



APPLICATIONS UNDER EXAMINATION

PEAS

PEAS
(Pisum sativum)

Proposed denomination: 'Hugo'
Application number: 08-6291
Application date: 2008/04/15
Applicant: Agriculture & Agri-Food Canada, Lacombe, Alberta
Agent in Canada: Agriculture & Agri-Food Canada, Lacombe, Alberta
Breeder: Deng-jin Bing, Agriculture & Agri-Food Canada, Lacombe, Alberta

Variety used for comparison: 'Agassiz'

Summary: 'Hugo' is shorter than 'Agassiz'. The base of the flower standard is raised to level for 'Hugo' whereas is is arched to strongly arched for 'Agassiz'.

Description:

PLANT: field type, no stem fasciation, green colour at flowering, no anthocyanin colouration, semi-leafless

STEM: short to medium vine

STIPULE: medium waxiness of upper surface, very weak dentation, normal development, no rabbit-eared stipules, very sparse to sparse flecking

FLOWER: blooms mid season, medium number of flower bearing nodes per stem, one to two flowers per node, white standard, base of standard is raised to level, pointed apex of upper calyx lobe, medium length peduncle

POD: thickened wall absent, weak concave curvatures, distal part blunt, green when fully swollen, 6 to 8 ovules

IMMATURE SEED: light green

DRY SEED: simple starch grain, yellow cotyledon, no marbling, no black hilum, ovoid shaped, absent or very weak wrinkling of cotyledon, medium dimpling, medium size, medium maturity

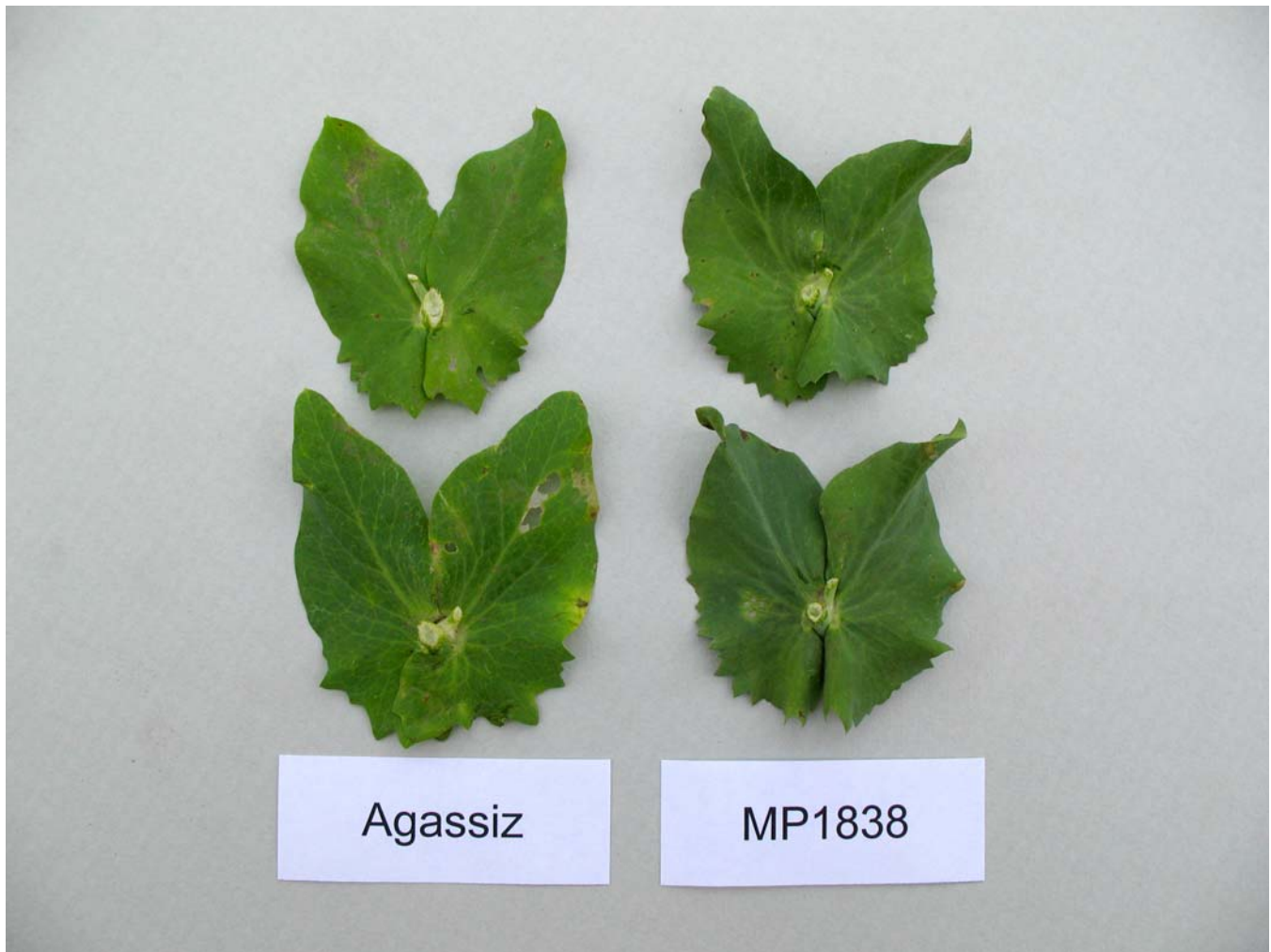
Origin and Breeding: 'Hugo' (experimental designation MP1838) is the result of the cross AC Melfort/CDC Mozart made in 1999 in Morden, Manitoba. The breeding method was pedigree selection in combination with single seed descent. The major selection criteria are appropriate maturity, good lodging resistance, good seed quality, high seed yield, as well as the reactions to mycosphaerella blight, fusarium wilt and powdery mildew resistance.

