



Official Grain Grading Guide

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7. Oats

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Determination of commercially clean

Dockage is not assessed on oat samples that meet the commercially clean specifications defined in the oats export grade determinant table. All samples must be analyzed to determine if they are commercially clean prior to dockage assessment. The analysis of samples which are clearly not commercially clean may consist of a visual assessment. For example, if there is no doubt that a sample contains more than 0.1% of small seeds without hand sieving and weighing the seeds then dockage will be assessed using procedures defined under Determination of dockage. Where there is any doubt regarding whether the sample is commercially clean the sample must be analyzed using the procedures outlined in steps 1 through 7 below to confirm that the sample is not commercially clean prior to assessing a dockage.

1. Using a Boerner-type divider, divide the sample to obtain a representative portion.
 - Official samples should be at least 900 grams.
 - Unofficial samples must be at least 750 grams.
2. Place approximately 250 grams of the sample at a time on the No. 5 buckwheat sieve nested over the No. 4.5 round hole hand sieve.
3. Move the sieves from left to right 30 times using a sifting motion. One complete motion is approximately 10 cm from the center to one side, back to the center, approximately 10 cm to the other side and back to the center.
4. All material passing through the No. 4.5 round hole sieve is weighed and the percentage calculated to determine if it meets the commercially clean specification of the grade for material removable through the No. 4.5 round hole sieve.
(Column # 1 in the oat export grade determinant table)
5. Small seeds passing the No. 4.5 round hole sieve are weighed and the percentage calculated to determine if they meet the commercially clean specification of the grade for small seeds. (Column #2 in the oat export grade determinant table)
6. Large seeds removable by the No. 5 buckwheat sieve are weighed and the percentage calculated to determine if they meet the commercially clean specification of the grade for large seeds removable by the No. 5 buckwheat sieve. (Column #3 in the oat export grade determinant table) (See definition of large seeds in *Glossary*)
7. The percentages of material through the No. 4.5 round hole sieve and large seeds removable by the No. 5 buckwheat sieve are added together to determine if they meet the commercially clean specification for total removable material.
(Column #4 in the oat export grade determinant table)

Should the percentage concentration of any of the factors determined in steps 1 through 7 exceed the specifications set out in columns 1 to 4 of the oat export grade determinant table the sample will be considered to be not commercial clean. Dockage will be assessed on samples determined to be not commercially clean by using the procedures defined under *Determination of dockage*.

Determination of dockage

Definitions

Dockage is assessed and recorded to the nearest 0.1%.

Dockage is defined under the Canada Grain Act as “any material intermixed with a parcel of grain, other than kernels of grain of a standard of quality fixed by or under this Act for a grade of that grain, that must and can be separated from the parcel of grain before that grade can be assigned to the grain.” Dockage is removed by following the cleaning procedures described in this chapter.

The sample as it arrives is referred to as the uncleaned or dirty sample. Its weight is the **gross weight** of the sample. Dockage is assessed on the gross weight of the sample.

Dockage is assessed in two stages.

1. Follow *Normal cleaning procedures*, using the Carter dockage tester.
2. Follow procedures for *Cleaning for grade improvement*. This cleaning can be done at any time after normal cleaning has been completed.

Dockage not reported

- ▲ **Important:** Dockage is not reported for samples grading
 - Oats, Sample CW/CE, Account Fireburnt
 - Oats, Sample Salvage
 - Oats, Sample Condemned

Normal cleaning procedures

- ▲ **Important:** Wear gloves and a mask to handle any samples that you suspect may contain hazardous substances.

1. Set up the Carter dockage tester as follows:

Feed control	#5
Air control	#3
Riddle	No. 6
Top sieve	No. 6 buckwheat
Centre sieve	No. 5 buckwheat
Bottom sieve	Blank tray
Sieve cleaner control	Off

2. Using a Boerner-type divider, divide the uncleaned sample to obtain a representative portion.
 - Official samples should be at least 900 grams.
 - Unofficial samples must be at least 750 grams.
3. Turn on the Carter dockage tester.

4. Pour the sample into the hopper.
5. After the sample has passed through the machine, turn on the sieve cleaner control for two to three seconds to remove kernels lodged in the sieve.
6. Turn off the dockage tester.
7. Lightly snap the retainer rod of the aspiration pan to loosen material gathered on the air screen.

