

FUTURE 50 FOODS



Cereals & Grains
Fruit - Vegetables

50 foods
for healthier
people and a
healthier planet



**FUTURE 50 FOODS IS
THE BEGINNING OF A
JOURNEY AND A WAY
FOR PEOPLE TO MAKE A
CHANGE, ONE DELICIOUS
DISH AT A TIME.**





CEREALS & GRAINS

Cereals and grains are considered the most important source of food for human consumption²⁶. They have been the principal component of diets for thousands of years and, therefore, have played a vital role in shaping human civilisation²⁷. For both environmental and health reasons, there is a pressing need to vary the types of cereals and grains grown and eaten. Diversifying sources of carbohydrates from white rice, maize, wheat and other staples, to these less common, whole cereals and grains will provide more nutritional value and help improve soil health. Many of them are readily available whilst others need to be brought back into the food system. Demand for, and supply of, a variety of less common crops needs to be carefully and sustainably increased to help improve diets and agricultural biodiversity.





Amaranth

Amaranthus

Amaranth is grown for both its seeds and leaves. The fibre-rich grain is prepared in boiling water, like rice, or popped like corn. Its leaves are a staple food in Asia and Africa and are eaten in the same ways as other leafy green vegetables.

The plant that the amaranth seed comes from can be grown at any elevation without needing a lot of water, making it an ideal crop in areas where water is scarce.

Believed to have been first cultivated in Mexico, amaranth is one of the oldest crops, beloved by the Aztecs and Incas for its suspected supernatural properties.

Relative to other grains, amaranth's sandy yellow seed is high in magnesium and protein. It has a mild, slightly nutty taste and gelatinous texture making it ideal for soups, side dishes and risottos.

Buckwheat

Fagopyrum esculentum

Buckwheat is one of the healthiest, nuttiest and most versatile grains. It is a short season crop, maturing in just eight to twelve weeks, and grows well in both acidic and under-fertilised soils. It can also be used as a 'cover crop' or 'smother crop' to help keep weeds down and reduce soil erosion while fields rest during crop rotation.

Contrary to its name, buckwheat is not related to wheat and is gluten-free. It is an ideal higher protein swap for flour in pastas and breads. It can also be a great alternative to rice, is ideal cooked in a broth or stock, and can be used in salads or stuffing. It is popular in Russia and Eastern European countries and is commonly eaten in stews, such as 'goulash', with potatoes, vegetables and meat.

Finger millet

Eleusine coracana

Finger millet is a cereal that has been cultivated for thousands of years since it was first domesticated from the wild subspecies in the highlands that range from Uganda to Ethiopia. A member of the grass family, it is now farmed more widely in the arid regions of Africa and South Asia as a staple cereal²⁸.

Although the diverse group of crops known as millets is among one of the most consumed, finger millet is often overlooked by the world at large as it only makes up around ten percent of global millet production. As a crop, it has many benefits. It can thrive in soils of low

fertility and can be intercropped with maize, sorghum and legumes. It has a higher natural resistance to insects than similar crops, leading to higher yields with less dependence on pesticide use. Of all major cereals, millet is one of the most nutritious. It is a good source of fibre and vitamin B1 and is rich in minerals.

Finger millet is most commonly eaten and used in the same way as other grains or cereals. It can be eaten as porridge, or milled into flour and used in bread or pancakes. It has a mild flavour that's slightly nuttier than quinoa and has a similar texture to couscous.



Fonio

Digitaria exilis

Arguably Africa's oldest cultivated cereal, fonio is a grain known for its nutty, delicate taste and versatility. The Bambara people of Mali have a saying that 'fonio never embarrasses the cook' as it is so easy to prepare and can be used in dishes to replace any grain.

Fonio has been around for more than 5,000 years. Evidence shows it was cultivated in ancient Egypt; today it is mainly grown in the dry Sahel region of West Africa. There are two cultivated species: *Digitaria exilis*, white fonio, and *Digitaria iburua*, black fonio.

