



---

# Official Grain Grading Guide

**August 1, 2006**

## **Regional offices**

Pacific Region .....Phone: 604-666-0488.....Fax: 604-666-8703  
Prairie Region.....Phone: 204-983-3308.....Fax: 204-983-5382  
Thunder Bay Region.....Phone: 807-626-1400 .....Fax: 807-623-8701  
Bayport Region.....Phone: 519-436-3190.....Fax: 519-436-3195  
Eastern Region.....Phone: 514-283-3873.....Fax: 514-283-7699

## **Service centers**

Brandon .....Phone: 204-726-7665 .....Fax: 204-726-7676  
Calgary .....Phone: 403-292-4211.....Fax: 403-292-5075  
Melville .....Phone: 306-728-6820.....Fax: 306-728-6821  
Moose Jaw.....Phone: 306-692-2141 .....Fax: 306-694-1488  
Saskatoon .....Phone: 306-975-5714 .....Fax: 306-975-4258  
Weyburn .....Phone: 306-848-3350.....Fax: 306-848-3353  
Winnipeg.....Phone: 204-983-2790.....Fax: 204-984-5131

**Quality • Service • Innovation**



---

## 4. Wheat

---

<b>Classes and varieties .....</b>	<b>4-3</b>
<b>Determination of commercially clean .....</b>	<b>4-5</b>
Export ready (ER) .....	4-6
Not ready for export (NRE) .....	4-6
<b>Determination of dockage .....</b>	<b>4-7</b>
Definitions .....	4-7
Dockage not reported .....	4-7
Normal cleaning procedures .....	4-7
Composition of dockage .....	4-8
Cleaning for grade improvement .....	4-8
Optional analysis .....	4-10
<b>Grading .....</b>	<b>4-11</b>
Important definitions .....	4-11
Net weight of sample .....	4-11
Kernel counts (K) .....	4-11
Hazardous substances in sample .....	4-11
Representative portion for grading .....	4-11
Grading factors .....	4-13
Artificial stain (ART STND) .....	4-13
Binburnt kernels (BBT) .....	4-13
Blackpoint (BLK PT) .....	4-14
Broken (BKN) .....	4-14
Common bunt (stinking smut) (SMUT) .....	4-14
Contaminated grain .....	4-14
Contrasting classes (CON CL) .....	4-15
Darkened kernels (amber durum) .....	4-15
Dark immature kernels (DKIM) .....	4-15
Degermed kernels (DGM) .....	4-15
Earth pellets (EP) .....	4-15
Ergot (ERG) .....	4-15
Excreta (EXCR) .....	4-16
Fertilizer pellets (FERT PLTS) .....	4-16
Fireburnt kernels (FBNT) .....	4-16
Foreign material (FM) .....	4-16
Frost/Heat stress (FRHTS) .....	4-16
Fusarium damage (FUS DMG) .....	4-17
Grass green kernels (GRASS GR) .....	4-17
Grasshopper, army worm damage (GAW) .....	4-17
Hard vitreous kernels (HVK) .....	4-17
Heated kernels (HTD) .....	4-19
Indian meal moth (DGM) .....	4-19
Matter other than cereal grains (MOTCG) .....	4-19
Midge damage (MDGE DMG) .....	4-19
Mouldy kernels (MLDY KRNL) .....	4-20
Natural stain (NSTN) .....	4-20
Odour (ODOR) .....	4-20
Other cereal grains (OCG) .....	4-21
Other cereal grains and other matter (OCGOM) .....	4-21

Penetrated smudge (PENT SM) .....	4-21
Pink kernels (PNK) .....	4-21
Protein (PROT) .....	4-21
Red smudge (RSM) .....	4-22
Rotted kernels (ROT KRNL).....	4-22
Ruptured kernels .....	4-22
Sawfly damage (SFLY DMG) .....	4-22
Sclerotinia sclerotiorum (SCL) .....	4-23
Severe midge damage (SEVMDGE).....	4-23
Severely mildewed kernels (SEVMIL) .....	4-23
Severely sprouted kernels (SEVSPTD) .....	4-24
Shrunken and broken (SHR, BKN) .....	4-24
Smudge (SM) .....	4-25
Soft earth pellets (SEP) .....	4-26
Sprouted kernels (SPTD).....	4-26
Stones (STNS) .....	4-27
Streak mould .....	4-29
Superficial discolouration (SUPDISCLR).....	4-29
Treated seed and other chemical substances .....	4-29
Wheats of other classes or varieties (WOOC) .....	4-30

**Primary grade determinants tables.....4-32**

Wheat, Canada Western Red Spring (CWRS).....	4-32
Wheat, Canada Western Hard White Spring (CWHWS) .....	4-34
Wheat, Canada Western Amber Durum (CWAD).....	4-36
Wheat, Canada Western Red Winter (CWRW).....	4-38
Wheat, Canada Western Soft White Spring (CWSWS) .....	4-40
Wheat, Canada Western Extra Strong (CWES).....	4-42
Wheat, Canada Prairie Spring White (CPSW).....	4-44
Wheat, Canada Prairie Spring Red (CPSR) .....	4-46
Wheat, Canada Eastern Red (CER).....	4-48
Wheat, Canada Eastern Red Spring (CERS) .....	4-50
Wheat, Canada Eastern Hard Red Winter (CEHRW).....	4-52
Wheat, Canada Eastern Soft Red Winter (CESRW) .....	4-54
Wheat, Canada Eastern Amber Durum (CEAD) .....	4-56
Wheat, Canada Eastern White Winter (CEWW) .....	4-58
Wheat, Canada Eastern Soft White Spring (CESWS).....	4-60
Wheat, Canada Eastern Hard White Spring (CEHWS) .....	4-62

**Export shipments.....4-64**

Commercially clean .....	4-64
Not commercially clean (NCC).....	4-64
Grading .....	4-64

**Export grade determinant tables.....4-65**

Wheat, Canada Western Red Spring (CWRS).....	4-65
Wheat, Canada Western Hard White Spring (CWHWS) .....	4-67
Wheat, Canada Western Amber Durum (CWAD).....	4-69
Wheat, Canada Western Red Winter (CWRW).....	4-71
Wheat, Canada Western Soft White Spring (CWSWS) .....	4-73
Wheat, Canada Western Extra Strong (CWES).....	4-75
Wheat, Canada Prairie Spring Red (CPSR) .....	4-77
Wheat, Canada Prairie Spring White (CPSW).....	4-79

## Classes and varieties

Class name	Grades	Variety (from the Regulations)
Canada Western Red Spring	No. 1 CWRS No. 2 CWRS No. 3 CWRS No. 4 CWRS	Any variety of the class CWRS designated as such by order of the Commission
Canada Western Hard White Spring	No. 1 CWHWS No. 2 CWHWS No. 3 CWHWS No. 4 CWHWS	Any variety of the class CWHWS designated as such by order of the Commission
Canada Western Amber Durum	No. 1 CWAD No. 2 CWAD No. 3 CWAD No. 4 CWAD	Any variety of the class CWAD designated as such by order of the Commission
	No. 5 CWAD	Any variety of amber durum wheat
Canada Western Red Winter	No. 1 CWRW No. 2 CWRW	Any variety of the class CWRW designated as such by order of the Commission
Canada Western Soft White Spring	No. 1 CWSWS No. 2 CWSWS No. 3 CWSWS	Any variety of the class CWSWS designated as such by order of the Commission
Canada Western Extra Strong	No. 1 CWES No. 2 CWES	Any variety of the class CWES designated as such by order of the Commission
Canada Prairie Spring White	No. 1 CPSW No. 2 CPSW	Any variety of the class CPSW designated as such by order of the Commission
Canada Prairie Spring Red	No. 1 CPSR No. 1 CPSR	Any variety of the class CPSR designated as such by order of the Commission
Canada Western Feed	CW Feed	Any type or variety of wheat excluding amber durum

Class name	Grades	Variety (from the Regulations)
Canada Eastern Red	No. 1 CER No. 2 CER No. 3 CER	Any registered variety of red wheat
Canada Eastern Red Spring	No. 1 CERS No. 2 CERS No. 3 CERS	Any variety of the class CERS designated as such by order of the Commission
Canada Eastern Hard Red Winter	No. 1 CEHRW No. 2 CEHRW No. 3 CEHRW	Any variety of the class CEHRW designated as such by order of the Commission
Canada Eastern Soft Red Winter	No. 1 CESRW No. 2 CESRW No. 3 CESRW	Any variety of the class CESRW designated as such by order of the Commission
Canada Eastern Amber Durum	No. 1 CEAD No. 2 CEAD No. 3 CEAD	Any variety of the class CEAD designated as such by order of the Commission
	CE Feed Durum	Any variety of amber durum wheat
Canada Eastern White Winter	No. 1 CEWW No. 2 CEWW No. 3 CEWW	Any variety of the class CEWW designated as such by order of the Commission
Canada Eastern Soft White Spring	No. 1 CESWS No. 2 CESWS No. 3 CESWS	Any variety of the class CESWS designated as such by order of the Commission
Canada Eastern Hard White Spring	No. 1 CEHWS	Any variety of the class CEHWS designated as such by order of the Commission
	No. 2 CEHWS	
	No. 3 CEHWS	
Canada Eastern Feed	CE Feed	Any type or variety of wheat excluding amber durum

---

## Determination of commercially clean

Dockage is not assessed on wheat samples that meet the commercially clean specifications defined in the wheat export grade determinant tables. 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 0.05% of small seeds without hand sieving and weighing the seeds then dockage will be assessed using procedures defined under *Determination of dockage*. Where there is any doubt regarding whether the sample is commercially clean, the sample must be analyzed using the procedures outlined below in steps 1 through 13 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 should be at least 900 g.
  - Unofficial samples should be at least 750 g.
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 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. (Column #1 in the wheat export grade determinant tables)
5. Small seeds passing the No. 4.5 round hole sieve are weighed and the percentage calculated to determine if they meet the commercially clean specification of the grade for small seeds. (Column #2 in the wheat export grade determinant tables)
6. Material other than 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. (Column #3 in the wheat export grade determinant tables)
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. (Column #4 in the wheat export grade determinant tables)

**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 the sample is “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. (Column #5 in the wheat export grade determinant tables)
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. (Column #6 in the wheat export grade determinant tables)
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. (Column #7 in the wheat export grade determinant tables)
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. (Column #8 in the wheat export grade determinant tables)

Should the percentage concentration of any of the factors determined in steps 1 through 13 exceed the specifications set out in columns #1 through #8 of the wheat export grade determinant tables the sample will be considered to be not commercial clean. Dockage will be assessed on samples determined to be not commercially clean using the procedures defined in *Determination of dockage*.

**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 and contrasting classes must meet the export specifications for the grade
3. Total foreign material must meet the export specification for the grade.

Carlots, which are commercially clean but do not meet the export specifications for either wheat of other classes or total foreign material, will be designated as “Not Ready for Export”.

### **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, contrasting classes or foreign material

---

## Determination of dockage

### Definitions

Dockage is assessed to the nearest 0.1%.

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

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

Dockage is assessed in two stages.

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

### Dockage not reported

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

- Wheat, Sample CW/CE/CAN Account Fireburnt
- Wheat, Sample Salvage
- Wheat, Sample Condemned

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

### Normal cleaning procedures

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

1. Set up the Carter dockage tester 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 should be at least 900 g.
  - Unofficial samples should be at least 750 g.
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.

### Composition of dockage

Dockage includes

- Wheat with long rootlets, unthreshed wheat heads, and material other than wheat removed by the No. 25 riddle
- Material removed by No. 5 buckwheat sieve in the lower position
- Material removed by aspiration
- A maximum of 10% of soft earth pellets handpicked from the clean sample
- Material removed by *Cleaning for grade improvement*

### Cleaning for grade improvement

If the grade of a 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 normal cleaning.

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 normal cleaning, examine the material to be removed and select your equipment according to that material. See the table, *Cleaning for grade improvement*, 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 you use a hand sieve, move the sieve from left to right 30 times, using a sifting motion. One time is one complete motion from the centre, to one side, to the other side, and back to the centre. The total distance from left to right is 20 cm, or about eight inches.
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
<b>Broken kernels</b>	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.  <i>See Shrunken and broken.</i>
<b>Bunt balls</b>	Carter dockage tester, using the setup for <i>Normal cleaning procedures</i> , 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.  <i>See Common bunt.</i>
<b>Foreign material, such as cockle, oat groats, or rye grass</b>	No. 6 buckwheat hand sieve No. 10x10 wire hand sieve	Add material to dockage, if the grade is improved as a result.
<b>Stones</b>	No. 6 buckwheat hand sieve	If the weight of stones and other material removed is <ul style="list-style-type: none"> <li>• 5.0% or less of the gross weight, assess as dockage.</li> <li>• More than 5.0% of the gross weight, see <i>Stones</i> in Grading factors, or the relevant grade determinants table.</li> </ul>
<b>Wild oats</b>	Carter dockage tester, using the setup for <i>Normal cleaning procedures</i> , 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 or elevator, and the elevator manager agrees, dockage material will be analyzed for the presence of grain. The percentage and grade of any grain contained in the dockage will be reported and elevator stocks will be adjusted on the basis of the analysis. Agreement of the shipper and unload elevator must be conveyed to the CGC in writing prior to the analysis being performed.

