Reisverslag van een bezoek aan Guernsey (27-29 september 1984)

C. Sonneveld

intern verslag nr. 5

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I N H O U D

Programma

Op verzoek van de Horticultural Advisory Service, St. Martins', Guernsey werd een lezing gehouden op de Guernsey Growing Event Conference te St. Peterport. De titel van de lezing was: "Substrate growing to improve yield and quality of glasshouse crops". De conferentie werd gehouden in de namiddag van 28 september 1984. Voor het programma wordt verwezen naar bijlage 1.

Donderdag 27 september werd naar Guernsey gereisd. Vrijdag 28 september is 's morgens het Proefstation bezocht en een freesia bedrijf. Zaterdag 29 september werd teruggereisd.

Algemeen

De tuinbouw op Guernsey heeft moeilijke jaren achter de rug. Voor wat de tomaat betreft, vanouds het belangrijkste gewas, kan men de concurrentie op de Engelse markt niet goed aan. Dit heeft tot gevolg gehad dat het areaal aan tomaten drastisch is gekrompen. Ten dele is overgeschakeld naar bloemen en ten dele zijn de opstanden afgebroken. De totale oppervlakte aan glas was nog maar 310 ha., waarvan nog 100 ha. tomaten. De rest van de oppervlakte wordt voornamelijk met bloemen beteeld, waarvan freesia, roos en anjer de belangrijkste zijn. Voorts wordt geëxperimenteerd met allerlei soorten snijbloemen. Potplanten worden ook op beperkte schaal geteeld, maar perspectieven ziet men hiervoor niet zo zeer. Het transport van een dergelijk produkt vormt voor Guernsey een handicap en bovendien zal men de reeds bestaande concurrentie op de Engelse markt ontmoeten. Perspectieven ziet men wel voor stekproductie van allerlei bloemgewassen. De teelt daarvan zal de komende jaren worden gestimuleerd.

Voor wat betreft andere groenten dan tomaat zullen in de zomer wat aubergine en paprika worden geteeld als vulling van oude en versleten kassen. Door de Horticultural Advisory Service wordt de teelt van komkommers in de late herfst gepropageerd. Na de productie van de Nederlandse komkommers en voor de productie van de Canarische eilanden ziet men een ga(a)t(je) in de markt.

Substraten

Steenwol neemt als substraat bij tomaat een belangrijke plaats in. De verwachting is, dat binnen één of twee jaar alle tomaten in steenwol geteeld zullen worden. Naast de hier ook in Nederland bekende teelttechnische voordelen van dit substraat boven veen, blijkt nu dat het ook goedkoper is dan veen. Een handicap op Guernsey is dat de oppervlakte op de bedrijven klein is, waardoor de in Nederland gebruikelijke geavanceerde apparatuur voor regeling van de EC en de pH wat duur is. Men zal wat blijven doorwerken met de goedkopere mestverdunners, waardoor de regeling van de samenstelling van de voedingsoplossing minder nauwkeurig zal blijven.

Naast tomaten wordt ook geëxperimenteerd met bloemen in steenwol. De oudste rozen in steenwol zijn nu 2 à 3 jaar. De resultaten zijn goed en met het inplanten van nieuwe gewassen wordt, geleidelijk aan, een toename van deze teelt in steenwol verwacht.

Met freesia in steenwol is dit jaar op 20 bedrijven geëxperimenteerd. Afgelopen zomer traden nogal problemen op, die waarschijnlijk

teruggevoerd moeten worden op te hoge temperaturen. Het komende jaar zullen proeven genomen worden met afdekken. Het teeltsysteem dat wordt gevolg is het aanbrengen van twee stroken steenwol voor een freesiabed van 1 m. breed. De steenwol is 7½ cm. dik en 30 cm. breed, ligt op folie dat over de kasgrond is uitgespreid en is niet ingehuld. In de matten zijn plantgaatjes aangebracht en per m lengte staan ongeveer 75 knollen en 4 druppelaars voor de watervoorziening.

Voor wat de voedingsoplossing betreft bestaat nog geen duidelijk beleid. Proeven naar de samenstelling van de voedingsoplossing zijn nog niet genomen. Momenteel wordt door de Advisory Service wel een samenstelling aanbevolen van 80 ppm N, 35 P, 112 K, 45 Ca, 20 Mg en 1 Fe. Voor de overige elementen worden de gangbare hoeveelheden gebruikt.

