



## Global Definition of Whole Grain

Developed by the International Working Group of the Global Whole Grain Initiative

This draft definition document as agreed in the Working Group Meeting October 21<sup>st</sup>, 2018 in London (AACCI Annual Meeting)

1. Whole grains shall consist of the intact, ground, cracked, flaked or otherwise processed kernel after the removal of inedible parts such as the hull and husk. The principal anatomical components - the starchy endosperm, germ and bran - are present in the same relative proportions as they exist in the intact kernel.<sup>1</sup>
2. This definition applies to all cereal grains of the Poaceae family that are listed for human consumption and the pseudocereals amaranth, buckwheat, quinoa.
3. Processing includes dry and wet primary processing of grains and their fractions – i.e. endosperm, bran and germ - taking into account the following points:
  - 3.1. The adding together, after temporary separation, of the three whole grain constituents as separate ingredients in the correct proportion, at both the milling stage and at the stage of baking/ food processing.
  - 3.2. The ability to recombine milling fractions and to use components of grains from other batches as long as the final product contains the component parts of the grain in line with their pre-processed proportions.
  - 3.3. The ability to recombine fractions from different varieties of the same grain as long as the final product contains the component parts. Small losses of components that occur through processing methods consistent with safety and quality are allowed.
  - 3.4. Small losses of components that occur through processing methods consistent with safety and quality are allowed.
  - 3.5. Fermented, malted or sprouted grains containing all of the original bran, germ, and endosperm shall be considered whole grains as long as sprout growth does not exceed kernel length and nutrient values have not diminished.
  - 3.6. Processing should not result in a >10 % reduction in the dietary fibre content (as an indicator of the amount of beneficial components within the whole grain).of the grain in line with their pre-processed proportions.

<sup>1</sup> The use of the term wholemeal may be legally protected in some jurisdictions and may be equivalent to whole grain. The use of this term should be checked within local contexts.

### General remarks

This global definition of whole grain refers to whole grain as a raw material and a food ingredient. The definition is generic and does not include quantitative criteria relevant for a single grain. Such criteria are available in existing standards and specifications. The Working Group will assess existing criteria and will recommend desirable improvements.

The development of the definition was initiated at the 6th International Whole Grain Summit, Vienna 13-15 November 2017. A Global Working Group, with experts from academia and industry worldwide, taking into account widely accepted existing definitions and new developments, agreed in its meeting in London, October 21<sup>st</sup>, 2018, to propose the definition as presented in this document.

As a next step AACCI, ICC, Healthgrain Forum and other organisations involved in the Global Whole Grain Initiative are planning to widely circulate this definition, collect and consider comments, thereafter officially adopt the final version and invite related organisations to endorse the definition as well.

Ad 2: The Poaceae (also called Gramineae) family includes all kinds of edible and other grasses. A wide range of edible ones, called cereal grains, are listed in the AACCI and Healthgrain definition, together with the 3 accepted pseudocereals (see e.g. [Healthgrain wholegrain definition](#)). The global definition allows addition of newly developed types of cereal grains, such as Tritordeum, when they are accepted by the relevant authoritative body as grain for human consumption.

Following existing definitions and dietary guidelines of whole grain worldwide, pulses and legumes are not included.

Ad 3: Grains need to be processed before consumption. The primary processing of grains includes processes for removal of inedible parts, for unlocking of the nutrients by dry (e.g. milling) and wet (e.g. malting, sprouting) processes, and stabilization / reducing deterioration after storage e.g. by inactivation of enzymes (e.g. toasting of germ and of rice bran). Therefore, in addition to the “ground, cracked, flaked” mentioned in the AACCI and Healthgrain definition “otherwise processed” is included. Issues related to further processing such as baking and extrusion for preparing food products are outside the scope of the definition of whole grain as a raw material.

Ad 3.1: Both recombination by flour mills and reconstitution by food producers are consistent with longstanding food industry technological and safety practices. Correct proportions are grain specific. Listing of such proportions can be included in grain-specific definitions and standards.

Ad 3.2: In most commonly applied milling processes endosperm, bran and germ are separated for later recombination. For most whole grains and flours that require a long shelf life, the germ and bran fraction are heat stabilized, followed by recombination - with endosperm of a batch of grain that entered the plant later.

Ad 3.3: In many large flour milling plants, a wide range of varieties of the same grain are processed.

Ad 3.4: Removal of the very outer bran layer is acceptable for minimising levels of undesirable substances such as bacteria, mycotoxins, agrochemicals and heavy metals. The maximum acceptable level of losses depends on the type of grain and local conditions and will therefore be kept open to local regulators. For wheat the maximum level set in Switzerland is 2%. This was used in the Healthgrain definition for all grains. NOTE: higher levels may be required due to local constraints and can be set by local regulations.

Ad 3.5: This is the AACCI statement for malted and sprouted grains (2008), with addition of ‘fermented’.

Ad 3.6: This condition was published by the Healthgrain Forum (2017) in order to prevent inclusion of fermented or otherwise processed whole grains with major breakdown of fibre.

In case of comments, please contact the [ICC HQ](#), we’ll forward them to the relevant working group!