### Procedures

1. Analyze the official sample.
2. Record the following on inspection records:
  - The percentage by gross weight to the nearest 0.1% and the grade of 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 CWRS*

*4.0% Domestic Mustard Seed, No. 1 CAN Oriental*

*1.0% dockage*

---

## Grading

### Important definitions

#### Net weight of sample

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

#### Kernel counts (K)

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

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

#### 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 the Regulations as "any pesticide, herbicide or dessicant".

#### Representative portion for grading

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

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

Values in the table on the next page represent a range of recommended portions of samples for grading.

**Representative portion of wheat for grading, grams**

Grading factor	Minimum	Optimum	Export
Artificial stain	250	500	500
Binburnt kernels	100	1000	1000
Blackpoint	25	50	50
Common bunt	50	100	100
Darkened kernels	100	500	500
Dark immature kernels	50	100	100
Degermed kernels	25	50	50
Ergot	500	1000	1000
Excreta	working sample	working sample	working sample
Fireburnt	500	working sample	working sample
Fusarium damage	10	100	100
Grasshopper, armyworm damage	50	100	100
Grass green kernels	50	100	100
Hard vitreous kernels, sieving	250	250	250
Hard vitreous kernels, handpick	15	25	25
Heated	25	250	500
Matter other than cereal grains	50	100	250
Mouldy	100	1000	1000
Natural stain	50	100	100
Odour	working sample	working sample	working sample
Other cereal grains	25	100	250
Other cereal grains and other matter	250	250	250
Penetrated smudge	100	500	500
Pink kernels	50	100	100
Red smudge	100	500	500
Rotted	100	1000	1000
Sawfly, midge damage	50	100	100
Sclerotinia	500	1000	1000
Severe midge damage	25	100	100
Severely mildewed	100	1000	1000
Severely sprouted	50	100	100
Shrunken and broken	250	250	250
Smudge	100	500	500
Soft earth pellets	working sample	working sample	working sample
Sprouted kernels	10	100	100
Stones	500	1000	1000
Superficial discolouration	working sample	working sample	working sample
Wheats of other classes or varieties	15 to 50	25 to 100	25 to 100

## Grading factors

### 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
- Does not include any stain caused by coming into contact with poisonous substances, or any stain that could be considered *Contaminated grain*

#### Representative portion for analysis

Minimum—250 g

Optimum—500 g

Export—500 g

#### Procedures

- If the amount of stain is not excessive, determine the kernel count.
- If the amount of stain seems excessive, determine the weight of stained kernels as a percentage of the net weight of the sample.
- ▲ **Important** If you are uncertain about the identity of the stain, treat the sample as *Contaminated grain*.

---

### Binburnt kernels (BBT)

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

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

#### Representative portion for analysis

Minimum—100 g

Optimum—1000 g

Export—1000 g

#### Procedures

- If the number of binburnt kernels is not excessive, determine the number of kernels in 1000 g.
- If the kernel count is excessive, determine the weight of binburnt 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.

### Representative portion for analysis

Minimum—25 g

Optimum—50 g

Export—50 g

### Procedures

- Disregard a slight discolouration restricted to the germ.
- When the discolouration affects more than one-half of the kernel or extends into the crease, it is considered smudge.

In assessing blackpoint

- Depending on the severity of the discolouration and the overall quality of the sample, established tolerances may be exceeded at the inspector's discretion.

---

## 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*

---

## 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

### Representative portion for analysis

Minimum—50 g

Optimum—100 g

Export—100 g

### Procedures

See procedures for *Cleaning for grade improvement*.

- If samples have a distinct odour or are heavily infected with non-removable bunt balls, 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* and graded accordingly.

---

## Contaminated grain

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

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

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

---

**Contrasting classes (CON CL)**

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

---

**Darkened kernels (amber durum)**

Darkened kernels (amber durum) – Darkened kernels are similar in appearance to penetrated smudge with the exception that discolouration is gray to charcoal in colour rather than red to dark brown.

For grading purposes, darkened kernels should be considered as, and in conjunction with severe midge damage.

**Representative portion for analysis**

Minimum—100 g

Optimum—500 g

Export—500 g

---

**Dark immature kernels (DKIM)**

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

**Representative portion for analysis**

Minimum—50 g

Optimum—100 g

Export—100 g

---

**Degermed kernels (DGM)**

The germ has been removed through the mechanical handling process. Degermed kernels lack the greyish discolouration that is often present with sprouted kernels.

**Representative portion for analysis**

Minimum—25 g

Optimum—50 g

Export—50 g

---

**Earth pellets (EP)**

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

**Ergot (ERG)**

Ergot is a plant disease which produces elongated fungus bodies with a purplish black exterior, a purplish white to off-white interior, and a relatively smooth surface texture.

**Representative portion for analysis**

Minimum—500 g

Optimum—1000 g

Export—1000 g

**Procedures**

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

---

## Excreta (EXCR)

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

### Representative portion for analysis

Minimum—working  
sample

Optimum—working  
sample

Export—working  
sample

---

## Fertilizer pellets (FERT PLTS)

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

### Representative portion for analysis

Minimum—working  
sample

Optimum—working  
sample

Export—working  
sample

### Procedures

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

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

---

## Fireburnt 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.

### Representative portion for analysis

Minimum—500 g

Optimum—working  
sample

Export—working  
sample

---

## Foreign material (FM)

Foreign material is anything that is not wheat that remains in the sample after the removal of dockage.

---

## Frost/Heat stress (FRHTS)

Frost/Heat Stress refers to wheat kernels with blistered brans as a result of exposure to freezing temperatures or prolonged hot weather conditions. The degree of blistering ranges from fine to coarse and is dependent upon the maturity of the grain, the temperature to which the grain is exposed and the duration of the exposure. Samples containing kernels affected by frost/heat stress are graded according to the degree of soundness definition as reflected in the standard or guide samples for each grade.

---

### **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 fibrous growth which may be visible only under a magnifying lens.

#### **Representative portion for analysis**

Minimum—10 g

Optimum—100 g

Export—100 g

#### **Procedures**

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, use only kernels with this white or pinkish mould or growth.

---

### **Grass green kernels (GRASS GR)**

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

#### **Representative portion for analysis**

Minimum—50 g

Optimum—100 g

Export—100 g

---

### **Grasshopper, army worm damage (GAW)**

Kernels damaged by grasshopper or army worm are chewed, usually on the sides.

#### **Representative portion for analysis**

Minimum—25 g

Optimum—100 g

Export—

100 g

---

### **Hard vitreous kernels (HVK)**

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

#### **Red Spring and Red Winter – Western Canada**

Non-vitreous material includes

- Contrasting classes of wheat
- Foreign material
- Kernels, including damaged and broken kernels, having a defined starch area of at least half the surface area of the kernel that clearly contrasts with the translucent colour of the vitreous kernels

**Note: Cutting of kernels is not permitted**

#### **Amber Durum**

Non-vitreous material includes:

- Wheats of other classes
- Foreign material

- Kernels, including damaged and broken 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:
  - Faces where the cut has resulted in a flaking of the endosperm
  - Faces having a minute starch area roughly the size of a pencil point typically at the trough of the cheeks
  - Faces that are cloudy overall but with no dense white starch area

**Representative portion for sieving**

Minimum—250 g                      Optimum—250 g                      Export—250 g

**Representative portion for handpicking**

Minimum—15 g                      Optimum—25 g                      Export—25 g

**Procedures**

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 15 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.

---

**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.

**Representative portion for analysis**

Minimum—25 g

Optimum—250 g

Export—500 g

---

**Indian meal moth (DGM)**

Consider kernels showing damage from Indian meal moth as degermed.  
See *Degermed*.

**Representative portion for analysis**

Minimum—25 g

Optimum—50 g

Export—50 g

---

**Matter other than cereal grains (MOTCG)**

Matter other than cereal grains is

- Inseparable seeds such as ragweed, Tartary buckwheat, rye grass, and wild oats
- Non-cereal domestic grains such as flaxseed, corn, peas, buckwheat and lentils that remain in the cleaned sample

**Representative portion for analysis**

Minimum—50 g

Optimum—100 g

Export—250 g

---

**Midge damage (MDGE DMG)**

Midge-damaged kernels are distinctly shrunken or distorted. They are characterized by a depression or caved-in side marked by a scarred pericarp. The pericarp is frequently ruptured, exposing the endosperm.

**Representative portion for analysis**

Minimum—25 g

Optimum—100 g

Export—100 g

---

### Mouldy kernels (MLDY KRNL)

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 can feel spongy under pressure.

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

#### Representative portion for analysis

Minimum—100 g                      Optimum—1000 g                      Export—1000 g

#### Procedures

For CE wheat

- If the number of mouldy kernels is not excessive, determine the number of kernels in 1000 g.
- If the number of mouldy kernels is excessive, determine the weight of mouldy kernels as a percentage of the net weight of the sample.

For CW wheat

- Determine the weight of mouldy kernels as a percentage of the net weight of the sample
- If the number of mouldy kernels is not excessive, determine the number of kernels in 1000 g.

---

### Natural stain (NSTN)

A natural stain is any stain on kernels caused by contact with natural substances such as bunt spores, soil or weeds.

#### Representative portion for analysis

Minimum—50 g                      Optimum—100 g                      Export—100 g

---

### 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

#### Representative portion for analysis

Minimum—working sample                      Optimum—working sample                      Export—working sample

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

---

### 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.

#### Representative portion for analysis

Minimum—25 g

Optimum—100 g

Export—250 g

---

### Other cereal grains and other matter (OCGOM)

Other cereal grains and other matter in the export grade determinant tables refers to cereal grains other than wheat and to inseparable material excluding large seeds, wild oats, stones, mineral matter, ergot and *sclerotinia sclerotiorum*.

#### Representative portion for analysis

Minimum—250 g

Optimum—250 g

Export—250 g

---

### Penetrated smudge (PENT SM)

With penetrated smudge, the discolouration penetrates and extends throughout the endosperm, usually as a result of a more severe infection.

#### Representative portion for analysis

Minimum—100 g

Optimum—500 g

Export—500 g

#### Procedures

- If the amount of smudge is not excessive, determine the kernel count.
  - If the kernel count is excessive, determine the amount of smudge as a percentage of the net weight of the sample.
- 

### Pink kernels (PNK)

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

- Are shrunken
- Display a pink discolouration

▲ **Important:** Do not confuse pink kernels with fusarium-damaged kernels, pesticide treated seed or other contaminated grains.

#### Representative portion for analysis

Minimum—50 g

Optimum—100 g

Export—100 g

---

### Protein (PROT)

The classes of CWRS, CWHWS, CWAD, CWES and CWRW wheat have a minimum protein level.

See *Primary grade determinants tables*.

---

### Red smudge (RSM)

Red smudge is a dark reddish discoloration usually associated with amber durum wheat. It usually affects the entire bran portion of the kernel. Discoloration is not superficial and cannot be removed through abrasion.

#### Representative portion for analysis

Minimum—100 g

Optimum—500 g

Export—500 g

#### Procedures

- If the amount of smudge is not excessive, determine the kernel count.
- If the kernel count is excessive, determine the amount of smudge as a percentage of the net weight of the sample.

---

### Rotted kernels (ROT KRNL)

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

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

#### Representative portion for analysis

Minimum—100 g

Optimum—1000 g

Export—1000 g

#### Procedures

For CE wheat

- If the number of rotted kernels is not excessive, determine the number of kernels in 1000 g.
- If the number of rotted kernels is excessive, determine the weight of rotted kernels as a percentage of the net weight of the sample.

For CW wheat

- If the number of rotted kernels is not excessive, determine the number of kernels in 1000 g.
- Determine the weight of rotted kernels as a percentage of the net weight of the sample.

---

### Ruptured kernels

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

Note: Ruptured kernels are considered as severely damaged for grading purposes and are assessed under the “Degree of Soundness” definition of the grading table.

---

### Sawfly damage (SFLY DMG)

Kernels with sawfly damage are shrivelled or distorted.

#### Representative portion for analysis

Minimum—25 g

Optimum—100 g

Export—100 g

---

### **Sclerotinia sclerotiorum (SCL)**

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

#### **Representative portion for analysis**

Minimum—500 g

Optimum—1000 g

Export—1000 g

#### **Procedures**

- Determine the weight of the *sclerotinia sclerotiorum* as a percentage of the net weight of the sample.

---

### **Severe midge damage (SEVMDGE)**

Midge damaged kernels that are blackened by moulds are classed as severe midge damage. This discolouration is the result of a secondary fungal infection. Severe midge damage is determined for CWAD only.

#### **Representative portion for analysis**

Minimum—25 g

Optimum—100 g

Export—100 g

---

### **Severely mildewed kernels (SEVMIL)**

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

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

#### **Representative portion for analysis**

Minimum—100 g

Optimum—1000 g

Export—1000 g

#### **Procedures**

For CE wheat

- If the number of severely mildewed kernels is not excessive, determine the number of kernels in 1000 g.
- If the kernel count is excessive, determine the weight of severely mildewed kernels as a percentage of the net weight of the sample.

For CW wheat

- If the number of rotted kernels is not excessive, determine the number of kernels in 1000 g.
- If the kernel count is excessive, determine the weight of severely mildewed kernels as a percentage of the net weight of the sample.

