

DRY BEANS - BEST PRACTICES FOR IMPROVED NUTRITION AND INCOMES

MOISTURE

MOISTURE CONTENT:

Moisture content is a measure of how much water is in the beans (how wet it is). It can be measured with a moisture meter.

Characteristic	Maximum Limit		
	Grade 1	Grade 2	Grade 3
Moisture, % m/m	14		



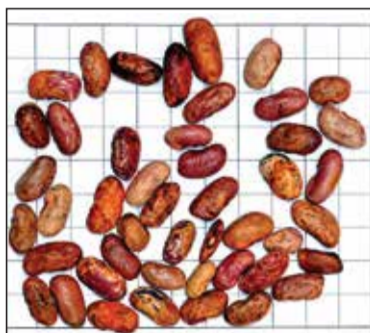
ORGANOLEPTIC (Appearance, Colour and Smell):

Dry beans are dried matured grains which are clean, wholesome, uniform in size, colour and shape; free from abnormal flavours, mouldy, sour or other undesirable odour, horrible smell and discolouration.



DEFECTIVE GRAIN

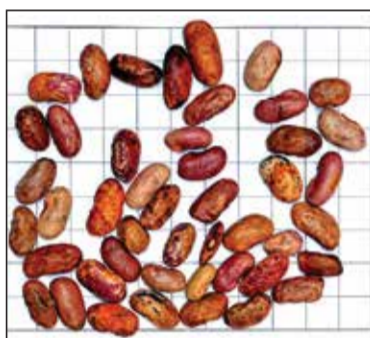
SHRIVELLED/DISEASED AND DISCOLOURED BEANS:



DISCOLOURED BEANS

Discoloured beans are beans which are damaged by heat, frost or water.

Note: Discolouration is limited to at least 25% change in colour on both sides.



ROTTEN AND DISEASED BEANS:

Rotten and diseased beans are beans affected by mould growth or bacterial decomposition or other causes that may be noticed without having to cut the grains to examine them and render them unsafe for human consumption.



IMMATURE/SHRIVELLED BEANS:

Immature/shrivelled beans are beans which are under-developed and wrinkled over their entire surface.

Characteristic	Maximum Limit		
	Grade 1	Grade 2	Grade 3
Shrivelled/diseased and discoloured, % m/m	3	5	7

PEST DAMAGED BEANS:



These are dry beans with obvious weevilbored holes or which have evidence of boring or tunneling, indicating the presence of insects, insect webbing or insect refuse; or beans chewed in one or more than one part of the bean which exhibit evident traces of an attack by vermin.

Characteristic	Maximum Limit		
	Grade 1	Grade 2	Grade 3
Pest damaged beans, % m/m	1.0	2.0	3.0

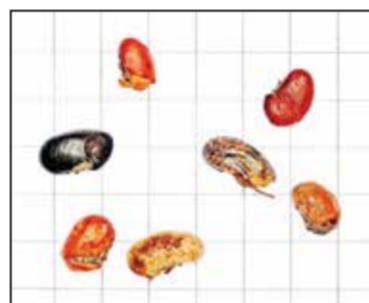
BROKEN AND SPLIT BEANS:



These are beans whose cotyledons are separated or one or both of the cotyledons have been broken.

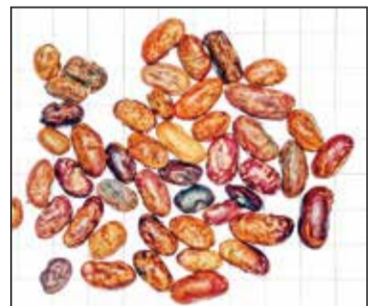
Characteristic	Maximum Limit		
	Grade 1	Grade 2	Grade 3
Broken and split, % m/m	1	2	3

GERMINATED BEANS:



Germinated beans are bean seeds showing visible signs of sprouting, such as cracked seed coats through which a sprout has emerged or is just beginning to merge.

TOTAL DEFECTIVES:



These are beans that have been broken, pest damaged, shrivelled, immature, rotten, mouldy, diseased, germinated and discoloured.

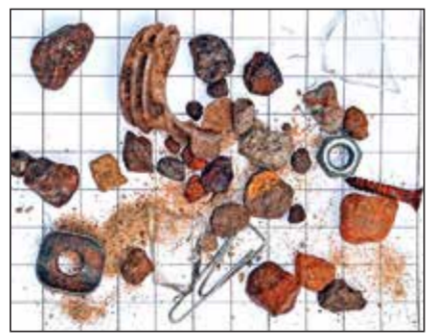
Characteristic	Maximum Limit		
	Grade 1	Grade 2	Grade 3
Total defectives, % m/m	3.5	6.3	9.1

Note: The parameter total defective grains is not the sum total of the individual defects. It is limited to 70% of the sum total of individual defects

FOREIGN MATTER

INORGANIC MATTER:

Inorganic matter are stones, glass, pieces of soil and other mineral matter.



ORGANIC MATTER:

Organic matter is any animal or plant matter (seed coats, straws, weeds) other than beans, damaged beans, inorganic extraneous matter and harmful / toxic seeds.



FILTH:

Filth are impurities of animal origin for example animal bone fragments, bird excrement and rat droppings.

Characteristics	Maximum Limit		
	Grade 1	Grade 2	Grade 3
Filth, % m/m	0.1 %		



FOREIGN MATTER:

Foreign matter is all organic and inorganic material other than beans, broken kernels and other grains.

Foreign Matter = Organic Matter + Inorganic Matter

Characteristic	Maximum Limit		
	Grade 1	Grade 2	Grade 3
Foreign matter, % m/m	0.5	0.75	1.0

CONTRASTING VARIETIES:

Contrasting varieties are beans of different colour, size or shape from the beans of the designated variety.

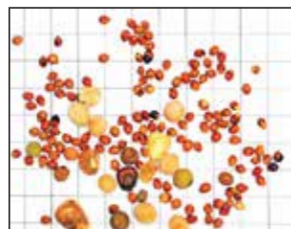
Characteristic	Maximum limit		
	Grade 1	Grade 2	Grade 3
Contrasting varieties, % m/m	1.5	3	5



OTHER EDIBLE GRAINS:

These are grains other than common beans (*Phaseolus vulgaris*), whole or broken such as maize, sorghum, wheat etc.

Characteristic	Maximum limit		
	Grade 1	Grade 2	Grade 3
Other edible beans, % m/m	0.1	0.2	0.5



PESTICIDE RESIDUES:

A pesticide is a chemical that is used to prevent, destroy, or repel pests. Most pesticides contain chemicals that can be harmful to people, animals, or the environment. Dry beans shall comply with pesticide residue limits established by the Codex Alimentarius Commission for this commodity.

OTHER CONTAMINANTS:

A contaminant is any substance not intentionally added to food or feed for food producing animals, which is present in such food or feed as a result of the production, manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food or feed, or as a result of environmental contamination such as heavy metal which may be of public health concern e.g. Lead and Cadmium.