

4. Wheat

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Classes and varieties

Classes

Canadian wheat varieties are grouped into classes by their functional characteristics. Canadian wheat classes are categorized as [western Canadian](#) or [eastern Canadian](#) by the regions in which the varieties are grown.

Canada Eastern Other Wheat

The selection of CEOW wheat varieties is the responsibility of the receiving elevator. Each individual company has their own selection criteria and specifications. All CEOW selected will be graded according to the specifications listed in the Wheat CE Other Wheat primary grade determination table.

In eastern Canada, varieties of wheat that are neither assigned to a class for the region, nor selected as CEOW are eligible for the class Canada Eastern Feed (CEFD).

Western class name	Variety (from the Regulations)
Canada Western Red Spring	Any variety of the class CWRS designated as such by order of the Canadian Grain Commission
Canada Western Hard White Spring	Any variety of the class CWHWS designated as such by order of the Canadian Grain Commission
Canada Western Amber Durum	Any variety of the class CWAD designated as such by order of the Canadian Grain Commission
Canada Western Red Winter	Any variety of the class CWRW designated as such by order of the Canadian Grain Commission
Canada Western Soft White Spring	Any variety of the class CWSWS designated as such by order of the Canadian Grain Commission
Canada Western Extra Strong	Any variety of the class CWES designated as such by order of the Canadian Grain Commission
Canada Prairie Spring White	Any variety of the class CPSW designated as such by order of the Canadian Grain Commission
Canada Prairie Spring Red	Any variety of the class CPSR designated as such by order of the Canadian Grain Commission
Canada Northern Hard Red	Any variety of the class CNHR designated as such by order of the Canadian Grain Commission
Canada Western Special Purpose	Any variety of the class CWSP designated as such by order of the Canadian Grain Commission

Eastern class name	Variety (from the Regulations)
Canada Eastern Red Spring	Any variety of the class CERS designated as such by order of the Canadian Grain Commission
Canada Eastern Hard Red Winter	Any variety of the class CEHRW designated as such by order of the Canadian Grain Commission
Canada Eastern Soft Red Winter	Any variety of the class CESRW designated as such by order of the Canadian Grain Commission
Canada Eastern Amber Durum	Any variety of the class CEAD designated as such by order of the Canadian Grain Commission
Canada Eastern White Winter	Any variety of the class CEWW designated as such by order of the Canadian Grain Commission
Canada Eastern Other Wheat	Any variety of the class CEOW designated as such by order of the Canadian Grain Commission The selection of CEOW wheat varieties is the responsibility of the receiving elevator. Each individual company has their own selection criteria and specifications. All CEOW selected will be graded according to the specifications listed in the Wheat CE Other Wheat primary grade determination table.
Canada Eastern Feed	Any class or variety of wheat excluding amber durum

Note: Refer to the primary and export grade determination tables for information specific to each grade.

Determination of commercially clean

Dockage is not assessed on wheat samples that meet the commercially clean specifications defined in the wheat commercially clean determination table. All samples must be analyzed to determine if they meet commercial cleanliness standards 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 the procedure defined under **Determination of dockage**. Where there is any doubt regarding whether the sample is commercially clean, the sample must be analyzed using the procedure outlined below in steps 1 through 14 to confirm that the sample is not commercially clean prior to assessing 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 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 broken wheat passing through the No. 5 buckwheat hand sieve or the No. 4.5 round hole hand sieve is weighed and the percentage calculated to determine if it meets the commercially clean specification of the grade for broken through a No. 5 buckwheat sieve.
5. Small seeds passing through 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.
6. Material other than whole or broken grain and small seeds passing through the 4.5 round hole sieve is weighed and the percentage calculated to determine if it meets the commercially clean specification of the grade for attrition.
7. The sample portions remaining on top of the No. 5 buckwheat sieve and the 4.5 round hole sieve are recombined and divided using a Boerner-type divider to a representative portion of not less than 250 grams.
8. The portion divided from step 7 is handpicked to remove large seeds (as defined in the **Glossary**), roughage and wild oats.
9. The roughage material is weighed and the percentage calculated to determine if it meets the commercially clean specification of the grade for roughage.

Note: If the roughage material contains unthreshed wheat heads, the heads are squeezed to remove the kernels of wheat prior to weighing. The wheat kernel is not included when assessing the concentration of roughage for commercial cleanliness. However, care should be taken to keep these wheat kernels separate. If it is determined that the sample is not commercially clean (NCC), kernels squeezed from the unthreshed heads will be included in the dockage.

10. The percentages of small seeds, attrition and roughage are added together to determine if the total meets the commercially clean specification of the grade for total small seeds, attrition and roughage.
11. The large seeds are weighed and the percentage calculated to determine if they meet the commercially clean specification of the grade for large seeds.
12. The wild oats are weighed and the percentage concentration calculated to determine if they meet the commercially clean specification of the grade for wild oats.
13. The percentages of small seeds, large seeds, and wild oats are added together to determine if the total meets the commercially clean specification of the grade for total small seeds, large seeds and wild oats.
14. The percentages of small seeds, large seeds, wild oats, roughage and broken grain through the No. 5 buckwheat sieve are added together to determine if the total meets the commercially clean specification of the grade.

Should the percentage concentration of any of the factors determined in steps 1 through 14 exceed the specifications set out in the wheat 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 using the procedure defined in **Determination of dockage** with the following exception. The exception relates to those samples which are determined, by hand sieving, to be NCC because of the concentration of attritional material either alone or as a component of total small seeds, attrition and roughage.

The attritional material from these samples will not be reconstituted back into the sample but will be added to the dockage removed by the Carter dockage tester. This procedure will ensure that attritional material that causes a sample to be designated NCC is not expelled by the fan of the Carter dockage tester and is retained in the sample in the event of a reinspection request.

Note: Large seeds, small seeds, roughage and attrition are defined in the **Glossary**.

Export ready (ER)

Export ready refers to carlots which meet the following criteria:

1. The lot must meet the commercially clean specifications for the grade
2. Wheat of other classes (WOOC) and contrasting classes (CON CL) must meet the export specifications for the grade
3. Total foreign material (TFM) must meet the export specification for the grade.

Not ready for export (NRE)

Not export ready refers to carlots which are commercially clean but do not meet the export specifications for either wheats of other classes (WOOC), contrasting classes (CON CL) or total foreign material (TFM).

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 procedure 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 the **Normal cleaning procedure**, using the Carter dockage tester.
2. Follow the procedure 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
- Wheat, Sample CW/CE/CAN Account Fireburnt
 - Wheat, Sample Salvage
 - Wheat, Sample Condemned
 - Unofficial samples declared as processed

For ‘Wheat, Sample CW/CE/CAN Account Admixture’, dockage is not reported for removable material similar in nature to the admixture.

Normal cleaning procedure

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

1. Set up the Carter dockage tester with the following specifications.

Feed control	# 6
Air control	Minimum # 4 (increase according to the nature of the material)
Riddle	No. 25
Top sieve	No. 6 buckwheat
Centre sieve	No. 5 buckwheat
Bottom sieve	No. 5 buckwheat
Sieve cleaner	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 2 to 3 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.
8. Remove the aspiration pan.
9. Handpick whole sound threshed kernels of wheat from the portion passing over the riddle and return them to the cleaned sample.

Learn more about operating a Carter dockage tester in our video on assessing dockage in wheat.

Composition of dockage

Dockage includes

- Wheat with long sprouts, unthreshed wheat heads, and material other than wheat removed by the No. 25 riddle
- Material removed by the No. 5 buckwheat sieve in the lower position
- Material removed by aspiration
- Soft earth pellets (SEP), 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 at any time after the cleaning assessment has been completed, including on export.

The purpose of this cleaning is not to remove all foreign material, but rather to reduce the admixture of conspicuous separable material to within the grade tolerance.

1. After the cleaning assessment has been completed, examine the material to be removed and select your equipment according to that material. See the table, **Cleaning for grade improvement—Wheat**, for the list of equipment.
2. Pass the sample through the Carter dockage tester, or sieve the sample by hand, depending on the material.
 - ▲ **Important:** When using a hand sieve, move the sieve from left to right 30 times, in a steady 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.
3. Weigh the additional dockage and add it to the original dockage

Cleaning for grade improvement—Wheat

Material to be removed	Equipment	Composition of dockage
Broken kernels	No. 6 buckwheat hand sieve No. 10x10 wire hand sieve	If the weight of broken kernels in the cleaned sample is over the grade tolerance, you can remove up to 5.0% of the gross weight in broken kernels to improve the grade. For example, if a sample of CWRS contains 12% broken kernels by gross weight, you can remove enough broken kernels to bring the percentage to 7%, which brings the sample within the grade tolerance for No. 3 CWRS. Add the maximum 5% broken kernels to dockage. See Shrunken and broken (SHR, BKN).
Bunt balls	Carter dockage tester, using the setup for the Normal cleaning procedure , but with air control at a maximum setting of 7	If there is no odour, remove bunt balls and add to dockage. If there is an odour, bunt is a grading factor. See Common bunt (SMUT).
All foreign material (other than stones and wild oats)	No. 6 buckwheat hand sieve No. 10x10 wire hand sieve	Add material to dockage, if the grade is improved as a result.
Stones	No. 6 buckwheat hand sieve	If the weight of stones and other material removed is • 5.0% or less of the gross weight, assess as dockage. • More than 5.0% of the gross weight, see Stones (STNS) in grading factors, or the relevant grade determination table.
Wild oats	Carter dockage tester, using the setup for the Normal cleaning procedure , but with No. 1 riddle No. 10x10 wire hand sieve	Everything removed is dockage.

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.

Procedure

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 wheat.
 - 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% Wheat, No. 1 Canada Western Red Spring

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 cleaned sample, or the net weight.

Hazardous substances in sample

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".

Non-registered varieties

A registered variety refers to varieties of crop kinds that have been granted variety registration in Canada. Crop kinds subject to variety registration in Canada are listed in Schedule III of the *Seeds Regulations*. Not all crops are subject to registration. The Canadian Food Inspection Agency (CFIA) is responsible for the registration of varieties in Canada. Consult the CFIA's [database of varieties registered in Canada](#) online to determine if a given variety is registered in Canada.

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.

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 or export grade determination tables.

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.

Standards

Standards are prepared by the Canadian Grain Commission and 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 and Guides List**.

See **Frost (FR)** and **Mildew (MIL)** definitions in this chapter for applicable standards for each class.

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.

Representative portion of wheat for grading (in grams)

Grading factor	Sample portion size range	
	Minimum	Maximum
Artificial stain	250 g	working sample
Binburnt kernels	250 g	working sample
Blackpoint	25 g	50 g
Common bunt	50 g	100 g
Contrasting classes	50 g	100 g
Darkened kernels	50 g	100 g
Dark immature kernels	50 g	100 g
Degermed kernels	25 g	50 g
Ergot	500 g	working sample
Excreta	working sample	working sample

Representative portion of wheat for grading (in grams) (cont'd)

Grading factor	Sample portion size range	
	Minimum	Maximum
Fertilizer pellets	working sample	working sample
Fireburnt	working sample	working sample
Foreign material	50 g	250 g
Fusarium damage	10 g	100 g
Grass green kernels	50 g	250 g
Hard vitreous kernels, sieving	250 g	250 g
Hard vitreous kernels, handpick	10 g	25 g
Heated	25 g	250 g
Insect damage	50 g	100 g
Matter other than cereal grains	50 g	250 g
Mouldy	100 g	working sample
Natural stain	50 g	100 g
Odour	working sample	working sample
Other cereal grains	50 g	250 g
Other cereal grains and other matter	50 g	250 g
Penetrated smudge	50 g	250 g
Pink kernels	50 g	250 g
Rotted	100 g	working sample
Sawfly, midge damage	10 g	50 g
Sclerotinia	500 g	working sample
Severe midge damage	50 g	100 g
Severely mildewed	100 g	working sample
Severely sprouted	50 g	100 g
Shrunken and broken	250 g	250 g
Smudge	50 g	100 g
Soft earth pellets	working sample	working sample
Sprouted kernels	10 g	100 g
Stones	working sample	working sample
Total damage	25 g	100 g
Treated seed	working sample	working sample
Wheats of other classes or varieties	15 g	50 g

Grading factors

 Images available on web version

Artificial Stain (ART STND)

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

Artificial stain

- Includes any nontoxic stain on kernels caused by contact with foreign substances such as dye, oil, grease, paint, or soot
 - Does not include any stain considered a natural stain (NSTN).
 - Does not include any stain caused by coming into contact with poisonous substances, or any stain that could be considered contaminated grain (CONTAM GRN).
- ▲ **Important:** If you are uncertain about the identity of the stain, treat the sample as contaminated grain (CONTAM GRN).

Binburnt kernels (BBT)

Binburnt kernels are blackened as a result of severe heating in storage. A cross section of a binburnt kernel maintains its dense structure and appears smooth and glossy. A binburnt kernel is similar in weight to sound kernel.

There is a single tolerance for total binburnt, severely mildewed, mouldy, and rotted (BBTSEVMILROTMLDY) kernels.

Procedure

- Determine the weight of binburnt kernels as a percentage of the net weight of the sample.

Blackpoint (BLK PT)

Kernels with blackpoint have a distinct dark brown or black discolouration of the whole germ and surrounding area.

Procedure

- Disregard a slight discolouration restricted to the germ.
- When the discolouration affects more than one-half of the kernel it is considered smudge (SM).

Broken (BKN)

Broken kernels are pieces of wheat that are less than three-quarters of a whole kernel. If the piece is more than three-quarters of a kernel, it is considered whole.

See **Shrunken and broken (SHR, BKN)**

Common bunt (stinking smut) (SMUT)

Common bunt is a plant disease caused by fungi, characterized by

- Soft black bunt balls
- Kernels tagged with black bunt spores
- A distinct smutty odour, or the smell of rotten fish

Procedure

See procedure for **Cleaning for grade improvement**.

- If samples have a distinct odour, grade 'Wheat Sample CW/CE/CAN Account Odour'.
 - If kernels are tagged with bunt spores but there is no smutty odour, the sample is naturally stained (NSTN) and graded accordingly.
 - Non-removable bunt balls are considered as matter other than cereal grains (MOTCG).
-

Contaminated grain (CONTAM GRN)

- ▲ **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*.

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.

Extraneous material

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

Procedure

If a sample is suspected of being coated with a pesticide, desiccant, inoculant or if the sample contains evidence of extraneous material, including any foreign chemical substance other than fertilizer pellets (FERT PLTS), the sample shall be graded 'Wheat, Held IP Suspect Contaminated Grain' and 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 'Wheat, Sample Condemned'.

Contrasting classes (CON CL)

See **Wheats of other classes or varieties (WOOC)**

Darkened kernels and severely darkened kernels (DRKND KRNL, SEVDRKND KRNL) **Darkened kernels**

Darkened kernels have a discolouration that penetrates the endosperm. The discolouration may range from red to dark brown in colour to grey to charcoal. The endosperm must be examined to make the darkened kernel assessment. Darkened kernels are determined only for amber durum.

Procedure

- Kernels must be cut, and the cut should be done at approximately one third of the distance from the brush end of the kernel.
- Only kernels with a discolouration that penetrates the cross section of the endosperm as shown in the photos below are considered darkened.
- Only 1 portion of the cut kernel needs to be discoloured to the degree shown in the photos to be considered as darkened.
- For grading purposes, darkened kernels should be considered as, and in conjunction with smudge (SM)

Severely darkened kernels

Darkened kernels that have over 50% of the external surface of the kernel affected as shown in the reference photographs, along with both portions of the cut kernel showing a darkened discolouration, are considered severely darkened and should be assessed as penetrated smudge (PENT SM).