---

**Severely sprouted kernels (SEVSPTD)**

Kernels are assessed as severely sprouted when they

- Have sprouts extending beyond the normal contours of the germ
- Are severely degenerated as an apparent result of advanced sprouting

**Representative portion for analysis**

Minimum—50 g

Optimum—100 g

Export—100 g

---

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

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

**Shrunken kernels (SHR)**

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

**Representative portion for analysis**

Minimum—250 g

Optimum—250 g

Export—250 g

**Determine the percentage of shrunken kernels**

1. Using a Boerner-type divider, divide a representative portion of approximately 250 g from the sample.
2. Pass the portion through the Carter dockage tester set up as follows:

Feed control	#5
Air control	Off
Riddle	None
Top sieve	No. 4.5 slotted
Centre sieve	Blank tray
Bottom sieve	None
Sieve cleaner	Off

3. Handpick broken kernels which pass through the sieve.

**Determine the percentage of broken kernels**

4. Using a Boerner-type divider and the remaining portion from which the shrunken kernels have been removed, divide a representative portion of approximately 50 g.
5. Handpick broken kernels from the 50-g portion.
6. Add this percentage to the percentage of handpicked kernels from Step 3.
7. Determine the percentage by net weight of broken kernels.

## Report total shrunken and broken (TSHRBKN)

8. When the percentage of shrunken, broken or total shrunken and broken is the grade determinant and is over the grade tolerance by up to 0.9% the excess fraction up to 0.9% is truncated for grade determination, for example, 4.6% is considered 4.0%. However, the percentages of shrunken, broken and total shrunken and broken recorded in documentation is the actual non-truncated percentages. The percentages of total shrunken and broken subject to truncation is the sum of the actual non-truncated percentages of shrunken kernels and of broken kernels.

### Examples

1 CWRS tolerances: shrunken 4%; broken 5%; total shrunken and broken 7%

#### Example 1

A 1 CWRS with; shrunken 4.7%, broken 2.2%; total shrunken and broken 6.9%

Shrunken would be reported as 4.7% but would be considered to be 4% for grade determination, total shrunken and broken would be reported as 6.9%. The sample would grade 1 CWRS.

#### Example 2

A 1 CWRS with; shrunken 4.7%, broken 3.2%, total shrunken and broken 7.9%.

Shrunken would be reported as 4.7% but would be considered to be 4% for grade determination. Total shrunken and broken would be reported as 7.9% but would be considered to be 7% for grade determination. The sample would grade 1 CWRS.

#### Example 3

A 1CWRS with; shrunken 4.7%, broken 3.4% and total shrunken and broken 8.1%.

Total shrunken and broken would be reported as 8.1% and could not be truncated in the determination of grade because it exceeds the tolerance by more than 0.9%. Shrunken would be reported as 4.7% but would be considered to be 4% for grade determination since truncation would improve the grade from a CWFD to 2 CWRS. The sample would grade 2 CWRS for 8.1% Total Shrunken and Broken.

---

## 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.

### Amber durum

The discolouration is assessed as smudge in amber durum if:

1. More than one-half the kernel is discoloured, or
2. Discolouration of the crease
  - Has spread onto the cheeks of the kernel regardless of any discolouration of the germ
  - Appears as a thin line extending more than half the length of the crease, in combination with any discolouration of the germ.

**Note:** kernels that have a thin line of discolouration of any length in the crease, but have no discolouration of the germ, are not assessed as smudge.

### 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, or if the discolouration extends into the crease. Less extensive discolouration is considered blackpoint.

#### Representative portion for analysis

Minimum—100 g      Optimum—500 g      Export—500 g

---

### Soft earth pellets (SEP)

Soft earth pellets are

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

#### Representative portion for analysis

Minimum—working      Optimum—working      Export—working  
sample                      sample                      sample

#### Procedures

1. Handpick soft earth pellets from the clean 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 kernels (SPTD)

Kernels are sprouted if one of the following conditions exists:

- Kernels show clear evidence of growth in the germ area.
- The bran is noticeably split over the germ from apparent growth.
- The germ is missing and there is apparent greyish discolouration normally attributable to sprouting.
- The germ, though intact, appears distinctly swollen as a result of sprouting activity.

#### Representative portion for analysis

Minimum—10 g      Optimum—100 g      Export—100 g

#### Procedures

1. Using a Boerner-type divider, divide a representative portion.
2. Separate all kernels showing any evidence of sprouting.  
**▲ Important:** For CEWW, unless there is clear evidence of growth, do not count the kernel as sprouted.
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 non-toxic materials of similar consistency. Fertilizer pellets are assessed as stones when constituting 1.0% or less of the net sample weight. (See *Fertilizer pellets* for specific procedures to be followed when samples contain fertilizer pellets.)

### Representative portion for analysis

Minimum—500 g

Optimum—1000 g

Export—1000 g

### Procedures

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

**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*.

- In western Canada samples of grain 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 determinant tables) that would have been assigned to the sample if it contained no stones.
- In eastern Canada samples of grain containing stones in excess of grade tolerances are degraded to lower grades. Samples containing stones in excess of the tolerance of the lowest grade established by regulation up to 2.5% are graded *Wheat, Sample Canada Eastern Account Stones*.
- In western and eastern Canada grain containing more than 2.5% stones is graded *Wheat, Sample Salvage*.

---

Examples: Western Canada

Excerpt from grade determinant 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
No. 4 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	<i>Wheat, Rejected No. 3 CWRS Account Stones</i>
1.0% stones	<i>Wheat, Rejected No. 3 CWRS Account Stones</i>
3.0% stones	<i>Wheat, Sample Salvage</i>

---

Examples: Eastern Canada

Excerpt from grade determinant 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
CE Feed	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	<i>Wheat, CE Feed</i>
1.0% stones	<i>Wheat, Sample CE Account Stones</i>
3.0% stones	<i>Wheat, Sample Salvage</i>

---

**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.

**Representative portion for analysis**

Minimum—25 g

Optimum—50 g

Export—50 g

**Procedures**

For grading, include streak mould with blackpoint.

---

**Superficial discolouration (SUPDISCLR)**

Superficial discolouration is a reddish discolouration not penetrating the endosperm. This factor is evaluated subjectively in relation to the degree of soundness without reference to specific tolerances.

**Representative portion for analysis**Minimum—working  
sampleOptimum—working  
sampleExport—working  
sample

---

**Treated seed and other chemical substances****Treated seed**

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

**Other chemical substances**

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

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

**Representative portion for analysis**Minimum—working  
sampleOptimum—working  
sampleExport—working  
sample

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

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

---

**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 a different colour wheat; for example, CWAD is a contrasting class in CWRS.
- Other varieties of wheat are any registered varieties.

**Representative portion for analysis  
Wheats of other classes or varieties**

Factor	Minimum, grams	Optimum, grams
For wheats other than durum, soft white spring—		
Other classes that blend	25	50
Contrasting classes	50	100
For durum, soft white spring—		
Wheats of other classes	50	100
Other varieties of wheat	15	25

**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 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.

Predominant class	Wheats of other classes												
	CWRS	CWHWS	CWAD	CWRW	CWSWS	CWES	CPSW	CPSR	CER <sup>1</sup>	CEAD	CEWW	CESWS	CEHWS
CWRS	-	CC	CC	B	CC	B	CC	B	B	CC	CC	CC	CC
CWHWS	CC	-	CC	CC	WOOC	CC	WOOC	CC	CC	CC	WOOC	WOOC	-
CWAD	WOOC	WOOC	-	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC	-	WOOC	WOOC	WOOC
CWRW	B	CC	CC	-	CC	B	CC	B		CC	CC	CC	CC
CWSWS	WOOC	WOOC	WOOC	WOOC	-	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC	-	WOOC
CWES	B	CC	CC	B	CC	-	CC	B	B	CC	CC	CC	CC
CPSW	CC	WOOC	CC	CC	WOOC	CC	-	CC	CC	CC	WOOC	WOOC	WOOC
CPSR	B	CC	CC	B	CC	B	CC	-	B	CC	CC	CC	CC
CER <sup>1</sup>		CC	CC		CC		CC		-	CC	CC	CC	CC
CEAD	WOOC	WOOC	-	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC	-	WOOC	WOOC	WOOC
CEWW	CC	WOOC	CC	CC	WOOC	CC	WOOC	CC	CC	CC	-	WOOC	WOOC
CESWS	WOOC	WOOC	WOOC	WOOC	-	WOOC	WOOC	WOOC	WOOC	WOOC	WOOC	-	WOOC
CEHWS	CC	-	CC	CC	WOOC	CC	WOOC	CC	CC	CC	WOOC	WOOC	-

WOOC Wheats of other classes

CC Contrasting classes

B See *Working tolerance for wheats of other classes that blend*

Note: <sup>1</sup> CER is used for CERS, CEHRW and CESRW

## Primary grade determinants tables

### Wheat, Canada Western Red Spring (CWRS)

Grade name	Standard of quality					Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Minimum hard vitreous kernels %	Minimum protein %	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No.1 CWRS	75 (365)	Any variety of the class CWRS designated as such by order of the Commission	65	10	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	0.6
No. 2 CWRS	72 (350)	Any variety of the class CWRS designated as such by order of the Commission	35	No minimum	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	0.02	0.01	0.3	0.02	0.03	1.2
No. 3 CWRS	69 (335)	Any variety of the class CWRS designated as such by order of the Commission	No minimum	No minimum	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.06	2.4
No. 4 CWRS	68 (330)	Any variety of the class CWRS designated as such by order of the Commission	No minimum	No minimum	May be severely frost-damaged, immature or weather-damaged, moderately free from other severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.06	2.4
CW Feed	65 (315)	Any class or variety of wheat excluding amber durum	No minimum	No minimum	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	0.1	0.03	1	0.1	0.1	10
Grade, if specs for CW Feed not met	<i>Wheat, Sample CW Account Light Weight</i>					<i>Wheat, Sample CW Account Ergot</i>	<i>Wheat, Sample CW Account Excreta</i>	<i>Wheat, Sample CW Account Admixture</i>	<i>Wheat, Sample CW Account Admixture</i>	2.5% or less– <i>Wheat, Rejected grade, Account Stones</i> Over 2.5%– <i>Wheat, Sample Salvage</i>	<i>See Mixed grain</i>

**Wheat Canada Western Red Spring (CWRS), continued**

Grade name	Wheats of other classes or varieties		Artificial stain, no residue %	Dark, Immature %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
	Contrasting classes %	Total %								Binburnt severely mildewed rotted, mouldy %	Total %
No.1 CWRS	<u>0.75</u>	<u>2.3</u>	Nil	1	4	Nil	<u>0.25</u>	<u>0.75</u>	1	1 kernel per 1000 g	0.05
No. 2 CWRS	<u>2.3</u>	<u>4.5</u>	5K	<u>2.5</u>	7	Nil	1.0	2	3	4 kernels per 1000 g	0.4
No. 3 CWRS	<u>3.8</u>	<u>7.5</u>	10K	10	13	Nil	2.0	10	8	6 kernels per 1000 g	1.0
No. 4 CWRS	<u>3.8</u>	<u>7.5</u>	10K	10	13	Nil	2.0	10	8	6 kernels per 1000 g	1.0
CW Feed	No limit-but not more than 10% amber durum		2	No limit	No limit	2	5	No limit	No limit	<u>2.5</u>	<u>2.5</u>
Grade, if specs for CW Feed not met	Over 10% amber durum- <i>Wheat, Sample CW Account Admixture</i>		<i>Wheat, Sample CW Account Stained Kernels</i>			<i>Wheat, Sample CW Account Fireburnt</i>	<i>Wheat, Sample CW Account Fusarium Damage Over 10%- Wheat, Commercial Salvage</i>			<i>Wheat, Sample CW Account Heated</i>	

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint		Sprouted	
				Shrunken %	Broken %	Total %	Smudge %	Total %	Severely sprouted %	Total %
No.1 CWRS	0.5	<u>1.5</u>	2.0	4	5	7	30K	10	0.10	0.5
No. 2 CWRS	2	5	5	4	6	8	1	20	0.20	1.0
No. 3 CWRS	5	10	10	4	7	9	5	35	0.30	3.0
No. 4 CWRS	5	10	10	4	7	9	5	35	0.5	5
CW Feed	No limit	No limit	No limit	No limit	13	No limit within broken tolerances	No limit	No limit	No limit	No limit
Grade, if specs for CW Feed not met					<i>Sample Broken Grain</i>					

K Number of kernel-sized pieces in 500 g

## Wheat, Canada Western Hard White Spring (CWHWS)

Grade name	Standard of quality				Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Minimum protein %	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CWHWS	75 (365)	Any variety of the class CWHWS designated as such by order of the Commission	10	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	0.6
No. 2 CWHWS	75 (365)	Any variety of the class CWHWS designated as such by order of the Commission	No minimum	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	0.02	0.01	0.3	0.02	0.03	1.2
No. 3 CWHWS	72 (350)	Any variety of the class CWHWS designated as such by order of the Commission	No minimum	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.06	2.4
No. 4 CWHWS	68 (330)	Any variety of the class CWHWS designated as such by order of the Commission	No minimum	May be severely frost-damaged, immature or weather-damaged, moderately free from other severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.06	2.4
CW Feed	65 (315)	Any class or variety of wheat excluding amber durum	No minimum	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	0.1	0.03	1	0.1	0.1	10
Grade, if specs for CW Feed not met	<i>Wheat, Sample CW Account Light Weight</i>				<i>Wheat, Sample CW Account Ergot</i>	<i>Wheat, Sample CW Account Excreta</i>	<i>Wheat, Sample CW Account Admixture</i>	<i>Wheat, Sample CW Account Admixture</i>	2.5% or less– <i>Wheat, Rejected grade, Account Stones</i> Over 2.5%– <i>Wheat, Sample Salvage</i>	See <i>Mixed grain</i>

