

2019-2020



POTATOES NEW ZEALAND

NEW ZEALAND SEED POTATO CERTIFICATION AUTHORITY

Certified Seed Lines & Rulebook

Seed Potato Certification Scheme

November 2019

A Potatoes New Zealand Publication
"91 Years of Certified Seed"

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CERTIFIED SEEDLINES

List of Certified Seedlines - 2019 HARVEST

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List of certified seedlines – 2019 Harvest

No.	Cultivar	Grower	Crop reference number	Region of production	Paddock number	Class	Crop area (hectares)
1	Agria	Aberdeen Farm Ltd	201954372	A2230	B3	G4	0.9500
2	Agria	Aberdeen Farm Ltd	201954358	A1493	H16	G5	1.0000
3	Agria	Aberdeen Farm Ltd	201954373	A2230	B4	G5	3.4000
4	Agria	AJ Calder	201953865	C2368	F5	G4	0.8000
5	Agria	AJ Calder	201953866	C2368	F6	G5	2.2000
6	Agria	AJ Calder	201953864	C1667	L	G6	8.2000
7	Agria	AJ Calder	201953863	C1994	D	G6	2.8000
8	Agria	AJ Calder	201953867	C2368	C1	G6	3.4000
9	Agria	BBCA Farms Ltd	201954086	C230	W1	G4	1.9300
10	Agria	BBCA Farms Ltd	201954377	C3086	PS1	G4	10.0000
11	Agria	BBCA Farms Ltd	201954084	C1414	M1	G5	1.6500
12	Agria	Burrows Farms Ltd	201955479	A1076	W1	G4	4.5000
13	Agria	Burrows Farms Ltd	201954762	A1051	H1	G5	6.0000
14	Agria	Burrows Farms Ltd	201954763	A998	M5	G5	10.0000
15	Agria	Burrows Farms Ltd	201954765	A998	M6	G5	5.0000
16	Agria	Burrows Farms Ltd	201955480	A1076	W2	G5	1.0000
17	Agria	Burrows Farms Ltd	201954766	A998	M7	G6	4.0000
18	Agria	Burrows Farms Ltd	201954767	A998	M8	G6	3.0000
19	Agria	Burrows Farms Ltd	201954770	A1085	DDD6	G6	3.0000
20	Agria	Burrows Farms Ltd	201954771	A1085	DDD7	G6	2.0000
21	Agria	Burrows Farms Ltd	201954772	A1085	DDD8	G6	7.0000
22	Agria	Burrows Farms Ltd	201954773	A1085	DDD9	G6	1.5000
23	Agria	Burrows Farms Ltd	201954774	A1085	DDD10	G6	1.5000
24	Agria	Burrows Farms Ltd	201954775	A1085	DDD11	G6	1.0000
25	Agria	Corbett Bros	201953801	K6362	A4	G3	0.4000
26	Agria	Corbett Bros	201953802	K6362	A5	G4	1.5000
27	Agria	Corbett Bros	201953797	K7400	B1	G4	0.4000
28	Agria	Corbett Bros	201953803	K6362	F	G6	1.6000
29	Agria	Corbett Bros	201953810	K6371	D	G6	3.6000
30	Agria	Corbett Bros	201953798	K7400	B2	G6	2.6000
31	Agria	GCA Calder	201953894	C2697	M14	G4	0.5000
32	Agria	GCA Calder	201953895	C2697	M15	G5	1.5000
33	Agria	GCA Calder	201953893	C1375	A	G6	8.0000
34	Agria	GCA Calder	201953896	C2697	M16	G6	3.0000
35	Agria	Innes Fields Ltd	201953487	A6764	J8	G3	1.4600
36	Agria	Innes Fields Ltd	201953488	A6764	J9	G4	2.3300
37	Agria	Innes Fields Ltd	201953489	A6764	J10	G6	1.7200

38	Agria	Innes Fields Ltd	201955150	A6764	C4	G6	0.4000
39	Agria	Innes Fields Ltd	201955478	A7527	P1C2	G6	1.6000
40	Agria	K & M Farming	201953935	A2310	Y3	G4	1.9800
41	Agria	K & M Farming	201953922	A301	Q15	G4	0.9000
42	Agria	K & M Farming	201953936	A2310	Y4	G5	4.0000
43	Agria	K & M Farming	201953924	A301	P7	G5	1.2000
44	Agria	K & M Farming	201955509	A687	QQ4	G5	4.5000
45	Agria	K & M Farming	201955510	A687	QQ5	G5	0.8000
46	Agria	K & M Farming	201955511	A687	QQ6	G6	0.9000
47	Agria	Lepoutre-Kroef Farm Ltd	201954549	A769	NN12	G3	1.4000
48	Agria	Lepoutre-Kroef Farm Ltd	201954550	A769	NN13	G4	9.6700
49	Agria	Lepoutre-Kroef Farm Ltd	201954551	A769	NN14	G5	11.5700
50	Agria	Lepoutre-Kroef Farm Ltd	201954552	A769	NN15	G5	3.7300
51	Agria	Merv Smith & Sons Ltd	201953633	T7590	A5	G4	1.9000
52	Agria	Merv Smith & Sons Ltd	201953446	T7362	B1	G3	2.1000
53	Agria	Merv Smith & Sons Ltd	201953447	T7362	B2	G4	1.3300
54	Agria	Mid Canterbury Growers Ltd	201954384	A1732	H4/26	G4	3.3000
55	Agria	Mid Canterbury Growers Ltd	201953880	A1025	SW1	G5	1.9600
56	Agria	Mid Canterbury Growers Ltd	201954385	A1732	H4/27	G5	8.5700
57	Agria	Mid Canterbury Growers Ltd	201953868	A7133	B1	G6	1.0900
58	Agria	Mid Canterbury Growers Ltd	201953881	A1025	SW2	G6	0.9500
59	Agria	Mid Canterbury Growers Ltd	201954562	A1732	H4/28	G6	3.5000
60	Agria	Mid Canterbury Growers Ltd	201953869	A7133	B2	G6	7.4500
61	Agria	Mid Canterbury Growers Ltd	201953870	A7133	B3	G6	3.4500
62	Agria	Mid Canterbury Growers Ltd	201955999	A7133	B4	G6	2.5100
63	Agria	Mid Canterbury Growers Ltd	201953874	A939	C5	G6	0.7000
64	Agria	PB & Craig Skou Ltd	201953762	K439	P2	G3	1.9000
65	Agria	PB & Craig Skou Ltd	201953761	K439	P1	G4	3.2000
66	Agria	PB & Craig Skou Ltd	201953721	K392	C7	G5	0.3000
67	Agria	PB & Craig Skou Ltd	201953722	K0439	K4	G5	4.0000
68	Agria	PB & Craig Skou Ltd	201953764	K439	P5	G5	4.7000
69	Agria	Sprout Central Ltd	201953850	C803	W7/1	G4	1.0000
70	Almera	K & M Farming	201954379	A33	C3	G3	0.2200
71	Almera	K & M Farming	201954380	A33	C4	G4	1.5800
72	Almera	K & M Farming	201954381	A33	C5	G5	2.5300
73	Almera	K & M Farming	201954565	A33	C6	G6	1.5500
74	Almera	Mid Canterbury Growers Ltd	201953882	A1025	SW3	G3	0.4000
75	Almera	Mid Canterbury Growers Ltd	201954387	A1732	H4/30	G3	0.1000
76	Almera	Mid Canterbury Growers Ltd	201953883	A1025	SW4	G4	3.4700

77	Alpine Russet	JR & WD Redmond	201954013	C780	U79	G3	0.1000
78	Alpine Russet	JR & WD Redmond	201954012	C780	U8	G4	2.5000
79	Andean Sunside	K & M Farming	201954435	A743	JJ4	G3	0.8000
80	Andean Sunside	K & M Farming	201954436	A743	JJ6	G4	1.2000
81	Andean Sunside	K & M Farming	201954437	A743	JJ6	G5	1.0000
82	Andean Sunside	Mid Canterbury Growers Ltd	201954389	A1732	H4/32	G3	0.1000
83	Andean Sunside	Mid Canterbury Growers Ltd	201953884	A1025	SW5	G4	2.8300
84	Andean Sunside	Mid Canterbury Growers Ltd	201954432	A7409	G8	G5	0.9100
85	Angelina	Alps Seed Ltd	201954311	A407	J5	G3	0.6900
86	Angelina	Alps Seed Ltd	201954310	A407	J4	G4	1.5000
87	Angelina	Alps Seed Ltd	201954312	A407	J6	G5	0.6300
88	Annabelle	Aberdeen Farm Ltd	201953471	A191	LM(S)3	G3	0.2000
89	Annabelle	Aberdeen Farm Ltd	201953472	A191	LM(S)4	G5	5.2500
90	Annabelle	Aberdeen Farm Ltd	201953473	A191	LM(S)5	G5	1.5500
91	Annabelle	Innes Fields Ltd	201953451	A1573	E12	G3	0.2300
92	Annabelle	Innes Fields Ltd	201953452	A1573	E14	G5	4.6500
93	Annabelle	Innes Fields Ltd	201955359	A1573	E13	G5	2.0400
94	Annabelle	Redmond Ag Farming	201953432	C7317	H5	G3	0.6000
95	Annabelle	Redmond Ag Farming	201953293	C7317	H3	G4	4.1000
96	Annabelle	Redmond Ag Farming	201953288	C7340	C1	G4	0.7700
97	Annabelle	Redmond Ag Farming	201953289	C7340	C2	G5	3.3800
98	Annabelle	RG & RM Cairns Ltd	201953685	A2310	Y1	G3	0.1000
99	Annabelle	RG & RM Cairns Ltd	201953591	A2310	Y2	G5	2.8500
100	Anuschka	NH Wright	201953939	C522	B9	G4	0.6000
101	Anuschka	NH Wright	201954408	C522	B10	G5	1.8000
102	Apache	Charterhouse Farm Ltd	201953263	A1149	X5	G3	0.5000
103	Apache	Charterhouse Farm Ltd	201953256	A1149	X1	G4	2.3000
104	Arizona	Mid Canterbury Growers Ltd	201954110	A1732	H4/2	Group 1	0.4000
105	Arran Banner	JF Ridge & Sons	201954031	A858	A5	G3	0.1130
106	Arran Banner	JF Ridge & Sons	201954032	A858	A6	G4	0.7600
107	Bellinda	Aberdeen Farm Ltd	201954374	A2230	B5	G3	0.1800
108	Bellinda	Aberdeen Farm Ltd	201954375	A2230	B6	G4	1.3000
109	Bellinda	Aberdeen Farm Ltd	201954376	A2230	B7	G5	1.3000
110	Blazer Russet	Alps Seed Ltd	201953418	A612	Y3	G3	0.9300
111	Brooke	Aberdeen Farm Ltd	201953475	A809	D4/1	G4	2.0000
112	Brooke	Innes Fields Ltd	201953710	A6553	G21	G3	1.2000
113	Brooke	Innes Fields Ltd	201953709	A6553	G20	G4	5.0000
114	Brooke	Merv Smith & Sons Ltd	201953598	A7591	F2	G3	0.7500
115	Brooke	Merv Smith & Sons Ltd	201953280	A6567	M(E)2	G4	1.2500

116	Brooke	Merv Smith & Sons Ltd	201953272	T7590	A3	G4	1.3000
117	Cabaret	JR & WD Redmond	201955411	C1653	PD4	G3	0.2000
118	Cabaret	JR & WD Redmond	201955412	C1653	PD5	G4	0.8000
119	Campina	JR & WD Redmond	201954020	C780	U12	G3	0.2000
120	Campina	JR & WD Redmond	201954021	C780	U13	G4	1.2500
121	Canberra	JR & WD Redmond	201954019	C780	U11	G3	0.5000
122	Canberra	JR & WD Redmond	201954014	C780	U10	G4	1.8000
123	Canberra	JR & WD Redmond	201953840	C882	MM4	G4	0.2000
124	Carrera	Innes Fields Ltd	201953492	A6764	FF6	G3	0.0880
125	Carrera	Innes Fields Ltd	201953493	A6764	FF7	G4	1.1770
126	Casablanca	Annat Farms Ltd	201953641	C1515	K14	G3	0.2000
127	Casablanca	Annat Farms Ltd	201953642	C1515	K15	G4	1.4000
128	Casino	Mid Canterbury Growers Ltd	201954129	A1732	H4/9	G5	0.1000
129	Celadine	Redmond Ag Farming	201953291	C7340	C4	G3	0.2200
130	Celadine	Redmond Ag Farming	201953290	C7340	C3	G4	2.8900
131	Charlotte	BBCA Farms Ltd	201954414	C355	A10	G3	0.1500
132	Charlotte	BBCA Farms Ltd	201954415	C355	A11	G4	3.1100
133	Chippewa	K & M Farming	201955584	A687	QQ7	Group 1	1.0000
134	Classic Russet	Alps Seed Ltd	201953417	A612	Y2	G3	0.8800
135	Cliffs Kidney	GCA Calder	201954033	C2697	M17	G5	1.0000
136	Cliffs Kidney	RL Worner	201953849	A7589	D2	G3	0.5000
137	Cliffs Kidney	RL Worner	201953742	A7589	D3	G4	1.5000
138	Columba	Innes Fields Ltd	201953482	A6764	J2	G3	0.2400
139	Compass	Annat Farms Ltd	201953424	C1515	K5	G3	0.1500
140	Compass	Annat Farms Ltd	201953428	C1515	K10	G4	0.3000
141	Compass	Annat Farms Ltd	201953427	C1515	K9	G5	0.6500
142	Crop 41	Innes Fields Ltd	201953700	A6553	G6	G4	3.4000
143	Crop 41	Innes Fields Ltd	201953701	A6553	G7	G5	2.7000
144	Crop 55	Aberdeen Farm Ltd	201953987	A1493	H1	G3	0.1000
145	Crop 55	Aberdeen Farm Ltd	201953469	A1491	LM(S)1	G4	0.6000
146	Crop 55	Aberdeen Farm Ltd	201953470	A191	LM(S)2	G5	1.4000
147	Crop 60	Alps Seed Ltd	201953578	A1187	AA9	G3	1.5300
148	Crop 77	Charterhouse Farm Ltd	201953408	A1149	X6	G3	0.1500
149	Desiree	Aberdeen Farm Ltd	201954005	A6877	B11	G3	0.6000
150	Desiree	Aberdeen Farm Ltd	201953479	A6570	N3	G4	2.3000
151	Desiree	Aberdeen Farm Ltd	201954006	A6877	B12	G4	1.3500
152	Desiree	Aberdeen Farm Ltd	201953480	A6570	N4	G5	1.3000
153	Desiree	Aberdeen Farm Ltd	201954001	A6877	B7	G6	0.2200
154	Desiree	Gorman Growers	201953712	A1031	Q3	G5	6.8000

