

Section 8

Cereal Rye

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8.1 Cereal Rye Classification Procedure

The following procedure is to be used when classifying a load of Cereal Rye submitted for delivery.

1. Sample the load presented for delivery according to the Reveal Sampling procedure to produce a representative **Grower Load Composite (GLC)** sample.
2. From the GLC sample draw a subsample to be tested for **Moisture** content. Cereal Rye moisture is determined using the Kett moisture meter using the WHEAT calibration, according to the instructions elsewhere in the CCM.

If the moisture content exceeds 13.0% then the load must be rejected and issued a Temporary Decline Notice.

If the moisture exceeds 12.0% but not 13.0% then retest 2 further samples and average the three results using the Kett's averaging function.

Should one of the repeats exceed 13.0%, the load must immediately be issued a Temporary Decline Notice.

Should the average moisture content be above 12.0% the load must be rejected and issued a Temporary Decline Notice. If the average moisture content is below 12.0% the classification can continue.

3. Draw a subsample from the GLC sample and measure the **Test Weight** and the % screenings using a certified Cereal Rye (1.6mm x 19.0mm slotted) Agtator type screen and agtator (40 shakes)
4. Assess the sample for **Unmillable Above the Screen** (chaff, weed seeds etc.) and **Unmillable Below the Screen – Screenings**. These are measured as a % by weight basis.
5. Calculate the **Total Unmillable Material**, which is the combination of unmillable material above and below the screen.
Check the grain remaining above the screen for defective grain. You may use magnification if required.
6. Check the sample for any signs of **Objectionable Contaminants** subject to NIL tolerance. If any material subject to a NIL tolerance is found in the load then you must issue a Temporarily Decline Notice
7. Check the sample for **Weed Seed Contaminants** to ensure that the number per ½ Litre is within the tolerances allowed.
8. At Manual Load Entry (MLE) sites record the results of the quality tests along with the provisional pay and bin grade in the quality section of the Transaction according to the instructions in the Commodity Document Manual. Ensure that the quality test data entered is compatible with the classification, otherwise the transaction will be held in error when it is entered at the Business Centre, delaying payment to the grower until the information is corrected.

At Operational Management System (OMS) sites enter the test results and the variety code onto the computer according to the instructions in the OMS User Guide. A list of the acceptable provisional pay and bin grades, can be derived by the computer, in order of rank. However it is important to remember that this is only an aid for the classifier and does not absolve you from the responsibility of classifying the load.

All tests performed and the results shall be included on the transaction. In order to perform this quickly and efficiently, the codes listed below shall be used. These codes are also listed on the Cereal Rye Reveal Standards reference Chart.

8.1.1 Test Codes

TEST	CODE	TEST	CODE
Commodity – cereal rye	RY	Weed seed contaminants type 4	S4
Moisture	MO*	Weed seed contaminants type 5	S5
Test weight	TW*	Weed seed contaminants type 6	S6
Screenings below the screen	SC*	Weed seed contaminants type 7	S7
Unmillable Material ABOVE the screen	SA	Weed seed contaminants type 8	S8
Total foreign material	TF	Small Foreign Seeds	SS
Weed seed contaminants type 1	S1	Damaged grains	DG
Weed seed contaminants type 2	S2	Snails – round	SNR
Weed seed contaminants type 3A	3A	Snails – conical	SNC
Weed seed contaminants type 3B	3B	Field Insects	FI
Weed seed contaminants type 3C	3C	Dead Grain Insects	DI

*Refers to mandatory tests

9. While there are no varietal requirements for Cereal Rye, the **Variety** needs to be included on the weighnote. Ask the driver to nominate the variety.

VARIETY	CODE
SA Commercial	C
Bevy	B
Unknown	X

10. Draw the appropriate amount of sample from the GLC sample to add to the **Partition Quality Sample** or **Bin Grade Composite** samples and collect any other samples requested by ABB Head Office.

8.2 Cereal Rye Receival Standards

8.2.1 Physical Characteristics

The seed shall be free from visible evidence of **Live Grain and Stored product pests** (including live adult Pea Weevil / Larvae), animal excreta, rodents or rodent carcasses.

The cereal rye shall also be free from **Objectionable Material** such as noxious weed seeds, sticks, sand, stones, glass, concrete or any other commercially unacceptable contaminant, smell or taste.