**Wheat Canada Western Hard White Spring (CWHWS), continued**

Grade name	Wheats of other classes or varieties		Artificial stain, no residue %	Dark, Immature %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
	Contrasting classes %	Total %								Binburnt severely mildewed rotted, mouldy %	Total %
No.1 CWHWS	3.0	3	Nil	1	4	Nil	<u>0.25</u>	<u>0.75</u>	1	1 kernel per 1000 g	0.05
No. 2 CWHWS	3.0	3	5K	<u>2.5</u>	7	Nil	1.0	2	3	4 kernels per 1000 g	0.4
No. 3 CWHWS	5.0	5	10K	10	13	Nil	2.0	10	8	6 kernels per 1000 g	1.0
No. 4 CWHWS	5.0	5	10K	10	13	Nil	2.0	10	8	6 kernels per 1000 g	1.0
CW Feed	No limit-but not more than 10% amber durum		2	No limit	No limit	2	5	No limit	No limit	<u>2.5</u>	<u>2.5</u>
Grade, if specs for CW Feed not met	Over 10% amber durum- <i>Wheat, Sample CW Account Admixture</i>		<i>Wheat, Sample CW Account Stained Kernels</i>			<i>Wheat, Sample CW Account Fireburnt</i>	<i>Wheat, Sample CW Account Fusarium Damage Over 10%- Wheat, Commercial Salvage</i>			<i>Wheat, Sample CW Account Heated</i>	

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint		Sprouted	
				Shrunken %	Broken %	Total %	Smudge %	Total %	Severely sprouted %	Total %
No.1 CWHWS	0.5	<u>1.5</u>	2.0	4	5	7	30K	10	0.10	0.5
No. 2 CWHWS	2	5	5	4	6	8	1	20	0.20	1.0
No. 3 CWHWS	5	10	10	4	7	9	5	35	0.30	3.0
No. 4 CWHWS	5	10	10	4	7	9	5	35	0.5	5
CW Feed	No limit	No limit	No limit	No limit	13	No limit within broken tolerances	No limit	No limit	No limit	No limit
Grade, if specs for CW Feed not met					<i>Sample Broken Grain</i>					

K Number of kernel-sized pieces in 500 g

**Wheat, Canada Western Amber Durum (CWAD)**

Grade name	Standard of quality					Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Minimum hard vitreous kernels %	Minimum protein %	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CWAD	79 (387)	Any variety of the class CWAD designated as such by order of the Commission	80	9.5	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	0.5
No. 2 CWAD	77 (377)	Any variety of the class CWAD designated as such by order of the Commission	60	No minimum	Reasonably well matured, reasonably free from severely damaged kernels	0.02	0.01	0.3	0.02	0.03	1.2
No. 3 CWAD	74 (362)	Any variety of the class CWAD designated as such by order of the Commission	40	No minimum	Fairly well matured, may be moderately weather-damaged or frost-damaged, reasonably free from severely damaged kernels	0.04	0.01	0.5	0.04	0.06	1.5
No. 4 CWAD	71 (347)	Any variety of the class CWAD designated as such by order of the Commission	No minimum	No minimum	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	0.04	0.01	0.5	0.04	0.06	3.0
No. 5 CWAD	65 (318)	Any variety of amber durum wheat	No minimum	No minimum	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	0.1	0.03	1	0.1	0.1	10
Grade, if No. 5 specs not met						<i>Wheat, Sample CW Account Ergot</i>	<i>Wheat, Sample CW Account Excreta</i>	<i>Wheat, Sample CW Account Admixture</i>	<i>Wheat, Sample CW Account Admixture</i>	2.5% or less– <i>Rejected (grade), Account Stones</i> Over 2.5%– <i>Wheat, Sample Salvage</i>	See <i>Mixed grain</i>

**Wheat, Canada Western Amber Durum (CWAD), continued**

Grade name	Wheats of other classes or varieties		Artificial stain, no residue %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
	Other classes %	Total %							Binburnt severely mildewed rotted, mouldy %	Total %
No. 1 CWAD	2.0	4	Nil	4	Nil	0.5	<u>0.75</u>	1	1 kernel per 1000 g	0.05
No. 2 CWAD	3.0	<u>7.5</u>	3K	7	Nil	0.5	2	3	2 kernels per 1000 g	0.1
No. 3 CWAD	<u>4.3</u>	11	7K	10	Nil	2.0	4	5	4 kernels per 1000 g	0.4
No. 4 CWAD	10	49	12K	13	Nil	2.0	10	8	0.5	1.5
No. 5 CWAD	49	No limit	2	No limit	2	5	No limit	No limit	5	5
Grade, if No. 5 specs not met	<i>Wheat, Sample CW Account Admixture</i>		<i>Wheat, Sample CW Account Stained Kernels</i>		<i>Wheat, Sample CW Account Fireburnt</i>	<i>Wheat, Sample CW Account Fusarium Damage Over 10%- Wheat, Commercial Salvage</i>			<i>Wheat, Sample CW Account Heated</i>	

Grade name	Natural stain %	Pink %	Severe midge %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint				Sprouted	
					Shrunken %	Broken %	Total %	Penetrated smudge %	Red smudge %	Total smudge %	Total %	Severely sprouted %	Total %
No. 1 CWAD	0.5	3	0.1	2.0	3	6	7	3K	30K	30K	5	0.10	0.5
No. 2 CWAD	2	6	<u>0.25</u>	8	3	8	9	<u>0.25</u>	1	1	10	0.20	2
No. 3 CWAD	5	10	<u>0.75</u>	15	3	10	11	0.5	1	3	20	8	8
No. 4 CWAD	<u>7.5</u>	No limit	2	40	3	11	12	Consider overall appearance				12	12
No. 5 CWAD	No limit	No limit	No limit	No limit	No limit	13	No limit within broken tolerances	No limit				No limit	No limit
Grade, if No. 5 specs not met						<i>Sample Broken Grain</i>							

**Wheat, Canada Western Red Winter (CWRW)**

Grade name	Standard of quality					Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Minimum hard vitreous kernels %	Minimum protein %	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CWRW	78 (380)	Any variety of the class CWRW designated as such by order of the Commission	50	9	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	1.0
No. 2 CWRW	74 (360)	Any variety of the class CWRW designated as such by order of the Commission	No minimum	No minimum	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.06	2.0
CW Feed	65 (315)	Any class or variety of wheat excluding amber durum	No minimum	No minimum	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	0.1	0.03	1	0.1	0.1	10
Grade, if specs for CW Feed not met	<i>Wheat, Sample CW Account Light Weight</i>					<i>Wheat, Sample CW Account Ergot</i>	<i>Wheat, Sample CW Account Excreta</i>	<i>Wheat, Sample CW Account Admixture</i>	<i>Wheat, Sample CW Account Admixture</i>	2.5% or less– <i>Rejected (grade) Account Stones</i> Over 2.5%– <i>Wheat, Sample Salvage</i>	See <i>Mixed grain</i>

**Wheat, Canada Western Red Winter (CWRW), continued**

Grade name	Wheats of other classes or varieties		Artificial stain, no residue %	Dark, Immature %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
	Contrasting classes %	Total %								Binburnt severely mildewed rotted, mouldy %	Total %
No. 1 CWRW	1.0	3	Nil	1	4	Nil	2.0	<u>0.75</u>	1	1 kernel per 1000 g	0.05
No. 2 CWRW	<u>2.5</u>	6	7K	10	10	Nil	2.0	4	5	2 kernels per 1000 g	0.1
CW Feed	No limit-but not more than 10% amber durum		2	No limit	No limit	2	5	No limit	No limit	<u>2.5</u>	<u>2.5</u>
Grade, if specs for CW Feed not met	Over 10% amber durum- <i>Wheat, Sample CW Account Admixture</i>		<i>Wheat, Sample CW Account Stained Kernels</i>			<i>Wheat, Sample CW Account Fireburnt</i>	<i>Wheat, Sample CW Account Fusarium Damage</i> Over 10% - <i>Wheat, Commercial Salvage</i>			<i>Wheat, Sample CW Account Heated</i>	

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint			Sprouted	
				Shrunken %	Broken %	Total %	Penetrated smudge %	Total smudge %	Total %	Severely sprouted %	Total %
No. 1 CWRW	0.5	3	1.0	3	5	7	3K	30K	10	0.10	0.5
No. 2 CWRW	5	10	5	3	7	9	1.0	3	35	0.30	<u>2.5</u>
CW Feed	No limit	No limit	No limit	No limit	13	No limit within broken tolerances	No limit	No limit	No limit	No limit	No limit
Grade, if specs for CW Feed not met						<i>Sample Broken Grain</i>					

K Number of kernel-sized pieces in 500 g

### Wheat, Canada Western Soft White Spring (CWSWS)

Grade name	Standard of quality			Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CWSWS	76 (370)	Any variety of the class CWSWS designated as such by order of the Commission	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	1.0
No. 2 CWSWS	74 (360)	Any variety of the class CWSWS designated as such by order of the Commission	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	0.02	0.01	0.3	0.02	0.03	2.0
No. 3 CWSWS	69 (335)	Any variety of the class CWSWS designated as such by order of the Commission	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.06	3.0
CW Feed	65 (315)	Any class or variety of wheat excluding amber durum	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	0.1	0.03	1	0.1	0.1	10
Grade, if specs for CW Feed not met	<i>Wheat, Sample CW Account Light Weight</i>			<i>Wheat, Sample CW Account Ergot</i>	<i>Wheat, Sample CW Account Excreta</i>	<i>Wheat, Sample CW Account Admixture</i>	<i>Wheat, Sample CW Account Admixture</i>	2.5% or less– <i>Rejected (grade) Account Stones</i> Over 2.5%– <i>Wheat, Sample Salvage</i>	See <i>Mixed grain</i>

**Wheat, Canada Western Soft White Spring (CWSWS), continued**

Grade name	Wheats of other classes or varieties %	Artificial stain, no residue %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
								Binburnt, severely mildewed rotted, mouldy %	Total %
No. 1 CWSWS	3	Nil	4	Nil	2.0	<u>0.75</u>	1	1 kernel per 1000 g	0.05
No. 2 CWSWS	6	3K	7	Nil	2.0	2	3	2 kernels per 1000 g	0.1
No. 3 CWSWS	10	7K	10	Nil	2.0	4	5	4 kernels per 1000 g	0.4
CW Feed	No limit—but not more than 10% amber durum	2	No limit	2	5	No limit	No limit	<u>2.5</u>	<u>2.5</u>
Grade, if specs for CW Feed not met	Over 10% amber durum— <i>Wheat, Sample CW Account Admixture</i>	<i>Wheat, Sample CW Account Stained Kernels</i>		<i>Wheat, Sample CW Account Fireburnt</i>	10% or less— <i>Wheat, Sample CW Account Fusarium Damage</i> Over 10%— <i>Wheat, Commercial Salvage</i>			<i>Wheat, Sample CW Account Heated</i>	

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint			Sprouted	
				Shrunken %	Broken %	Total %	Penetrated smudge %	Total smudge %	Total %	Severely sprouted %	Total %
No. 1 CWSWS	0.5	3	2.0	3	5	7	3K	30K	10	0.10	1
No. 2 CWSWS	2	6	8	3	6	8	0.5	1	15	0.30	5
No. 3 CWSWS	5	10	15	3	7	9	1.0	3	35	0.50	8
CW Feed	No limit	No limit	No limit	No limit	13	No limit within broken tolerances	No limit	No limit	No limit	No limit	No limit
Grade, if specs for CW Feed not met					<i>Sample Broken Grain</i>						

K Number of kernel-sized pieces in 500 g

## Wheat, Canada Western Extra Strong (CWES)

Grade name	Standard of quality				Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Minimum protein %	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CWES	75 (365)	Any variety of the class CWES designated as such by order of the Commission	10	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	0.03	0.01	0.2	0.03	0.03	<u>0.75</u>
No. 2 CWES	73 (355)	Any variety of the class CWES designated as such by order of the Commission	No minimum	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	0.06	0.03	0.3	0.06	0.06	1.5
CW Feed	65 (315)	Any class or variety of wheat excluding amber durum	No minimum	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	0.1	0.03	1	0.1	0.1	10
Grade, if specs for CW Feed not met	<i>Wheat, Sample CW Account Light Weight</i>				<i>Wheat, Sample CW Account Ergot</i>	<i>Wheat, Sample CW Account Excreta</i>	<i>Wheat, Sample CW Account Admixture</i>	<i>Wheat, Sample CW Account Admixture</i>	2.5% or less- <i>Rejected(grade) Account Stones</i> Over 2.5%- <i>Wheat, Sample Salvage</i>	See <i>Mixed grain</i>