Proefstation

Het onderzoek op het proefstation te St. Martins' op Guernsey is duidelijk aangepast aan de veranderde situatie. In tegenstelling tot vroeger, toen vooral onderzoek aan tomaat werd verricht, wordt nu vooral onderzoek aan bloemen gedaan.

Bij roos wordt vooral gewerkt aan onderstammen, soorten en worteltemperatuur voor de teelt in steenwol. Bij freesia wordt gewerkt aan plantmethoden. Ook wordt gewerkt aan andere bloemgewassen om die te introduceren, alstroemeria, gerbera, enz. Het kweken van stek en jonge planten (azalea) krijgt ook enige aandacht. In bijlage 2 zijn de resultaten opgenomen van enkele proeven die in 1984 zijn genomen.

Het proefstation heeft ook altijd nog service voor de kwekers voor het analyseren van substraatmonsters en voedingsoplossingen. Men werkt min of meer volledig volgens de Naaldwijkse methode. Het aantal ingezonden monsters bij steenwol als substraat is nog wat laag. Gewoonlijk wordt maar 3 of 4 maal bemonsterd, evenals men dit bij veen gewoon was. Dit is te weinig, zeker als de kweker nog weinig ervaring heeft. De analysekosten zijn laag, ongeveer £ 6,-- per monster, dus daar behoeft men het niet voor te laten.

Op het proefstation wordt ook wat onderzoek gedaan naar gewasanalyse op basis van plantesap. Hierbij wordt min of meer de methode van Mänsson uit Zweden gevolgd. In plaats van vooraf bevriezen van het gewasmonster wordt het verse materiaal direct zeer fijn vermalen (liquidizing), waarbij 1 g. vers materiaal wordt verdeeld in 10 ml. water. De methode verliest wat aan exactheid, omdat de resultaten niet meer op het plantesap of op de droge stof kunnen worden uitgedrukt als niet tegelijkertijd een droge-stofbepaling wordt uitgevoerd. De methode is echter bestemd voor quickservice en voor een dergelijk doel is een iets mindere exactheid wel acceptabel.

Conferentie

De in de inleiding genoemde conferentie werd gehouden tijdens een ter plaatse georganiseerde tuinbouwtentoonstelling. In de eerste helft van de conferentie zijn vooral technische aspecten belicht om te komen tot kwaliteitsverbetering van glasproducten. In het tweede deel is ingegaan op organisatorische aspecten vooral voor de afzet. De afzet coöperatie is sterk naar voren gebracht en in de discussie zwaar bediscussieërd. De tekst van de meeste lezingen is bij de schrijver

van dit verslag beschikbaar voor belangstellenden.

GUERNSEY GROWING EVENT CONFERENCE

Friday, 28th September 1984
Theme: Horticulture Today

AFTERNOON SESSION: GROWING FOR QUALITY

2.00 p.m.	INTRODUCTION: Chairman, J E Langlois, President, States Committee for Horticulture.
2.05	Programmed production and cool chain handling. Professor J K A Bleasdale. (Director, National Vegetable Research Station, Wellesbourne).
2.35	Discussion.
2.45	Substrate growing to improve yield and quality of glasshouse crops. Ir C Sonneveld (Glasshouse Crops Research Station, Naaldwijk).
3.15	Discussion.
3.30	TEA.
4.00	Improving the glasshouse environment. B R Smith (ADAS Liaison Unit, NIAE, Silsoe).
4.30	Discussion.
4.40	Meeting the Market Requirements. Brian Pinker (Geest Horticultural Group).
5.10	Discussion.
5.30	Conclusion of Afternoon Session.

BREAK

EVENING SESSION: MARKETING THE PRODUCT

7.00	INTRODUCTION: Chairman M I Lloyd, President, Guernsey Growers Association.
7.05	Improving marketing through co-operation. Dr Malcolm Sargent (University of Bath).
7.35	Marketing Guernsey Ornamentals. M R Evans (GMC LTD).
7.45	Marketing Glasshouse Flowers. P P Falla (GFM).
7.55	Marketing Guernsey Vegetables. R G Kimber (GTMB).
8.05	Guernsey/UK Liaison. (M M Revell, Humber Growers Marketing Organisation Ltd).
8.20	Panel Discussion.
9.00	CONCLUSION.

