

Crop & Food Research Confidential Report No. 1792

**Summary of potato trial research
for 2006–07**

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1 *Executive summary*

This report provides the documentation to support the potato breeding programmes underway at Crop and Food Research with financial support from Horticulture New Zealand.

Data from a number of trials are presented in the appendices.

A popular article that was published in the November 2006 issue of *Grower* is also appended.

Appendices

Appendix I: Potato Regional Trial Results 2006 Grower (November, 2006)

John Anderson and Russell Genet
Crop & Food Research

Over the past season 14 regional trials were conducted (the Ohakune trial was not planted because of poor weather) to assess the performance of advanced breeding lines from Crop & Food Research's potato breeding programme as well as recently imported lines from around the world. These trials were funded by Crop & Food Research, Horticulture New Zealand, and merchants. The assistance of growers on whose properties some of the trials were conducted is gratefully acknowledged.

To remain competitive with products around the world and with local food products, food processors, exporters and local fresh market growers will need to meet the increasingly specific and exacting requirements of their customers. New improved cultivars will be the cornerstone of future advances.

As in previous years, trials were conducted throughout the potato growing regions of the country. Most trials were run successfully. However, the very wet autumn in Canterbury resulted in some damage to plots at Lincoln. Also the Late Waikato trial resulted in high levels of hollow heart or fleck and lower dry matter content than would usually be expected from this site. Details are presented in Table 1.

A short summary of more recent lines entered in the trials is presented below.

MACRUSSET: A main crop French fry line with high yield and good processing quality. Dry matter contents were high in both trials but there were some tubers with pointed ends in South Canterbury and slight fleck at Palmerston North. Agent Eurogrow Potatoes.

MARABEL: An early fresh market line that yielded well in early trials although not as well as in previous years. Performed well in steaming tests and with relatively high dry matter content and good crisping tests may have a place as an early processor. Tubers are oval-shaped with yellow flesh. Agent: Eurogrow Potatoes.

MARLEN: A crisping line with good yield, good dry matter and low sugars and may have some resistance to cold induced sweetening. Only defects were at the late Waikato site with some hollow heart and fleck. Agent: Eurogrow Potatoes.

MILVA: A fresh market line with high yield but marginal appearance, mainly due to pear- or irregular-shaped tubers. Oval-shaped, yellow-fleshed tubers with lowish dry matter content performed well in steaming tests but not suitable for processing. Agent: Eurogrow Potatoes.

RIVERENA RUSSET: A French fry line with high yield and good frying quality. Tendency towards pear-shaped tubers in South Canterbury trial. The late Waikato site resulted in tubers with after-cooking greying, high sugars and some hollow heart. Agent: Eurogrow Potatoes.

94-2-9: A crisping line with medium to high dry matter. Below average yielding at both trial sites and, like most lines, suffered in the late Waikato trial. Agent: Eurogrow Potatoes.

HERMES: Above average yields at all five sites. Tubers had medium to high dry matter contents and produced good crisp scores. Some after-cooking greying was observed in steamed samples. Tubers tended to be slightly irregular in shape or suffered from slight secondary growth. Like most lines in the late Waikato trial, some hollow heart and fleck were observed in this trial.

CROP 22: A second early-main crop fresh market line although sugar levels are usually ok for processing. This line is bruise tolerant, yellow-fleshed and returned an attractive sample from Ohakune in the previous three years. Dry matter content is typically medium and steaming results good. Crisping tests from trials dug before June produced acceptable sugar levels but results from later trials were unreliable. This line was tendered by Crop & Food Research this year and will be marketed by the Ruahine syndicate.

CROP 25: Predominantly a fresh market line with bright waxy textured tubers suitable for boiling, salads and roasting. This line has a high yield potential from crops planted between mid-August and early December. Commercial evaluation is being conducted over this season.

CROP 32 This line has been 'on the shelf' for a couple of seasons, mainly because we wondered whether there was a large enough market to justify its release in New Zealand. Two reasons prompted us to tender it this year. Firstly it had been sent to Australia and our collaborators there have shown interest in promoting it as a specialist cultivar. It has been named Purple Passion in Australia. Secondly we would like to test the opportunity in the New Zealand market for something slightly more specialised and capable of attracting a higher value.

CROP 32 This line is an early-main crop potato suitable for the fresh market. The purple skin colour has a novelty/identification value but this is backed by an excellent cooking quality, especially when dug as a green top. Tubers are oval-shaped and sets are typically high so oversized tubers are uncommon. Tuber flesh is cream to pale yellow and physiological disorders are rare. This cultivar has good resistance to late blight, powdery scab and bacterial soft rot. While yields are not high, most tubers fall in a marketable component.

The major attraction of this cultivar is its cooking quality, showing excellent boiling/steaming results especially when dug slightly immature. The dry matter content is usually about 1.5% higher than that of Nadine. Licensing arrangements are under discussion.

4113-8 This line is the most promising of all the advanced breeding numbers. Apart from the Bombay first early trial and to a lesser extent the Birdlings second early trial, it has yielded well in all trials. Tubers are round to oval-shaped with white skin and cream flesh. An occasional tuber with hollow heart has been seen but other physiological disorders are rare. Dry matter content is usually medium to high. Both steaming and crisping tests gave very good results.

Table 1: Potato line performance in regional trials, 2005–06.

Trial site & maturity	Number of lines	Plant date	Harvest date	Control cultivar	Market yield (t/ha)	Most promising lines in trial
Bombay 1 st early	16	June 10	Nov 3	Ilam Hardy	55	
Birdlings Early	24	Aug 2	Dec 3	Ilam Hardy	54	4141-1, Crop 21
Pukekohe Early	290	Aug 19	Dec 18	Ilam Hardy	44	Marabel, Driver, Summer Delight, 4113-8
Lincoln Early	300	Sept 29	Jan 9	Ilam Hardy	63	Crop 21, Crop 22. Horizon, Marabel, 4113-8
Pukekohe E-main	96	Oct 18	Feb 23	Ilam H. Moonlight	33 47	Summer Delight, Milva , Laura, Crop 22, Lone Ranger, Crop 25, 4113-8
Waikato E-main	20	Oct 25	Mar 16	Rua Moonlight	37 72	Summer Delight, Milva, Laura, Hermes, 4113-8
Lincoln Main	300	Oct 11	May 27	Red Rascal		
S. Cauty Crisping	18	Nov 1	Apr 28	Ilam Hardy	85	Crop 25, Marlen, Fraser, Hermes, 4113-8
S. Cauty French-fry	18	Oct 25	Apr 28	Ranger	84	Moonlight, Crop16, Crop19, MacRusset, LoneRanger
Manawatu Main	102	Oct 19	Apr 5	Moonlight Rua	96 64	Marlen, Summer Delight, Crop 25. 4113-8
Pukekohe Main	320	Nov 2	June 6	Moonlight. Rua	45 17	Milva, Summer Delight, Crop 25, 4113-8, Hermes, Crop16, Agria, Nadine
Waikato Late	20	Dec 14	June 27	Fianna	46	Riverena, Hermes, 4113-8, Moonlight, Marlen
Waikato Ground-store	20	Dec 14	Aug 23	Fianna	34	Riverena
Pukekohe Ground-store	30	Nov 25	Sept 25	Rua	35	Crop 25, 4113-8

Acknowledgements:

The following growers are thanked for allowing trials to be conducted in their crops:

- Pinnacle Growers Ltd – Bombay first early
- Michael Bayley – Birdlings Flat early
- A S Wilcox and Sons – Waikato early main
- COEL Waikato – main and ground store
- Raymond Bowen – South Canterbury crisp and French fry
- Doug Whitfield – Ohakune

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Appendix II: Bombay First Early Trial 2005

Planted 10 June 2005. Harvested 3 November 2005

Number	# Clone	Yield t/ha	Relative Yield	Market t/ha	Relative Market	% Saleable	General Impression	Emergence % 16 Aug	Early Vigour	Vigour	Maturity	Comments		
												sm	sm	sm
1	Ilam Hardy	64.8	100.0	55.4	100.0	85.4	5.9	100.6	7.7	5.7	4.5	sm	sm	sm
2	Summit	45.8	70.6	39.6	71.5	86.6	6.0	100.6	5.4	5.3	6.2	sm	sm	sm
3	Marabel	40.0	61.7	29.4	53.1	73.6	4.9	100.6	6.0	4.7	3.9	sm	sm	sm
4	Swift	48.5	74.8	38.3	69.1	78.9	5.6	99.4	5.3	4.3	3.1	sm	sm	sm
5	Victoria	35.0	54.0	32.9	59.4	94.0	6.1	85.5	2.3	5.3	5.1			
6	Winston	48.1	74.2	45.5	82.1	94.6	5.3	99.4	2.9	4.7	5.4			
7	Crop21	39.3	60.7	34.8	62.7	88.3	4.3	57.7	2.3	5.0	6.4	gr	gr	gr
8	4047.10	51.4	79.2	45.9	82.8	89.4	5.4	100.5	4.0	6.0	5.3	sm	sm	sm
9	4113.3	42.0	64.7	38.6	69.6	92.0	5.3	91.2	2.0	5.0	5.1		gr	
10	4113.8	31.0	47.8	27.3	49.3	87.6	5.4	97.7	3.3	5.7	4.7		sm	sm
11	4141.1	41.4	63.9	35.7	64.4	85.9	5.7	96.8	3.0	4.3	4.4	sm	sm	sm
12	4203.2	27.1	41.7	24.4	44.1	90.2	4.7	50.5	2.0	4.3	6.3	sm	sm	
13	4217.1	50.2	77.4	44.7	80.7	89.0	6.1	99.5	4.4	5.0	4.7	sm	sm	sm
14	4221.2	32.3	49.8	25.4	45.8	78.5	3.6	20.1	1.0	4.7	6.9	cr sm	sm	cr
15	4266.2	34.4	53.0	28.9	52.1	83.9	3.9	78.2	1.7	5.7	5.7	sg	sm cr	sm
16	4271.1	40.4	62.3	31.2	56.4	77.3	5.2	99.5	4.0	4.0	3.7	sm	sm	sm
	# LSD05	5.4	8.3	6.4	11.5	6.7	0.5	15.5	0.9	1.0	0.7			
	# LSD01	7.3	11.2	8.6	15.5	9.0	0.7	21.0	1.2	1.4	1.0			
	# PVALUE	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0			
	# CV%	7.7		10.5		4.7	5.1	10.7	14.2	12.3	8.5			