155	Desiree	Gorman Growers	201953734	A1031	Q5	G3	0.2000
156	Desiree	Gorman Growers	201953740	A7391	F3	G5	0.1000
157	Destiny	Mid Canterbury Growers Ltd	201954131	A1732	H4/11	G4	0.2000
158	Divaa	Gorman Growers	201953716	A257	G5	G3	0.3000
159	Divaa	Gorman Growers	201953715	A257	G4	G5	2.0000
160	Dolce Vita	NH Wright	201953774	C522	B7	G3	1.3000
161	Dolce Vita	NH Wright	201953767	C522	B1	G4	1.2000
162	Dolce Vita	NH Wright	201953254	C6348	C(W)2	G4	0.2000
163	Donata	Mid Canterbury Growers Ltd	201954130	A1732	H4/10	G3	0.1000
164	Draga	Aberdeen Farm Ltd	201955515	A1493	H20	G3	0.1100
165	Draga	Aberdeen Farm Ltd	201954077	A1493	H11	G4	0.4600
166	Draga	Aberdeen Farm Ltd	201953900	A809	D4/3	G5	1.2000
167	Draga	Aberdeen Farm Ltd	201953901	A809	D4/4	G5	1.6000
168	Draga	Aberdeen Farm Ltd	201953902	A809	D4/5	G6	4.2000
169	Draga	Annat Farms Ltd	201953909	C1515	K17	G3	0.0400
170	Draga	Annat Farms Ltd	201953917	C1515	A7	G6	1.1000
171	Draga	Annat Farms Ltd	201953910	C1515	K18	G6	1.4500
172	Driver	Field View Farms Ltd	201953251	C116	CC3	G3	0.4000
173	Driver	Field View Farms Ltd	201953252	C116	CC4	G4	4.6000
174	Endeavour	Annat Farms Ltd	201953425	C1515	K6	G6	0.6500
175	Endeavour	JR & WD Redmond	201955395	C1653	PF1	G3	0.2000
176	Endeavour	JR & WD Redmond	201955399	C1653	PF3	G4	1.2000
177	Erika	K & M Farming	201955512	A687	QQ8	G5	0.2500
178	Everest	Annat Farms Ltd	201953911	C1515	K19	G3	0.6000
179	Fandango	Mid Canterbury Growers Ltd	201954133	A1732	H4/13	G3	0.1000
180	Fianna	Annat Farms Ltd	201953912	C1515	K20	G5	1.4000
181	Fianna	Burrows Farms Ltd	201955481	A1076	W3	G4	1.0000
182	Fianna	Burrows Farms Ltd	201954776	A198	T1	G5	2.0000
183	Fianna	K & M Farming	201954438	A743	JJ7	G5	0.5000
184	Fianna	K & M Farming	201954382	A33	C7	G5	0.2200
185	Fianna	K & M Farming	201954439	A743	JJ8	G6	2.7000
186	Fianna	Lepoutre-Kroef Farm Ltd	201954539	A769	NN2	G3	0.6800
187	Fianna	NH Wright	201953940	C522	B11	G4	0.4000
188	Fianna	NH Wright	201953941	C522	B12	G5	2.3000
189	Fianna	NH Wright	201953942	C522	B13	G6	0.4500
190	FL2221	Innes Fields Ltd	201953706	A6553	G17	G3	1.0500
191	FL2221	Innes Fields Ltd	201953707	A6553	G18	G4	1.6700
192	FL2221	Innes Fields Ltd	201953708	A6553	G19	G5	1.8200
193	FL2221	Merv Smith & Sons Ltd	201953270	T7590	A1	G4	0.9000

194	FL2221	Merv Smith & Sons Ltd	201953271	T7590	A2	G5	0.9000
195	Flamenco	JR & WD Redmond	201955409	C1653	PD2	G3	0.2000
196	Flamenco	JR & WD Redmond	201955408	C1653	PD1	G4	0.3000
197	Francisca	Aberdeen Farm Ltd	201953467	A2670	A8	G3	0.0700
198	Francisca	Aberdeen Farm Ltd	201953468	A2670	A10	G5	0.2500
199	Francisca	Aberdeen Farm Ltd	201953631	A2670	A9	G5	0.4300
200	Francisca	Innes Fields Ltd	201953453	A1573	E15	G3	0.0300
201	Francisca	Innes Fields Ltd	201953454	A1573	E16	G4	0.6800
202	Francisca	Innes Fields Ltd	201953455	A1573	E17	G5	0.3500
203	Gourmandine	BBCA Farms Ltd	201955487	A1121	B4	G3	0.1100
204	Gourmandine	BBCA Farms Ltd	201954791	A1121	B5	G4	0.2900
205	Gourmandine	BBCA Farms Ltd	201954778	A1121	B3	G5	0.8900
206	Gourmandine	BBCA Farms Ltd	201954779	A1121	B6	G6	3.0100
207	Gourmandine	BBCA Farms Ltd	201955586	C3086	PS2	G6	5.1000
208	Haylo	JF Ridge & Sons	201954029	A858	A3	G3	0.2000
209	Haylo	JF Ridge & Sons	201954030	A858	A4	G4	0.9110
210	Heather	RL Worner	201953743	A7589	D4	G3	0.5000
211	Heraclea	JR & WD Redmond	201955406	C1653	PF4	G3	0.2000
212	Heraclea	JR & WD Redmond	201955405	C1653	PF5	G4	1.2000
213	Hermes	Charterhouse Farm Ltd	201953410	A1149	X8	G3	0.5000
214	Hermes	Charterhouse Farm Ltd	201953437	A1640	G1	G3	0.3000
215	Hermes	Charterhouse Farm Ltd	201953259	A1149	X4	G4	1.5000
216	Hermes	Charterhouse Farm Ltd	201953440	A1416	N2	G4	3.0000
217	Hermes	Charterhouse Farm Ltd	201953260	A7184	A1	G4	7.5000
218	Highlander	Alps Seed Ltd	201954313	A407	J7	G3	3.0000
219	Highlander	Merv Smith & Sons Ltd	201953281	A6567	M(E)3	G3	0.9000
220	Highlander	Merv Smith & Sons Ltd	201953275	T7590	A7	G3	1.3000
221	Highlander	Merv Smith & Sons Ltd	201953282	A6567	M(E)4	G4	2.0000
222	Highlander	Merv Smith & Sons Ltd	201953597	A7591	F1	G4	1.7500
223	Highlander	Merv Smith & Sons Ltd	201953276	T7590	A8	G4	1.9000
224	Highlander	Merv Smith & Sons Ltd	201953632	A572	JJ3	G5	0.4000
225	Ilam Hardy	Alps Seed Ltd	201954553	C955	B8	G3	3.2000
226	Ilam Hardy	Alps Seed Ltd	201954554	C955	B9	G5	4.7000
227	Ilam Hardy	Burrows Farms Ltd Ltd	201955350	A1017	K5	G4	0.4000
228	Ilam Hardy	Burrows Farms Ltd Ltd	201955381	A1017	K6	G5	0.6000
229	Ilam Hardy	Burrows Farms Ltd Ltd	201955353	A1017	K9	G6	0.6000
230	Ilam Hardy	Burrows Farms Ltd Ltd	201955349	A1017	K4	Group 1	7.0000
231	Ilam Hardy	Burrows Farms Ltd Ltd	201955352	A1017	K8	Group 1	1.0000
232	Ilam Hardy	Burrows Farms Ltd Ltd	201955354	A1017	K10	Group 1	0.6000

233	Ilam Hardy	Burrows Farms Ltd Ltd	201955355	A1017	K11	Group 1	0.4000
234	Ilam Hardy	Charterhouse Farm Ltd	201953261	A2674	W2	G3	0.2500
235	Ilam Hardy	Charterhouse Farm Ltd	201953266	A2674	W3	G4	0.5000
236	Ilam Hardy	Charterhouse Farm Ltd	201953267	A2674	W4	G5	11.0000
237	Ilam Hardy	Corbett Bros	201953815	K7401	M2	G5	0.7000
238	Ilam Hardy	Corbett Bros	201953814	K7401	M1	G6	1.4000
239	Ilam Hardy	Gorman Growers	201953735	A2669	EE1	G5	5.8000
240	Ilam Hardy	Gorman Growers	201953728	A2669	PP1	G3	0.2000
241	Ilam Hardy	Gorman Growers	201953736	A2669	PP2	G5	3.6000
242	Ilam Hardy	Gorman Growers	201953737	A2669	F1	G5	5.3000
243	Ilam Hardy	MH Pearce Ltd	201953611	C142	P2	G3	0.2000
244	Ilam Hardy	MH Pearce Ltd	201953612	C142	P3	G4	0.6000
245	Ilam Hardy	MH Pearce Ltd	201953613	C142	P4	G5	3.2000
246	Innovator	Aberdeen Farm Ltd	201953457	A1324	D2	G3	0.7000
247	Innovator	Aberdeen Farm Ltd	201953458	A1324	D3	G4	3.2000
248	Innovator	Aberdeen Farm Ltd	201953464	A6571	S4	G4	1.5000
249	Innovator	Aberdeen Farm Ltd	201953465	A6571	S5	G5	1.2000
250	Innovator	Alps Seed Ltd	201953574	A1187	AA5	G3	1.8000
251	Innovator	Alps Seed Ltd	201953983	A1187	AA6	G5	0.9500
252	Innovator	Alps Seed Ltd	201953575	A1187	AA7	G5	0.7800
253	Innovator	Alps Seed Ltd	201953576	A1187	AA8	G5	0.9500
254	Innovator	Alps Seed Ltd	201953420	A612	Y5	G5	1.5000
255	Innovator	BBCA Farms Ltd	201954416	C355	A12	G6	11.0000
256	Innovator	BBCA Farms Ltd	201954417	C355	A13	G6	8.0000
257	Innovator	Creese Farm Ltd	201953595	A2215	H10	G3	0.5000
258	Innovator	Creese Farm Ltd	201953596	A2215	H11	G3	0.5000
259	Innovator	Creese Farm Ltd	201953593	A2215	H8	G4	3.0000
260	Innovator	Creese Farm Ltd	201953594	A2215	H9	G4	1.0000
261	Innovator	Creese Farm Ltd	201953571	A101	A7	G6	8.0000
262	Innovator	Creese Farm Ltd	201953592	A2215	H7	G6	10.0000
263	Innovator	Innes Fields Ltd	201955164	A7527	P1B2	G3	0.2400
264	Innovator	Innes Fields Ltd	201955165	A7527	P1B3	G4	4.7000
265	Innovator	Innes Fields Ltd	201955166	A7527	P1B4	G5	2.9800
266	Innovator	JR & WD Redmond	201953841	C1869	NH1	G5	2.0000
267	Innovator	JR & WD Redmond	201953842	C1869	NH2	G5	4.0000
268	Innovator	JR & WD Redmond	201953845	C1869	SB2	G5	2.5000
269	Innovator	JR & WD Redmond	201953846	C1869	SB3	G5	4.0000
270	Innovator	JR & WD Redmond	201954009	C780	U5	G5	0.3000
271	Innovator	JR & WD Redmond	201954010	C780	U6	G5	3.7000

