

## **Weed Seed Review 2011/12 Industry Consultation Paper**

### **Background**

Industry was advised during the development of the 2010/11 Standards that the GTA Standards Committee (the Committee) were reviewing the weed seed categories and tolerances with a view to their simplification. Industry submissions on those and subsequent Standards generally agreed with the review and sought input into the changes following further development of the changes by the Committee.

#### **1. Principles for the weed seed review**

The current Standards include a range of weed seed categories, in some Standards up to 15 direct weed seed categories and 3 associated categories. Different commodities have variations to the categories, the weed seeds listed in each category and tolerances that apply. This makes the classification process, including understanding of the Standards and correct implementation of the classification process difficult.

A number of separate tolerances and test methods exist for quality parameters closely associated with weed seeds (such as Foreign Material, weed seed pods, unmillable material). Additionally, a range of activities must be done to assess each of these different quality parameters.

The Committee has considered a range of topics and the intention of the review is to develop revised Standards in relation to weed seeds and associated contaminants. The proposed changes have been identified in general (unless otherwise identified) as complying with the following key principles:

##### **1.1 Simplification when implementing**

- Desire for the testing process to be readily understood by all approved samplers
- Samplers easily trained in new Standards and testing process

##### **1.2 Fits into existing testing processes**

- Testing process must be as rapid as possible without compromising the integrity of the process
- Desire for existing testing processes to be used, rather than implement a new process

##### **1.3 Weight where possible versus count**

- To aid the speed of assessment of various quality parameters, many processes are now undertaken on a weight basis rather than a count
- A mix of methods is proposed, with assessment for the new categories A-E to be done by count and Foreign Material by weight

##### **1.4 One single process to assess**

- In many Standards, weed seeds are listed in several sections such as Unmillable Material, various weed seed categories, Foreign Material
- This requires in some instances different assessment methods, prolonging the classification process
- The new categories simplify the assessment into one process, recognising that both above and below the screen will need to be inspected as per the current process
- The Committee believes the new categories and process will in the majority of cases, shorten the time for assessment

##### **1.5 Reference to weed seeds in one area of the standards**

- In many Standards, weed seeds are listed in several sections such as Unmillable Material, various weed seed categories, Foreign Material
- This requires additional effort to understand the tolerances and methods to be applied, creating unnecessary delays in the assessment process and risks of incorrect application of the Standards

### **1.6 Complies with all relevant legislation**

- Various State and Federal legislation exists in relation to noxious weed seeds, weed seed movements and tolerances in commodities such as Stockfeed
- Any revised Standards must consider that legislation, noting that it may not be relevant for commodity standards to impose tolerances on weed seeds that are restricted in particular State or Federal legislation
- The Committee intends to write to all State Departments that have existing legislation seeking their views on the proposed changes and impacts on their legislation

### **1.7 All weed seeds and tolerances must be defensible**

- Weed seeds must only be listed if they have a direct market impact
- Where possible weed seeds should not be listed as previously occurred in order to promote good crop management and weed seed control
- Tolerances must be set that are able to be readily complied with by the production sector, are able to be managed in the supply chain and reflect market requirements
- Given the conflict that may sometimes exist between those three sectors, individual weed seeds may be listed and tolerances set may be a “compromise” that meets the overall objective of the grain industry of ‘facilitating trade’

### **1.8 Consistency across all commodities**

- While this paper is focussed on cereals, consistency in standards and test methods across all commodities is desirable to assist training of samplers, understanding of Standards and to simplify the testing and classification process
- It is recognised that variations may exist reflecting factors such as the end-use of the commodity, however any variations must be defensible and where possible minimised

### **1.9 Visual categorisation**

- While some weed seeds may be difficult to assess at the species level, the desire is for all weed seeds with a specific tolerance listed to be readily identified visually, with minimal additional training other than already occurs
- The desire is that all other weed seeds not listed would be included in an “all encompassing” category, not requiring identification to the species level

### **1.10 Existing tolerances are not significantly altered**

- Existing tolerances for individual weed seeds have generally been in place for many years, enabling the successful marketing of a range of commodities
- Unless there are compelling reasons, under any new system, the desire is to maintain tolerances as close as practically possible to existing ones
- The review also provides an opportunity to justify the existing tolerances and update those based on modern farming practices, increased marketing competition and a range of other factors
- Specific weed seeds listed in the new categories now include only those that are unsightly in a sample, impart a taint, have a feed intake impact, are considered allergens, have a potentially toxic effect if consumed or have quarantine restrictions
- The Committee has considered previous tolerances and under the proposed changes, some tolerances have increased and others decreased. These changes are highlighted and industry comment is sought specifically on those and other issues outlined in this document

## **2. Other Considerations**

A number of other factors have been considered when conducting this review:

### **2.1 Weight Assessment**

- While there is a desire for weight assessment in order to speed the classification process, this is not always practical
- In considering whether to implement assessment of weed seeds by weight, the Committee considered a range of factors including but not limited to
  - The practicality of identifying individual weed seeds in a sample
  - The practicality and method (tweezers etc) of picking up and removing individual weed seeds from a sample

- The time taken to place the various weed seeds in “a bowl for weighing on the balance” and the additional time that may be required for this over counting the weed seeds
- The availability of suitably accurate balances and practicality of their location in a sample stand