Fonio is drought-resistant and has the ability to grow in sandy or acidic soil. Its roots help to secure topsoil to prevent the spread of deserts and it's one of the world's fastest-maturing grains, growing in 60 to 70 days. Fonio is nicknamed the 'lazy farmer's crop' because it is so easy to grow. Farmers simply scatter the seeds after the first rain and wait for harvest. This traditional method yields about 0.5 to 1.2 tonnes per hectare. However, up to two tonnes per hectare can be harvested under very good agronomic conditions.

The main challenge when cultivating fonio is turning the grain into food. Fonio grains are as tiny as sand and each must have their inedible covers removed. Farmers spend large amounts of time threshing and dehulling, most of which is still done manually.

Current annual fonio production is estimated at 600,000 tonnes globally, of which more than 95 percent is consumed within fonio-growing communities.

To reduce the manual labour and increase processing capacity, a company called Yolélé Foods is building the world's first fonio mill. The company, which was co-founded by Pierre Thiam, who is seen as a leading authority on African food in the United States, currently exports fonio to the United States and Canada. Once the mill is finalised in late 2020 in Senegal, the company plans to begin fonio exportation to other parts of the world.

Fonio is gluten-free and highly nutritious, containing iron, zinc, magnesium and phytonutrients. Fonio can be used in salads, crackers, pastas, and even in baked goods. It can be used in place of oats to make hot cereal, in place of couscous or rice in any dish and is delicious mixed with spices and olive oil as a side dish. It also can be used to brew beer.





Khorasan wheat

Triticum turanicum

Khorasan wheat is grown in 40 countries around the world and is known for its ability to tolerate different climates without the use of artificial pesticides or fertilisers. Commonly referred to by its trademarked name of KAMUT®, the amber-coloured kernels of this ancient wheat are twice the size of regular wheat and, when cooked, they have a richer, creamier and nuttier taste.

Khorasan wheat is high in fibre, a good source of the minerals magnesium and selenium, and contains antioxidants²⁹.

It is nutritious and can be used in similar ways to other forms of wheat. Khorasan wheat is available in many forms, including as a wholegrain, couscous and flour. The kernels are great in stews, soups, pilafs and salads.



Category

Cereals & Grains



Quinoa

Chenopodium quinoa

Quinoa has long been a staple food in South America but has been gaining popularity in Europe and the US since the early 2000s, marketed as a healthier, tastier replacement for rice.

The sudden surge in demand for one type of quinoa forced farmers to take measures to rapidly increase yield, to the detriment of land, trees, soil and water use. Quinoa, like any food, can and should be grown following sustainable practices and, compared with similar crops, doesn't require any more resources.

