

Parents used in some of our special crosses

Currently, the program offers 27 unique crosses made using 31 parents suggested by farmers participating in the program across Canada in 2014 and 2015. Just as each farmer-breeder is making selections with goals in mind, these breeders selected these varieties.

Parent	Year Registered/ Introduced	Initial Cross Year	Parents	Development Location	Goal of selection and cross	Crossed with	PPB Cross Contained
CDC Kernen	2012	1999	CDC Bounty/FHB4	Saskatoon, SK	The bulked F7 was selected for yield under drought conditions. Matures mid-season, erect growth habit. Susceptible to orange blossom wheat midge.	08NW109 (for quality)	PWA01A
Goodeve	2007	1998	94B43-BLW4/AC Intrepid	Swift Current, SK	Good yield stability in dry, hot conditions during kernel filling stage.	Superb	PWA02
Superb	2001	1993	AC Domain/Grandin	Winnipeg, MB	To develop a pre-harvest sprouting tolerant cultivar with yield potential of Grandin	Goodeve, Helios	PWA02, PWA17
Cardale	2011	2001	McKenzie/Alsen	Winnipeg, MB	Semi-dwarf wheat with moderate resistance to FHB	BF34A-18-1 Shaw	PWA03, PWA04
Shaw	2009	2001	Harvest/BW313	Winnipeg, MB	Wheat midge larvae resistance. The cultivar is named after Philip Shaw Barker, who originally discovered a source of previously unknown antibiotic resistance to wheat midge.	Cardale, ERA131-R3	PWA04, PWB10
Cadillac	1996	1987	BW90*3/BW553	Swift Current, SK	It combines high grain yield with high grain protein concentration, heavy kernel and volume weights.	Carberry	PWA05
AAC Scotia	2011		AC Helena//Quantum/AC Walton	Ottawa, ON	Does well in Eastern regions of Canada	BF34A-18-1 Norwell, AC Walton, Acadia	PWA06, PWA12, PWB02, PWB03, PWB16
AAC Tradition	2016	2003	98B25AS6D01/'ND744	Winnipeg, MB	Selection criteria included yield, height, and tolerance to lodging, maturity and disease resistance. First organically bred registered wheat variety in Canada	08NW109, Carberry, Unity	PWA09, PWB04, PWB05
Sable	2005	1989	TG3S/B58664HCH	Oberlimpurg, Germany	Selection criteria was yield, milling and baking quality, Fusarium head blight resistance, leaf and stem rust resistance.	ERA131-R3, Helios	PWA10, PWA15
Carberry	2011	2000	Alsen/Superb	Swift Current, SK	Spikes were selected from 534 disease resistant doubled haploid lines that also matured early and had strong stems of acceptable height.	Cadillac, ERA 131-R3, AC Tradition, Glenn	PWA05, PWA11, PWB04, PWB08,
Norwell	2009	1989	Max/PT742//Blue	St-Foy, QC	Final selection of 'Norwell' was made in the F7 and F8	AAC Scotia	PWA12

			sky///Max/Coteau//Bluesky		generations based on Fusarium resistance, Barley Yellow Dwarf resistance, kernel cross-section type, kernel size, grain density, plant appearance, number of heads produced per unit area, cleanliness of leaves, percent protein, percent moisture, alpha amylase activity and loaf characteristics.		
Helios	2007	1996	BW674/BW689//AC Barrie	Swift Current, SK	Selected F8 lines were screened for reaction to loose smut and common bunt.	Touran, Sable, Superb	PWA13, PWA15, PWA17
Touran	2013				Does well in Eastern Regions of Canada		
Unity	2009	1997	McKenzie*3//BW174*2/Clark	Winnipeg, MB	The F4 generation was grown as short rows at Glenlea where selection for resistance to midge may have occurred along with selection for agronomic traits and leaf and stem rust resistance.	Red Fife, AAC Tradition, Shaw, Brandon	PWA14, PWB05, PWB10, PWB15
Red Fife		1842		Otonabee, Ontario	Heritage, known for culinary preference	Unity, McKenzie	PWA14, PWA16,
McKenzie	1997	1989	Columbus/Amidon	Saskatoon, SK	McKenzie wheat is named after Roy Edward McKenzie, P. Ag., FAIC, whose career was dedicated to the practice of agrology and service to farmers. Mr. McKenzie was one of nine individuals who drafted the legislation that established the Saskatchewan Institute of Agrology. Selection was based on resistance to stem and leaf rust, maturity, plant height, straw strength, plant vigour, protein content	Red Fife	PWA16
Park	1963	1950	(Mida-Cadet) x Thatcher	Lacombe, AB	Selected for resistant to loose smut, stem rust.	Pembina	PWB01
Pembina	1959		Thatcher/Selkirk			Park	
AC Walton	1995	1984	Nobeoka Bozu/2/Kolibri/Janus/3/Opal/Glenlea	Charlottetown, PEI	Identified on the basis of yield, disease resistance, and straw strength.	AAC Scotia, Celtic	PWB02, PWB11
AAC Scotia				Ottawa, ON	Does well in Eastern Regions of Canada	B34A-18-1, Norwell, AC Walton, Acadia,	PWA06, PWA12, PWB02, PWB03, PWB16
Acadia	1952	1937	Marquis/Pentad//Canus	Indian Head, SK	Does well in Eastern Regions of Canada, known for culinary preference	AAC Scotia, AC Barrie	PWB03, PWB06, PWB16
AC Barrie	1996	1984	Neepawa/Columb	Swift Current,	The F8 was screened for reaction to both loose smut and	Acadia	PWB06