## **2.2 Seed Pods**

- Weed seed pods, including any seeds they contain are currently defined and assessed in a number of different ways in various commodities. For example
  - Pieces of pods included in Unmillable Material above the Screen or Foreign Material
  - Tolerances for weed seeds or their pods are the same
  - Some pods are broken open and seeds counted ,whereas others are not
- If weed seeds are not removed from pods at receipt, the potential exists for pods to break during storage and handling and for levels of individual weed seeds to violate the tolerance on outturn
- Any revised process must meet with the principles outlined in point 1 above and not add significantly to the assessment time or increase the difficulty of assessment
- In considering the future assessment of weed seeds in pods and pieces of pods, the Committee has proposed that
  - Weed seed pods be handled as per the weed seeds they may contain. Therefore pods should be broken and weed seeds counted. This will result in weed seeds listed in the one area of the Standards and not be listed in several areas as previously described
  - Pieces of weed seed pods in a commodity are not encouraged or wanted by the marketplace. Weed seed pods therefore logically fall under the definition of Foreign Material
  - The exception is Peanut pods, which will remain as a NIL tolerance (Category A) due to potential allergenic effects

## **2.3 Foreign Material**

- Foreign Material is generally defined as “ all material other than whole or broken kernels of the commodity in question being assessed”
- While some commodities list a definition and tolerance, others do not. The Committee noted that many export contracts have a Foreign Material category and tolerance that generally reflects what is proposed in this paper
- Different definitions apply for various commodities, complicating the assessment process when changing from one delivered commodity to another
- To simplify the assessment process for weed seeds and associated categories, the Committee recommends that a Foreign Material category be developed for all Standards in accordance with the following principles:
  - The definition be consistent
  - As much material as possible will be included in this definition, thereby reducing the number of “other categories” to be individually assessed
  - Where an existing definition exists, this be reviewed to ensure consistency
  - Where a tolerance exists, this be reviewed to ensure it is appropriate for the revised definition
  - As per most Standards, the tolerance to apply will be the same within a Standard for bulk, container or the bag trade on receipt or outturn. The Committee considers the potential for “Foreign Material accumulation in a storage” and the implications of loading this material on outturn into a container or individual truckload as a commercial matter

## **2.4 Soil**

- Soil may be associated with deliveries of some commodities and in coastal areas where sand may be prevalent
- Any revised assessment process for weed seeds must not compromise the assessment for soil, as there is a nil tolerance in exported product for soil
- The Committee does not consider that the recommendations outlined in this paper impact on the assessment of soil in a sample

## 2.5 Data Collection at Receiving

- Some receiving agents stipulate mandatory analysis and recording of various quality parameters in a sample. This also applies to some of the existing weed seed or associated categories
- The Committee considers that the proposed changes do not impact on this requirement, as industry will choose to record data where it is considered an operational or marketing requirement
- The proposed changes may enhance the collection and transfer of data on the quality of the crop, assisting the marketing effort. For example, recording of Foreign Material will assist exporters when contracts stipulate a tolerance
- Comment from industry is sought on the requirement for data collection and the impact of this on the receiving process

## 2.6 End-user Sector and Regional Variations

- In existing Standards variations exist to cater for regional weed seeds of significance and based on specific commodity end-user sector requirements
- Where possible the Committee encourages consistency in Standards across the country but recognises the need for variations arising from commercial issues
- Industry is encouraged to provide supporting data where any regional or end-user variations are sought on the proposals in this document

## 2.7 Other Contaminants

- In many commodity Standards a range of categories and tolerances exist for other contaminants
- These separate categories generally have low tolerances
- The proposal is for all contaminants to be included in Foreign Material
- In 2012/13, the Committee will review those categories and tolerances in light of industry feedback and the outcomes of the 2011/12 season trial with a view to simplification of the Standards where possible via deletion of these individual categories
- Industry comment on those proposed changes will be sought during development of the 2012/13 Standards

## 3. Proposed Changes

### 3.1 Weed Seed Categories

The following weed seed categories are to be applied across all cereal commodities.

Table 1: Revised Weed Seed Categories

Category/Reason	Current categories to be included*	Proposed Tolerance Max (seeds per half litre)
A. Nil	Type 2	Nil
B. High toxicity / Quarantine	Type 3a, 3b, 3c, 6 (Except Saffron Thistle), Parthenium weed	5
C. Medium toxicity / Quarantine	Type 1, 5 (Except Patterson's Curse), 6 (Saffron Thistle only)	10
D. Low toxicity / Quarantine	Type 4, Patterson's Curse, Black/Wild Oats	30
E. Visual / Unsightly	Type 7a	Low for milling#
		Higher for off-grades#

\* Variations may currently exist in some Standards. Refer to Appendix A for a list of specific weed seeds in each category and Appendix B for the reason for weed seed categorisation and a more detailed description of each category

# Refer to the summary table 2 below and Appendix C-I for specific categories and tolerances by commodity

### 3.2 Foreign Material

Development of a Foreign Material category that will include the old categories (where applicable) of:

- Small foreign seeds
- Type 7b
- Unmillable material above the screen
- All other contaminants (individual tolerances where stipulated remain)

Table 2: Foreign Material tolerances

Commodity	Grade	Foreign Material Max % by weight
Wheat	Milling	1%
	Off-Grades plus SFW1	2%
	Fed 1	5%
Barley	Malt 1	1%
	Malt 2	2%
	Malt 3	2%
	Feed 1	2%
	Feed 2	5%
Oats	Milling	1%
	Feed	5%
Triticale		2%
Rye		2%
Sorghum	No.1, No. 1a	2%
	No. 2, No. 3	5%
Maize	Gritting	1%
	Prime	3%
	Feed	5%

### 4. Specific Commodity changes requiring consideration

In conducting this review, the Committee specifically identified the following items that require further consideration and the committee invites industry comment.

