

Varieties of Pulse Crops for Alberta

Variety testing procedures

In 2009, Alberta Agriculture and Rural Development (ARD) reinstated the Regional Variety Testing program. ARD would like to thank the Agricultural Research and Extension Council of Alberta (ARECA) for maintaining the program over the last few years and for their work with ARD in 2009 to smoothly transition the program.


Staff of Alberta Agriculture's Crop Diversification Centre North did the compilation and co-ordination of the pea, lentil, chickpea and fababeen tests. Staff of Agriculture and Agri-Food Canada, Lethbridge, conducted the dry bean trials.

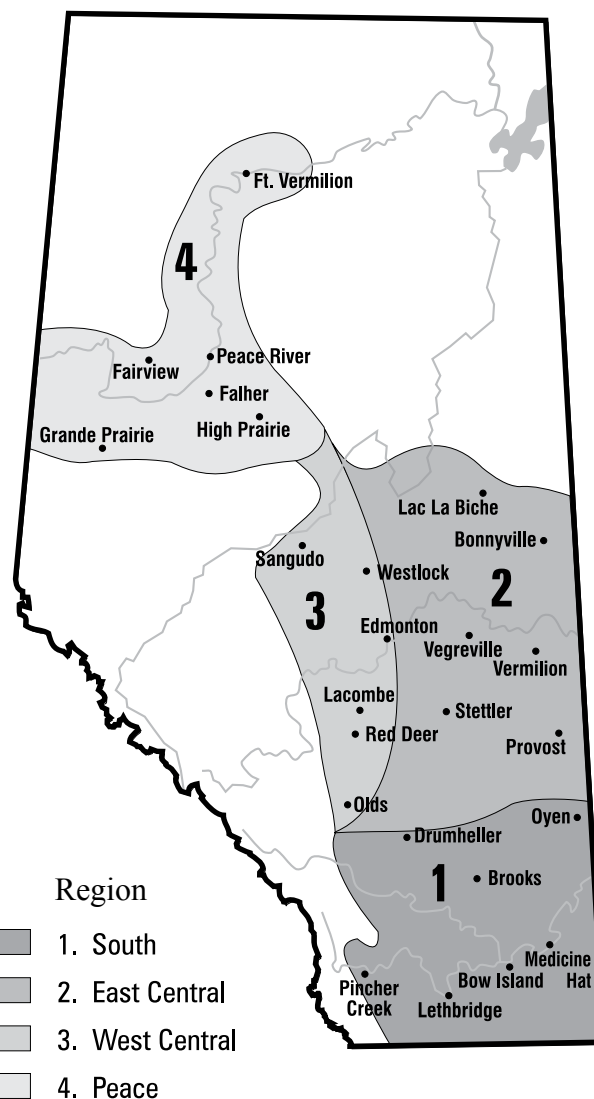
Funding was provided by seed companies (field pea entries only), the Alberta Pulse Growers Commission, Alberta Agriculture and Rural Development, the Alberta Branch of Canadian Seed Growers Association and the Association of Alberta Co-op Seed Cleaning Plants Ltd.

Contributors:

- Applied Research Associations
- Agriculture and Agri-Food Canada
- Alberta Agriculture and Food
- BC Grain Producers Association
- Three Links AgResearch Inc.
- EMD Crop Biosciences – field pea inoculant

Plant Breeder's Rights

The use of the logo  indicates the variety is protected by law, and the seed of this cultivar cannot be sold for seed purposes without permission and royalty payment.



2009 data

In 2009, there were 18 sites grown of combined green and yellow pea trials. Two sites from British Columbia were used as part of Region 4 and were grown as separate green and yellow trials. Fourteen sites of pea trials were used in the final report for the Regional Variety Trials. Only sites with coefficient of variances (cv's) less than 15% were used for field peas and less than 20% for other pulses were included in the final report of pulse crop summaries.

Fully tested varieties

Fully tested varieties were not tested in 2009. Direct comparisons between field pea fully tested and the 2000 - 2008 data cannot be made.

First-year entries

Please use caution interpreting relative yield % when overall station years are below 25 sites for green and yellow pea.