Number	Clone name	Average DM %	Tuber size	Flesh colour	Comments	Cooking Results		
						Slough	Grey	Agtron
1	Ilam Hardy	17.9	5	2	RO,S EYE,S SKIN	8	5	44
2	Summit	18.2	4	3	RO,S SKIN	8	7	36
3	Marabel	19.4	3	4	OR	6	6	46
4	Swift	14.2	4	4	RO,M ATT	8	7	30
5	Victoria	17.0	6	5	O,S SKIN	8	7	36
6	Winston	12.7	7	4	OR,PR,SKIN	8	6	20
7	Crop21	14.4	8	1	O,S SKIN,5%HH	8	8	30
8	4047.10	17.3	4	1	OL,S PR,S SKIN	8	8	30
9	4113.3	16.6	6	2	OR,S IR,SKIN	8	7	34
10	4113.8	19.8	3	2	RO,S SKIN,S IR	7	6	42
11	4141.1	15.8	4	4	RO	8	6	25
12	4203.2	16.9	5	2	OL,S FLAT,S PR,S SKIN	8	6	32
13	4217.1	17.2	6	2	OR,SKIN,RED	8	6	42
14	4221.2	16.8	6	2	O,S FLAT,SKIN	8	6	30
15	4266.2	15.7	5	2	O,S PR,SKIN	8	7	36
16	4271.1	16.8	4	3	OR,S IR,RED,S SKIN	8	7	40

Appendix III: Birdlings Flat Early Maturity Trial 2005–06

Planted 2 August 2005. Harvested 3 December 2005

Cultivar		Table		Reject	Total		1/12					Colour					Cooking		
Name	Number	Mean	%Control	Mean	Mean	%Control	Mat	SK	SH	Eye	Defects	Ext	Int	Siz	Gl	DM%	SL	GY	AG
Ilam Hardy	1	53.6	100.0	3.3	56.8	100.0	4	4	RO	D	SLIRREG	W	W	ML	5	19.4	6	6	44
Crop32	2	47.3	88.3	4.2	51.5	90.6	5.5	5	OL	S	-	PUP	PY	M	7	17.1	8	7	38
Crop21	3	57.9	108.0	2.5	60.5	106.5	6.5	5	FO	S	-	W	C	L	7	15.2	8	6	25
4085.2	4	46.4	86.5	2.1	48.6	85.5	6.5	7	FLOS	-		W	PY	ML	7	16.6	8	6	30
4113.8	5	47.9	89.3	4.5	52.6	92.4	4	5	RO	SM	-	W	C	M	8	18.0	8	7	38
4141.1	6	57.4	107.1	7.5	64.8	114.0	6	6	R	S	-	W	PY	M	7	15.0	8	7	20
4194.1	7	37.8	70.4	4.9	42.8	75.2	8	4	OL	S	SSG,HH	W	W	ML	6	16.1	8	6	36
4200.2	8	53.9	100.5	4.9	58.9	103.7	7.5	6	OL	S	-	W	W	ML	8	18.3	6	6	36
4201.4	9	45.0	83.8	6.9	51.9	91.3	5	7	O	S	SGC	W	C	M	7	14.9	8	6	25
4203.2	10	45.7	85.2	4.6	50.2	88.2	8.5	6	O	S	-	W	C	M	7	17.0	9	6	36
4208.4	11	47.2	88.0	1.9	49.2	86.5	5	6	FO	S	SHH	W	C	ML	6	18.7	7	8	46
4217.1	12	47.0	87.6	2.3	49.2	86.6	5	7	FO	SM	-	RR	C	ML	7	17.6	8	7	40
4217.6	13	40.0	74.5	10.7	50.8	89.3	6	5	FO	S	SLIRREG	W	C	M	6	18.6	8	7	40
4221.3	14	45.2	84.3	5.9	51.0	89.7	5	7	RO	S	-	W	PY	M	6	17.6	7	7	36
4223.2	15	53.5	99.7	4.9	58.4	102.7	4	8	RO	SM	-	W	W	M	8	19.7	8	6	46
4231.5	16	51.3	95.6	3.5	54.9	96.6	6	6	FO	S	-	W	Y	L	6	15.0	8	7	30
4231.9	17	41.6	77.6	4.8	46.5	81.9	7	4	OL	M	-	W	C	M	6	16.6	8	6	40
4235.6	18	52.6	98.0	4.1	56.6	99.5	7	5	FO	S	-	W	PY	M	8	15.4	8	8	32
4243.5	19	50.7	94.6	2.4	53.1	93.4	8	7	RO	S	-	W	W	SM	8	17.2	8	8	38
4252.2	20	47.4	88.3	7.1	54.6	96.1	7	4	RO	S	-	P	W	SM	7	18.7	8	7	38
4266.2	21	47.7	88.9	6.5	54.2	95.4	6	6	O	S	-	W	W	M	7	16.3	8	5	42

Cultivar		Table		Reject	Total		1/12					Colour					Cooking		
Name	Number	Mean	%Control	Mean	Mean	%Control	Mat	SK	SH	Eye	Defects	Ext	Int	Siz	GI	DM%	SL	GY	AG
4271.1	22	46.5	86.6	4.2	50.5	88.9	6	7	OL	S	-	R	Y	M	8	18.1	7	8	40
4289.3	23	50.9	94.8	4.8	55.5	97.7	5.5	7	FOL	S	-	W	Y	ML	8	17.4	7	8	38
4320.1	24	45.1	84.2	1.9	47.1	82.8	9	6	OL	S		W	W-	ML	8	16.88	8	8	40
LSD05			6.31			6.31													
LSD01			8.38			8.38													
CV%			9.18			8.37													

Appendix IV: Pukehohe Early Trial 2005 – Trial No.# 06PKE3A

Planted 19 August 2005. Harvested 28 December 2005

Number	# Clone	Yield t/ha	Relative Yield	Market t/ha	Relative Market	% Saleable	General Impression	Vigour	Maturity	Comments		
										gr	gr	gr
1	Ilam Hardy	54.5	97.8	44.3	94.3	79.7	5.6	4.2	3.7	gr	gr	gr
2	Driver	56.9	102.2	49.7	105.7	87.7	6.5	5.0	4.0		gr	sm
3	Horizon	37.7	67.7	34.8	73.9	92.4	6.6	3.4	2.0		sm	sm
4	Marabel	49.0	88.0	43.3	92.1	88.2	6.2	4.7	3.3	gr	gr	sm
5	Summer.D	52.3	93.9	47.7	101.5	91.1	6.6	5.4	5.0	gr	gr	
6	Summit	39.2	70.3	30.2	64.2	77.8	5.4	4.8	3.3	gr	gr	gr
7	Crop21	55.8	100.2	39.2	83.4	69.8	4.5	4.8	3.7	gr	gr	grr
8	Crop22	42.9	77.1	38.1	81.1	88.0	6.2	4.0	4.3	gr	gr	gr
9	Crop25	33.4	59.9	26.9	57.1	79.2	5.3	4.3	5.7	cr	gr	gr
10	Crop28	31.9	57.2	28.7	61.0	89.9	5.9	3.4	4.0	sg	sg	gr
11	4085.2'	47.9	85.9	38.2	81.2	79.3	5.7	5.3	5.0	dr	gr	gr
12	4113.8'	49.1	88.2	45.5	96.8	92.5	7.2	4.6	4.3			gr
13	4141.1'	26.2	47.0	23.0	49.0	82.9	6.1	3.3	2.3		sm	
14	4194.1'	37.4	67.0	30.6	65.0	82.8	5.7	3.7	4.3	gr	gr	sm
15	4200.2McC'	36.4	65.2	25.1	53.4	69.1	4.5	4.5	4.0	gr	gr cr	gr
16	4201.4'	38.6	69.2	27.3	58.1	69.9	4.5	3.9	3.7	gr	cr sg	sm
17	4203.2'	48.3	86.7	36.5	77.6	75.9	5.5	5.2	5.7	gr	gr	grr
18	4208.4C'	33.5	60.0	26.6	56.6	78.7	5.4	2.8	4.0	gr	gr	gr
19	4217.1'	45.1	81.0	33.0	70.2	73.1	4.9	4.0	4.0	gr	gr	gr
20	4217.6'	20.4	36.6	15.3	32.5	70.9	4.6	3.3	2.4	sm	sm	sm
21	4221.2'	27.1	48.7	24.1	51.3	87.5	5.3	2.3	3.3	sm	cr	cr
22	4221.3'	39.6	71.0	33.9	72.2	85.3	6.0	4.3	3.0	gr	gr	Gr

