7. Oats

Determination of commercially clean

Dockage is not assessed on oat samples that meet the commercially clean specifications defined in the commercially clean determination table. The table is found in the Export shipments section of this chapter. 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 shall be at least 1 kg.
   - Unofficial samples shall be at least 1 kg.
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 commercially clean determination 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 commercially clean determination 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 commercially clean determination 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 commercially clean determination 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 commercially clean determination table the sample will be considered to be not commercially 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 the cleaning assessment has been completed.

Dockage not reported

▲ **Important:** Dockage is not reported for

- Oats, Sample CW/CE, Account Fireburnt
- Oats, Sample Salvage
- Oats, Sample Condemned
- Unofficial samples declared as processed

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 shall be at least 1 kg.
   - Unofficial samples shall be at least 1 kg.
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
- Soft earth pellets, up to a maximum of 10% of the gross weight of the sample, handpicked from the clean sample
- Material removed by *Cleaning for grade improvement*

Cleaning for grade improvement

If the grade of a sample can be improved by additional cleaning, perform the cleaning and add the additional material to dockage. Cleaning for grade improvement can be done any time after the cleaning assessment has been completed, including on export.

1. After the cleaning assessment has been completed, 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	Large seeds are • 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 Assess material as dockage, provided the grade is improved and not more than 5.0% of oats are removed.
Covered smut and false loose smut	Carter dockage tester, set up for Normal cleaning procedures, but with air control set to 7 **Note:** The material originally removed by aspiration is to be reconstituted back into the sample prior to cleaning for improvement.	If the percentage by weight of material removed is • 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 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.

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 Canada Western
   4.0% Domestic Mustard Seed, No. 1 Canada 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.

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 section 1 of the Canada Grain Regulations as “any pesticide, desiccant or inoculant”.

Rounding rules

Rounding rules are outlined in schedule 3 of the Canada Grain Regulations. When official inspection results are expressed numerically, they should be expressed to the same decimal precision as the applicable tolerance in the primary and export grade determination tables.

Non-registered varieties

Where grain of any kind is not a registered variety under the Seeds Act, no person shall, except with the permission of the Canadian Grain Commission, assign a statutory grade to that grain which is higher than the lowest grade established by regulation for that kind of grain.

Processed sample

An unofficial sample of grain declared to be conditioned or cleaned to meet end user specifications, and whereas, the determination of dockage and/or determination of commercially clean are not performed or reported.

Standard prints

Standard prints are grain photographs prepared by the Canadian Grain Commission that are used for the assessment of visual grading factors as defined in the *Standard of quality*. See Chapter 29 of this guide, Active Grain Standards List

Representative portion for grading

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

The optimum representative portion is the representative sample size within the minimum and maximum range used to obtain the most accurate result when assessing an objective factor. It is determined by taking into consideration the tolerance and concentration of the objective factor being assessed.

Recommended portion of oats for grading (in grams)

Grading factor	Sample portion size range	
	Minimum	Maximum
Barley	25 g	100 g
Cereal grains other than barley and wheat	25 g	100 g
Covered smut and false loose smut	working sample	working sample
Damage	10 g	50 g
Ergot	500 g	working sample
Excreta	working sample	working sample
Fertilizer pellets	working sample	working sample
Fireburnt	500 g	working sample
Frost damage	5 g	25 g
Fusarium damage	25 g	100 g
Green	10 g	50 g
Heated	25 g	100 g
Hulled	25 g	100 g
Large seeds	50 g	250 g
Mildew	25 g	50 g
Odour	working sample	working sample
Rotted	25 g	working sample
Sclerotinia sclerotiorum	500 g	working sample
Soft earth pellets	working sample	working sample
Stones	working sample	working sample
Thins	250 g	250 g
Treated Seed	working sample	working sample
Wheat	25 g	100 g
Wild oats	25 g	100 g

Grading factors

Images available on web version

Adhered hulls (ADHULLS)

Adhered hulls are kernels of hulless varieties with hulls that have not been removed during harvesting.

Barley (BLY)

There is a separate tolerance for barley in oats.

Cereal grains other than barley and wheat

Cereal grains other than barley and wheat refers to rye and triticale.
For grading purposes, spelt and Kamut® are considered as *Other cereal grains* in samples of oats.

Colour (CLR)

Colour is a component of the degree of soundness, and evaluated using the standard prints for oats**.**

Contaminated grain

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

Grain is contaminated for the purposes of the *Canada Grain Act* if the grain contains any substance in sufficient quantity that the grain is either

(a) adulterated for the purposes of the *Food and Drugs Act*; or

(b) contaminated within the meaning of the regulations made under section 51 of the *Safe Foods for Canadians Act*.