See **Smudge and Penetrated smudge (SM, PENT SM)**

Dark immature kernels (DKIM)

Dark immature kernels are also called swath-heated kernels. They are similar to heated (HTD) kernels, but they do not exhibit the reddish discolouration associated with heated kernels, and they do not have a heated odour.

- Are considered as damage (DMG) for grading purposes in CWRW

Degermed kernels (DGM)

The germ has been removed through the mechanical handling process or by insect attack. Degermed kernels lack the greyish discolouration that is often present with sprouted (SPTD) kernels.

- Are considered as damage (DMG) for grading purposes in CWRW.

See **Insect damage (I DMG)**.

See **Sprouted and severely sprouted kernels (SPTD, SEV SPTD)**.

Earth pellets (EP)

- Hard earth pellets are pellets that do not crumble under light pressure.

See **Stones (STNS)**.

- Soft earth pellets are pellets that crumble under light pressure.

See **Soft earth pellets (SEP)**.

Ergot (ERG)

Ergot is a plant disease which produces elongated fungus bodies with 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

See **Contaminated grain (CONTAM GRN)**

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.

Procedure

- Handpick any fertilizer pellets and determine the concentration in the net working sample.
- Fertilizer pellets are assessed as stones (STNS) 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 'Wheat, Held IP Suspect Contaminated Grain'. 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 'Wheat, Sample Condemned'.

Fireburnt kernels (FBNT)

Fireburnt kernels are charred or scorched by fire. A cross-section of a fireburnt kernel resembles charcoal with numerous air holes which crumble easily under pressure.

Foreign material (FM)

Foreign material in wheat includes all material other than whole or broken wheat kernels that remain in the sample after the removal of dockage.

Frost (FR)

Frost refers to wheat kernels with blistered brans as a result of exposure to freezing temperatures. The degree of blistering ranges from fine to coarse and is dependent upon the maturity of the grain, the temperature to which the grain was exposed and the duration of the exposure. Samples containing kernels affected by frost are graded according to the degree of soundness definition as reflected in the standard for each grade. Standards are not available for all classes of wheat; refer to the table below to determine the applicable standard for a sample class.

Frost Standards			
Grade / Class	Applicable Standard	Grade / Class	Applicable Standard
No.1 CWRS	2021 No.1 CWRS	No.1 CWSWS	2021 No.1 CWRS
No.2 CWRS	2021 No.2 CWRS	No.2 CWSWS	2021 No.2 CWRS
No.3 CWRS	2021 No.3 CWRS	No.3 CWSWS	2021 No.3 CWRS
No.1 CWHWS	2021 No.1 CWRS	No.1 CWES	2021 No.2 CWRS
No.2 CWHWS	2021 No.2 CWRS	No.2 CWES	2021 No.3 CWRS
No.3 CWHWS	2021 No.3 CWRS	No.1 CPSW	2021 No.2 CWRS
No.1 CWAD	2021 No.1 CWAD	No.2 CPSW	2021 No.3 CWRS
No.2 CWAD	2021 No.2 CWAD	No.1 CPSR	2021 No.2 CWRS
No.3 CWAD	2021 No.3 CWAD	No.2 CPSR	2021 No.3 CWRS
No.4 CWAD	2021 No.4 CWAD	No.1 CNHR	2021 No.1 CWRS
No.1 CWRW	N/A	No.2 CNHR	2021 No.2 CWRS
No.2 CWRW	N/A	No.3 CNHR	2021 No.3 CWRS
No.3 CWRW	N/A		

Fusarium damage (FUS DMG)

Fusarium-damaged wheat is typically characterized by thin or shrunken chalk-like kernels. Fusarium-damaged kernels have a white or pinkish mould or fibrous growth.

Procedure

1. Using a Boerner-type divider, divide the representative portion.
2. Separate all kernels showing any evidence of fusarium damage, including any kernels that have a chalk-like appearance.
3. You may examine kernels using a 10-power magnifying lens to confirm evidence of a white or pinkish mould or fibrous growth. In determining fusarium damage, select only kernels with this white or pinkish mould or fibrous growth.

Grass green kernels (GRASS GR)

Grass-green kernels are a distinct vivid green throughout because of immaturity.

- Are considered as damage (DMG) for grading purposes in CWRW
-

Green (GR)

Green wheat kernels may range from fully developed to shrunken and distorted with various degrees of darkening that are in contrast to the natural sound colour.

The maturation process has been affected or arrested by the environment or an agronomic practice resulting in a variation in colour, size and shape. The physical effect is dependent on the timing and extent of the exposure to the contributing factors.

Dark immature (DKIM), grass green (GRASS GR) and immature (IM) are separate grading factors that should not be confused with green damaged kernels.

Samples containing green kernels are graded according to the degree of soundness definition for each grade.

Hail damage (H DMG)

Hail damage is visually similar to sawfly damage. Hail damaged kernels are considered as sawfly damage (SFLY DMG) for grading purposes.

See **Sawfly damage (SFLY DMG)**.

Hard vitreous kernels (HVK)

Vitreousness is the natural translucence of a kernel that is a visible sign of kernel hardness. Hard vitreous kernels are a grade determinant for the amber durum wheat class in Canada and the red spring wheat class in western Canada.

Red spring – Western Canada

Note: Cutting of kernels is not permitted

Non-vitreous material includes

- Contrasting classes (CON CL) of wheat
- Foreign material (FM)
- Kernels that are sprouted (SPTD), binburnt (BBT), severely mildewed (SEVMIL), rotted (ROT), mouldy (MLDY), heated (HTD), fireburnt (FBNT), penetrated smudge (PENT SM), chalky white fusarium damaged (FUS DMG), grass green (GRASS GR), severely frost damaged (FR) or midge damaged (MDGE).
- Whole and pieces of kernels having a defined starch area of at least half the surface area of the kernel or piece of kernel that clearly contrasts with the translucent colour of a vitreous kernel

Amber durum

Note: Cutting of kernels is permitted

Non-vitreous material includes:

- Wheats of other classes (WOOC)
- Foreign material (FM)

- Kernels that are sprouted (SPTD), binburnt (BBT), severely mildewed (SEVMIL), rotted (ROT), mouldy (MLDY), heated (HTD), fireburnt (FBNT), penetrated smudge (PENT SM), chalky white fusarium damaged (FUS DMG), grass green (GRASS GR), severely frost damaged (FR) or midge damaged (MDGE) including severe midge damaged (SEVMDGE).
- Kernels having an externally visible starch area of any size
- Kernels having internal starch areas that require cutting of the kernels. Opaque and bleached kernels may require cutting to determine if there are starchy areas within the kernel.
- When evaluating the face of the cross-section, the following will be excluded from non-vitreous:
 - The cut has resulted in a flaking of the endosperm
 - The face of the cross cut kernel has a minute starch area roughly the size of a pencil point typically at the trough of the cheeks
 - The face of the cross cut kernel appears cloudy overall but with no dense white starch area

Procedure

1. Using a Boerner-type divider, divide a representative portion of 250 g from the cleaned sample.
2. Sieve the representative portion mechanically, using the Carter dockage tester or manually using the No. 4.5 slotted sieve.

Feed control	#6
Air control	Off
Riddle	None
Top sieve	No. 4.5 slotted sieve
Centre sieve	Blank tray
Bottom sieve	None
Sieve cleaner	Off

Manual method

Sift the approximately 250 g clean sub-sample over the No. 4.5 slotted hand sieve. Sifting shall consist of 25 complete motions of about 20 cm total distance.

3. From the material that remains on top of the sieve or lodged in the sieve, divide a portion of 15 g, or 25 g for export shipments.

Material that passes through the sieve is not used in the determination of HVK.

4. Separate vitreous and non-vitreous kernels from the 15-g portion.
5. For amber durum only: Cut and examine the endosperm of suspect kernels to determine if they are vitreous.

Heat stress (HTS)

Heat stress refers to wheat kernels with blistered brans as a result of exposure to prolonged hot weather conditions. The degree of blistering ranges from fine to moderate and is dependent upon the maturity of the grain, the temperature to which the grain is exposed and the duration of the exposure. Heat stressed kernels may be visually indistinguishable from frost affected kernels but rarely exhibit severe blistering or distortion. Samples containing kernels affected by heat stress are graded according to the degree of soundness definition and the frost standard for each grade.

See **Frost (FR)**

Heated kernels (HTD)

Heated kernels have the colour and may have the odour typical of grain that has deteriorated in storage or has been damaged by artificial drying. They range from orange-red to very dark brown, but are not black.

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

Note: Tolerance for total heated includes heated, binburnt, severely mildewed, rotted, and mouldy (BBTSEVMILROTMLDY) kernels.

Immature (IM)

Immature wheat kernels are not fully ripened. The kernels may be fully developed with various shades of green that are in contrast to the natural sound colour.

The kernel development has been arrested during the maturation process often resulting in variation in colour, size and shape.

Dark immature (DKIM) and grass green (GRASS GR) are separate grading factors that should not be confused with immature kernels.

Samples containing immature kernels are graded according to the degree of soundness definition as reflected in the standard for each grade.

Insect damage (I DMG)

Insect damaged kernels have been bored or chewed by insects resulting in a portion of the endosperm being removed. Insect damage is characterized by chew and bite marks or by small holes drilled into the sides or germ area of the kernel. Damage can be caused by field insects such as grasshoppers or armyworms, as well as stored grain pests such as the Indian meal moth, red flour beetle or the lesser grain borer.

Midge damaged kernels are not considered insect damaged and are assessed separately.

See **Midge damage (MDGE)**

Surface damage, where only small portions of the bran have been removed, should not be considered damaged but should be considered in the degree of soundness

- Are considered as damage (DMG) for grading purposes in CWRW
-

Matter other than cereal grains (MOTCG)

Matter other than cereal grains includes the following material remaining in the cleaned sample:

- Inseparable seeds such as ragweed, Tartary buckwheat, rye grass, and wild oats

- Non-cereal domestic grains such as canola, flaxseed, corn, peas, buckwheat or lentils

Note: Once the sample is determined to be commercially clean, assessing MOTCG is not necessary unless requested. If sample is not commercially clean, MOTCG should only be assessed after cleaning.

See the **Normal cleaning procedure**.

Midge and severe midge damage (MDGE, SEVMDGE)

Midge damage (MDGE)

Midge damage is caused by the Orange Blossom Wheat Midge. The only part of the plant damaged is the developing seed. When a kernel of grain is attacked either it will not develop or it will develop as a shrivelled, deformed kernel.

For grading purposes, midge damaged kernels must have at least two of the following characteristics:

- a rupture of the bran on either the back or side of the kernel
- a distinct white line or mark, located on the back or side of the kernel
- the kernel is distinctly distorted

The tolerance for sawfly damage (SFLY DMG) and midge damage (MDGE) is combined. The damaged kernels are weighed together and a percentage determined. This percentage is then compared to the grade determination table to assign the appropriate grade.

Severe midge damage (SEVMDGE)

Midge damaged kernels that have a blackened streak extending more than one quarter the length of the kernel are assessed as severely midge damaged kernels. This discolouration is the result of a fungal infection. Midge damaged kernels that are blackened less than one quarter the length of the kernel or have only grey discolouration, of any amount, are not assessed as severely midge damaged kernels. Severe midge damage is determined for CWAD and CEAD only.

There is a single tolerance for the total of severe midge damage and penetrated smudge (PENT SM).

Mildew (MIL)

Mildew kernels are kernels affected by field fungi that develop under conditions of excessive moisture affecting unthreshed kernels of wheat. Samples affected by mildew have an overall greyish discolouration with grey to black mildew spores typically attached to the brush end of the kernel.

Samples containing kernels affected by mildew are graded according to the degree of soundness definition as reflected in the standard for each grade. Standards are not available for all classes of wheat; refer to the table below to determine the applicable standard for a sample class.

See **Severely mildewed (SEVMIL)** for heavily affected samples

Note: For most classes of wheat, samples will be graded no lower than No. 3 on account of mildew. For CPSR, CPSW and CWES, samples will be graded no lower than No. 2 on account of mildew. For CWAD, samples will be graded no lower than No. 4 on account of mildew.

Mildew Standards			
Grade / Class	Applicable Standard	Grade / Class	Applicable Standard
No.1 CWRS	2025 No.1 CWRS	No.1 CPSW	2025 No.2 CWRS
No.2 CWRS	2025 No.2 CWRS	No.2 CPSW	N/A
No.3 CWRS	N/A	No.1 CPSR	2025 No.2 CWRS
No.1 CWHWS	2025 No.1 CWRS	No.2 CPSR	N/A
No.2 CWHWS	2025 No.2 CWRS	No.1 CNHR	2025 No.1 CWRS
No.3 CWHWS	N/A	No.2 CNHR	2025 No.2 CWRS
No.1 CWAD	2025 No.1 CWAD	No.3 CNHR	N/A
No.2 CWAD	2025 No.2 CWAD	No.1 CERS	2025 No.1 CERS
No.3 CWAD	2025 No.3 CWAD	No.2 CERS	2025 No.2 CERS
No.4 CWAD	N/A	No.3 CERS	N/A
No.1 CWRW	2025 No.1 CWRS	No.1 CEHRW	2025 No.1 CESRW
No.2 CWRW	2025 No.2 CWRS	No.2 CEHRW	2025 No.2 CESRW
No.3 CWRW	N/A	No.3 CEHRW	N/A
No.1 CWSWS	2025 No.1 CWRS	No.1 CESRW	2025 No.1 CESRW
No.2 CWSWS	2025 No.2 CWRS	No.2 CESRW	2025 No.2 CESRW
No.3 CWSWS	N/A	No.3 CESRW	N/A
No.1 CWES	2025 No.2 CWRS	No.1 CEWW	2025 No.1 CEWW
No.2 CWES	N/A	No.2 CEWW	2025 No.2 CEWW
		No.3 CEWW	N/A

Mineral matter (MIN MAT)

Mineral matter refers to stones (STNS), earth pellets (EP), fertilizer (FERT PLTS) and screening pellets that may be found in samples of grain.

Mouldy kernels (MLDY)

Mouldy kernels are discoloured, swollen and soft as a result of decomposition by fungi or bacteria. They have mould visible to the naked eye and may feel spongy under pressure.

There is a single tolerance for the total of binburnt, severely mildewed, mouldy, and rotted (BBTSEVMILROTMLDY) kernels.

Procedure

- Determine the weight of mouldy kernels as a percentage of the net weight of the sample.

Natural stain (NSTN)

Naturally stained kernels are caused by contact with natural substances such as bunt spores, soil or weeds. Consideration is given to the incidence of affected kernels and the nature and severity of the stain. Kernels that are lightly stained should not be considered.

When the nature of the material is in doubt, the sample is sent to the Chief Grain Inspector for review, and, if necessary, for laboratory analysis.

See **Glossary**, weed stain

Odour (ODOR)

There is no numeric tolerance for odour. Consider

- The basic quality of the sample
- The type and degree of the odour—such as fuel oil, skunk or urea
- 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	Wheat, Sample CW/CE/CAN Account Odour
A distinct heated odour	Wheat, Sample CW/CE/CAN Account Heated
A distinct fireburnt odour	Wheat, Sample CW/CE/CAN Account Fireburnt

Other cereal grains (OCG)

Other cereal grains in wheat are rye, barley, triticale, oats, oat groats, and wild oat groats that remain in the cleaned sample. Other cereal grains are treated as total foreign material (TFM).

