

# **Section 6**

# **Triticale**

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## 6.1 Triticale Classification Procedures

The following procedure is to be used for the receipt of Triticale.

1. Sample the load presented for delivery according to the Receiving 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. Triticale moisture is to be determined using the Kett moisture meter using the Wheat calibration.

If the moisture content exceeds 13.5% the load must be rejected and issued a Temporary Decline Notice.

If the moisture exceeds 12.5% but not 13.5% then retest 2 further samples and average the three results using the Kett's averaging function.

Should the average moisture content be above 12.5% the load must be rejected and issued a Temporary Decline Notice.

If the average moisture content is below 12.5% the classification can continue.

3. Draw a subsample from the GLC sample and measure the **Test Weight** using the ½ litre & Electronic Scale method.
4. Screen the ½ litre sample used to determine the Test weight with the 2.00mm Certified Wheat screen on the Agtator. Weigh the material collected below the screen using the scales to determine the % of **Screenings** according to the ½ litre and Agtator procedure in section 2 and record the results.
5. Check the top of the screen for any lightweight material such as chaff, straw and wild radish pods. Separate this material if it appears that it will exceed the allowed tolerance and determine **Unmillable Material Above the Screen** as a % by weight.
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 Temporary Decline Notice.
7. Check the sample for **Nominated Foreign Seeds** to ensure that the number per ½ litre is within the tolerances allowed. Refer to the table below for weed seed contaminants for both TRIT and TRIF.
8. Examine the grain remaining above the screen for a period of 30-60 seconds under conditions of good lighting. Instruments of magnification are acceptable for use to assist the determination of the level of **Sprouted** and other visually **Defective Grains** in a sample. If defective grains are found or you suspect that sprouted grain may be present due to the presence of swollen germs, then determine the percentage of defective grains in the sample by using the 300-Grain Tray.

The percentage of defective grains is calculated by, counting the number of defective grains and dividing by 3. Round the number to the nearest whole percentage.

9. At Manual Load Entry (MLE) sites record the results of the quality tests along with the provisional pay and bin grades 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. The computer can derive a list of the acceptable pay and bin grades in order of rank. However it is important to remember that this is only an aid for the classifier and does not absolve the classifier 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 Triticale Receiving Standards Reference Chart.

## 6.1.1 Test Codes

TEST	CODE	TEST	CODE
Commodity – Triticale	TR	Weed Seed Contaminants Type 1	S1
<b>Moisture</b>	<b>MO*</b>	Weed Seed Contaminants Type 2	S2
<b>Test Weight</b>	<b>TW*</b>	Weed Seed Contaminants Type 3a	3A
<b>Screenings</b>	<b>SC*</b>	Weed Seed Contaminants Type 3b	3B
<b>Variety</b>	<b>VR*</b>	Weed Seed Contaminants Type 3c	3C
Unmillable Material	SA	Weed Seed Contaminants Type 4	S4
Black Point	BP	Weed Seed Contaminants Type 5	S5
Pink Stained Grain	PF	Weed Seed Contaminants Type 6	S6
Dry Green And Sappy Grain	GS	Weed Seed Contaminants Type 7	S7
Sprouted Grain	SP	Weed Seed Contaminants Type 8	S8
Snails – Round	SNR		
Snails – Conical	SNC		
Triticale Ergot	TE		

\*Refers to Mandatory Tests

10. While there are no varietal requirements for Triticale grades, the **Variety** needs to be listed on the transaction. Ask the driver for the variety of the triticale and the paddock name (optional). The grower can be reassured the variety makes no difference to grading of the load. Codes to be used are as follows.

VARIETY	CODE
Abacus	ATR
Credit	DTR
Currency	CTR
Everest	MTR
Maiden	NTR
Muir	RTR
Tahara	TTR
Tickit	ITR
Treat	ETR
Venus	VTR
Unknown	XTR

11. 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 Grain Ltd Head Office.

## 6.2 Triticale Receival Standards

### 6.2.1 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 Triticale 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.

### 6.2.2 Description

Triticale is a cereal developed from crosses between wheat and rye. In a normal season, Triticale is nearly 50% longer than a wheat grain. Triticale grains are dull in colour, most grains have some degree of wrinkling of the husk, and the germ end is pointed similar to rye. Triticale grains must be sound, mature and bright, and of the current season.

### 6.2.3 Moisture Content

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

### 6.2.4 Test Weight

Basic Quality parameter measuring the density of triticale, measured in kilograms per hectoliter.

### 6.2.5 Unmillable Material

A 2.00mm Certified Wheat screen is to be used in the assessment of Unmillable material.

#### 6.2.5.1 Unmillable Material Above the Screen

Material remaining ABOVE the screen, which includes wild radish pods, milk thistle pods, white heads, chaff, and stalk.