#### 4.1 Type A-E – all commodities

- Prior tolerances applied to individual seeds in Type 1 only, with a tolerance for the total of all seeds in each category for all other Types
- The proposal is for the tolerance to apply to individual seeds across all categories

#### 4.2 Type 7a – all commodities

- Prior tolerances for lower grades have been reduced

#### 4.3 Type 7b – all commodities

- As noted, the previously categories of 7b, Small Foreign Seeds and Unmillable Material Above the Screen (where applicable) now fall into the one category of Foreign Material
- There is a potential increased tolerance when specific individual weed seeds are the major contaminant in the new category Foreign Material (previously in 7b for most commodities)

#### 4.4 Small Foreign Seeds – all commodities

- Currently SFS are in most Standards, generally being 0.6% in the main grades. Unless levels of these weed seeds are considered excessive, these weeds are rarely removed from a sample and the level in a sample subsequently determined
- The current method to remove SFS from a sample involves significant time and is a somewhat tedious process
- Under the proposal to include all SFS in the one category of Foreign Material, as with the existing tolerances, it is not expected that these weed seeds will be removed unless all material in this new category approaches the tolerance level indicated in the Standards
- A separate list of weed seeds included in this category will not be required, nor will assessment of seeds falling below the screen and into the SFS category be required as a separate process

#### **4.5 Unmillable Material Above the Screen**

- In some Standards, this category or a similar category exists, while in others material defined in this category is included elsewhere
- The definition for this category varies by commodity, making assessment of each commodity difficult
- In commodities such as wheat, some weed seeds are also included in this category
- It is proposed that the existing category be removed, however the requirement to “remove seeds within chaff” remain. This test and “seed removal” is generally not done unless levels are approaching the applicable tolerances. This is not expected to alter under the proposed scenario
- Seed pods (weed seeds removed) are now to be defined as Foreign Material, reflecting that they are “not the commodity being assessed”. It is therefore logical that seed pods fall under the Foreign Material definition

#### **4.6 Foreign Material – all commodities**

- Higher contamination levels have been created for the off-grades relative to the milling/main grades
- Unless identified as a “mandatory” test, it is not expected that this test will be routinely conducted on the main milling grades
- Recognising this test may not be done unless the tolerance might be “approached” the Committee seeks industry comment on the potential for this test to prolong the existing assessment process, especially in the off-grades
- Comment is also sought on the expected frequency where this test may need to be conducted due to high contamination levels

#### **4.7 Barley – Appendix D**

- Foreign Material now includes all non-barley seed material and is a tightening from the previous tolerance
- The prior “Foreign Grain, Variations and Other Foreign Material” categories have been removed as separate categories and included in a total Foreign Material
- With the inclusion of all material including “variations” and 7b in Foreign Material, this may be a significant tightening from previous tolerances where high levels of contaminants are detected, impacting on grain being classified not as Malt 1 but downgraded to Malt 2, Malt 3, Feed1 or Feed2
- Barley with Blue Aleurone Layer is now included in Foreign Material with a nil tolerance for Malt grades but no separate category in Feed 1 and Feed 2

#### **4.8 Oats – Appendix E**

- A Foreign Material tolerance has been created
- Unmillable Material is now removed as a separate quality parameter and included in Foreign Material
- For Feed, Foreign Material now includes all material other than oat seeds. The previous separate categories of 7b, 8 and SFS are deleted
- Category C is a tightening from the previous tolerance

#### **4.9 Triticale – Appendix F**

- A Foreign Material tolerance has been created
- Unmillable Material is now removed as a separate quality parameter and included in Foreign Material
- Foreign Material now includes all material other than triticale seeds. The previous separate categories of Unmillable Material above the Screen, 7b and SFS are deleted. Comment is sought on the appropriateness of the 2% tolerance

#### **4.10 Cereal Rye – Appendix G**

- A Foreign Material tolerance has been created
- Unmillable Material is now removed as a separate quality parameter and included in Foreign Material
- Foreign Material now includes all material other than cereal rye seeds. The previous separate categories of Unmillable Material above the Screen, 7b and SFS are deleted. Comment is sought on the appropriateness of the 2% tolerance

#### **4.11 Sorghum – Appendix H**

- The previous Foreign Material definition has been altered to include all material other than sorghum seeds
- Trash is now removed as a separate quality parameter and included in Foreign Material
- The revised Foreign Material tolerances in general reflect export contracts for this parameter, which is significantly tighter than the previous tolerance applicable to all material included in this category for export
- Total Admixture would not be required as separate tolerances would exist for Foreign Material and Screenings
- Comment is sought on the appropriateness of the revised Foreign Material tolerance for all grades
- Category E tolerances for all grades have been altered
- Comment is sought on the need (and if so, what tolerances should apply) for revised tolerances for Category E and Foreign Material for each grade
- As highlighted in the table in Appendix H, tolerances have been tightened for Johnson grass and Columbus grass

#### **4.12 Maize – Appendix I**

- The previous Foreign Material definition has not been altered as it is consistent with the proposed changes for all other cereals
- Trash is now removed as a separate quality parameter and included in Foreign Material
- Total Admixture would not be required as separate tolerances would exist for Foreign Material and Screenings
- Comment is sought on the appropriateness of the revised Foreign Material tolerance for all grades
- Category A-E tolerances for gritting maize have been included rather than the previous “not applicable”
- Comment is sought on revised tolerances for Category E and Foreign Material for each grade

### **5. Summary**

The changes proposed are considered to simplify the testing process without significantly altering the tolerances for weed seeds in general, and therefore is unlikely to compromise the quality of grain or Australia’s international competitiveness.