▲ **Important:** These are the normal settings. Ensure when you are aspirating lightweight oats that fully developed, sound oats are not removed from the sample.

If the aspirated material contains whole, sound oats,

1. Return the material to the sample.
 2. Reset the dockage tester with a lower air setting to remove only lightweight dockage material.
 3. Pass it through the Carter dockage tester again.
8. Remove the aspiration pan.
 9. Determine dockage, using the list under *Composition of dockage*.

Composition of dockage

Dockage includes

- Material removed over the No. 6 riddle
- Lightweight material removed by aspiration
- Material that is removed by the No. 5 buckwheat sieve
- A maximum of 10% of soft earth pellets handpicked from the clean sample
- Material removed by *Cleaning for grade improvement*

Cleaning for grade improvement

If the grade of a delivery can be improved by additional cleaning, perform the cleaning and add the additional material to dockage. Cleaning for grade improvement can be done at any time.

1. After normal cleaning, examine the material to be removed and select your equipment according to the material you want to remove. See the table *Cleaning for grade improvement—Oats* for the list of equipment.
2. Sieve the sample by hand, or pass it through the Carter dockage tester, depending on the material.

▲ **Important:** When you use a hand sieve, move the sieve from left to right 30 times, using a sifting motion. One time is one complete motion from the centre, to one side, to the other side, and back to the centre. The total distance from left to right is 20 cm, or about 8 inches.
3. Weigh the additional dockage and add it to the original dockage.

Cleaning for grade improvement—Oats

Material to be removed	Equipment	Effect on composition of dockage
Large seeds	No. 6 buckwheat hand sieve	<p>Large seeds are</p> <ul style="list-style-type: none"> • Seeds that do not pass through the No. 4.5 round-hole sieve • Grains other than cereal grains, such as peas, beans, corn, flaxseed and domestic buckwheat • Ragweed and Tartary buckwheat <p>Assess material as dockage, provided the grade is improved and not more than 5.0% of oats are removed.</p>
Covered smut and false loose smut	Carter dockage tester, set up for Normal cleaning procedures, but with air control set to 7	<p>If the percentage by weight of material removed is</p> <ul style="list-style-type: none"> • Less than 2.0% of the gross weight of the sample, add to dockage • 2.0% or more of the gross weight of the sample, the sample is sent to the Chief Grain Inspector for review.

Optional analysis

Where a shipper requests special cleaning of a carlot of grain at a terminal or transfer elevator, and the elevator manager agrees, dockage material will be analyzed for the presence of grain. The percentage and grade of any grain contained in the dockage will be reported and elevator stocks will be adjusted on the basis of the analysis. Agreement of the shipper and unload elevator must be conveyed to the CGC in writing prior to the analysis being performed.

Procedures

1. Analyze the official sample.
2. Record the following on inspection records:
 - The percentage by gross weight to the nearest 0.1% and the grade of oats.
 - The percentage by gross weight to the nearest 0.1% and the grade of grain separable from dockage.
 - The percentage of dockage.

Example

95.0% Oats, No. 1 CW

4.0% Domestic Mustard Seed, No. 1 CAN Oriental

1.0% dockage

Grading

Important definitions

Net weight of sample

The sample after cleaning and removal of dockage is referred to as the cleaned sample. Its weight is the net weight of the sample. Percentages by weight for grading refer to percentages of the net weight.

Kernel counts (K)

A kernel count is the number of kernel-sized pieces in a 500 gram sample.

- To do kernel counts, you must have 500 grams of cleaned sample.
- All grading is done on representative portions divided down from the cleaned sample using a Boerner-type divider.

Hazardous substances in samples

Wear gloves and a mask to handle any samples that you suspect may contain hazardous substances. Hazardous substances are defined in the Regulations as “any pesticide, herbicide or desiccant.”

Representative portion for grading

All grading is done on representative portions divided down from the cleaned sample, using a Boerner-type divider.

When the concentration of the grading factor is . . .	Then use . . .
Low	Optimum portion size
High	Minimum portion size or more (do not use less)

Values in the table represent a range of recommended portion sizes.