**Wheat, Canada Western Extra Strong (CWES), continued**

Grade name	Wheats of other classes or varieties		Artificial stain, no residue %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
	Contrasting classes %	Total %							Binburnt severely mildewed rotted, mouldy %	Total %
No. 1 CWES	1.5	3	5K	7	Nil	1.0	2	3	4 kernels per 1000 g	0.4
No. 2 CWES	<u>2.5</u>	5	10K	13	Nil	1.0	10	8	6 kernels per 1000 g	1.0
CW Feed	No limit-but not more than 10% amber durum		2	No limit	2	5	No limit	No limit	<u>2.5</u>	<u>2.5</u>
Grade, if CW Feed specs not met	Over 10% amber durum- <i>Wheat, Sample CW Account Admixture</i>		<i>Wheat, Sample CW Account Stained Kernels</i>		<i>Wheat, Sample CW Account Fireburnt</i>	<i>10% or less- Wheat, Sample CW Account Fusarium Damage</i> <i>Over 10%- Wheat Commercial Salvage</i>			<i>Wheat, Sample CW Account Heated</i>	

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint		Sprouted	
				Shrunken %	Broken %	Total %	Smudge %	Total %	Severely sprouted %	Total %
No. 1 CWES	2	5	2.0	3	7	8	1	15	0.10	0.5
No. 2 CWES	5	10	5	3	7	8	Consider overall appearance		0.30	2
CW Feed	No limit	No limit	No limit	No limit	13	No limit within broken tolerances	No limit		No limit	No limit
Grade, if CW Feed specs not met					<i>Sample Broken Grain</i>					

K Number of kernel-sized pieces in 500 g

### Wheat, Canada Prairie Spring White (CPSW)

Grade name	Standard of quality			Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CPSW	77 (375)	Any variety of the class CPSW designated as such by order of the Commission	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	0.03	0.01	0.2	0.03	0.03	<u>0.75</u>
No. 2 CPSW	75 (365)	Any variety of the class CPSW designated as such by order of the Commission	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	0.06	0.03	0.3	0.06	0.03	1.5
CWICE Feed	65 (315)	Any class or variety of wheat excluding amber durum	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	0.1	0.03	1	0.1	0.1	10
Grade, if specs for CWICE Feed not met	<i>Wheat, Sample CW Account Light Weight</i>			<i>Wheat, Sample Canada Account Ergot</i>	<i>Wheat, Sample Canada Account Excreta</i>	<i>Wheat, Sample Canada Account Admixture</i>	<i>Wheat, Sample Canada Account Admixture</i>	2.5% or less— <i>Rejected (grade) Account Stones or Wheat, Sample Canada Account Stones</i> Over 2.5%— <i>Wheat, Sample Salvage</i>	See <i>Mixed grain</i>

**Canada Prairie Spring White (CPSW) continued**

Grade name	Wheats of other classes or varieties		Artificial stain, no residue %	Dark immature %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
	Contrasting classes %	Total %								Binburnt severely mildewed rotted, mouldy %	Total %
No. 1 CPSW	3	5	5K	<u>2.5</u>	7	Nil	2.0	2	3	4 kernels per 1000 g	0.4
No. 2 CPSW	5	10	10K	10	13	Nil	2.0	10	8	6 kernels per 1000 g	1.0
CW/CE Feed	No limit—but not more than 10% amber durum		2	No limit	No limit	2	5	No limit	No limit	<u>2.5</u>	<u>2.5</u>
Grade, if specs for CW/CE Feed not met	Over 10% amber durum— <i>Wheat, Sample Canada Account Admixture</i>		<i>Wheat, Sample Canada Account Stained Kernels</i>			<i>Wheat, Sample Canada Account Fireburnt</i>	10% or less— <i>Wheat, Sample Canada Account Fusarium Damage</i> Over 10%— <i>Wheat, Commercial Salvage</i>			<i>Wheat, Sample Canada Account Heated</i>	

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint			Sprouted	
				Shrunken %	Broken %	Total %	Penetrated smudge %	Total smudge %	Total %	Severely sprouted %	Total %
No. 1 CPSW	2	5	3	5	6	9	10K	1	20	0.10	0.5
No. 2 CPSW	5	10	8	5	6	9	0.5	5	35	0.30	2
CW/CE Feed	No limit	No limit	No limit	No limit	13	No limit within broken tolerances	No limit	No limit	No limit	No limit	No limit
Grade, if specs for CW/CE Feed not met					<i>Sample Broken Grain</i>						

K Number of kernel-sized pieces in 500 g

### Wheat, Canada Prairie Spring Red (CPSR)

Grade name	Standard of quality			Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CPSR	77 (375)	Any variety of the class CPSR designated as such by order of the Commission	Fairly well matured, may be moderately bleached or frost-damaged, reasonably free from severely damaged kernels	0.03	0.01	0.2	0.03	0.03	<u>0.75</u>
No. 2 CPSR	75 (365)	Any variety of the class CPSR designated as such by order of the Commission	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	0.06	0.03	0.3	0.06	0.03	1.5
CW/CE Feed	65 (315)	Any class or variety of wheat excluding amber durum	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	0.1	0.03	1	0.1	0.1	10
Grade, if specs for CW/CE Feed not met	<i>Wheat, Sample Canada, Account Light Weight</i>			<i>Wheat, Sample Canada Account Ergot</i>	<i>Wheat, Sample Canada Account Excreta</i>	<i>Wheat Sample Canada Account Admixture</i>	<i>Wheat, Sample Canada Account Admixture</i>	2.5% or less– <i>Rejected (grade) Account Stones or Wheat, Sample Canada Account Stones</i> Over 2.5%– <i>Wheat, Sample Salvage</i>	<i>See Mixed Grain</i>

**Wheat, Canada Prairie Spring Red (CPSR), continued**

Grade name	Wheats of other classes or varieties		Artificial stain, no residue %	Dark immature %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper %	Heated	
	Contrasting classes %	Total %								Binburnt severely mildewed rotted, mouldy %	Total %
No. 1 CPSR	3	5	5K	<u>2.5</u>	7	Nil	2.0	2	3	4 kernels per 1000 g	0.4
No. 2 CPSR	5	10	10K	10	13	Nil	2.0	10	8	6 kernels per 1000 g	1.0
CW/CE Feed	No limit—but not more than 10% amber durum		2	No limit	No limit	2	5	No limit	No limit	<u>2.5</u>	<u>2.5</u>
Grade, if specs for CW/CE Feed not met	Over 10% amber durum— <i>Wheat, Sample Canada Account Admixture</i>		<i>Wheat, Sample Canada Account Stained Kernels</i>			<i>Wheat, Sample Canada Account Fireburnt</i>	10% or less— <i>Wheat, Sample Canada Account Fusarium Damage</i> Over 10%— <i>Wheat, Commercial Salvage</i>			<i>Wheat, Sample Canada Account Heated</i>	

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint			Sprouted	
				Shrunken %	Broken %	Total %	Penetrated smudge %	Total smudge %	Total %	Severely sprouted %	Total %
No. 1 CPSR	2	5	3	5	6	9	10K	1	20	0.10	0.5
No. 2 CPSR	5	10	8	5	6	9	0.5	5	35	0.30	2
CW/CE Feed	No limit	No limit	No limit	No limit	13	No limit within broken tolerances	No limit	No limit	No limit	No limit	No limit
Grade, if specs for CW/CE Feed not met					<i>Sample Broken Grain</i>						

K Number of kernel-sized pieces in 500 g

## Wheat, Canada Eastern Red (CER)

Grade name	Standard of quality			Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CER	75 (365)	Any registered variety of red wheat	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	<u>0.75</u>
No. 2 CER	72 (350)	Any registered variety of red wheat	Fairly well matured, reasonably free from severely damaged kernels	0.02	<u>0.015</u>	0.3	0.02	0.03	1.5
No. 3 CER	69 (335)	Any registered variety of red wheat	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.06	3.5
CE Feed	65 (315)	Any class or variety of wheat excluding amber durum	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	0.1	0.03	1	<u>0.25</u>	0.1	10
Grade, if specs for CE Feed not met	<i>Wheat, Sample CE Account Light Weight</i>			<i>Wheat, Sample CE Account Ergot</i>	<i>Sample CE Account Excreta</i>	<i>Wheat, Sample CE Account Admixture</i>	<i>Wheat, Sample CE Account Admixture</i>	2.5% or less– <i>Wheat, Sample CE Account Stones</i> Over 2.5%– <i>Wheat, Sample Salvage</i>	<i>See Mixed grain</i>

**Wheat, Canada Eastern Red (CER), continued**

Grade name	Contrasting classes %	Artificial stain, no residue %	Dark immature %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
									Binburnt, severely mildewedrotted, mouldy %	Total %
No. 1 CER	1.0	Nil	1	4	Nil	1.0	<u>0.75</u>	1	2K	0.1
No. 2 CER	3	3K	<u>2.5</u>	7	Nil	1.0	2	3	5K	<u>0.75</u>
No. 3 CER	5	7K	10	10	Nil	1.5	4	5	10K	2.0
CE Feed	No limit—but not more than 10% amber durum	2	No limit	No limit	2	5	No limit	No limit	10	10
Grade, if specs for CE Feed not met	50% or less amber durum— <i>Wheat, Sample CE Account Admixture</i>	<i>Wheat, Sample CE Account Stained Kernels</i>			<i>Wheat, Sample CE Account Fireburnt</i>	<i>Wheat, Sample CE Account Fusarium Damage</i>			<i>Wheat, Sample CE Account Heated</i>	<i>Wheat, Sample CE Account Heated</i>

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint			Sprouted %
				Shrunken %	Broken %	Total %	Penetrated smudge %	Total smudge %	Total %	
No. 1 CER	0.5	<u>1.5</u>	2.0	6	6	7	3K	30K	10	0.5
No. 2 CER	2	5	8	10	10	11	0.5	1	20	2.5
No. 3 CER	5	10	15	12	10	13	1.0	5	35	8
CE Feed	No limit	No limit	No limit	No limit	50	No limit within broken tolerances	No limit	No limit	No limit	No limit
Grade, if specs for CE Feed not met					<i>Sample Broken Grain</i>					

K Number of kernel-sized pieces in 500 g

## Wheat, Canada Eastern Red Spring (CERS)

Grade name	Standard of quality			Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CERS	75 (365)	Any variety of the class CERS designated as such by order of the Commission	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	<u>0.75</u>
No. 2 CERS	72 (350)	Any variety of the class CERS designated as such by order of the Commission	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	0.02	<u>0.015</u>	0.3	0.02	0.03	1.5
No. 3 CERS	69 (335)	Any variety of the class CERS designated as such by order of the Commission	May be immature or weather-damaged, moderately free from severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.06	3.5
CE Feed	65 (315)	Any class or variety of wheat excluding amber durum	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	0.1	0.03	1	<u>0.25</u>	0.1	10
Grade, if specs for CE Feed not met	<i>Wheat, Sample CE Account Light Weight</i>			<i>Wheat, Sample CE Account Ergot</i>	<i>Wheat, Sample CE Account Excreta</i>	<i>Wheat, Sample CE Account Admixture</i>	<i>Wheat, Sample CE Account Admixture</i>	2.5% or less- <i>Wheat, Sample CE Account Stones</i> Over 2.5%- <i>Wheat, Sample Salvage</i>	See <i>Mixed grain</i>

**Wheat, Canada Eastern Red Spring (CERS), continued**

Grade name	Contrasting classes %	Artificial stain, no residue %	Dark immature %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
									Binburnt, severely mildewed rotted, mouldy %	Total %
No. 1 CERS	1.0	Nil	1	4	Nil	1.0	<u>0.75</u>	1	2K	0.1
No. 2 CERS	3	3K	<u>2.5</u>	7	Nil	1.0	2	3	5K	<u>0.75</u>
No. 3 CERS	5	7K	10	10	Nil	1.5	4	5	10K	2.0
CE Feed	No limit—but not more than 10% amber durum	2	No limit	No limit	2	5	No limit	No limit	10	10
Grade, if specs for CE Feed not met	50% or less amber durum—Wheat, Sample CE Account Admixture	Wheat, Sample CE Account Stained Kernels			Wheat, Sample CE Account Fireburnt	Wheat, Sample CE Account Fusarium Damage			Wheat, Sample CE Account Heated	Wheat, Sample CE Account Heated

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint			Sprouted %
				Shrunken %	Broken %	Total %	Penetrated smudge %	Total smudge %	Total %	
No. 1 CERS	0.5	<u>1.5</u>	2.0	6	6	7	3K	30K	10	0.5
No. 2 CERS	2	5	8	10	10	11	0.5	1	20	2.5
No. 3 CERS	5	10	15	12	10	13	1.0	5	35	8
CE Feed	No limit	No limit	No limit	No limit	50	No limit within broken tolerances	No limit	No limit	No limit	No limit
Grade, if specs for CE Feed not met					Sample Broken Grain					