Many of the existing weed seed or related tests are not conducted unless in the view of the sampler (based on experience and training) the levels are approaching the tolerances. This is not expected to alter under the proposed changes.

That said, it is recognised there are some significant changes to individual weed seeds and commodities as outlined in this paper that require further consideration. However the intent of these changes is to provide consistency in definitions, testing processes and tolerances across commodities.

Trials during 2011/12 and 2012/13 will validate the assumptions made in this paper and assist in identifying any testing and marketing issues that may arise from the proposed changes.

This paper outlines a significant change to the contaminants area of Australian grain Standards, and the Committee believes the changes are for the benefit of industry in the longer term. Industry is encouraged to provide feedback on the above and any other related issue.

### Current and Proposed Weed Seed Categories

The following table lists the current weed seeds named in each category and the proposed new category. These categories are intended to apply across all cereal commodities. Note that variations may exist by commodity and further details on variations and commodities are outlined in the following Appendices.

Table 3: Current and future weed seed categories

Existing Standards		Proposed New Standards	
Current Category	Current Definition	Proposed Category	Proposed Definition
Unmillable Material Above the Screen Max (% by weight)	Includes whiteheads (with grains removed), chaff, backbone, Wild Radish pods, Milk Thistle pods or other seedpods not otherwise listed. Excludes contaminants where tolerances already exist	Foreign Material	See Foreign Material below
<b>Foreign Seed Contaminants Max - (count of seeds in total per half litre)</b>			
Type 2	Branched Broomrape, Castor Oil Plant, Coriander, Crow Garlic/ Wild Garlic, Darling Pea, Peanut seeds and pods, Ragweed, Rattlepods, Starburr, St. John's Wort	A	Branched Broomrape, Castor Oil Plant, Coriander, Crow Garlic / Wild Garlic, Darling Pea, <b>Opium Poppy</b> , Peanut seeds and pods, Ragweed, Rattlepods, Starburr, St. John's Wort
Type 3a	Bathurst Burr, <b>Bellvine</b> , Bulls Head/Caltrop/Cats Head, Cape Tulip, Cottonseed, Dodder, Noogoora Burr, Thornapple	B	Bathurst Burr, Bulls Head/Caltrop/Cats Head, Cape Tulip, Columbus Grass, Cottonseed, Dodder, Heliotrope (Blue), Heliotrope (Common), Johnson Grass, Noogoora Burr, <b>Parthenium weed</b> , Thornapple, Vetch (Commercial), Vetch (Tare)
Type 3b	Vetch (Tare), Vetch (Commercial)		
Type 3c	Heliotrope (Blue), Heliotrope (Common)		
Type 6	Colombus Grass, Johnson Grass, <b>Saffron Thistle</b>		
Type 1 (individual seeds)	<b>Colocynth</b> , Double Gees/Spiny Emex/Three Cornered Jack, Jute, <b>Long Head Poppy</b> , Mexican Poppy, <b>Opium Poppy</b> , <b>Field Poppy</b> , <b>Horned Poppy</b> , <b>Wild Poppy</b> , <b>New Zealand Spinach</b> , <b>Parthenium Weed</b>	C	Double Gees/Spiny Emex/Three Cornered Jack, Jute, Knapweed (Creeping/Russian), Mexican Poppy, <b>Saffron Thistle</b>
Type 5	Knapweed (Creeping/Russian), <b>Sesbania Pea</b> , <b>Patterson's Curse/ Salvation Jane</b>		
Type 4	Bindweed (Field), <b>Cutleaf Mignonette</b> , Darnel (Drake Seed), Hexham Scent/Melilot (only acceptable if no tainting odour is present), <b>Hoary Cress</b> , Mintweed, Nightshades, Paddy Melon, <b>Skeleton Weed</b> , <b>Variegated Thistle</b>	D	Bindweed (Field), <b>Black/Wild Oats</b> , Darnel (Drake Seed), Hexham Scent/Melilot, Mintweed, Nightshades, Paddy Melon, <b>Patterson's Curse/ Salvation Jane</b>
Type 7a	Broad Beans, Chickpeas, Corn (Maize), Cowpea, Faba Beans, Lentils, Lupins, Peas (Field), Safflower, Soybean, Sunflower <b>and any other seeds or pods greater than 5mm in diameter</b>	E	Broad Beans, Chickpeas, Corn (Maize), Cowpea, Faba Beans, Lentils, Lupins, Peas (Field), Safflower, Soybean, Sunflower
Type 7b	Barley (2 & 6 row), Bindweed (Australian), Bindweed (Black), Durum, Red/Spring Feed Wheats, <b>Oats (Black/Wild)</b> , Oats (Sand), Oats (Common), Rice, Rye (Cereal), Sorghum (Grain), Triticale, Turnip Weed and any other Foreign Seeds not specified in Types 1-7(a), in SFS or in Unmillable Material Above the Screen that remain above the 2.0mm screen following the Screenings process	Foreign Material	Includes all material other than seed material of the commodity being assessed. Includes whiteheads (with grains removed), chaff, backbone, all weed seeds, all weed seed pods and all other contaminants listed in the Standards
Small Foreign Seeds (% by weight)	All Foreign Seeds not specified in Types 1-7(b) that fall below the 2.0mm screen during the Screenings process		