Measured as a % by weight.

#### 6.2.5.2 Unmillable Material Below the Screen (Screenings)

Is the total material passing through the screen, includes unmillable material, small foreign seeds and distorted, pinched, and cracked grains.

Measured as a % by weight.

### 6.2.5.3 Small Foreign Seeds

Refers to all seeds other than Triticale that have not been placed in Types 1-8 Seed Contaminants, that fall through the 2.00mm screen and collect in the catch pan during the screenings process.

Refer to the Small Foreign Seeds list in the Wheat section.

Measured as a % by weight.

### 6.2.6 Seed Contaminants

Tolerances for Seed Contaminants apply to whole seeds or their equivalent in pieces per ½ litre sample (above or below the screen). Any seed pods detected must be opened and the seed counted for inclusion in the tolerances specified.

The tolerances listed are maximums and refer to the total of all seeds named in each type, EXCEPT for Type 1 in which the maximum applies on an individual seed basis.

For a complete listing of the tolerances for all weed seeds and their scientific names refer to the Wheat Section. TRITICALE No. 1 grade (TRIT) Weed Seed tolerances equates to that of Wheat AGP1.

<b>TOLERANCE (Maximum per half litre)</b>
<b>TYPE 1* Tolerances Refer To The Maximum Allowed For Each Individual Seed Listed</b>
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)
<b>For Types 2 - 8, Tolerances Refer To The Total Of All Seeds Named In Each Type</b>
<b>Type 2</b>
Castor Oil Plant, Coriander, Crow or Wild Garlic, Darling Pea, Opium Poppy, Ragweed, Rattlepods, Common Broomrape, Starburr, St. John's Wort
<b>Type 3a</b>
Bathurst & Noogoora Burr, Bulls Head or Caltrop or Cats Head, Cape Tulip, Cottonseed, Dodder, Thornapple (Datura spp or False Castor Oil), Bellvine
<b>Type 3b</b>
Vetch (Tare) Vetch (Commercial)
<b>Type 3c</b>
Heliotrope (Blue) Heliotrope (Common)
<b>Type 4</b>
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
<b>Type 5</b>
Creeping Knapweed or Russian Knapweed, Salvation Jane or Paterson's Curse, Sesbania Pea
<b>Type 6</b>
Saffron Thistle, Johnson Grass, Colombus Grass
<b>Type 7</b>
Chickpeas, Corn (Maize), Cowpea, Faba Beans, Lentils, Lupins, Field Peas, Safflower, Soybean, Sunflower

<b>Type 8</b>
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 1-8 or Small Foreign Seeds
<b>Small Foreign Seeds</b>
% by weight

## 6.2.7 Defective Grain

Assessed using a 300 grain tray and tolerances are a Maximum % by 300 grain count.

### 6.2.7.1 Sprouted grain

Sprouted grains are those in which the covering of the germ is split. It includes any further advanced stage of growth of the germ. Grains, which have had the germ knocked off or scalloped out due to header damage or grains with pinholes, are not included in this definition of sprouted grains.

### 6.2.7.2 Insect Damaged Grain

Insect damaged grains include those that have been eaten in part by stored grain insects, and any field pest of wheat, including *Heliothis* spp.

### 6.2.7.3 Stained grain

Stained grains are those that have been exposed to wet weather during the growing and maturation phases or have become infected by field fungi. Symptoms may include a dark brown, grey or various shades of black discolouration on mainly the germ end, occasionally on the brush end, or in severe cases this discolouration may progress to other parts of grain such as the crease. The definition includes the commonly referred to terms blackpoint, blacktip, pink fungal stained grains and grains discoloured by field fungi, but does not include grains infected with storage fungi.

### 6.2.7.4 Dry Green, Sappy and Frost Distorted Grains

Dry green, sappy or frost distorted grains are those which have been harvested at an immature stage of development, have been affected by frost during the maturation phase, distorted by drying operations or during plant growth due to the use of herbicides.

The definition does not included grain that has been pinched as a result of dry conditions or disease during ripening.

### 6.2.7.5 Heat Affected, 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.

## 6.1.1 Contaminants

Assessed as a maximum count per ½ litre, unless otherwise defined.

### 6.2.8.1 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.

### 6.2.8.2 Ergot

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

Cereal Ergot                The tolerance applies to the number of pieces in a ½ Litre sample.

Ryegrass Ergot            There is a Nil tolerance for Ryegrass ergot.

### 6.2.8.3 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.

### 6.2.8.4 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.

### 6.2.8.5 Snails

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

### 6.2.8.6 Sand and Earth

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

Earth is defined as a clod of dirt, being less than 5mm in diameter.

## 6.3 Triticale Reveal Chart

You may add the current Triticale Reveal Standards Reference Chart. Refer to the Intranet for the latest revision of the Reference Chart.