Guernsey Growing Event '84

Guide to Edible Crops 1984

Appendix VI

TOMATO TRIALS

RESULTS TO THE END OF AUGUST 1984

Yields, Monetary Returns and Grade figures to Week Ending 2 September

Yields

are given in lbs per foot x 30 (1 kg = 2.2 lbs, 1 ft x 30 = 2.8m^2).

Returns

are given in £'s per foot x 30. Financial returns are calculated by applying the weekly average grade prices obtained from the Guernsey Tomato Marketing Board to weekly grading figures obtained from each experimental treatment. No deductions have been made for the cost of tray, packing and local cartage. This is in the order of 60p per tray.

Grading

figures are given as percentage select grades and mean fruit weight (in grams).

N.B. This appendix contains figures for trials 84/4 & 84/5 only; recording of all other trials ceased at end of July.

84/5 HEAT SAVING TRIAL

LOCATION: HOUSE C
SOWN: 11 November

Figures are means of 3 varieties, Dawn, Danny and Wilset.

	Seasons Yield		Cumulative Grading		Seasons Returns	
	Kg/m^2	lb/ft x 30	% Select	Mean Fruit Wt. (gms)	£/m^2	£/ft x 30
Single Glass	26.0	159	73	62.5	14.20	39.50
Melinex Lined	24.9	152	75	61.1	13.10	36.40

84/4 & 14 INTERPLANTING OBSERVATION

LOCATION: WEST BLOCK (NORTH)
SPACING: HIGH WIRE - 18"
INTERPLANT - 24"

	Seasons Yield		Cumulative Grading		Seasons Returns	
	Kg/m²	lb/ft x 30	% Select	Mean Fruit Wt. (gms)	£/m²	£/ft x 30
HIGH WIRE CROP						
Mean	30.8	188	82	70.2	16.70	46.40
Variety B	32.3	198	92	67.7	17.80	48.90
Variety C	31.1	190	88	70.9	17.30	48.10
Variety D	29.8	182	82	66.4	16.20	45.00
Dawn	30.3	185	66	75.8	15.50	43.10
INTERPLANTED CROP						
A) Initial Plant*						
Mean	12.0	73	82	68.8	10.00	27.80
Variety B	12.1	74	90	64.5	10.10	28.10
Variety C	12.2	75	93	67.1	10.40	28.90
Variety D	11.4	70	90	65.3	9.80	27.20
Dawn	12.5	77	55	78.2	9.80	27.20
B) Interplants**						
Mean	13.6	83	79	72.9	4.70	13.10
Variety B	13.2	81	87	70.2	4.60	12.80
Variety C	13.9	85	84	73.8	4.80	13.30
Variety D	12.9	79	82	69.1	4.60	12.80
Dawn	14.2	87	64	78.3	4.90	13.60

* last harvest 15 June

** first harvest 4 June

Summary of above; totals to date

	Seasons Yield		Seasons Returns	
	Kg/m²	lb/ft x 30	£/m²	£/ft x 30
High Wire Crop	30.8	188	16.70	46.40
Interplant Crop	25.6	156	14.70	40.90

Guide to Edible Crops 1984
Appendix-V

TOMATO VARIETY EXPERIMENTS

RESULTS TO THE END OF JULY 1984

Yields, Monetary Returns and Grade figures to
Week Ending 29 July

Additional information on Variety Trials

Yields

are given in lbs per foot x 30 (1 kg = 2.2 lbs, 1 ft x 30 = 2.8 m^2). Plants from row ends are not recorded.

Returns*

are given in £'s per foot x 30. Financial returns are calculated by applying the weekly average grade prices obtained from the Guernsey Tomato Marketing Board to weekly grading figures obtained from each experimental treatment. No deductions have been made for the cost of tray, packing and local cartage. This is in the order of 60p per tray.

Grading

figures are given as percentage select grades and mean fruit weight (in grams).

Chimera Index

is calculated relative to the range of chimera in the trial. A difference of 2 units is large enough to be just reliable.

INTERPRETATION OF THESE FIGURES

Variety trial results should only be interpreted within each trial and not between trials, because of possible positional effects within the glasshouse.

Figures quoted in the 'Analysis' section are Least Significant Differences (LSD) of the relevant means. N/S indicates no significant difference was detected.