Number	# Clone	Yield t/ha	Relative Yield	Market t/ha	Relative Market	% Saleable	General Impression	Vigour	Maturity	Comments		
										gr	cr	cr gr
23	4221.5'	36.9	66.2	29.0	61.7	78.8	5.3	3.5	4.3	gr	cr	cr gr
24	4223.2'	35.2	63.2	31.0	66.0	87.4	6.1	4.1	3.0	gr	gr	sm
25	4231.5'	41.9	75.1	28.7	61.1	69.4	4.5	3.4	3.7	gr	gr cr	gr
26	4231.9'	42.9	77.0	27.6	58.7	65.4	4.2	4.5	5.7	gr	gr sm	gr
27	4235.6'	34.6	62.1	25.9	55.1	74.1	4.7	3.3	5.0	gr	gr	gr
28	4242.1'	37.3	66.9	30.7	65.4	82.9	5.9	4.4	4.0	gr	gr	gr
29	4242.2C'	40.8	73.3	32.8	69.8	81.3	5.4	5.3	6.3	sm	cr	gr
30	4243.5'	56.5	101.4	47.6	101.2	84.5	6.6	5.3	5.7	gr	gr	gr
31	4244.2'	47.2	84.7	42.7	90.8	90.6	7.0	3.6	4.7			
32	4249.3'	31.6	56.7	22.9	48.7	70.3	4.6	2.4	3.7	sm	sm	gr
33	4252.2'	37.5	67.4	33.1	70.4	87.3	6.2	4.7	4.0		sm	sm
34	4253.6'	39.1	70.1	30.0	63.9	75.4	5.0	4.0	5.0	gr	gr	gr
35	4256.3'	32.2	57.7	26.7	56.8	84.6	5.9	3.7	4.0	sm gr		sm
36	4257.1C'	38.4	68.8	32.2	68.6	83.7	5.9	4.7	5.0	gr		sm
37	4262.3'	33.6	60.3	29.2	62.0	86.3	6.0	5.0	8.3		sm	sm
38	4266.2'	38.7	69.4	32.6	69.5	84.1	5.5	3.7	4.0	gr cr	sm	cr
39	4267.2'	42.1	75.5	34.2	72.8	81.3	5.9	3.6	3.0	gr	sm	gr
40	4268.6'	35.6	63.9	29.1	61.9	79.5	5.6	4.3	3.0	sm	gr	sm
	# LSD05	7.6	13.7	9.3	19.7	13.9	1.3	1.1	1.1			
	# LSD01	10.1	18.2	12.3	26.1	18.4	1.7	1.4	1.5			
	# PVALUE	0.0		0.0		0.0	0.0	0.0	0.0			
	#CV%	11.1		16.5		10.2	13.5	15.3	16.7			

Number	Clone name	Average DM %	Tuber size	Flesh colour	Comments	Cooking Slough	Results Grey	Agtron
1	Ilam Hardy	18.4	6	2	RO,M EYE,S IR,30%HH	7	7	44
2	Driver	19.1	5	3	OR	8	8	48
3	Horizon	16.4	5	1	OR,M ATT	7	8	30
4	Marabel	19.1	5	5	RO	8	6	42
5	Summer.D	16.3	7	4	OR,M ATT	8	7	34
6	Summit	19.0	4	3	OR	7	7	38
7	Crop21	15.9	8	2	OR5%HH,FL4	8	7	25
8	Crop22	18.6	6	6	OR	7	8	44
9	Crop25	18.7	5	2	RO,FL5	7	7	38
10	Crop28	19.5	5	1	RO,M BRITE,S IR,5%HH	8	8	50
11	4085.2'	17.0	7	4	OL,S FLATS IR	8	8	36
12	4113.8'	18.9	5	3	RO,10%HH	7	7	42
13	4141.1'	17.5	3	5	RO	8	8	30
14	4194.1'	17.1	5	2	O,S IR,S SG,S ROT	8	4	36
15	4200.2McC'	19.5	5	2	O,FL9	8	8	40
16	4201.4'	17.8	5	2	OR	8	7	32
17	4203.2'	17.4	7	2	O,M BRITE,S IR,5%H,FL3	8	7	36
18	4208.4C'	19.6	5	3	OR,S FLAT,S IR,S PR,FL12	8	8	46
19	4217.1'	18.4	7	3	O,RED,S IR,5%HH,FL4	8	7	50
20	4217.6'	18.0	3	2	OR,S IR	8	7	40
21	4221.2'	17.1	6	1	OR	7	7	36
22	4221.3'	18.4	5	5	OR	6	8	40

Number	Clone name	Average DM %	Tuber size	Flesh colour	Comments	Cooking Results		
						Slough	Grey	Agtron
23	4221.5'	17.1	6	2	OR,5%HH,S ROT	6	8	42
24	4223.2'	19.1	5	1	OR,S GLASS	8	6	46
25	4231.5'	17.3	7	5	OR	7	8	38
26	4231.9'	17.5	6	2	O	8	7	46
27	4235.6'	15.7	6	4	RO,FL2,M ROT	7	8	30
28	4242.1'	18.2	5	1	O,RED,S FLAT	8	7	44
29	4242.2C'	19.1	4	3	O,S FLAT	7	8	40
30	4243.5'	17.5	6	2	O,M BRITE,M ATT,5%HH	8	8	44
31	4244.2'	17.4	5	3	OR,5%HH	7	8	44
32	4249.3'	18.1	4	6	RO,S IR,S ROT,5%HH	7	7	46
33	4252.2'	18.1	4	1	OR,L RED,M EYE	8	8	34
34	4253.6'	17.6	5	6	OR,S RUS,S IR	7	7	38
35	4256.3'	18.9	3	7	RO,S RUS	8	8	46
36	4257.1C'	19.8	5	4	OR	8	8	48
37	4262.3'	20.7	4	3	O,S IR.FL3	7	3	46
38	4266.2'	16.3	5	2	O,S IR,S ROT	8	7	34
39	4267.2'	19.4	4	1	O,RED EYE	6	7	50
40	4268.6'	17.4	4	1	OR,SPL PK,FL2	7	8	50

Appendix V: Lincoln Early Trial A 2005–06

Planted 29 August 2005. Harvested 9 January 2006

Variety		Table		Seed		Reject	Total	
Name	Number	Mean	%Cont	Mean	%Cont	Mean	Mean	%Cont
Ilam Hardy	1	62.9	100.0	9.4	100.0	0.0	72.3	100.0
Horizoneg	2	54.7	86.9	5.8	61.9	3.1	63.7	88.0
Marabeleg	3	51.2	81.4	12.8	135.7	0.4	64.4	89.1
Rocket	4	41.3	65.7	5.4	57.1	9.6	56.2	77.8
Sinoraeg	5	61.5	97.9	8.0	84.5	0.4	70.0	96.7
937/3	6	49.8	79.2	17.1	181.0	0.0	66.9	92.5
2886.3	7	53.8	85.5	6.1	64.3	0.7	60.5	83.7
2279.3	8	71.9	114.2	2.2	23.8	0.8	74.9	103.6
3011.6C	9	37.3	59.4	8.8	92.9	1.2	47.3	65.5
4085.2	10	53.1	84.4	7.9	83.3	0.2	61.2	84.6
4113.8	11	72.3	115.0	9.4	100.0	0.0	81.8	113.1
4141.1	12	45.0	71.6	14.2	150.0	0.7	59.8	82.7
4194.1	13	36.1	57.4	12.1	128.6	0.7	48.9	67.7
4200.2MCC	14	45.0	71.6	13.0	138.1	1.7	59.7	82.6
4201.4	15	29.9	47.6	10.1	107.1	8.5	48.6	67.2
4203.2	16	61.4	97.7	7.0	73.8	2.0	70.4	97.4
4208.4C	17	49.9	79.4	5.4	57.1	2.5	57.8	79.9
4217.1	18	58.5	93.0	2.9	31.0	6.7	68.2	94.2
4217.6	19	44.5	70.8	11.0	116.7	1.7	57.2	79.2
4221.2	20	43.6	69.4	5.6	59.5	1.6	50.8	70.3
4221.3	21	40.5	64.4	10.8.3	114.3	1.0	52.3	72.3
4221.5	22	23.5	37.4	12.4	131.0	7.6	43.5	60.2
4223.2	23	68.4	108.8	5.2	54.8	1.6	75.1	103.9
4231.5	24	48.1	76.6	6.1	64.3	3.4	57.6	79.6
4231.9	25	31.9	50.8	11.9	126.2	0.1	44.0	60.8
4235.6	26	45.5	72.5	9.4	100.0	4.5	59.5	82.3
4242.1	27	45.2	71.9	5.4	57.1	7.4	58.0	80.2
4242.2C?	28	22.3	35.4	13.5	142.9	0.2	36.0	49.8
4243.5	29	62.2	98.9	6.3	66.7	0.8	69.3	95.8
4244.2	30	45.9	73.0	11.7	123.8	0.4	58.0	80.2
#LSD05		12.49		4.20			12.62	
#LSD01		16.51		5.55			16.68	
#CV%		16.76		25.03			13.49	