Procedures

If a sample is suspected of being contaminated, the sample should be submitted to the Canadian Grain Commission. Determination as to whether grain is contaminated will be made by the Grain Research Laboratory in consultation with the Chief Grain Inspector for Canada. Samples deemed to be contaminated 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

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

Damage (DMG)

Kernels are damaged if the groats are fireburnt, heated, frost-damaged, insect damaged, sprouted, mildewed, green, 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 discolouration on 50% or more of the groat or the discolouration penetrates into the groat.

Frost damage is not included in the 4CW/CE total damage, and total damage and foreign material tolerances.

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.

Excreta (EXCR)

Excrement from any animal including mammals, birds and insects.

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

Extraneous material

Can be defined as glass, metal, wood, plastic or any other material not already defined in the Official Grain Grading Guide.

Fertilizer pellets (FERT PLTS)

Fertilizer pellets are a manufactured plant nutrient product used by producers in the production of grain. They are typically small, round or irregular shaped and usually white, grey, brown, pink or reddish in colour.

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.*

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.

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/CE.

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.

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.

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.

Rotted kernels are included in the tolerance for *Heated*

.

Heated seeds of other grains are included in the tolerance for *Heated.*

Procedures

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

If the discolouration affects . . .	The kernel is considered . . .
The entire groat	Heated
Less than the entire groat	Damaged

Hulled and hulless (HULL)

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

Groats are the oat kernels without the hulls.

If oats contain 75% or more of hulless oats,

- Grade the sample according to the primary and export grade specifications except for the tolerances for hulled and hulless kernels.
- Add *hulless* to the grade name, for example, *Oats, No. 1 CW/CE Hulless*.
- When determining moisture content, use the hulless oats conversion table.

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

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.

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

Mineral matter (MIN MAT)

Mineral matter refers to stones, earth pellets, fertilizer and screening pellets that may be found in samples of grain.

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

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	*Oats, Sample CW/CE, Account Odour*
A distinct heated odour	*Oats, Sample CW/CE, Account Heated*
A distinct fireburnt odour	*Oats, Sample CW/CE, Account Fireburnt*

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 heated.
See *Heated*.

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 course surface texture, vary in exterior color from dark black to gray to white and have a pure white interior.

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

Procedures

1. Handpick soft earth pellets from a representative portion of the cleaned sample.
2. Soft earth pellets constituting 10% 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*.

Stones (STNS)

Stones are hard shale, coal, hard earth pellets, and any other nontoxic 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.)

Procedures

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

- Samples of grain grown in western Canada 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 determination tables) that would have been assigned to the sample if it contained no stones.
- Samples of grain grown in eastern Canada 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.*
- Samples of western and eastern Canadian grain containing more than 2.5% stones are graded *Oats, Sample Salvage.*

Examples: Western Canada

Excerpt from grade determination tables for
Oats, Canada Western

Grade name	Stones %
No. 1 CW	0.02
No. 2 CW	0.07
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	*Oats, Rejected No. 1 CW Account Stones*
1.0% stones	*Oats, Rejected No. 1 CW Account Stones*
3.0% stones	*Oats, Sample Salvage*

Examples: Eastern Canada

Excerpt from grade determination tables for
Oats, Canada Eastern

Grade name	Stones
No. 1 CE	0.02
No. 2 CE	0.07
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	*Oats, No. 2 CE*
1.0% stones	*Oats, Sample CE Account Stones*
3.0% stones	*Oats, Sample Salvage*

Test weight (TWT)

Test weight is the weight of a known volume of grain expressed in kilograms per hectolitre. For procedures, see Chapter 1 of this guide, *Test weight*.

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/CE Oats. When assigning a grade, choose the most appropriate grade as indicated in the table below.

If any one of, or the total of *Barley or Cereal grains other than wheat and barley* or *Wheat* or *Wild* oats is...	**and *Total damage* is . . .**	**Then the grade is . . .**
Greater than the 4 CW/CE tolerance	Equal to or less than the 4 CW/CE tolerance	See procedures for Mixed grain
Equal to or less than the 4CW/CE tolerance	Greater than the 4 CW/CE tolerance	Oats, Sample CW/CE, Account Damage
Individually, each is less than the 4 CW/CE tolerance, but together they are greater than the 4 CW/CE 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 adulterated with an agricultural chemical for agronomic purposes. The types of agricultural chemicals used to treat seed include pesticides, fungicides and inoculants. 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 standard for pesticide and fungicide seed treatments for cereal (including corn) is red or pink. The colour standard for pesticide and fungicide seed treatments for canola is blue; however, green has also been used. Pulse crop (including soybeans) pesticide and fungicide seed treatments are typically blue or green. The coatings or stains may appear greasy or powdery and the surface area covered may range 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.