Internet resources

For more information, please visit Alberta Agriculture's website Ropin' the Web:
www.agriculture.alberta.ca/rvt

For more information, contact

Alberta Ag-Info Centre
Call toll-free 310-FARM (3276)

Website: www.agriculture.alberta.ca

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FIELD PEA – YELLOW

Average of all regions from 2003–2009

Relative yield % of Cutlass 2003–2009

Region (see map)

Variety	1- Irri.		1-Dryland		2		3		4		Total stn years	Yield as % of Cutlass	Relative Maturity >	Vine Length (cm)	Seed Weight (g/1000)	Standability (1E-9F)**
	Stn*	%	Stn	%	Stn	%	Stn	%	Stn+	%						
Cutlass (R)***	1	100	19	100	29	100	22	100	40	100	111	100	E	68	233	3.8
Agassiz ◊ (R)***	-	-	6	100	11	102	9	102	13	105	39	103	E	76	238	2.9
Canstar ◊ (R)***	-	-	8	92	15	104	12	102	16	100	51	100	E	74	250	3.2
CDC 1749-8 (A NR)***	-	-	3	88	3	97	3	104	5	105	14	99	M	83	234	3.0
CDC Prosper (R)***	-	-	4	91	7	98	6	92	8	100	25	96	E	73	154	3.4
CDC Treasure (R)***	-	-	4	94	7	100	6	96	8	100	25	98	E	78	222	3.1
Eclipse ◊ (R)***	1	108	17	103	27	103	20	99	33	103	98	102	M	64	255	3.0
Thunderbird (R)***	-	-	6	89	11	96	9	99	13	99	39	97	M	76	228	2.1
FULLY TESTED VARIETIES																
CDC Centennial (R)***	-	-	5	101	12	99	9	104	13	100	Fully Tested	101	E	61	259	4.8
CDC Meadow (R)***	-	-	6	105	10	110	8	102	16	108	Fully Tested	107	E	76	221	2.9
DS-Admiral ◊ (R)***	1	91	13	97	18	108	13	98	24	104	Fully Tested	102	M	68	246	3.2
Miser ◊ (R)***	-	-	6	96	11	108	6	99	9	96	Fully Tested	101	E	66	205	5.2
Noble ◊ (R)***	-	-	3	88	8	95	6	99	8	92	Fully Tested	94	M	74	237	2.9
Polstead ◊ (R)***	-	-	5	97	12	99	9	99	13	104	Fully Tested	101	E	62	262	3.7
Reward ◊ (R)***	-	-	5	86	12	106	9	102	13	101	Fully Tested	101	M	76	248	2.5
SW MIDAS ◊ (R)***	-	-	10	103	17	106	11	91	20	100	Fully Tested	100	E	66	213	3.1
Cutlass – Yield kg/ha	4003		2997		3326		5791		4525		4197					

FIELD PEA – YELLOW (continued)

Average of all regions from 2000-2005

Relative yield % of Carrera 2000-2005

Region (see map)

Variety	1– Irri.				2				3				4				Total stn years	Yield as % of Carrera	Relative Maturity >	Vine Length (cm)	Seed Weight (g/1000)	Standability (1E-9F)**
	Stn*	%	Stn	%	Stn	%	Stn	%	Stn	%	Stn	%	Stn	%	Stn	%						
Carrera ☺ (R)	6	100	14	100	28	100	15	100	33	100	Fully Tested	100	E	52	257	4.6						
CDC Bronco (R)***	1	93	11	91	16	100	8	94	15	117	Fully Tested	102	M	63	220	4.1						
CDC Golden (R)***	1	109	11	101	14	105	8	102	15	109	Fully Tested	105	M	68	224	3.4						
CDC Handel (R)***	2	116	8	95	17	94	7	87	14	102	Fully Tested	96	L	67	201	6.2						
CDC Minuet (R)***	5	115	12	97	26	100	11	92	22	111	Fully Tested	102	M	64	192	4.9						
CDC Mozart (R)***	2	110	8	108	17	100	7	97	14	105	Fully Tested	103	M	61	241	5.9						
DS-Stalwarth (R)***	5	120	8	98	19	93	10	94	23	107	Fully Tested	101	M	69	231	3.4						
Eiffel ☺ (R)	4	98	5	106	6	103	5	95	7	112	Fully Tested	103	M	77	268	4.4						

FULLY TESTED VARIETIES

Average of all regions from 2000-2005

Yield as % of Carrera

Relative yield % of Carrera 2000-2005

Remarks: Varieties marked with (A) are first year entries in 2009, (R) registered with CFIA, ☺ have Plant Breeders Rights