Variety		Table		Seed		Reject	Total	
Name	Num	Mean	%Cont	Mean	%Cont	Mean	Mean	%Cont
4249.3	31	45.0	71.6	13.9	147.6	0.2	59.2	81.8
4252.2	32	55.3	88.0	14.4	152.4	0.3	70.1	96.9
4253.6	33	40.6	64.6	9.6	101.2	0.0	50.2	69.4
4256.3	34	47.7	75.8	13.9	147.6	0.2	61.9	85.5
4257.1C	35	30.1	47.9	11.7	123.8	0.0	41.8	57.9
4262.3	36	26.3	41.9	12.8	135.7	1.7	40.8	56.5
4266.2	37	56.5	89.8	9.7	102.4	1.1	67.3	93.0
4267.2	38	44.4	70.7	11.7	123.8	0.6	56.7	78.4
4268.6	39	65.3	103.9	11.7	123.8	0.0	77.0	106.5
4268.7	40	31.5	50.1	27.9	295.2	0.0	59.4	82.1
4269.1C?	41	38.2	60.8	14.4	152.4	0.0	52.6	72.8
4271.1	42	55.2	87.8	14.1	148.8	0.2	69.5	96.1
4271.2	43	47.5	75.5	9.2	97.6	0.0	56.7	78.4
4273.2	44	48.7	77.5	10.5	110.7	0.0	59.2	81.8
4289.3	45	44.6	71.0	8.9	94.0	0.3	53.9	74.5
4303.1C?	46	62.2	98.9	8.1	85.7	0.3	70.6	97.7
4320.1	47	45.4	72.3	8.1	85.7	0.0	53.5	74.0
4320.5	48	44.1	70.1	12.5	132.1	0.3	56.9	78.7
4324.3	49	34.9	55.5	14.7	156.0	0.0	49.6	68.6
4325.2	50	33.7	53.7	14.7	156.0	0.0	48.5	67.0
4331.3	51	54.0	85.9	10.5	110.7	0.0	64.4	89.1
4332.3	52	36.0	57.2	14.5	153.6	2.1	52.6	72.8
BB54332.4BL	53	51.4	81.8	11.4	120.2	0.4	63.2	87.4
4332.5	54	41.6	66.2	8.7	91.7	0.4	50.7	70.1
4335.1	55	21.6	34.3	9.8	103.6	2.2	33.6	46.5
4340.4	56	59.4	94.5	7.0	73.8	0.0	66.4	91.8
4342.1	57	37.7	59.9	7.1	75.0	1.1	45.9	63.5
BB84343.3BL	58	18.1	28.8	18.3	194.0	0.0	36.4	50.4
4344.1	59	41.9	66.7	9.0	95.2	0.3	51.3	70.9
4344.5	60	49.1	78.2	6.5	69.0	0.0	55.7	77.0
#LSD05		12.49		4.20			12.62	
#LSD01		16.51		5.55			16.68	
#CV%		16.76		25.03			13.49	

Variety		Defects					Colour					Cooking		
Name	Num	Sk	Sh	Eye	Ext	Int	Ext	Int	Siz	GI	DM%	SL	GY	AG
Ilam Hardy	1	TYP									20.6	6.0	6.0	44
Horizoneg	2	SF	RO	S	OK	SGC			ML	7	17.4	7.0	7.0	20
Marabeleg	3	S	OL	S	OK	OK			M	6	22.5	8.0	7.0	46
Rocket	4	SF	RO	SM	SEVGC	OK			M	4	17.8	7.0	6.0	36
Sinoraeg	5	S	RO	S	OK	OK	W	Y	M	7	20.3	8.0	7.0	44
937/3	6	S	FO	S	OK	OK	W	W	M	7	19.9	7.0	7.0	36
2886.3	7	S	OL	S	SPTS	OK	W	Y	M	6	21.3	7.0	8.0	40
2279.3	8	S	FRO	S	SSG	OK	W	W	LL	7	16.6	7.0	6.0	20
3011.6C	9	SF	RO	S	SSG	OK	W	C	SM	5	20.2	8.0	6.0	44
4085.2	10	SF	O	S	OK	OK	W	PY	M	7	19.9	8.0	7.0	40
4113.8	11	SF	O	S	OK	OK	W	PY	ML	7	21.5	8.0	7.0	44
4141.1	12	S	O	S	OK	OK	W	Y	ML	8	18.3	8	8	20
4194.1	13	SF	OL	S	OK	OK	W	W	M	7	20.4	7.0	6.0	36
4200.2MCC	14	S	OL	S	SSG	OK	W	W	M	6	21.4	6.0	8.0	40
4201.4	15	SF	O	S	MSG	OK	W	C	M	7	18.7	7.0	7.0	20
4203.2	16	S	O	S	OK	OK	W	C	LL	7	18.8	8.0	6.0	36
4208.4C	17	S	FO	S	SSG	OK	W	W	ML	7	22.8	5.0	7.03	6
4217.1	18	SF	FO	SM	SGC	OK	R	C	L	6	20.8	6.0	6.0	40
4217.6	19	SF	FO	S	SGC	OK	W	W	ML	8	21.8	7.0	7.0	40
4221.2	20	SF	OL	S	OK	OK	W	W	M	8	19.6	6.0	7.0	25
4221.3	21	SF	FRO	S	OK	OK	W	Y	M	8	20.2	6.0	8.0	40
4221.5	22	SF	O	S	SECGC	OK	W	C	SM	6	18.7	7.0	8.0	40
4223.2	23	SF	FRO	S	OK	OK	W	W	ML	8	22.8	6.0	4.0	44
4231.5	24	SF	RO	SM	SSG	OK	W	Y	ML	6	17.5	8.0	6.0	34
4231.9	25	SF	LO	S	OK	OK	W	C	ML	7	20.3	8.0	6.0	40
4235.6	26	S	RO	S	SGC	2HH	W	Y	M	6	17.9	8.0	7.0	36
4242.1	27	S	FOL	S	MSG	OK	R	C	ML	7	21.1	7.0	6.0	46
4242.2C?	28	SF	O	S	OK	OK	W	C	SM	6	21.1	7.0	7.0	48
4243.5	29	SF	RO	S	OK	OK	W	W	ML	8	19.5	7.0	7.0	44
4244.2	30	SF	OL	S	SSG	1HH	W	C	ML	7	20.1	7.0	7.0	48

Variety		Defects					Colour					Cooking		
Name	Number	Sk	Sh	Eye	Ext	Int	Ext	Int	Siz	Gi	Dm%	Sl	Gy	Ag
4249.3	31	SF	OL	S	OK	OK	W	Y	M	7	22.2	6.0	7.0	44
4252.2	32	SF	OL	SM	OK	OK	P	C	M	7	21.6	5.0	6.0	34
4253.6	33	SF	RO	S	OK	OK	W	Y	M	8	21.3	8.0	7.0	46
4256.3	34	F	R	S	OK	OK	W	Y	M	8.5	22.6	7.0	7.0	46
4257.1C	35	SF	RO	S	OK	OK	W	PY	M	7.5	21.8	7.0	6.0	44
4262.3	36	SF	O	S	SGC	OK	W	W	SM	7	22.2	5.0	8.0	44
4266.2	37	SF	RO	S	SGC	OK	W	W	M	7	19.0	7.0	8.0	44
4267.2	38	SF	O	S	SIRR	OK	W/P	C	M	7	23.7	5.0	4.0	44
4268.6	39	S	RO	S	OK	OK	PP	C	ML	7	20.5	6.0	7.0	44
4268.7	40	SF	RO	S	OK	OK	W	PY	S	7	22.0	8.0	7.0	42
4269.1C?	41	SF	LO	S	SHK	OK	W	PY	ML	7	22.5	6.0	6.0	44
4271.1	42	SF	FOL	S	OK	OK	R	PY	ML	7	21.0	6.0	8.0	44
4271.2	43	S	LO	S	OK	OK	W	PY	ML	8	20.3	7.0	8.0	44
4273.2	44	SF	L	S	OK	OK	W	C	ML	8	20.4	7.0	6.0	44
4289.3	45	SF	FOL	S	OK	OK	W	PY	ML	8	20.4	4.0	8.0	36
4303.1C?	46	SF	FO	S	OK	OK	W	PY	ML	8	13.8	8.0	5.0	36
4320.1	47	SF	OL	S	OK	1AHH	W	C	ML	8	20.2	8.0	7.0	34
4320.5	48	SF	OL	S	OK	1HH	W	Y	ML	8	20.8	8.0	8.0	36
4324.3	49	SF	O	S	OK	OK	W	W	M	7	20.4	6.0	6.0	44
4325.2	50	SF	O	S	OK	OK	W	W	M	7	19.9	7.0	6.0	40
4331.3	51	S	OL	S	SIRR	OK	W	W	ML	6	19.1	6.0	7.0	36
4332.3	52	S	L	S	SSG	OK	W	W	ML	6	19.9	6.0	8.0	44
BB54332.4BL	53	SF	RO	SM	SGC	OK	W	C	L	7	20.3	6.0	7.0	40
4332.5	54	S	FLO	S	SIRR	OK	W	C	ML	6	18.9	5.0	7.0	38
4335.1	55	SF	LL	S	IRR	OK	W	Y	M	5	21.3	5.0	6.0	44
4340.4	56	SF	LO	S	OK	OK	W	W	LL	8	19.2	8.0	7.0	48
4342.1	57	S	FO	S	SIRR	1HH	R	W	M	7	19.8	8.0	6.0	38
BB84343.3BL	58	F	LO	S	OK	OK	W	W	S	6	20.8	7.0	6.0	50
4344.1	59	SF	O	SM	SIRR	OK	W	W	ML	6	20.4	6.0	6.0	34
4344.5	60	SF	LO	S	SIRR	OK	W	W	ML	7	20.1	8.0	7.0	36