272	Innovator	JR & WD Redmond	201953837	C882	MM1	G5	2.4000
273	Innovator	JR & WD Redmond	201953838	C882	MM2	G5	2.5000
274	Innovator	Mid Canterbury Growers Ltd Ltd	201954411	A7575	HH8	G3	0.7000
275	Innovator	Mid Canterbury Growers Ltd Ltd	201953695	A1669	PV3/2	G5	2.5700
276	Innovator	Mid Canterbury Growers Ltd Ltd	201953696	A1669	PV3/3	G6	3.7700
277	Innovator	Mid Canterbury Growers Ltd Ltd	201953697	A1669	PV3/4	G6	3.2100
278	Innovator	Mid Canterbury Growers Ltd Ltd	201954201	A7575	HH6	G6	1.3000
279	Innovator	Naivic Farm Ltd	201954049	A5047	H14	G3	0.5000
280	Innovator	Naivic Farm Ltd	201954048	A5047	H11	G5	6.0000
281	Innovator	Naivic Farm Ltd	201954050	A5047	H13	G5	3.5000
282	Innovator	Redmond Ag Farming	201953645	C2178	FF3	G3	0.7500
283	Innovator	Redmond Ag Farming	201953646	C2178	FF4	G5	4.2500
284	Innovator	Redmond Ag Farming	201953652	C431	XX1	G6	3.2600
285	Innovator	Redmond Ag Farming	201953649	C5186	C2	G6	13.0000
286	Innovator	RG & RM Cairns Ltd	201953687	A301	Q10	G3	0.1300
287	Innovator	RG & RM Cairns Ltd	201953688	A301	Q11	G4	0.8300
288	Innovator	RG & RM Cairns Ltd	201953691	A301	Q12	G4	1.0200
289	Innovator	RG & RM Cairns Ltd	201953692	A301	Q13	G5	0.7000
290	Innovator	RG & RM Cairns Ltd	201953693	A301	Q14	G5	3.7900
291	Innovator	RL Worner	201953748	A926	H2	G3	0.5000
292	Innovator	RL Worner	201953749	A926	H3	G5	5.0000
293	Innovator	Westacre Farm Ltd	201953683	C523	F1	G5	1.6000
294	Innovator 2	JR & WD Redmond	201953844	C1869	SB1	G3	0.7500
295	Innovator 2	JR & WD Redmond	201953843	C1869	NH3	G4	1.6000
296	Innovator 2	JR & WD Redmond	201954011	C780	U7	G4	0.6000
297	Innovator 2	JR & WD Redmond	201953839	C882	MM3	G4	2.0000
298	Innovator 2	Mid Canterbury Growers Ltd Ltd	201953694	A1669	PV3/1	G4	5.3000
299	Innovator 2	Mid Canterbury Growers Ltd Ltd	201954202	A7575	HH7	G4	2.3400
300	Innovator 2	Naivic Farm Ltd	201954051	A5047	H12	G4	4.0000
301	Innovator 2	Redmond Ag Farming	201953980	C2178	FF5	G4	0.8500
302	Innovator 2	Redmond Ag Farming	201953982	C431	XX2	G4	6.7700
303	Innovator 2	Redmond Ag Farming	201953981	C5186	C3	G4	0.7800
304	Ivory Russet	Alps Seed Ltd	201953847	A1187	AA13	G3	0.0800
305	Ivory Russet	BBCA Farms Ltd	201954427	C2178	FF5	Group 1	0.6000
306	Ivory Russet	Creeseide Farm Ltd	201953984	A101	A8	G3	0.1000
307	Ivory Russet	Creeseide Farm Ltd	201953570	C431	XX2	G4	1.0000
308	Jelly	K & M Farming	201953937	A2310	Y5	G3	1.4700
309	Jelly	K & M Farming	201954441	A743	JJ10	G5	1.7200
310	Jelly	K & M Farming	201955513	A687	QQ9	G5	0.7500

311	Jersey Benne	GCA Calder	201954036	C2697	M20	G3	0.4000
312	Jersey Benne	Merv Smith & Sons Ltd	201953277	A7373	W1	G3	0.1600
313	Jersey Benne	Merv Smith & Sons Ltd	201953278	A7373	W2	G5	3.6000
314	Jersey Benne	RL Worner	201953752	A926	FF1	G3	0.5000
315	Jersey Benne	RL Worner	201953753	A926	FF2	G4	2.5000
316	Jurata	Mid Canterbury Growers Ltd	201954135	A1732	H4/15	G3	0.1000
317	Karaka	JF Ridge & Sons	201954102	A858	A7	G3	0.2500
318	Karaka	JF Ridge & Sons	201954103	A858	A8	Group 1	1.0000
319	Lady Rosetta	Aberdeen Farm Ltd	201953998	A2230	B4	G3	0.8000
320	Lady Rosetta	Aberdeen Farm Ltd	201954348	A2230	B1	G4	0.7000
321	Lady Rosetta	Aberdeen Farm Ltd	201953477	A6570	N1	G4	0.9000
322	Lady Rosetta	Aberdeen Farm Ltd	201954002	A6877	B8	G4	2.1000
323	Lady Rosetta	Aberdeen Farm Ltd	201953476	A809	D4/2	G4	1.3500
324	Lady Rosetta	Aberdeen Farm Ltd	201954349	A2230	B2	G5	0.3000
325	Lady Rosetta	Aberdeen Farm Ltd	201953478	A6570	N2	G5	4.1000
326	Lady Rosetta	Annat Farms Ltd	201953640	C1515	K13	G3	0.4000
327	Lady Rosetta	Annat Farms Ltd	201953639	C1515	K12	G4	2.2000
328	Lady Rosetta	Annat Farms Ltd	201953760	C1515	A6	G6	0.7000
329	Lady Rosetta	Annat Farms Ltd	201953638	C1515	K11	G5	0.5400
330	Lamoka	Mid Canterbury Growers Ltd	201954391	A1732	H4/34	G3	0.1000
331	Lamoka	Mid Canterbury Growers Ltd	201953875	A7575	HH1	G4	0.5100
332	Lamoka	Mid Canterbury Growers Ltd	201953876	A7575	HH2	G5	0.4500
333	Lamoka	NH Wright	201953944	C522	B15	G4	0.7000
334	Lamoka	NH Wright	201953945	C522	B16	G5	0.4000
335	Lanorma	Aberdeen Farm Ltd	201954007	A6877	B13	G3	0.0500
336	Lanorma	Aberdeen Farm Ltd	201954008	A6877	B14	G5	0.6000
337	Lanorma	Aberdeen Farm Ltd	201953999	A6877	B5	G6	1.2000
338	Laura	Aberdeen Farm Ltd	201954079	A1493	H13	G3	0.0900
339	Laura	Aberdeen Farm Ltd	201954074	A6877	B15	G4	0.4600
340	Laura	Aberdeen Farm Ltd	201954075	A6877	B16	G5	3.4000
341	Laura	K & M Farming	201954443	A743	JJ12	G3	0.5100
342	Laura	K & M Farming	201954564	A743	JJ13	Group 1	2.2400
343	Leonardo	Alex McDonald Ltd	201953392	A1275	G80	G3	0.1200
344	Liseta	Annat Farms Ltd	201953919	C1515	A9	G3	0.2000
345	Liseta	Annat Farms Ltd	201953920	C1515	A10	G4	0.6000
346	Liseta	Annat Farms Ltd	201953921	C1515	A11	G5	0.6000
347	Ludmilla	Alex McDonald Ltd	201953391	A1275	G79	G3	0.1000
348	Ludmilla	JR & WD Redmond	201955410	C1653	PD3	G4	0.5000
349	Magnum	Alps Seed Ltd	201953580	A1187	AA11	G3	1.6000

350	Marabel	K & M Farming	201955514	A687	QQ10	G3	1.6000
351	Marabel	K & M Farming	201955506	A687	QQ1	G5	3.9000
352	Marabel	K & M Farming	201954383	A33	C8	G6	0.3200
353	Marabel	K & M Farming	201955507	A687	QQ2	G6	0.5000
354	Marabel	K & M Farming	201955508	A687	QQ3	G6	0.6000
355	Marabel	Mid Canterbury Growers Ltd	201954393	A1732	H4/36	G4	1.2100
356	Marabel	Mid Canterbury Growers Ltd	201954431	A7409	G7	G4	1.1800
357	Marabel	Mid Canterbury Growers Ltd	201953872	A6980	K3/6	G5	1.8600
358	Marabel	Mid Canterbury Growers Ltd	201954394	A1732	H4/37	G6	0.5200
359	Marabel	Mid Canterbury Growers Ltd	201953873	A6980	K3/7	G6	5.7600
360	Marilyn	BBCA Farms Ltd	201954412	C355	A8	G4	0.8000
361	Marilyn	BBCA Farms Ltd	201954413	C355	A9	G5	1.0000
362	Marilyn	Innes Fields Ltd	201953449	A1573	E10	G3	0.6200
363	Marilyn	Innes Fields Ltd	201953450	A1573	E11	G4	5.8500
364	Maris Anchor	RL Worner	201953848	A7589	D6	G3	0.5000
365	Maris Anchor	RL Worner	201953745	A7589	D7	G4	1.5000
366	Mariska	Mid Canterbury Growers Ltd	201954144	A1732	H4/24	Group 1	0.2000
367	Markies	BBCA Farms Ltd	201954089	C230	W4	G4	0.2400
368	Markies	BBCA Farms Ltd	201954090	C230	W5	G4	1.0000
369	Markies	BBCA Farms Ltd	201954400	C230	W6	G5	0.3300
370	Markies	BBCA Farms Ltd	201954761	C230	AA1	G6	3.0000
371	Moonlight	Aberdeen Farm Ltd	201954359	A1493	H17	G4	1.2000
372	Moonlight	Aberdeen Farm Ltd	201954364	A1493	H18	G5	1.4000
373	Moonlight	Aberdeen Farm Ltd	201954409	A6570	N5	G5	2.6000
374	Moonlight	Aberdeen Farm Ltd	201954410	A6570	N6	G6	0.8000
375	Moonlight	BBCA Farms Ltd	201954091	C230	W7	G4	2.2900
376	Moonlight	BBCA Farms Ltd	201954085	C1414	M2	G5	2.0800
377	Moonlight	BBCA Farms Ltd	201954083	C1414	N1	G5	9.8200
378	Moonlight	Burrows Farms Ltd	201955482	A1076	W4	G4	1.5000
379	Moonlight	Colee Farming Ltd	201953775	C355	A1	G3	0.8300
380	Moonlight	Colee Farming Ltd	201953776	C355	A2	G4	2.5400
381	Moonlight	Colee Farming Ltd	201953777	C355	A3	G4	0.5400
382	Moonlight	Colee Farming Ltd	201953778	C355	A4	G5	4.7900
383	Moonlight	Corbett Bros	201953805	K6371	E1	G3	0.9000
384	Moonlight	Corbett Bros	201953812	K6371	E6	G3	0.1000
385	Moonlight	Corbett Bros	201953807	K6371	E2	G4	1.9000
386	Moonlight	Corbett Bros	201953808	K6371	E3	G5	1.4000
387	Moonlight	Corbett Bros	201953809	K6371	G2	G5	1.4000
388	Moonlight	Corbett Bros	201953804	K6371	G1	G6	3.6000

389	Moonlight	Corbett Bros	201953799	K7401	BBB	G6	3.6000
390	Moonlight	GC Foster Farming Ltd	201953830	A2116	AA16	G3	0.2000
391	Moonlight	GC Foster Farming Ltd	201953831	A2116	AA17	G4	1.8000
392	Moonlight	GC Foster Farming Ltd	201953832	A2116	AA18	G5	5.6000
393	Moonlight	GC Foster Farming Ltd	201953836	A2116	BB10	G5	3.6000
394	Moonlight	Innes Fields Ltd	201953703	A6553	G13	G3	0.8400
395	Moonlight	Innes Fields Ltd	201953704	A6553	G14	G4	1.0000
396	Moonlight	Innes Fields Ltd	201955167	A7527	P1C1	G4	2.9000
397	Moonlight	JF Ridge & Sons	201954097	A50	A(N)2	G4	3.3400
398	Moonlight	JF Ridge & Sons	201954098	A50	A(N)3	G5	20.0000
399	Moonlight	JF Ridge & Sons	201954095	A50	J9	G5	6.5000
400	Moonlight	Lepoutre-Kroef Farm Ltd	201954545	A769	NN8	G3	0.9400
401	Moonlight	Mid Canterbury Growers Ltd	201953877	A7575	HH3	G4	0.6100
402	Moonlight	Mid Canterbury Growers Ltd	201953878	A7575	HH4	G5	2.0500
403	Moonlight	Mid Canterbury Growers Ltd	201953879	A7575	HH5	G6	1.8400
404	Moonlight	PB & Craig Skou Ltd	201953723	K0439	K6	G3	0.3000
405	Moonlight	PB & Craig Skou Ltd	201953724	K0439	K7	G3	0.1000
406	Moonlight	PB & Craig Skou Ltd	201953725	K0439	K8	G4	0.5000
407	Moonlight	PB & Craig Skou Ltd	201953726	K0439	K9	G5	2.0000
408	Mustang	Aberdeen Farm Ltd	201954081	A1493	H15	G3	0.2400
409	Mustang	Aberdeen Farm Ltd	201953905	A1324	D7	G4	1.5500
410	Mustang	Aberdeen Farm Ltd	201953906	A1324	D8	G5	4.6000
411	Mustang	BBCA Farms Ltd	201954093	C230	W9	G3	0.0900
412	Mustang	BBCA Farms Ltd	201954094	C230	W10	G4	0.5700
413	Mustang	BBCA Farms Ltd	201955586	C3086	PS3	G6	5.1000
414	Nadine	Aberdeen Farm Ltd	201953474	A191	LM(S)6	G6	4.6000
415	Nadine	Aberdeen Farm Ltd	201954004	A6877	B10	G6	2.1000
416	Nadine	Annat Farms Ltd	201953759	C1515	A5	G6	2.0000
417	Nadine	Charterhouse Farm Ltd	201953435	A1416	N1	G3	2.0000
418	Nadine	Charterhouse Farm Ltd	201953262	A827	N1	G4	0.7500
419	Nadine	Charterhouse Farm Ltd	201953411	A1416	N3	G6	0.5000
420	Nadine	Charterhouse Farm Ltd	201953268	A2674	W5	G6	2.0000
421	Nadine	Charterhouse Farm Ltd	201953269	A827	N2	G6	11.0000
422	Nadine	Field View Farms Ltd	201953249	C5102	C4	G4	0.2000
423	Nadine	Field View Farms Ltd	201953250	C5102	C5	G6	5.3000
424	Nadine	Innes Fields Ltd	201955171	A1551	C11	G6	2.1600
425	Nadine	Innes Fields Ltd	201955170	A1573	E18	G6	1.8000
426	Nadine	MH Pearce Ltd	201953615	C732	X4	G6	2.2000
427	Nadine	MH Pearce Ltd	201954306	C1717	LL2	G4	1.0000

