



Technical Specifications for

CANADIAN BEANS OTHER THAN CRANBERRY, BLACKEYE, YELLOWEYE OR PEA BEANS

Specification reference: **Canadian Dry Beans other than Cranberry, Blackeye, Yelloweye or Pea Beans_Grade 2**

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1. SCOPE

This specification applies to **Canadian Dry Beans other than Cranberry, Blackeye, Yelloweye or Pea Beans_Grade 2 (Beans)** purchased by WFP.

2. DEFINITIONS

Colour is evaluated on the cleaned sample after the removal of splits and damaged beans. There is no numeric tolerance for colour. It is included in the evaluation of the standard of quality of the sample.

Fairly good colour: Beans have moderately adhered soil or are stained, or moderately discoloured from storage.

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

Insect parts refers to pieces of insects such as grasshoppers and lady bugs that remain in the sample after cleaning or processing. Samples are analyzed for the percentage of insect fragments and graded according to established tolerances.

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.

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.

Foreign material. This includes any material other than beans or split beans not removed in cleaning.

Contrasting classes: Beans of another class that contrast in colour, size or shape to the predominant beans in a sample are considered to be of a contrasting class.

Heated: Red kidney beans: Heating is indicated by a dull seed coat, dark red to black in colour.

Rotted beans are whole beans or pieces of beans that are visibly in advanced stages of decomposition and that feel spongy under pressure.

Mouldy beans are characterized by the presence of dark blue exterior moulds that develop in machine-damaged crevices. Light and dark red kidney beans may develop yellow to black interior moulds in the concave centre area.

Splits include split beans, broken pieces of beans that are less than three-quarters of whole kernels, and halves of beans that are loosely held together by cracked seed coats. Splits do not include beans that are otherwise damaged. In other words, if a split is damaged, it is graded as *Damage*, not as splits.

Other classes of beans that blend are sound beans of other classes which are similar in colour, size and shape to the predominant beans in a sample.

3. REFERENCE

Codex Standard for certain pulses grains (Codex Stan 171-1989, rev. 1-1995).

Official grain grading guide-19.Beans_ Canadian Grain Commission_ August 1, 2013
(<http://www.grainscanada.gc.ca/oggg-gocg/2013/19/oggg-gocg-19-eng.htm>)

4. PRODUCT SPECIFICATION

4.1 General requirements

• Organoleptic:	Clean and bright appearance, Natural odour
• Colour:	Fair good colour
• Moisture content:	14.0% max.
• Ergot:	0.05% max.
• Excreta:	0.01% max.
• Insect part:	0.02% max.
• Sclerotinia:	0.05% max.
• Stones, shale or similar material:	0.10% max.
• Total foreign material:	0.20% max.
• Contrasting classes:	3.0% max.
• Heated, rotted, mouldy:	0.20% max.
• Total damage, foreign material and contrasting classes:	3.0% max.
• Total damage including splits, foreign material and contrasting classes:	4.0% max.
• Other classes that blend:	5.0% max.
• Live insects:	Nil
• Crop year:	As per contractual agreement
• GMO (<i>only if required</i>):	Negative (< 0.9% of GMO material)

4.2 Toxic or noxious seeds

The products covered by the provisions of this specification shall be free from the following toxic or noxious seeds in amounts which may represent a hazard to human health.

- *Crotalaria* (*Crotalaria* spp.), Corn cockle (*Agrostemma githago* L.), Castor bean (*Ricinus communis* L.), Jimson weed (*Datura* spp.), and other seeds that are commonly recognized as harmful to health.

4.3 Contaminants

4.3.1 Heavy metals

Beans shall be free from heavy metals in amounts which may represent a hazard to health.

4.3.2 Pesticide residues

Beans shall comply with those maximum residue limits established by the Codex Alimentarius Commission for this commodity.

4.3.3 Mycotoxins

Beans shall comply with those maximum mycotoxin limits established by the Codex Alimentarius Commission for this commodity.

4.4 Hygiene

4.4.1 It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the *Recommended International Code of Practice – General Principles of Food Hygiene* (CAC/RCP 1-1969), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to these products.

4.4.2 To the extent possible in good manufacturing practice, the products shall be free from objectionable matter.

4.4.3 When tested by appropriate methods of sampling and examination, the products:

- shall be free from micro-organisms in amounts which may represent a hazard to health;
- shall be free from parasites which may represent a hazard to health; and
- shall not contain any substance originating from micro-organisms in amounts which may represent a hazard to health.

5. PACKAGING AND MARKING

As per contractual agreement.

6. STORING

Beans must be stored under dry, ventilated and hygienic conditions.

7. SAMPLING REQUIREMENTS

Representative samples can be drawn according to international sampling method standards at the bagging section or in the warehouse.

For packed units, sampling frequency and reference method are showed in *table 1*. One laboratory samples of about 3 kg is required by lot or sub-lot of 500MT maximum.

For the bulk (static and flowing), the sampling must follow the rules described in paragraphs 5.2 of ISO 24333-2009.

Table 1: Sampling rules

Lot or sub-lot size (MT)	Number of increment	Place of sampling	Reference (or equivalent)
≤100	3 % of bags and minimum 50 bags (e.g. 60 increments for a lot of 100 MT, packed in 50 kg bag)	Warehouse or during production	GAFTA 124-2
101-500	3 % of bags <i>Examples:</i> - 120 increments for a lot of 200 MT, packed in 50 kg bag) - 180 increments for a lot of 300 MT, packed in 50 kg bag - 240 increments for a lot of 400 MT, packed in 50 kg bag - 300 increments for a lot of 500 MT, packed in 50 kg bag		

7. ANALYTICAL REQUIREMENTS

The principal analyses/tests in table 2 must be performed in order to check if the quality of the **Beans** meets above requirements. Additional analyses shall be defined in case of further quality assessment.

Table 2: List of compulsory analyses/tests and reference method

No	Analyses/tests	Limit	Reference method (or equivalent)
1	Organoleptic	Clean and bright appearance, Natural odour	Organoleptic examination
2	Colour	Fair good colour	Visual examination
3	Moisture content	14.0% max.	ISO 712- 2009
4	Ergot	0.05% max.	Visual examination
5	Excreta	0.01% max.	Visual examination
6	Insect part	0.02% max.	Visual examination
7	Sclerotinia	0.05% max.	Visual examination
8	Stones, shale or similar material	0.10% max.	Visual examination
9	Total foreign material	0.20% max.	Visual examination
10	Contrasting classes	3.0% max.	Visual examination
11	Heated, rotted, mouldy	0.20% max.	Visual examination
12	Total damage, foreign material and contrasting classes	3.0% max.	Visual examination
13	Total damage including splits, foreign material and contrasting classes	4.0% max.	Visual examination
14	Other classes that blend	5.0% max.	Visual examination
15	Live insects	Nil	Visual examination
16	GMO (only if required)	Negative (< 0.9% of GMO material)	