Appendix VI: Pukekohe Early–Main Trial 2005 – Trial No.# 06PKE-M3A

Planted 18 October 2005. Harvested 23 February 2006

Number	# Clone	Yield t/ha	Relative Yield	Market t/ha	Relative Market	% Saleable	General Impression	Vigour	Maturity	Comments		
1	Ilam Hardy	45.5	88.0	32.5	81.8	75.5	4.2	4.7	2.8	gr	tm	sg
2	Moonlight	57.9	112.0	46.9	118.2	83.3	5.8	5.3	4.2	gr	gr	gr
3	Laura	52.4	101.4	42.3	106.5	79.9	6.2	5.0	3.0	tm	tm	gr
4	Milva	47.5	91.9	40.1	101.1	80.5	5.3	4.3	4.2	gr	gr	sm
5	Summer.D	65.4	126.4	52.5	132.4	79.8	6.3	5.7	2.0	tm	tm	tm
6	Fill	47.0	90.8	30.1	75.8	67.3	4.3	4.7	2.7	tm	gr	gr
7	Driver	50.8	98.2	35.3	89.0	65.2	4.4	5.0	2.9	sm	sm tm	sm tm
8	Lone.Rang	49.5	95.8	43.6	109.9	87.3	6.4	5.0	4.0	sm		sm
9	Nadine	51.1	98.8	35.5	89.5	72.1	5.6	4.0	1.3	tm	sm tm	tm
10	Ranger	22.0	42.5	15.3	38.6	66.6	4.3	4.3	2.3	sm	sm	sm
11	Rua	42.9	82.8	39.7	100.1	88.9	6.1	4.7	5.4	sm	sm	gr
12	Crop16	43.0	83.2	22.9	57.7	57.6	4.0	5.3	5.7	tm	gr	tm
13	Crop20	38.1	73.7	33.2	83.6	90.0	6.2	6.0	6.6		sm	sm
14	Crop21	73.1	141.3	39.7	100.1	56.1	3.8	5.0	4.4	gr tm	gr tm	gr tm
15	Crop22	51.9	100.3	38.8	97.8	73.5	5.6	4.7	3.2	gr	gr	gr tm
16	Crop25	57.4	110.9	48.2	121.4	81.6	6.0	6.0	5.6	gr	sm	sm tm
17	Crop28	32.0	61.8	26.5	66.8	79.1	6.2	4.7	4.5	gr	tm	sm tm
18	1229/9	54.7	105.8	45.5	114.6	83.2	5.8	6.0	7.7	gr	gr	
19	4085.2	41.4	80.1	30.4	76.5	74.8	5.3	5.7	5.2	tm	gr	tm
20	4113.8	51.5	99.6	42.0	105.9	78.5	5.7	5.0	5.0	gr	sm	gr
21	4141.1	37.6	72.7	22.9	57.6	63.0	4.5	4.7	1.7	sm	sm	sm sg
22	4194.1	38.7	74.8	28.4	71.5	74.0	5.4	4.3	4.3	gr	sg	gr
23	4200.2	39.1	75.7	23.6	59.4	55.8	4.1	5.0	2.6	gr	tm	tm cr
24	4201.4	33.1	63.9	22.5	56.7	68.2	5.1	4.3	1.4	tm	sm	sm
	# LSD05	10.3	20.0	8.5	21.5	14.1	1.0	0.8	0.8			
	# LSD01	13.8	26.7	11.4	28.7	18.8	1.3	1.1	1.1			
	# PVALUE	0.0		0.0		0.0	0.0	0.0	0.0			
	# CV%	12.6		12.9		10.8	10.4	10.0	12.0			

Number	Clone Name	Average DM %	Tuber Size	Flesh Colour	Comments	Cooking Results		
						Slough	Grey	Agtron
1	Ilam Hardy	16.5	5	2	RO,M EYE,S IR,5%HH	8	6	36
2	Moonlight	17.7	7	2	OR,S IR	8	6	46
3	Laura	17.3	5	9	0,RED,M ATT,FL6	8	8	46
4	Milva	16.2	5	7	RO.S RUS,PR,S IR	8	8	30
5	Summer.D	16.3	7	5	OR,M ATT	8	7	46
6	Fill							
7	Driver	18.4	4	3	RO	8	7	50
8	Lone.Rang	17.9	5	1	L	8	7	50
9	Nadine	15.7	4	1	O,M BRITE,M ATT	8	8	30
10	Ranger	17.6	3	1	LO,RUS	8	8	46
11	Rua	17.8	5	1	RO,S SKIN	8	7	38
12	Crop16	18.6	6	6	OR	8	8	46
13	Crop20	20.8	5	1	OR,RED,S FLAT	8	7	50
14	Crop21	16.5	8	2	O,S IR,FL4	7	7	30
15	Crop22	19.0	6	6	OR	8	8	50
16	Crop25	19.2	6	2	RO,M BRITE,M ATT	7	7	46
17	Crop28	18.3	5	2	OR,BRITE,M ATT	8	6	50
18	1229/9	20.6	7	1	O,S RUS	8	7	46
19	4085.2	17.1	5	6	OR,S RUS,S IR,S PR	8	7	40
20	4113.8	19.2	6	3	RO	8	8	50
21	4141.1	16.6	3	5	RO,S EYE,M BRITE	8	7	34
22	4194.1	16.2	6	2	OL,S IR	7	6	44
23	4200.2	18.9	5	1	OL	6	7	54
24	4201.4	18.9	4	1	O,M ATT	7	7	

Appendix VII: Pukekohe Main Trial 2005/06 – Trial No.# 06PKM3A

Planted 2 November 2005. Harvested 21 June 2006

Number	# Clone	Yield t/ha	Relative Yield	Market t/ha	Relative Market	% Saleable	General Impression	Vigour	Maturity	Comments		
1	Moonlight	53.2	142.0	44.6	144.0	85.9	6.3	5.4	4.0	gr	gr	
2	Rua	21.7	58.0	17.3	56.0	71.2	5.3	3.7	4.3	sm	sm	sm
3	Agria	56.1	149.7	44.4	143.3	80.7	6.1	4.5	3.3	gr	gr	gr
4	Crop 16	51.2	136.5	40.5	130.7	78.8	5.6	5.4	5.0	sm	gr sm	sm
5	Nadine	64.6	172.4	44.7	144.3	68.4	5.3	3.4	1.0	sm gr	gr	gr
6	Fianna	44.9	119.9	35.6	114.8	79.1	5.5	4.0	4.1	sm	gr	sm
7	Hermes	50.6	135.1	42.0	135.7	83.9	5.8	4.1	2.0	gr	gr	sm
8	Ilam Hardy	37.6	100.2	27.8	89.8	74.0	5.1	3.8	2.7	gr	gr	gr
9	Laura	39.8	106.2	33.5	108.0	83.7	6.4	3.7	1.7	gr	gr	sm
10	Lone.Rang	46.5	124.1	36.5	117.8	79.5	5.5	5.2	3.6	sm	sm	gr
11	Milva	46.3	123.6	37.2	120.1	80.4	5.1	3.7	2.3	sm	su	gr
12	Summer.D	74.0	197.6	60.6	195.6	84.1	6.2	5.5	2.3	gr	gr	gr
13	Crop20	47.8	127.6	41.9	135.2	87.0	6.2	5.2	6.1	gr	gr	gr
14	Crop22	40.5	108.1	33.0	106.6	80.6	5.9	3.7	2.3	gr	sm	gr
15	Crop25	55.3	147.5	46.4	149.6	84.3	6.3	5.8	5.4	sm	gr	sm
16	Crop28	26.2	69.8	22.3	72.1	84.9	6.1	3.6	3.0	sm	sm	sm
17	813/28	32.9	87.9	22.4	72.4	68.1	5.2	3.1	1.9	gr	gr	sm
18	989/10	27.3	72.9	21.9	70.5	81.1	5.5	3.8	2.0	sm	gr	gr
19	1143/6	23.4	62.5	19.1	61.5	78.4	5.4	3.3	2.4	gr	gr	sm
20	1229/9	42.8	114.1	37.2	120.1	86.3	6.0	5.6	6.3	gr	gr	gr
21	3175.2	42.4	113.1	33.0	106.4	78.6	5.6	5.7	5.6	gr	gr	gr
22	4085.2	37.0	98.8	29.7	95.7	79.6	5.4	4.3	4.3	gr	gr	gr
23	4086.1	30.4	81.2	23.0	74.2	73.1	5.3	2.9	1.9	gr	gr	gr
24	4113.8	49.0	130.8	40.1	129.5	81.1	6.0	4.4	3.6	gr	gr	gr
25	4141.1	37.0	98.8	28.4	91.6	76.7	5.6	3.6	1.3	sm	sm	sm
26	4192.3	31.6	84.3	22.1	71.4	70.8	5.1	3.6	1.9	gr	sm	gr
27	4194.1	32.5	86.8	28.7	92.5	86.3	6.0	3.6	4.1	sm	gr	sm
28	4200.2	28.8	76.9	22.1	71.3	76.6	5.5	3.2	2.3	gr	sm	gr cr
29	4201.4	36.7	98.0	26.8	86.6	73.9	5.2	3.7	1.2	sm	gr	sm