Tests and Trials: Tests and trials were conducted during the summers of 2007 and 2008 in Lacombe, Alberta. Plots were arranged in a complete randomized block design with 4 replicates. The plot size was 5 x 1 meter with 20 cm row space. The seeding rate was 85 germinating seeds per meter square.

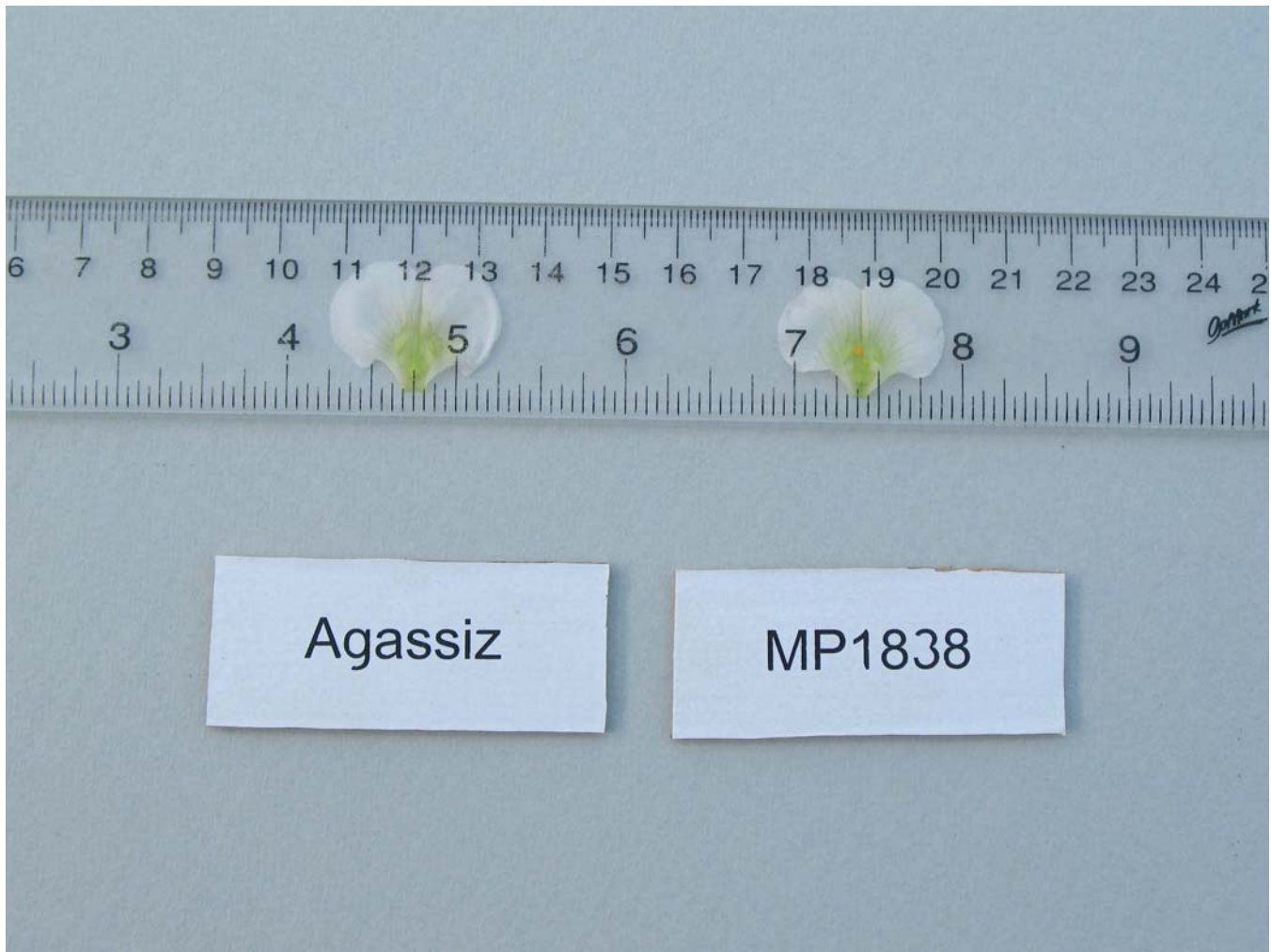
Comparison table for 'Hugo'