Procedures

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*.

Variety (VAR)

Oats are graded without reference to variety. However, for samples containing 75% or more of hulless oats, *Hulless* forms part of the grade name, and tolerances for *Hulled and hulless* are disregarded.

Wheat (WHT)

There is a separate tolerance for wheat in oats.

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.

Special analyses

Upon request, samples may be analyzed for other factors. The shipper of the oats indicates which factors are to be analyzed and which sieves to use.

Thins

The process for determining thin kernels is called sizing. Thin kernels are kernels that pass through the No. 5 slotted sieve or the sieve specified by the shipper.

Procedures

1. Using a Boerner-type divider, divide a representative portion of not less than 250 grams from the cleaned sample.
2. Set the Carter dockage tester as follows:

Feed control	# 5
Air control	Off
Riddle	None
Top sieve	None
Centre sieve	No. 5 slotted or as specified by the shipper
Bottom sieve	Blank tray
Sieve cleaner control	Off

3. Pass the representative portion through the Carter dockage tester once.
4. When most of the sample has passed over the sieves, turn on the sieve cleaner control for five kicks of the machine to loosen lodged kernels.

   ▲ **Important:** Do not rap sieves in the machine to loosen lodged kernels.
5. Remove each sieve carefully from the machine.
6. Remove lodged kernels from each sieve. Add them to the oats that passed over the sieve.
7. Weigh the kernels that passed through the sieve to determine the percentage of thins.

Primary and export grade determination tables

Oats, Canada Western (CW), standard of quality

Grading factor	No. 1 CW	No. 2 CW	No. 3 CW	No. 4 CW	Grade, if No. 4 specs not met
Degree of soundness	Good colour, 98% sound groats	Good colour, 96% sound groats	Fair colour, 94% sound groats	Poor colour, 92% sound groats	*Oats, Sample CW Account Damage and Foreign Material*
Minimum test weight kg/hL (g/0.5 L)	56 (260)	53 (245)	51 (235)	48 (220)	*Oats, Sample CW Account Light Weight*
Variety	Any variety of oats registered under the *Seeds Act*	Any variety of oats registered under the *Seeds Act*	Any variety of oats registered under the *Seeds Act*	Any variety of oats	
Hulled and Hulless* %	6	8	20	No limit—If sample contains 75% or more of hulless oats, grade as hulless oats	

Note: Samples of Oats, CW will be graded no lower than No. 4 CW account colour
*Hulled and hulless does not apply to Hulless oats. See *Hulled and hulless* definition. Hulless forms part of the grade name, *Oats, 1 CW, Hulless*. Adhered hulls are not a grading factor in Hulless oats.

Oats, Canada Western (CW), damage

Grading factor	No. 1 CW	No. 2 CW	No. 3 CW	No. 4 CW	Grade, if No. 4 specs not met
Fireburnt %	0.0	0.0	0.0	0.2	*Oats, Sample CW Account Fireburnt*
Frost %	0.1	4.0	6.0	No limit. Not included in total damage assessment	
Fusarium %	0.1	2.0	4.0	6.0	*Oats, Sample CW Account Fusarium Damaged*
Heated / Rotted %	0.0	0.1	0.5	1.0	*Oats, Sample CW Account Heated*
Total % Damage	2	4	6	8 excluding frost	*Oats, Sample CW Account Damage*

Oats, Canada Western (CW), foreign material

Grading factor	No. 1 CW	No. 2 CW	No. 3 CW	No. 4 CW	Grade, if No. 4 specs not met
Barley %	0.8	1.5	3.0	8.0	See *Mixed grain*
Cereal grains other than wheat or barley %	1	2	3	8	See *Mixed grain*
Wheat %	0.8	1.5	3.0	8.0	See *Mixed grain*
Wild oats %	1	2	3	8	50% or less - see *Mixed grain* Over 50% - *Mixed Feed Oats*
Total % Other cereal grains and wild oats	2	4	6	8	See *Mixed grain*
Large seeds %	0.2	0.3	0.5	1.0	*Oats, Sample CW Account Admixture*
Sclerotinia %	0.00	0.05	0.05	0.10	*Oats, Sample CW Account Admixture*
Stones %	0.02	0.07	0.15	0.15	2.5% or less - *Oats, Rejected (grade) Account Stones* Over 2.5% – *Oats, Sample Salvage*
Total % Mineral matter including stones	0.03	0.07	0.25	0.25	2.5% or less - *Oats, Rejected (grade) Account Stones* Over 2.5% - *Oats, Sample Salvage*
Ergot %	0.00	0.03	0.03	0.05	*Oats, Sample CW Account Ergot*
Excreta %	0.01	0.01	0.02	0.02	*Oats, Sample CW Account Excreta*
Total % Damage and foreign material	2	4	6	8 excluding frost	*Oats, Sample CW Account Damage and Foreign Material*