428	Nadine	MH Pearce Ltd	201954305	C1717	LL1	G6	8.0000
429	Nadine	RE & DB Yaxley	201954419	C5084	F6/2	G4	1.0000
430	Nadine	RE & DB Yaxley	201954418	C5084	F6/1	G6	2.0000
431	Nadine	RE & DB Yaxley	201955380	C7594	B1	G6	12.8000
432	Nadine	Weeping Hill Farm	201954428	K7614	A1	G4	0.5000
433	Nadine 10	Aberdeen Farm Ltd	201954003	A6877	B9	G4	0.8000
434	Nadine 10	Annat Farms Ltd	201953758	C1515	A4	G4	0.2500
435	Nadine 10	Gorman Growers	201953730	A7391	F1	G4	0.5000
436	Nadine 10	Gorman Growers	201953739	A7391	F2	G5	4.7000
437	Nadine 10	Gorman Growers	201953738	A7391	G	G5	4.6000
438	Nadine 10	Gorman Growers	201953732	A7391	H2	G5	1.0000
439	Nadine 10	Innes Fields Ltd	201955168	A6764	FF4	G4	7.3000
440	Nadine 10	Innes Fields Ltd	201955169	A6764	FF5	G4	0.9700
441	Nadine 3	Alex McDonald Ltd	201953400	A1275	G84	G4	1.1800
442	Nadine 3	NH Wright	201953772	C522	B5	G4	0.0200
443	Nadine 3	NH Wright	201953773	C522	B6	G5	3.6000
444	Nadine Almac	Alex McDonald Ltd	201953397	A1275	G85	G3	0.3000
445	Natascha	Aberdeen Farm Ltd	201953992	A1493	H6	G3	0.0300
446	Natascha	Aberdeen Farm Ltd	201953993	A1493	H7	G3	0.1400
447	Natascha	Aberdeen Farm Ltd	201953994	A1493	H8	G5	0.8200
448	Natasha	Innes Fields Ltd	201953483	A6764	J3	G3	0.0460
449	Natasha	Innes Fields Ltd	201953484	A6764	J4	G4	0.4210
450	Nectar	Mid Canterbury Growers Ltd	201954395	A1732	H4/38	G3	0.1000
451	Olympus	NH Wright	201953946	C522	B17	G5	0.6000
452	Orlena	Aberdeen Farm Ltd	201953459	A1324	D4	G3	0.0200
453	Orlena	Aberdeen Farm Ltd	201953460	A1324	D5	G4	0.2000
454	Orlena	Aberdeen Farm Ltd	201953461	A1324	D6	G5	0.5500
455	Orlena	Innes Fields Ltd	201953490	A6764	FF1	G3	0.0450
456	Orlena	Innes Fields Ltd	201953491	A6764	FF2	G4	0.6000
457	Orlena	Innes Fields Ltd	201953481	A6764	J1	G5	0.4500
458	Orwell	Aberdeen Farm Ltd	201953466	A2670	A7	G5	2.5000
459	Orwell	Innes Fields Ltd	201953495	A1551	C9	G3	0.9800
460	Orwell	Innes Fields Ltd	201953496	A1551	C10	G4	3.7000
461	Orwell	Merv Smith & Sons Ltd	201953599	A7591	F3	G3	0.6500
462	Orwell	Merv Smith & Sons Ltd	201953279	A6567	M(E)1	G4	0.7500
463	Orwell	Merv Smith & Sons Ltd	201953600	A7591	F4	G4	1.0000
464	Osprey	Gorman Growers	201953731	A7391	H1	G3	0.1000
465	Osprey	Gorman Growers	201953733	A7391	H3	G5	4.1000
466	Pallisade Russet	Alps Seed Ltd	201953419	A612	Y4	G3	1.4000

467	Pelikan	Alex McDonald Ltd	201953395	A1275	G83	G3	0.0100
468	Perline	Mid Canterbury Growers Ltd	201954106	A1732	H4/1	G4	0.2000
469	Purple Heart	GCA Calder	201954034	C2697	M18	G3	0.1000
470	Purple Heart	GCA Calder	201954035	C2697	M19	G4	0.3000
471	Purple Passion	GCA Calder	201954037	C2697	M21	G3	0.2000
472	Purple Passion	GCA Calder	201954038	C2697	M22	G4	0.5000
473	Red Fantasy	Mid Canterbury Growers Ltd	201954396	A1732	H4/39	G4	19.0000
474	Red King Edward	RL Worner	201953741	A7589	D1	G3	0.5000
475	Red Rascal	GC Foster Farming Ltd	201953828	A2116	AA14	G3	0.2000
476	Red Rascal	GC Foster Farming Ltd	201953829	A2116	AA15	G4	4.0000
477	Rocket	Annat Farms Ltd	201955565	C1515	K8	G3	0.2000
478	Rocket	Annat Farms Ltd	201953426	C1515	K7	G4	1.4000
479	Rocket	Annat Farms Ltd	201953402	C7475	B2	G5	4.1000
480	Rocket	Annat Farms Ltd	201953403	C7475	B3	G4	0.3000
481	Rocket	Annat Farms Ltd	201953286	C7475	B1	G6	2.2000
482	Rocket	NH Wright	201953253	C6348	C(W)1	G3	0.2000
483	Rocket	NH Wright	201953771	C522	B4	G4	0.8000
484	Rocket	NH Wright	201953255	C6348	C(W)3	G6	8.0000
485	Romanze	JR & WD Redmond	201955414	C1653	PD7	G3	0.2000
486	Romanze	JR & WD Redmond	201955413	C1653	PD6	G4	2.4000
487	Romanze	JR & WD Redmond	201955407	C1653	PF6	G4	1.7000
488	Romie	JF Ridge & Sons	201954104	A858	A9	Group 1	0.5500
489	Royal	Alps Seed Ltd	201953579	A1187	AA10	G3	2.7500
490	Rua	Alex McDonald Ltd	201953393	A1275	G81	G3	0.2000
491	Rua	Burrows Farms Ltd Ltd	201955347	A1051	H2	G3	0.4000
492	Rua	Burrows Farms Ltd Ltd	201955351	A1017	K7	G5	1.4000
493	Rua	Burrows Farms Ltd Ltd	201955348	A1051	H3	Group 1	0.2000
494	Rua	Gorman Growers	201953717	A257	G6	G4	1.2000
495	Rua	Gorman Growers	201953714	A257	Q3	G4	7.4000
496	Rua	JF Ridge & Sons	201954025	A50	J7	G3	0.1650
497	Rua	JF Ridge & Sons	201954026	A50	J8	G4	1.3600
498	Rua	JF Ridge & Sons	201954022	A50	J4	G5	0.9420
499	Rua	JF Ridge & Sons	201954027	A858	A1	G5	2.5800
500	Rua	JF Ridge & Sons	201954028	A858	A2	G6	1.1700
501	Russet Burbank	Aberdeen Farm Ltd	201953897	A2670	A11	G4	2.2000
502	Russet Burbank	Aberdeen Farm Ltd	201953898	A2670	A12	G5	1.5000
503	Russet Burbank	Aberdeen Farm Ltd	201953899	A2670	A13	G5	2.2000
504	Russet Burbank	Aberdeen Farm Ltd	201953462	A6571	S1	G3	0.8000
505	Russet Burbank	Aberdeen Farm Ltd	201953463	A6571	S2	G4	7.2000

506	Russet Burbank	Alps Seed Ltd	201953412	A7479	F1	G3	6.7300
507	Russet Burbank	Alps Seed Ltd	201953413	A7479	F2	G4	2.4400
508	Russet Burbank	Alps Seed Ltd	201953414	A7479	F3	G4	0.9500
509	Russet Burbank	Alps Seed Ltd	201953416	A612	Y1	G5	5.5000
510	Russet Burbank	Alps Seed Ltd	201953415	A7479	F4	G5	1.7800
511	Russet Burbank	Creeside Farm Ltd	201953569	A101	A5	G4	3.5000
512	Russet Burbank	Field View Farms Ltd	201953433	C116	A5	G3	0.3000
513	Russet Burbank	Field View Farms Ltd	201953434	C116	A6	G4	5.9500
514	Russet Burbank	Innes Fields Ltd	201954698	A1551	C5	G4	12.8200
515	Russet Burbank	Innes Fields Ltd	201955360	A1551	C7	G3	2.8000
516	Russet Burbank	JR & WD Redmond	201955398	C1653	PF2	G4	3.0000
517	Russet Burbank	K & M Farming	201954445	A743	JJ15	G4	1.9000
518	Russet Burbank	K & M Farming	201954446	A743	JJ16	G4	0.6000
519	Russet Burbank	K & M Farming	201953925	A301	P8	G5	10.0000
520	Russet Burbank	Merv Smith & Sons Ltd	201953283	A572	JJ1	G3	1.2000
521	Russet Burbank	Merv Smith & Sons Ltd	201953284	A572	JJ2	G4	7.0000
522	Russet Burbank	Redmond Ag Farming	201953643	C2178	FF1	G3	0.2700
523	Russet Burbank	Redmond Ag Farming	201953644	C2178	FF2	G4	4.2500
524	Russet Ranger	K & M Farming	201953923	A301	Q16	G5	4.2000
525	Russet Ranger	Lepoutre-Kroef Farm Ltd	201954541	A769	NN4	G3	0.4300
526	Russett Burbank	Aberdeen Farm Ltd	201953985	A6571	S3	G4	0.7500
527	Russett Burbank	Lepoutre-Kroef Farm Ltd	201954547	A769	NN10	G3	0.7200
528	Saturn King	Mid Canterbury Growers Ltd	201954563	A7409	G6	G3	0.1800
529	Saturn King	Mid Canterbury Growers Ltd	201954746	A7409	G4	Group 1	5.3100
530	Saturn King	Mid Canterbury Growers Ltd	201954747	A7409	G5	Group 1	1.3800
531	Sebago	RL Worner	201953746	A7589	D8	G3	0.5000
532	Sebago	RL Worner	201953747	A7589	D9	G4	1.0000
533	Shepody	Alps Seed Ltd	201954309	A407	J3	G3	3.0000
534	Sifra	MH Pearce Ltd	201953614	C732	X3	G4	6.4000
535	Sifra	Sprout Central Ltd	201953852	C803	W7/3	G3	0.5000
536	Sifra	Westacre Farm Ltd	201953684	C523	F2	Group 1	3.5000
537	Agria	Colee Farming Ltd	201953779	C355	A5	G3	0.5300
538	Agria	Colee Farming Ltd	201953780	C523	F2	G4	5.0000
539	Agria	Merv Smith & Sons Ltd	201953273	T7590	A4	G3	0.9000
540	Summer Delight	Corbett Bros	201953816	K7401	BB1	G3	0.4000
541	Summer Delight	Corbett Bros	201953819	K7401	BB2	G4	0.2000
542	Summer Delight	Corbett Bros	201953820	K7401	BB3	G5	0.5000
543	Summer Delight	Corbett Bros	201953813	K6617	B3	G6	1.5000
544	Summer Delight	Corbett Bros	201953821	K7401	BB4	G6	1.0000

545	Swift	Charterhouse Farm Ltd	201953438	A1640	G2	G4	1.2000
546	Swift	Charterhouse Farm Ltd	201953439	A1640	G3	G5	8.5000
547	Taurus	Aberdeen Farm Ltd	201953995	A6877	B1	G3	0.1700
548	Taurus	Aberdeen Farm Ltd	201953996	A6877	B2	G4	0.2000
549	Taurus	Aberdeen Farm Ltd	201953997	A6877	B3	G6	1.0000
550	Taurus	Charterhouse Farm Ltd	201953436	A1149	X7	G3	0.5000
551	Taurus	Charterhouse Farm Ltd	201953257	A1149	X2	G4	1.0000
552	Taurus	Charterhouse Farm Ltd	201953258	A1149	X3	G5	1.5000
553	Taurus	NH Wright	201953769	C522	B2	G4	0.0200
554	Taurus	NH Wright	201953770	C522	B3	G4	0.5000
555	Tiffany	Redmond Ag Farming	201953292	C7317	H1	G3	0.1800
556	Tiffany	Redmond Ag Farming	201953782	C7317	H4	G6	2.3100
557	Van Rosa	GC Foster Farming Ltd	201953833	A2116	BB7	G3	0.2000
558	Van Rosa	GC Foster Farming Ltd	201953834	A2116	BB8	G4	1.0000
559	Van Rosa	GC Foster Farming Ltd	201953835	A2116	BB9	G6	3.2000
560	Van Rosa	Gorman Growers	201953713	A1031	Q4	G5	1.0000
561	Van Rosa	Gorman Growers	201953755	A1416	N5	G3	0.1000
562	Van Rosa	Gorman Growers	201953757	A1416	N7	G3	3.2000
563	Van Rosa	RL Worner	201953750	A926	H4	G3	0.5000
564	Van Rosa	RL Worner	201953751	A926	H5	G6	1.0000
565	Verdi	Alex McDonald Ltd	201953394	A1275	G82	G3	0.1000
566	Victoria	Gorman Growers	201953754	A1416	N4	G3	0.2000
567	Victoria	Gorman Growers	201953756	A1416	N6	G5	2.1000
568	Victoria	Innes Fields Ltd	201953485	A6764	J5	G3	0.2000
569	Victoria	Innes Fields Ltd	201953486	A6764	J6	G4	2.9000
570	Victoria	Mid Canterbury Growers Ltd Ltd	201953647	A6980	K3/5	G3	0.4400
571	Victoria	Mid Canterbury Growers Ltd Ltd	201953421	A6980	K3/2	G4	2.4600
572	Victoria	Mid Canterbury Growers Ltd Ltd	201953422	A6980	K3/3	G5	2.8000
573	Vivaldi	JF Ridge & Sons	201954023	A50	J5	G3	0.4450
574	Vivaldi	JF Ridge & Sons	201954024	A50	J6	G4	5.0000
575	Vivaldi	Mid Canterbury Growers Ltd Ltd	201954347	A7409	G2	G3	0.6300
576	Vivaldi	Mid Canterbury Growers Ltd Ltd	201953423	A6980	K3/4	G4	4.0000
577	Vivaldi	Mid Canterbury Growers Ltd Ltd	201954346	A7409	G1	G4	3.0000
578	Vivaldi	Sprout Central Ltd	201953851	C803	W7/2	G5	2.0000
579	VR808	Aberdeen Farm Ltd	201953903	A1336	B8/1	G4	2.4000
580	VR808	Aberdeen Farm Ltd	201953904	A1336	B8/2	G5	2.3000
581	VR808	Lepoutre-Kroef Farm Ltd	201954543	A769	NN6	G3	0.3400
582	Waneta	Annat Farms Ltd	201953914	C1515	K22	G3	0.4000
583	Waneta	Annat Farms Ltd	201953915	C1515	K23	G4	1.4000