For grading purposes, spelt and Kamut® are considered as other cereal grains in samples of wheat.

Penetrated smudge (PENT SM)

See **Smudge and penetrated smudge (SM, PENT SM)**

Pink kernels (PNK)

Pink pigment in wheat kernels is an indication of immaturity. Pink kernels

- Are shrunken
- Display a pink discolouration
- Are considered as damage (DMG) for grading purposes in CWRW

▲ **Important:** Do not confuse pink kernels with fusarium-damaged kernels (FUS DMG), pesticide treated seed or other contaminated grains (CONTAM GRN).

Protein (PROT)

The classes of CWRS, CWHWS, CWAD, CNHR, CWES and CWRW wheat have minimum protein levels established for No. 1 grades. Protein content is reported on a 13.5% moisture basis.

See **Primary grade determination tables**.

Rotted kernels (ROT)

Rotted kernels are discoloured, swollen and soft as a result of decomposition by fungi or bacteria. They may feel spongy under pressure.

There is a single tolerance for the total of binburnt, severely mildewed, mouldy, and rotted (BBTSEVMILROTMLDY) kernels.

Procedure

- Determine the weight of rotted kernels as a percentage of the net weight of the sample.

Ruptured kernels (RUP)

Kernels are considered ruptured when the split in the cheek and/or back extends at least half the length of the kernel or if both cheeks are split to any degree. Ruptured kernels do not require magnification to be identified.

Ruptured kernels are considered as severely damaged (SEVDMG) and are assessed using the degree of soundness definition in the grading table.
See **Severely damaged kernels (SEVDMG)**

Sawfly damage (SFLY DMG)

Kernels with sawfly damage are shrivelled or distorted as a result of the sawfly insect attacking the stem of the plant hence stopping the flow of nutrients to the kernel.

The tolerance for sawfly damage and midge damage is combined. The damaged kernels are weighed together and a percentage determined. This percentage is then compared to the grade determination table to assign the appropriate grade.

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.

Severely damaged kernels (SEVDMG)

Kernels are considered to be severely damaged when

- the kernel is severely shriveled or distorted due to weather, insect, fungal and/or other reason
- in wheat, the cheeks and/or back of the kernel are ruptured

See **Ruptured kernels (RUP)**

Severely midge damaged kernels (SEVMDGE)

See **Midge damage and severe midge damage (MDGE, SEVMDGE)**

Severely mildewed kernels (SEVMIL)

In severely mildewed wheat, mildew spores have severely blackened the kernel inside and out. The kernels may feel spongy under pressure.

There is a single tolerance for the total of binburnt, severely mildewed, mouldy, and rotted (BBTSEVMILROTMLDY) kernels.

Procedure

- Determine the weight of severely mildewed kernels as a percentage of the net weight of the sample.

Severely sprouted kernels (SEVSPTD)

See **Sprouted and severely sprouted kernels (SPTD, SEVSPTD)**

Shrunken and broken (SHR, BKN)

Percentages of shrunken and broken kernels are determined from the same representative portion.

Total shrunken and broken (TSHRBKN)

Total shrunken and broken is the sum of the percentage of shrunken kernels and the percentage of broken kernels.

Shrunken kernels (SHR)

Shrunken kernels are whole kernels of wheat that pass through a No. 4.5 slotted handheld sieve.

Broken kernels (BKN)

Broken kernels are pieces of wheat that are less than three-quarters of a whole kernel. If the piece is more than three-quarters of a kernel, it is considered whole.

Determine the percentage of shrunken kernels

1. Using a Boerner-type divider, divide a representative portion of approximately 250 g from the sample.
2. Sieve the approximately 250 g clean sub-sample over the No. 4.5 slotted handheld sieve, ensuring the slotted perforations are parallel with the sieving motion. In a steady motion, move the sieve from left to right 30 times. 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.
3. Separate the shrunken and broken kernels which pass through the sieve and calculate a percentage for each.

Determine the percentage of broken kernels

4. Using a Boerner-type divider, divide the material that remains on top of the sieve or lodged in the sieve from Step 2 into a representative portion of approximately 50 g.
5. Handpick broken kernels from the 50-g portion and calculate the percentage.
6. Add this percentage to the percentage of handpicked kernels from Step 3 to determine total broken.

**Smudge and penetrated smudge (SM, PENT SM) **
Smudge (SM)

Smudge is a discolouration on the kernel as a result of infection by some common field fungi. The discolouration may be brown, black or red.

Classes of wheat other than amber durum

The discolouration is considered as smudge in wheat classes other than amber durum if more than one half of the kernel is discoloured. Less extensive discolouration is considered blackpoint (BLK PT).

Amber durum

The discolouration is assessed as smudge in amber durum if:

- more than one half of the kernel is discoloured, or
- discolouration of the crease extends more than half the length of the kernel.

Penetrated smudge (PENT SM)

The discolouration penetrates and extends throughout the entirety of both sides of the endosperm, usually as a result of a more severe infection. Kernels must be cut, and the cut should be done at approximately one third of the distance from the brush end of the kernel.

See **Darkened and severely darkened kernels (DRKND KRNL, SEVDRKND KRNL)**

Note: There is a single tolerance for the total of severe midge damage (SEVMDGE) and penetrated smudge (PENT SM)

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 (STNS).
- any nontoxic material of similar consistency.

Procedure

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 'Wheat, Sample Account Admixture'.

Sprouted and severely sprouted kernels (SPTD, SEVSPTD)

Sprouted kernels (SPTD)

Kernels are assessed as sprouted if one of the following conditions exists:

- Kernels show clear evidence of growth in the germ area, including kernels where the bran is noticeably split over the germ area along with clear evidence of growth.
- The sprout is broken or completely gone and only a portion remains. There is no clear evidence that the sprout extended beyond the normal contour of the germ nor any evidence of kernel degeneration.
- The germ is missing along with discolouration and deterioration of the kernel from weathering.

Note: For kernels with missing germs that are not discoloured and deteriorated from weathering, see **Degermed (DGM)**

Severely sprouted kernels (SEVSPTD)

Kernels are assessed as severely sprouted if one of the following conditions exists:

- The sprout extends beyond the normal contour of the germ
- The kernels are severely degenerated as an apparent result of advanced sprouting
- The sprout is broken or completely gone and there is evidence showing that there was extension of the sprout outside the normal contour of the germ

Note: A slight tear in the bran above the contour of the germ is not on its own clear evidence that the sprout extended outside the normal contour of the germ

Total sprouted is a combination of severely sprouted and sprouted kernels

Procedure

1. Using a Boerner-type divider, divide a representative portion.
2. Separate all kernels showing any evidence of sprouting.
3. You may use a 10-power magnifying lens to confirm sprouting activity.

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 (FERT PLTS)** for the specific procedure to be followed when samples contain fertilizer pellets.

Procedure

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

Note: Stones may be removed and included in dockage if the material removed is 5% or less of the gross weight of the sample. See **Cleaning for grade improvement**.

- Samples of grain grown in western Canada containing stones in excess of basic grade tolerances, up to 2.5%, are graded 'Wheat, 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 'Wheat, Sample Canada Eastern Account Stones'.
- Samples of western and eastern Canadian grain containing more than 2.5% stones are graded 'Wheat, Sample Salvage'.

Examples: Western Canada

Excerpt from grade determination tables for
Wheat, Canada Western Red Spring

Grade name	Stones %
No. 1 CWRS	0.03
No. 2 CWRS	0.03
No. 3 CWRS	0.06
CW Feed	0.10

Basic grade:..... Wheat, No. 3 CWRS

Reason for basic grade:..... Mildew

If the above sample contained	Grade in Western Canada
0.08% stones	Wheat, Rejected No. 3 CWRS Account Stones
1.0% stones	Wheat, Rejected No. 3 CWRS Account Stones
3.0% stones	Wheat, Sample Salvage

Examples: Eastern Canada

Excerpt from grade determination tables for
Wheat, Canada Eastern Red Spring

Grade name	Stones %
No. 1 CERS	0.03
No. 2 CERS	0.03
No. 3 CERS	0.06
No. 4 CERS	0.10

Basic grade:..... Wheat, No. 3 CERS

Reason for basic grade:..... Mildew

If the above sample contained	Grade in Eastern Canada
0.08% stones	Wheat, No. 4 CERS
1.0% stones	Wheat, Sample CE Account Stones
3.0% stones	Wheat, Sample Salvage

Streak mould

Kernels with unusual dark grey streaks on their sides toward the brush may indicate streak mould. This very slow-growing mould is harmless in wheat, but it affects kernel appearance. It occurs most commonly in red winter wheat. It is not related to the more serious storage moulds.

Procedure

For grading, include streak mould with blackpoint (BLK PT).

Test weight (TWT)

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

Total damage (TDMG)

Includes kernels that are dark immature (DKIM), degermed (DGM), fireburnt (FBNT), fusarium damaged (FUS DMG), grass green (GRASS GR), heated (HTD), insect damaged (I DMG), pink (PNK), sawfly/midge damaged (SFLY/MDGE), smudge damaged (SM), sprouted (SPTD) or damaged in any other way.

Note: Total damage only applies as a grading factor to the class Canada Western Red Winter (CWRW)

Treated seed and other chemical substances

See **Contaminated grain (CONTAM GRN)**

Variety (VAR)

Only varieties registered in Canada under the *Seeds Act* are eligible for the top grades of wheat.

The Canadian Food Inspection Agency (CFIA) is responsible for the registration of varieties in Canada. Consult the CFIA's [database of varieties registered in Canada](#) online to determine if a given variety is registered in Canada.

Individual wheat varieties are designated by the Canadian Grain Commission into classes and published on [Variety Designation Lists](#).

Wheats of other classes or varieties (WOOC)

- Other classes of wheat are all classes of wheat, including non-registered varieties, other than the predominant class in the sample.

Contrasting classes are classes of different colour wheat; for example, CWAD is a contrasting class in CWRS.

Note: The wheat class CWHWS is considered a WOOC for grading purposes in samples of CWRS.

- Other varieties of wheat are any registered varieties.

Working tolerance for wheats of other classes that blend

When assessing wheats of other classes that blend, up to 0.9% in excess of the grade specification is considered a working tolerance and disregarded.

For example, for No. 2 CWRS the primary grade tolerance is 4.5%. Samples containing up to 5.4% will still be considered within tolerance.

Note: This working tolerance only applies to registered varieties that qualify for the milling grades of wheat.

Assessment of wheats of other classes in CW Feed and sample grades

When assessing wheats of other classes, samples containing wheats of other classes beyond the lowest numerical grade tolerances and up to 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP will be graded 'Wheat, CW Feed'.

When assessing wheats of other classes in samples containing over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP will be graded 'Wheat, Sample CW Account Admixture'.

Samples containing up to 49% of wheats of other classes other than CWAD or any variety of the class CWSP will be graded 'Wheat, CW Feed'.

Examples

3 CWRS WOOC primary grade tolerance: 7.5%

Example 1

A sample contains 10% CWAD and 90% CWRS. The sample will be graded 'Wheat, CW Feed'.

A sample contains 15% CWAD and 85% CWRS. The sample will be graded 'Wheat, Sample CW Account Admixture'.

Example 2

A sample contains 49% CPSR and 51% CWRS will be graded 'Wheat, CW Feed'.

Predominant class	Wheats of other classes														
	CWRS	CWHWS	CWAD	CWRW	CWSWS	CWES	CWSP	CPSW	CPSR	CNHR	CEAD	CERS, CEHRW, CESRW	CEWW	CEOW	CEFD
CWRS	–	WOOC	CON CL	WOOC *	CONCL	WOOC *	**	CON CL	WOOC *	WOOC*	CON CL	WOOC *	CON CL	**	**
CWHWS	CON CL	–	CON CL	CON CL	WOOC	CON CL	**	WOOC	CON CL	CON CL	CON CL	CON CL	WOOC	**	**
CWAD	WOOC	WOOC	–	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC	–	WOOC	WOOC	WOOC	WOOC
CWRW	WOOC *	CON CL	CON CL	–	CON CL	WOOC *	**	CON CL	WOOC *	WOOC*	CON CL	WOOC *	CON CL	**	**
CWSWS	WOOC	WOOC	WOOC	WOOC	–	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC
CWES	WOOC *	CON CL	CON CL	WOOC *	CON CL	–	**	CON CL	WOOC *	WOOC*	CON CL	WOOC *	CON CL	**	**
CWSP	-	-	-	-	-	-	-	-	-	-	-	WOOC	-	-	-
CPSW	CON CL	WOOC	CON CL	CON CL	WOOC	CON CL	**	–	CON CL	CON CL	CON CL	CON CL	WOOC	**	**
CPSR	WOOC *	CON CL	CON CL	WOOC *	CON CL	WOOC *	**	CON CL	–	WOOC*	CON CL	WOOC *	CON CL	**	**
CNHR	WOOC*	WOOC	CON CL	WOOC*	CON CL	WOOC*	**	CON CL	WOOC*	–	CON CL	WOOC*	CON CL	**	**
CERS	–	WOOC	CON CL	–	CON CL	–	***	CON CL	–	–	CON CL	-	CON CL	***	***
CEHRW	–	CON CL	CON CL	–	CON CL	–	***	CON CL	–	–	CON CL	-	CON CL	***	***
CESRW	–	CON CL	CON CL	–	CON CL	–	***	CON CL	–	–	CON CL	-	CON CL	***	***
CEAD	WOOC	WOOC	-	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC	–	WOOC	WOOC	WOOC	WOOC
CEWW	CON CL	WOOC	CON CL	CON CL	WOOC	CON CL	**	WOOC	CON CL	CON CL	CON CL	CON CL	–	**	**
CEOW	-	-	-	-	–	-	-	-	-	-	-	-	-	–	-
CEFD	***	–	***	***	***	***	***	***	***	***	***	***	***	***	–

WOOC Wheats of other classes

CON CL Contrasting classes

* See working tolerance for wheats of other classes that blend

** Consider as WOOC if the same colour, consider as CON CL if a different colour

*** No WOOC tolerance, consider as CON CL if a different colour

Primary grade determination tables

Wheat, Canada Western Red Spring (CWRS), standard of quality

Grading factor	No. 1 CWRS	No. 2 CWRS	No. 3 CWRS	CW Feed	Grade, if specs for CW Feed not met
Degree of soundness *	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	75 (365)	72 (350)	69 (335)	65 (315)	Wheat, Sample CW Account Light Weight
Minimum hard vitreous kernels %	65	No minimum	No minimum	No minimum	
Minimum protein %	10.0	No minimum	No minimum	No minimum	
Variety	Any variety of the class CWRS designated as such by order of the Commission	Any variety of the class CWRS designated as such by order of the Commission	Any variety of the class CWRS designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and CWSP	

Note: Samples of CWRS will be graded no lower than No. 3 CWRS on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Western Red Spring (CWRS), foreign material

Grading factor	No. 1 CWRS	No. 2 CWRS	No. 3 CWRS	CW Feed	Grade, if specs for CW Feed not met
Ergot %	0.04	0.04	0.04	0.10	Wheat, Sample CW Account Ergot
Excreta %	0.01	0.01	0.01	0.03	Wheat, Sample CW Account Excreta
Matter other than cereal grains %	0.2	0.3	0.5	1.0	Wheat, Sample CW Account Admixture
Sclerotinia %	0.04	0.04	0.04	0.10	Wheat, Sample CW Account Admixture
Stones %	0.03	0.03	0.06	0.10	2.5% or less - Wheat, Rejected (grade) Account Stones Over 2.5% - Wheat, Sample Salvage
Total % Foreign material	0.6	1.2	2.4	10.0	See Mixed grain

