3.1	6.0	7.4
		R	12.8	3.0	1.6	4.4	5.2
		PR	-9.8	3.1	2.3	5.1	6.2
BeWSr	12	P	16.3	7.2	.7	7.6	8.4
		R	14.3	2.6	1.0	3.5	4.3
		PR	16.0	4.8	.8	5.4	6.2
BeWSr	6	P	40.9	8.2	1.5	9.3	10.8
		R	28.3	6.5	1.4	7.8	9.1
		PR	37.5	7.3	1.5	8.5	9.9
BeWSr	4	P	65.5	13.2	3.5	16.6	20.0
		R	19.5	8.1	2.5	10.6	11.5
		PR	46.9	10.5	3.0	13.4	15.5
BeWSpr	12	P	22.9	1.8	3.2	4.7	7.1
		R	12.1	3.0	2.2	5.1	5.9
		PR	10.8	2.5	2.7	4.9	6.5
BeWSpr	6	P	36.9	5.6	2.6	7.9	10.1
		R	25.4	5.9	2.2	8.2	10.0
		PR	30.6	5.8	2.4	8.0	10.0
BeWSpr	4	P	51.5	10.4	3.8	13.9	17.2
		R	43.8	8.3	3.6	12.0	14.9
		PR	52.1	9.3	3.7	12.9	16.0

p = plant crop,   r = ratoon crop, pr = (p+r)/2   where p,r are plot values
p1r = (p+r)/2 of each seedling
SEL7 (8, 10) = Number of selections (seedlings) graded 7+ (8+, 10+)
ST = number of stalks, WS = Weight per stalk (kg)
G   = net merit grade, VISG = Visual NMG

Table 111. Realized gains from selection of families in the Se type in trial Te, with evaluation based on performance of Ss seedlings in two replicates (KL) in trial Ts.

| Character | Number of families selected | Crop | Realized gain as per cent of General Mean | | | | |
			SEL8	TCH	CCS	TSH	NMGYOT
SiTCHp	12	p	2.3	1.2	-.2	.8	.8
		r	14.3	4.9	-.7	4.2	4.2
		pr	16.8	3.2	-.5	2.6	2.6
SiTCHp	6	p	5.0	-.2	-.4	-1.0	-1.0
		r	1.8	3.9	-1.1	3.0	.8
		pr	3.1	1.9	-.7	1.2	.0
SiTCHp	4	p	1.7	1.7	-2.6	-1.2	-2.6
		r	-9.3	6.7	-3.2	3.8	.2
		pr	5.7	4.4	-2.9	1.5	-1.1
SiTCHr	12	p	17.0	6.1	.3	6.2	6.3
		r	20.2	9.2	.2	9.3	10.7
		pr	19.4	7.7	.3	7.9	8.6
SiTCHr	6	p	11.6	7.5	-2.1	4.5	2.7
		r	16.5	12.7	-1.8	10.5	11.8
		pr	8.2	10.2	-2.0	7.7	7.5
SiTCHr	4	p	-10.3	11.3	-4.8	5.7	1.3
		r	17.3	13.7	-3.9	9.3	10.1
		pr	-14.9	12.5	-4.3	7.6	6.0
SiTCHpr	12	p	3.7	5.0	-1.5	3.2	2.1
		r	15.0	8.4	-1.5	6.9	6.9
		pr	10.0	6.8	-1.5	5.2	4.6
SiTCHpr	6	p	18.3	8.2	-1.1	6.6	5.7
		r	18.0	13.7	-1.2	12.3	12.6
		pr	13.4	11.1	-1.1	9.7	9.4
SiTCHpr	4	p	17.6	2.7	.3	2.5	2.8
		r	6.2	11.8	-.2	11.4	10.8
		pr	18.6	7.4	.0	7.3	7.1
SiCCSp	12	p	24.9	1.0	3.5	4.5	7.5
		r	10.6	-1.7	3.0	1.2	2.2
		pr	16.0	-.4	3.3	2.7	4.7
SiCCSp	6	p	24.9	-4.2	3.6	-.4	2.7
		r	41.6	-1.6	3.9	2.4	4.7
		pr	34.0	-2.8	3.8	1.1	3.8
SiCCSp	4	p	55.5	5.2	6.2	11.4	17.1
		r	59.3	6.1	5.5	11.7	15.5
		pr	62.4	5.7	5.8	11.6	16.3

Table 111 continued (2/9)