Number	# Clone	Yield t/ha	Relative Yield	Market t/ha	Relative Market	% Saleable	General Impression	Vigour	Maturity	Comments		
30	4203.2	46.0	122.9	39.0	125.7	84.5	6.0	4.2	2.4	gr		gr
31	4208.4	31.9	85.0	24.4	78.9	78.7	5.8	3.4	1.4	gr	sm	gr
32	4217.1	46.2	123.2	34.3	110.6	75.6	4.8	3.6	1.6	gr	gr sp	sp
33	4217.6	32.4	86.5	23.1	74.5	70.2	5.0	3.1	1.4	gr	sm	gr sm
34	4221.2	24.6	65.8	17.0	54.7	68.0	4.7	2.9	1.0	cr gr	gr	cr
35	4221.3	35.5	94.8	28.3	91.4	79.6	5.3	3.6	1.3	sm	gr	gr
36	4221.5	22.2	59.3	16.0	51.7	72.2	5.1	3.1	1.1	gr cr	sm	sm
37	4223.2	42.1	112.3	34.0	109.7	80.8	5.6	3.7	1.5	gr	gr	gr
38	4231.5	36.9	98.5	26.4	85.1	72.0	5.5	3.3	2.1	sm	gr	gr
39	Driver	52.2	139.3	44.2	142.6	85.0	6.2	4.3	2.6	sm	sm	sm
40	Ranger	17.6	46.9	13.4	43.2	76.7	5.0	3.0	1.2	sm	gr	gr
	# LSD05	12.3	32.9	10.1	32.6	10.5	0.8	0.9	1.0			
	# LSD01	16.3	43.6	13.4	43.2	14.0	1.0	1.2	1.3			
	# PVALUE	0.0		0.0		0.0	0.0	0.0	0.0			
	# CV%	18.4		18.9		7.9	8.4	13.8	20.8			

Number	Clone Name	Average DM %	Tuber Size	Flesh Colour	Comments	Cooking Results		
						Slough	Grey	Agtron
1	Moonlight	18.8	6	2	OR,S RUS,10%HH	8	6	30
2	Rua	17.9	5	1	RO	8	6	44
3	Agria	17.7	6	7	O	9	7	44
4	Crop 16	18.7	4	5	OR	8	7	44
5	Nadine	14.9	5	1	RO,FL2	8	5	20
6	Fianna	19.3	5	2	RO,S IR,10%HH	8	4	46
7	Hermes	20.1	6	6	RO,S RUS,S EYE,S IR,15%HH	8	6	38
8	Ilam Hardy	15.2	5	2	OR,S IR,M EYE, S SPR,S GLASS,FL3			34
9	Laura	17.9	3	8	OR,RED,M ATT	8	8	40
10	Lone.Rang	20.4	4	1	OL,S RUS	8	6	42
11	Milva	17.0	4	6	RO,PR,S IR,S RUS	8	8	32
12	Summer.D	17.4	7	4	OR,M ATT	8	6	36
13	Crop20	20.3	4	1	OR,RED,S RUS	8	7	46
14	Crop22	18.8	5	6	O	8	8	34
15	Crop25	19.7	5	1	R,M BRITE,M ATT	8	8	50
16	Crop28	18.3	4	2	RO,M BRITE,M ATT	8	7	48
17	813/28	15.8	5	2	OR	8	7	42
18	989/10	16.9	5	3	OR,S RUS	8	6	42
19	1143/6	18.3	5	3	OR,S RUS,S IR	8	6	46
20	1229/9	19.3	7	2	O,S RUS	8	8	48
21	3175.2	17.7	6	6	O,RUS	8	8	38
22	4085.2	17.1	6	3	O,S RUS	8	8	32
23	4086.1	17.1	6	1	OR,S RUS,S IR	8	5	34
24	4113.8	21.1	5	1	RO,M ATT	8	7	48
25	4141.1	16.2	3	3	RO	8	6	26
26	4192.3	17.8	4	1	O	8	7	36
27	4194.1	17.5	4	1	O,S IR	8	7	46

Number	Clone Name	Average DM %	Tuber Size	Flesh Colour	Comments	Cooking Results		
						Slough	Grey	Agtron
28	4200.2	17.4	4	1	O	8	8	40
29	4201.4	17.0	4	1	OR	6	8	30
30	4203.2	19.1	6	2	OR	8	7	42
31	4208.4	17.8	5	2	OR	7	8	46
32	4217.1	16.7	6	1	O,REDS FLAT,S IR	8	6	36
33	4217.6	17.7	3	1	RO	8	7	46
34	4221.2	17.0	5	1	RO,5%HH	7	8	36
35	4221.3	17.6	5	2	RO	8	7	40
36	4221.5	15.4	3	1	RO	8	7	36
37	4223.2	17.5	6	1	OR,S EYE,5%HH	8	6	38
38	4231.5	17.1	4	4	RO	8	7	34
39	Driver	19.7	4	2	RO,FL2	7	7	34
40	Ranger	16.9	4	1	O,S IR,RUS	8	6	34

Appendix VIII: Manawatu Main 3A – Trial No.# 06PN3A

Planted 19 October 2005. Harvested 5 April 2006

Number	# Clone	Yield t/ha	Relative Yield	Market t/ha	Relative Market	% Saleable	General Impression	Vigour	Maturity	Comments		
1	Moonlight	120.6	127.1	95.7	119.9	79.7	5.5	8.3	4.4	gr sg	gr	gr sl
2	Rua	69.1	72.9	64.0	80.1	91.5	6.8	6.9	4.2	gr	gr	
3	Ilam Hardy	122.3	129.0	99.7	124.7	81.1	5.2	8.2	3.7	gr	gr cr	gr
4	Laura	89.5	94.4	73.9	92.5	82.1	6.5	5.9	3.4	cr	gr	gr
5	Lone.Rang	113.2	119.3	81.2	101.6	71.7	5.7	7.1	4.1	gr sg	gr sg	gr sl
6	Marlen	119.5	126.0	97.0	121.4	81.6	6.2	5.8	2.1		gr sg	gr sg
7	Macrusset	113.3	119.5	86.8	108.6	76.1	5.7	7.5	4.0	gr sg	sg	gr
8	Summer.D	155.1	163.5	130.5	163.3	84.4	6.2	6.6	1.9	gr sl		gr
9	Nadine	84.7	89.3	68.3	85.5	81.5	6.3	2.9	2.0	cr sl	gr sl	
10	Ranger	87.5	92.2	75.5	94.5	84.5	7.2	7.5	4.0			gr sl
11	R.Burbank	99.4	104.8	75.4	94.4	74.6	5.5	6.4	3.0	gr	gr sg	gr sg
12	Crop20	79.0	83.2	73.8	92.4	93.6	7.2	8.3	4.9			
13	Crop21	109.4	115.4	88.2	110.4	79.9	4.8	7.3	3.6	gr	gr sl	gr
14	Crop22	88.1	92.9	73.8	92.4	83.9	6.5	6.4	3.3	gr	gr	sg
15	Crop25	127.9	134.9	111.5	139.6	87.9	6.8	8.7	5.0		gr	
16	Crop28	83.9	88.5	65.6	82.2	78.9	6.0	7.8	4.2	gr sg	gr	gr
17	1229/9	105.3	111.0	82.9	103.7	79.6	5.7	8.6	5.5	gr	gr sg	sg gr
18	3175.2	85.0	89.6	66.8	83.6	79.8	5.3	8.4	5.4	gr	gr	gr
19	4085.2	71.1	75.0	58.6	73.4	82.0	6.3	7.0	4.6	gr	gr	gr
20	4086.1	81.2	85.6	69.4	86.9	85.6	6.3	5.7	4.1	gr		gr
21	4113.8	118.9	125.3	91.3	114.2	77.0	5.8	6.8	3.7	gr sg	gr sl	gr sg
22	4141.1	72.5	76.5	57.8	72.4	78.4	5.7	5.6	2.4	gr	sg	sm gr
23	4192.3	87.2	92.0	47.0	58.9	54.3	3.8	7.5	4.2	gr sg	gr sl	gr
24	4194.1	74.5	78.5	56.2	70.4	75.3	5.2	7.5	4.9	gr	gr rt	gr sl
25	4200.2	88.7	93.5	61.0	76.4	70.1	4.7	7.0	2.6	gr sg	cr gr	gr sg
26	4201.4	62.8	66.3	34.4	43.0	55.4	3.5	4.6	2.7	sg gr	gr sg	gr sg
27	4208.4	68.4	72.1	59.3	74.2	85.4	6.0	6.3	3.7	sl	gr	gr rt

Number	# Clone	Yield t/ha	Relative Yield	Market t/ha	Relative Market	% Saleable	General Impression	Vigour	Maturity	Comments		
28	4217.1	76.3	80.4	60.6	75.8	78.0	6.0	4.3	2.9	gr	gr	gr
29	4217.6	80.1	84.5	52.0	65.0	65.5	4.7	6.6	2.5	gr sl	gr sg	gr sg
30	4221.3	84.1	88.6	66.2	82.9	79.4	5.3	6.0	2.3	gr	gr	gr rt
31	4221.5	44.7	47.1	31.0	38.8	66.8	4.3	5.3	3.1	cr	gr sl	gr sl
32	4223.2	96.9	102.2	75.3	94.2	78.7	5.5	4.5	1.4	gr sl	gr	gr
33	4231.5	77.3	81.5	50.1	62.7	65.5	4.3	6.4	4.1	gr	gr cr	gr
34	4231.9	63.4	66.9	45.2	56.5	68.6	4.8	8.0	4.7	cr cs	gr	gr
35	4235.6	68.6	72.3	36.2	45.3	53.8	3.0	6.2	3.0	gr cr	cr gr	cr gr
36	Hermes	103.6	109.2	81.5	102.0	79.2	5.3	7.6	3.6	sg gr	gr sg	gr sg
	# LSD05	19.6	20.6	21.1	26.4	14.7	1.4	1.2	0.9			
	# LSD01	26.0	27.4	28.0	35.1	19.5	1.8	1.6	1.2			
	# PVALUE	0.0		0.0		0.0	0.0	0.0	0.0			
	# CV%	12.9		18.3		11.7	15.1	10.0	15.0			

