



## Technical Specifications for WHEAT - Syria

Version: 2

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*This is the first specification for wheat destined to Syria.*

### 1. SCOPE

This specification applies to **Wheat** grains purchased by WFP for making flour intended for bread baking.

### 2. DEFINITIONS

Terms	Definition
Broken kernel	pieces of wheat that are less than three-quarters of a whole kernel and includes grains of wheat in which part of the endosperm is exposed or wheat without a g erm. If the piece is more than three-quarters of a kernel, it is considered whole.
Shrunken/shriveled and broken kernels	All matter that passes through a 1.7 mm x 20 oblong-holed metal sieve.
Insect damaged kernels	Kernels which have been visibly bored or tunneled by insects.
Ergot	Sclerotium of the fungus <i>Claviceps Purpurea</i>
Sprouted kernels/grains	Sprouted grains are kernels showing visible signs of sprouting such as cracked coats through which a sprout has been emerged or is just beginning to emerge.
Impurities / Damage	<ul style="list-style-type: none"> <li>- Shrunken and broken grains: grains and parts of grains that pass through slot sieve (1.7 mm X 20 mm) after 30 shakes/30 seconds, noting that Shrunken and broken kernels that remain on the that sieve are not considered impurities as they can be milled and used.</li> <li>- Unsound wheat grains: frosted, partly damaged by smudge or sonn-pest (not to exceed 2%), immature, partially insect-damaged, or sprouted kernels.</li> <li>- Fungi-infected wheat kernels, apart from smut fungi- infections, where the fungi cover over 50% of the kernel and the infection is superficial.</li> <li>-Barley in all its kinds, species and wild barley.</li> <li>-Triticale (crossbred between wheat and Secale).</li> </ul>
Total Dockage	<p>Any material other than wheat. These include:</p> <ul style="list-style-type: none"> <li>- All materials filtered through slot sieve (1 mm X 20 mm).</li> <li>- Foreign Materials: These are all the materials foreign to wheat, such as gravel, dust, straw, weed seeds, including Lolium (of different kinds), Lawsonia spinose; insects of all phases alive or dead, whole or pieces; and other grains (lentil, chickpeas, maize ..), except from barley and triticale.</li> <li>- Spoiled Kernels: These include the wheat grains totally damaged and of no benefit anymore, kernels that turned into "bunt balls", and kernels totally infested, mouldy or discolored due to poor storage.</li> </ul>
Organic matter	Organic matter are all organic components (e.g fragments of stems, leaves, ears, awns, chaff, fragments of pests, seeds of weeds and other cultivated plants, edible grains other than wheat etc), other than filth.
Inorganic matter	Inorganic matter is defined as any inorganic component (e.g stones, dust, plastic)
Filth	Filth are impurities of animal origin, including dead insect.
Grains attacked by pests	Wheat grain which shows visible damage owing to attack by pests, kernel which obvious weevil- bored holes or which have evidence of boring or tunneling indicating the presence of insects refused chewed in one or more than one part of the kernel.

### **3. REFERENCE**

The product shall comply, with latest versions of recognized international standards and best practices and/or guidelines, such as the following:

- Codex Standard for Wheat grains CODEX STAN 199-1995.
- Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969).

Additionally, the supplier shall comply with relevant local regulations/standards of the food originating and recipient countries. Foods destined for Syria shall comply with the national Decree # 158 dated 25/4/2017 by Syrian Ministry of Agriculture, including the annexes (e.g. requirements for quarantine and nonquarantine pests and weed seeds).

### **4. PRODUCT SPECIFICATION**

#### **4.1 General requirements**

The commodity shall meet following quality characteristic requirements:

- Shall be safe and suitable for human consumption.
- Shall be free from abnormal flavours, odours, and living insects.
- Shall be free from filth (impurities of animal origin, including dead insects) in amounts which may represent a hazard to human health.
- Shall be stored under dry, ventilated, and hygienic conditions. Only authorized insecticides (e.g. phosphine) may be used for fumigation control. Where needed, fumigation shall be performed by certified operators and as specified in the GAFTA Standard for Fumigation.
- Shall comply with other requirements specified in table 2

#### **4.2 Requirements for flour obtained from wheat grains**

Supplier must guarantee that the flour obtained from wheat grains covered by this specification is suitable to make bread.