Variety trial yield and return figures have been presented in 'banded' order. The bands are calculated such that a difference of two bands indicates a just reliable difference.

NB * The mid July GIMB average prices were severely distorted by the dock strike, in particular the usual pattern of price differentials between grades was upset. In view of this, 1983 prices were substituted in the calculations for this period.

MAIN VARIETY TRIAL - CONCLUSIONS

The data presented on this page are from the Station trial only. The replicated field trial was not recorded after the end of June (see page 3). Records of Station variety trials ceased at the end of July.

Figures are to the end of July.

Results: (Varieties are listed in order of their performance to the end of July).

	Yield (lb/ft x 30)	Band*
Dawn (ref)	137	1
C	134	1
B	131	2
D	129	3
E	126	4
A	124	5

	Return (£/ft x 30)	Band*
C	41.60	1
B	41.10	1
Dawn	39.90	2
D	39.20	4
E	38.30	5
A	37.60	6

* A difference of two bands is a just reliable difference.

Comments

To the end of July two varieties, C and B, produced similar yields to Dawn. The same three varieties generated the best returns over this period, however the much lower gradeout of Dawn, 52% select compared to 93% and 89% for B and C respectively, lowered it to third place in the returns table. Varieties B and C both had excellent early gradeouts and were the largest fruited apart from Dawn to the end of April. Varieties A and E produced the heaviest yield to the end of April but this was not sustained and by the end of June the other four varieties had done clearly better. Variety A had the lowest gradeout (as % select) and the smallest fruit size. The results from this years replicated field trial were in good agreement with Station figures, apart from the performance of variety A. This was poor on the Station but as good as the leading varieties in the field. The variety is not silverleaf tolerant and a comparison of records shows double the level of silverleaf in this variety at the Station compared to the field trial. It is likely that this is a principal cause of the difference.

84/1 Main Variety Trial - Detailed Results

Location: West Block

Sowing Date: 21 October 1983

Cultural Details: Rockwool, Grodan slab. 18" spacing, Modified Guernsey Arch. Minimum night air temperature 12°C during Stage III. Thermal Screen from dusk to dawn when heating in use.

(A) Yield and Return (per ft x 30) to the end of each month

Variety	Yield (lb)					Return (£)				
	Mar	Apr	May	Jun	Jul	Mar	Apr	May	Jun	Jul
A	20	52	75	96	124	8.10	21.40	28.40	32.00	37.60
B	18	48	78	102	131	7.80	20.90	30.90	34.80	41.10
C	19	48	80	105	134	8.10	20.90	31.10	35.30	41.60
D	18	49	76	100	129	7.20	20.60	28.90	33.40	39.20
E	20	50	73	96	126	8.30	21.70	28.60	32.50	38.30
Dawn (ref) (EZ)	15	48	82	106	137	6.30	19.20	29.50	33.60	39.90

(B) Cumulative Grading. Early (to end April) & Mid Season (End July)

Variety	to end April		to end July	
	% Select	Fruit Weight (gms)	% Select	Fruit Weight (gms)
A	68	60.2	72	62.3
B	97	61.2	93	63.3
C	93	62.0	89	64.9
D	81	60.5	81	64.2
E	94	60.3	80	62.3
Dawn (ref) (EZ)	37	78.9	52	74.6

(C) Additional Observations
(Entries marked with an asterisk (*) are different to the average score for that characteristic by a statistically significant amount).

	Flowering Date	Date of First Pick	Plant Height (cms)	Total Fruit Count	Chimera Index
	Truss 1	Truss 1	to Truss 6	Trusses 1-6	
	December	February			
A	13	1 Mar	175	51	3
B	13	28 Feb	176	54*	0
C	14	28 Feb	162*	50*	0
D	12	24 Feb*	175	53	0
E	13	26 Feb	187*	52	0
Dawn (ref) (EZ)	18*	2 Mar*	174	52	2

84/11 Main Variety Field Trial Detailed Results

Location: La Maraive Vinery, Vale.

Sown: 28 October 1983.

Cultural Details: Shamrock Peat Modules, 18" spacing, Guernsey Arch training; Intermediate low night temperature Stage III.