Recommended portion of oats for grading, grams

Grading factor	Minimum	Optimum	Export
Barley	25	100	100
Cereal grains other than barley and wheat	25	100	100
Covered smut and false loose smut	working sample	working sample	working sample
Damage	25	25	50
Ergot	500	1000	1000
Excreta	working sample	working sample	working sample
Fireburnt	500	working sample	working sample
Frost damage	5	25	25
Fusarium damage	25	100	100
Green	25	25	50
Heated	25	25	50
Hulled	25	100	100
Large seeds	50	250	250
Mildew	25	25	50
Odour	working sample	working sample	working sample
Rotted	25	100	100
Sclerotinia sclerotiorum	500	1000	1000
Soft earth pellets	working sample	working sample	working sample
Stones	500	1000	1000
Wheat	25	100	100
Wild oats	50	100	500

Grading factors

Barley (BLY)

There is a separate tolerance for barley in oats.

Representative portion for analysis

Minimum—25 g

Optimum—100 g

Export—100 g

Cereal grains other than barley and wheat

Cereal grains other than barley and wheat refers to rye and triticale.

Representative portion for analysis

Minimum—25 g

Optimum—100 g

Export—100 g

Contaminated grain

- ▲ **Important:** Wear gloves and a mask to handle any sample that is suspected of containing contaminated grain.

Contaminated is defined in the “*Canada Grain Act*” as; “Contaminated means, in respect of grain, containing any substance in sufficient quantity that the grain is unfit for consumption by persons or animals or is adulterated within the meaning of the regulations made pursuant to sections B.01.046(1), B.15.001 and B.15.002(1) of the *Food and Drugs Act*.”

Samples deemed to be contaminated by the Grain Research Laboratory in consultation with the Chief Grain Inspector for Canada are graded *Oats, Sample Condemned*.

Covered smut and false loose smut (SMUT)

There are no specific numeric tolerances for smut. In evaluating covered smut as a grading factor, consider

- The degree of smut tag on the kernels
- The number of pieces of covered smut left in the cleaned sample

Representative portion for analysis

Minimum—working
sample

Optimum—working
sample

Export—working
sample

If the sample . . .	Then the grade is . . .
Contains about 5K of covered smut and no tagged kernels	<i>Oats, No. 1 or No. 2 CW/CE</i>
Contains many pieces of covered smut and smut-tagged kernels	<i>Oats, No. 3 CW/CE</i> or <i>Oats, No. 4 CW/CE</i>
Is severely contaminated	<i>Oats, Sample CW/CE Account Smut</i>

Damage (DMG)

Kernels are damaged if the groats are fireburnt, heated, frost-damaged, insect damaged, sprouted, mildewed, green, rotted, badly weather stained, affected by fusarium or are otherwise damaged.

Weather stained and/or mildewed groats are considered damaged if there is significant brown or black discoloration on 50% or more of the groat or the discoloration penetrates into the groat.

There is no limit for frost damage in Oats, No. 4 CW. When the inclusion of frost damage in *Total damage* or *Total damage and foreign material* would result in either of these totals exceeding 8%, only that percentage of frost that brings the total up to 8% is considered in grade assessment. That is, the percentage of the frost component in a sample cannot be used to assign a grade lower than Oats, No. 4 CW.

Representative portion for analysis (hulls removed)

Minimum—25 g

Optimum—25 g

Export—50 g

Determination of damage by mechanical hulling

1. Hull a divided representative portion of the clean sample to yield at least 25 grams of groats.
2. Determine the weight of damaged groats as a percentage of hulled groats.

Determination of damage by manual hulling

Use this method only if a mechanical huller is not available. To determine the percentage by weight of damaged kernels,

1. Divide a representative portion of not less than 5 grams from the cleaned sample.
2. Hull all kernels to establish whether the groats are damaged.
3. To accurately determine the percentage by weight of damaged kernels, weigh the affected groat and the oat hull together.

Earth pellets (EP)

- Hard earth pellets are pellets that do not crumble under light pressure.
See *Stones*.
- Soft earth pellets are pellets that crumble under light pressure.
See *Soft earth pellets*.