K Number of kernel-sized pieces in 500 g

### Wheat, Canada Eastern Hard Red Winter (CEHRW)

Grade name	Standard of quality			Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CEHRW	76 (370)	Any variety of the class CEHRW designated as such by order of the Commission	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	<u>0.75</u>
No. 2 CEHRW	74 (360)	Any variety of the class CEHRW designated as such by order of the Commission	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	0.02	<u>0.015</u>	0.3	0.02	0.03	1.5
No. 3 CEHRW	69 (335)	Any variety of the class CEHRW designated as such by order of the Commission	May be immature or weather-damaged, moderately free from severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.06	3.5
CE Feed	65 (315)	Any class or variety of wheat excluding amber durum	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	0.1	0.03	1	<u>0.25</u>	0.1	10
Grade, if specs for CE Feed not met	<i>Wheat, Sample CE Account Light Weight</i>			<i>Wheat, Sample CE Account Ergot</i>	<i>Wheat, Sample CE Account Excreta</i>	<i>Wheat, Sample CE Account Admixture</i>	<i>Wheat, Sample CE Account Admixture</i>	2.5% or less- <i>Wheat, Sample CE Account Stones</i> Over 2.5%- <i>Wheat, Sample Salvage</i>	See <i>Mixed grain</i>

**Wheat, Canada Eastern Hard Red Winter (CEHRW), continued**

Grade name	Contrasting classes %	Artificial stain, no residue %	Dark immature %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
									Binburnt, severely mildewedrotted, mouldy %	Total %
No. 1 CEHRW	1.0	Nil	1	4	Nil	1.0	<u>0.75</u>	1	2K	0.1
No. 2 CEHRW	3	3K	<u>2.5</u>	7	Nil	1.0	2	3	5K	<u>0.75</u>
No. 3 CEHRW	5	7K	10	10	Nil	1.5	4	5	10K	2.0
CE Feed	No limit—but not more than 10% amber durum	2	No limit	No limit	2	5	No limit	No limit	10	10
Grade, if specs for CE Feed not met	50% or less amber durum— <i>Wheat, Sample CE Account Admixture</i>	<i>Wheat, Sample CE Account Stained Kernels</i>			<i>Wheat, Sample CE Account Fireburnt</i>	<i>Wheat, Sample CE Account Fusarium Damage</i>			<i>Wheat, Sample CE Account Heated</i>	<i>Wheat, Sample CE Account Heated</i>

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint			Sprouted %
				Shrunken %	Broken %	Total %	Penetrated smudge %	Total smudge %	Total %	
No. 1 CEHRW	0.5	<u>1.5</u>	2.0	6	6	7	3K	30K	10	0.5
No. 2 CEHRW	2	5	8	10	10	11	0.5	1	20	2.5
No. 3 CEHRW	5	10	15	12	10	13	1.0	5	35	8
CE Feed	No limit	No limit	No limit	No limit	50	No limit within broken tolerances	No limit	No limit	No limit	No limit
Grade, if specs for CE Feed not met					<i>Sample Broken Grain</i>					

K Number of kernel-sized pieces in 500 g

## Wheat, Canada Eastern Soft Red Winter (CESRW)

Grade name	Standard of quality			Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CESRW	76 (370)	Any variety of the class CESRW designated as such by order of the Commission	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	<u>0.75</u>
No. 2 CESRW	74 (360)	Any variety of the class CESRW designated as such by order of the Commission	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	0.02	<u>0.015</u>	0.3	0.02	0.03	1.5
No. 3 CESRW	69 (335)	Any variety of the class CESRW designated as such by order of the Commission	May be immature or weather-damaged, moderately free from severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.06	3.5
CE Feed	65 (315)	Any class or variety of wheat excluding amber durum	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	0.1	0.03	1	<u>0.25</u>	0.1	10
Grade, if specs for CE Feed not met	<i>Wheat, Sample CE Account Light Weight</i>			<i>Wheat, Sample CE Account Ergot</i>	<i>Wheat, Sample CE Account Excreta</i>	<i>Wheat, Sample CE Account Admixture</i>	<i>Wheat, Sample CE Account Admixture</i>	2.5% or less- <i>Wheat, Sample CE Account Stones</i> Over 2.5%- <i>Wheat, Sample Salvage</i>	See <i>Mixed grain</i>

**Wheat, Canada Eastern Soft Red Winter (CESRW), continued**

Grade name	Contrasting classes %	Artificial stain, no residue %	Dark immature %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
									Binburnt, severely mildewedrotted, mouldy %	Total %
No. 1 CESRW	1.0	Nil	1	4	Nil	1.0	<u>0.75</u>	1	2K	0.1
No. 2 CESRW	3	3K	<u>2.5</u>	7	Nil	1.0	2	3	5K	<u>0.75</u>
No. 3 CESRW	5	7K	10	10	Nil	1.5	4	5	10K	2.0
CE Feed	No limit—but not more than 10% amber durum	2	No limit	No limit	2	5	No limit	No limit	10	10
Grade, if specs for CE Feed not met	50% or less amber durum— <i>Wheat, Sample CE Account Admixture</i>	<i>Wheat, Sample CE Account Stained Kernels</i>			<i>Wheat, Sample CE Account Fireburnt</i>	<i>Wheat, Sample CE Account Fusarium Damage</i>			<i>Wheat, Sample CE Account Heated</i>	<i>Wheat, Sample CE Account Heated</i>

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint			Sprouted %
				Shrunken %	Broken %	Total %	Penetrated smudge %	Total smudge %	Total %	
No. 1 CESRW	0.5	1.5	2.0	6	6	7	3K	30K	10	0.5
No. 2 CESRW	2	5	8	10	10	11	0.5	1	20	2.5
No. 3 CESRW	5	10	15	12	10	13	1.0	5	35	8
CE Feed	No limit	No limit	No limit	No limit	50	No limit within broken tolerances	No limit	No limit	No limit	No limit
Grade, if specs for CE Feed not met					<i>Sample Broken Grain</i>					

K Number of kernel-sized pieces in 500 g

**Wheat, Canada Eastern Amber Durum (CEAD)**

Grade name	Standard of quality				Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Minimum hard vitreous kernels %	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CEAD	79 (387)	Any variety of the class CEAD designated as such by order of the Commission	80	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	0.5
No. 2 CEAD	77 (377)	Any variety of the class CEAD designated as such by order of the Commission	60	Reasonably well matured, reasonably free from severely damaged kernels	0.02	0.01	0.3	0.02	0.03	1.5
No. 3 CEAD	74 (362)	Any variety of the class CEAD designated as such by order of the Commission	40	Fairly well matured, may be moderately weather-damaged or frost-damaged, reasonably free from severely damaged kernels	0.04	0.01	0.5	0.04	0.03	2.0
CE Feed Durum	65 (318)	Any variety of amber durum wheat	No minimum	Reasonably sweet, excluded from higher grades on account of light weight or damaged kernels	0.1	0.03	1	<u>0.25</u>	0.1	10
Grade, if specs for Feed Durum not met					<i>Wheat, Sample CE Account Ergot</i>	<i>Wheat, Sample CE Account Excreta</i>	<i>Wheat, Sample CE Account Admixture</i>	<i>Wheat, Sample CE Account Admixture</i>	2.5% or less– <i>Wheat, Sample CE Account Stones</i> Over 2.5%– <i>Wheat, Sample Salvage</i>	<i>See Mixed grain</i>

**Wheat, Canada Eastern Amber Durum (CEAD), continued**

Grade name	Wheats of other classes or varieties		Artificial stain, no residue %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper army worm%	Heated	
	Other classes %	Total %							Binburnt, severely mildewed, rotted, mouldy %	Total %
No. 1 CEAD	2	5	Nil	4	Nil	1.0	<u>0.75</u>	1	2K	0.1
No. 2 CEAD	<u>3.5</u>	10	3K	7	Nil	1.0	2	3	4K	<u>0.25</u>
No. 3 CEAD	5	15	7K	10	Nil	1.0	4	5	6K	<u>0.75</u>
CE Feed Durum	49	No limit	2	No limit	2	5	No limit	No limit	10	10
Grade, if specs for Feed Durum not met	<i>Wheat, Sample CE Account Admixture</i>		<i>Wheat, Sample CE Account Stained Kernels</i>		<i>Wheat, Sample CE Account Fireburnt</i>	<i>Wheat, Sample CE Account Fusarium Damage</i>			<i>Wheat, Sample CE Account Heated</i>	<i>Wheat, Sample CE Account Heated</i>

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint				Sprouted %
				Shrunken %	Broken %	Total %	Penetrated smudge %	Red smudge %	Total smudge %	Total %	
No. 1 CEAD	0.5	3	2.0	6	6	7	3K	30K	30K	10	0.5
No. 2 CEAD	2	6	8	10	10	10	0.5	1.0	1	15	2
No. 3 CEAD	5	10	15	12	10	15	1.0	<u>1.5</u>	3	35	8
CE Feed Durum	No limit	No limit	No limit	No limit	50	No limit within broken tolerances	No limit	No limit	No limit	No limit	No limit
Grade, if specs for Feed Durum not met					<i>Sample Broken Grain</i>			<b>No. 3 CWRS</b>	2.5	5	No minimum

K Number of kernel-sized pieces in 500 g

0.30 3.0

**Wheat, Canada Eastern White Winter (CEWW)**

Grade name	Standard of quality			Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CEWW	76 (370)	Any variety of the class CEWW designated as such by order of the Commission	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	1.0
No. 2 CEWW	74 (360)	Any variety of the class CEWW designated as such by order of the Commission	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	0.02	<u>0.015</u>	0.3	0.02	0.03	2.0
No. 3 CEWW	69 (335)	Any variety of the class CEWW designated as such by order of the Commission	May be immature or weather-damaged, moderately free from severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.03	3.0
CE Feed	65 (315)	Any class or variety of wheat excluding amber durum	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	0.1	0.03	1	<u>0.25</u>	0.1	10
Grade, if specs for CE Feed not met	<i>Wheat, Sample CE Account Light Weight</i>			<i>Wheat, Sample CE Account Ergot</i>	<i>Wheat, Sample CE Account Excreta</i>	<i>Wheat, Sample CE Account Admixture</i>	<i>Wheat, Sample CE Account Admixture</i>	2.5% or less- <i>Wheat, Sample CE Account Stones</i> Over 2.5%- <i>Wheat, Sample Salvage</i>	See <i>Mixed grain</i>

**Wheat, Canada Eastern White Winter (CEWW), continued**

Grade name	Wheats of other classes or varieties		Artificial stain, no residue %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper army worm %	Heated	
	Contrasting classes %	Total %							Binburnt, severely mildewed, rotted, mouldy %	Total %
No. 1 CEWW	1.0	5	Nil	4	Nil	1.0	<u>0.75</u>	1	2K	0.1
No. 2 CEWW	2.0	6	3K	7	Nil	1.0	2	3	4K	<u>0.25</u>
No. 3 CEWW	3	10	7K	10	Nil	1.0	4	5	6K	<u>0.75</u>
CE Feed	No limit—but not more than 10% amber durum		2	No limit	2	5	No limit	No limit	5	5
Grade, if specs for CE Feed not met	50% or less amber durum— <i>Wheat, Sample CE Account Admixture</i>		<i>Wheat, Sample CE Account Stained Kernels</i>		<i>Wheat, Sample CE Account Fireburnt</i>	<i>Wheat, Sample CE Account Fusarium Damage</i>			<i>Wheat, Sample CE Account Heated</i>	<i>Wheat, Sample CE Account Heated</i>

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken %	Smudge and blackpoint			Sprouted %
					Penetrated smudge %	Total smudge %	Total %	
No. 1 CEWW	0.5	3	2.0	3	3K	30K	10	1.0
No. 2 CEWW	2	6	8	5	0.5	1	15	5
No. 3 CEWW	5	10	15	8	1.0	3	35	8
CE Feed	No limit	No limit	No limit	No limit—maximum 50% broken	No limit	No limit	No limit	No limit
Grade, if specs for CE Feed not met				<i>Sample Broken Grain</i>				

K Number of kernel-sized pieces in 500 g

## Wheat, Canada Eastern Soft White Spring (CESWS)

Grade name	Standard of quality			Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CESWS	78 (380)	Any variety of the class CESWS designated as such by order of the Commission	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	1.0
No. 2 CESWS	74 (360)	Any variety of the class CESWS designated as such by order of the Commission	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	0.02	0.01	0.3	0.02	0.03	2.0
No. 3 CESWS	69 (335)	Any variety of the class CESWS designated as such by order of the Commission	May be frost-damaged, immature or weather-damaged, moderately free from severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.03	3.0
CE Feed	65 (315)	Any class or variety of wheat excluding amber durum	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	0.1	0.03	1	<u>0.25</u>	0.1	10
Grade, if specs for CE Feed not met	<i>Wheat, Sample CE Account Light Weight</i>			<i>Wheat, Sample CE Account Ergot</i>	<i>Wheat, Sample CE Account Excreta</i>	<i>Wheat, Sample CE Account Admixture</i>	<i>Wheat, Sample CE Account Admixture</i>	2.5% or less- <i>Wheat, Sample CE Account Stones</i> Over 2.5%- <i>Wheat, Sample Salvage</i>	See <i>Mixed grain</i>