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
SiCCSr	12	p	20.9	1.0	3.2	4.2	6.7
		r	12.8	-.9	2.9	1.8	3.3
		pr	15.1	.0	3.0	2.9	4.9
SiCCSr	6	p	55.5	1.9	5.3	7.0	11.9
		r	49.0	3.3	4.3	7.6	10.6
		pr	56.4	2.6	4.8	7.3	11.2
SiCCSr	4	p	63.5	1.9	6.1	8.0	14.0
		r	85.8	6.0	6.0	12.1	18.2
		pr	90.7	4.1	6.1	10.2	16.3
SiCCSpr	12	p	24.9	-.7	4.0	3.3	6.6
		r	10.6	-3.3	3.5	.0	1.7
		pr	16.8	-2.0	3.7	1.5	4.0
SiCCSpr	6	p	24.9	-4.2	3.6	-.4	2.7
		r	41.6	-1.6	3.9	2.4	4.7
		pr	34.0	-2.8	3.8	1.1	3.8
SiCCSpr	4	p	55.5	5.2	6.2	11.4	17.1
		r	59.3	6.1	5.5	11.7	15.5
		pr	62.4	5.7	5.8	11.6	16.3
SiTSHp	12	p	15.0	2.2	1.5	3.5	4.8
		r	8.4	3.6	.1	3.7	3.5
		pr	16.0	3.0	.8	3.6	4.1
SiTSHp	6	p	40.9	4.2	3.6	7.7	11.1
		r	46.0	7.2	3.0	10.2	11.8
		pr	52.9	5.8	3.3	9.1	11.5
SiTSHp	4	p	73.4	4.1	6.6	10.8	17.4
		r	72.6	9.0	5.4	14.6	18.1
		pr	98.5	6.7	6.0	12.9	17.8
SiTSHr	12	p	20.9	5.5	.5	6.0	6.2
		r	18.0	8.2	.1	8.2	8.9
		pr	17.7	7.0	.3	7.2	7.7
SiTSHr	6	p	24.9	10.0	-.4	9.1	8.9
		r	44.5	13.0	-.7	12.1	14.3
		pr	32.3	11.5	-.5	10.7	11.8
SiTSHr	4	p	49.5	11.1	2.9	13.8	16.6
		r	70.4	13.4	1.9	15.4	19.1
		pr	64.9	12.4	2.4	14.6	17.9

Table 111 continued (3/9)

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
SiTSHpr	12	p	23.6	3.9	1.3	5.1	6.1
		r	26.8	6.8	.9	7.6	8.9
		pr	26.3	5.4	1.1	6.5	7.6
SiTSHpr	6	p	30.2	6.0	2.5	8.4	10.7
		r	28.3	9.3	1.7	10.9	11.6
		pr	35.7	7.7	2.1	9.8	11.2
SiTSHpr	4	p	57.5	6.7	5.0	11.8	16.8
		r	46.0	12.2	3.3	15.7	17.9
		pr	72.7	9.6	4.1	13.9	17.4
SiNMGYp	12	p	10.3	.4	2.5	2.7	4.8
		r	17.3	4.3	2.1	6.3	7.8
		pr	14.3	2.4	2.3	4.6	6.4
SiNMGYp	6	p	40.9	4.2	3.6	7.7	11.1
		r	46.0	7.2	3.0	10.2	11.8
		pr	52.9	5.8	3.3	9.1	11.5
SiNMGYp	4	p	53.5	1.7	6.2	7.8	13.1
		r	61.5	4.9	4.6	9.5	12.5
		pr	62.4	3.3	5.4	8.7	12.8
SiNMGYr	12	p	18.3	3.9	.2	3.9	4.0
		r	26.8	8.0	.0	7.9	8.9
		pr	21.1	6.1	.1	6.1	6.6
SiNMGYr	6	p	46.2	8.0	3.1	10.9	13.6
		r	38.6	8.2	1.6	9.8	11.1
		pr	39.2	8.1	2.3	10.3	12.3
SiNMGYr	4	p	49.5	11.1	2.9	13.8	16.6
		r	70.4	13.4	1.9	15.4	19.1
		pr	64.9	12.4	2.4	14.6	17.9
SiNMGYpr	12	p	23.6	3.9	1.3	5.1	6.1
		r	26.8	6.8	.9	7.6	8.9
		pr	26.3	5.4	1.1	6.5	7.6
SiNMGYpr	6	p	42.2	3.1	4.7	7.7	11.9
		r	38.6	7.6	3.3	10.9	12.7
		pr	47.8	5.5	4.0	9.4	12.3
SiNMGYpr	4	p	37.6	4.2	4.6	8.8	12.5
		r	35.0	8.1	2.5	10.5	12.3
		pr	36.6	6.3	3.5	9.7	12.4