Number	Clone Name	Average DM %	Tuber Size	Flesh Colour	Comments	Cooking Results		
						Slough	Grey	Agtron
1	Moonlight	19.4	7	2	OR,S RUS,S EYE,FL3	6	6	48
2	Rua	20.5	5	2	RO,S FLAT	7	6	44
3	Ilam Hardy	18.6	4	2	RO,M EYE,S IR,S SP	6	5	46
4	Laura	17.6	3	8	OR,RED	7	6	46
5	Lone.Rang	20.3	5	1	L,S PR	6	6	46
6	Marlen	20.1	4	4	OR	7	7	48
7	Macrusset	21.2	6	3	L,S RUS,S FLAT,FL4	5	6	46
8	Summer.D	17.8	7	5	OR,S IR	6	7	38
9	Nadine	15.7	5	1	OR,M ATT	7	7	25
10	Ranger	21.2	6	1	L,RUS	4	6	40
11	R.Burbank	20.0	6	1	L,S RUS,S IR	7	6	40
12	Crop20	23.8	5	1	OR,RED,S RUS,S FLAT	7	6	42
13	Crop21	18.4	7	2	OR,S RUS,S IR	7	6	30
14	Crop22	19.4	5	6	OR	7	8	48
15	Crop25	22.6	5	2	RO,M ATT,M BRITE,FL2	6	7	40
16	Crop28	21.3	5	1	OR,M BRITE	8	5	48
17	1229/9	22.6	8	1	OL,S RUS	8	6	44
18	3175.2	19.2	9	5	O,S RUS	8	7	34
19	4085.2	17.8	6	5	OR,S RUS,S FLAT,S IR,FL3	6	7	42
20	4086.1	18.4	7	2	O,S RUS	7	6	42
21	4113.8	20.7	6	3	OR,S GLASS	7	6	44
22	4141.1	16.7	5	5	OR,S IR	7	3	30
23	4192.3	19.7	6	2	O,FL2	8	5	48
24	4194.1	19.0	6	3	O,S IR,5%HH	6	7	43
25	4200.2	19.6	7	2	O,S IR	6	7	43
26	4201.4	16.7	5	2	OR	6	7	40
27	4208.4	20.5	5	2	OR,S FLAT	6	7	44

Number	Clone Name	Average DM %	Tuber Size	Flesh Colour	Comments	Cooking Results		
						Slough	Grey	Agtron
28	4217.1	17.8	5	1	OR,RED,S FLAT,FL3	7	6	50
29	4217.6	19.4	5	2	OR,S IR,S FLAT	6	5	48
30	4221.3	18.0	5	6	RO,M ATT	7	6	48
31	4221.5	15.8	4	2	OR,S IR	6	7	38
32	4223.2	18.7	6	3	OR,S IR,RUS	7	5	48
33	4231.5	17.0	6	5	RO,5%HH	7	8	38
34	4231.9	18.1	6	3	OR,S IR,RUS	7	5	44
35	4235.6	15.2	5	4	OR,S IR,FLAT,FL8	7	8	34
36	Hermes	19.3	5	7	RO,M EYE,RUS	8	4	46

Appendix IX: Early Waikato – Trial No.# 06EWAI

Planted 25 October 2005. Harvested 16 March 2006

Number	# Clone	Yield t/ha	Relative Yield	Market t/ha	Relative Market	% Saleable	General Impression	Vigour	Maturity	Comments		
1	Moonlight	78.0	128.9	71.5	131.7	91.3	6.3	6.3	5.0			gr
2	Rua	43.0	71.1	37.1	68.3	86.1	6.7	5.0	5.8		sm	
3	Laura	94.4	155.9	73.2	135.0	77.8	5.7	6.0	3.3	cr gr	gr rk	rk cr
4	Summer.D	128.2	211.8	114.3	210.7	89.0	6.3	6.0	2.9	gr	gr	gr
5	Lone.Rang	64.9	107.2	55.1	101.5	85.3	5.8	5.7	4.7	sm	sm	sm gr
6	Milva	84.3	139.3	74.0	136.4	88.2	4.5	4.7	4.1		gr	gr
7	Hermes	80.8	133.4	67.4	124.1	82.8	5.2	5.0	3.3	sg	cr rk	gr sg
8	4266.2	76.6	126.5	61.3	112.9	80.3	5.0	5.3	2.9	rk ct	rk cr	sg rk
9	4085.2	74.9	123.7	61.9	114.0	82.9	5.7	5.7	5.6	gr sm	gr	gr
10	4113.8	81.0	133.8	71.9	132.4	88.9	6.2	5.7	5.6	cr	gr	gr
11	4141.1	50.8	83.9	34.9	64.3	68.1	3.7	4.0	2.1	sm gr	sm cr	sm sg
12	4194.1	63.1	104.3	53.8	99.2	85.3	5.8	5.7	5.1	sg gr	gr	sg gr
13	4201.4	33.0	54.6	25.5	47.0	76.6	5.0	3.7	1.4	sm cr	sm gr	sm gr
14	4217.1	74.4	122.9	62.4	114.9	84.3	5.7	5.0	3.3	gr	gr	gr sg
15	4217.6	85.7	141.5	64.5	118.9	75.5	4.3	4.3	2.7	sg gr	sg gr	gr cr
16	4221.3	61.5	101.5	49.2	90.7	79.7	5.0	5.0	2.3	gr	gr	gr sm
17	4221.5	35.8	59.1	29.6	54.6	82.0	5.3	4.0	3.3	gr	gr cr	gr
18	4223.2	81.2	134.1	66.5	122.5	82.4	5.2	5.0	2.0	gr	gr rt	rt br
19	4235.6	43.6	72.1	35.3	65.0	80.4	5.2	4.3	2.6	gr	gr	sm
20	4252.2	86.6	143.0	74.5	137.3	86.0	5.8	5.7	5.0	gr		gr sm
	# LSD05	20.6	34.0	17.2	31.7	9.6	1.0	0.9	1.0			
	# LSD01	27.6	45.7	23.0	42.5	12.8	1.4	1.1	1.4			
	# PVALUE	0.0		0.0		0.0	0.0	0.0	0.0			
	# CV%	17.5		17.5		6.9	11.3	10.1	16.7			

Number	Clone Name	Average DM %	Tuber Size	Flesh Colour	Comments	Cooking Results		
						Slough	Grey	Agtron
1	Moonlight	17.7	7	2	O,S RUS	5	6	42
2	Rua	17.0	6	1	O	7	7	44
3	Laura	16.8	6	8	O,RED,S PR,S RKN,FL4	8	7	44
4	Summer.D	15.5	7	4	O,S FLAT	6	7	46
5	Lone.Rang	18.2	6	2	L	8	6	42
6	Milva	17.2	6	6	OR,PR,IR,S RUS,5%HH	8	7	25
7	Hermes	18.0	5	5	OR,RUS,S IR,SG	7	4	48
8	4266.2	16.4	7	2	L,S IR,S RKN,S SG	8	6	44
9	4085.2	16.3	7	5	OL,S RUS	7	5	42
10	4113.8	19.2	6	3	OR,S RKN,15%HH	7	7	50
11	4141.1	17.1	4	5	OR,S SIR,S SG,FL2	7	7	30
12	4194.1	17.0	7	3	OR,S IR,S ROT,S SG,60%HH	6	6	36
13	4201.4	17.4	3	2	O	7	7	48
14	4217.1	17.8	6	5	OL,RED,FL17	7	7	48
15	4217.6	17.5	5	2	OR,FLAT,S IR,5%HH	6	6	46
16	4221.3	16.7	6	5	OR,FLAT	8	7	36
17	4221.5	16.1	7	2	OR,S FLAT,S IR	8	7	34
18	4223.2	16.8	7	2	OR,RUS,S IR,35%HH	7	5	30
19	4235.6	14.9	6	4	OR,FLAT,FL11,5%HH	8	7	50
20	4252.2	18.6	6	2	RO,L RED,M EYE	7	6	46

Appendix X: Late Waikato – Trial No.# 06LWAI

Planted 14 December 2005. Harvested 27 June 2006

Number	# Clone	Yield t/ha	Relative Yield	Market t/ha	Relative Market	% Saleable	General Impression	Vigour	Maturity	Comments		
1	Fianna	53.1	101.5	46.3	99.7	88.7	6.3	5.3	5.6		sm	
2	Rua	38.6	73.8	32.7	70.4	86.1	6.1	5.0	5.4	gr	sm	gr
3	Moonlight	65.2	124.7	60.3	129.8	92.1	6.1	6.6	5.3			sg
4	Marlen	73.8	141.0	60.3	129.8	81.5	5.3	5.4	2.4	sg	sg sm	sm
5	Riverena.R	62.6	119.8	54.8	117.9	87.1	5.9	5.7	5.0	gr		sg
6	94-2-9	43.8	83.7	35.8	77.1	82.2	5.6	4.1	3.2	sm	sm	sm
7	Hermes	68.8	131.6	48.3	104.1	71.0	4.3	5.6	4.2	sm	sm sg	sm sg
8	Crop20	45.4	86.8	42.6	91.7	92.3	6.8	6.9	7.1			sm
9	1229/9	53.3	102.0	49.0	105.6	91.8	7.0	5.8	6.7	gr		
10	4085.2	49.3	94.3	40.7	87.7	84.1	5.8	5.2	5.4	gr	gr	gr
11	4113.8	56.7	108.5	54.5	117.4	94.7	7.2	5.8	5.5	gr		
12	4194.1	47.9	91.6	41.0	88.2	86.2	5.6	4.8	5.0	sg	sg	gr
13	4201.4	30.2	57.8	23.9	51.5	77.4	5.6	3.4	2.9	sm	sm	sm sg
14	4217.1	46.1	88.1	38.4	82.7	84.0	5.3	4.2	4.0	sg gr	gr	gr
15	4217.6	48.0	91.8	37.1	79.8	76.9	4.9	4.5	3.4	gr cr	gr	gr
16	4221.3	42.5	81.3	35.5	76.5	83.3	5.7	4.6	4.3	gr	gr	gr
17	4221.5	29.0	55.4	27.0	58.1	92.2	6.5	4.2	4.0			sm
18	4252.2	54.6	104.4	50.6	108.8	91.8	6.4	5.6	5.7		sg	
19	4253.6	46.5	89.0	40.6	87.3	87.3	6.2	5.1	5.2	gr	gr	sm
20	4271.2	39.8	76.1	34.6	74.5	88.4	6.6	4.5	4.2			gr
	# LSD05	14.5	27.7	12.6	27.1	8.2	1.0	1.1	1.0			
	# LSD01	19.4	37.2	16.9	36.3	11.0	1.3	1.5	1.3			
	# PVALUE	0.0		0.0		0.0	0.0	0.0	0.0			
	# CV%	16.8		16.5		5.8	9.8	11.9	11.5			