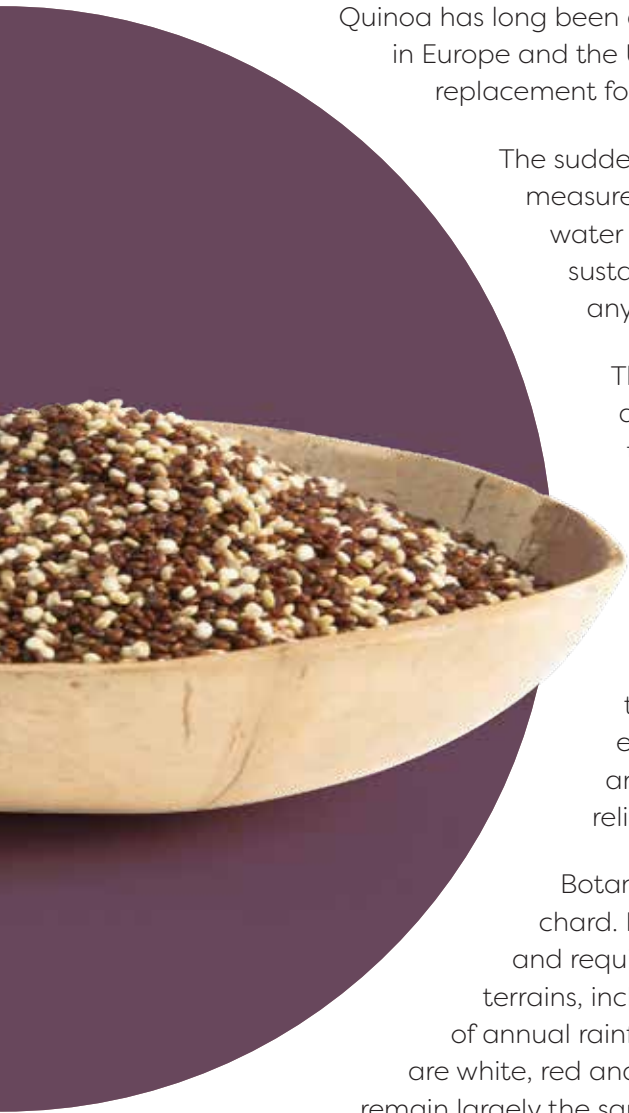
There are over 3,000 varieties of quinoa. However, the demand to date has been for only a few types, which has caused the farmers to stop growing many others. This has resulted in environmental degradation and damaged soil, because the land was not left to fallow (rest between harvests).

There are now incentives in place for farmers to grow less common types of quinoa and programmes to encourage their consumption in schools and restaurants. This popularity has opened global trade opportunities for farmers and benefitted local economies enormously. The quinoa case stresses the importance of growing and eating a wide variety of grains and cereals to help decrease the reliance on any one specific type.

Botanically, quinoa is not a cereal but is a relative of spinach, beets and chard. It is a hardy plant that can tolerate frosts, droughts and high winds, and requires little fertilisation. This means it can grow in diverse climates and terrains, including areas with minimal irrigation or as little as three to four inches of annual rainfall. The most commonly cultivated and exported types of quinoa are white, red and black. The texture varies between them, but the flavour and uses remain largely the same.

Quinoa is a complete protein as it contains all nine of the essential amino acids. It is gluten-free and contains an exceptional balance of protein, fat, minerals and vitamins³⁰.

In Bolivia and Peru, quinoa is mainly eaten in stews and soups. It is easy to prepare as a rice substitute by bringing it to the boil in stock or water, then reducing to a simmer until the liquid is absorbed. It can replace rice in many dishes, such as pilafs, stuffings, salads and even veggie burgers, giving a nutty flavour and enhancing texture. It can also be ground and used in breads and even pastas.





Spelt

Triticum spelta

An ancient form of wheat, spelt is a hybrid of emmer wheat and goat grass. Due to its high carbohydrate content, the Romans called it the ‘marching grain’.

It has a thick outer husk that helps to protect it from disease and pests, making it easier for farmers to grow without the need for fertilisers or pesticides. Compared to similar types of wheat, it contains more fibre, as well as higher concentrations of minerals, including magnesium, iron and zinc³¹.

Spelt is often one of the components of farro, which is a mix of various types of wheat and is becoming more popular in some parts of Europe and North America. Whole or pearled, spelt should be boiled until tender.

The mellow, nutty flavour makes it popular to use in place of rice in pilaf, risotto and side dishes. In Germany and Austria, using spelt flour to make breads and cakes is common and often preferred over other types of wheat.

Teff

Eragrostis tef

Known as ‘the next super grain’ the popularity of teff as a preferred grain has grown over the past few years. This has led many farmers in Europe and North America to begin growing teff to boost supply.

This tiny grass seed is a long-standing staple in Ethiopia thanks to its nutritional value, as teff is a good source of iron, calcium, magnesium, manganese and phosphorous³².

It is well suited to challenging climates, can cope with both drought and waterlogged soil, is easy to store and is pest-resistant³³.

