

## **Are “ancient grains”, “ancient gluten” and “wheat without D genome” better for you?**

There is much social media attention and marketing about benefits of “ancient grains”, most of which is based on belief and emotion, rather than on sound scientific data.

An example is spelt (Dinkel) which in many social media statements is viewed to be much healthier for reasons of being “ancient”, having more dietary fiber, a lower content of FODMAPs and a better nutritional profile.

However, careful analysis shows that Spelt wheat is hexaploid (AABBDD genome), as is bread wheat and that the nutritional composition is virtually indifferent. In terms of “ancient”, spelt wheat equals bread wheat.

Other recent marketing claims state that “ancient” wheat types that do not have the D genome, such as for example tetraploid durum wheat and Emmer wheat (both AABB genome), as well as Einkorn wheat (monococcum genome AA) are better digestible and do not at all contain D-Gluten. Such tetraploid wheat types recently got the marketing name ‘2ab Wheat’ with the claim that this type of wheat *“only contains ancient gluten, as opposed to modern gluten, which triggers troublesome symptoms in sensitive people suffering from gluten intolerance”*.

By this type of marketing claims false hope may be created that “this type of gluten” is harmless. In reality, all wheat types, including their early ancestors contain gluten and all are more or less bio-reactive with regard to gluten intolerance in celiac disease. In fact, in one of the studies that addressed this (Suligoj 2013), the authors stated “our findings provide further evidence for the need for a strict gluten-free diet in coeliac patients, including avoidance of ancient strains of wheat”

Recent research indicated that amylase trypsin inhibitors (ATI's) may be a causing factor of wheat allergy and of non celiac wheat sensitivity (NCWS- wheat induced intestinal sensitivity and symptoms). CNWS has a preliminary estimated prevalence of 3-5% of the population. There are about 20 ATI isomers and the distribution of these isomers as well as their relative intestinal bio-reactivity differs among wheat types. Since gluten and ATI's go “hand in hand” gluten free grains, such as for example oat, millet and amaranth, contain no or very low ATI levels. The near future should clarify whether the selection of low and /or more favorable ATI spectrum wheat types, or the elimination of the most reactive isomer(s) by gene editing (crispr technique) is desired and feasible for the general population.

selected references

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