584	Waneta	Annat Farms Ltd	201953916	C1515	K24	G5	4.1000
585	White Beauty	Colee Farming Ltd	201953444	C955	B13	G3	0.4200
586	White Beauty	Colee Farming Ltd	201953442	C955	B11	G4	0.2500
587	White Beauty	Corbett Bros	201953823	K7401	AA4	G3	0.3000
588	White Beauty	Corbett Bros	201953824	K7401	AA5	G4	0.6000
589	White Beauty	Corbett Bros	201953825	K7401	AA6	G5	1.2000
590	White Beauty	Corbett Bros	201953817	K7401	AA1	G6	0.3000
591	White Beauty	Corbett Bros	201953818	K7401	DD	G6	1.5000
592	White Beauty	PB & Craig Skou Ltd	201954210	K392	C4	G3	0.3000
593	White Beauty	PB & Craig Skou Ltd	201954204	K392	C6	G3	0.1000
594	White Beauty	PB & Craig Skou Ltd	201953720	K392	C5	G4	1.4000
595	White Beauty	PB & Craig Skou Ltd	201953718	K392	C1	G5	2.5000

***Note: the status of these cultivar names is being clarified by the Authority.**

Amendment record

Date	Section	Nature of amendment
16 September 2014	Whole of document	Revision, reorganisation and reissue of the entire document and changes to remove ambiguity. It is recommended that industry participants review the entire document.
	Definitions	Definitions of terms used in the scheme.
	1.3.1	Clarification that G0 material is the first ground planted mini-tuber or tissue culture plantlet.
	2.3	New requirements for registration of G0 material.
	2.7.1	New requirements for segregation of seedlines (points 4 & 5).
	2.7.4	Revisions to field inspection tolerances:
		Chemical damage and weeds
		Revised tolerance table and deletion of previous "combined virus and rogues" table.
		New requirement that seedlines certified in the group programme meet G6 field tolerances.
	2.10.2	Provision for inspectors to apply additional charges if they have to return to complete an inspection due to grower tuber inspection records not being available.
	2.10.3	Introduction of 1% tolerance for powdery scab and clarification of sampling procedure.
	4.3	New requirements for registration of G0 material.
	4.4	Determination that upgrading applications are to be approved by the Authority.
	4.5	New section allowing downgrading of seedlines for commercial reasons.
	4.6	New requirements for G2 virus testing
	5	Clarification of requirements for inspectors.
	8	New requirements for tissue culture laboratories and mini-tuber production facilities to be registered and to issue statements of origin for material entering the scheme.
	Appendices	Annexures relating to approved organisations removed and now available from the Secretary.
	Appendix 2 and appendix 3	New requirements for tissue culture laboratories and mini-tuber production facilities to issue statements of origin for material entering the scheme.
23 September 2015	2.2	Growers may change inspection body only if done before the first inspection
	2.4	Renaming of the PCN Compliance Programme
	2.7.3	Rogueing to include plants showing Liberibacter symptoms
	2.7.4	Inspectors to record on the inspection form the incidence of suspected Liberibacter in certified seed crops and report this to the Authority
	2.9	Changes to appeals process
	4.4	Change to the process for Merchants to notify the Authority of upgraded seedlines.
	5.1	Renaming of the MPI Pest Survey Standard
	5.3	Staff competency – changed training requirements for inspectors

Date	Section	Nature of amendment
	6	Changed reference to MPI Technical Standard: Audit and risk categories for establishing audit frequency
	7	Changed reference in MPI Standard IVA Requirements to option 1.
	9	Updated contact details
12 October 2015	9	Updated contact details
16 August 2016	2.3	Replaced “registered” with “Authority approved” tissue culture laboratory or mini-tuber production facility
	2.7.4	New tolerance for <i>Candidatus Liberibacter solanacearum</i> symptoms established.
	2.8.3	Correction to cross-referenced sections
	2.8.4	New section allowing rejection of a part crop at field inspection.
	4.6	Addition of the word “crop” to point 1.
26 October 2017	All	Annual update for minor corrections.
	Definitions	Addition of new definitions and acronyms.
	1.3.1	Clarifications of the operation of the pyramid programme.
	2.2	Removal of point 5. Tags no longer need to be submitted with entries.
	2.7.4	Pyramid programme tolerances. Clarification that tolerances are based on visual examination for symptoms.
	2.8.2	New section 2.8.2 allowing suspension of inspection, corrective actions, and re-inspection. Renumbering of following sections.
	2.9	Modifications to the appeal process. An Appeals Panel established. Appeal fee in non-refundable.
	2.10.2	Deletion of requirement for growers to operate a documented tuber inspection procedure and provide grading sheet to the Inspector. Renumbering of subsequent sections.
	2.10.3	Renumbered to 2.10.4. Other Faults – Clarification that the tolerance is applied to the whole inspection sample. Table 3, rewording of heading.
7 August 2018	1.3.1	Deletion of “and other tests” and insertion of “except for “Field Certified” lines”
	1.3.2	Insertion of a new 1.3.2 for “Field Certified” lines, and consequent renumbering of following sections.
	2.3	Cross reference inserted for new varieties being registered, and statement that G3-G6 lines will be published on the PNZ website and Seedlines booklet.
	2.10.2	Clarification that tuber inspection is not done for Field Certified seedlines.
	2.10.3	Clarification that tuber inspection is not done for Field Certified seedlines.
	4.1	Clarification that all Merchants must be registered in the Scheme (refer to Merchant in the Definitions)
	4.2	New information requirements to accompany entry of new varieties, and rules for variety registration.
	4.2	Removal for requirement that new varieties are subject to Powdery scab indexing.
	4.5	Addition of rule for downgrading seedlines from Pyramid to Field Certified.
	4.6	Clarification that G2 virus testing is done on G2 harvested lines.
	Appendix 2.	Update of the names of pathogens to be tested for.

Definitions & Acronyms

Approved	Authorised by the New Zealand Seed Potato Certification Authority to perform specified activities under the scheme.
Approved organisation	An organisation authorized by the Authority to undertake seed potato certification activities under the Scheme.
Authority	The New Zealand Seed Potato Certification Authority, operating as an unincorporated committee of Potatoes New Zealand Incorporated.
Certified seed	Seed potatoes for which seed certification labels have been issued.
Faults	Factors affecting seed potato quality, including pests and diseases and their symptoms, rogues, external damage, misshapen tubers, and sizing, for which tolerances are established within the Scheme.
Field inspection	Official visual examination of potato crop entered for certification to determine compliance with requirements of the Scheme.
Lot	A seedline, or portion of a seedline, presented for official tuber inspection.
Merchant	Commercial entity managing the multiplication of seed potatoes for seed potato certification.
MAO	MPI Approved Organisation.
MPI	Ministry for Primary Industries.
Official	Established, authorized or performed by the Authority.
PCN	Potato Cyst Nematode.
ROP	Region of Production.
Tuber inspection	Visual examination of seed tubers submitted for certification to determine compliance with requirements of the Scheme.
Rogues	Off types (genetic variants), volunteers, and foreign varieties.
Scheme	The New Zealand Seed Potato Certification Scheme as published and amended from time to time by the Authority.
Seed certification labels	Labels approved by the Authority used to provide assurances to seed potato buyers that seed meets the requirements of the Scheme.
Seed Potato Certification	All those activities leading to, and including, the official issuance of a seed certification label.
Seedline	Seed potatoes, including tissue culture plantlets, of a single variety that when grown are confined within one field and for which a unique reference number has been issued by the Authority.

1. INTRODUCTION

1.1. PURPOSE

The purpose of the New Zealand Seed Potato Certification Scheme (the Scheme) is to provide assurance that certified seed lines meet the minimum standards for disease freedom and trueness to type that are specified by the Authority. The scheme is also intended to at least meet the requirements of UNECE Standard S1 concerning the marketing and commercial quality control of seed potatoes.

1.2. ROLE OF THE SEED POTATO CERTIFICATION AUTHORITY

The New Zealand Seed Potato Certification Authority (the Authority) is a sub-committee of Potatoes New Zealand Incorporated and members of the Authority are appointed by the Potatoes New Zealand Board. Membership comprises of 2 seed growers, 2 merchant members, 2 end users, plus one Potatoes New Zealand Board representative.

The Authority is responsible for all aspects of the operation of the Scheme, including determining the tolerances for diseases and other defects, and appointing and contracting organisations to manage the Scheme or to conduct inspections. The operation of the scheme is managed by the Administrator and the Secretary, and Technical Panels are established by the Authority from time to time to consider and provide advice on specific technical issues.

The Administrator manages the day to day operation of the Scheme. This includes registering growers, merchants and crops into the scheme, managing the database of seed lines, recording virus test results, recording inspection outcomes, handling appeals, and reporting to the Authority.

The Secretary manages the operation of the Authority and is the contact point for the Authority. The role includes preparing agendas and papers for Authority and Technical Panel meetings, maintenance of the Scheme document, providing technical support for the Authority, managing the Authority's work programme, managing finances and preparing accounts for Authority meetings, and for communications with members.

1.3. OVERVIEW OF THE SEED POTATO CERTIFICATION SCHEME

The Authority operates a single Seed Potato Certification Scheme. Within that Scheme there are two multiplication programmes: a pyramid multiplication programme and a group programme. The Authority contracts organisations to undertake field and tuber inspections, but also provides an option whereby organisations (e.g., seed merchants) may be approved to undertake certification activities on behalf of the Authority. These options have been provided in order to maximise industry participation in the Scheme.

Seed potatoes certified under the scheme meet the requirements and tolerances of the scheme at the time that field and tuber inspections are carried out. Grower requirements are verified through the growing cycle (identification of sown crops, separation of varieties, traceability) and at tuber inspection. Field inspections are undertaken to ensure tolerances for virus, diseases, and varietal purity are not exceeded.

Freedom from potato cyst nematode is verified by requiring that all seed crops are registered in the Ministry for Primary Industries' "Export Compliance Programme for the Provision for Potato Cyst Nematode (PCN) and Potato Wart Additional Declarations". This is an efficient way of providing assurances of PCN freedom without the Authority having to undertake PCN testing within the Scheme.

The Authority also requires that growers complete a grower tuber sampling and inspection procedure. Completion of this procedure is checked at the time of official tuber inspection which is conducted immediately prior to issuance of certification.

Subsequent storage, cutting and transport may affect the quality of seed planted by a table or process grower later in the season. Certification by the Authority does not provide any assurances about these activities and buyers are encouraged to work closely with seed growers and merchants to make known their commercial requirements and to confirm arrangements for storage, cutting and transport. The boundaries of responsibilities are illustrated in Figure 1.

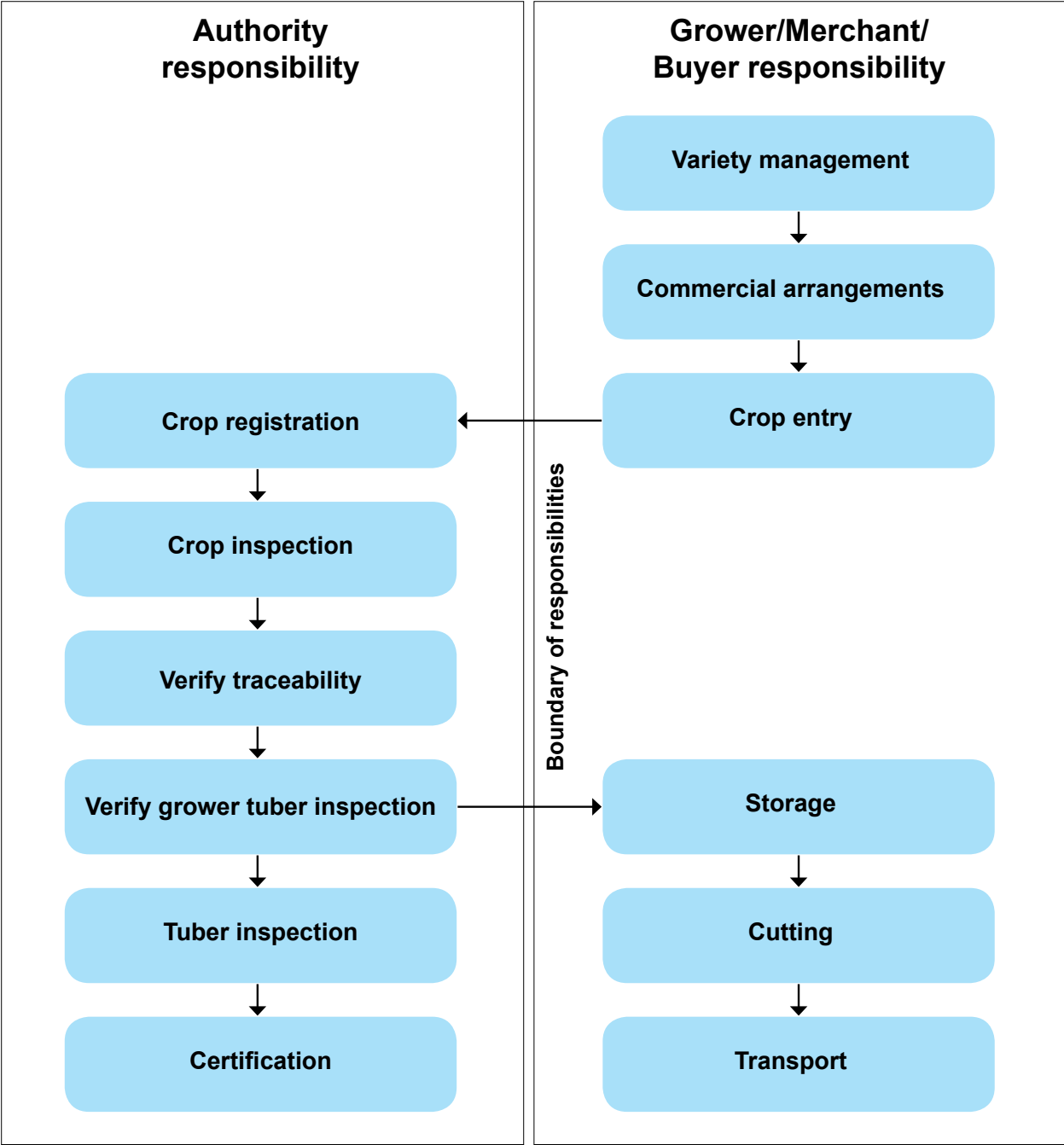


Figure 1. Delineation of responsibilities between the Authority and commercial interests in the production of Certified Seed Potatoes.