**Wheat, Canada Eastern Soft White Spring (CESWS), continued**

Grade name	Wheats of other classes or varieties %	Artificial stain, no residue %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
								Binburnt, severely mildewedrotted, mouldy %	Total %
No. 1 CESWS	3	Nil	4	Nil	1.0	<u>0.75</u>	1	2K	0.1
No. 2 CESWS	6	3K	7	Nil	1.0	2	3	4K	<u>0.25</u>
No. 3 CESWS	10	7K	10	Nil	1.0	4	5	6K	<u>0.75</u>
CE Feed	No limit—but not more than 10% amber durum	2	No limit	2	5	No limit	No limit	5	5
Grade, if specs for CE Feed not met	50% or less—Wheat, Sample CE Account Admixture	Wheat, Sample CE Account Stained Kernels		Wheat, Sample CE Account Fireburnt	Wheat, Sample CE Account Fusarium Damage			Wheat, Sample CE Account Heated	Wheat, Sample CE Account Heated

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint			Sprouted %
				Shrunken %	Broken %	Total %	Penetrated smudge %	Total smudge %	Total %	
No. 1 CESWS	0.5	3	2.0	6	6	7	3K	30K	10	1.0
No. 2 CESWS	2	6	8	10	10	11	0.5	1	15	5
No. 3 CESWS	5	10	15	No limit	13	No limit within broken tolerances	1.0	3	35	8
CE Feed	No limit	No limit	No limit	No limit	50	No limit within broken tolerances	No limit	No limit	No limit	No limit
Grade, if specs for CE Feed not met					Sample Broken Grain					

## Wheat, Canada Eastern Hard White Spring (CEHWS)

Grade name	Standard of quality			Foreign material					
	Minimum test weight kg/hL (g/0.5 L)	Variety	Degree of soundness	Ergot %	Excreta %	Matter other than cereal grains %	Sclerotinia %	Stones %	Total %
No. 1 CEHWS	75 (365)	Any variety of the class CEHWS designated as such by order of the Commission	Reasonably well matured, reasonably free from damaged kernels	0.01	0.01	0.2	0.01	0.03	<u>0.75</u>
No. 2 CEHWS	72 (350)	Any variety of the class CEHWS designated as such by order of the Commission	Fairly well matured, may be moderately weather-damaged, reasonably free from severely damaged kernels	0.02	<u>0.015</u>	0.3	0.02	0.03	1.5
No. 3 CEHWS	69 (335)	Any variety of the class CEHWS designated as such by order of the Commission	May be immature or weather-damaged, moderately free from severely damaged kernels	0.04	<u>0.015</u>	0.5	0.04	0.06	3.5
CE Feed	65 (315)	Any class or variety of wheat excluding amber durum	Reasonably sweet, excluded from other grades of wheat on account of damaged kernels	0.1	0.03	1	<u>0.25</u>	0.1	10
Grade, if specs for CE Feed not met	<i>Wheat, Sample CE Account Light Weight</i>			<i>Wheat, Sample CE Account Ergot</i>	<i>Wheat, Sample CE Account Excreta</i>	<i>Wheat, Sample CE Account Admixture</i>	<i>Wheat, Sample CE Account Admixture</i>	2.5% or less– <i>Wheat, Sample CE Account Stones</i> Over 2.5%– <i>Wheat, Sample Salvage</i>	See <i>Mixed grain</i>

**Wheat, Canada Eastern Hard White Spring (CEHWS), continued**

Grade name	Contrasting classes %	Artificial stain, no residue %	Dark immature %	Degermed %	Fireburnt %	Fusarium damage %	Grass green %	Grasshopper, army worm %	Heated	
									Binburnt, severely mildewed rotted, mouldy %	Total %
No. 1 CEHWS	1.0	Nil	1	4	Nil	1.0	<u>0.75</u>	1	2K	0.1
No. 2 CEHWS	3	3K	<u>2.5</u>	7	Nil	1.0	2	3	5K	<u>0.75</u>
No. 3 CEHWS	5	7K	10	10	Nil	1.5	4	5	10K	2.0
CE Feed	No limit—but not more than 10% amber durum	2	No limit	No limit	2	5	No limit	No limit	10	10
Grade, if specs for CE Feed not met	50% or less amber durum—Wheat, Sample CE Account Admixture	Wheat, Sample CE Account Stained Kernels			Wheat, Sample CE Account Fireburnt	Wheat, Sample CE Account Fusarium Damage			Wheat, Sample CE Account Heated	Wheat, Sample CE Account Heated

Grade name	Natural stain %	Pink %	Sawfly, midge %	Shrunken and broken			Smudge and blackpoint			Sprouted %
				Shrunken %	Broken %	Total %	Penetrated smudge %	Total smudge %	Total %	
No. 1 CEHWS	0.5	<u>1.5</u>	2.0	6	6	7	3K	30K	10	0.5
No. 2 CEHWS	2	5	8	10	10	11	0.5	1	20	2.5
No. 3 CEHWS	5	10	15	12	10	13	1.0	5	35	8
CE Feed	No limit	No limit	No limit	No limit	50	No limit within broken tolerances	No limit	No limit	No limit	No limit
Grade, if specs for CE Feed not met					Sample Broken Grain					

K Number of kernel-sized pieces in 500 g

---

## Export shipments

Export shipments can be commercially clean or not commercially clean.

### Commercially clean

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

Dockage is not reported for commercially clean shipments.

### Not commercially clean (NCC)

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

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 CGC.

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

- 0.1% for samples representing commercially clean shipments loaded from a single terminal or transfer elevator
  - 0.01% for composite samples representing shipments loaded from more than one terminal or transfer elevator
- less a deduction of up to 0.2% to take into account the buildup of attritional material.

### Grading

Wheat on export is graded using standard samples and export specifications. Where there are no export specifications, the primary specifications are used.

## Export grade determinant tables

### Wheat, Canada Western Red Spring (CWRS)

Column	1	Foreign Material						*8 (2+6+7)
		2	3	4	*5 (2+3+4)	6	7	
Grade name	Broken grain through #5 buckwheat sieve	Small seeds %	Attrition %	Roughage %	Total small seeds, attrition and roughage %	Large seeds %	Wild oats %	Total small seeds, large seeds and wild oats %
No. 1 CWRS	0.3	0.05	0.1	0.05	0.1	0.2	0.05	0.2
No. 2 CWRS	0.3	0.05	0.1	0.05	0.1	0.2	0.05	0.2
No. 3 CWRS	0.3	0.05	0.1	0.05	0.1	0.2	0.05	0.2
No. 4 CWRS	0.3	0.05	0.1	0.05	0.1	0.2	0.05	0.2
CW Feed	0.5	0.05	0.1	0.1	0.1	0.5	0.1	0.5

Column	Foreign Material					
	9	10	11	12	13	*14 (2+3+4+6+7 +9+10+11+12+13)
Grade name	Stones %	Mineral matter including stones %	Ergot %	Sclerotinia %	Other cereal grains and other matter %	Total foreign material %
No. 1 CWRS	0.03	0.06	0.01	0.01	0.4	0.4
No. 2 CWRS	0.03	0.10	0.02	0.02	<u>0.75</u>	<u>0.75</u>
No. 3 CWRS	0.06	0.10	0.04	0.04	<u>1.25</u>	<u>1.25</u>
No. 4 CWRS	0.06	0.10	0.04	0.04	2.4	2.4
CW Feed	0.1	<u>0.25</u>	0.1	0.1	5	5

\* Columns which represent a subtotal of other columns show the columns to be added in parenthesis  
 The area inside dashed lines refers to factors which are assessed in determining commercial cleanliness.  
 Total foreign material does not include broken wheat passing through the #5 buckwheat sieve

**Wheat, Canada Western Red Spring (CWRS) continued**

Grade name	Minimum test weight kg/hL (g/0.5 L)	Wheats of other classes or varieties		Minimum hard vitreous kernels %	Sprouted		Heated		Shrunken and broken		
		Contrasting classes %	Total %		Severely sprouted %	Total %	Binburnt, severely mildewed, rotted, mouldy %	Total %	Shrunken %	Broken %	Total %
No. 1 CWRS	79 (385)	0.5	<u>1.5</u>	65	0.10	0.5	1 kernel per 1000 g	0.05	4	5	7
No. 2 CWRS	<u>77.5</u> (378)	1.5	3	35	0.20	1.0	4 kernels per 1000 g	0.4	4	6	8
No. 3 CWRS	<u>76.5</u> (373)	<u>2.5</u>	5	No minimum	0.30	3.0	6 kernels per 1000 g	1.0	4	7	9
No. 4 CWRS	75 (365)	<u>2.5</u>	5	No minimum	0.50	5	6 kernels per 1000 g	1.0	4	7	9
CW Feed	73 (355)	No limit—but not more than 10% amber durum		No minimum	No limit	No limit	<u>2.5</u>	<u>2.5</u>	4	13	15

### Wheat, Canada Western Hard White Spring (CWHWS)

Column	Foreign Material							
	1	2	3	4	*5 (2+3+4)	6	7	*8 (2+6+7)
Grade name	Broken grain through #5 buckwheat sieve	Small seeds %	Attrition %	Roughage %	Total small seeds, attrition and roughage %	Large seeds %	Wild oats %	Total small seeds, large seeds and wild oats %
No. 1 CWHWS	0.3	0.05	0.1	0.05	0.1	0.2	0.05	0.2
No. 2 CWHWS	0.3	0.05	0.1	0.05	0.1	0.2	0.05	0.2
No. 3 CWHWS	0.3	0.05	0.1	0.05	0.1	0.2	0.05	0.2
No. 4 CWHWS	0.3	0.05	0.1	0.05	0.1	0.2	0.05	0.2
CW Feed	0.5	0.05	0.1	0.1	0.1	0.5	0.1	0.5

Column	Foreign Material					
	9	10	11	12	13	*14 (2+3+4+6+7 +9+10+11+12+13)
Grade name	Stones %	Mineral matter including stones %	Ergot %	Sclerotinia %	Other cereal grains and other matter %	Total foreign material %
No. 1 CWHWS	0.03	0.06	0.01	0.01	0.4	0.4
No. 2 CWHWS	0.03	0.10	0.02	0.02	<u>0.75</u>	<u>0.75</u>
No. 3 CWHWS	0.06	0.10	0.04	0.04	<u>1.25</u>	<u>1.25</u>
No. 4 CWHWS	0.06	0.10	0.04	0.04	2.4	2.4
CW Feed	0.1	<u>0.25</u>	0.1	0.1	5	5

\* Columns which represent a subtotal of other columns show the columns to be added in parenthesis. The area inside dashed lines refers to factors which are assessed in determining commercial cleanliness. Total foreign material does not include broken wheat passing through the #5 buckwheat sieve

**Wheat, Canada Western Hard White Spring (CWHWS) continued**

Grade name	Minimum test weight kg/hL (g/0.5 L)	Wheats of other classes or varieties		Sprouted		Heated		Shrunken and broken		
		Contrasting classes %	Total %	Severely sprouted %	Total %	Binburnt, severely mildewed, rotted, mouldy %	Total %	Shrunken %	Broken %	Total %
No. 1 CWHWS	79 (385)	0.5	<u>1.5</u>	0.10	0.5	1 kernel per 1000 g	0.05	4	5	7
No. 2 CWHWS	<u>77.5</u> (378)	1.5	3	0.20	1.0	4 kernels per 1000 g	0.4	4	6	8
No. 3 CWHWS	<u>76.5</u> (373)	<u>2.5</u>	5	0.30	3.0	6 kernels per 1000 g	1.0	4	7	9
No. 4 CWHWS	75 (365)	<u>2.5</u>	5	0.50	5	6 kernels per 1000 g	1.0	4	7	9
CW Feed	73 (355)	No limit—but not more than 10% amber durum		No limit	No limit	<u>2.5</u>	<u>2.5</u>	4	13	15

### Wheat, Canada Western Amber Durum (CWAD)

Column	1	Foreign Material						*8 (2+6+7)
		2	3	4	*5 (2+3+4)	6	7	
Grade name	Broken grain through #5 buckwheat sieve	Small seeds %	Attrition %	Roughage %	Total small seeds, attrition and roughage %	Large seeds %	Wild oats %	Total small seeds, large seeds and wild oats %
No. 1 CWAD	0.3	0.05	0.1	0.05	0.1	0.2	0.10	0.2
No. 2 CWAD	0.3	0.05	0.1	0.05	0.1	0.2	0.15	0.2
No. 3 CWAD	0.3	0.05	0.1	0.05	0.1	0.2	0.15	0.2
No. 4 CWAD	0.5	0.05	0.1	0.05	0.1	0.2	0.15	0.2
No. 5 CWAD	0.5	0.05	0.1	0.1	0.1	0.5	0.15	0.5

Column	Foreign Material					
	9	10	11	12	13	*14 (2+3+4+6+7 +9+10+11+12+13)
Grade name	Stones %	Mineral matter including stones %	Ergot %	Sclerotinia %	Other cereal grains and other matter %	Total foreign material %
No. 1 CWAD	0.03	0.06	0.01	0.01	0.5	0.5
No. 2 CWAD	0.03	0.10	0.02	0.02	0.8	0.8
No. 3 CWAD	0.06	0.10	0.04	0.04	1.0	1.0
No. 4 CWAD	0.06	0.10	0.04	0.04	3.0	3.0
No. 5 CWAD	0.1	<u>0.25</u>	0.1	0.1	5	5