(A) Yields (per ft x 30) to the end of each month and mean fruit weight to June

	Yield (lb)				Mean Fruit Weight (gms)
	March	April	May	June	
A	20	40	74	97	64.2
B	16	33	70	96	62.1
C	18	32	69	95	62.8
D	17	36	69	94	61.4
E	17	31	62	86	63.6
Dawn (ref) (EZ)	15	32	72	98	84.7

NB The simplified recording procedure used on the field trial does not enable an accurate estimate of return to be made.

TOMATO MARKETABILITY STUDIES

Important Notes

The main element of tomato marketability work is assessment of samples of fruit by two groups of local housewives who attend regularly once a week from May to July. A second series is run in parallel and is assessed by visitors, mostly British, at the Guernsey Tomato Centre, from late May to early August. This panel is not as experienced as the housewives panel but is representative of the British tomato buying public.

Fruit for these main series of trials was collected from the Station, matched for grade and stage of ripeness and stored in a cabinet which has positive ventilation with outside air.

The fruit used was all of "Pink and White" grade, this removes the influence of fruit size and grade out from the assessment; these affect the marketing of varieties, but not the "marketability", and are assessed in our normal yield trials.

As the panel assessment period is from late spring to summer it is important to consider the trend of marketability over this period, as a variety may perform tolerably well in cool conditions but decline rapidly when subjected to hot weather. The trend is presented in the tables below; a negative figure indicates a decline over the test period, the larger the figure, the sharper the decline.

Results - Main Series

A) HOUSEWIVES PANEL

Table 1: Mean Preference over whole trial period

Variety	Score	Band
B	3.47	1
D	3.36	2
Sonato	3.27	3
C	3.17	4
A	3.02	5
Dawn	2.86	7
E	2.65	9

Table 2: Trend of Marketability (Preference) and estimated late summer score

Variety	Trend (Units x 1000/Wk)	Estimated Late Summer Score	
		Score	Band
D	+ 40	3.60	1
B	- 6	3.43	2
C	+ 20	3.29	4
Sonato	0	3.27	4
A	- 4	3.00	7
Dawn	+ 13	2.94	7
E	- 5	2.62	11

B) 'VISITORS' PANEL

Table 1: Mean Preference over whole trial period

Variety	Score	Band
D	3.88	1
Sonato	3.76	2
C	3.42	5
B	3.37	5
A	3.35	5
Dawn	3.33	5
E	2.91	9

Table 2: Trend of Marketability (Preference) and estimated late summer score

Variety	Trend (Units x 1000/Wk)	Estimated Late Summer Score	
		Score	Band
D	+ 3	3.89	1
Dawn	+ 99	3.67	2
Sonato	- 56	3.56	3
C	+ 8	3.45	4
B	- 8	3.34	5
A	- 29	3.25	6
E	- 179	2.28	15

Comments: As might be expected the results from the two panels do not give exactly the same relative positions for varieties. However it is clear that the differences do not interfere to any great extent with the interpretation. Varieties D and Sonato score well in both series, C, A and Dawn form an intermediate grouping and variety E is firmly and clearly in the lowest position. Variety B was elevated to the top grouping by the housewives panel. The relative positions of Sonato and Dawn are superficially anomalous but it should be noted that each season the sets of varieties change and with the absence of bright coloured varieties such as the 'J's or Wilset the scoring criteria are likely to alter. Sonato, when defect free, ripens to a rich red whereas Dawn a slow ripening variety may be less preferred early in the season. The Visitors panel analysis of trends is most revealing with Dawn's relative position improving strongly through the hot weather and Sonato declining.

C) Fruit Firmness Measurements

Firmness is tested for all samples after storage by measuring fruit compression under a standard load; thus the lower the score, the firmer the fruit.

Scores are means over the whole trial period (May, June & July)

Variety	Score	Band
D	58.1	1
C	58.2	1
B	58.3	1
Dawn	59.5	2
E	63.6	6
A	65.1	8
Sonato	66.2	9

Comments: Dawn has again proved to be a firm variety and with varieties D, C and B is in a group clearly firmer than the remaining varieties E, A and Sonato.

D) Summary of Marketability Observations

Variety A: Relatively free of defects; a fairly bright coloured fruit. Quite soft after storage and on occasions a tendency to uneven ripening.

Variety B: Bright colour, firm after storage, rarely has defects. Good appearance.

Variety C: Good appearance, firm, few defects, occasional skin blemishes.

Variety D: Good appearance, firm, fairly bright colour, only rarely has defects.