Ergot (ERG)

Ergot is a plant disease producing elongated fungus bodies that have a purplish-black exterior, a purplish-white to off-white interior, and a relatively smooth surface texture.

Representative portion for analysis

Minimum—500 g

Optimum—1000 g

Export—1000 g

Procedures

Determine the weight of ergot as a percentage of the net weight of the sample.

Excreta (EXCR)

▲ **Important:** Wear gloves and a mask to handle any samples that you suspect may contain excreta.

Representative portion for analysis

Minimum—working
sample

Optimum—working
sample

Export—working
sample

Fertilizer pellets (FERT PLTS)

Fertilizer pellets are typically either small, round and white or irregular shaped and pink or red. Fertilizer pellets are not considered a hazardous substance however there is no visible means of assuring that material resembling fertilizer pellets is not some other contaminant.

Representative portion for analysis

Minimum—working
sample

Optimum—working
sample

Export—working
sample

Procedures

- Handpick any fertilizer pellets and determine the concentration basis the net working sample.
- Fertilizer pellets are assessed as stones when the concentration does not exceed 1.0% of the net sample weight.
- Samples containing fertilizer pellets in excess of 1.0% of the net sample weight are graded *Oats, Held IP Suspect Contaminated Grain*.

Note: Canadian Grain Commission personnel should refer to ISO national work instruction “*Suspect Contaminated Grain, Handling Procedures*” for procedures to be followed when handling samples containing fertilizer pellets.

Fireburnt (FBNT)

Fireburnt kernels have been charred or scorched by fire. A cross-section of a fireburnt kernel resembles charcoal with numerous air holes. The air holes result in a low weight kernel that crumbles easily under pressure.

Representative portion for analysis

Minimum—500 g

Optimum—working
sample

Export—working
sample

Foreign material (FM)

Foreign material is anything other than oats that remains in the sample after the removal of dockage. Some types of foreign material have separate tolerances.

Frost damage (FR)

Frost-damaged kernels of oats have a black or sunken ventral side and gray or black groats. Frost-damaged oat groats show discolouration in the ventral crease as a dark line. The discolouration may extend throughout the groats depending on the severity of frost damage.

There is no limit for frost damage in Oats, No. 4 CW. When the inclusion of frost damage in *Total damage* or *Total damage and foreign material* would result in either of these totals exceeding 8%, only that percentage of frost that brings the total up to 8% is considered in grade assessment. That is, the percentage of the frost component in a sample cannot be used to assign a grade lower than Oats, No. 4 CW.

Representative portion for analysis

Minimum—5 g

Optimum—25 g

Export—25 g

Procedures

Cut the kernels lengthwise through the ventral side and examine the groats to confirm frost damage symptoms.

Fusarium damage (FUS DMG)

Fusarium damage is rare on oats. It resembles fusarium damage in barley. Kernels are discoloured by pink, orange or black encrustations of fusarium mould. Under magnification, the black encrustations appear raised above the surface of the kernel and are surrounded by a white mould. The black encrustations can be scraped off.

Some degree of judgment is required when identifying kernels with the fusarium mould. Only those kernels which meet this description are to be designated as fusarium damaged.

Representative portion for analysis

Minimum—25 g

Optimum—100 g

Export—100 g

Procedures

Confirm the presence of fusarium damage using a 10-power magnifying lens.

Green (GR)

Green kernels in oats are an indication of immaturity.

- Green hulls are assessed in the general colour of the sample.
- Green groats are considered damaged.

Representative portion for analysis

Minimum—25 g

Optimum—25 g

Export—50 g

Procedures

Manually or mechanically hull the appropriate portion and examine the groats for green discolouration. Green groats are assessed as damaged. See *Damage*.

Heated (HTD)

Heated kernels have the colour or odour typical of grain that has deteriorated in storage or has been damaged by artificial drying. When the hull of a heated oat is removed, the groat appears brown or orange-red.

Representative portion for analysis

Minimum—25 g

Optimum—25 g

Export—50 g

Procedures

Manually or mechanically hull the appropriate portion and examine the groats.

If the discolouration affects . . .	The kernel is considered . . .
The entire groat	Heated
Only the germ	Damaged

Hulled and hullless (HULL)

Hulled oats have the hulls removed. Hullless oats have loose hulls which are usually removed during harvesting.