NR – Not registered with CFIA

*Stn – station years

** standability – 1 = erect, 9 = flat

*** Powdery mildew resistant

Fully tested varieties not tested in 2009

– no data

> Maturity E = early, M = medium, L = late

F I E L D P E A - Y E L L O W (c o n t i n u e d)

Variety	Resistance to ~					
	Powdery Mildew	Myco. Blight	Fusarium Wilt	Seed Coat Breakage	Seed Coat Dimpling	Green Seed Coat
Cutlass (R)	VG	F	F	F	F	G
Agassiz ◊ (R)	VG	F	F	G	VG	G
Canstar ◊ (R)	VG	P	G	G	G	G
CDC 1749-8 (A NR)	VG	F	F	P	-	-
CDC Prosper (R)	VG	F	G	F	F	G
CDC Treasure (R)	VG	F	F	G	G	F
Eclipse ◊ (R)	VG	F	F	G	F	G
Thunderbird (R)	VG	F	F	G	VG	-
Fully Tested Varieties						
CDC Centennial (R)	VG	F	G	G	G	F
CDC Meadow (R)	VG	F	F	G	G	G
DS-Admiral ◊ (R)	VG	P	F	F	G	F
Miser ◊ (R)	VG	F	F	G	G	G
Noble ◊ (R)	VG	F	F	F	F	G
Polstead ◊ (R)	VG	P	P	F	VG	F
Reward ◊ (R)	VG	F	F	G	VG	F
SW MIDAS ◊ (R)	VG	P	F	G	G	G
Fully Tested Varieties						
Carrera ◊ (R)	P	P	F	F	G	-
CDC Bronco (R)	VG	F	F	G	G	G
CDC Golden (R)	VG	F	F	G	G	G
CDC Handel (R)	VG	F	P	G	G	F
CDC Minuet (R)	VG	F	F	F	G	F
CDC Mozart (R)	VG	F	F	G	G	F
DS-Stalwarth (R)	VG	P	P	G	G	-
Eiffel ◊ (R)	-	-	-	-	-	-

Remarks: Varieties marked with (A) are first year entries in 2009, (R) registered with CFIA, ◊ have Plant Breeders Rights

NR – Not registered with CFIA

*Stn – station years

Fully tested varieties not tested in 2009.

- no data

~ Resistance – P=poor, F=fair, G=good, VG=very good

F I E L D P E A - G R E E N

Average of all regions from 2000-2009

Relative yield % of Nitouche 2000-2009

Region (see map)

Variety	1-Irri.		1-Dryland		2		3		4		Total station years	Yield as % of Nitouche	Relative maturity >	Vine length (cm)	Seed weight (g/1000)	Standability (1E-9F)**
	Stn*	%	Stn	%	Stn	%	Stn	%	Stn	%						
Nitouche ◊	6	100	18	100	45	100	27	100	51	100	147	100	M	70	267	3.4
CDC Patrick ***	-	-	4	121	7	106	6	106	9	109	26	110	M	79	201	3.1
COOPER ◊ ***	-	-	12	105	23	102	17	111	27	108	79	107	L	71	280	2.9
Nitouche - Yield kg/ha	4586		2568		2955		5047		3914		3691					

FULLY TESTED VARIETIES

Camry ◊ ***	-	-	8	97	18	95	11	110	22	100	Fully Tested	100	M	57	258	3.0
CDC Striker	1	71	8	90	19	95	8	95	21	95	Fully Tested	94	M	66	244	2.9
CDC Sage ***	-	-	5	80	8	86	8	97	13	91	Fully Tested	90	M	71	199	3.1
Stratus ◊ ***	3	97	9	96	24	103	13	100	28	96	Fully Tested	99	M	55	260	4.5
SW PARADE ◊ ***	5	90	3	96	15	103	5	91	11	102	Fully Tested	99	M	64	196	4.6
TAMORA ◊ ***	-	-	4	90	10	95	9	110	14	97	Fully Tested	99	M	70	268	3.0

Remarks: Varieties marked with ◊ have Plant Breeders Rights. All green peas in this table are registered with CFIA.

*Stn - station years

** standability - 1 = erect, 9 = flat

*** Powdery mildew resistant

Fully tested varieties not tested in 2009.