Number	Clone Name	Average DM %	Tuber Size	Flesh Colour	Comments	Cooking Results		
						Slough	Grey	Agtron
1	Fianna	16.9	5	2	OR,S IR,S RKN,5%HH,FL2,S GLASS	7	6	30
2	Rua	16.6	6	1	OR,S IR,FL2,S RKN	7	7	25
3	Moonlight	16.7	8	2	OR,S IR,S RUS,30%HH	8	4	25
4	Marlen	17.6	5	5	OR,S IR,20%HH,FL7	7	7	48
5	Riverena.R	16.1	6	2	O,S IR,S RKN,10%HH,FL3,S GLASS	7	4	36
6	94-2-9	16.6	5	1	R,RUS,S GLASS,10%HH	7	5	44
7	Hermes	14.8	6	6	RO,RUS,S IR,S SG,10%HH,FL10	8	4	40
8	Crop20	19.0	6	1	O,RED,S FLAT	6	5	48
9	1229/9	17.5	8	1	OL,S RUS	8	5	42
10	4085.2	15.2	7	5	OL,S PR,FL4	7	7	25
11	4113.8	18.3	7	2	OR,35%HH	7	8	46
12	4194.1	15.6	7	2	OL,S IR,75%HH	8	7	34
13	4201.4	17.1	4	2	OR,5%HH	7	8	38
14	4217.1	15.2	7	1	OL,L RED,FLAT,25%HH	8	7	30
15	4217.6	16.3	6	2	RO,FLAT,S IR,S GLASS	7	7	44
16	4221.3	16.1	5	4	RO,S FLAT,FL8	7	8	42
17	4221.5	14.2	5	1	OR,M ATT	8	8	34
18	4252.2	17.1	6	1	OR,L RED,M EYE	7	7	20
19	4253.6	19.1	6	6	RO,S RUS	6	7	42
20	4271.2	16.6	7	6	O	6	7	34

Appendix XI: Canterbury Crisp Trial 2005–06

Planted 1 November 2005. Harvested 28 April 2006

Variety		Table		Seed	Reject	Total	
Name	Number	Mean	%Control	Mean	Mean	Mean	%Control
Ilam Hardy	1	84.9	100.0	0.0	0.0	84.9	100.0
Fraser	2	83.3	98.1	0.0	0.0	83.3	98.1
Marlen	3	81.4	95.9	0.0	0.0	81.4	95.9
94-2-9	4	66.0	77.7	0.0	0.0	66.0	77.7
Hermes	5	87.7	103.3	0.0	0.0	87.7	103.3
937/3	6	102.1	120.2	0.0	0.0	102.1	120.2
1021/1	7	70.7	83.3	0.0	0.0	70.7	83.3
4113.8	8	81.3	95.8	0.0	0.0	81.4	95.9
4217.6	9	78.6	92.5	0.0	0.0	78.6	92.5
4208.4	10	67.4	79.4	0.0	0.0	67.4	79.4
4221.3	11	77.9	91.7	0.0	0.0	77.9	91.7
4221.5	12	54.0	63.6	0.5	0.0	54.5	64.2
4249.3	13	80.7	95.1	0.6	0.0	81.3	95.8
4253.6	14	55.3	65.1	0.0	0.0	55.3	65.1
4256.3	15	64.9	76.4	0.0	0.0	64.9	76.4
4257.1	16	51.8	61.0	0.0	0.0	51.8	61.0
4267.2	17	71.2	83.8	0.0	0.0	71.2	83.8
4268.6	18	70.8	83.4	0.0	0.0	70.8	83.4
LSD05		12.62				12.65	
LSD01		16.82				16.86	
CV%		12.03				12.04	

Variety		Skin				AvgTuber				
Name	Number	Shape	Colour	Defects		Siz	Number	Weight(g)	Dm%	Ag
Ilam Hardy	1	R0		EYE	PS	ML	119	200	24.1	44
Fraser	2	RO			PS	M	111	209	26.3	46
Marlen	3	RO			PS	M	133	171	24.9	48
94-2-9	4	R		M	PS	M	105	173	23.8	46
Hermes	5	RO		SGC, SSG		M	92	272	25.0	46
937/3	6	R			PS	ML	132	217	26.8	42
1021/1	7	O	RED			ML	100	198	27.7	44
4113.8	8	RO			PS	ML	120	190	26.0	46
4217.6	9	RO			PS	M	121	182	24.7	46
4208.4	10	FO		IRREG	PS	L	83	227	24.4	54
4221.3	11	FRO			PS	ML	106	205	21.9	34
4221.5	12	FRO		SIR	PS	ML	71	214	20.5	36
4249.3	13	RO			PS	ML	114	197	25.7	40
4253.6	14	RO				ML	84	185	24.0	44
4256.3	15	R				M	116	157	25.4	44
4257.1	16	O			PS	M	81	179	25.9	48
4267.2	17	O	PKEYE			ML	102	196	25.6	46
4268.6	18	RO	PKSPL		PS	M	118	167	23.4	44

Appendix XII: South Canterbury French Fry Trial 2005–06

Planted 25 October 2005. Harvested 28 April 2006

Variety Name	Number	Table		Seed Mean	Reject Mean	Total	
		Mean	%Control			Mean	%Control
Ranger	1	84.1	100.0	0.1	0.0	84.2	100.0
Moonlight	2	130.2	154.8	0.1	0.0	130.3	154.7
Russetburbank	3	71.3	84.8	0.9	0.0	72.2	85.8
Crop16	4	135.3	160.8	0.5	0.0	135.8	161.3
Crop19	5	108.1	128.6	0.0	0.0	108.1	128.4
Loneranger	6	100.1	119.0	0.8	0.0	100.9	119.9
Macrusset	7	112.9	134.2	0.9	0.0	113.8	135.2
Riverinarusset	8	94.8	112.7	0.0	0.0	94.8	112.6
1229/9	9	94.3	112.1	0.4	0.0	94.7	112.4
4085.2	10	91.9	109.2	0.1	0.0	92.0	109.3
4086.1	11	72.1	85.8	0.0	0.0	72.1	85.7
4192.3	12	81.9	97.4	2.3	0.0	84.2	100.0
4194.1	13	89.9	106.9	0.8	0.0	90.7	107.7
4200.2	14	82.8	98.4	1.0	0.0	83.8	99.5
4217.1	15	74.7	88.9	0.1	0.0	74.9	88.9
4262.3	16	103.8	123.5	0.0	0.0	103.8	123.4
4269.1	17	81.6	97.0	0.0	0.0	81.6	96.9
4273.2	18	100.4	119.3	0.1	0.0	100.5	119.3
4303.1	19	104.3	124.0	0.4	0.0	104.7	124.3
4320.5	20	73.5	87.4	0.0	0.0	73.5	87.3
LSD05	23.67					23.57	
LSD01	31.51					31.38	
CV%	17.69					17.54	

Name	Variety				AverageTuber		Flesh Colour	DM%	CookingTests		
	Number	Shape	Defects		Weight(gms)	Number			SL	GY	AG
Ranger	1	L	PTS	IRR	297	79		21.8	6	6	36
Moonlight	2	O	-		415	88		22.4	5	7	46
Russet Burbank	3	L	SPTS	SSG	235	85		21.8	5	6	42
Crop16	4	O	SSG		262	144	YELLOW	23.8	5	8	34
Crop19	5	L	SSG		404	75		24.0	4	5	44
Lone Ranger	6	L	SSG	SPTS	307	91		23.4	6	7	40
Macrusset	7	L	PTS		335	94		24.9	4	7	40
Riverina Russet	8	OL	SPTS		349	76		24.5	5	7	44
1229/9	9	Lo	SIR		395	67		24.6	7	6	46
4085.2	10	OL	SIR		349	74	YELLOW	20.2	6	7	36
4086.1	11	OL	SIR	SSG	327	62		19.9	6	6	38
4192.3	12	LO	SIR	SSG	288	81		21.4	6	8	48
4194.1	13	L	SSG		323	78		22.4	6	7	32
4200.2	14	O	SSG		294	79		21.4	6	7	38
4217.1	15	OL	RED	SIR	328	64		18.4	8	6	44
4262.3	16	OL	SGC		270	108		26.6	5	6	38
4269.1	17	OL	SPTS		259	88		24.8	4	7	48
4273.2	18	OL	SSG	PTS	314	90		21.5	7	7	40
4303.1	19	O	SSG		287	95	YELLOW	19.6	8	7	44
4320.5	20	LO	SPTS		238	86	YELLOW	22.0	8	7	44