Variety E: Very poor appearance, fairly soft after storage. Skin blemishes frequent with soft patches leading to splitting.

Variety Dawn: Slow ripening, firm, bright colour, very few defects.

Variety Sonato: Soft, can show skin blemish and uneven ripening. Strong red when ripe.

VARIETY SCREENING TRIAL - CONCLUSIONS

Results: Varieties are listed in order of performance to the end of July.

		Yield lb/ft x 30	Band
Danny (ref)	(EZ)	137	1
81289	(Asm)	131	2
692	(RZ)	129	2
1274/82	(Br)	129	2
B 2201	(S&G)	125	3
Marathon (ref)	(VdB)	125	3
B 82.911	(VdB)	124	3
Dawn (ref)	(EZ)	123	3
RS 820290	(RS)	118	4
E 11939B	(EZ)	117	5
E 12165	(EZ)	116	5
81069	(Asm)	115	5

		Return £/ft x 30	Band
Danny (ref)	(EZ)	40.30	1
81289	(Asm)	38.90	2
B 2201	(S&G)	38.40	2
Marathon (ref)	(VdB)	38.40	2
1274/82	(Br)	38.30	2
B 82.911	(VdB)	37.90	2
692	(RZ)	37.90	2
RS 820290	(RS)	35.80	4
Dawn (ref)	(EZ)	35.60	4
E 12165	(EZ)	35.40	4
E 11939B	(EZ)	35.10	4
81069	(Asm)	33.80	5

Comments

In this years screening trial Danny (Enza Zaden) produced the biggest yield and generated the best returns. Three of the new varieties 81289 (Asmer), 692 (Rijk Zwaan) and 1274/82 (Bruinsma) had similar yields to Danny but none had outstanding gradeouts; indeed that of 692 was comparable to Dawn (noted for its poor early quality). B 2201 (Sluis & Groot), although slightly lower yielding to the end of July, had very high overall gradeout but was considerably smaller fruited. B 82.911 (Van den Berg) yielded during the first three months of picking but this was not sustained and it generated slightly lower returns than Marathon (which also has clearly better grading figures). The remaining varieties did no better than Dawn.

84/2 Variety Screening Trial - Detailed Records

Location: West Block.

Sowing Date: 21 October 1983.

Cultural Details: see 84/1.

(A) Cumulative Yield and Return (per ft x 30) to the end of each month

		Yield (lbs)					Return (£'s)				
		Mar	Apr	May	Jun	Jul	Mar	Apr	May	Jun	Jul
B 2201	(S&G)	18	47	74	94	125	7.80	20.00	28.40	32.00	38.40
B 82.911	(VdB)	19	49	74	94	124	7.80	20.60	28.10	31.70	37.90
E 12165	(EZ)	18	44	67	86	116	7.50	18.90	25.60	29.20	35.40
E 11939B	(EZ)	17	44	66	90	117	6.70	18.60	25.00	29.50	35.10
RS 820290	(RS)	18	45	68	89	118	8.10	19.50	26.10	29.70	35.80
692	(RZ)	18	50	75	98	129	7.50	20.00	27.50	31.70	37.90
1274/82	(Br)	19	48	75	97	129	7.20	19.70	28.10	32.00	38.30
81069	(Asm)	18	45	65	86	115	7.20	18.60	24.50	28.10	33.80
81289	(Asm)	19	51	80	99	131	7.20	20.60	29.20	32.50	38.90
Danny (ref)	(EZ)	21	53	79	102	137	8.60	22.00	29.20	33.10	40.30
Marathon (ref)	(VdB)	18	45	73	96	125	7.80	19.50	28.10	32.20	38.40
Dawn (ref)	(EZ)	14	42	73	94	123	5.30	17.00	26.10	29.50	35.60

(B) Cumulative Grading for Early Season (to end April) and mid Season (to end July)

		Early Season (end April)		Mid Season (end July)	
		% Select	Mean Fruit Weight (gms)	% Select	Mean Fruit Weight (gms)
B 2201	(S&G)	94	54.9	93	58.9
B 82.911	(VdB)	76	59.2	81	61.9
E 12165	(EZ)	94	57.8	93	59.9
E 11939B	(EZ)	95	56.1	94	59.3
RS 820290	(RS)	93	58.6	90	61.7
692	(RZ)	49	70.1	59	70.4
1274/82	(Br)	71	56.2	81	62.5
81069	(Asm)	93	52.6	92	56.1
81289	(Asm)	58	59.3	73	62.1
Danny (ref)	(EZ)	74	58.8	78	60.4
Marathon (ref)	(VdB)	95	58.9	92	62.6
Dawn (ref)	(EZ)	47	64.6	60	72.8

(C) Additional Information
(Entries marked with an asterisk (*) are different to the average score for that characteristic by a statistically significant amount).