Wheat, Canada Western Red Spring (CWRS), grading factors

Grading factor	No. 1 CWRS	No. 2 CWRS	No. 3 CWRS	CW Feed	Grade, if specs for CW Feed not met
Artificial stain, no residue %	0.0	0.1	0.1	2.0	Wheat, Sample CW Account Stained Kernels
Binburnt, severely mildewed, rotted, mouldy %	0.01	0.02	0.03	2.50	Wheat, Sample CW Account Heated
Total % Heated, binburnt, severely mildewed rotted, mouldy	0.1	0.4	1.0	2.5	Wheat, Sample CW Account Heated
Contrasting classes %	0.8	2.3	3.8	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP - Wheat, Sample CW Account Admixture
Total % Wheats of other classes or varieties and contrasting classes **	2.3	4.5	7.5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP - Wheat, Sample CW Account Admixture
Dark immature %	1	3	10	No limit	
Degermed %	4	7	13	No limit	
Fireburnt %	0.0	0.0	0.0	2.0	Wheat, Sample CW Account Fireburnt
Fusarium damage %	0.3	0.8	1.5	4.0	Wheat, Sample CW Account Fusarium Damage Over 10%- Wheat, Commercial Salvage
Grass green %	0.8	2.0	10.0	No limit	
Insect damage %	1	3	6	No limit	
Natural stain %	1	2	5	No limit	
Pink %	2	5	10	No limit	
Sawfly, midge %	2	5	10	No limit	
Shrunken %	4	4	4	No limit	
Broken %	5	6	7	13	Sample Broken Grain
Total % Shrunken and broken	7	8	9	No limit within broken tolerances	
Smudge %	0.3	1.0	5.0	No limit	
Total % Smudge and blackpoint	10	20	35	No limit	
Severely sprouted %	0.1	0.2	0.3	No limit	
Total % Sprouted	0.5	1.0	3.0	No limit	

** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**

Wheat, Canada Western Hard White Spring (CWHWS), standard of quality

Grading factor	No. 1 CWHWS	No. 2 CWHWS	No. 3 CWHWS	CW Feed	Grade, if specs for CW Feed not met
Degree of soundness *	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	75 (365)	75 (365)	72 (350)	65 (315)	Wheat, Sample CW Account Light Weight
Minimum protein %	10.0	No minimum	No minimum	No minimum	
Variety	Any variety of the class CWHWS designated as such by order of the Commission	Any variety of the class CWHWS designated as such by order of the Commission	Any variety of the class CWHWS designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and CWSP	

Note: Samples of CWHWS will be graded no lower than No. 3 CWHWS on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Western Hard White Spring (CWHWS), foreign material

Grading factor	No. 1 CWHWS	No. 2 CWHWS	No. 3 CWHWS	CW Feed	Grade, if specs for CW Feed not met
Ergot %	0.04	0.04	0.04	0.10	Wheat, Sample CW Account Ergot
Excreta %	0.01	0.01	0.01	0.03	Wheat, Sample CW Account Excreta
Matter other than cereal grains %	0.2	0.3	0.5	1.0	Wheat, Sample CW Account Admixture
Sclerotinia %	0.04	0.04	0.04	0.10	Wheat, Sample CW Account Admixture
Stones %	0.03	0.03	0.06	0.10	2.5% or less - Wheat, Rejected (grade) Account Stones Over 2.5% - Wheat, Sample Salvage
Total % Foreign material	0.6	1.2	2.4	10.0	See Mixed grain

Wheat, Canada Western Hard White Spring (CWHWS), grading factors

Grading factor	No. 1 CWHWS	No. 2 CWHWS	No. 3 CWHWS	CW Feed	Grade, if specs for CW Feed not met
Artificial stain, no residue %	0.0	0.1	0.1	2.0	Wheat, Sample CW Account Stained Kernels
Binburnt, severely mildewed, rotted, mouldy %	0.01	0.02	0.03	2.50	Wheat, Sample CW Account Heated
Total % Heated, binburnt, severely mildewed rotted, mouldy	0.1	0.4	1.0	2.5	Wheat, Sample CW Account Heated
Contrasting classes %	3.0	3.0	5.0	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP - Wheat, Sample CW Account Admixture
Total % Wheats of other classes or varieties and contrasting classes	3	3	5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP - Wheat, Sample CW Account Admixture
Dark immature %	1	3	10	No limit	
Degermed %	4	7	13	No limit	
Fireburnt %	0.0	0.0	0.0	2.0	Wheat, Sample CW Account Fireburnt
Fusarium damage %	0.3	0.8	1.5	4.0	Wheat, Sample CW Account Fusarium Damage Over 10%- Wheat, Commercial Salvage
Grass green %	0.8	2.0	10.0	No limit	
Insect damage %	1	3	6	No limit	
Natural stain %	1	2	5	No limit	
Pink %	2	5	10	No limit	
Sawfly, midge %	2	5	10	No limit	
Shrunken %	4	4	4	No limit	
Broken %	5	6	7	13	Sample Broken Grain
Total % Shrunken and broken	7	8	9	No limit within broken tolerances	
Smudge %	0.3	1.0	5.0	No limit	
Total % Smudge and blackpoint	10	20	35	No limit	
Severely sprouted %	0.1	0.2	0.3	No limit	
Total % Sprouted	0.5	1.0	3.0	No limit	

Wheat, Canada Western Amber Durum (CWAD), standard of quality

Grading factor	No. 1 CWAD	No. 2 CWAD	No. 3 CWAD	No. 4 CWAD	No. 5 CWAD	Grade, if No. 5 specs not met
Degree of soundness *	Reasonably well matured, reasonably free from damaged kernels	Reasonably well matured, reasonably free from severely damaged kernels	Fairly well matured, may be moderately weather-damaged or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	79 (387)	77 (377)	74 (362)	71 (347)	65 (318)	Wheat, Sample CW Account Light Weight
Minimum hard vitreous kernels %	80	60	40	No minimum	No minimum	
Minimum protein %	9.5	No minimum	No minimum	No minimum	No minimum	
Variety	Any variety of the class CWAD designated as such by order of the Commission	Any variety of the class CWAD designated as such by order of the Commission	Any variety of the class CWAD designated as such by order of the Commission	Any variety of the class CWAD designated as such by order of the Commission	Any variety of amber durum wheat	

Note: Samples of CWAD will be graded no lower than No. 4 CWAD on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Western Amber Durum (CWAD), foreign material

Grading factor	No. 1 CWAD	No. 2 CWAD	No. 3 CWAD	No. 4 CWAD	No. 5 CWAD	Grade, if No. 5 specs not met
Ergot %	0.02	0.02	0.04	0.04	0.10	Wheat, Sample CW Account Ergot
Excreta %	0.01	0.01	0.01	0.01	0.03	Wheat, Sample CW Account Excreta
Matter other than cereal grains %	0.2	0.3	0.5	0.5	1.0	Wheat, Sample CW Account Admixture
Sclerotinia %	0.02	0.02	0.04	0.04	0.10	Wheat, Sample CW Account Admixture
Stones %	0.03	0.03	0.06	0.06	0.10	2.5% or less - Wheat, Rejected (grade) Account Stones Over 2.5% - Wheat, Sample Salvage
Total % Foreign material	0.5	1.2	1.5	3.0	10.0	See Mixed grain

Wheat, Canada Western Amber Durum (CWAD), grading factors

Grading factor	No. 1 CWAD	No. 2 CWAD	No. 3 CWAD	No. 4 CWAD	No. 5 CWAD	Grade, if No. 5 specs not met
Artificial stain, no residue %	0.0	0.1	0.1	0.1	2.0	Wheat, Sample CW Account Stained Kernels
Binburnt, severely mildewed, rotted, mouldy %	0.01	0.01	0.02	0.50	5.00	Wheat, Sample CW Account Heated
Total % Heated, binburnt, severely mildewed rotted, mouldy	0.1	0.1	0.4	1.5	5.0	Wheat, Sample CW Account Heated
Other classes %	2.0	3.0	4.3	10.0	49.0	Wheat, Sample CW Account Admixture
Total % Wheats of other classes or varieties	4	8	11	49	No limit	Wheat, Sample CW Account Admixture
Degermed %	4	7	10	13	No limit	
Fireburnt %	0.0	0.0	0.0	0.0	2.0	Wheat, Sample CW Account Fireburnt
Fusarium damage %	0.5	0.5	2.0	2.0	4.0	Wheat, Sample CW Account Fusarium Damage Over 10%- Wheat, Commercial Salvage
Grass green %	0.8	2.0	4.0	10.0	No limit	
Insect damage %	1	3	5	8	No limit	
Natural stain %	1	2	5	8	No limit	
Pink %	3	6	10	No limit	No limit	
Sawfly, midge %	2	8	15	40	No limit	
Severe midge %	0.1	0.3	0.8	2.0	No limit	
Penetrated smudge %	0.1	0.3	0.8	2.0	No limit	
Total % Severe midge and penetrated smudge	0.1	0.3	0.8	2.0	No limit	
Total % Smudge	0.5	1.0	3.0	Consider overall appearance	No limit	
Total % Smudge and blackpoint	5	10	20	Consider overall appearance	No limit	
Shrunken %	3	3	3	3	No limit	
Broken %	6	8	10	11	13	Sample Broken Grain
Total % Shrunken and broken	7	9	11	12	No limit within broken tolerances	
Severely sprouted %	0.2	0.4	3.0	12.0	No limit	
Total % Sprouted	1	2	7	12	No limit	

Wheat, Canada Western Red Winter (CWRW), standard of quality

Grading factor	No. 1 CWRW	No. 2 CWRW	No. 3 CWRW	CW Feed	Grade, if specs for CW Feed not met
Degree of soundness *	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	79 (386)	76 (370)	74 (360)	65 (315)	Wheat, Sample CW Account Light Weight
Minimum protein %	11.0	11.0	No minimum	No minimum	
Variety	Any variety of the class CWRW designated as such by order of the Commission	Any variety of the class CWRW designated as such by order of the Commission	Any variety of the class CWRW designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and any variety of the class CWSP	

Note: Samples of CWRW will be graded no lower than No. 3 CWRW on account of mildew

* See **Mildew (MIL)** for applicable standard

Wheat, Canada Western Red Winter (CWRW), foreign material

Grading factor	No. 1 CWRW	No. 2 CWRW	No. 3 CWRW	CW Feed	Grade, if specs for CW Feed not met
Ergot %	0.04	0.04	0.04	0.10	Wheat, Sample CW Account Ergot
Excreta %	0.01	0.01	0.01	0.03	Wheat, Sample CW Account Excreta
Matter other than cereal grains %	0.2	0.3	0.5	1.0	Wheat, Sample CW Account Admixture
Sclerotinia %	0.04	0.04	0.04	0.10	Wheat, Sample CW Account Admixture
Stones %	0.03	0.06	0.06	0.10	2.5% or less—Rejected (grade) Account Stones Over 2.5%—Wheat, Sample Salvage
Total % Foreign material	0.4	0.7	1.3	10.0	See Mixed grain

Wheat, Canada Western Red Winter (CWRW), grading factors

Grading factor	No. 1 CWRW	No. 2 CWRW	No. 3 CWRW	CW Feed	Grade, if specs for CW Feed not met
Contrasting classes %	1	2	3	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP – Wheat, Sample CW Account Admixture
Total % Wheats of other classes or varieties and contrasting classes **	3	5	10	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP – Wheat, Sample CW Account Admixture
Artificial stain, no residue %	0.0	0.1	0.1	2.0	Wheat, Sample CW Account Stained Kernels
Blackpoint %	10	20	35	No limit	
Natural stain %	1	2	5	No limit	
Shrunken %	3	3	3	No limit	
Broken%	3	5	8	13	Sample Broken Grain
Total % Shrunken and broken	3	5	8	No limit within broken tolerances	

** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**

Wheat, Canada Western Red Winter (CWRW), grading factors included in total damage

Grading factor	No. 1 CWRW	No. 2 CWRW	No. 3 CWRW	CW Feed	Grade, if specs for CW Feed not met
Binburnt, severely mildewed, rotted, mouldy %	0.01	0.01	0.03	2.50	Wheat, Sample CW Account Heated
Total % Heated, binburnt, severely mildewed rotted, mouldy	0.1	0.1	0.5	2.5	Wheat, Sample CW Account Heated
Fireburnt %	0.0	0.0	0.0	2.0	Wheat, Sample CW Account Fireburnt
Fusarium damage %	0.8	1.0	1.5	4.0	Wheat, Sample CW Account Fusarium Damage Over 10% - Wheat, Commercial Salvage
Sawfly, midge %	1	5	7	No limit	
Penetrated smudge %	0.1	1.0	3.0	No limit	
Total % Smudge	0.3	3.0	5.0	No limit	
Severely sprouted %	0.1	0.2	0.3	No limit	
Total % Sprouted	0.5	1.0	2.5	No limit	
Total % Damage	2	5	7	N/A	

Wheat, Canada Western Soft White Spring (CWSWS), standard of quality

Grading factor	No. 1 CWSWS	No. 2 CWSWS	No. 3 CWSWS	CW Feed	Grade, if specs for CW Feed not met
Degree of soundness *	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	76 (370)	74 (360)	69 (335)	65 (315)	Wheat, Sample CW Account Light Weight
Variety	Any variety of the class CWSWS designated as such by order of the Commission	Any variety of the class CWSWS designated as such by order of the Commission	Any variety of the class CWSWS designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and any variety of the class CWSP	

Note: Samples of CWSWS will be graded no lower than No. 3 CWSWS on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Western Soft White Spring (CWSWS), foreign material

Grading factor	No. 1 CWSWS	No. 2 CWSWS	No. 3 CWSWS	CW Feed	Grade, if specs for CW Feed not met
Ergot %	0.04	0.04	0.04	0.10	Wheat, Sample CW Account Ergot
Excreta %	0.01	0.01	0.01	0.03	Wheat, Sample CW Account Excreta
Matter other than cereal grains %	0.2	0.3	0.5	1.0	Wheat, Sample CW Account Admixture
Sclerotinia %	0.04	0.04	0.04	0.10	Wheat, Sample CW Account Admixture
Stones %	0.03	0.03	0.06	0.10	2.5% or less– Rejected (grade) Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	1.0	2.0	3.0	10.0	See Mixed grain

Wheat, Canada Western Soft White Spring (CWSWS), grading factors

Grading factor	No. 1 CWSWS	No. 2 CWSWS	No. 3 CWSWS	CW Feed	Grade, if specs for CW Feed not met
Wheats of other classes or varieties %	3	6	10	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP – Wheat, Sample CW Account Admixture
Artificial stain, no residue %	0.0	0.1	0.1	2.0	Wheat, Sample CW Account Stained Kernels
Degermed %	4	7	10	No limit	
Fireburnt %	0.0	0.0	0.0	2.0	Wheat, Sample CW Account Fireburnt
Fusarium damage %	1.5	1.5	1.5	4.0	10% or less–Wheat, Sample CW Account Fusarium Damage Over 10%– Wheat, Commercial Salvage
Grass green %	0.8	2.0	4.0	No limit	
Insect damage %	1	3	5	No limit	
Binburnt, severely mildewed rotted, mouldy %	0.01	0.01	0.02	2.50	Wheat, Sample CW Account Heated
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.1	0.1	0.4	2.5	Wheat, Sample CW Account Heated
Natural stain %	1	2	5	No limit	
Pink %	3	6	10	No limit	
Sawfly, Midge %	2	8	15	No limit	
Shrunken %	3	3	3	No limit	
Broken %	5	6	7	13	Sample Broken Grain
Total % Shrunken and broken	7	8	9	No limit within broken tolerances	
Penetrated smudge %	0.1	0.5	1.0	No limit	
Total % Smudge	0.3	1.0	3.0	No limit	
Total % Smudge and blackpoint	10	15	35	No limit	
Severely sprouted %	0.1	0.3	0.5	No limit	
Total % Sprouted	1.0	5.0	8.0	No limit	