- no data

Maturity E=early, M=medium, L=late

F I E L D P E A - G R E E N (c o n t i n u e d)

Variety	Resistance to ~					
	Powdery Mildew	Myco. Blight	Fusarium Wilt	Bleaching	Seed Coat Breakage	Seed Coat Dimpling
Nitouche ☉	P	P	P	G	F	F
CDC Patrick	VG	F	G	G	G	G
COOPER ☉	VG	F	F	G	F	G

Fully Tested Varieties						
Camry ☉	VG	F	F	F	F	G
CDC Striker	P	F	G	G	G	F
CDC Sage	VG	F	G	G	VG	G
Stratus ☉	VG	F	P	P	G	G
SW PARADE ☉	VG	P	G	F	G	G
TAMORA ☉	VG	F	P	F	F	G

Remarks: Varieties marked with ☉ have Plant Breeders Rights. All green peas in this table are registered with CFIA.

*Stn – station years

Fully tested varieties not tested in 2009.

– no data

~ Resistance – P=poor, F=fair, G=good, VG=very good

DRY BEANS - NARROW ROW

Variety	Station years 1997-09	Type	Yield as % of check	Days to bloom*	Maturity (days +/-) check	Seed weight g/1000	Plant height (cm)	Lodge (1-5) 1 = erect	Growth Habit +
AC Black Diamond (check)	14	black (shiny)	100	56	0	253	37	2.4	II
AC Black Violet	7	black (matte)	93	59	5	166	40	2.3	II
AC Black Diamond – maturity = 100 days from seeding, yield 2776 kg/ha									
AC Polaris (check)	15	great northern	100	56	0	305	40	3.5	II
AC Alert	12	great northern	96	56	1	333	48	2.8	II
AC Resolute	11	great northern	83	54	-3	334	40	2.5	II
AC Polaris – maturity = 101 days from seeding, yield 2970 kg/ha									
AC Island (check)	4	pinto	100	60	0	334	44	3.0	II
CDC WM-1 (CDC 2005s-1) (A)	1	pinto	75	59	-11	347	35	2.8	I
CDC WM-2 (2793CBB) (A)	1	pinto	74	60	-6	350	50	2.8	II
Winchester (A)	1	pinto	90	58	-5	336	55	3.0	II
AC Island – maturity = 93 days from seeding, 2636 yield kg/ha									
AC Redbond (check)	15	small red	100	51	0	301	38	2.4	II
AC Redbond – maturity = 98 days from seeding, yield 2573 kg/ha									
Viva (check)	14	pink	100	52	0	248	32	3.5	III
Viva – maturity = 99 days from seeding, 2260 yield kg/ha									
Arikara Yellow (check)	12	yellow	100	50	0	388	35	2.0	I
Arikara Yellow – maturity = 96 days from seeding, 2430 yield kg/ha									

Remarks: * Days from seeding. (A) first year entry in 2009

+ Growth habit I = determinate bush, II = indeterminate bush, III = indeterminate prostrate

All dry bean data updated to the RVT database in 2009.

DRY BEANS - WIDE ROW

Variety	Type	Station years 1997-09	Yield as % of check	Days to bloom*	Maturity (days +/-) check	Seed weight (g/1000)	Plant height (cm)	Lodge (1-5) 1 = erect	Growth Habit +
AC Black Diamond (check)	black (shiny)	33	100	57	0	263	39	2.1	II
AC Black Violet	black (matte)	26	83	61	4	175	41	2.0	II
AC Black Diamond – maturity = 108 days from seeding, yield 3024 kg/ha									
AC Polaris (check)	great northern	33	100	56	0	313	42	3.6	II
AC Resolute	great northern	16	87	52	-4	341	42	2.3	II
AC Polaris – maturity = 109 days from seeding, yield 3300 kg/ha									
AC Island	pinto	7	100	56	0	358	39	2.9	II
CDC WM-1 (CDC 2005s-1) (A)	pinto	2	69	57	-5	326	41	2.4	I
CDC WM-2 (2793CBB) (A)	pinto	2	86	55	-4	355	52	1.8	II
Othello	pinto	7	92	57	0	353	36	3.6	III
Pecos	pinto	3	87	54	3	314	48	2.5	II
Winchester	pinto	7	91	53	-3	338	40	2.4	II
AC Island – maturity = 102 days from seeding, yield 3417 kg/ha									
AC Redbond (check)	small red	33	100	53	0	318	41	2.4	II
AC Redbond – maturity = 105 days from seeding, yield 3272 kg/ha									
Arikara Yellow (check)	yellow	9	100	49	0	399	32	1.7	I
Arikara Yellow – maturity = 103 days from seeding, 2558 yield kg/ha									

Remarks: * Days from seeding, (A) first year entry in 2009

+ Growth habit I = determinate bush, II = indeterminate bush, III = indeterminate prostrate

All dry bean data updated to the RVT database in 2009.