1.3.1. PYRAMID PROGRAMME

The Pyramid Programme is a seed potato multiplication programme starting with tissue culture plantlets or mini-tubers and tuber numbers are increased through successive field generations (denoted by the “G” number in the programme). Virus tested tissue culture or mini-tubers produced in approved tissue culture laboratories or mini-tuber production facilities is considered to be G0, and this disease free material provides new starting stock. As soon as G0 material is planted in the ground it becomes G1 harvested seed. Each year seed passes to a following lower class distinguished by a higher G number. On reaching the lowest certifiable class (G6) seed is no longer eligible for seed multiplication and cannot be certified beyond this point. Certified classes are G1, G2, G3, G4, G5 and G6 (refer Figure 2).

The Authority has specific requirements for the entry of new material and new varieties into the pyramid programme, as described in detail in the Merchant section of this document. Tissue culture plantlets or mini-tubers entering the pyramid programme must be sourced from tissue culture laboratories or mini-tuber production facilities approved by, and meeting the requirements of, the Authority. New varieties must undergo validation before being accepted into the pyramid programme.

All G2 lines (i.e., G1 seed that is planted and is registered as G2 for field and tuber inspection) are required to undergo leaf testing for viruses at the cost of the party submitting samples for testing. Every generation is subject to at least two field inspections where viruses, diseases, varietal purity and other defects are assessed against the tolerances established for the programme. Tuber inspections are also undertaken at any point where the ownership of the seed line changes (e.g., when seed is sold to another seed grower or when seed is sold for table or process production) to ensure that defect tolerances are not exceeded, except for “Field Certified” lines.

Following tuber inspection, labels are issued for the appropriate class (G1-G6) of seed to certify that scheme requirements have been met.

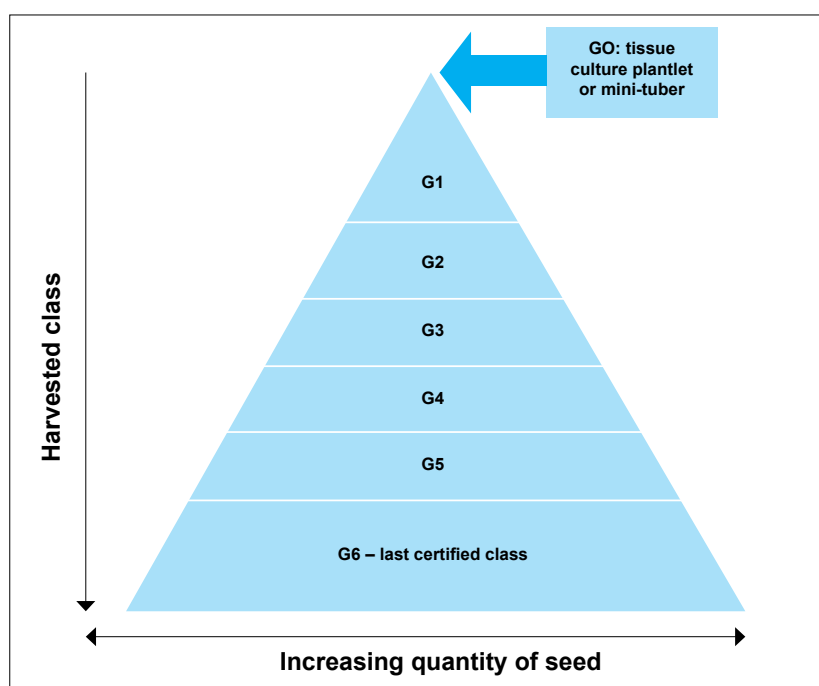


Figure 2. The pyramid multiplication programme. New material is considered G0 until it is ground planted and registered as a G1 crop and progresses through subsequent generations to G6 harvested which is the last certified generation. The G number denotes the harvested class of the seed.

1.3.2. FIELD CERTIFIED

“Field Certified” is a programme within the scheme for seed potatoes intended for process potato production. Field Certified is identical to the Pyramid Programme, except that no tuber inspection is undertaken. The status of Field Certified assists with traceability of seed, and makes clear the inspection status of the lines. Seed labels must be endorsed with the words “Field Certified”.

1.3.3. GROUP PROGRAMME

In the group programme growers maintain seed lines on their farms and make selections from these for multiplication. Seed may enter from any source and is not required to be obtained from approved facilities. Leaf testing is not carried out on group lines, however they are subject to at least two field inspections and tuber inspection at any point where the ownership of the seed line changes (e.g., when seed is sold to another seed grower or seed when is sold for table or process production) to ensure that defect tolerances are not exceeded. Following tuber inspection labels are issued to confirm that group programme requirements have been met.

1.3.4. APPROVED ORGANISATIONS

The Authority operates a process for approval of organisations to undertake field and tuber inspection of their contracted growers’ crops as part of documented and independently audited quality assurance systems. Approved Organisations must maintain a documented system containing procedures for meeting the requirements of the Scheme, including procedures for staff competency. Organisations must apply to the Authority for approval, a process which includes independent evaluation of the organisation’s documented system and a series of independent audits. Ongoing annual audits are required. An annual approved organisation fee applies, as modified by the Authority from time to time. Full details are available from the Secretary.

2. REQUIREMENTS FOR GROWERS

2.1. REGISTRATION OF NEW GROWERS

All new growers must complete the ‘Registration of Participation in the New Zealand Seed Potato Certification Scheme’ before applications to register seedlines will be processed. Registration forms are available from the Administrator or from the Potatoes New Zealand website. Submit completed application forms to the Administrator.

2.2. ANNUAL CROP REGISTRATION

Each seedline must be registered annually. Complete the current “Application for seed potato certification” form. The current version of the application form is available from the Administrator, from the Potatoes New Zealand website, or from an Approved Organisation. To be eligible for registration:

1. Each seedline must be confined within one field.
2. A minimum of 5 harvest seasons is required since the last potato crop was grown in the field.
3. Farm numbers and field letters are required on entry applications for paddock identification.
4. A property map must be supplied when requesting a new farm number. The Administrator will issue a unique farm number and paddock identification letters for the property.

Submit completed applications to the Administrator or Approved Organisation. The closing date

for entries is 21 days after planting. Where planting is spread over an extended period, growers must ensure applications for early plantings are completed on time. The Administrator may exercise discretion in accepting late entries where this does not impinge on the management of the Scheme or on field inspections.

Growers may change inspection body after crop registration only if this is done before the first inspection of the registered crop.

2.3. REGISTRATION OF G0 MATERIAL INTO THE PYRAMID PROGRAMME

All tissue culture plantlets and mini-tubers entering the pyramid programme for certification must have been produced in an Authority approved tissue culture laboratory or mini-tuber production facility meeting the standards described in Annexures 5 & 6. This G0 material will become G1 harvested. A statement of origin provided by the tissue culture laboratory or mini-tuber production facility must be supplied to the Administrator when entering G0 material into the Scheme. The statement is required include the following information:

1. Name of supplier.
2. Type of material (tissue culture or mini-tuber).
3. Variety (for new varieties or selections, refer section 4.2).
4. Quantity of material (number/weight of mini-tubers or number of tissue culture plantlets).
5. Name of company material supplied to.
6. Date material supplied.

Any tissue culture or mini-tubers not produced in an approved tissue culture laboratory or mini-tuber production facility will not be registered.

Seedlines from G3-G6 harvested will be listed on the Potatoes New Zealand website and other publications.

2.4. POTATO CYST NEMATODE PROGRAMME REGISTRATION

All registered seed potato crops must be entered into, and be compliant with, the Ministry for Primary Industries' (MPI) "MPI Phytosanitary Official Assurance Programme for Potato Cyst Nematode and Potato Wart". Growers must register their crops into the MPI programme: this is not done by the Authority or the Administrator. Growers must contact their Independent Verification Agency to register with the MPI programme. Further details are available on the MPI website.

2.5 ANNUAL CROP REGISTRATION FEES

The Authority reviews its fees annually and publishes the fees in the Authority newsletter. The fee comprises of an administration fee and an inspection fee. The administration fee covers management of the seed potato database, management of the Scheme by the Authority, printing of labels, communications, and other administrative matters. The inspection fee covers the cost of two field inspections, tuber inspection, providing labels, and reporting to the Authority.

Where growers are operating with an Approved Organisation the Authority will recover the grower's administration fee from the Approved Organisation. The Approved Organisation will make

arrangements for field and tuber inspections to be carried out and report the results to the Administrator. The Approved Organisation may charge the grower for these inspections and the administration fee, as determined by commercial arrangements between the parties.

All other seed growers will be invoiced by the Authority for the combined administration and inspection fees. Half of the total will be invoiced in February and the balance in May.

2.6. WITHDRAWAL OF CROPS FROM THE SCHEME

Growers may voluntarily withdraw crops from the Scheme at any time. Once withdrawn the seed lines will not be eligible for re-entry into the scheme. Where a crop is withdrawn prior to the first inspection the grower is required to pay to the Authority only the administration charge per hectare set for that growing season. All claims for refunds must be lodged with the Secretary within 30 days of the crop withdrawal date. Where crops are withdrawn after the first inspection no refund will be given.

2.7. CROP MANAGEMENT

2.7.1. Identification of seedlines

At planting and during growth:

1. Individual varieties in the field must be kept separate by at least the equivalent of one clear row between different varieties.
2. At least 5 metres of clear row must be left at each end of the first row of each seedline of the same variety, be clearly marked, and be visible from the centres (clearly marked means marked with a flag, visible post or marker at each end of the row).
3. Each seedline must be readily identifiable in the field throughout the growing season.
4. No table or uncertified seed crop may be planted on the same property as seed potatoes to be certified under the Scheme, unless the table or uncertified seed crop are sown with certified seed.
5. If the table or uncertified seed crops are sown with certified seed, there must be a 2 metre gap between the table or uncertified seed crops and any certified seed crops sown in the same paddock.

2.7.2. Crop protection

It is recommended that growers implement a robust pest and disease management programme to minimise the risk of infection and spread of infection. A crop diary must be kept for each seed line. Minimum information recorded shall be: planting dates/s, spray applications, names of spray, rates of applications, burn off date, post-burn off applications, and harvest dates.

2.7.3. Rogueing

Regular observation of the crop is recommended. Rogueing of diseased plants (including *Liberibacter* symptoms), foreign varieties and off types should be completed as early as practicable, but preferably before the first inspection. All plant tops and tubers of diseased, foreign varieties and off types must be removed from the field.

2.7.4. TOLERANCES FOR DEFECTS IN SEED CROPS

Following crop inspections the inspector will determine whether the level of faults in the seedline falls below the established tolerances for pests, diseases, and varietal purity within the group programme or the appropriate generation within the pyramid programme. The relevant tolerances are as follows:

CHEMICAL DAMAGE & WEEDS

Any crop showing the effects of chemical damage (e.g., hormonal damage) may be rejected if the number of affected plants is very obvious and extensive and the affected area cannot be isolated for re-inspection. Crops that are excessively weedy may be rejected if the inspector is unable to see the crop and move freely through it. Inspectors will consider the impact of weeds on their ability to inspect the crop and whether chemical damage may impact on daughter tubers, or mask disease symptoms.

PYRAMID PROGRAMME TOLERANCES

Within the pyramid programme the following tolerances apply to the harvested class of each seedline (Table 1) based on visual examination for symptoms. A seedline that is assessed to be below or at the tolerance indicated will be passed, seedlines that exceed the tolerances will be rejected.

Table 1. Tolerances for faults by visual examination within the pyramid programme of the Seed Potato Certification Scheme.