If required by recipient country, Wheat needs to be obtained from non-genetically modified varieties.

Wheat flour must also comply with other requirements specified in table 2.

#### **4.3 Contaminants**

The product shall be free from contaminants in amounts which may represent a hazard to health. The product shall comply with those maximum contaminant limits established by the Codex Alimentarius Commission for this commodity (e.g. following the latest version of CODEX STAN 193- 1995). Additionally, the product should meet the following requirements:

#### **4.4 Toxic or noxious seeds**

The products covered by the provisions of this Standard shall comply with all requirements under Table 2 testing requirements and Annex I.

#### **4.5 Hygiene**

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. To the extent possible in good manufacturing practice, the products shall be free from objectionable matter. When tested by appropriate methods of sampling and examination, the product:

– 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.

#### **4.6 Fit for human consumption guarantee**

Suppliers shall have to check the quality of their products and guarantee that the product is 'fit for human consumption', in line with International Federation of Inspection Agencies requirements.

#### **5. Packaging and marking**

**Wheat** shall be packed in a PP woven bag complying with the packaging and marking requirements separately available under "4.5 to 90 kg PP woven bag specification with or without PE inner liner" on <http://foodqualityandsafety.wfp.org/specifications>.

Weight and quantity tolerance must meet The International Organization of Legal Metrology International Recommendation OIML R 87<sup>1</sup>.

#### **6. STORING**

The product must be stored under cool, dry, ventilated, hygienic conditions and free from insect infestation and all other sources of contaminations.

#### **7. ANALYTICAL REQUIREMENTS**

As per contractual agreement, WFP can appoint an inspection company that will check that the commodity matches requirements specified in Table 2. Additional analyses shall be defined in case of further quality assessment is required. WFP may reserve the right to change the testing plan when required.

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<sup>1</sup> OIML R 87 Quantity of commodity in prepackages [https://www.oiml.org/en/files/pdf\\_r/r087-e04.pdf](https://www.oiml.org/en/files/pdf_r/r087-e04.pdf), latest edition to be followed

**Table 2: List of mandatory tests and reference methods**

No	Parameter	Limits	Referenced method (or equivalent)
1	Organoleptic	Wheat should be sound, of natural odour; free from rot, lump and living insects of all phases, fit for human consumption, and consistent with the applicable Syrian laws and regulations of the Agricultural Quarantine.	Visual inspection
2	Moisture	14% max	ISO 712
3	Insect damaged kernels	Max. 1.5% by weight	Visual inspection
4	Filth & Dead insect	Max. 0.1% by weight	Visual inspection
5	Edible grain other than wheat	Max 2% by weight	Visual inspection
6	Shrunken	Max 4% by weight	ISO 5223
7	Sprouted grains	1 % max by weight	Visual inspection
8	Total Dockage	Max 2% by weight	Visual inspection
9	Impurities / Damage	Max 5% by weight	Visual inspection
10	Protein	11% min based on 5.7*N	ICC No. 105
11	Falling number	Min 250 Seconds	ISO 3093
12	Bulk Density / Specific weight (mass per hectolitre)	Min 76 kg/hl	ISO7971
13	Live insects	Free	Visual inspection
14	Grains infected with Ergot (claviceps purpurea)	Max 0.005% by weight	Visual inspection
15	Trogoderma Granarium (Khapra Beetle) - live and dead	Free	Visual inspection
16	Grains infected with: Tilletia Cotroversa Tilletia Indica	Nil	Visual inspection
17	Grains infected with: Anguina tritici	Max 2 grains/kg	Visual inspection
18	Toxic or noxious seeds - Crotonaria (Crotonaria spp.) - Jimson weed (Datura spp.) - Castor bean (Ricinus communis L.) - Corn cockle (Agrostemma githago L.)	Max. 1 seed per 1kg (for each seeds)	Visual examination on one kg sample (size of sample as per GAFTA sampling rules) 5 Visual examination on one kg sample (size of sample as per GAFTA sampling rules)
19	Toxic or noxious seeds - Mexican Poppy (Argemone mexicana) - Cocklebur* (Xanthium species) - Field bindweed (Convolvulus spp.) - Darnel Ryegrass (Lolium temulentum)	Max. 7 seeds per 1kg (for each seeds)	
20	Toxic or Noxious seeds List A1 in Annex I -Bellardia spp. (except Bellardia trixago) -Coronopus didymis -Solanum carolinse -Solanum heterodoxum -Solanum rostratum -Striga spp.	Max 0	
21	Toxic or Noxious seeds List A2 in Annex I	<u>Compliant with individual limits set out in List A2 in Annex I</u>	
22	Toxic or Noxious seeds Total seeds listed in list A2 in Annex I	Max 1%	
23	Lead	0.2 ppm max	AOAC 934.07
24	Cadmium	0.2 ppm max	AOAC 945.58
25	Total aflatoxins	4 ppb max	ISO 16050
26	Aflatoxin B1	2 ppb max	ISO 16050
27	Salmonella (n - c - m- M)	n=5, c=0, m=free/25g, M=-	ISO 21527-2