Groats are the oat kernels without the hulls.

If oats appear to be unprocessed and contain 95.0% or more of a hullless variety,

- Grade the sample according to the primary or export grade specifications except for the tolerances for hulled and hullless kernels.
- Add *hullless* to the grade name, for example, *Oats, No. 1 CW Hullless*.

Representative portion for analysis

Minimum—25 g

Optimum—100 g

Export—100 g

Large seeds (LSDS)

Large seeds are domestic and wild seeds that remain on top of the No. 4.5 round-hole sieve. Large seeds are assessed

- As dockage if they are removed by *Cleaning for grade improvement*
- As large seeds and included in *Total damage and foreign material* if they remain in the sample

Representative portion for analysis

Minimum—50 g

Optimum—250 g

Export—250 g

Mildew (MIL)

Mildew is a fungal condition that develops in unthreshed grain usually under conditions of excessive moisture. The affected kernels are grayish in colour and lower in quality. In the evaluation of mildew, consider the number of affected kernels and their severity.

- Hull discolouration is assessed in the general colour of the sample.
- Discoloured groats are considered as damaged when there is significant brown or black discolouration on 50% or more of the groat or the discolouration penetrates into the groat.

Representative portion for analysis

Minimum—25 g

Optimum—25 g

Export—50 g

Procedures

Manually or mechanically hull the appropriate portion and examine the groats for mildew discolouration. Mildewed groats are assessed as damaged. See *Damage*.

If the discolouration is . . .	The sample is considered . . .
On the groats, from mildew	Damaged
On the hull, but groats are undamaged	Superficially mildewed, but sound

Odour (ODOR)

There is no numeric tolerance for odour. Consider

- The basic quality of the sample
- The type and degree of the odour
- The presence of visible residue causing the odour

Representative portion for analysisMinimum—working
sampleOptimum—working
sampleExport—working
sample

If odour is the grade determinant and there is . . .	Then the grade is . . .
A distinct objectionable odour not associated with the quality of the grain, but not heated or fireburnt	<i>Oats, Sample CW/CE, Account Odour</i>
A distinct heated odour	<i>Oats, Sample CW/CE, Account Heated</i>
A distinct fireburnt odour	<i>Oats, Sample CW/CE, Account Fireburnt</i>

Rotted (ROT)

Rotted kernels are discoloured, swollen, and soft and spongy as a result of decomposition by fungi or bacteria. Rotted kernels in oats are considered as damaged. See *Damage*.

Representative portion for analysis

Minimum—25 g

Optimum—100 g

Export—100 g

Sclerotinia sclerotiorum (SCL)

Sclerotinia sclerotiorum is a fungus producing hard masses of fungal tissue, called *sclerotia*. The sclerotia vary in size and shape, have a coarse surface texture, vary in exterior color from dark black to gray to white and have a pure white interior.

Representative portion for analysis

Minimum—500 g

Optimum—1000 g

Export—1000 g

Soft earth pellets (SEP)

Soft earth pellets are

- Earth pellets that crumble into fine dust under light pressure, using a finger only—if they do not crumble, they are considered *Stones*
- Any non-toxic material of similar consistency

Representative portion for analysis

Minimum—working
sample

Optimum—working
sample

Export—working
sample

Procedures

1. Handpick soft earth pellets from a representative portion of the cleaned sample.
 2. Soft earth pellets constituting 10.0% or less of the sample are assessed as dockage.
 3. Where soft earth pellets represent more than 10% of the net weight, the sample is graded *Oats, Sample CW/CE Account Admixture*.
-

Sprouted (SPTD)

Sprouted kernels show definite signs of germination. Sprouted oats are assessed as damaged. See *Damage*.

Representative portion for analysis

Minimum—10 g

Optimum—50 g

Export—50 g

Stones (STNS)

Stones are hard shale, coal, hard earth pellets, and any other non toxic materials of similar consistency. Fertilizer pellets are assessed as stones when constituting 1.0% or less of the net sample weight. (See *Fertilizer pellets* for specific procedures to be followed when samples contain fertilizer pellets.)

