

Canadian Grain Commission Grading Factors for Lentils

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The Canadian Grain Commission (CGC) sets out grading factors to be considered in establishing lentil grades. These factors are based on subjective analysis of lentil samples using established protocols and colour guides. The following are the main grading factors and the complete list is available from the CGC website at: <http://grainscanada.gc.ca/oggg-gocg/18/oggg-gocg-18-eng.htm>

Ascochyta - Ascochyta is a fungal disease that attacks the lentil plant and seed. Any degree of white fungal growth on the seed is considered damaged.

Bleached - Bleached seeds have a whitened seed coat that is distinctly faded from the natural red colour of sound lentils. The discoloration must affect the entire seed coat. Lentils having a lighter pink shade that are contrasting with the overall sample are considered sound.

Colour Lentils, Other Than Red

Colour is determined on the basis of the cleaned sample after the removal of stained and damaged lentils:

- Good natural colour: sound and well matured with a good natural colour
- Reasonably good natural colour: moderately immature, lightly earth-tagged, or lightly discoloured from storage or other natural causes
- Fair colour: immature but not green, moderately earth-tagged, or otherwise moderately discoloured from natural causes
- Poor colour: cannot be considered of fairly good colour but is not severely earth-tagged, immature, or severely stained
- Sunburned: the normal discolouration of lentil that occurs during storage – the color may vary from light tan to brown or very dark brown, depending on the duration and conditions of storage
- Blue-black: the dark blue hull discolouration that is natural on some lentil

Colour, Red Lentils - Colour is evaluated after the removal of damaged lentils (excluding wrinkled). Bleached and copper seeds are evaluated to determine the overall colour.

Copper - Copper seeds have a rust color covering both sides of seed and the entire seed coat. The rust colour is in distinct contrast with the natural red colour of sound lentils.

Damage - Damaged lentils may be peeled, split, broken, sprouted, distinctly green, frost damaged, distinctly deteriorated, or discoloured by weather or disease, insect damaged, heat damaged, or otherwise damaged in a way which materially affects quality.

Frost Damage - Frost damage is normally indicated by a combination of wrinkling and close adherence of the seed coat to the cotyledon. The seed coat may be translucent in appearance, and the cotyledons are brittle in texture.

Stained - Stained lentils includes (only applies to lentils, other than red):

- Mottled seeds: seeds with a significant number of distinct spots on the seed coat
- Water spot: seeds with distinct brown discolourations on the seed coat
- Ascochyta: seeds with dark-coloured lesions on the seed coat. Seeds with white fungal growth are also considered as damaged. See Ascochyta.

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- **Blue-black:** seeds of green lentils with significant blue-black discolouration of the seed coat. Seeds of varieties of lentils with dark-green speckled or coloured seed coats are considered as contrasting colours.

Wrinkled - Wrinkled seeds are characterized by a seed surface that has sharp ridges and pronounced depressions that could also be described as seed coat folds and indents. Wrinkles may be evident only on one side of the lentil. Lentils that only have dimpled seed coat or folds restricted only to the outside ring of the seed are considered sound. The red lentil wrinkled guide may be used to assist in the determination of wrinkled seeds.

Foreign Material – includes tolerances for Ergot, excreta, insect parts, Sclerotinia, stones, and other foreign material that is not lentil.

Export Standards

Lentils are considered commercially cleaned when they contain 0.2 per cent or less by weight of dockage material. Shipments that do not meet the standards for commercial cleanliness are referred to as not commercially clean. Such shipments are allowed only with the permission of the CGC.