	G1	G2	G3	G4	G5	G6
Maximum Virus Potato virus A, M, X, Y, & leafroll virus	0	0.05 (1 in 2000)	0.05 (1 in 2000)	0.05 (1 in 2000)	0.1 (1 in 1000)	0.2 (1 in 500)
<i>Candidatus</i> Liberibacter solanacearum symptoms	0	0.2 (1 in 500)	0.2 (1 in 500)	0.2 (1 in 500)	0.2 (1 in 500)	0.2 (1 in 500)
Maximum Rogues (off types, volunteers and foreign varieties)	0	0	0.01 (1 in 10,000)	0.01 (1 in 10,000)	0.01 (1 in 10,000)	0.025 (1 in 4000)
Maximum Blackleg (<i>E. carotovora</i>)	0	0.1 (1 in 1000)	0.1 (1 in 1000)	0.1 (1 in 1000)	0.1 (1 in 1000)	0.3 (1 in 333)
Maximum wilt <i>Verticillium</i> , <i>Fusarium</i> , Pink Rot.	0	0.1 (1 in 1000)	0.1 (1 in 1000)	0.1 (1 in 1000)	0.1 (1 in 1000)	0.5 (1 in 200)

LIBERIBACTER

Tolerances for symptoms of Liberibacter have been established. Where the tolerance is exceeded the grower or merchant may, at their expense, request that the inspector takes samples and that these are tested for the presence of Liberibacter. If the tests do not confirm the presence of Liberibacter the seedline may be passed.

GROUP PROGRAMME TOLERANCES

Seedlines to be certified within the Group programme must meet the tolerances specified for G6 within the pyramid programme.

2.8. FIELD INSPECTION

2.8.1. NUMBER OF FIELD INSPECTIONS REQUIRED

All seedlines entered will have two inspections, with the exception of Red King Edward, Jersey Benne, Russet Burbank and Russet Ranger which require three inspections. The first inspection should be carried out as early as is practicable and the second inspection should be as late as is practicable and applicable for the variety concerned. Growers must contact the inspection agency no less than 3 days prior to the proposed haulm destruction date to arrange for the inspection to be completed as close as is practicable to haulm destruction.

The inspection fee paid to the Authority covers two inspections only. Where a third inspection is required, or re-inspections are carried out, additional charges will apply.

2.8.2. SUSPENSION OF INSPECTION

Where an inspector finds faults in a crop that exceed the scheme tolerances, and the inspector believes that corrective actions could be taken by the grower to correct the fault, the inspector may suspend the inspection and allow the grower to take corrective action. The inspector must complete the inspection report and record the options given to the grower.

The grower must be notified in writing of requirements for corrective actions, including the time within which the actions must be completed and a re-inspection undertaken. The inspector should make sure that the grower understands the situation. The grower is responsible for the action to be taken, i.e. carry out corrective measures and request re-inspection.

Inspectors may not allow corrective actions to be taken for the same fault in the same crop twice. If the fault is not corrected the crop concerned will be downgraded or rejected. Upon re-inspection the crop must meet all of the requirements and tolerances of the scheme.”

2.8.3. DOWNGRADING FOLLOWING FIELD INSPECTION

Where a seedline within the pyramid programme exceeds the tolerance for its registered generation it may be down-graded to a lower class (i.e., a higher G number) as long as it does not exceed the tolerance for that generation.

2.8.4. REJECTION FOLLOWING FIELD INSPECTION

Where a seedline within the group programme exceeds the tolerance for the group programme, it shall be rejected from certification. Where a seedline within the pyramid programme exceeds the tolerance for its registered generation and is unable to be downgraded (as described in 2.7.2) it shall be rejected from certification. Seedlines may be rejected from certification if they fail to meet other requirements of the scheme including, but not limited to:

1. Seedlines are not adequately identified or separated (Section 2.7.1).
2. Plant tops and tubers of rogued plants have not been removed from the field (Section 2.7.3).
3. Seedlines are not compliant with the requirements of the MPI PCN compliance programme (Section 2.3).
4. Haulm destruction has taken place before all necessary field inspections have been completed.

Where a seedline is rejected following field inspection the inspector is required to notify the grower and the Scheme Administrator in writing and discuss the reasons for rejection with the grower.

2.8.5. REJECTION OF A PART CROP

At an inspector's discretion a seedline may be separated and part of the seedline rejected or downgraded with the remaining portion passed. There must be a clearly defined area affected by a fault that exceeds the tolerance for the harvest generation.

Prior to inspection, the grower may also propose to the inspector that the area entered for certification is modified (for example where the grower is aware of a problem in a portion of the crop).

The original seedline entry area must be redefined and the separate areas must be clearly defined and identifiable (e.g., pegged off by markers that can be seen clearly at both ends of the rows). If the area with the fault is to be downgraded rather than rejected, the grower is required to contact the Scheme Administrator and formally enter the downgraded crop area into the data base as an additional entry.

The inspector should ensure that the areas for certification meet the tolerances for the generation.

2.9. APPEALS

Where a grower wishes to appeal the decision of an inspector to reject a crop from certification an appeal must be lodged with the Secretary within 24 hours of being notified in writing of the Inspector's decision.

The grower must not improve the crop in any way before the Appeal Panel's visit.

Appeals must be made in writing (email is acceptable) specifying:

- Crop registration details (ROP, paddock code, variety, class, area sown);
- Name of the inspection body;
- The reason for the appeal.

Each crop for which an appeal is lodged is considered to be a separate appeal. For example, if two crops in one paddock are appealed these will be considered as separate appeals.

An appeal fee of \$1000 plus GST per crop under appeal is payable at the time of lodging an appeal.

The Secretary will convene an Appeals Panel to hear the appeal. The Panel will comprise of a relevant technical expert, an independent industry member, and a member of the Authority. The Panel will collect all relevant information and discuss the appeal with the grower and the inspector. The grower will have the opportunity to make the case supporting the appeal. The Panel will normally visit the crop under appeal, without the presence of the grower and inspector.

The grower must not attempt to influence or lobby members of the Appeals Panel during crop inspection or contact members of the Authority regarding the appeal.

The outcome of the appeal will be a Panel decision that the crop either passes certification at the intended classification, is rejected from certification, or is downgraded to a lower classification. The stated reason for the appeal, as well as compliance with the requirements of the scheme, will be factors in the Panel's decision.

2.10. HARVESTING AND GRADING

2.10.1. TRACEABILITY

To ensure traceability of seed lines and to avoid contamination, all containers must be labelled prior to leaving the paddock at harvest. Minimum information on the label is the seedline reference number, ROP number and paddock letter. Seedline reference numbers are available from the Administrator or the Potatoes New Zealand website. Each seedline must be readily identifiable with the same information when in storage after harvest.

2.10.2. TOLERANCES FOR FAULTS AT TUBER INSPECTION

Tolerances for faults at tuber inspection in the Pyramid and Group programmes are described below. These do not apply to Field Certified seedlines. Tolerances for scab, Rhizoctonia, sizing and misshapen tubers are described separately, and the tolerances for the remaining faults are presented in Table 3.

SCAB

The maximum tolerance for powdery scab is 1% of tubers in any generation of the pyramid programme or in the group programme.

If scab is present (regardless of type) on more than 1 tuber in any of the 100 tuber samples drawn, an additional randomly selected sample of 500 tubers is to be drawn. Where more than 5 tubers in the 500 sample show any presence of scab, the grower must have the scab type identified by a laboratory. The test result must be forwarded to the inspector. Where the level of powdery scab exceeds 1% the line will be rejected. Where the level of common scab exceeds 1% the seed certification label will be endorsed with common scab. The result will also be recorded on the official tuber inspection report.

RHIZOCTONIA

The maximum tolerance for Rhizoctonia is 5% of tubers each with 5% of the surface area covered with Rhizoctonia, i.e., for each 100 tubers inspected, rejection will occur if more than 5 tubers have more than 5% surface covered with Rhizoctonia.

SIZING

The minimum size of seed acceptable for certification is 28mm or 30g. Exceptions will be allowed for trial plots or multiplication plots of mini tubers etc.

MISSHAPEN TUBERS

If misshapen tubers are more than 4% in any of the 100 tuber samples drawn, the % of misshapen tubers must be printed on the seed certification label.

OTHER FAULTS

The maximum allowable faults are described in Table 3. The maximum tolerances described in Table 3 must not be exceeded for any individual fault, or in combination. For example, if a lot has >1% Dry rot (*Fusarium*/Gangrene) the lot will fail even if the total faults do not exceed the combined maximum faults.

Table 3. Maximum allowable faults in a tuber sample within the group programme and all generations of the pyramid programme (refer also separate tolerances for scab, Rhizoctonia, size and misshapen tubers).

Fault type	Maximum %
Potato Tuber Moth and & insect damage	4
Dry rot (<i>Fusarium</i> /Gangrene)	1
External damage (not infected, as lesions deeper than 2mm into the tuber)	4
Stem end rot	2
Wet rot	0.1
Combined maximum faults	5

2.10.3. OFFICIAL TUBER INSPECTION

Seed potatoes for certification must be officially inspected at any point when ownership of that seed changes hands, except for “Field Certified” lines. Seed lots exceeding specified tolerances will be rejected from certification.

2.11. STORAGE

Storage is outside the scope of the Scheme, however it is recommended that good seed potato storage practices are followed. Best practice guidelines can be found on the potatoes New Zealand website.

3. CERTIFICATION OF SEED LOTS

The Authority will approve organisations to issue, on its behalf, seed certification labels. Seed certification labels must conform to the format described in Appendix 1. The Potatoes New Zealand Inc. logo, coloured line and G-numeral combination is a trademark of Potatoes New Zealand Inc. Labels may not be reformatted to change the relative size or location of the Potatoes New Zealand Inc. logo, coloured line and G-numeral combination.

Seed certification labels may only be issued when all requirements of the Scheme have been met. Prior to issuing seed certification labels the organisation undertaking this activity must also verify that crops have a PCN “compliant” status (refer to the MPI website).

Seed certification labels are issued signifying the final stage of certification and must be attached to the container. Seed tubers not bearing an official seed certification label cannot be sold as Certified Seed.

Seed certification labels remain the property of the Authority and may be withdrawn or recalled at any time if the Authority has reason to believe that the relevant seedline was not eligible for certification or that certification was incorrectly issued.

4. REQUIREMENTS FOR MERCHANTS

4.1. REGISTRATION OF MERCHANTS

All Merchants must be registered in the Scheme. The 'Registration of Participation in the New Zealand Seed Potato Certification Scheme' must be completed. Registration forms are available from the Administrator or from the Potatoes New Zealand website. Submit applications to the Administrator.

4.2. REGISTRATION OF NEW VARIETIES

New varieties must be registered with the Administrator before grower applications will be accepted. The following conditions must be met and the required information provided before new varieties can be registered:

1. New varieties will only be accepted for certification on the authority of the breeder, rights holder, or authorised agents.
2. A statement of origin is required when entering a cultivar for the first time to be certified in New Zealand in either of the programmes. A special entry fee to assist with crop identification details is payable to the Authority (details and conditions from the Administrator).
3. All varieties entering the scheme must clearly state the material's origin, provide description of varietal characteristics and photos, and be entered using the commonly known variety name, PVR denomination (where that exists), or an acceptable breeder reference code. All entered material must comply with the PVR Act and UPOV obligations.
4. Entries of areas sown with a selection from an established variety may be accepted at the discretion of the Authority.

4.3. G0 MATERIAL ENTERING THE PYRAMID PROGRAMME

All material entering the pyramid programme for certification must have been produced in an approved tissue culture laboratory or mini-tuber production facility meeting the standards described in Appendix 2 and Appendix 3. This G0 material will become G1 harvested. A statement of origin provided by the tissue culture laboratory or mini-tuber production facility must be supplied to the Administrator when entering G0 material into the Scheme. The statement is required include the following information:

1. Name of supplier.
2. Type of material (tissue culture or mini-tuber).
3. Variety.
4. Quantity of material (number/weight of mini-tubers or number of tissue culture plantlets).
5. Name of company material supplied to.
6. Date material supplied.

4.4. UPGRADING SEEDLINES

Seedlines within the pyramid programme are automatically downgraded by one generation between crop cycles (e.g., G3 seed that is planted is registered as G4). However in the following circumstances a merchant may apply to the Authority to upgrade a portion of that seedline:

1. Where there is a total loss of a classification of a variety, a portion (not to exceed the area of the lost classification) of the next lower classification may be held back in that classification, provided that it meets the field tolerances of the higher classification that it is to replace.
2. Where there is a significant partial loss of classification, to such an extent that stocks of the classification will be so short that hardship through the lack of stock will result, a portion (not to exceed the area of that lost), of the next lower classification may be held back in that classification provided that it meets the field health standard of the higher classification that it is to replace.

Merchants must notify the Administrator with details of the seedline to be upgraded (describing the justification for the application including the cause of the total or partial loss, the seedlines numbers, varieties, and areas involved. The Administrator will include this information in reports to the Authority.

4.5. DOWNGRADING SEEDLINES

Seedlines may be downgraded in the following circumstances:

1. Commercial downgrading. Lines may be voluntarily downgraded to a lower classification (a higher G number) providing the lines meet the tolerances and requirements for the intended classification (G number).
2. Due to failure to meet the tolerances for a specified class of seed (refer 2.8.3).
3. From Pyramid to "Field Certified"

4.6. G2 VIRUS TESTING

Merchants are required to collect leaf samples from all G2 registered crops (i.e., G2 harvested) and submit these for virus testing by a laboratory approved by the Authority. Samples must be taken according to the following procedure:

1. Aim for representative coverage of the crop with the sampling pattern
2. Sample in a W or zig-zag (e.g. WWW) pattern depending on the size and shape of the crop.
3. Determine the number of paces required between 100 sampling points in order to cover as much of the crop as possible using the W or zig-zag pattern.
4. Take the required number of steps, stop, reach down to the plant nearest the right or left foot (be consistent).
5. Select a leaf within the top ¼ of the plant and select 1 leaflet per plant.
6. Group in lots of 10 in paper bags.
7. Clearly label with the seedline reference number and other information required on the Virus Sample Submission Form.