Table 111 continued (4/9)

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
SiSEL7p	12	p	19.6	2.4	.7	2.8	3.4
		r	27.6	5.4	1.1	6.3	7.8
		pr	19.4	4.0	.9	4.7	5.7
SiSEL7p	6	p	32.9	3.8	1.1	4.7	5.5
		r	40.1	1.6	1.1	2.5	3.9
		pr	27.1	2.7	1.1	3.5	4.7
SiSEL7p	4	p	15.6	-4.2	.5	-3.7	-3.8
		r	10.6	-.4	-.1	-.7	-1.4
		pr	8.2	-2.2	.2	-2.1	-2.6
SiSEL7r	12	p	17.0	3.2	-.3	2.5	2.1
		r	12.8	8.1	-.3	7.5	8.6
		pr	15.1	5.8	-.3	5.2	5.5
SiSEL7r	6	p	28.9	3.6	2.1	5.3	7.0
		r	-2.7	9.6	1.3	10.8	12.2
		pr	16.8	6.8	1.7	8.3	9.8
SiSEL7r	4	p	9.6	5.0	-.5	4.0	3.9
		r	-2.7	11.2	.0	11.1	12.2
		pr	8.2	8.2	-.3	7.8	8.3
SiS7p1r	12	p	20.3	2.5	1.1	3.4	4.1
		r	14.3	6.7	.9	7.5	8.6
		pr	11.7	4.7	1.0	5.6	6.5
SiS7p1r	6	p	28.9	3.8	.1	3.5	3.6
		r	35.7	11.0	.0	10.9	11.9
		pr	34.0	7.6	.1	7.5	8.0
SiS7p1r	4	p	43.5	.6	2.9	3.0	5.8
		r	21.7	10.3	1.7	12.0	12.8
		pr	36.6	5.7	2.3	7.9	9.5
SiSEL8p	12	p	27.6	3.4	1.3	4.7	6.3
		r	35.7	3.9	1.2	5.2	6.6
		pr	33.2	3.7	1.3	5.0	6.4
SiSEL8p	6	p	50.2	4.2	2.0	6.2	8.3
		r	63.7	7.1	1.5	8.6	11.2
		pr	66.7	5.8	1.8	7.5	9.8
SiSEL8p	4	p	67.5	10.8	3.6	14.2	18.1
		r	85.8	6.4	3.1	9.5	13.8
		pr	85.6	8.5	3.3	11.7	15.8

Table 111 continued (5/9)

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
SiSEL8r	12	p	14.3	4.3	-.3	3.7	3.2
		r	4.0	8.1	-.5	7.4	7.7
		pr	5.7	6.3	-.4	5.7	5.5
SiSEL8r	6	p	34.2	9.9	.7	10.1	10.6
		r	18.0	12.0	.3	12.1	12.9
		pr	23.7	11.0	.5	11.2	11.8
SiSEL8r	4	p	43.5	15.2	1.6	16.5	17.7
		r	17.3	12.7	1.0	13.7	15.1
		pr	26.3	13.9	1.3	15.0	16.3
SiS8p1r	12	p	26.3	4.7	1.1	5.7	6.5
		r	26.8	7.2	.8	7.8	9.0
		pr	26.3	6.0	.9	6.8	7.8
SiS8p1r	6	p	30.2	.9	1.1	1.6	2.2
		r	29.8	5.1	.4	5.5	5.7
		pr	23.7	3.1	.8	3.7	4.1
SiS8p1r	4	p	15.6	-4.2	.5	-3.7	-3.8
		r	10.6	-.4	-.1	-.7	-1.4
		pr	8.2	-2.2	.2	-2.1	-2.6
SiSEL10p	12	p	3.0	4.0	-.8	3.0	2.5
		r	16.5	4.1	-1.0	3.0	2.6
		pr	10.8	4.1	-.9	3.0	2.6
SiSEL10p	6	p	6.3	5.1	-1.2	4.0	3.2
		r	43.1	3.7	-1.3	2.7	3.0
		pr	25.4	4.4	-1.3	3.3	3.1
SiSEL10p	4	p	21.6	9.6	-.7	8.8	9.3
		r	68.1	4.8	-.8	4.4	6.3
		pr	52.1	7.0	-.8	6.4	7.7
SiSEL10r	12	p	14.3	5.7	-.3	5.1	4.6
		r	11.4	8.4	-.2	8.0	8.9
		pr	12.5	7.1	-.3	6.7	6.9
SiSEL10r	6	p	14.3	1.8	.0	1.7	1.3
		r	1.8	8.7	-.4	8.1	8.0
		pr	15.1	5.4	-.2	5.2	4.8
SiSEL10r	4	p	41.5	5.1	2.9	7.7	10.2
		r	6.2	9.1	2.0	11.1	11.3
		pr	34.0	7.2	2.4	9.5	10.8