Note: **bold and underlined** removed from previous existing weed seed type and proposal is to be placed in a different specific category (A-E) or Foreign Material

### Categorisation of each Weed Seed

The following table 4 lists the reason individual weed seeds are placed in each category. Weed seeds have been added or deleted from their previous category based on those designations. Industry comment on the categorisation of individual weed seeds is sought.

#### Brief Explanation of Categories:

The following is a general explanation of the separate categories. Note that a particular weed seed in Table 4 may be listed for more than one reason in a category. There may also be varying levels of impacts within a category of each weed seed. Industry should note that as seeds are generally the main contaminant in commodity samples, categories have been created based on the seed, not other parts of the plant.

#### Quarantine

- Restricted by Quarantine regulations either domestically or by international markets

#### Toxicity / Allergen

- May pose a food safety issue when ingested for human and/or animal consumption

#### Taint

- May taint the end-product

#### Feed Impact

- May reduce feed intake for animals or impact on animal feeding

#### Unightly

- Affects the visual appearance of the grain, reducing its marketability

#### Agronomic

- May be a competitor of commercial crops if not readily controlled
- Included in this definition may be specific weed seeds that are legislated in individual Australian States and/or Territories legislation

Table 4: Weed seed categories and reasons for their inclusion/deletion

Proposed Category	Weed Seed	Reason for Inclusion in Category
A – Nil	Branched Broomrape	Quarantine
	Castor Oil Plant	Toxicity
	Coriander	Taint
	Crow Garlic / Wild Garlic	Taint
	Darling Pea	Toxicity
	Peanut seeds and pods	Allergen
	<b>Poppy (Opium)</b>	Quarantine, Taint
	Ragweed	Allergen
	Rattlepods	Toxicity
	Starburr	Feed Impact
	St. John's Wort	Toxicity
B – High Toxicity / Quarantine	Bathurst Burr	Feed Impact
	<b>Bellvine</b>	Propose to move to FM - agronomic
	Bulls Head / Caltrop / Cats Head	Feed Impact
	Cape Tulip	Toxicity
	Colombus Grass	Quarantine
	Cottonseed	Quarantine, Taint to milling
	Dodder	Quarantine
	Heliotrope (Blue)	Toxicity
	Heliotrope (Common)	Toxicity
Johnson Grass	Quarantine	

<b>Proposed Category</b>	<b>Weed Seed</b>	<b>Reason for Inclusion in Category</b>
	Noogoora Burr	Feed Impact
	<b><u>Parthenium weed</u></b>	Quarantine
	Thornapple	Toxicity
	Vetch (Tare)	Toxicity
	Vetch (Commercial)	Toxicity
C – Medium Toxicity / Quarantine	<b><u>Colocynth</u></b>	Propose to move to FM - agronomic
	Double Gees / Spiny Emex / Three Cornered Jack	Feed Impact
	Jute	Toxicity
	Knapweed (Creeping/Russian)	Taint
	<b><u>New Zealand Spinach</u></b>	Propose to move to FM - agronomic
	<b><u>Poppy (Field)</u></b>	Propose to move to FM - agronomic
	<b><u>Poppy (Horned)</u></b>	Propose to move to FM - agronomic
	<b><u>Poppy (Long Head)</u></b>	Propose to move to FM - agronomic
	Poppy (Mexican)	Toxicity
	<b><u>Poppy (Wild)</u></b>	Propose to move to FM - agronomic
	<b><u>Saffron Thistle</u></b>	Quarantine - Tasmania
	<b><u>Sesbania Pea</u></b>	Propose to move to FM - agronomic
D – Low Toxicity / Quarantine	Bindweed (Field)	Toxicity
	<b><u>Black/Wild Oats</u></b>	Unightly
	<b><u>Cutleaf Mignonette</u></b>	Propose to move to FM - agronomic
	Darnel (Drake Seed)	Taint
	Hexham Scent/Meliot	Taint
	<b><u>Hoary Cress</u></b>	Propose to move to FM - agronomic
	Mintweed	Toxicity
	Nightshades	Toxicity
	Paddy Melon	Toxicity
	<b><u>Patterson's Curse / Salvation Jane</u></b>	Toxicity
	<b><u>Skeleton Weed</u></b>	Propose to move to FM - agronomic
	<b><u>Variiegated Thistle</u></b>	Propose to move to FM - agronomic
E – Visual / Unightly	Broad Beans	Unightly
	Chickpeas	Unightly
	Corn (Maize)	Unightly
	Cowpea	Unightly
	Faba Beans	Unightly
	Lentils	Unightly
	Lupins	Unightly
	Peas (Field)	Unightly
	Safflower	Unightly
	Soybean	Unightly
Sunflower	Unightly	
Foreign Material	Includes all material other than seed material of the commodity being assessed. Includes whiteheads (with grains removed), chaff, backbone, all weed seeds, all weed seed pods and all other contaminants listed in the Standards	n/a

Note: **bold and underlined** removed from previous existing weed seed type and proposal is to be placed in a different specific category (A-E) or Foreign Material

### Current and Proposed Weed Seed Categories - Wheat

The following table lists the proposed new categories for wheat.