			us//BW90	SK	common bunt. Reaction to leaf and stem rust was measured in an epiphytotic nursery near Glenlea, MB. AC Barrie exhibited superior overall quality with superior ratings for protein, flour yield, and loaf volume.		
Glenn	2009	1997	ND 2831' / 'Steele-ND	North Dakota	Selection criteria for the breeding of 'Glenn' wheat were highly heritable traits (i.e., plant vigor and height, maturity, and pest resistance) in early segregating generations F2 - F4. For the F4 - F6 generations, selection criteria also included Fusarium Head Blight (FHB) (Scab) resistance, grain yield, lodging resistance, shattering resistance, grain volume and kernel weights, and milling and bread making characteristics.	Carberry	PWB08
Champlain	1910		Black Sea/Golden Drop	Vermont		AC Brandon	PWB09
AC Brandon	2003	2012	Superb / CDC Osler // ND744	Swift Current, SK	Seed of the F3 generation was grown in a contra-season nursery in New Zealand where selections were made based on relative maturity, plant height and straw strength. The F4, F6 and F8 lines were planted and screened in various locations in Western Canada (Swift Current, Indian Head and Regina, Saskatchewan; and Morden, Manitoba) and assessed for agronomic performance, grain quality and kernel attributes. The F5 and F7 generations were grown in nurseries in New Zealand. Selected F8 lines were screened for resistance to mixtures of Loose Smut and Common Bunt.	Champlain, Unity	PWB09, PWB15
Celtic	1990		Len/Angus			AC Walton	PWB11

Cross information used from Canadian Food Inspection Agency, Canadian Journal of Plant Science and wheatpedigree.net

List of our unique crosses using the parents featured above:

Western Canadian Suggestions		Eastern Canadian Suggestions		East meets West		Heritage vs. Modern*very special! (for disease resistance)	
Name	Pedigree	Name	Pedigree	Name	Pedigree	Name	Pedigree
PWA01A	CDC Kernen/08NW109	PWA06	BF34A-18-1 / AAC Scotia	PWA13	Helios / Touran	PWA14	Unity / Red Fife
PWA02	Goodeven/Superb	PWA10	ERA131-R3 / Sable	PWA15	Helios / Sable	PWA16	Red Fife / McKenzie
PWA03	BF34A-18-1 / Cardale	PWA12	AAC Scotia / Norwell	PWA17	Superb / Helios	PWB09	Champlain / Brandon
PWA04	Cardale / Shaw	PWB02	AC Walton / AAC Scotia	PWB06	AC Barrie / Acadia		
PWA05	Cadillac / Carberry	PWB03	AAC Scotia / Acadia	PWB09	Champlain / Brandon	Agronomics with Quality Cross	
PWA09	08NW109 / AAC Tradition	PWB11	Celtic / AC Walton			PWA14	Unity / Red Fife
PWA11	ERA 131-R3 / Carberry	PWB16	AAC Scotia / Acadia	Agronomics with Quality Cross		PWA16	Red Fife / McKenzie
PWB01	Park / Pembina			PWB06	AC Barrie / Acadia	PWB09	Champlain / Brandon
PWB04	Carberry / AAC Tradition	Agronomics with Quality Cross		PWB09	Champlain / Brandon		
PWB05	AAC Tradition / Unity	PWA06	BF34A-18-1 / AAC Scotia				
PWB08	Glenn / Carberry	PWA10	ERA131-R3 / Sable				
PWB10	Shaw / Unity	PWA12	AAC Scotia / Norwell				
PWB15	Brandon / Unity	PWB02	AC Walton / AAC Scotia				
		PWB03	AAC Scotia / Acadia				
Agronomics with Quality Cross		PWB11	Celtic / AC Walton				
PWA01A	CDC Kernen/08NW109	PWB16	AAC Scotia / Acadia				
PWA05	Cadillac / Carberry						
PWA09	08NW109 / AAC Tradition						
PWA11	ERA 131-R3 / Carberry						