Representative portion for analysis

Minimum—500 g

Optimum—1000 g

Export—1000 g

Procedures

1. Handpick stones from a representative portion of the cleaned sample.
2. Determine stone concentration in the net sample.

- In western Canada samples of grain containing stones in excess of “basic grade” tolerances, up to 2.5% are graded *Oats, Rejected “basic grade” Account Stones*. The “*basic grade*” refers to a grade established in the Canada Grain Regulations (grades listed in the first column in grade determinant tables) that would have been assigned to the sample if it contained no stones.
- In eastern Canada samples of grain containing stones in excess of grade tolerances are degraded to lower grades. Samples containing stones in excess of the tolerance of the lowest grade established by regulation up to 2.5% are graded *Oats, Sample Canada Eastern Account Stones*.
- In western and eastern Canada grain containing more than 2.5% stones is graded *Oats, Sample Salvage*.

Examples: Western Canada

Excerpt from grade determinant tables for
Oats, Canada Western

Grade name	Stones %
No. 1 CW	0.017
No. 2 CW	0.066
No. 3 CW	0.15
No. 4 CW	0.15

Basic grade:..... *Oats, No. 1 CW*

If the above sample contained	Grade in western Canada
0.05% stones	<i>Oats, Rejected No. 1 CW Account Stones</i>
1.0% stones	<i>Oats, Rejected No. 1 CW Account Stones</i>
3.0% stones	<i>Oats, Sample Salvage</i>

Examples: Eastern Canada

Excerpt from grade determinant tables for
Oats, Canada Eastern

Grade name	Stones
No. 1 CE	0.017
No. 2 CE	0.066
No. 3 CE	0.15
No. 4 CE	0.15

Basic grade:..... Oats, No. 1 CE

If the above sample contained	Grade in eastern Canada
0.05% stones	<i>Oats, No. 2 CE</i>
1.0% stones	<i>Oats, Sample CE Account Stones</i>
3.0% stones	<i>Oats, Sample Salvage</i>

Total damage and foreign material (TDMG&FM)

Total damage and foreign material includes all foreign material and all damage. Frost damage is not included in No. 4 CW Oats. When assigning a grade, choose the most appropriate grade as indicated in the table below.

If any one of, or the total of <i>Barley, Cereal grains other than wheat and barley, or Wheat, or Wild oats</i> is...	and <i>Total damage</i> is . . .	Then the grade is . . .
Above the tolerance	At or below the tolerance	See procedures for Mixed grain
At or below the tolerance	Above the tolerance	Oats, Sample CW/CE, Account Damage
Individually, each is below the tolerance, but together they exceed the tolerance for Total damage and Foreign Material		Oats, Sample CW/CE, Account Damage and Foreign Material

Treated seed and other chemical substances

Treated seed

Treated seed is grain that has been coated with an agricultural chemical for agronomic purposes. These seed dressings contain a dye to render the treated seed visually conspicuous. The colour of the dye varies depending upon the type of treatment and the type of grain. The current Canadian colour standards for pesticide seed treatments are: cereals—pink or red, canola—baby blue or green. Seed treated with an inoculant may have a green stain. The coatings or stains may appear greasy or powdery and surface area distribution ranges from tiny flecks to complete coverage.

Other chemical substances

Other chemical substances refers to any chemical residues either adhering to the kernel or remaining in the sample and to samples having a chemical odour of any kind.

▲ **Important:** Wear gloves and a mask to handle any samples that you suspect may contain contaminated grain.

Representative portion for analysis

Minimum—working sample	Optimum—working sample	Export—working sample
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If a sample is suspected of being coated with a pesticide, desiccant, inoculant or if the sample contains evidence of any foreign chemical substance other than fertilizer pellets, the sample shall be graded *Oats, Held IP Suspect Contaminated Grain*.

Note: Canadian Grain Commission personnel should refer to ISO national work instruction “*Suspect Contaminated Grain, Handling Procedures*” for specific procedures to be followed when handling samples suspected of containing treated seed or other chemical substances

Varieties (VAR)

Oats are graded without reference to variety. However, for samples containing 95% or more of a hullless variety, *Hullless* forms part of the grade name, and tolerances for *Hulled and hullless* are disregarded.

Wheat (WHT)

There is a separate tolerance for wheat in oats.