There shall be a NIL tolerance on **Pickling Compounds, Coloured Grains and Fusarium (pink) Fungal Stained Grains**, seed dressings or any fungicide added to the triticale as a seed dressing.

There is a NIL tolerance for grain that has any commercially **Objectionable Foreign Odour** due to tainting agents or improper storage causing mould, souring or musty odours.

There is a NIL tolerance for any residues of any **Chemical** compound not approved for triticale or used in contravention of the labeled instructions or in excess of legal tolerances.

Cereal Rye grains must be free from **Ryegrass ergot, Cereal ergot and Smut**.

8.2.2 Description

In a normal season, Cereal Rye is approximately half the size of a wheat grain. It has the distinguishing characteristic that the majority of seeds are greyish black ranging to dark brown.

Seeds are to be sound, mature, whole grain and amber-light brown in colour suitable for milling.

8.2.3 Moisture

Refers to the amount of water in a sample of Cereal Rye. Moisture is assessed using the KETT Moisture Meter on the WHEAT scale.

8.2.4 Test Weight

Basic quality parameter measuring the density of cereal rye, measured in kilograms per hectoliter.

8.2.5 Total Unmillable

Refers to all material above and below as defined below. Unmillable material is to be assessed using a certified agtator type screen (1.6mm X 19mm slotted).

8.2.5.1 Unmillable Material ABOVE the screen

Refers to material that remains ABOVE the certified screen and includes chaff and stalk.

8.2.5.2 Unmillable Material BELOW the screen - Screenings

This is all material passing through the screen including weed seeds, insects, and unmillable material.

8.2.6 Seed Contaminants

Tolerances refer to the total of ALL seeds named in each type EXCEPT for Type 1 weed seed that is on individual seed basis.

TOLERANCE (Maximum per half litre)
TYPE 1* Tolerances Refer To The Maximum Allowed For Each Individual Seed Listed
Colocynth, Three Corner Jacks / Spiny Emex / Double Gee, Jute, Long Head Poppy, Mexican Poppy, Field Poppy, Horned Poppy, Wild Poppy, New Zealand Spinach, Parthenium Weed (QLD only)
For Types 2 - 8, Tolerances Refer To The Total Of All Seeds Named In Each Type
Type 2
Castor Oil Plant, Coriander, Crow or Wild Garlic, Darling Pea, Opium Poppy, Ragweed, Rattlepods, Common Broomrape, Starburr, St. John's Wort
Type 3a
Bathhurst & Noogoora Burr, Bulls Head or Caltrop or Cats Head, Cape Tulip, Cottonseed, Dodder, Thornapple (Datura spp or False Castor Oil), Bellvine
Type 3b
Vetch (Tare) Vetch (Commercial)
Type 3c
Heliotrope (Blue) Heliotrope (Common)
Type 4
Field Bindweed, Cutleaf Mignonette, Darnel, Hexham Scent (Melilotus) or King Island Melilot, Hoary Cress, Mintweed, Nightshades, Paddy Melon, Skeleton Weed, Variegated Thistle
Hexham Scent is only acceptable if no tainting odour is present
Type 5
Creeping Knapweed or Russian Knapweed, Salvation Jane or Paterson's Curse, Sesbania Pea
Type 6
Saffron Thistle, Johnson Grass, Columbus Grass
Type 7
Chickpeas, Corn (Maize), Cowpea, Faba Beans, Lentils, Lupins, Field Peas, Safflower, Soybean, Sunflower
Type 8
Barley, Bindweed (Black & Australian), Wheat, Durum Wheat, Black Oats, Sand Oats, Wild Oats, Common Oats, Rice, Cereal Rye, Triticale, Turnip Weed, Forage Sorghum and Other Weed Seeds Not Specified In Types 1-7 or Small foreign seeds
Small Foreign Seeds % by weight

Refer to the Cereal Rye Receival Standards Reference chart for any **Weed Seed Tolerance VARIATIONS from the weed seed groupings above.**

8.2.7 Defective Grain

Assessed as a % on a 300 grain count.

8.2.7.1 Damaged Grain

Includes both whole and part kernels, for sprouted, weather damaged, frost affected, field fungi, heat damaged, germ damaged or insect damaged.