Wheat, Canada Western Extra Strong (CWES), standard of quality

Grading factor	No. 1 CWES	No. 2 CWES	CW Feed	Grade, if specs for CW Feed not met
Degree of soundness *	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	75 (365)	73 (355)	65 (315)	Wheat, Sample CW Account Light Weight
Minimum protein %	10.0	No minimum	No minimum	
Variety	Any variety of the class CWES designated as such by order of the Commission	Any variety of the class CWES designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and any variety of the class CWSP	

Note: Samples of CWES will be graded no lower than No. 2 CWES on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Western Extra Strong (CWES), foreign material

Grading factor	No. 1 CWES	No. 2 CWES	CW Feed	Grade, if specs for CW Feed not met
Ergot %	0.04	0.04	0.10	Wheat, Sample CW Account Ergot
Excreta %	0.01	0.03	0.03	Wheat, Sample CW Account Excreta
Matter other than cereal grains %	0.2	0.3	1.0	Wheat, Sample CW Account Admixture
Sclerotinia %	0.04	0.04	0.10	Wheat, Sample CW Account Admixture
Stones %	0.03	0.06	0.10	2.5% or less– Rejected (grade) Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	0.8	1.5	10.0	See Mixed grain

Wheat, Canada Western Extra Strong (CWES), grading factors

Grading factor	No. 1 CWES	No. 2 CWES	CW Feed	Grade, if specs for CW Feed not met
Contrasting classes %	1.5	2.5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP – Wheat, Sample CW Account Admixture
Total % Wheats of other classes or varieties and contrasting classes **	3	5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP – Wheat, Sample CW Account Admixture
Artificial stain, no residue %	0.1	0.1	2.0	Wheat, Sample CW Account Stained Kernels
Degermed %	7	13	No limit	
Fireburnt %	0.0	0.0	2.0	Wheat, Sample CW Account Fireburnt
Fusarium damage %	1.0	1.0	4.0	10% or less–Wheat, Sample CW Account Fusarium Damage Over 10%– Wheat Commercial Salvage
Grass green %	2	10	No limit	
Insect damage %	3	8	No limit	
Binburnt, severely mildewed rotted, mouldy %	0.02	0.03	2.50	Wheat, Sample CW Account Heated
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.4	1.0	2.5	Wheat, Sample CW Account Heated
Natural stain %	2	5	No limit	
Pink %	5	10	No limit	
Sawfly, Midge %	2	5	No limit	
Shrunken %	3	3	No limit	
Broken %	7	7	13	Sample Broken Grain
Total % Shrunken and broken	8	8	No limit within broken tolerances	
Smudge %	1	Consider overall appearance	No limit	
Total % Smudge and blackpoint	15	Consider overall appearance	No limit	
Severely sprouted %	0.1	0.3	No limit	
Total % Sprouted	0.5	2.0	No limit	

** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**

Wheat, Canada Prairie Spring White (CPSW), standard of quality

Grading factor	No. 1 CPSW	No. 2 CPSW	CW Feed	Grade, if specs for CW Feed not met
Degree of soundness *	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	77 (375)	75 (365)	65 (315)	Wheat, Sample Canada Account Light Weight
Variety	Any variety of the class CPSW designated as such by order of the Commission	Any variety of the class CPSW designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and any variety of the class CWSP	

Note: Samples of CPSW will be graded no lower than No. 2 CPSW on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Prairie Spring White (CPSW), foreign material

Grading factor	No. 1 CPSW	No. 2 CPSW	CW Feed	Grade, if specs for CW Feed not met
Ergot %	0.04	0.04	0.10	Wheat, Sample Canada Account Ergot
Excreta %	0.01	0.03	0.03	Wheat, Sample Canada Account Excreta
Matter other than cereal grains %	0.2	0.3	1.0	Wheat, Sample Canada Account Admixture
Sclerotinia %	0.04	0.04	0.10	Wheat, Sample Canada Account Admixture
Stones %	0.03	0.03	0.10	2.5% or less– Rejected (grade) Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	0.8	1.5	10.0	See Mixed grain

Wheat, Canada Prairie Spring White (CPSW), grading factors

Grading factor	No. 1 CPSW	No. 2 CPSW	CW Feed	Grade, if specs for CW Feed not met
Contrasting classes %	3	5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP – Wheat, Sample CW Account Admixture
Total % Wheats of other classes or varieties and contrasting classes	5	10	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP – Wheat, Sample CW Account Admixture
Artificial stain, no residue %	0.1	0.1	2.0	Wheat, Sample Canada Account Stained Kernels
Dark immature %	2.5	10.0	No limit	
Degermed %	7	13	No limit	
Fireburnt %	0.0	0.0	2.0	Wheat, Sample Canada Account Fireburnt
Fusarium damage %	1.5	1.5	4.0	10% or less– Wheat, Sample Canada Account Fusarium Damage Over 10%– Wheat, Commercial Salvage
Grass green %	2	10	No limit	
Insect damage %	3	8	No limit	
Binburnt, severely mildewed rotted, mouldy %	0.02	0.03	2.50	Wheat, Sample Canada Account Heated
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.4	1.0	2.5	Wheat, Sample Canada Account Heated
Natural stain %	2	5	No limit	
Pink %	5	10	No limit	
Sawfly, Midge %	3	8	No limit	
Shrunken %	5	5	No limit	
Broken %	6	6	13	Sample Broken Grain
Total % Shrunken and broken	9	9	No limit within broken tolerances	
Penetrated smudge %	0.10	0.50	No limit	
Total % Smudge	1	5	No limit	
Total % Smudge and blackpoint	20	35	No limit	
Severely sprouted %	0.1	0.3	No limit	
Total % Sprouted	0.5	2.0	No limit	

Wheat, Canada Prairie Spring Red (CPSR), standard of quality

Grading factor	No. 1 CPSR	No. 2 CPSR	CW Feed	Grade, if specs for CW Feed not met
Degree of soundness	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	77 (375)	75 (365)	65 (315)	Wheat, Sample Canada Account Light Weight
Variety	Any variety of the class CPSR designated as such by order of the Commission	Any variety of the class CPSR designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and any variety of the class CWSP	

Note: Samples of CPSR will be graded no lower than No. 2 CPSR on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Prairie Spring Red (CPSR), foreign material

Grading factor	No. 1 CPSR	No. 2 CPSR	CW Feed	Grade, if specs for CW Feed not met
Ergot %	0.04	0.04	0.10	Wheat, Sample Canada Account Ergot
Excreta %	0.01	0.03	0.03	Wheat, Sample Canada Account Excreta
Matter other than cereal grains %	0.2	0.3	1.0	Wheat, Sample Canada Account Admixture
Sclerotinia %	0.04	0.04	0.10	Wheat, Sample Canada Account Admixture
Stones %	0.03	0.03	0.10	2.5% or less– Rejected (grade) Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	0.8	1.5	10.0	See Mixed grain

Wheat, Canada Prairie Spring Red (CPSR), grading factors

Grading factor	No. 1 CPSR	No. 2 CPSR	CW Feed	Grade, if specs for CW Feed not met
Contrasting classes %	3	5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP – Wheat, Sample CW Account Admixture
Total % Wheats of other classes or varieties and contrasting classes **	5	10	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP – Wheat, Sample CW Account Admixture
Artificial stain, no residue %	0.1	0.1	2.0	Wheat, Sample Canada Account Stained Kernels
Dark immature %	2.5	10.0	No limit	
Degermed %	7	13	No limit	
Fireburnt %	0.0	0.0	2.0	Wheat, Sample Canada Account Fireburnt
Fusarium damage %	1.5	1.5	4.0	10% or less–Wheat, Sample Canada Account Fusarium Damage Over 10%– Wheat, Commercial Salvage
Grass green %	2	10	No limit	
Insect damage %	3	8	No limit	
Binburnt, severely mildewed rotted, mouldy %	0.02	0.03	2.50	Wheat, Sample Canada Account Heated
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.4	1.0	2.5	Wheat, Sample Canada Account Heated
Natural stain %	2	5	No limit	
Pink %	5	10	No limit	
Sawfly, Midge %	3	8	No limit	
Shrunken %	5	5	No limit	
Broken %	6	6	13	Sample Broken Grain
Total % Shrunken and broken	9	9	No limit within broken tolerances	
Penetrated smudge %	0.10	0.50	No limit	
Total % Smudge	1	5	No limit	
Total % Smudge and blackpoint	20	35	No limit	
Severely sprouted %	0.1	0.3	No limit	
Total % Sprouted	0.5	2.0	No limit	

** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**

Wheat, Canada Northern Hard Red (CNHR), standard of quality

Grading factor	No. 1 CNHR	No. 2 CNHR	No. 3 CNHR	CW Feed	Grade, if specs for CW Feed not met
Degree of soundness*	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	75 (365)	72 (350)	69 (335)	65 (315)	Wheat, Sample CW Account Light Weight
Minimum protein %	11.0	No minimum	No minimum	No minimum	
Variety	Any variety of the class CNHR designated as such by order of the Commission	Any variety of the class CNHR designated as such by order of the Commission	Any variety of the class CNHR designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and any variety of the class CWSP	

Note: Samples of CNHR will be graded no lower than No. 3 CNHR on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Northern Hard Red (CNHR), foreign material

Grading factor	No. 1 CNHR	No. 2 CNHR	No. 3 CNHR	CW Feed	Grade, if specs for CW Feed not met
Ergot %	0.04	0.04	0.04	0.10	Wheat, Sample CW Account Ergot
Excreta %	0.01	0.01	0.01	0.03	Wheat, Sample CW Account Excreta
Matter other than cereal grains %	0.2	0.3	0.5	1.0	Wheat, Sample CW Account Admixture
Sclerotinia %	0.04	0.04	0.04	0.10	Wheat, Sample CW Account Admixture
Stones %	0.03	0.03	0.06	0.10	2.5% or less– Wheat, Rejected (grade) Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	0.6	1.2	2.4	10.0	See Mixed grain

Wheat, Canada Northern Hard Red (CNHR), grading factors

Grading factor	No. 1 CNHR	No. 2 CNHR	No. 3 CNHR	CW Feed	Grade, if specs for CW Feed not met
Contrasting classes %	1	3	5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP – Wheat, Sample CW Account Admixture
Total % Wheats of other classes or varieties and contrasting classes **	3	5	10	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP – Wheat, Sample CW Account Admixture
Artificial stain, no residue %	0.0	0.1	0.1	2.0	Wheat, Sample CW Account Stained Kernels
Dark immature %	1	3	10	No limit	
Degermed %	4	7	13	No limit	
Fireburnt %	0.0	0.0	0.0	2.0	Wheat, Sample CW Account Fireburnt
Fusarium damage %	0.3	0.8	1.5	4.0	Wheat, Sample CW Account Fusarium Damage Over 10%- Wheat, Commercial Salvage
Grass green %	0.8	2.0	10.0	No limit	
Insect damage %	1	3	6	No limit	
Binburnt, severely mildewed rotted, mouldy %	0.01	0.02	0.03	2.50	Wheat, Sample CW Account Heated
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.1	0.4	1.0	2.5	Wheat, Sample CW Account Heated
Natural stain %	1	2	5	No limit	
Pink %	2	5	10	No limit	
Sawfly, Midge %	2	5	10	No limit	
Shrunken %	4	4	4	No limit	
Broken %	5	6	7	13	Sample Broken Grain
Total % Shrunken and broken	7	8	9	No limit within broken tolerances	
Smudge %	0.3	1.0	5.0	No limit	
Total % Smudge and blackpoint	10	20	35	No limit	
Severely sprouted %	0.1	0.2	0.3	No limit	
Total % Sprouted	0.5	1.0	3.0	No limit	

** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**

Wheat, Canada Western Special Purpose (CWSP), standard of quality

Grading factor	No. 1 CWSP	No. 2 CWSP	Grade, if No. 2 specs not met
Minimum test weight kg/hL (g/0.5 L)	72 (350)	65 (315)	Wheat, Sample CW Account Light Weight
Variety	Any variety of the class CWSP designated as such by order of the Commission	Any variety of the class CWSP designated as such by order of the Commission	

Wheat, Canada Western Special Purpose (CWSP), foreign material

Grading factor	No. 1 CWSP	No. 2 CWSP	Grade, if No. 2 specs not met
Ergot %	0.1	0.1	Wheat, Sample CW Account Ergot
Excreta %	0.03	0.03	Wheat, Sample CW Account Excreta
Stones %	0.03	0.06	2.5% or less– Rejected (grade) Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	5	10	See Mixed grain

Wheat, Canada Western Special Purpose (CWSP), grading factors

Grading factor	No. 1 CWSP	No. 2 CWSP	Grade, if No. 2 specs not met
Heated %	2.5	2.5	Wheat, Sample CW Account Heated
Fusarium damage %	1.0	4.0	10% or less–Wheat, Sample CW Account Fusarium Damage Over 10%– Wheat, Commercial Salvage
Artificial stain, no residue %	2.0	2.0	Wheat, Sample CW Account Stained Kernels
Fireburnt %	2.0	2.0	Wheat, Sample CW Account Fireburnt
Broken %	13	50	Sample Broken Grain

Wheat, Canada Eastern Red Spring (CERS), standard of quality

Grading factor	No. 1 CERS	No. 2 CERS	No. 3 CERS	No. 4 CERS	Grade, if specs for No. 4 CERS not met
Degree of soundness*	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	May be immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	75 (365)	72 (350)	69 (335)	65 (315)	Wheat, Sample CE Account Light Weight
Variety	Any variety of the class CERS designated as such by order of the Commission	Any variety of the class CERS designated as such by order of the Commission	Any variety of the class CERS designated as such by order of the Commission	Any variety of the class CERS designated as such by order of the Commission	

Note: Samples of CERS will be graded no lower than No. 3 CERS on account of mildew

* See **Mildew (MIL)** for applicable standard

Wheat, Canada Eastern Red Spring (CERS), foreign material

Grading factor	No. 1 CERS	No. 2 CERS	No. 3 CERS	No. 4 CERS	Grade, if specs for No. 4 CERS not met
Ergot %	0.04	0.04	0.04	0.10	Wheat, Sample CE Account Ergot
Excreta %	0.01	0.01	0.01	0.03	Wheat, Sample CE Account Excreta
Matter other than cereal grains %	0.2	0.3	0.5	1.0	Wheat, Sample CE Account Admixture
Sclerotinia %	0.04	0.04	0.04	0.25	Wheat, Sample CE Account Admixture
Stones %	0.03	0.03	0.06	0.10	2.5% or less– Wheat, Sample CE Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	0.8	1.5	3.5	10.0	See Mixed grain