Representative portion for analysis

Minimum—25 g	Optimum—100 g	Export—100 g
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Wild oats (WO)

Wild oats is an annual grassy weed. The seeds vary in colour from white to black. They are normally more slender than domestic oats, and have a slanting, circular depressed scar, sometimes called a sucker mouth, at the base, and a bent twisted awn.

Representative portion for analysis

Minimum—50 g	Optimum—100 g	Export—500 g
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Primary grade determinants tables

Oats, Canada Western (CW)

Grade name	Standard of quality		Hulled and hullless %	Damage				
	Minimum test weight kg/hl (g/0.5 L)	Degree of soundness		Fireburnt %	Frost %	Fusarium %	Heated %	Total %
No. 1 CW	56 (260)	Good colour, 98% sound groats	6	Nil	0.1	0.1	Nil	2
No. 2 CW	53 (245)	Good colour, 96% sound groats	8	Nil	4	2.0	0.1	4
No. 3 CW	51 (235)	Fair colour, 94% sound groats	20	Nil	6	4	0.5	6
No. 4 CW	48 (220)	92% sound groats	No limit—If sample contains 95% or more of hullless varieties, hullless becomes part of the grade name	<u>0.25</u>	No limit. Not included in total damage assessment	6	1	8
Grade, if No.4 specs not met	<i>Oats, Sample CW Account Light Weight</i>	<i>Oats, Sample CW Account Damage and Foreign Material</i>		<i>Oats, Sample CW Account Fireburnt</i>		<i>Oats, Sample CW Account Fusarium Damaged</i>	<i>Oats, Sample CW Account Heated</i>	<i>Oats, Sample CW Account Damage</i>

Oats, Canada Western (CW), continued

Grade name	Foreign material									Total damage and foreign material %
	Barley %	Cereal grains other than wheat or barley %	Ergot %	Excreta %	Large seeds %	Sclerotinia %	Stones %	Wheat %	Wild oats %	
No. 1 CW	<u>0.75</u>	1	Nil	1 piece in 1000 g or less	0.2	Nil	<u>0.017</u>	<u>0.75</u>	1	2
No. 2 CW	<u>1.5</u>	2	<u>0.025</u>	0.01	0.3	0.05	<u>0.066</u>	<u>1.5</u>	2	4
No. 3 CW	3	3	<u>0.025</u>	0.02	0.5	0.05	<u>0.15</u>	3	3	6
No. 4 CW	8	8	0.05	0.02	1	0.1	<u>0.15</u>	8	8	8
Grade, if No.4 specs not met	See <i>Mixed grain</i>	See <i>Mixed grain</i>	<i>Oats, Sample CW Account Ergot</i>	<i>Oats, Sample CW Account Excreta</i>	<i>Oats, Sample CW Account Admixture</i>	<i>Oats, Sample CW Account Admixture</i>	2.5% or less – <i>Oats, Rejected (grade) Account Stones</i> Over 2.5% – <i>Oats, Sample Salvage</i>	See <i>Mixed grain</i>	50% or less – see <i>Mixed grain</i> Over 50% – <i>Mixed Feed Oats</i>	<i>Oats, Sample CW Account Damage and Foreign Material</i>

Oats, Canada Eastern (CE)

Grade name	Standard of quality		Hulled and hulless %	Damage			
	Minimum test weight kg/hl (g/0.5 L)	Degree of soundness		Fireburnt %	Fusarium %	Heated %	Total %
No. 1 CE	51 (235)	Well matured, good natural colour, 97% sound groats	6	Nil	0.1	Nil	0.1
No. 2 CE	49 (225)	Reasonably well matured, reasonably good natural colour, 96% sound groats	8	Nil	2.0	0.1	2
No. 3 CE	46 (210)	Fairly well matured, fair colour, 94% sound groats	20	Nil	4	1.0	4
No. 4 CE	43 (195)	86% sound groats	No limit—If sample contains 95% or more of hulless varieties, hulless becomes part of the grade name	<u>0.25</u>	6	3	6
Grade, if No.4 specs not met	<i>Oats, Sample CE Account Light Weight</i>	<i>Oats, Sample CE Account Damage and Foreign Material</i>		<i>Oats, Sample CE Account Fireburnt</i>	<i>Oats, Sample CE Account Fusarium Damaged</i>	<i>Oats, Sample CE Account Heated</i>	<i>Oats, Sample CE Account Damage</i>

