Ancient Grains - A Rising Trend

Ancient grains have taken the healthy food scene by storm. But what are ancient grains? And are they really better than your usual grains?

Michael Sweeney, Senior Analyst, Farrelly & Mitchell
msweeney@farrellymitchell.com

Marketing or Science
There is some confusion over what constitutes an ancient grain. Although the Whole Grains Council defines ancient grains loosely as grains that are largely unchanged over the last several hundred years, no clear definition exists.

The term seems to be a marketing construct with little basis in history or science. Many of the commodities which categorised as ancient grains are, in fact, no older than grains such as wheat or oats.

If we look at what has changed and what has not changed, the picture becomes somewhat clearer. Despite having roots going back into antiquity; modern common varieties of wheat, rice and corn are not ancient grains. These modern grains are products of thousands of years of selective breeding for rapid growth and easier milling.

In contrast, the pseudo-grain, amaranth is a good example of what is considered an ancient grain. It was a staple of the Aztec civilisation prior to colonisation. Following the Spanish conquest, cultivation of the crop was outlawed. Having largely maintained its genetic base, amaranth was recovered from wild varieties in the 20th century; it is now cultivated commercially and considered an ancient grain.

Classifications
Commodities commonly classified as ancient grains largely fall into one or more of the following three different categories:

1. Grains that have not been significantly changed through breeding or other means since they were first cultivated;

2. Heirloom varieties of commonly cultivated grains; and

3. Grains and pseudo-grains that have not been a part of the Western diets until relatively recently.

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The dominant reason for the rising popularity of ancient grains is related to their perceived nutritional and health benefits. They are marketed as healthier than modern grains but this is not always the case. While some ancient grains have higher rates of particular nutrients than modern grains, others do not.

As a group, ancient grains have become attractive due to consumer perceptions and misconceptions around the nutritional profile of ancient gains compared to modern grains. They are generally perceived to have a higher content of protein, fibre, vitamin B and minerals, all of which are essential to a well-balanced and nutritious diet.

Figure 1: Types of Ancient Grains

1: Unchanged over the years
- Amaranth
- Einkorn
- Farro/emmer
- Kamut
- Spelt

2: Heirloom varieties
- Black barley
- Red and black rice
- Blue corn

3: New to Western diet
- Quinoa
- Freekeh
- Bulgur
- Sorghum
- Millet
- Chia seeds
- Teff

Figure 2: What makes ancient proteins attractive to health conscious consumers?

- Plant-based protein
- Fibre
- Vitamin B Complex
- Minerals

Nutritional Profile of Grains

As stated, ancient grains are not necessarily more nutritious than modern grains. For example, the protein content of modern wheat is relatively high when compared to most other grains.

The nutritional profile of grains varies significantly across grain types, be they modern or ancient. This is illustrated in Table 1 which compares the nutrient content of common ancient and modern grains. The nutritional profile of specific whole grains also varies as it depends on growth factors such as soil, weather/climate, farm management practices and the crop and cultivar. In addition, processing and cooking can negatively impact the nutritional value of whole grains.
In the USA, retail sales of products with labels featuring “made with ancient grains” grew by 37% to reach $222 million in 2015.

Implications For Food Companies & Consumers

The implication of this is that whole grains do not need to be exotic or ancient to be healthy. Many studies in the recent years have supported the fact that common foods such as brown rice, whole grain pasta, oatmeal and whole white bread offer similar nutritious value, usually at a lower price point. In general, consuming whole grains, of whichever variety, is healthier and more nutritional than refined grain products.

From a nutritional standpoint, adding variety to diets is always advantageous. Different grains have different nutritional profiles and eating a variety of grains ensures consumption of the different types of nutrients available in each of them. Nevertheless, the buzz around ancient grains has created an inevitable demand for them, attracting the attention of food producers. General Mills and Kellogg’s, two of the largest players in the breakfast cereals market, have both launched products made with ancient grains in order to capitalise demand. In the USA, retail sales of products with labels featuring “made with ancient grains” grew by 37% to reach $222 million in 2015.

Despite the strong market potential, product development activities seeking to take advantage of growth potential in the ancient grains segment need to be supported in appropriate market research.

Innovation and differentiation are also key components for success as with all segments of the food industry. This is especially true in the bakery industry, where the use of ancient grains can introduce the variety consumers crave. Moreover, utilising functional characteristics of ancient grains, such as chia seed’s gelling properties, can elevate ancient grains into new and exciting levels. Such new applications can make ancient grains big influencers of food formulation. In any case, ancient seeds are no longer just a side act, but rapidly becoming a main attraction.

<table>
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<th>Grain Category</th>
<th>Grain/Pseudo-Grain</th>
<th>Protein</th>
<th>Fibre</th>
<th>B Vitamins</th>
<th>Vitamin C</th>
<th>Minerals</th>
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Table 1: Comparison of Nutrient Content of Common Ancient Grains & Common Grains
Contact Details: Farrelly & Mitchell

www.FarrellyMitchell.com

Global Head Office:
Malachy Mitchell
Managing Director

Unit 5A Fingal Business Park
Balbriggan
Co. Dublin
Ireland

Tel:  + 353 1 690 6550
Fax:  + 353 1 883 4910
Mobile:  + 353 86 806 0843
Email:  mmitchell@farrellymitchell.com

Middle East & Africa Office:
Najeeb Alhumaid
Regional Manager

Al-Rusais Building
Suite 510
6468 Al-Ulaya Road - Al Ulaya
Riyadh 12211-3857
Kingdom of Saudi Arabia

Tel:  + 966 1 4634406
Mobile:  + 966 54 338 7199
Email:  nalhumaid@farrellymitchell.com

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