Wheat, Canada Eastern Red Spring (CERS), grading factors

Grading factor	No. 1 CERS	No. 2 CERS	No. 3 CERS	No. 4 CERS	Grade, if specs for No. 4 CERS not met
Contrasting classes %	1	3	5	10%, either alone or in combination with each other, of amber durum and any variety of the class CEOW	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CEOW – Wheat, Sample CE Account Admixture
Artificial stain, no residue %	0.0	0.1	0.1	2.0	Wheat, Sample CE Account Stained Kernels
Dark immature %	1	3	10	No limit	
Degermed %	4	7	10	No limit	
Fireburnt %	0.0	0.0	0.0	2.0	Wheat, Sample CE Account Fireburnt
Fusarium damage %	1.0	1.0	1.5	5.0	Wheat, Sample CE Account Fusarium Damage
Grass green %	0.8	2.0	4.0	No limit	
Insect damage %	1	3	5	No limit	
Binburnt, severely mildewed rotted, mouldy %	0.02	0.05	0.10	2.50	Wheat, Sample CE Account Heated
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.1	0.8	2.0	2.5	Wheat, Sample CE Account Heated
Natural stain %	1	2	5	No limit	
Pink %	2	5	10	No limit	
Sawfly, Midge %	2	8	15	No limit	
Shrunken %	6	10	12	No limit	
Broken %	6	10	10	50	Sample Broken Grain
Total % Shrunken and broken	7	11	13	No limit within broken tolerances	
Penetrated Smudge %	0.1	0.5	1.0	No limit	
Total % Smudge	0.3	1.0	5.0	No limit	
Total % Smudge and blackpoint	10	20	35	No limit	
Sprouted %	0.5	2.5	8.0	No limit	

Wheat, Canada Eastern Hard Red Winter (CEHRW), standard of quality

Grading factor	No. 1 CEHRW	No. 2 CEHRW	No. 3 CEHRW	No. 4 CEHRW	Grade, if specs for No. 4 CEHRW not met
Degree of soundness*	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	May be immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	76 (370)	74 (360)	69 (335)	65 (315)	Wheat, Sample CE Account Light Weight
Variety	Any variety of the class CEHRW designated as such by order of the Commission	Any variety of the class CEHRW designated as such by order of the Commission	Any variety of the class CEHRW designated as such by order of the Commission	Any variety of the class CEHRW designated as such by order of the Commission	

Note: Samples of CEHRW will be graded no lower than No. 3 CEHRW on account of mildew

* See **Mildew (MIL)** for applicable standard

Wheat, Canada Eastern Hard Red Winter (CEHRW), foreign material

Grading factor	No. 1 CEHRW	No. 2 CEHRW	No. 3 CEHRW	No. 4 CEHRW	Grade, if specs for No. 4 CEHRW not met
Ergot %	0.04	0.04	0.04	0.10	Wheat, Sample CE Account Ergot
Excreta %	0.01	0.01	0.01	0.03	Wheat, Sample CE Account Excreta
Matter other than cereal grains %	0.2	0.3	0.5	1.0	Wheat, Sample CE Account Admixture
Sclerotinia %	0.04	0.04	0.04	0.25	Wheat, Sample CE Account Admixture
Stones %	0.03	0.03	0.06	0.10	2.5% or less– Wheat, Sample CE Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	0.8	1.5	3.5	10.0	See Mixed grain

Wheat, Canada Eastern Hard Red Winter (CEHRW), grading factors

Grading factor	No. 1 CEHRW	No. 2 CEHRW	No. 3 CEHRW	No. 4 CEHRW	Grade, if specs for No. 4 CEHRW not met
Contrasting classes %	1	3	5	10%, either alone or in combination with each other, of amber durum and any variety of the class CEOW	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CEOW – Wheat, Sample CE Account Admixture
Artificial stain, no residue %	0.0	0.1	0.1	2.0	Wheat, Sample CE Account Stained Kernels
Dark immature %	1	3	10	No limit	
Degermed %	4	7	10	No limit	
Fireburnt %	0.0	0.0	0.0	2.0	Wheat, Sample CE Account Fireburnt
Fusarium damage %	1.0	1.0	1.5	5.0	Wheat, Sample CE Account Fusarium Damage
Grass green %	0.8	2.0	4.0	No limit	
Insect damage %	1	3	5	No limit	
Binburnt, severely mildewed rotted, mouldy %	0.02	0.05	0.10	2.50	Wheat, Sample CE Account Heated
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.1	0.8	2.0	2.5	Wheat, Sample CE Account Heated
Natural stain %	1	2	5	No limit	
Pink %	1	5	10	No limit	
Sawfly, Midge %	2	8	15	No limit	
Shrunken %	6	10	12	No limit	
Broken %	6	10	10	50	Sample Broken Grain
Total % Shrunken and broken	7	11	13	No limit within broken tolerances	
Penetrated Smudge %	0.1	0.5	1.0	No limit	
Total % Smudge	0.3	1.0	5.0	No limit	
Total % Smudge and blackpoint	10	20	35	No limit	
Sprouted %	0.5	2.5	8.0	No limit	

Wheat, Canada Eastern Soft Red Winter (CESRW), standard of quality

Grading factor	No. 1 CESRW	No. 2 CESRW	No. 3 CESRW	No. 4 CESRW	Grade, if specs for No. 4 CESRW not met
Degree of soundness*	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	May be immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	76 (370)	74 (360)	69 (335)	65 (315)	Wheat, Sample CE Account Light Weight
Variety	Any variety of the class CESRW designated as such by order of the Commission	Any variety of the class CESRW designated as such by order of the Commission	Any variety of the class CESRW designated as such by order of the Commission	Any variety of the class CESRW designated as such by order of the Commission	

Note: Samples of CESRW will be graded no lower than No. 3 CESRW on account of mildew

* See **Mildew (MIL)** for applicable standard

Wheat, Canada Eastern Soft Red Winter (CESRW), foreign material

Grading factor	No. 1 CESRW	No. 2 CESRW	No. 3 CESRW	No. 4 CESRW	Grade, if specs for No. 4 CESRW not met
Ergot %	0.04	0.04	0.04	0.10	Wheat, Sample CE Account Ergot
Excreta %	0.01	0.01	0.01	0.03	Wheat, Sample CE Account Excreta
Matter other than cereal grains %	0.2	0.3	0.5	1.0	Wheat, Sample CE Account Admixture
Sclerotinia %	0.04	0.04	0.04	0.25	Wheat, Sample CE Account Admixture
Stones %	0.03	0.03	0.06	0.10	2.5% or less– Wheat, Sample CE Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	0.8	1.5	3.5	10.0	See Mixed grain

Wheat, Canada Eastern Soft Red Winter (CESRW), grading factors

Grading factor	No. 1 CESRW	No. 2 CESRW	No. 3 CESRW	No. 4 CESRW	Grade, if specs for No. 4 CESRW not met
Contrasting classes %	1	3	5	10%, either alone or in combination with each other, of amber durum and any variety of the class CEOW	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CEOW – Wheat, Sample CE Account Admixture
Artificial stain, no residue %	0.0	0.1	0.1	2.0	Wheat, Sample CE Account Stained Kernels
Dark immature %	1	3	10	No limit	
Degermed %	4	7	10	No limit	
Fireburnt %	0.0	0.0	0.0	2.0	Wheat, Sample CE Account Fireburnt
Fusarium damage %	1.0	1.0	1.5	5.0	Wheat, Sample CE Account Fusarium Damage
Grass green %	0.8	2.0	4.0	No limit	
Insect damage %	1	3	5	No limit	
Binburnt, severely mildewed rotted, mouldy %	0.02	0.05	0.10	2.50	Wheat, Sample CE Account Heated
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.1	0.8	2.0	2.5	Wheat, Sample CE Account Heated
Natural stain %	1	2	5	No limit	
Pink %	1	5	10	No limit	
Sawfly, Midge %	2	8	15	No limit	
Shrunken %	6	10	12	No limit	
Broken %	6	10	10	50	Sample Broken Grain
Total % Shrunken and broken	7	11	13	No limit within broken tolerances	
Penetrated Smudge %	0.1	0.5	1.0	No limit	
Total % Smudge	0.3	1.0	5.0	No limit	
Total % Smudge and blackpoint	10	20	35	No limit	
Sprouted %	0.5	2.5	8.0	No limit	

Wheat, Canada Eastern Amber Durum (CEAD), standard of quality

Grading factor	No. 1 CEAD	No. 2 CEAD	No. 3 CEAD	No. 4 CEAD	Grade, if specs for No. 4 CEAD not met
Degree of soundness	Reasonably well matured, reasonably free from damaged kernels	Reasonably well matured, reasonably free from severely damaged kernels	Fairly well matured, may be moderately weather-damaged or frost-damaged, reasonably free from severely damaged kernels	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	79 (387)	77 (377)	74 (362)	65 (318)	Wheat, Sample CE Account Light Weight
Minimum hard vitreous kernels %	80	60	40	No minimum	
Variety	Any variety of the class CEAD designated as such by order of the Commission	Any variety of the class CEAD designated as such by order of the Commission	Any variety of the class CEAD designated as such by order of the Commission	Any variety of amber durum wheat	

Wheat, Canada Eastern Amber Durum (CEAD), foreign material

Grading factor	No. 1 CEAD	No. 2 CEAD	No. 3 CEAD	No. 4 CEAD	Grade, if specs for No. 4 CEAD not met
Ergot %	0.02	0.02	0.04	0.10	Wheat, Sample CE Account Ergot
Excreta %	0.01	0.01	0.01	0.03	Wheat, Sample CE Account Excreta
Matter other than cereal grains %	0.2	0.3	0.5	1.0	Wheat, Sample CE Account Admixture
Sclerotinia %	0.02	0.02	0.04	0.25	Wheat, Sample CE Account Admixture
Stones %	0.03	0.03	0.03	0.10	2.5% or less– Wheat, Sample CE Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	0.5	1.5	2.0	10.0	See Mixed grain

Wheat, Canada Eastern Amber Durum (CEAD), grading factors

Grading factor	No. 1 CEAD	No. 2 CEAD	No. 3 CEAD	No. 4 CEAD	Grade, if specs for No. 4 CEAD not met
Other classes %	2	4	5	49	Wheat, Sample CE Account Admixture
Total % Wheats of other classes or varieties	5	10	15	No limit	
Artificial stain, no residue %	0.0	0.1	0.1	2.0	Wheat, Sample CE Account Stained Kernels
Degermed %	4	7	10	No limit	
Fireburnt %	0.0	0.0	0.0	2.0	Wheat, Sample CE Account Fireburnt
Fusarium damage %	1.0	1.0	1.0	5.0	Wheat, Sample CE Account Fusarium Damage
Grass green %	0.8	2.0	4.0	No limit	
Insect damage %	1	3	5	No limit	
Binburnt, severely mildewed rotted, mouldy %	0.02	0.04	0.06	2.50	Wheat, Sample CE Account Heated
Total % Heated, Binburnt, severely mildewed rotted, mouldy	0.1	0.3	0.8	2.5	Wheat, Sample CE Account Heated
Natural stain %	1	2	5	No limit	
Pink %	3	6	10	No limit	
Sawfly, Midge %	2	8	15	No limit	
Severe midge %	0.1	0.3	0.8	No limit	
Penetrated smudge %	0.1	0.3	0.8	No limit	
Total % Severe midge and penetrated smudge	0.1	0.3	0.8	No limit	
Total % Smudge	0.5	1.0	3.0	No limit	
Total % Smudge and blackpoint	10	15	35	No limit	
Shrunken %	6	10	12	No limit	
Broken %	6	10	10	50	Sample Broken Grain
Total % Shrunken and broken	7	10	15	No limit within broken tolerances	
Sprouted %	0.5	2.0	7.0	No limit	

Wheat, Canada Eastern White Winter (CEWW), standard of quality

Grading factor	No. 1 CEWW	No. 2 CEWW	No. 3 CEWW	No. 4 CEWW	Grade, if specs for No. 4 CEWW not met
Degree of soundness*	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	May be immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	76 (370)	74 (360)	69 (335)	65 (315)	Wheat, Sample CE Account Light Weight
Variety	Any variety of the class CEWW designated as such by order of the Commission	Any variety of the class CEWW designated as such by order of the Commission	Any variety of the class CEWW designated as such by order of the Commission	Any variety of the class CEWW designated as such by order of the Commission	

Note: Samples of CEWW will be graded no lower than No. 3 CEWW on account of mildew

* See **Mildew (MIL)** for applicable standard

Wheat, Canada Eastern White Winter (CEWW), foreign material

Grading factor	No. 1 CEWW	No. 2 CEWW	No. 3 CEWW	No. 4 CEWW	Grade, if specs for No. 4 CEWW not met
Ergot %	0.04	0.04	0.04	0.10	Wheat, Sample CE Account Ergot
Excreta %	0.01	0.01	0.01	0.03	Wheat, Sample CE Account Excreta
Matter other than cereal grains %	0.2	0.3	0.5	1.0	Wheat, Sample CE Account Admixture
Sclerotinia %	0.04	0.04	0.04	0.25	Wheat, Sample CE Account Admixture
Stones %	0.03	0.03	0.03	0.10	2.5% or less– Wheat, Sample CE Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	1.0	2.0	3.0	10.0	See Mixed grain

Wheat, Canada Eastern White Winter (CEWW), grading factors

Grading factor	No. 1 CEWW	No. 2 CEWW	No. 3 CEWW	No. 4 CEWW	Grade, if specs for No. 4 CEWW not met
Contrasting classes %	1	2	3	10%, either alone or in combination with each other, of amber durum and any variety of the class CEOW	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CEOW – Wheat, Sample CE Account Admixture
Total % Wheats of other classes or varieties and contrasting classes	5	6	10	10%, either alone or in combination with each other, of amber durum and any variety of the class CEOW	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CEOW – Wheat, Sample CE Account Admixture
Artificial stain, no residue %	0.0	0.1	0.1	2.0	Wheat, Sample CE Account Stained Kernels
Degermed %	4	7	10	No limit	
Fireburnt %	0.0	0.0	0.0	2.0	Wheat, Sample CE Account Fireburnt
Fusarium damage %	1.0	1.0	1.0	5.0	Wheat, Sample CE Account Fusarium Damage
Grass green %	0.8	2.0	4.0	No limit	
Insect damage %	1	3	5	No limit	
Binburnt, severely mildewed rotted, mouldy %	0.02	0.04	0.06	2.50	Wheat, Sample CE Account Heated
Total % Heated, Binburnt, severely mildewed rotted, mouldy %	0.1	0.3	0.8	2.5	Wheat, Sample CE Account Heated
Natural stain %	1	2	5	No limit	
Pink %	3	6	10	No limit	
Sawfly, Midge %	2	8	15	No limit	
Shrunken and broken %	3	5	8	No limit—maximum 50% broken	Sample Broken Grain
Penetrated Smudge %	0.1	0.5	1.0	No limit	
Total % Smudge	0.3	1.0	3.0	No limit	
Total % Smudge and blackpoint	10	15	35	No limit	
Sprouted %	1.0	5.0	8.0	No limit	

Wheat, Canada Eastern Other Wheat (CEOW), standard of quality

Grading factor	No. 1 CEOW	No. 2 CEOW	No. 3 CEOW	Grade, if specs for No. 3 CEOW not met
Degree of Soundness	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	May be immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	
Minimum test weight kg/hL (g/0.5 L)	74 (360)	69 (335)	65 (315)	Wheat, Sample CE Account Light Weight
Variety	Any variety of the class CEOW designated as such by order of the Commission	Any variety of the class CEOW designated as such by order of the Commission	Any variety of the class CEOW designated as such by order of the Commission	