28	Yeast & Molds (n - c - m- M)	n=5, c=2, m=10 <sup>3</sup> , M=10 <sup>4</sup>	ISO 21527-2
29	Radiation (Cs134 and 137) (Only for foods originated from Ukraine & Russia or as per contract)	150 becquerel max	WEAC.RN.METHOD3.0 (Cs and other)
30	Deoxynivalenol	2ppm max	AOAC 986.17

## Annex I

### Noxious Weed Seeds Limits in Imported Wheat

#### As per Syrian Regulations

**List A1: Non-regulated noxious weed seeds (Not allowed, limit is Zero)**

No.	Scientific Name
1	<i>Bellardia spp. (except Bellardia trixago)</i>
2	<i>Coronopus didymis</i>
3	<i>Solanum carolinse</i>
4	<i>Solanum heterodoxum</i>
5	<i>Solanum rostratum</i>
6	<i>Striga spp.</i>

**List A2: Regulated (non-quarantine) noxious weed seeds (Seed count/kg)**

No.	Scientific Name	Allowed count/kg	No.	Scientific Name	Allowed count/kg
1	<i>Abutilon spp.</i>	20	31	<i>Cleome viscosa</i>	25
2	<i>Acanthus spp.</i>	15	32	<i>Cochia scoparia</i>	20
3	<i>Adonis spp.</i>	20	33	<i>Convolvulus althaeoides</i>	20
4	<i>Aegilops spp.</i>	30	34	<i>Convolvulus arvensis</i>	20
5	<i>Agropyron repens</i>	15	35	<i>Corchorus olitorius</i>	10
6	<i>Agropyron spp.</i>	15	36	<i>Cuscuta spp.</i>	15
7	<i>Amaranthus spp.</i>	75	37	<i>Cyperus spp.</i>	30
8	<i>Ambrosia spp.</i>	20	38	<i>Delphinium consolida</i>	20
9	<i>Anagallis arvensis</i>	50	39	<i>Diplotaxis spp.</i>	50
10	<i>Anthoxanthum spp</i>	15	40	<i>Echinochloa colomum</i>	35
11	<i>Arctium minus</i>	10	41	<i>Echinochloa crus-galli</i>	35
12	<i>Arundo donax</i>	15	42	<i>Emex spinosus</i>	10
13	<i>Asphodelus fistulosus</i>	20	43	<i>Erigeron spp.</i>	30
14	<i>Avena fatua</i>	20	44	<i>Euphorbia spp.</i>	30
15	<i>Avena ludoviciana</i>	20	45	<i>Fumaria officinalis</i>	25
16	<i>Avena strilis</i>	20	46	<i>Galeopsis angustifolia</i>	25
17	<i>Bellardia trixago</i>	15	47	<i>Gallium spp.</i>	25
18	<i>Bifora spp.</i>	5	48	<i>Glaucium corniculatum</i>	10
19	<i>Boerhavia erecta</i>	5	49	<i>Geranium dissectum</i>	25
20	<i>Brassica nigra</i>	25	50	<i>Heliotropium spp.</i>	25
21	<i>Bromus spp.</i>	15	51	<i>Hibiscus spp.</i>	15