\* Columns which represent a subtotal of other columns show the columns to be added in parenthesis  
 The area inside dashed lines refers to factors which are assessed in determining commercial cleanliness.  
 Total foreign material does not include broken wheat passing through the #5 buckwheat sieve

**Wheat, Canada Western Amber Durum (CWAD) continued**

Grade name	Minimum test weight kg/hL (g/0.5 L)	Wheats of other classes or varieties		Minimum hard vitreous kernels %	Sprouted		Heated		Shrunken and broken			Smudge and blackpoint			
		Wheats of other classes %	Total %		Severely sprouted %	Total %	Binburnt, severely mildewed, rotted, mouldy %	Total %	Shrunken %	Broken %	Total %	Smudge			Total %
												Penetrated %	Red %	Total %	
No. 1 CWAD	80 (392)	2.0	3	80	0.10	0.5	1 kernel per 1000 g	0.05	3	6	7	3K	30K	30K	5
No. 2 CWAD	<u>79.5</u> (390)	2.5	5	60	0.20	2	2 kernels per 1000 g	0.1	3	8	9	<u>0.25</u>	1	1	10
No. 3 CWAD	78 (382)	<u>3.5</u>	7	40	8	8	4 kernels per 1000 g	0.4	3	10	11	0.5	1	3	20
No. 4 CWAD	75 (367)	10	15	No minimum	12	12	0.5	1.5	3	11	12	Consider overall appearance No limit			
No. 5 CWAD	73 (357)	15	No limit	No minimum	No limit	No limit	5	5	3	13	15				

K Number of kernel-sized pieces in 500 g

### Wheat, Canada Western Red Winter (CWRW)

Column	Foreign Material							
	1	2	3	4	*5 (2+3+4)	6	7	*8 (2+6+7)
Grade name	Broken grain through #5 buckwheat sieve	Small seeds %	Attrition %	Roughage %	Total small seeds, attrition and roughage %	Large seeds %	Wild oats %	Total small seeds, large seeds and wild oats %
No. 1 CWRW	0.3	0.05	0.1	0.05	0.1	0.2	0.1	0.2
No. 2 CWRW	0.3	0.05	0.1	0.05	0.1	0.2	0.1	0.2
CW Feed	0.5	0.05	0.1	0.1	0.1	0.5	0.1	0.5

Column	Foreign Material					
	9	10	11	12	13	*14 (2+3+4+6+7 +9+10+11+12+13)
Grade name	Stones %	Mineral matter including stones %	Ergot %	Sclerotinia %	Other cereal grains and other matter %	Total foreign material %
No. 1 CWRW	0.03	0.06	0.01	0.01	1.0	1.0
No. 2 CWRW	0.06	0.10	0.04	0.04	2.0	2.0
CW Feed	0.1	<u>0.25</u>	0.1	0.1	5	5

\* Columns which represent a subtotal of other columns show the columns to be added in parenthesis. The area inside dashed lines refers to factors which are assessed in determining commercial cleanliness. Total foreign material does not include broken wheat passing through the #5 buckwheat sieve

**Wheat, Canada Western Red Winter (CWRW) continued**

Grade name	Minimum test weight kg/hL (g/0.5 L)	Wheats of other classes or varieties		Minimum hard vitreous kernels %	Sprouted		Heated		Shrunken and broken		
		Contrasting classes %	Total %		Severely sprouted %	Total %	Binburnt, severely mildewed, rotted, mouldy %	Total %	Shrunken %	Broken %	Total %
No. 1 CWRW	78 (380)	1.0	3	50	0.10	0.5	1 kernel per 1000 g	0.05	3	5	7
No. 2 CWRW	74 (360)	<u>2.5</u>	6	No minimum	0.30	<u>2.5</u>	2 kernels per 1000 g	0.1	3	7	9
CW Feed	73 (355)	No limit—but not more than 10% amber durum		No minimum	No limit	No limit	<u>2.5</u>	<u>2.5</u>	4	13	15

### Wheat, Canada Western Soft White Spring (CWSWS)

Column	1	Foreign Material						*8 (2+6+7)
		2	3	4	*5 (2+3+4)	6	7	
Grade name	Broken grain through #5 buckwheat sieve	Small seeds %	Attrition %	Roughage %	Total small seeds, attrition and roughage %	Large seeds %	Wild oats %	Total small seeds, large seeds and wild oats %
No. 1 CWSWS	0.3	0.05	0.1	0.05	0.1	0.2	0.05	0.2
No. 2 CWSWS	0.3	0.05	0.1	0.05	0.1	0.2	0.05	0.2
No. 3 CWSWS	0.3	0.05	0.1	0.05	0.1	0.2	0.05	0.2
CW Feed	0.5	0.05	0.1	0.1	0.1	0.5	0.1	0.5

Column	Foreign Material					
	9	10	11	12	13	*14 (2+3+4+6+7 +9+10+11+12+13)
Grade name	Stones %	Mineral matter including stones %	Ergot %	Sclerotinia %	Other cereal grains and other matter %	Total foreign material %
No. 1 CWSWS	0.03	0.06	0.01	0.01	<u>0.75</u>	<u>0.75</u>
No. 2 CWSWS	0.03	0.10	0.02	0.02	1.0	1.0
No. 3 CWSWS	0.06	0.10	0.04	0.04	1.5	1.5
CW Feed	0.1	<u>0.25</u>	0.1	0.1	5	5

\* Columns which represent a subtotal of other columns show the columns to be added in parenthesis  
 The area inside dashed lines refers to factors which are assessed in determining commercial cleanliness.  
 Total foreign material does not include broken wheat passing through the #5 buckwheat sieve

**Wheat, Canada Western Soft White Spring (CWSWS) continued**

Grade name	Minimum test weight kg/hL (g/0.5 L)	Wheats of other classes or varieties %	Sprouted		Heated		Shrunken and broken			Smudge and blackpoint		
			Severely sprouted %	Total %	Binburnt, severely mildewed, rotted, mouldy %	Total %	Shrunken %	Broken %	Total %	Smudge		Total %
										Penetrated %	Total %	
No. 1 CWSWS	78 (380)	<u>1.5</u>	0.10	1	1 kernel per 1000 g	0.05	3	5	7	3K	30K	10
No. 2 CWSWS	<u>75.5</u> (368)	3	0.30	5	2 kernels per 1000 g	0.1	3	6	8	0.5	1	15
No. 3 CWSWS	75 (365)	5	0.50	8	4 kernels per 1000 g	0.4	3	7	9	1.0	3	35
CW Feed	73 (355)	No limit—but not more than 10% amber durum	No limit	No limit	<u>2.5</u>	<u>2.5</u>	4	13	15	No limit	No limit	No limit

K Number of kernel-sized pieces in 500 g

### Wheat, Canada Western Extra Strong (CWES)

Column	Foreign Material							
	1	2	3	4	*5 (2+3+4)	6	7	*8 (2+6+7)
Grade name	Broken grain through #5 buckwheat sieve	Small seeds %	Attrition %	Roughage %	Total small seeds, attrition and roughage %	Large seeds %	Wild oats %	Total small seeds, large seeds and wild oats %
No. 1 CWES	0.3	0.05	0.1	0.05	0.1	0.2	0.10	0.2
No. 2 CWES	0.3	0.05	0.1	0.05	0.1	0.2	0.10	0.2
CW Feed	0.5	0.05	0.1	0.1	0.1	0.5	0.1	0.5

Column	Foreign Material					
	9	10	11	12	13	*14 (2+3+4+6+7 +9+10+11+12+13)
Grade name	Stones %	Mineral matter including stones %	Ergot %	Sclerotinia %	Other cereal grains and other matter %	Total foreign material %
No. 1 CWES	0.03	0.10	0.03	0.03	<u>0.75</u>	<u>0.75</u>
No. 2 CWES	0.06	0.10	0.06	0.06	1.5	1.5
CW Feed	0.1	<u>0.25</u>	0.1	0.1	5	5

\* Columns which represent a subtotal of other columns show the columns to be added in parenthesis. The area inside dashed lines refers to factors which are assessed in determining commercial cleanliness. Total foreign material does not include broken wheat passing through the #5 buckwheat sieve

**Wheat, Canada Western Extra Strong (CWES) continued**

Grade name	Minimum test weight kg/hL (g/0.5 L)	Wheats of other classes or varieties		Sprouted		Heated		Shrunken and broken		
		Contrasting classes %	Total %	Severely sprouted %	Total %	Binburnt, severely mildewed, rotted, mouldy %	Total %	Shrunken %	Broken %	Total %
No. 1 CWES	78 (380)	1.5	3	0.10	0.5	1 kernel per 1000 g	0.4	3.	7	8
No. 2 CWES	76 (370)	<u>2.5</u>	5	0.30	2	2 kernels per 1000 g	1.0	3	7	8
CW Feed	73 (355)	No limit—but not more than 10% amber durum		No limit	No limit	<u>2.5</u>	<u>2.5</u>	4	13	15

**Wheat, Canada Prairie Spring Red (CPSR)**

Column	Foreign Material							
	1	2	3	4	*5 (2+3+4)	6	7	*8 (2+6+7)
Grade name	Broken grain through #5 buckwheat sieve	Small seeds %	Attrition %	Roughage %	Total small seeds, attrition and roughage %	Large seeds %	Wild oats %	Total small seeds, large seeds and wild oats %
No. 1 CPSR	0.3	0.05	0.1	0.05	0.1	0.2	0.10	0.2
No. 2 CPSR	0.3	0.05	0.1	0.05	0.1	0.2	0.10	0.2
CW Feed	0.5	0.05	0.1	0.1	0.1	0.5	0.1	0.5

Column	Foreign Material					
	9	10	11	12	13	*14 (2+3+4+6+7 +9+10+11+12+13)
Grade name	Stones %	Mineral matter including stones %	Ergot %	Sclerotinia %	Other cereal grains and other matter %	Total foreign material %
No. 1 CPSR	0.03	0.10	0.03	0.03	<u>0.75</u>	<u>0.75</u>
No. 2 CPSR	0.03	0.10	0.06	0.06	1.5	1.5
CW Feed	0.1	<u>0.25</u>	0.1	0.1	5	5

\* Columns which represent a subtotal of other columns show the columns to be added in parenthesis. The area inside dashed lines refers to factors which are assessed in determining commercial cleanliness. Total foreign material does not include broken wheat passing through the #5 buckwheat sieve

**Wheat, Canada Prairie Spring Red (CPSR) continued**

Grade name	Minimum test weight kg/hL (g/0.5 L)	Wheats of other classes or varieties		Sprouted		Heated		Shrunken and broken		
		Contrasting classes %	Total %	Severely sprouted %	Total %	Binburnt, severely mildewed, rotted, mouldy %	Total %	Shrunken %	Broken %	Total %
No. 1 CPSR	77 (375)	3	5	0.10	0.5	4 kernels per 1000 g	0.4	5	6	9
No. 2 CPSR	75 (365)	5	10	0.30	2	6 kernels per 1000 g	1.0	5	6	9
CW Feed	73 (355)	No limit—but not more than 10% amber durum		No limit	No limit	<u>2.5</u>	<u>2.5</u>	4	13	15

**Wheat, Canada Prairie Spring White (CPSW)**

Column	Foreign Material							
	1	2	3	4	*5 (2+3+4)	6	7	*8 (2+6+7)
Grade name	Broken grain through #5 buckwheat sieve	Small seeds %	Attrition %	Roughage %	Total small seeds, attrition and roughage %	Large seeds %	Wild oats %	Total small seeds, large seeds and wild oats %
No. 1 CPSW	0.3	0.05	0.1	0.05	0.1	0.2	0.10	0.2
No. 2 CPSW	0.3	0.05	0.1	0.05	0.1	0.2	0.10	0.2
CW Feed	0.5	0.05	0.1	0.1	0.1	0.5	0.1	0.5

Column	Foreign Material					
	9	10	11	12	13	*14 (2+3+4+6+7 +9+10+11+12+13)
Grade name	Stones %	Mineral matter including stones %	Ergot %	Sclerotinia %	Other cereal grains and other matter %	Total foreign material %
No. 1 CPSW	0.03	0.10	0.03	0.03	<u>0.75</u>	<u>0.75</u>
No. 2 CPSW	0.03	0.10	0.06	0.06	1.5	1.5
CW Feed	0.1	<u>0.25</u>	0.1	0.1	5	5

\* Columns which represent a subtotal of other columns show the columns to be added in parenthesis. The area inside dashed lines refers to factors which are assessed in determining commercial cleanliness. Total foreign material does not include broken wheat passing through the #5 buckwheat sieve

**Wheat, Canada Prairie Spring White (CPSW) continued**

Grade name	Minimum test weight kg/hL (g/0.5 L)	Wheats of other classes or varieties		Sprouted		Heated		Shrunken and broken		
		Contrasting classes %	Total %	Severely sprouted %	Total %	Binburnt, severely mildewed, rotted, mouldy %	Total %	Shrunken %	Broken %	Total %
No. 1 CPSW	77 (375)	3	5	0.10	0.5	4 kernels per 1000 g	0.4	5	6	9
No. 2 CPSW	75 (365)	5	10	0.30	2	6 kernels per 1000 g	1.0	5	6	9
CW Feed	73 (355)	No limit—but not more than 10% amber durum		No limit	No limit	<u>2.5</u>	<u>2.5</u>	4	13	15