Oats, Canada Eastern (CE), continued

Grade name	Foreign material									Total damage and foreign material %
	Barley %	Cereal grains other than wheat or barley %	Ergot %	Excreta %	Large seeds %	Sclerotinia %	Stones %	Wheat %	Wild oats %	
No. 1 CE	1	3	Nil	1 piece in 1000 g or less	0.2	Nil	<u>0.017</u>	1	1	3
No. 2 CE	2	4	0.05	0.01	0.3	0.05	<u>0.066</u>	2	2	4
No. 3 CE	6	6	0.05	0.02	0.5	0.05	<u>0.15</u>	6	3	6
No. 4 CE	14	14	0.1	0.02	1	0.1	<u>0.15</u>	14	8	14
Grade, if No.4 specs not met	See <i>Mixed grain</i>	See <i>Mixed grain</i>	<i>Oats, Sample CE Account Ergot</i>	<i>Oats, Sample CE Account Excreta</i>	<i>Oats, Sample CE Account Admixture</i>	<i>Oats, Sample CE Account Admixture</i>	2.5% or less– <i>Oats, Sample CE Account Stones</i> Over 2.5%– <i>Oats, Sample Salvage</i>	See <i>Mixed grain</i>	50% or less– see <i>Mixed grain</i> Over 50% – <i>Mixed Feed Oats</i>	<i>Oats, Sample CE Account Damage and Foreign Material</i>

Export shipments

Export shipments can be commercially clean or not commercially clean.

Commercially clean

Shipments are defined as commercially clean when meeting the commercially clean specifications listed in the export grade determinant table upon following the *Determination of commercially clean* procedures described in this chapter.

No dockage is reported for samples representing commercially clean oats.

Not commercially clean (NCC)

Shipments that do not meet the standards for commercial cleanliness are referred to as not commercially clean. Such shipments are permitted only with the permission of the CGC.

For samples representing not commercially clean shipments approved by the CGC for shipment from terminal and transfer elevators, dockage is reported to the nearest

- 0.1% for samples representing commercially clean shipments loaded from a single terminal or transfer elevator
- 0.01% for composite samples representing shipments loaded from more than one terminal or transfer elevator

less a deduction of up to 0.2% to take into account the buildup of attritional material.

Grading

Western oats on export are graded using export specifications. All other oats are exported using primary specifications.

Export grade determinants tables

Oats, Canada Western (CW)

Grade name	(1)	(2)	(3)	(4)
	Total material through No. 4.5 round hole sieve %	Small seeds %	Large seeds through No. 5 buckwheat sieve %	(1) + (3) Total removable material %
No. 1 CW	0.2	0.10	0.2	0.2
No. 2 CW	0.2	0.10	0.2	0.2
No. 3 CW	0.2	0.10	0.2	0.2
No. 4 CW	0.2	0.10	0.2	0.2

Grade name	Damage and foreign material												
	Damage			Barley %	Cereal grains other than wheat or barley %	Ergot %	Large seeds %	Mineral matter		Sclerotinia %	Wheat %	Wild oats %	Total damage and foreign material %
	Frost %	Heated %	Total damage %					Stones %	Total %				
No. 1 CW	0.1	Nil	2	<u>0.75</u>	1	Nil	0.2	<u>0.017</u>	<u>0.033</u>	Nil	<u>0.75</u>	1	2
No. 2 CW	4	0.1	4	<u>1.5</u>	2	<u>0.025</u>	0.3	<u>0.066</u>	<u>0.066</u>	<u>0.025</u>	<u>1.5</u>	2	4
No. 3 CW	6	0.5	6	3	3	<u>0.025</u>	0.5	<u>0.15</u>	<u>0.25</u>	<u>0.025</u>	3	3	6
No. 4 CW	No limit	1	8 excluding frost	8	8	0.05	1	<u>0.15</u>	<u>0.25</u>	<u>0.25</u>	8	8	8 excluding frost

The area inside dashed lines refers to factors which are assessed in determining commercial cleanliness.