

CUTLASS ORIENTAL MUSTARD

Cutlass oriental mustard (*Brassica juncea* (L.) Coss), licenced in 1985, is a pure-yellow-seeded cultivar which combines a high glucosinolate level with high seed yield, reduced oil content and early maturity. It is adapted to all areas of western Canada where *B. juncea* is grown.

Key words: Mustard (oriental), Cutlass cultivar

[Moutarde orientale Cutlass.]

Titre abrégé: Moutarde orientale Cutlass.

La moutarde orientale Cutlass (*Brassica juncea* (L.) Coss), homologuée en 1985, est une variété à graines jaunes précoce présentant les caractéristiques suivantes: forte teneur en glucosinolates, rendement élevé en grains et faible teneur en huile. La variété Cutlass est adaptée aux régions de culture de la moutarde orientale de l'Ouest canadien.

Mots clés: Moutarde (orientale), la variété Cutlass

Cutlass oriental mustard (*Brassica juncea* (L.) Coss), a high glucosinolate (173 $\mu\text{mole sinigrin g meal}^{-1}$), totally yellow-seeded cultivar, was developed at Agriculture Canada Research Station, Saskatoon, Saskatchewan. Cutlass was licenced (no. 2529 on 19 Apr. 1985) after 5 yr of testing in the Western Canadian Cooperative Mustard Test.

Pedigree and Breeding

Cutlass is the direct descendant of a single plant selected within the cultivar Domo. Selection pressure was applied in subsequent generations for increased glucosinolate content,

reduced oil levels, and agronomic performance equal or superior to Domo. The selection, identified as BJ08-1418, was initially entered into the Western Canadian Cooperative Mustard Test in 1980 at four locations only because of limited seed supply, but was grown at all co-op locations in subsequent years. To ensure there were no unexpected processing problems, 12 000 kg of seed were produced in 1984 and test milled into mustard flour at Coleman Foods, Norwich, England. No particular problems with this cultivar were noted, and flour yields were satisfactory.

Table 1. Average performance of the oriental mustard cultivars Domo and Cutlass in the Western Canadian Cooperative Tests, 1980–1987†

Cultivar	Yield (kg ha^{-1})	Sinigrin ($\mu\text{mole g meal}^{-1}$)	Oil (g kg seed^{-1})	Maturity (d)
Domo	2115	165	382	94
Cutlass	2228	173	376	93
LSD 0.05	59	2.7	2	0.4
Station years	85	86	86	67

†Data from western locations where the site CV was less than 25% for the character considered, except maturity where no site statistics are available. Langdon 1981 maturity excluded as unacceptable (60 d recorded). Locations included were: (Manitoba) Winnipeg, Morden, Portage la Prairie, (Saskatchewan) Saskatoon, Scott, Outlook, Melfort, Swift Current, Indian Head, (Alberta) Brooks, Irricana, Delacour, Lethbridge, (North Dakota) Langdon, Williston, Minot, (Montana) Sidney, although not all sites were planted each year. Cultivar means at each site were used for statistical analysis, without partitioning for year effects, thus each station year of data was treated as one replicate.

Performance

Over the period 1980–1987, in comparison to Domo, Cutlass was higher yielding by 5%, was higher in sinigrin content by 8 $\mu\text{mole g meal}^{-1}$, had an oil content lower by 6 g kg-seed $^{-1}$, and was about 1 d earlier maturing (Table 1). Lodging resistance was essentially the same as for Domo, and resistance to white rust (*Albugo candida* (Pers. ex Lev.) Ktze.) was equal to or slightly superior to that of Domo (Western Expert Committee on Grain Breeding, data from the Mustard Co-operative Test, and the report of the Expert Committee on Grain Diseases).

Pedigreed Seed

Breeder Seed of Cutlass is maintained by the Seed Section of the Experimental Farm, Agriculture Canada, Indian Head, Saskatchewan, Canada S0G 2K0. Multiplication and distribution of seed stocks are handled by the mustard seed trade.

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