Wheat, Canada Eastern Other Wheat (CEOW), foreign material

Grading factor	No. 1 CEOW	No. 2 CEOW	No. 3 CEOW	Grade, if specs for No. 3 CEOW not met
Ergot %	0.04	0.04	0.10	Wheat, Sample CE Account Ergot
Excreta %	0.01	0.01	0.03	Wheat Sample CE Account Excreta
Matter other than cereal grains %	0.3	0.5	1.0	Wheat Sample CE Account Admixture
Sclerotinia %	0.04	0.04	0.25	Wheat Sample CE Account Admixture
Stones %	0.03	0.06	0.10	2.5% or less– Wheat, Sample CE Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	1.5	3.5	10.0	See Mixed grain

Wheat, Canada Eastern Other Wheat (CEOW), grading factors

Grading factor	No. 1 CEOW	No. 2 CEOW	No. 3 CEOW	Grade, if specs for No. 3 CEOW not met
Artificial stain, no residue %	0.1	0.1	2.0	Wheat, Sample CE Account Stained Kernels
Fireburnt %	0.0	0.0	2.0	Wheat, Sample CE Account Fireburnt
Fusarium damage %	1.0	1.5	5.0	Wheat, Sample CE Account Fusarium Damage
Heated %	0.8	2.0	2.5	Wheat, Sample CE Account Heated

Note: Additional grading factors may apply and be assessed based on contract specifications set by the selecting company

Wheat, Canada Eastern Feed (CEFD), standard of quality

Grading factor	CE Feed	Grade, if specs for CE Feed not met
Degree of soundness	Reasonably sweet, may be immature or weather damaged	
Minimum test weight kg/hl (g/0.5L)	65 (315)	Wheat, Sample CE Account Light Weight
Variety	Any class or variety of wheat excluding amber durum	

Wheat, Canada Eastern Feed (CEFD), foreign material

Grading factor	CE Feed	Grade, if specs for CE Feed not met
Ergot %	0.1	Wheat, Sample CE Account Ergot
Excreta %	0.03	Wheat, Sample CE Account Excreta
Matter other than cereal grains %	1	Wheat, Sample CE Account Admixture
Sclerotinia %	0.25	Wheat, Sample CE Account Admixture
Stones %	0.1	2.5% or less– Wheat, Sample CE Account Stones Over 2.5%– Wheat, Sample Salvage
Total % Foreign material	10	See Mixed grain

Wheat, Canada Eastern Feed (CEFD), grading factors

Grading factor	CE Feed	Grade, if specs for CE Feed not met
Artificial stain, no residue %	2	Wheat, Sample CE Account Stained Kernels
Binburnt, severely mildewed, rotted, mouldy %	2.5	Wheat, Sample CE Account Heated
Total % Heated, Binburnt, severely mildewed, rotted, mouldy	2.5	Wheat, Sample CE Account Heated
Contrasting classes %	10% or less, either alone or in combination with each other, of amber durum and any variety of the class CEOW	Over 10%, either alone or in combination with each other, of amber durum and any variety of the class CEOW - Sample CE Account Admixture
Dark immature %	No limit	
Degermed %	No limit	
Fireburnt %	2	Wheat, Sample CE Account Fireburnt
Fusarium damage %	5	Wheat, Sample CE Account Fusarium Damage
Grass green %	No limit	
Insect damage %	No limit	
Natural stain %	No limit	
Pink %	No limit	
Sawfly, midge %	No limit	
Shrunken %	No limit	
Broken %	50	Sample Broken Grain
Total % Shrunken and broken	No limit within broken tolerances	
Smudge %	No limit	
Total % Smudge and blackpoint	No limit	
Sprouted %	No limit	

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 commercially clean determination table upon following the **Determination of commercially clean** procedure described in this chapter.

Dockage is not reported for commercially clean shipments.

Note: For shipments of eastern wheat classes, commercial cleanliness specifications listed in the CWRS commercially clean determination table is to be used.

Not commercially clean (NCC)

If any of the components exceed the allowable limits as defined in the table, the shipment becomes not commercially clean, and dockage is assessed using procedures for primary samples.

Export shipments, which 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 Canadian Grain Commission.

For samples representing not commercially clean shipments approved by the Canadian Grain Commission 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.

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 at any time after the cleaning assessment has been completed, including on export.

The purpose of this cleaning is not to remove all foreign material, but rather to reduce the admixture of conspicuous separable material to within the grade tolerance.

Refer to **Cleaning for grade improvement** for full instructions.

Grading

Wheat on export is graded using standards and the export grade determination tables.

Where no export grade determination table exists, and for export of Eastern classes of wheat, the primary grade determination tables are to be used.

Commercially clean determination table

Class	CWRS	CWHWS	CWAD			CWRW	CWSWS	CWES	CPSR	CPSW	CNHR	All classes (except CWAD and CWSP)	CWSP
Grade	No.1, 2, 3	No.1, 2, 3	No.1, 2, 3	No. 4	No. 5	No.1, 2,3	No.1, 2, 3	No.1, 2	No.1, 2	No.1, 2	No.1, 2, 3	CW Feed	No.1, 2
Broken grain through No. 5 buckwheat sieve (Exiting Primary %)	0.3	0.3	0.3	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5
Broken grain through No. 5 buckwheat sieve (Exiting Terminal %)	0.35	0.35	0.35	0.5	0.5	0.35	0.35	0.35	0.35	0.35	0.35	0.5	0.5
Broken grain through No. 5 buckwheat sieve (Exiting St. Lawrence Terminal %) *	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Small seeds %	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Attrition %	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Roughage %	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total small seeds, attrition and roughage %	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Large seeds %	0.2	0.2	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5
Wild oats %	0.05	0.05	0.15	0.15	0.15	0.10	0.05	0.10	0.10	0.10	0.05	0.1	0.1
Total small seeds, large seeds and wild oats %	0.2	0.2	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5
Total small seeds, large seeds, wild oats, roughage, and broken grain through No. 5 buckwheat sieve %	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Note: For shipments of eastern wheat classes, commercial cleanliness specifications listed in the CWRS commercially clean determination table is to be used.

* St. Lawrence Terminal includes Montréal, Sorel, Trois-Rivières, Québec, Baie-Comeau, Port-Cartier and Halifax

Export grade determination tables

Wheat, Canada Western Red Spring (CWRS), standard of quality

Grading factor	No. 1 CWRS	No. 2 CWRS	No. 3 CWRS	CW Feed
Degree of soundness*	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels
Minimum test weight kg/hL (g/0.5 L)	79 (385)	77 (375)	76 (370)	73 (355)
Minimum hard vitreous kernels %	65	No minimum	No minimum	No minimum
Minimum protein %	10.0	No minimum	No minimum	No minimum
Variety	Any variety of the class CWRS designated as such by order of the Commission	Any variety of the class CWRS designated as such by order of the Commission	Any variety of the class CWRS designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and CWSP

Note: Samples of CWRS will be graded no lower than No. 3 CWRS on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Western Red Spring (CWRS), foreign material

Grading factor	No. 1 CWRS	No. 2 CWRS	No. 3 CWRS	CW Feed
Ergot %	0.04	0.04	0.04	0.10
Excreta %	0.01	0.01	0.01	0.03
Matter other than cereal grains %	0.2	0.3	0.5	1.0
Other cereal grains %	0.4	0.8	1.3	5.0
Sclerotinia %	0.04	0.04	0.04	0.10
Stones %	0.03	0.03	0.06	0.10
Total % Mineral matter including stones	0.06	0.10	0.10	0.25
Total % Foreign material **n	0.4	0.8	1.3	5.0

** Total foreign material (TFM) includes all components in the commercially clean determinant table except broken wheat passing through the No.5 buckwheat sieve

Wheat, Canada Western Red Spring (CWRS), grading factors

Grading factor	No. 1 CWRS	No. 2 CWRS	No. 3 CWRS	CW Feed
Artificial stain, no residue %	0.0	0.1	0.1	2.0
Binburnt, severely mildewed, rotted, mouldy %	0.01	0.02	0.03	2.50
Total % Heated, binburnt, severely mildewed rotted, mouldy	0.1	0.4	1.0	2.5
Contrasting classes %	0.5	1.5	2.5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Total % Wheats of other classes or varieties and contrasting classes ***	1.5	3.0	5.0	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Dark immature %	1	3	10	No limit
Degermed %	4	7	13	No limit
Fireburnt %	0.0	0.0	0.0	2.0
Fusarium damage %	0.3	0.8	1.5	4.0
Grass green %	0.8	2.0	10.0	No limit
Insect damage %	1	3	6	No limit
Natural stain %	1	2	5	No limit
Pink %	2	5	10	No limit
Sawfly, midge %	2	5	10	No limit
Shrunken %	4	4	4	4
Broken %	5	6	7	13
Total % Shrunken and broken	7	8	9	15
Smudge %	0.3	1.0	5.0	No limit
Total % Smudge and blackpoint	10	20	35	No limit
Severely sprouted %	0.1	0.2	0.3	No limit
Total % Sprouted	0.5	1.0	3.0	No limit

*** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**

Wheat, Canada Western Hard White Spring (CWHWS), standard of quality

Grading factor	No. 1 CWHWS	No. 2 CWHWS	No. 3 CWHWS	CW Feed
Degree of soundness*	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels
Minimum test weight kg/hL (g/0.5 L)	79 (385)	77 (375)	76 (370)	73 (355)
Minimum protein %	10.0	No minimum	No minimum	No minimum
Variety	Any variety of the class CWHWS designated as such by order of the Commission	Any variety of the class CWHWS designated as such by order of the Commission	Any variety of the class CWHWS designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and CWSP

Note: Samples of CWHWS will be graded no lower than No. 3 CWHWS on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Western Hard White Spring (CWHWS), foreign material

Grading factor	No. 1 CWHWS	No. 2 CWHWS	No. 3 CWHWS	CW Feed
Ergot %	0.04	0.04	0.04	0.10
Excreta %	0.01	0.01	0.01	0.03
Matter other than cereal grains %	0.2	0.3	0.5	1.0
Other cereal grains %	0.4	0.8	1.3	5.0
Sclerotinia %	0.04	0.04	0.04	0.10
Stones %	0.03	0.03	0.06	0.10
Total % Mineral matter including stones	0.06	0.10	0.10	0.25
Total % Foreign material **	0.4	0.8	1.3	5.0

** Total foreign material (TFM) includes all components in the commercially clean determinant table except broken wheat passing through the No.5 buckwheat sieve

Wheat, Canada Western Hard White Spring (CWHWS), grading factors

Grading factor	No. 1 CWHWS	No. 2 CWHWS	No. 3 CWHWS	CW Feed
Artificial stain, no residue %	0.0	0.1	0.1	2.0
Binburnt, severely mildewed, rotted, mouldy %	0.01	0.02	0.03	2.50
Total % Heated, binburnt, severely mildewed rotted, mouldy	0.1	0.4	1.0	2.5
Contrasting classes %	0.5	1.5	2.5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Total % Wheats of other classes or varieties and contrasting classes	1.5	3.0	5.0	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Dark immature %	1	3	10	No limit
Degermed %	4	7	13	No limit
Fireburnt %	0.0	0.0	0.0	2.0
Fusarium damage %	0.3	0.8	1.5	4.0
Grass green %	0.8	2.0	10.0	No limit
Insect damage %	1	3	6	No limit
Natural stain %	1	2	5	No limit
Pink %	2	5	10	No limit
Sawfly, midge %	2	5	10	No limit
Shrunken %	4	4	4	4
Broken %	5	6	7	13
Total % Shrunken and broken	7	8	9	15
Smudge %	0.3	1.0	5.0	No limit
Total % Smudge and blackpoint	10	20	35	No limit
Severely sprouted %	0.1	0.2	0.3	No limit
Total % Sprouted	0.5	1.0	3.0	No limit

Wheat, Canada Western Amber Durum (CWAD), standard of quality

Grading factor	No. 1 CWAD	No. 2 CWAD	No. 3 CWAD	No. 4 CWAD	No. 5 CWAD
Degree of soundness*	Reasonably well matured, reasonably free from damaged kernels	Reasonably well matured, reasonably free from severely damaged kernels	Fairly well matured, may be moderately weather-damaged or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels
Minimum test weight kg/hL (g/0.5 L)	80 (392)	79 (387)	78 (382)	75 (367)	73 (357)
Minimum hard vitreous kernels %	80	60	40	No minimum	No minimum
Minimum protein %	9.5	No minimum	No minimum	No minimum	No minimum
Variety	Any variety of the class CWAD designated as such by order of the Commission	Any variety of the class CWAD designated as such by order of the Commission	Any variety of the class CWAD designated as such by order of the Commission	Any variety of the class CWAD designated as such by order of the Commission	Any variety of amber durum wheat

Note: Samples of CWAD will be graded no lower than No. 4 CWAD on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Western Amber Durum (CWAD), foreign material

Grading factor	No. 1 CWAD	No. 2 CWAD	No. 3 CWAD	No. 4 CWAD	No. 5 CWAD
Ergot %	0.02	0.02	0.04	0.04	0.10
Excreta %	0.01	0.01	0.01	0.01	0.03
Matter other than cereal grains %	0.2	0.3	0.5	0.5	1.0
Other cereal grains %	0.5	0.8	1.0	3.0	5.0
Sclerotinia %	0.02	0.02	0.04	0.04	0.10
Stones %	0.03	0.03	0.06	0.06	0.10
Total % Mineral matter including stones	0.06	0.10	0.10	0.10	0.25
Total % Foreign material **	0.5	0.8	1.0	3.0	5.0

** Total foreign material (TFM) includes all components in the commercially clean determinant table except broken wheat passing through the No.5 buckwheat sieve

Wheat, Canada Western Amber Durum (CWAD), grading factors

Grading factor	No. 1 CWAD	No. 2 CWAD	No. 3 CWAD	No. 4 CWAD	No. 5 CWAD
Artificial stain, no residue %	0.0	0.1	0.1	0.1	2.0
Binburnt, severely mildewed, rotted, mouldy %	0.01	0.01	0.02	0.50	5.00
Total % Heated, binburnt, severely mildewed rotted, mouldy	0.1	0.1	0.4	1.5	5.0
Other classes %	2.0	2.5	3.5	10.0	15.0
Total % Wheats of other classes or varieties ***	3	5	7	15	No limit
Degermed %	4	7	10	13	No limit
Fireburnt %	0.0	0.0	0.0	0.0	2.0
Fusarium damage %	0.5	0.5	2.0	2.0	4.0
Grass green %	0.8	2.0	4.0	10.0	No limit
Insect damage %	1	3	5	8	No limit
Natural stain %	1	2	5	8	No limit
Pink %	3	6	10	No limit	No limit
Sawfly, midge %	2	8	15	40	No limit
Severe midge %	0.1	0.3	0.8	2.0	No limit
Penetrated smudge %	0.1	0.3	0.8	2.0	No limit
Total % Severe midge and penetrated smudge	0.1	0.3	0.8	2.0	No limit
Total % Smudge	0.5	1.0	3.0	Consider overall appearance	No limit
Total % Smudge and blackpoint	5	10	20	Consider overall appearance	No limit
Shrunken %	3	3	3	3	3
Broken %	6	8	10	11	13
Total % Shrunken and broken	7	9	11	12	15
Severely sprouted %	0.2	0.4	3.0	12.0	No limit
Total % Sprouted	1	2	7	12	No limit

*** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**

Wheat, Canada Western Red Spring (CWRW), standard of quality

Grading factor	No. 1 CWRW	No. 2 CWRW	No. 3 CWRW	CW Feed
Degree of soundness*	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels
Minimum test weight kg/hL (g/0.5 L)	79 (386)	76 (370)	74 (361)	73 (355)
Minimum protein %	11.0	11.0	No minimum	No minimum
Variety	Any variety of the class CWRW designated as such by order of the Commission	Any variety of the class CWRW designated as such by order of the Commission	Any variety of the class CWRW designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and any variety of the class CWSP

Note: Samples of CWRW will be graded no lower than No. 3 CWRW on account of mildew

* See **Mildew (MIL)** for applicable standard

Wheat, Canada Western Red Winter (CWRW), foreign material

Grading factor	No. 1 CWRW	No. 2 CWRW	No. 3 CWRW	CW Feed
Ergot %	0.04	0.04	0.04	0.10
Excreta %	0.01	0.01	0.01	0.03
Matter other than cereal grains %	0.2	0.3	0.5	1.0
Other cereal grains %	0.4	0.7	1.3	5.0
Sclerotinia %	0.04	0.04	0.04	0.10
Stones %	0.03	0.06	0.06	0.10
Total % Mineral matter including stones	0.06	0.10	0.10	0.25
Total % Foreign material **	0.4	0.7	1.3	5.0

** Total foreign material (TFM) includes all components in the commercially clean determinant table except broken wheat passing through the No.5 buckwheat sieve

Wheat, Canada Western Red Winter (CWRW), grading factors

Grading factor	No. 1 CWRW	No. 2 CWRW	No. 3 CWRW	CW Feed
Contrasting classes %	1	2	3	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Total % Wheats of other classes or varieties and contrasting classes ***	3	5	10	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Artificial stain, no residue %	0.0	0.1	0.1	2.0
Blackpoint %	10	20	35	No limit
Natural stain %	1	2	5	No limit
Shrunken %	3	3	3	4
Broken%	3	5	8	13
Total % Shrunken and broken	3	5	8	15

*** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**

Wheat, Canada Western Red Winter (CWRW), grading factors included in total damage

Grading factor	No. 1 CWRW	No. 2 CWRW	No. 3 CWRW	CW Feed
Binburnt, severely mildewed, rotted, mouldy %	0.01	0.01	0.03	2.50
Total % Heated, binburnt, severely mildewed rotted, mouldy	0.1	0.1	0.5	2.5
Fireburnt %	0.0	0.0	0.0	2.0
Fusarium damage %	0.8	1.0	1.5	4.0
Sawfly, midge %	1	5	7	No limit
Penetrated smudge %	0.1	1.0	3.0	No limit
Total % Smudge	0.3	3.0	5.0	No limit
Severely sprouted %	0.1	0.2	0.3	No limit
Total % Sprouted	0.5	1.0	2.5	No limit
Total % Damage	2	5	7	N/A

Wheat, Canada Western Soft White Spring (CWSWS), standard of quality

Grading factor	No. 1 CWSWS	No. 2 CWSWS	No. 3 CWSWS	CW Feed
Degree of soundness*	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels
Minimum test weight kg/hL (g/0.5 L)	78 (380)	75 (365)	75 (365)	73 (355)
Variety	Any variety of the class CWRS designated as such by order of the Commission	Any variety of the class CWRS designated as such by order of the Commission	Any variety of the class CWRS designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and CWSP

Note: Samples of CWSWS will be graded no lower than No. 3 CWSWS on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Western Soft White Spring (CWSWS), foreign material

Grading factor	No. 1 CWSWS	No. 2 CWSWS	No. 3 CWSWS	CW Feed
Ergot %	0.04	0.04	0.04	0.10
Excreta %	0.01	0.01	0.01	0.03
Matter other than cereal grains %	0.2	0.3	0.5	1.0
Other cereal grains %	0.8	1.0	1.5	5.0
Sclerotinia %	0.04	0.04	0.04	0.10
Stones %	0.03	0.03	0.06	0.10
Total % Mineral matter including stones	0.06	0.10	0.10	0.25
Total % Foreign material **	0.8	1.0	1.5	5.0

** Total foreign material (TFM) includes all components in the commercially clean determinant table except broken wheat passing through the No.5 buckwheat sieve

Wheat, Canada Western Soft White Spring (CWSWS), grading factors

Grading factor	No. 1 CWSWS	No. 2 CWSWS	No. 3 CWSWS	CW Feed
Wheats of other classes or varieties % ***	1.5	3.0	5.0	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Artificial stain, no residue %	0.0	0.1	0.1	2.0
Degermed %	4	7	10	No limit
Fireburnt %	0.0	0.0	0.0	2.0
Fusarium damage %	1.5	1.5	1.5	4.0
Grass green %	0.8	2.0	4.0	No limit
Insect damage %	1	3	5	No limit
Binburnt, severely mildewed rotted, mouldy %	0.01	0.01	0.02	2.50
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.1	0.1	0.4	2.5
Natural stain %	1	2	5	No limit
Pink %	3	6	10	No limit
Sawfly, Midge %	2	8	15	No limit
Shrunken %	3	3	3	4
Broken %	5	6	7	13
Total % Shrunken and broken	7	8	9	15
Penetrated smudge %	0.1	0.5	1.0	No limit
Total % Smudge	0.3	1.0	3.0	No limit
Total % Smudge and blackpoint	10	15	35	No limit
Severely sprouted %	0.1	0.3	0.5	No limit
Total % Sprouted	1.0	5.0	8.0	No limit

*** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**

Wheat, Canada Western Extra Strong (CWES), standard of quality

Grading factor	No. 1 CWES	No. 2 CWES	CW Feed
Degree of soundness*	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels
Minimum test weight kg/hL (g/0.5 L)	78 (380)	76 (370)	73 (355)
Minimum protein %	10.0	No minimum	No minimum
Variety	Any variety of the class CWES designated as such by order of the Commission	Any variety of the class CWES designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and any variety of the class CWSP

Note: Samples of CWES will be graded no lower than No. 2 CWES on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Western Extra Strong (CWES), foreign material

Grading factor	No. 1 CWES	No. 2 CWES	CW Feed
Ergot %	0.04	0.04	0.10
Excreta %	0.01	0.03	0.03
Matter other than cereal grains %	0.2	0.3	1.0
Other cereal grains %	0.8	1.5	5.0
Sclerotinia %	0.04	0.04	0.10
Stones %	0.03	0.06	0.10
Total % Mineral matter including stones	0.10	0.10	0.25
Total % Foreign material **	0.8	1.5	5.0

** Total foreign material (TFM) includes all components in the commercially clean determinant table except broken wheat passing through the No.5 buckwheat sieve

Wheat, Canada Western Extra Strong (CWES), grading factors

Grading factor	No. 1 CWES	No. 2 CWES	CW Feed
Contrasting classes %	1.5	2.5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Total % Wheats of other classes or varieties and contrasting classes ***	3	5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Artificial stain, no residue %	0.1	0.1	2.0
Degermed %	7	13	No limit
Fireburnt %	0.0	0.0	2.0
Fusarium damage %	1.0	1.0	4.0
Grass green %	2	10	No limit
Insect damage %	3	8	No limit
Binburnt, severely mildewed rotted, mouldy %	0.01	0.01	2.50
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.4	1.0	2.5
Natural stain %	2	5	No limit
Pink %	5	10	No limit
Sawfly, Midge %	2	5	No limit
Shrunken %	3	3	4
Broken %	7	7	13
Total % Shrunken and broken	8	8	15
Smudge %	1	Consider overall appearance	No limit
Total % Smudge and blackpoint	15	Consider overall appearance	No limit
Severely sprouted %	0.10	0.30	No limit
Total % Sprouted	0.5	2.0	No limit

*** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**

Wheat, Canada Prairie Spring Red (CPSR), standard of quality

Grading factor	No. 1 CPSR	No. 2 CPSR	CW Feed
Degree of soundness*	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels
Minimum test weight kg/hL (g/0.5 L)	77 (375)	75 (365)	73 (355)
Variety	Any variety of the class CPSR designated as such by order of the Commission	Any variety of the class CPSR designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and any variety of the class CWSP

Note: Samples of CPSR will be graded no lower than No. 2 CPSR on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Prairie Spring Red (CPSR), foreign material

Grading factor	No. 1 CPSR	No. 2 CPSR	CW Feed
Ergot %	0.04	0.04	0.10
Excreta %	0.01	0.03	0.03
Matter other than cereal grains %	0.2	0.3	1.0
Other cereal grains %	0.8	1.5	5.0
Sclerotinia %	0.04	0.04	0.10
Stones %	0.03	0.03	0.10
Total % Mineral matter including stones	0.10	0.10	0.25
Total % Foreign material **	0.8	1.5	5.0

** Total foreign material (TFM) includes all components in the commercially clean determinant table except broken wheat passing through the No.5 buckwheat sieve

Wheat, Canada Prairie Spring Red (CPSR), grading factors

Grading factor	No. 1 CPSR	No. 2 CPSR	CW Feed
Contrasting classes %	3	5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Total % Wheats of other classes or varieties and contrasting classes ***	5	10	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Artificial stain, no residue %	0.1	0.1	2.0
Dark immature %	2.5	10.0	No limit
Degermed %	7	13	No limit
Fireburnt %	0.0	0.0	2.0
Fusarium damage %	1.5	1.5	4.0
Grass green %	2	10	No limit
Insect damage %	3	8	No limit
Binburnt, severely mildewed rotted, mouldy %	0.02	0.03	2.50
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.4	1.0	2.5
Natural stain %	2	5	No limit
Pink %	5	10	No limit
Sawfly, Midge %	3	8	No limit
Shrunken %	5	5	4
Broken %	6	6	13
Total % Shrunken and broken	9	9	15
Penetrated smudge %	0.10	0.50	No limit
Total % Smudge	1	5	No limit
Total % Smudge and blackpoint	20	35	No limit
Severely sprouted %	0.1	0.3	No limit
Total % Sprouted	0.5	2.0	No limit

*** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**

Wheat, Canada Prairie Spring White (CPSW), standard of quality

Grading factor	No. 1 CPSW	No. 2 CPSW	CW Feed
Degree of soundness*	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels
Minimum test weight kg/hL (g/0.5 L)	77 (375)	75 (365)	73 (355)
Variety	Any variety of the class CPSW designated as such by order of the Commission	Any variety of the class CPSW designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and any variety of the class CWSP

Note: Samples of CPSW will be graded no lower than No. 2 CPSW on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Prairie Spring White (CPSW), foreign material

Grading factor	No. 1 CPSW	No. 2 CPSW	CW Feed
Ergot %	0.04	0.04	0.10
Excreta %	0.01	0.03	0.03
Matter other than cereal grains %	0.2	0.3	1.0
Other cereal grains %	0.8	1.5	5.0
Sclerotinia %	0.04	0.04	0.10
Stones %	0.03	0.03	0.10
Total % Mineral matter including stones	0.10	0.10	0.25
Total % ** Foreign material	0.8	1.5	5.0

** Total foreign material (TFM) includes all components in the commercially clean determinant table except broken wheat passing through the No.5 buckwheat sieve

Wheat, Canada Prairie Spring White (CPSW), grading factors

Grading factor	No. 1 CPSW	No. 2 CPSW	CW Feed
Contrasting classes %	3	5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Total % Wheats of other classes or varieties and contrasting classes ***	5	10	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Artificial stain, no residue %	0.1	0.1	2.0
Dark immature %	2.5	10.0	No limit
Degermed %	7	13	No limit
Fireburnt %	0.0	0.0	2.0
Fusarium damage %	1.5	1.5	4.0
Grass green %	2	10	No limit
Insect damage %	3	8	No limit
Binburnt, severely mildewed rotted, mouldy %	0.02	0.03	2.50
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.4	1.0	2.5
Natural stain %	2	5	No limit
Pink %	5	10	No limit
Sawfly, Midge %	3	8	No limit
Shrunken %	5	5	4
Broken %	6	6	13
Total % Shrunken and broken	9	9	15
Penetrated smudge %	0.10	0.50	No limit
Total % Smudge	1	5	No limit
Total % Smudge and blackpoint	20	35	No limit
Severely sprouted %	0.10	0.30	No limit
Total % Sprouted	0.5	2.0	No limit

*** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**

Wheat, Canada Northern Hard Red (CNHR), standard of quality

Grading factor	No. 1 CNHR	No. 2 CNHR	No. 3 CNHR	CW Feed
Degree of soundness*	Reasonably well matured, reasonably free from damaged kernels	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels
Minimum test weight kg/hL (g/0.5 L)	79 (385)	77 (375)	76 (370)	73 (355)
Minimum protein %	11.0	No minimum	No minimum	No minimum
Variety	Any variety of the class CNHR designated as such by order of the Commission	Any variety of the class CNHR designated as such by order of the Commission	Any variety of the class CNHR designated as such by order of the Commission	Any class or variety of wheat excluding amber durum and any variety of the class CWSP

Note: Samples of CNHR will be graded no lower than No. 3 CNHR on account of mildew

* See **Frost (FR)** and **Mildew (MIL)** for applicable standard

Wheat, Canada Northern Hard Red (CNHR), foreign material

Grading factor	No. 1 CNHR	No. 2 CNHR	No. 3 CNHR	CW Feed
Ergot %	0.04	0.04	0.04	0.10
Excreta %	0.01	0.01	0.01	0.03
Matter other than cereal grains %	0.2	0.3	0.5	1.0
Other cereal grains %	0.4	0.8	1.3	5.0
Sclerotinia %	0.04	0.04	0.04	0.10
Stones %	0.03	0.03	0.06	0.10
Total % Mineral matter including stones	0.06	0.10	0.10	0.25
Total % Foreign material **	0.4	0.8	1.3	5.0

** Total foreign material (TFM) includes all components in the commercially clean determinant table except broken wheat passing through the No.5 buckwheat sieve

Wheat, Canada Northern Hard Red (CNHR), grading factors

Grading factor	No. 1 CNHR	No. 2 CNHR	No. 3 CNHR	CW Feed
Contrasting classes %	1	3	5	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Total % Wheats of other classes or varieties and contrasting classes ***	3	5	10	10%, either alone or in combination with each other, of amber durum and any variety of the class CWSP
Artificial stain, no residue %	0.0	0.1	0.1	2.0
Dark immature %	1	3	10	No limit
Degermed %	4	7	13	No limit
Fireburnt %	0.0	0.0	0.0	2.0
Fusarium damage %	0.3	0.8	1.5	4.0
Grass green %	0.8	2.0	10.0	No limit
Insect damage %	1	3	6	No limit
Binburnt, severely mildewed rotted, mouldy %	0.01	0.02	0.03	2.50
Total % Heated, binburnt, severely mildewed, rotted, mouldy	0.1	0.4	1.0	2.5
Natural stain %	1	2	5	No limit
Pink %	2	5	10	No limit
Sawfly, Midge %	2	5	10	No limit
Shrunken %	4	4	4	4
Broken %	5	6	7	13
Total % Shrunken and broken	7	8	9	15
Smudge %	0.3	1.0	5.0	No limit
Total % Smudge and blackpoint	10	20	35	No limit
Severely sprouted %	0.1	0.2	0.3	No limit
Total % Sprouted	0.5	1.0	3.0	No limit

*** See working tolerance for **Wheats of Other Classes or Varieties (WOOC)**