	'Hugo'	'Agassiz'*
<i>Plant height (cm)</i>		
mean	71	87
standard deviation	3.7	3.8

*reference variety



Peas: 'Hugo' (MP1838) (right) with reference variety 'Agassiz' (left)



Peas: 'Hugo' (MP1838) (right) with reference variety 'Agassiz' (left)

Proposed denomination: 'Mendel'
Application number: 08-6292
Application date: 2008/04/15
Applicant: Agriculture & Agri-Food Canada, Lacombe, Alberta
Agent in Canada: Agriculture & Agri-Food Canada, Lacombe, Alberta
Breeder: Deng-jin Bing, Agriculture & Agri-Food Canada, Lacombe, Alberta

Variety used for comparison: 'Cooper'

Summary: 'Mendel' is taller than 'Cooper'. The petiole of 'Mendel' is longer than 'Cooper'. 'Mendel' has a wider stipule than 'Cooper'. The flowering time of 'Mendel' is early to medium whereas it is medium to late for 'Cooper'. 'Mendel' has an arched to strongly arched base of the flower standard whereas it is raised to level for 'Cooper'. 'Mendel' has less dimpled cotyledons than 'Cooper'.

Description:

PLANT: field type, no stem fasciation, green colour at flowering, no anthocyanin colouration, semi-leafless

STEM: medium vine

STIPULE: normal development, few rabbit-eared stipules, very sparse to sparse flecking

FLOWER: blooms early to mid season, many flower bearing nodes per stem, two flowers per node, white standard, base of standard is arched to strongly arched, pointed apex of upper calyx lobe, medium length peduncle

POD: thickened wall absent, very weak concave curvatures, distal part blunt, green when fully swollen, 8 to 9 ovules

IMMATURE SEED: light green

DRY SEED: simple starch grain, green cotyledon, no marbling, no black hilum, ovoid shaped, absent or very weak wrinkling of cotyledon, no dimpling, medium size, medium maturity