This hardy little grain is being championed by the Ethiopian government, which is working to introduce new varieties and improve production methods.

In Ethiopia, teff is ground into flour and baked into the sourdough flatbread called injera. It can be used in ‘paap’ (South African porridge) instead of cornmeal as it offers a more enticing texture and has greater nutritional value.

The mild flavour means teff flour lends itself to any number of sweet and savoury dishes. The seeds can be steamed or boiled in stock or water to be served as a side dish or to bulk up dishes.



Wild rice

Zizania

This so-called 'rice' isn't a rice at all. Wild rice is the seed of a semi-aquatic grass that grows wild in North American lakes and rivers. Long and thin, the seeds are covered in green, brown or black husks. After harvesting, the husk is dried then hulled. Often mixed with brown and white rice, wild rice is not commercially grown and, therefore, supply is scarce in many parts of the world.

Deliciously nutty, toasty and earthy with a chewy texture, wild rice is easy to digest and is a source of a variety of valuable minerals.

Compared with white rice, wild rice contains more protein, zinc and iron^{22, 34}. Like rice, it is boiled in water or stock. It can also be popped like corn for a colourful and more nutritious version of popcorn, is great mixed with other grains, added to salads, soups and mixed with other grains and vegetables to make vegetarian burgers.







FRUIT VEGETABLES

Vegetable-like fruits are eaten as vegetables and commonly mistaken for them. They are sweeter and, in most cases, contain a higher amount of carbohydrate and water compared to vegetables. Examples include squash, tomatoes, eggplants/aubergines, peppers and zucchini/courgettes. Commonly grown in warm climates, fruit vegetables can be eaten in various forms and tend to be high in vitamin C and fibre.





Pumpkin flowers

Cucurbita pepo

Both pumpkin leaves and flowers are not only edible, but highly nutritious and delicious. The female flowers have tiny fruit attached which can form a pumpkin, while the male flowers don't. The combination of mild pumpkin taste and soft texture make them the perfect addition to soups, sauces, salads and pasta dishes. Like other cucurbits, pumpkins grow

best in rich, well-drained soil in the hot, humid climates of Egypt, Mexico, India, parts of the US, China and Ukraine. It is recommended to discard the centre of the flower (the stamen) prior to preparation. The flowers are rich in many nutrients, including vitamin C. These precious flowers are often discarded, wasting a good source of nutrients and flavour.

Okra

Abelmoschus esculentus

Well suited to resist changes in climate, okra is among the most heat- and drought-resistant vegetables in the world. It contains antioxidants, including beta-carotene, zeaxanthine, and lutein³⁵. This slim, green seed pod goes by many names, including gumbo, bhindi and lady's finger. It's commonly used in the Caribbean and in areas of the world

where Creole, Cajun and Asian cooking are popular. When cooked, the seeds produce a sticky, viscous liquid, which makes them ideal for thickening soups and stews. Okra can be steamed, stir-fried or grilled and pairs well with strong, spicy flavours and seasonings.

Orange tomatoes

Solanum lycopersicum

Like all tomatoes, this small orange variety can be traced back to the tiny, perfectly round berries that grow wild in coastal Peru and the Galapagos Islands. That was before tomatoes were domesticated and their seeds brought back to Europe after Cortés conquered what would later be known as Mexico City in 1521. Now, red tomatoes are one of the most consumed vegetables globally. Orange tomatoes are sweeter and less acidic than their red relatives and contain up to twice as much vitamin A and folate (B vitamin) than other varieties (red, green).

Many are also 'heirloom' – genetically unique, making them more resistant to disease and pests. They can be used in the same way as the more familiar red varieties: in soups, to make sauces or chutney, or added to casseroles and stews. They're also delicious roasted to bring out even more sweetness and can be eaten on their own as a snack.

Eating less common varieties of vegetables, such as orange tomatoes, drives demand which will increase the variety of types of crops grown, which, in turn, makes the food system more resilient.

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50
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