Table 5: Current and future weed seed categories – wheat

Proposed Category #	Proposed Definition	Grade		
		Milling Grade*	AUH2, AGP1, AUW1, HPS1, DR3, SFW1	Fed1
A	Branched Broomrape, Castor Oil Plant, Coriander, Crow Garlic / Wild Garlic, Darling Pea, Opium Poppy, Peanut seeds and pods, Ragweed, Rattlepods, Starburr, St. John's Wort	Nil		
B	Bathurst Burr, Bulls Head/Caltrop/Cats Head, Cape Tulip, Colombus Grass, Cottonseed, Dodder, Heliotrope (Blue), Heliotrope (Common), Johnson Grass, Noogoora Burr, Parthenium weed, Thornapple, Vetch (Commercial), Vetch (Tare)	5		
C	Double Gees/Spiny Emex/Three Cornered Jack, Jute, Knapweed (Creeping/Russian), Mexican Poppy, Saffron Thistle	10		
D	Bindweed (Field), Black/Wild Oats, Darnel (Drake Seed), Hexham Scent/Meliot, Mintweed, Nightshades, Paddy Melon, Patterson's Curse/ Salvation Jane	30		
E	Broad Beans, Chickpeas, Corn (Maize), Cowpea, Faba Beans, Lentils, Lupins, Peas (Field), Safflower, Soybean, Sunflower	1	10	20
Foreign Material <sup>^</sup>	Includes all material other than whole or broken wheat kernels. Includes whiteheads (with grains removed), chaff, backbone, all weed seeds, weed seed pods and all other contaminants listed in the Standards  ----- (For clarity, includes previous categories of Unmillable Material above the Screen, all Foreign Seed Contaminants categories including SFS and all Other Contaminants)	1.0%	2.0%	5.0%

# Within each category the tolerance is the maximum number by count for each seed per half litre, except for Foreign Material

<sup>^</sup> Assessment and tolerance based on maximum weight per half litre sample

\* Milling includes APH1, APH2, H1, H2, APW1, APW2, ASW1, ANW1, ANW2, PNC, PNE, PWT, ASWS, APWN, DR1, DR2, SFE1 (NSW/VIC), SFE1 (SA), SFT1, SFE2 (NSW/VIC), SFE2 (SA), SFT2

## Current and Proposed Weed Seed Categories - Barley

The following table lists the proposed new categories for barley.

Table 6: Current and future weed seed categories – barley

Proposed Category #	Proposed Definition	Grade				
		Malt1	Malt2	Malt3	Feed1	Feed2
A	Branched Broomrape, Castor Oil Plant, Coriander, Crow Garlic / Wild Garlic, Darling Pea, Opium Poppy, Peanut seeds and pods, Ragweed, Rattlepods, Starburr, St. John's Wort	Nil				
B	Bathurst Burr, Bulls Head/Caltrop/Cats Head, Cape Tulip, Colombus Grass, Cottonseed, Dodder, Heliotrope (Blue), Heliotrope (Common), Johnson Grass, Noogoora Burr, Parthenium weed, Thornapple, Vetch (Commercial), Vetch (Tare)	5				
C	Double Gees/Spiny Emex/Three Cornered Jack, Jute, Knapweed (Creeping/Russian), Mexican Poppy, Saffron Thistle	10				
D	Bindweed (Field), Black/Wild Oats, Darnel (Drake Seed), Hexham Scent/Meliot, Mintweed, Nightshades, Paddy Melon, Patterson's Curse/ Salvation Jane	30				
E	Broad Beans, Chickpeas, Corn (Maize), Cowpea, Faba Beans, Lentils, Lupins, Peas (Field), Safflower, Soybean, Sunflower	1	1	1	10	20
Foreign Material <sup>^</sup>	Includes all material other than whole or broken barley kernels. Includes whiteheads (with grains removed), chaff, backbone, all weed seeds, weed seed pods and all other contaminants listed in the Standards	1.0%	2.0%	2.0%	2.0%	5.0%
	Of which Blue Aleurone Layer ----- (For clarity, includes previous categories of all Foreign Seed Contaminants categories including SFS, Foreign Material and all Other Contaminants)	Nil	Nil	Nil	Included as part of Foreign Material	Included as part of Foreign Material

# Within each category the tolerance is the maximum number by count for each seed per half litre, except for Foreign Material

<sup>^</sup> Assessment and tolerance based on maximum weight per half litre sample

### Current and Proposed Weed Seed Categories - Oats

The following table lists the proposed new categories for oats.