L E N T I L - E A R L Y

Relative yield % of Milestone 2003-2008

Variety	Region (see map)				Total stn years	Yield as % of CDC Milestone	Seed weight (g/1000)	Height (cm)	Relative maturity >	Seed Size**	Seed coat color***	Disease Resistance ~	
	1	2	3	4								Ascochyta	Anthracnose
	Stn* %	Stn %	Stn %	Stn %									
CDC Milestone (R)	8	100	2	100	13	100	30	40	E	S	G	G	VP
CDC Blaze (R)+	7	87	1	72	11	88	35	39	E	S	R	G	P
CDC Impala (A) (CL)	1	95	-	-	1	95	33	-	E	S	R	G	P
CDC Impact (R) (CL)	3	86	1	56	4	78	36	34	E	ES	R	G	G
CDC Imperial (R) (CL)	3	79	1	87	4	81	30	29	E	ES	R	G	G
CDC Maxim (R) (A) (CL)	1	103	-	-	1	103	45	-	E	S	R	F	VP
CDC Lemay (R)+	1	73	-	-	2	101	35	-	E	S	FG	G	G
CDC Red Rider (R)+	2	91	-	-	2	91	-	43	E	S	R	G	F
CDC Redberry (R)	6	89	2	96	10	101	32	43	E	S	R	G	G
CDC Robin (R)	6	76	2	92	10	83	30	29	E	ES	R	G	G
CDC Rouleau (R)	3	99	1	83	7	108	37	42	M	S	R	G	G
CDC Viceroy (R)+	7	96	1	104	11	110	31	41	E	S	G	G	G
Crimson (R)+	5	84	1	70	9	84	39	27	E	S	R	VP	VP
Eston (R)	3	88	1	75	5	83	34	39	E	S	G	VP	VP
CDC Milestone - Yield (kg/ha)	2022	1364	2335	1477	1861								

Remarks: Varieties marked with (A) are first year entries in 2009 (R) - Registered with CFIA

* Stn - station years

** Seed size - ES= extra small S = small, M = medium, L = large, VL=very large

*** Seed coat color G = green, R = red, FG=French green

> Maturity E=early, M=mid, L=late, VL=very late

CL - Clearfield variety

- no data. + not entered in 2009

~Disease resistance - VP = very poor, P = poor, F = fair, G = good

NOTE: Early lentil trials failed in 2009.

L E N T I L - L A T E

Relative yield % of Laird 2003-2008

Variety	Region (see map)				Total stn years	Yield as % of Laird	Seed weight (g/1000)	Height (cm)	Relative maturity >	Seed Size**	Seed coat color***	Disease Resistance ~	
	1	2	3	4								Ascochyta	Anthracnose
	Stn*	%	Stn	%									
Laird (R)	10	100	-	-	12	100	76	34	VL	L	G	VP	VP
CDC Impress (R) (CL)	2	113	-	-	2	113	60	-	VL	L	G	G	VP
CDC Glamis (R)+	5	102	-	-	7	102	71	35	VL	L	G	G	VP
CDC Grandora (R)+	3	101	-	-	3	101	69	46	L	L	G	G	VP
CDC Greenland (R)	4	108	-	-	4	108	66	45	M	M	G	G	P
CDC Improve (R) (CL)	4	113	-	-	4	113	73	43	L	L	G	F	VP
CDC Meteor (R)+	5	113	-	-	6	110	51	45	M	M	G	G	VP
CDC Plato (R)	10	120	-	-	12	116	69	33	L	L	G	G	P
CDC Richlea (R)+	4	128	-	-	4	128	53	43	M	M	G	VP	VP
CDC Sedley (R)+	5	111	-	-	6	110	75	46	M	L	G	F	VP
CDC Sovereign (R)+	7	96	-	-	9	97	64	47	L	L	G	G	P
CDC Vantage (R) +	5	113	-	-	7	109	59	32	M	M	G	G	VP
Laird - Yield (kg/ha)					1636	1583							