Table 111 continued (6/9)

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
SiS10p1r	12	p	20.3	5.3	1.2	6.4	7.8
		r	24.6	5.8	.8	6.7	7.6
		pr	24.6	5.6	1.0	6.5	7.7
SiS10p1r	6	p	34.2	8.3	1.7	9.5	11.2
		r	20.9	9.6	1.1	10.7	11.1
		pr	32.3	9.0	1.4	10.2	11.1
SiS10p1r	4	p	47.5	14.5	2.5	16.4	19.0
		r	37.2	13.9	1.9	15.8	16.5
		pr	54.6	14.2	2.2	16.1	17.7
SiSTp	12	p	12.3	1.9	-.7	1.3	1.4
		r	-2.7	2.5	-.9	1.9	.9
		pr	9.1	2.2	-.8	1.6	1.1
SiSTp	6	p	20.9	2.1	.2	1.9	3.3
		r	-23.3	3.3	-1.1	2.4	-.6
		pr	11.7	2.7	-.5	2.2	1.3
SiSTp	4	p	-8.3	-.1	-1.9	-2.8	-3.1
		r	-33.6	1.9	-3.0	-.9	-4.1
		pr	-12.4	.9	-2.4	-1.7	-3.6
SiSTr	12	p	3.0	2.8	-1.0	1.6	1.0
		r	11.4	7.0	-.8	6.2	6.6
		pr	10.0	5.0	-.9	4.1	3.9
SiSTr	6	p	15.6	3.0	-1.7	.8	-.4
		r	7.7	10.9	-1.4	9.3	9.2
		pr	22.0	7.1	-1.5	5.4	4.7
SiSTr	4	p	15.6	3.8	-1.8	.9	-.4
		r	4.0	11.4	-1.8	9.2	10.0
		pr	10.8	7.8	-1.8	5.4	5.1
SiSTp1r	12	p	15.0	3.9	-.3	3.4	3.8
		r	6.2	5.0	-.5	4.6	4.1
		pr	16.8	4.5	-.4	4.0	3.9
SiSTp1r	6	p	6.3	3.9	-2.6	.7	-.8
		r	-10.0	8.5	-2.9	5.7	3.9
		pr	4.8	6.4	-2.8	3.4	1.7
SiSTp1r	4	p	15.6	3.8	-1.8	.9	-.4
		r	4.0	11.4	-1.8	9.2	10.0
		pr	10.8	7.8	-1.8	5.4	5.1

Table 111 continued (7/9)

Character	Number of families selected	Realized gain as per cent of General Mean					
		Crop	SEL8	TCH	CCS	TSH	NMGYOT
SiBRIXp	12	p	20.9	-1.9	3.0	1.1	3.7
		r	19.5	-1.2	2.7	1.4	2.8
		pr	20.3	-1.5	2.9	1.2	3.2
SiBRIXp	6	p	50.2	-1.0	3.8	3.1	7.2
		r	44.5	-2.9	4.0	1.1	3.7
		pr	52.9	-2.0	3.9	2.0	5.4
SiBRIXp	4	p	91.4	6.4	6.5	13.0	19.8
		r	65.9	2.9	4.7	7.5	11.1
		pr	90.7	4.6	5.6	10.0	15.2
SiBRIXr	12	p	38.9	5.4	4.9	10.1	14.8
		r	15.8	.2	4.2	4.2	6.2
		pr	38.3	2.6	4.5	6.9	10.2
SiBRIXr	6	p	56.8	4.8	5.6	10.3	15.2
		r	12.1	-.2	4.8	4.2	6.3
		pr	34.0	2.2	5.2	7.0	10.4
SiBRIXr	4	p	57.5	8.3	5.7	14.2	18.9
		r	-4.9	-4.2	4.3	-.3	.5
		pr	23.7	1.7	5.0	6.3	9.1
SiBRp1r	12	p	39.6	4.9	4.6	9.4	13.6
		r	17.3	2.2	3.7	5.8	7.3
		pr	31.4	3.5	4.1	7.5	10.2
SiBRp1r	6	p	76.8	6.5	6.3	12.9	18.9
		r	50.4	2.5	5.3	7.7	12.1
		pr	71.8	4.4	5.8	10.1	15.3
SiBRp1r	4	p	91.4	6.4	6.5	13.0	19.8
		r	65.9	2.9	4.7	7.5	11.1
		pr	90.7	4.6	5.6	10.0	15.2
SiVISGp	12	p	30.2	4.1	1.3	5.4	7.0
		r	33.5	4.4	1.0	5.4	6.6
		pr	34.0	4.3	1.2	5.4	6.8
SiVISGp	6	p	36.9	6.0	1.6	7.6	9.1
		r	54.9	4.8	1.3	6.1	8.0
		pr	47.8	5.3	1.5	6.8	8.5
SiVISGp	4	p	35.6	8.1	.6	8.9	9.8
		r	94.7	8.3	1.5	9.9	14.4
		pr	77.8	8.2	1.1	9.4	12.2