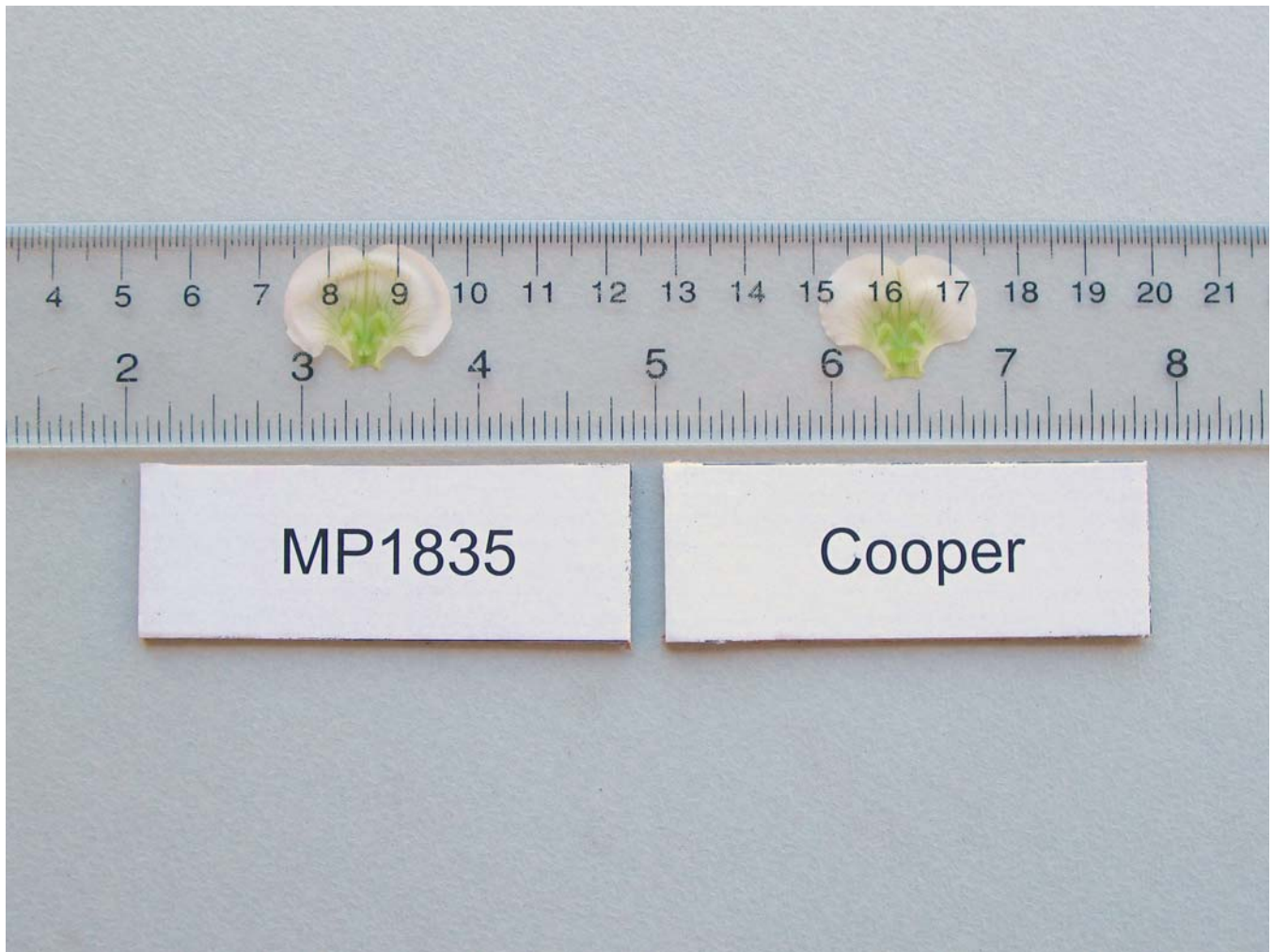
Origin and Breeding: 'Mendel' (experimental designation MP1835) is the result of the cross 9427004/Carneval made in 1999 in Morden, Manitoba. The main objectives of the cross were to combine the high yielding, good lodging resistance and good bleaching resistance from the parents. The breeding method is pedigree selection in combination with single seed descent.

Tests and Trials: Tests and trials were conducted during the summers of 2007 and 2008 in Lacombe, Alberta. Trials consisted of 4 replicates per variety, 5 x 1 meter with 20 cm row space. The seeding rate was 85 germinating seeds per meter square.