8.2.7.2 Heat Damaged, Bin Burnt or Storage Mould Affected Grains

Heat Damaged or Bin Burnt grains refer to kernels that have become discoloured due to exposure to severe heat during storage or an incorrect artificial drying technique. Affected grains appear reddish-brown or in severe cases blackened.

Storage Mould affected grains refer to kernels that have been affected by the development of fungi or bacteria due to an increase in grain moisture levels during storage. Affected grains appear discoloured and visibly affected by mould. Grains that are soft and emit an odour are to be classified as Rotted.

Heat Damaged, Bin Burnt and Storage Mould affected grains have been categorised together as the differences between them can be difficult to distinguish.

8.2.8 Contaminants

Measured as a maximum count per ½ litre.

8.2.8.1 Cereal, Ryegrass Ergot and Smut

There is a **NIL** tolerance for smut. This includes all types of Smut – ball, covered and loose.

Loose Smut is the result of the fungus *Ustilago tritici* developing in heads during the growing phase.

Grains infected with Ball Smut (commonly known as Stinking Smut or Bunt) are those that have become invaded by spores of the fungus, *Tilletia caries*. They have the appearance of pale, plump, slightly oversized grains. These grains are easily crushed between the fingers and contain a mass of black powder (spores) with a distinctive rotten egg smell.

Ergots are purplish black fungal bodies that contaminate cereal and ryegrass kernels when they are infected by the fungus *Claviceps purpurea*

Cereal Ergot There is a Nil tolerance for Cereal Ergot

Ryegrass Ergot There is a Nil tolerance for Ryegrass ergot.

8.2.8.2 Dead Grain Insects

There is a NIL tolerance for Live Stored grain insects include the following:

COMMON NAME	SCIENTIFIC NAME
Angoumois Grain Moth	<i>Sitotroga cerealella</i>
Confused Flour Beetle	<i>Tribolium confusum</i>
Flat Grain Beetle	<i>Cryptolestes spp</i>
Granary Weevil	<i>Sitophilus granarius</i>
Indian Meal Moth	<i>Plodia interpunctella</i>
Khapra beetle	<i>Trogoderma granarium</i>
Lesser Grain Borer	<i>Rhyzopertha dominica</i>
Maize Weevil	<i>Sitophilus zeamais</i>
Psocids / Book Lice	<i>Psocoptera spp</i>
Rice Weevil	<i>Sitophilus oryzae</i>
Rust-Red Flour Beetle	<i>Tribolium castaneum</i>
Saw Toothed Grain Beetle	<i>Oryzaephilus surinamensis</i>
Tropical Warehouse Moth	<i>Ephestia cautella</i>
Warehouse Beetle	<i>Trogoderma variable</i>

For a guide to Insect identification consult the CSIRO Insects of Stored Grain pocket book or wall chart available in all classification offices.

8.2.8.3 Field Insects

Field Insects include Grasshoppers, Woodbugs, Ladybirds and any other field insects that are not damaging to stored grain. Common ones are listed in the table below.

COMMON NAME	SCIENTIFIC NAME
Grasshopper	<i>Various</i>
Hairy fungus beetle	<i>Typhaea stercorea</i>
Ladybirds	<i>Various</i>
Minute mould beetles	<i>Corticaria species</i>
Pea Weevil*	<i>Bruchus pisorum</i>
Sitona Weevil*	<i>Sitona species</i>
Desiantha Weevil	<i>Desiantha diversipes</i>
Woodbugs	<i>Various</i>
All other field insects	

* Individual tolerances apply

Tolerances are for dead or live insects and refer to whole bodies or body portions for all field insects except Grasshoppers. For Grasshoppers, 6 legs, 3 body parts or 2 wings, constitute 1 insect. The tolerance is for dead or alive Grasshoppers and refers to whole bodies.

8.2.8.4 Snails

Snails refer to whole bodies or substantially whole (more than half) Snail shells irrespective of size of the White Snail (*Ceruella virgata*), White Italian Snail (*Theba pisana*), Pointed Snail (*Cochlicella acuta*) and Small Pointed Snail (*Cochlicella barara*).

8.2.8.5 Sand and Earth

A grain of sand is defined as being between 1/16th to 2mm in diameter.

Earth is defined as pea size pieces of dirt.

8.3 Cereal Rye Receival Chart

You may add the current Cereal Rye Receival Standards Reference Chart. Refer to the ABB Intranet for the latest revision of the Reference Chart.