	Flowering Date	Date of first pick	Plant Height (cms)	Total Fruit Count	Chimera Index
	Truss 1	Truss 1	to Truss 6	Trusses 1-6	
	December	February			
B 2201 (S&G)	13	24	171*	52	0
B 82.911 (VdB)	12*	24	191	51	1
E 12165 (EZ)	12*	22	176	49	0
E 11939B (EZ)	15	28	181	52	1
RS 820290 (RS)	17*	2 Mar*	204*	53	1
692 (RZ)	16*	4 Mar*	189	46*	0
1274/82 (Br)	11*	19*	185	52	0
81069 (Asm)	12*	21*	201*	51	0
81289 (Asm)	14	25	205*	51	0
Danny (ref) (EZ)	15	27	185	58*	2
Marathon (ref) (VdB)	15	26	172*	54	1
Dawn (ref) (EZ)	19*	8 Mar*	182	50	3

84/3 OLD/NEW ROCKWOOL TRIAL

LOCATION: WEST BLOCK (SOUTH)
VARIETY: DAWN

	Seasons Yield		Cumulative Grading		Seasons Returns	
	Kg/m^2	lb/ft x 30	% Select	Mean Fruit Wt. (gms)	£/m^2	£/ft x 30
New Rockwool	22.5	138	60	77.0	14.50	40.40
Old Rockwool	22.5	138	58	76.7	14.40	40.10
Basalan	22.7	139	59	77.4	14.70	40.80
Capogro	22.0	135	61	74.8	14.10	39.20
Grodan	22.9	140	58	78.5	14.60	40.70

No significant differences recorded between old and new rockwool or the three products in either yield or return.

84/5 HEAT SAVING TRIAL

LOCATION: HOUSE C
SOWN: 11 November

Figures are means of 3 varieties, Dawn, Danny, Wilset.

	Seasons Yield		Cumulative Grading		Seasons Returns	
	Kg/m^2	lb/ft x 30	% Select	Mean Fruit Wt. (gms)	£/m^2	£/ft x 30
Single Glass	19.9	122	72	62.4	12.70	35.20
Melinex Lined	18.7	114	72	60.8	11.60	32.20

84/4 & 14 INTERPLANTING OBSERVATION

LOCATION: WEST BLOCK (NORTH)
SPACING: HIGH WIRE - 18"
INTERPLANT - 24"

	Seasons Yield		Cumulative Grading		Seasons Returns	
	Kg/m^2	lb/ft x 30	% Select	Mean Fruit Wt. (gms)	£/m^2	£/ft x 30
HIGH WIRE CROP						
Mean	24.2	148	82	70.5	15.10	42.10
Variety B	25.3	155	95	67.4	16.10	44.60
Variety C	24.8	152	90	70.8	15.90	44.10
Variety D	23.4	143	81	65.5	14.70	40.90
Dawn	23.4	143	63	78.4	13.90	38.60
INTERPLANTED CROP A) Initial Plant*						
Mean	12.0	73	82	68.8	10.00	27.80
Variety B	12.1	74	90	64.5	10.10	28.10
Variety C	12.2	75	93	67.1	10.40	28.90
Variety D	11.4	70	90	65.3	9.80	27.20
Dawn	12.5	77	55	78.2	9.80	27.20
B) Interplants**						
Mean	7.8	48	77	77.3	3.40	9.50
Variety B	7.4	45	86	75.0	3.20	8.90
Variety C	7.9	48	82	77.9	3.40	9.50
Variety D	7.7	47	82	72.8	3.30	9.20
Dawn	8.1	50	59	83.3	3.40	9.50

* last harvest 15 June

** first harvest 4 June

Summary of above, totals to date

	Seasons Yield		Seasons Return	
	Kg/m^2	lb/ft x 30	£/m^2	£/ft x 30
High Wire Crop	24.2	148	15.10	42.10
Interplant Crop	19.8	121	13.40	37.30