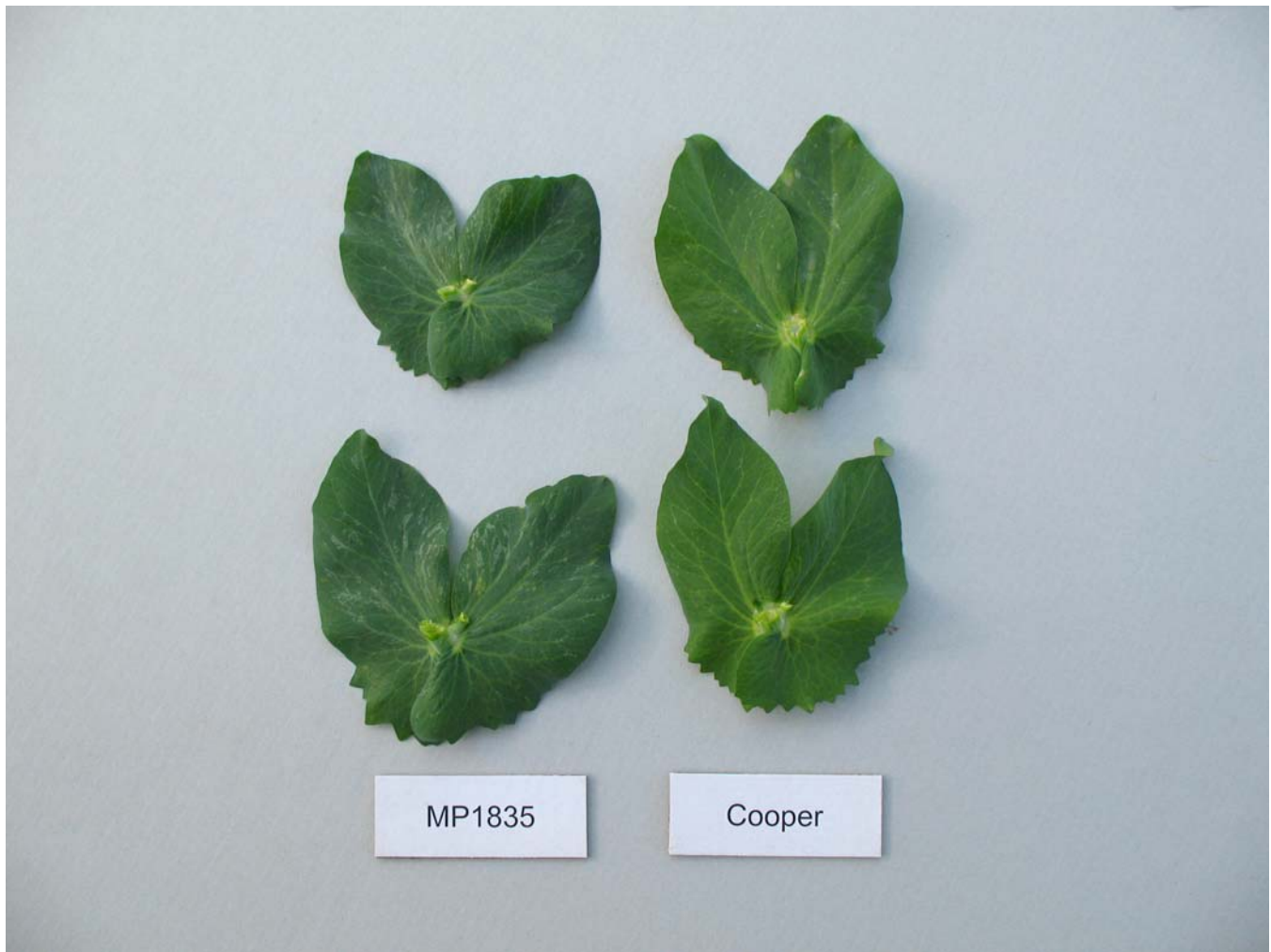
Comparison table for 'Mendel'

	'Mendel'	'Cooper'*
<i>Plant height (cm)</i>		
mean	89	83
standard deviation	3.6	4.3
<i>Petiole length (mm)</i>		
mean	89	65
standard deviation	6.2	4.5
<i>Maximum width of the stipule (mm)</i>		
mean	63	58
standard deviation	6.3	4.9
<i>Seed weight (grams per 1000 seed)</i>		
mean	216	246

*reference variety



Peas: 'Mendel' (MP1835) (left) with reference variety 'Cooper' (right)



Peas: 'Mendel' (MP1835) (left) with reference variety 'Cooper' (right)