22	<i>Calendula spp.</i>	10	52	<i>Hordeum spontaneus</i>	15
23	<i>Capsella bursa – pastoris</i>	50	53	<i>Hordeum stristum</i>	15
24	<i>Cardaria spp.</i>	25	54	<i>Hyptis suaveolens</i>	5
25	<i>Cassia hirsute</i>	15	55	<i>Imperata cylindrica</i>	15
26	<i>Centaurea spp.</i>	20	56	<i>Ipomoea spp.</i>	5
27	<i>Cephalaria spp.</i>	20	57	<i>Lappula echinata</i>	5
28	<i>Chenopodium spp.</i>	50	58	<i>Latherus spp.</i>	15
29	<i>Cichorium spp.</i>	10	59	<i>Lethospermum arvense</i>	10
30	<i>Cirsium spp.</i>	10	60	<i>Linum usitatissimum</i>	10

No.	Scientific Name	Allowed count/kg	No.	Scientific Name	Allowed count/kg
61	<i>Lolium multiflorum</i>	15	84	<i>Raphanus raphanistrum</i>	30
62	<i>Madia spp.</i>	20	85	<i>Reseda luteola</i>	20
63	<i>Malva spp.</i>	15	86	<i>Rorippa spp.</i>	10
64	<i>Medicago spp. Except M.sativa (Crop)</i>	30	87	<i>Rottboellia exalata</i>	5
65	<i>Melandrium album</i>	15	88	<i>Rumex spp.</i>	35
66	<i>Melilotus spp.</i>	35	89	<i>Schismus spp.</i>	10
67	<i>Myagrum spp.</i>	20	90	<i>Scolymus spp.</i>	10
68	<i>Onobrychis viciifolia</i>	5	91	<i>Setaria spp.</i>	40
69	<i>Ononis spp.</i>	10	92	<i>Sida hederacea</i>	20
70	<i>Onopordum acanthium</i>	5	93	<i>Silena spp.</i>	40
71	<i>Orobanche spp.</i>	15	94	<i>Silybum spp.</i>	15
72	<i>Papaver spp.</i>	40	95	<i>Sinapis spp.</i>	35
73	<i>Paspalum urvillei</i>	15	96	<i>Solanum elaeagnifolium</i>	10
74	<i>Pennisetum americanum</i>	5	97	<i>Solanum nigrum</i>	10
75	<i>Phalaris spp.</i>	20	98	<i>Sorghum spp.</i>	10
76	<i>Phyllanthus carolinensis</i>	25	99	<i>Stellaria spp.</i>	50
77	<i>Picris spp.</i>	5	100	<i>Thlaspi spp.</i>	30
78	<i>Plantago spp.</i>	10	101	<i>Trianthema portulacastrum</i>	5
79	<i>Polygonium aviculare</i>	20	102	<i>Tribulus terrestris</i>	25
80	<i>Polygonium convovulus</i>	20	103	<i>Trifolium repens</i>	20
81	<i>Polygonium persicaria</i>	20	104	<i>Trigonella monspeliaca</i>	50
82	<i>Polygonium lapathifolium</i>	20	105	<i>Vaccaria spp.</i>	20
83	<i>Ranunculus arvensis</i>	10	106	<i>Veronica spp.</i>	40