



Canadian Grain  
Commission

Commission canadienne  
des grains

## Domestic Mustard Seed grading

Canada 

# Classes of DMS

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- Yellow
- Brown
- Oriental

# Classes of DMS - Yellow

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- Light creamy-yellow to yellow  
Occasionally — light or yellowish brown
- Large, 2 to 3 mm in diameter
- Shape — oval or spherical
- Surface — textured, similar to an orange peel
- Hilum — small white spot on deep yellow to light tan circular area



# Classes of DMS - Brown

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- Reddish-brown to dark-brown
- Small, less than 2 mm in diameter
- Shape — oval or spherical
- Surface — predominant netting
- Hilum — white on a black or darker brown circular area



# Classes of DMS - Oriental

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- Predominantly yellow to dark-yellow  
— some seeds ranging from light brown to brown
- Small, less than 2 mm in diameter
- Shape — oval
- Surface — fine netting
- Hilum — white on a darker yellow to lighter brown circular area



# Grade definitions

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- Established under the authority of the Canada Grain Regulations
- Tables of specifications or grade definitions provide the structure for assigning grades





**Grading a sample**

# Representative sampling

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- Major factor in accurate assessment of grain quality
- Approved mechanical sampling devices used to obtain samples
- Sampling devices — approved by Canadian Grain Commission (CGC)





Dividing of unload  
sample, to approximately  
1000 grams



# Composition of dockage

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- Material
  - remaining on top of the round-hole hand sieve
  - passing through the slotted hand sieve
  - passing over the No. 000 Riddle
  - removed by aspiration
  - removed by *Cleaning for grade improvement*



# Round hole sieve

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# Slotted sieve

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# Aspiration

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# Cleaning for grade improvement

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- To improve the grade
- Add the additional material to dockage

## Approved Methods

- Carter Dockage Tester – all DMS
- Spiral Cleaner – for yellow mustard seed and only upon request



# Cleaning for grade improvement Carter Dockage Tester

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## Material to be removed

- Excessive inseparable weed seeds or damaged mustard seeds for all classes of mustard seed
- Canola or wild mustard in yellow mustard seed



# Cleaning for grade improvement Spiral Cleaner – Yellow mustard

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## Yellow mustard only

Material to be removed

- Excessive inseparable weed seeds and/or damaged mustard seeds



# Cleaning for grade improvement Spiral Cleaner – Yellow mustard

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## Method

- Pour the entire net sample after cleaning into the feed hopper at the top of the spiral cleaner



# Cleaning for grade improvement

## Spiral Cleaner – Yellow mustard

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### Method



- Once the sample has passed through the spiral cleaner, lightly tap the cleaner to remove any lodged seeds remaining in the flights

# Cleaning for grade improvement

## Spiral Cleaner – Yellow mustard

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### Method

- Collect and determine the percentage of seeds that have discharged from the bottom spout (spout closest to the core of the cleaner)

# Optional analysis

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- Where a shipper requests special cleaning of a carlot of grain at the terminal or transfer elevator, and the elevator manager agrees, dockage material will be analyzed for the presence of grain.



# Optional analysis

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- Percentage and grade of any grain contained in the dockage will be reported and elevator stocks adjusted
- Agreement of the shipper and unload elevator must be conveyed to the CGC in writing prior to the analysis.



# Definition of a grading factor for oilseeds

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- A characteristic which can be assessed visually
- Defect acquired from the environment
- May lower utilization quality making it difficult to make acceptable products



# Grading factors and grades

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## Oilseeds

- Segregated into grades according to the amount of individual grading factors which are present in the sample



# Grading factors

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Colour



# Grading factors

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- Conspicuous Admixture
- Assessed in Yellow, Brown and Oriental
  - small seeds or broken grain
  - weed seeds
  - any conspicuous foreign material except stones and soft earth pellets

# Grading factors

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## Inconspicuous admixture

- Assessed in Brown and Oriental only
  - canola
  - wild mustard
  - any other seeds that blend



# Grading factors

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## Damage

- Distinctly shrunken or shriveled
- Badly discoloured from mould
- Completely and densely covered with rime
- Excessively weathered, sprouted, distinctly green, heated or otherwise damaged



# Grading factors

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Damaged – weathered

# Grading factors

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Damaged – sprouted

# Grading factors

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Equipment for  
assessment of  
*Distinctly green* and  
*Heated*

# Grading factors

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Distinctly green and  
Heated kernels



**Graded sample**





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