Table 111 continued (8/9)

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
SiVlSGr	12	p	14.3	4.3	-.3	3.7	3.2
		r	4.0	8.1	-.5	7.4	7.7
		pr	5.7	6.3	-.4	5.7	5.5
SiVlSGr	6	p	17.0	2.3	1.7	3.7	4.6
		r	-8.6	10.0	.5	10.2	10.9
		pr	-.3	6.3	1.0	7.2	8.0
SiVlSGr	4	p	51.5	5.7	3.9	9.3	12.5
		r	-4.9	10.9	1.9	12.7	13.0
		pr	26.3	8.4	2.8	11.2	12.8
SiGp1r	12	p	20.3	2.9	.8	3.3	3.7
		r	9.1	7.2	.3	7.4	8.2
		pr	11.7	5.2	.5	5.5	6.1
SiGp1r	6	p	28.9	2.7	1.6	4.1	5.3
		r	35.7	8.1	1.4	9.5	10.0
		pr	32.3	5.6	1.5	7.0	7.8
SiGp1r	4	p	25.6	5.5	-.3	5.1	4.9
		r	54.9	9.4	.7	10.2	11.8
		pr	49.5	7.6	.2	7.9	8.6
SiWSp	12	p	2.3	3.9	.5	4.2	4.3
		r	16.5	4.1	.7	4.6	5.7
		pr	9.1	4.0	.6	4.4	5.0
SiWSp	6	p	-14.9	-2.5	1.4	-1.5	-1.2
		r	1.8	2.6	.5	2.8	4.6
		pr	-10.7	.2	.9	.8	1.9
SiWSp	4	p	3.7	-1.5	3.5	1.5	3.7
		r	10.6	-.1	1.9	1.5	3.6
		pr	10.8	-.8	2.7	1.5	3.6
SiWSr	12	p	2.3	2.3	.5	2.8	2.7
		r	-1.2	1.6	.6	2.1	1.6
		pr	-2.1	1.9	.5	2.4	2.1
SiWSr	6	p	3.7	7.3	.6	7.4	7.2
		r	20.9	7.1	.6	7.4	10.1
		pr	6.5	7.2	.6	7.4	8.7
SiWSr	4	p	15.6	15.8	.6	15.9	15.7
		r	12.8	9.8	.0	9.4	11.5
		pr	10.8	12.6	.3	12.4	13.5

Table 111 continued (9/9)

Character	Number of families selected	Crop	Realized gain as per cent of General Mean				
			SEL8	TCH	CCS	TSH	NMGYOT
SiWSpr	12	p	7.7	6.5	.7	7.0	7.1
		r	14.3	4.6	1.0	5.2	6.1
		pr	8.2	5.5	.8	6.0	6.6
SiWSpr	6	p	3.7	7.3	.6	7.4	7.2
		r	20.9	7.1	.6	7.4	10.1
		pr	6.5	7.2	.6	7.4	8.7
SiWSpr	4	p	15.6	15.8	.6	15.9	15.7
		r	12.8	9.8	.0	9.4	11.5
		pr	10.8	12.6	.3	12.4	13.5

p = plant crop, r = ratoon crop, pr = (p+r)/2 where p,r are plot values
p1r = (p+r)/2 of each seedling
SEL7 (8, 10) = Number of selections (seedlings) graded 7+ (8+, 10+)
ST = number of stalks
WS = Weight per stalk (kg)
G   = net merit grade, VISG = Visual NMG