Table 7: Current and future weed seed categories – oats

Proposed Category #	Proposed Definition	Grade		
		Prime	Milling No.1	Feed
A	Branched Broomrape, Castor Oil Plant, Coriander, Crow Garlic / Wild Garlic, Darling Pea, Opium Poppy, Peanut seeds and pods, Ragweed, Rattlepods, Starburr, St. John's Wort	Nil		
B	Bathurst Burr, Bulls Head/Caltrop/Cats Head, Cape Tulip, Colombus Grass, Cottonseed, Dodder, Heliotrope (Blue), Heliotrope (Common), Johnson Grass, Noogoora Burr, Parthenium weed, Thornapple, Vetch (Commercial), Vetch (Tare)	5		
C	Double Gees/Spiny Emex/Three Cornered Jack, Jute, Knapweed (Creeping/Russian), Mexican Poppy, Saffron Thistle	10		
D	Bindweed (Field), Black/Wild Oats, Darnel (Drake Seed), Hexham Scent/Meliot, Mintweed, Nightshades, Paddy Melon, Patterson's Curse/ Salvation Jane	30		
E	Broad Beans, Chickpeas, Corn (Maize), Cowpea, Faba Beans, Lentils, Lupins, Peas (Field), Safflower, Soybean, Sunflower	1	1	20
Foreign Material <sup>^</sup>	Includes all material other than whole or broken oat kernels. Includes whiteheads (with grains removed), chaff, backbone, all weed seeds, weed seed pods and all other contaminants listed in the Standards  ----- (For clarity, includes previous categories of Unmillable Material above the Screen, all Foreign Seed Contaminants categories including SFS and all Other Contaminants)	1.0%	1.0%	5.0%

# Within each category the tolerance is the maximum number by count for each seed per half litre, except for Foreign Material

<sup>^</sup> Assessment and tolerance based on maximum weight per half litre sample

### Current and Proposed Weed Seed Categories – Triticale

The following table lists the proposed new categories for Triticale.

Table 8: Current and future weed seed categories – triticale

Proposed Category #	Proposed Definition	Grade
		Triticale
A	Branched Broomrape, Castor Oil Plant, Coriander, Crow Garlic / Wild Garlic, Darling Pea, Opium Poppy, Peanut seeds and pods, Ragweed, Rattlepods, Starburr, St. John's Wort	Nil
B	Bathurst Burr, Bulls Head/Caltrop/Cats Head, Cape Tulip, Colombus Grass, Cottonseed, Dodder, Heliotrope (Blue), Heliotrope (Common), Johnson Grass, Noogoora Burr, Parthenium weed, Thornapple, Vetch (Commercial), Vetch (Tare)	5
C	Double Gees/Spiny Emex/Three Cornered Jack, Jute, Knapweed (Creeping/Russian), Mexican Poppy, Saffron Thistle	10
D	Bindweed (Field), Black/Wild Oats, Darnel (Drake Seed), Hexham Scent/Melilot, Mintweed, Nightshades, Paddy Melon, Patterson's Curse/ Salvation Jane	30
E	Broad Beans, Chickpeas, Corn (Maize), Cowpea, Faba Beans, Lentils, Lupins, Peas (Field), Safflower, Soybean, Sunflower	1
Foreign Material <sup>^</sup>	Includes all material other than whole or broken triticale kernels. Includes whiteheads (with grains removed), chaff, backbone, all weed seeds, weed seed pods and all other contaminants listed in the Standards  -----  (For clarity, includes previous categories of Unmillable Material above the Screen, all Foreign Seed Contaminants categories including SFS and all Other Contaminants)	2.0%

# Within each category the tolerance is the maximum number by count for each seed per half litre, except for Foreign Material

<sup>^</sup> Assessment and tolerance based on maximum weight per half litre sample

### Current and Proposed Weed Seed Categories – Cereal Rye

The following table lists the proposed new categories for Cereal Rye.

Table 9: Current and future weed seed categories – cereal rye

Proposed Category #	Proposed Definition	Grade
		Cereal Rye
A	Branched Broomrape, Castor Oil Plant, Coriander, Crow Garlic / Wild Garlic, Darling Pea, Opium Poppy, Peanut seeds and pods, Ragweed, Rattlepods, Starburr, St. John's Wort	Nil
B	Bathurst Burr, Bulls Head/Caltrop/Cats Head, Cape Tulip, Colombus Grass, Cottonseed, Dodder, Heliotrope (Blue), Heliotrope (Common), Johnson Grass, Noogoora Burr, Parthenium weed, Thornapple, Vetch (Commercial), Vetch (Tare)	5
C	Double Gees/Spiny Emex/Three Cornered Jack, Jute, Knapweed (Creeping/Russian), Mexican Poppy, Saffron Thistle	10
D	Bindweed (Field), Black/Wild Oats, Darnel (Drake Seed), Hexham Scent/Meliot, Mintweed, Nightshades, Paddy Melon, Patterson's Curse/ Salvation Jane	30
E	Broad Beans, Chickpeas, Corn (Maize), Cowpea, Faba Beans, Lentils, Lupins, Peas (Field), Safflower, Soybean, Sunflower	1
Foreign Material <sup>^</sup>	Includes all material other than whole or broken cereal rye kernels. Includes whiteheads (with grains removed), chaff, backbone, all weed seeds, weed seed pods and all other contaminants listed in the Standards  ----- (For clarity, includes previous categories of Unmillable Material above the Screen, all Foreign Seed Contaminants categories including SFS and all Other Contaminants)	2.0%

# Within each category the tolerance is the maximum number by count for each seed per half litre, except for Foreign Material

<sup>^</sup> Assessment and tolerance based on maximum weight per half litre sample

### Current and Proposed Weed Seed Categories – Sorghum

The following table lists the proposed new categories for Sorghum.