Remarks: (R) – Registered with CFIA

* Stn – station years

** Seed size – ES = extra small S = small, M = medium, L = large, VL=very large

*** Seed coat color G = green, R = red, FG=French green

> Maturity E=early, M=mid, L=late, VL=very late

CL – Clearfield variety

- no data. + not entered in 2009

~Disease resistance – VP = very poor, P = poor, F = fair, G = good

NOTE: Late lentil trials failed in 2009

F A B A B E A N

Relative yield % of Earlibird 2000-2008

Variety	Station years	Yield as % of		Relative	Plant height	Weight (g/1000)	Flower color**
		Earlibird		maturity >			
Earlibird ☉	27	100		E	86	543	C
CDC Blitz (R)	37	98		ML	96	463	C
CDC Fatima (R)	31	94		M	92	533	C
Snowbird ☉	24	105		E	93	526	W
Earlibird - Yield (kg/ha)		5462					

FULLY TESTED VARIETIES

Aladin (R)	Fully Tested	82		L	100	431	C
Ben ☉	Fully Tested	110		E	101	584	C
Cresta	Fully Tested	98		M	86	591	W
Hertz Freya	Fully Tested	80		L	111	398	C
Orion (R)	Fully Tested	84		M	77	347	C
Outlook	Fully Tested	92		L	100	373	C
Pegasus	Fully Tested	88		L	99	393	C
Scirocco	Fully Tested	104		ML	89	576	C

Remarks: Varieties with more than 10 station years are fully tested.

Varieties with (R) are registered with CFIA, ☉ have Plant Breeder's Rights. Fully tested varieties not tested in 2008

** W – white flowered, zero tannin, C – colored flower, tannin. > Maturity E = early, M = medium, ML = medium-late, L = late

C H I C K P E A – D E S I

Relative yield % of Myles 2003-2009

Variety	Region (see map)						Total station years	Yield as % of Myles	Seed weight (g/1000)	Relative Maturity >	Height (cm)	Resistance to Ascochyta ~
	1		2		4							
	Stn*	%	Stn	%	Stn	%						
Myles	12	100	4	100	2	100	18	100	217	M	40	F
CDC Anna	11	114	3	113	2	75	16	109	197	M	52	F
CDC Cabri	12	114	4	95	2	88	18	107	327	E	42	F
CDC Desiray	11	106	3	93	2	109	16	104	202	M	48	F
CDC Nika	11	114	3	103	2	72	16	107	318	E	53	F
CDC Vanguard	4	118	1	108	-	-	5	116	228	M	46	F
CDC Corinne	2	135	-	-	-	-	2	135	265	M	46	F
Myles - Yield in kg/ha		2841		1692		1427		2428				

C H I C K P E A – K A B U L I

Relative yield % of Sanford 2003-2008

Variety	Region (see map)						Total station years	Yield as % of Sanford	Seed weight (g/1000)	Relative Maturity >	Height (cm)	Resistance to Ascochyta ~
	1		2		4							
	Stn*	%	Stn	%	Stn	%						
Sanford	11	100	4	100	2	100	17	100	397	L	45	VP
Amit ☉ (R)	11	164	4	148	2	163	17	161	267	L	42	F
CDC Luna	1	156	-	-	-	-	1	156	366	ML	-	P
CDC Chichi	7	126	2	120	-	-	9	125	362	M	52	P
CDC Chico	7	149	2	151	-	-	9	150	246	E	51	VP
CDC Diva	11	99	3	86	2	153	16	104	458	L	50	F
CDC Frontier	11	171	3	155	2	180	16	169	361	L	53	F
CDC Xena	11	106	3	100	2	123	16	107	455	L	50	VP
CDC Yuma	11	114	3	96	2	124	16	112	426	L	54	P
Sanford Yield in kg/ha		2503		1162		747		1981				

Remarks:

* Stn - station years – no data ~ Resistance – VP=very poor, P=poor, F=fair

> Maturity E – early, M – medium, L – late

NOTE: Kabuli trials failed in 2009.