8. Store in a cooler bag/chilly bin until dispatch (do not freeze).
9. Complete the sample submission form and dispatch to the laboratory.

Test results must be forwarded to the sample submitter and a copy to the Scheme Administrator. If more than one sample out of ten (from ten x ten leaf sub-samples) tests positive then the line must be removed from the scheme.

If one sample out of ten tests positive then the G2 label must be endorsed “failed G2 virus test” and the seedline will be subject to a compulsory virus test at G3. The G3 line is subject to the same criteria as G2 lines. Continued failure will require G4, G5 and G6 lines also being tested as above.

4.7. LABELS

Seed certification labels must conform to the format described in Appendix 1. Space is provided on the label for merchant information and barcode which may be used or omitted at the discretion of the merchant. The Potatoes New Zealand Inc. logo, coloured line and G-numeral combination is a trademark of Potatoes New Zealand Inc. Labels may not be reformatted to change the relative size or location of the Potatoes New Zealand Inc. logo, coloured line and G-numeral combination.

5. REQUIREMENTS FOR INSPECTORS

The Authority contracts organisations to administer the Scheme, conduct field and tuber inspections, verify grower requirements are met, and issue seed certification labels. The Authority also operates a process of approval of organisations to undertake field and tuber inspection of their contracted growers’ crops as part of documented and independently audited quality assurance systems.

5.1. TECHNICAL REQUIREMENTS

Inspectors (contracted inspection service providers and Approved Organisations) must meet the requirements of the MPI Technical Standard: Pest Freedom Survey”. Seed potato inspection services must be delivered with sufficient and appropriately trained and competent personnel to ensure accurate and timely provision of inspection services.

5.2. DOCUMENTED PROCEDURES

Inspectors must document, maintain, and adhere to procedures for seed potato crop and seed potato tuber inspection activities. Documented procedures will be evaluated by an auditor appointed by the Authority prior to commencement of service. Compliance with procedures and the Scheme requirements will be audited by the Authority.

5.3. STAFF COMPETENCY

Inspectors are required to undergo training approved by the Authority.

Approved organisations are required to document their competency assessment processes as described in Section 6.

For organisations contracted by the Authority new inspectors must attend the next available training course approved by the Authority, and all inspectors must attend a course approved by the Authority every four years. Inspector competency will be audited.

5.4. VERIFICATION ACTIVITIES

In the course of conducting field and tuber inspections, inspectors must verify that certain grower activities have been undertaken, as specified in the Scheme. These include, but are not limited to:

1. Seed lines meet separation and identification requirements where differing seed lines are planted in one field or are planted in the same field as table crops;
2. Seed lines are identifiable throughout the growing season, at harvest and in storage;
3. Rogued plants and tubers have been removed from the field;
4. Harvested crops are labelled correctly;
5. Grower tuber inspection has been conducted and record sheets completed.

6. REQUIREMENTS FOR APPROVED ORGANISATIONS

As described in Section 1.3, the Authority provides an option whereby organisations (e.g., seed merchants) may be approved to undertake inspection activities on behalf of the Authority.

Approved organisations must maintain a documented system containing procedures for meeting the requirements of this Scheme. Procedures for staff competency must also be documented. Organisations must:

1. Specify the person(s) with overall responsibility for management of the organisation's system, the competency required and their job description;
2. Identify the competencies required for each seed certification activity;
3. Have a sufficient number of staff with the necessary competence to undertake these activities;
4. Implement safeguards to ensure staff engaged in seed certification decisions are free from commercial interest in their decisions;
5. Describe the method used to assess staff competency to undertake seed certification activities within the organisation's system; and
6. Describe how these competencies are maintained on an ongoing basis.

To obtain approval, Organisations must apply to the Authority by contacting the Secretary. The Secretary will provide further information on the application and approval process. Auditors will evaluate the Organisation's procedures and conduct audits. Audit frequency will be that defined in MPI Technical Standard "Audit" for Risk Category – Level 2. Audit fees are payable by the organisation seeking approval.

Upon satisfactory completion of evaluations and audits, the auditor will make a written recommendation to the Authority. The Authority will consider the recommendation and where appropriate sign a contract of approval with the Organisation.

An annual Approved Organisation fee applies as set by the Authority from time to time.

7. REQUIREMENTS FOR AUDITORS

Independent auditors of Approved Organisations must be MPI Authorised Independent Verification Agencies (IVAs) under the MPI standard “IVA requirements” for at least option 1 (“Evaluation and/or audit of MAO systems”). Auditors must also have in place procedures to ensure competency to audit seed potato field and tuber inspections. The Authority will enter into a memorandum of agreement with audit bodies for provision of these services. Audit fees are payable by the organisation seeking approval.

8. REQUIREMENTS FOR TISSUE CULTURE LABORATORIES AND MINI-TUBER PRODUCTION FACILITIES

All material entering the pyramid programme for certification must have been produced in an approved tissue culture laboratory or mini-tuber production facility meeting the standards described in Appendix 2 and Appendix 3. The Authority will maintain a register of approved facilities.

A statement of origin provided by the tissue culture laboratory or mini-tuber production facility must be supplied with material entering the Scheme as G0. The statement is required include the following information:

1. Name of supplier.
2. Type of material (tissue culture or mini-tuber).
3. Variety.
4. Quantity of material (number/weight of mini-tubers or number of tissue culture plantlets).
5. Name of company material supplied to.
6. Date material supplied.
2. Type of material (tissue culture or mini-tuber).
3. Variety.
4. Quantity of material (number/weight of mini-tubers or number of tissue culture plantlets).
5. Name of company material supplied to.
6. Date material supplied.

9. CONTACTS

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APPENDIX 1: SEED CERTIFICATION LABELS

Seed certification labels must conform to the format contained in this Appendix. Space is provided on the label for merchant information and barcode which may be used or omitted at the discretion of the merchant. Labels may not be reformatted to change the relative size or location of the Potatoes New Zealand Inc. logo, coloured line and G-numeral combination.

The Potatoes New Zealand Inc. logo, coloured line and G-numeral combination is a trademark of Potatoes New Zealand Inc.

 Bar Code size EAN8 – EAN13 95% Tolerance		Certified Seed Potatoes Variety: Size: Crop Ref. #. ROP: Inspection Date: Grower: Inspection Authority: TM G1 The Potatoes New Zealand Inc logo, coloured line and G-numeral combination is trademark of Potatoes New Zealand Inc	Merchant Logo/ Information
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 Bar Code size EAN8 – EAN13 95% Tolerance		Certified Seed Potatoes Variety: Size: Crop Ref. #. ROP: Inspection Date: Grower: Inspection Authority: TM G2 The Potatoes New Zealand Inc logo, coloured line and G-numeral combination is trademark of Potatoes New Zealand Inc	Merchant Logo/ Information
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		Certified Seed Potatoes Variety: Size: Crop Ref. #. ROP: Inspection Date: Grower: Inspection Authority: TM G3 The Potatoes New Zealand Inc logo, coloured line and G-numeral combination is trademark of Potatoes New Zealand Inc	Merchant Logo/ Information
Bar Code size EAN8 – EAN13 95% Tolerance			

		Certified Seed Potatoes Variety: Size: Crop Ref. #. ROP: Inspection Date: Grower: Inspection Authority: TM G4 The Potatoes New Zealand Inc logo, coloured line and G-numeral combination is trademark of Potatoes New Zealand Inc	Merchant Logo/ Information
Bar Code size EAN8 – EAN13 95% Tolerance			

		Certified Seed Potatoes Variety: Size: Crop Ref. #. ROP: Inspection Date: Grower: Inspection Authority: TM G5 The Potatoes New Zealand Inc logo, coloured line and G-numeral combination is trademark of Potatoes New Zealand Inc	Merchant Logo/ Information
Bar Code size EAN8 – EAN13 95% Tolerance			

 Bar Code size EAN8 – EAN13 95% Tolerance	Certified Seed Potatoes Variety: Size: Crop Ref. #. ROP: Inspection Date: Grower: Inspection Authority: ™ G6 The Potatoes New Zealand Inc logo, coloured line and G-numeral combination is trademark of Potatoes New Zealand Inc	Merchant Logo/ Information
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GROUP PROGRAMME LABEL

 Group 1	Certified Seed Potatoes Variety: Size: Crop Ref. #. ROP: Inspection Date: Grower: Inspection Authority: The Potatoes New Zealand Inc logo, coloured line and G-numeral combination is trademark of Potatoes New Zealand Inc
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APPENDIX 2: MINIMUM CONDITIONS TO BE SATISFIED BY REGISTERED LABORATORIES FOR THE PRODUCTION OF TISSUE CULTURE FOR CERTIFIED SEED POTATOES.

1. Tissue culture laboratories must be housed in a secured building and only allow entry of authorised personnel.
2. The initial stock entering the tissue culture (TC) laboratory multiplication programme must be tested free from at least the following pathogens;
 - Potato Spindle Tuber viroid
 - *Clavibacter michiganensis* spp. *sepedonicus* (ring rot)
 - *Ralstonia solanacearum* (brown rot)
 - *Pectobacterium* spp. and *Dickeya* spp. including *Dickeya solani*, *Dickeya chrysanthemi* pv. *chrysanthemi*, *Dickeya chrysanthemi* pv. *parthenii*, *Dickeya paradisiaca*, *Pectobacterium betavasculorum*, *Pectobacterium polaris*
 - Potato viruses, X, Y, S, M and A
 - Potato Leaf roll virus
 - *Candidatus Liberibacter solanacearum* (haplotypes A & B)

Records are to be kept of testing and sources of original material. Commercial confidentiality is to be maintained.

3. Every five years all lines being maintained for active production of tissue culture for certified seed production must be subject to laboratory testing for:
 - *Pectobacterium* spp. and *Dickeya* spp. including *Dickeya solani*, *Dickeya chrysanthemi* pv. *chrysanthemi*, *Dickeya chrysanthemi* pv. *parthenii*, *Dickeya paradisiaca*, *Pectobacterium betavasculorum*, *Pectobacterium polaris*
 - Potato viruses, X, Y, S, M and A
 - Potato Leaf roll virus

Candidatus Liberibacter solanacearum (haplotypes A & B). Positive detections must be removed from the scheme.

4. Appropriate sterile laboratory procedures must be applied to avoid contamination of the cultured plant material, e.g., use of sterile tools, laminar flow hood and sterile growing media for aseptic multiplication of plant material, dedicated clothing for operators (e.g., lab coat, overshoes).

5. Regular visual monitoring of the growing tissue culture plants shall be conducted to ensure no contamination has occurred.
6. Regular cleaning of all laboratory surfaces including media preparation and growth room. Regular use of insecticide in laboratory to ensure no mites, spiders, or other insects can reside.
7. Records are to be kept to facilitate traceability of all lines.
8. A statement of origin must be provided to the customer by the tissue culture laboratory. The statement is required include the following information:
 - Name of tissue culture facility.
 - Type of material (tissue culture).
 - Variety.
 - Quantity of material (number of tissue culture plantlets).
 - Name of company material supplied to.
 - Date material supplied.
9. The satisfaction of the conditions under items 2 & 3 shall be established by appropriate tests for those pathogens known to occur in New Zealand (i.e., ELISA or preferably PCR).

APPENDIX 3: REQUIREMENTS FOR REGISTERED FACILITIES FOR THE PRODUCTION OF MINI-TUBERS FOR CERTIFIED SEED PRODUCTION

Physical structure

- Double door entry with a change area for changing garments and donning protective overcoats and gloves, the change area to contain foot disinfecting pads and a facility for disinfecting hands.
- Entry doors insect proof and all vents and openings covered with insect-proof screens that will prevent entry of the local pests and pest vectors.
- Gaps between the external to internal environment to be sealed.
- Production isolated from soil (e.g. concrete floors or floors covered with a protective membrane).
- Designated areas for washing and disinfecting containers, and cleaning, grading, packing and storing mini-tubers.
- In places where there is unreliable supply of electricity and water, standby facilities for emergencies.

Management of environment

- Suitable temperature, light, air circulation and humidity controls.

Crop management

- Regular pest and pest vector monitoring (e.g. using sticky insect traps) at specified intervals.
- Hygienic practices for handling plant material.
- Correct disposal procedures.
- Identification of production lots.
- A suitable separation between lots.
- Appropriate disease management programme.

Growing media, fertilizer, water

- Use of new, soil-less growing medium (e.g., potting media, artificial media, peat).
- Storage of growing medium under conditions preventing contamination.
- A water supply free of plant pests (either treated water or deep-well spring water).
- Use of inorganic fertilizer.

Pre-harvest testing

- Sampling of leaves from each line for pre-harvest testing for virus (the lesser of 10% of plants or 100 leaves per line, to be tested for the 6 viruses identified in Appendix 2).

Post-harvest handling

- Suitable storage conditions.
- Grading and packing (if appropriate, according to a seed potato certification scheme).
- New or adequately sterilized containers used for packing mini-tubers.
- Containers for shipment adequate for preventing contamination by pests and pest vectors.
- Adequate cleaning and disinfection of handling equipment and storage facilities.

Traceability

- Records are to be kept to facilitate traceability of all lines.
- A statement of origin must be supplied with tissue culture material entering the mini-tuber production facility.
- A statement of origin must be provided by the mini-tuber production facility to the customer. The statement is required include the following information:
 - Name of mini-tuber production facility.
 - Type of material (mini-tuber).
 - Variety.
 - Source of tissue culture material.
 - Quantity of material (number/weight of mini-tubers).
 - Name of company material supplied to.
 - Date material supplied.





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