Table 10: Current and future weed seed categories – sorghum

Proposed Category #	Proposed Definition	Grade	
		No.1, No. 1a	No. 2, No.3
A	Branched Broomrape, Castor Oil Plant, Coriander, Crow Garlic / Wild Garlic, Darling Pea, Opium Poppy, Peanut seeds and pods, Ragweed, Rattlepods, Starburr, St. John's Wort	Nil	
B	Bathurst Burr, Bulls Head/Caltrop/Cats Head, Cape Tulip, Colombus Grass, Cottonseed, Dodder, Heliotrope (Blue), Heliotrope (Common), Johnson Grass, Noogoora Burr, Parthenium weed, Thornapple, Vetch (Commercial), Vetch (Tare)	5	
C	Double Gees/Spiny Emex/Three Cornered Jack, Jute, Knapweed (Creeping/Russian), Mexican Poppy, Saffron Thistle	10	
D	Bindweed (Field), Black/Wild Oats, Darnel (Drake Seed), Hexham Scent/Meliot, Mintweed, Nightshades, Paddy Melon, Patterson's Curse/ Salvation Jane	30	
E	Broad Beans, Chickpeas, Corn (Maize), Cowpea, Faba Beans, Lentils, Lupins, Peas (Field), Safflower, Soybean, Sunflower	20	50
Foreign Material <sup>^</sup>	Includes all material other than whole or broken sorghum kernels. Includes chaff, backbone, all weed seeds, weed seed pods and all other contaminants listed in the Standards  ----- (For clarity, includes previous categories of Trash, all Foreign Seed Contaminants categories including SFS and all Other Contaminants)	2.0%	5.0%

# Within each category the tolerance is the maximum number by count for each seed per half litre, except for Foreign Material

<sup>^</sup> Assessment and tolerance based on maximum weight per half litre sample

### Current and Proposed Weed Seed Categories – Maize

The following table lists the proposed new categories for Maize.

Table 11: Current and future weed seed categories – maize

Proposed Category #	Proposed Definition	Grade		
		Gritting	Prime	Feed
A	Branched Broomrape, Castor Oil Plant, Coriander, Crow Garlic / Wild Garlic, Darling Pea, Opium Poppy, Peanut seeds and pods, Ragweed, Rattlepods, Starburr, St. John's Wort	Nil		
B	Bathurst Burr, Bulls Head/Caltrop/Cats Head, Cape Tulip, Columbus Grass, Cottonseed, Dodder, Heliotrope (Blue), Heliotrope (Common), Johnson Grass, Noogoora Burr, Parthenium weed, Thornapple, Vetch (Commercial), Vetch (Tare)	5		
C	Double Gees/Spiny Emex/Three Cornered Jack, Jute, Knapweed (Creeping/Russian), Mexican Poppy, Saffron Thistle	10		
D	Bindweed (Field), Black/Wild Oats, Darnel (Drake Seed), Hexham Scent/Meliot, Mintweed, Nightshades, Paddy Melon, Patterson's Curse/ Salvation Jane	30		
E	Broad Beans, Chickpeas, Corn (Maize), Cowpea, Faba Beans, Lentils, Lupins, Peas (Field), Safflower, Soybean, Sunflower	1	20	20
Foreign Material <sup>^</sup>	Includes all material other than whole or broken maize kernels. Includes chaff, backbone, all weed seeds, weed seed pods and all other contaminants listed in the Standards  ----- (For clarity, includes previous categories of Trash, all Foreign Seed Contaminants categories including SFS and all Other Contaminants)	1.0%	3.0%	5.0%

# Within each category the tolerance is the maximum number by count for each seed per half litre, except for Foreign Material

<sup>^</sup> Assessment and tolerance based on maximum weight per half litre sample

## Proposed Trial 2011/12 Season

The following outlines considerations to be included in a trial of the proposed changes for the 2011/12 season. Industry should note that an additional trial potentially more widespread and with a greater level of information collected will be proposed for the 2012/13 season.

### Key Trial Principles

1. To be conducted across a range of regional areas representing the different weed seed status of the crop growing region
2. All commodities as listed in this document to be included in the trial
3. GTA will review the need for trials in 2011/12 with the pulse and oilseed industries or if these should be done in the following year
4. As many grades as possible be included in the trial
5. Preference for grower load samples to be used for the collection of data
6. Preference to target sites allocated to the export and domestic market and for some domestic end-users to be included in the trial
7. Proposed revised tolerances not to be introduced for 2011/12
8. Following classification of a load, a sample to be collected and assessed as per the proposed weed seed tolerances
9. Data collection per sample to be:
  - a. As per existing 2011/12 standards
  - b. As per proposed weed seed tolerances, including other changes as listed for each commodity
  - c. Sufficient data collected on each sample to enable a direct comparison of the two “standards” that exist/may apply
  - d. Sufficient information collected to enable a decision to be made on the impacts of the proposed changes on the classification of the sample
10. Preference is for samples to be assessed post-harvest or away from the sample stand so as to minimise impacts on delivery
11. A record be kept of the other implications of the proposed changes on the classification process as outlined in the “key principles under point 1” of this document, including the time taken for the assessment, the need for assessment of each category and the impact of the changes on the relative ease of classification
12. It is preferred that sites and samples be targeted where reasonably high levels of foreign material could be expected
13. Industry is encouraged to participate in the trials or conduct their own and provide data on a confidential basis to GTA. However to ensure adequate data is collected and provided, it is preferable if the trial protocol is reviewed by GTA prior to commencement