Primary and export grade determinants tables

Lentils, Canada, other than Red (CAN)

Grade name	Standard of quality		Stained %	Damage			
	Degree of soundness	Contrasting colours		Heated %	Peeled, split and broken %	Other damage %	Total %
No. 1 Canada	Uniform size, good natural colour	0.2	1	0.2	2.0	1.0	2.0
No. 2 Canada	Uniform size, reasonably good natural colour	0.5	4	0.5	3.5	2	3.5
Extra No. 3 Canada	Uniform size, fair colour	2	7	0.5	5	5	5
No. 3 Canada	Poor colour	3	No limit	1	10	10	10
Grade, if No. 3 specs not met		<i>Lentils, Sample Canada Account Contrasting Colours</i>		<i>Lentils, Sample Canada Account Heated</i>	<i>Lentils, Sample Canada Account Damaged</i>	<i>Lentils, Sample Canada Account Damaged</i>	<i>Lentils, Sample Canada Account Damaged</i>

Grade name	Foreign material						
	Ergot %	Excreta %	Insect parts %	Sclerotinia %	Stones %	Other foreign material %	Total %
No. 1 Canada	0.05	0.01	0.02	0.05	0.10	0.2	0.2
No. 2 Canada	0.05	0.01	0.02	0.05	0.2	0.5	0.5
Extra No. 3 Canada	0.05	0.01	0.02	0.05	0.2	0.5	0.5
No. 3 Canada	0.05	0.01	0.02	0.05	0.2	1	1
Grade, if No. 3 specs not met	<i>Lentils, Sample Canada Account Ergot</i>	<i>Lentils, Sample Canada Account Excreta</i>	<i>Lentils, Sample Canada Account Admixture</i>	<i>Lentils, Sample Canada Account Admixture</i>	<i>2.5% or less—Lentils, Rejected (grade) Account Stones, or Lentils, Sample Canada Account Stones Over 2.5%—Lentils, Sample Salvage</i>	<i>Lentils, Sample Canada Account Admixture</i>	<i>Lentils, Sample Canada Account Admixture</i>

Note: Upon written request, the variety name will be added to the grade name and the statement "Varietal purity not guaranteed" shown in the remarks section of any certificate issued.

Lentils, Canada Red (CAN)

Grade name	Standard of quality			Contrasting colours %	Damage				Wrinkled %	Total damage including wrinkled %
	Degree of soundness	Colour			Heated %	Peeled, split and broken %	Other damage %	Total %		
		Copper %	Total bleached including copper %							
No. 1 Canada	Uniform size, good natural colour	1	3	0.2	0.2	2.0	1.0	2.0	2.0	4
No. 2 Canada	Uniform size, reasonably good natural colour	3	10	0.5	0.5	3.5	2	3.5	5.0	8
Extra No. 3 Canada	Uniform size, fair colour	10	25	2	0.5	5	5	5	N/A	N/A
No. 3 Canada	Poor colour	No limit	No limit	3	1	10	10	10	N/A	N/A
Grade, if No. 3 specs not met				<i>Lentils, Sample Canada Red Account Contrasting Colours</i>	<i>Lentils, Sample Canada Red Account Heated</i>	<i>Lentils, Sample Canada Red Account Damaged</i>	<i>Lentils, Sample Canada Red Account Damaged</i>	<i>Lentils, Sample Canada Red Account Damaged</i>		

Grade name	Foreign material							Total %
	Ergot %	Excreta %	Insect parts %	Sclerotinia %	Stones %	Other foreign material %		
No. 1 Canada	0.05	0.01	0.02	0.05	0.10	0.2	0.2	
No. 2 Canada	0.05	0.01	0.02	0.05	0.2	0.5	0.5	
Extra No. 3 Canada	0.05	0.01	0.02	0.05	0.2	0.5	0.5	
No. 3 Canada	0.05	0.01	0.02	0.05	0.2	1	1	
Grade, if No. 3 specs not met	<i>Lentils, Sample Canada Red Account Ergot</i>	<i>Lentils, Sample Canada Red Account Excreta</i>	<i>Lentils, Sample Canada Red Account Admixture</i>	<i>Lentils, Sample Canada Red Account Admixture</i>	<i>2.5% or less—Lentils, Rejected (grade) Account Stones, or Lentils, Sample Canada Red Account Stones Over 2.5%—Lentils, Sample Salvage</i>	<i>Lentils, Sample Canada Red Account Admixture</i>	<i>Lentils, Sample Canada Red Account Admixture</i>	

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