Oats, Canada Eastern (CE), standard of quality

Grading factor	No. 1 CE	No. 2 CE	No. 3 CE	No. 4 CE	Grade, if No. 4 specs not met
Degree of soundness	Good colour, 98% sound groats	Good colour, 96% sound groats	Fair colour, 94% sound groats	Poor colour, 92% sound groats	*Oats, Sample CE Account Damage and Foreign Material*
Minimum test weight kg/hL (g/0.5 L)	51 (235)	49 (225)	46 (210)	43 (195)	*Oats, Sample CE Account Light Weight*
Variety	Any variety of oats registered under the *Seeds Act*	Any variety of oats registered under the *Seeds Act*	Any variety of oats registered under the *Seeds Act*	Any variety of oats	
Hulled and Hulless* %	6	8	20	No limit—If sample contains 75% or more of hulless oats, grade as hulless oats	

Note: Samples of Oats, CE will be graded no lower than No. 4 CE account colour
*Hulled and hulless does not apply to Hulless oats. See *Hulled and hulless* definition. Hulless forms part of the grade name, *Oats, 1 CE, Hulless*. Adhered hulls are not a grading factor in Hulless oats.

Oats, Canada Eastern (CE), damage

Grading factor	No. 1 CE	No. 2 CE	No. 3 CE	No. 4 CE	Grade, if No. 4 specs not met
Fireburnt %	0.0	0.0	0.0	0.2	*Oats, Sample CE Account Fireburnt*
Frost %	0.1	4.0	6.0	No limit. Not included in total damage assessment	
Fusarium %	0.1	2.0	4.0	6.0	*Oats, Sample CE Account Fusarium Damaged*
Heated / Rotted %	0.0	0.1	0.5	1.0	*Oats, Sample CE Account Heated*
Total % Damage	2	4	6	8 excluding frost	*Oats, Sample CE Account Damage*

Oats, Canada Eastern (CE), foreign material

Grading factor	No. 1 CE	No. 2 CE	No. 3 CE	No. 4 CE	Grade, if No. 4 specs not met
Barley %	0.8	1.5	3.0	8.0	See *Mixed grain*
Cereal grains other than wheat or barley %	1	2	3	8	See *Mixed grain*
Wheat %	0.8	1.5	3.0	8.0	See *Mixed grain*
Wild oats %	1	2	3	8	50% or less - see *Mixed grain* Over 50% - *Mixed Feed Oats*
Total % Other cereal grains and wild oats	2	4	6	8	See *Mixed grain*
Large seeds %	0.2	0.3	0.5	1.0	*Oats, Sample CE Account Admixture*
Sclerotinia %	0.00	0.05	0.05	0.10	*Oats, Sample CE Account Admixture*
Stones %	0.02	0.07	0.15	0.15	2.5% or less - *Oats, Sample CE Account Stones* Over 2.5% - *Oats, Sample Salvage*
Total % Mineral matter including stones	0.03	0.07	0.25	0.25	2.5% or less - *Oats, Sample CE Account Stones* Over 2.5% - *Oats, Sample Salvage*
Ergot %	0.00	0.05	0.05	0.10	Oats, Sample CE Account Ergot
Excreta %	0.01	0.01	0.02	0.02	*Oats, Sample CE Account Excreta*
Total % Damage and foreign material	2	4	6	8 excluding frost	*Oats, Sample CE Account Damage and Foreign Material*

Export shipments

Export shipments can be commercially clean or not commercially clean.

Commercially clean (CCLN)

Export shipments are defined as commercially clean when meeting the commercially clean specifications listed in the table below upon following the *Determination of commercially clean* procedures described in this chapter.

No dockage is reported for samples representing commercially clean oats.

Commercially clean determination table, oats

Grade name	(1) Total material through No. 4.5 round hole sieve %	(2) Small seeds %	(3) Large seeds through No. 5 buckwheat sieve %	(4) (1) + (3) Total removable material %
No. 1 CW	0.2	0.1	0.2	0.2
No. 2 CW	0.2	0.1	0.2	0.2
No. 3 CW	0.2	0.1	0.2	0.2
No. 4 CW	0.2	0.1	0.2	0.2

Not commercially clean (NCC)

Export 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 elevators, dockage is reported to the nearest 0.1%.

A deduction of up to 0.2% is applied to take into account the buildup of attritional material for direct exports only.

Grading

Oats on export are graded using the primary and export grade determination tables.