

1 Fonio



Crop type

Fonio (*Digitaria exilis*) is one of the oldest cultivated cereals in Africa, dating back to 5,000 BC. Fonio is the smallest species of millet. In the mythology of the Dogon people in Mali, the creator made the universe by exploding a single grain of fonio, located inside the "egg of the world".

Fonio has potential to improve nutrition, boost food security, foster rural development and support sustainable land use. Despite the widespread cultivation of maize and other non-native cereals since the 20th century, African farmers and consumers still value fonio highly because it is nutritious and extremely fast growing, reaching maturity in only 8 weeks.

Cultivation and uses

Fonio is a very hardy crop and grows well on poor soils. It can even produce seed on soils with aluminium levels that are toxic to other crops and can be relied on in dry savannah lands, where rains are brief and unreliable. It is one of the primary cereals in Sudan and Ethiopia. In West Africa fonio is mainly grown and cooked by women, as a special food for treats at weddings, baptisms and other ceremonies. The entire fonio production in Africa is estimated at 250,000 to 300,000 tons.

Fonio grains are used by African consumers in porridge and couscous, for bread, and for brewing beer. The tiny grains are gluten-free and rich in protein, and consumers outside Africa are beginning to recognize its flavour and nutritional qualities. Fonio is light and easy to digest and can be included in many different cereal-based recipes, making it an attractive ingredient for health food products for those with gluten intolerance, in poor health or for baby food.

Processing and marketing

A major obstacle to increasing fonio production is the long and complex processing. The tiny grain makes dehusking and milling, traditionally done by women using a pestle and mortar, highly laborious. In the case of the Yakaar Niani Wulli farmers association (YNW) in Senegal, fonio is therefore grown only on very small plots under 0.1ha and yields just 100-500kg per ha. It is hard for farmers to increase production volumes without access to finance before harvest.

Senegalese farmers growing fonio are exploring ways of improving local and export markets. Ecological farming NGO Enda Pronat has worked with them to introduce fonio into the crop rotation cycle of YWN organic cotton farmers.



Pre-cooked fonio packs sold in Dakar by Yakaar Niani Wulli Federation of organic farmers, Senegal. Credit: Britta Pichler















Harvesting fonio by sickle. Credit: Enda Pronat



Food crops grown by organic cotton farmers in West Africa

For the farmers and their NGO partners, export options should only be considered for certain crops that fit well into their cotton rotations and are not food staples in the local diet and therefore do not raise concerns that export production would reduce the food security of local communities. Fonio is one of the crops that YNW consider is useful to grow for export and local markets.

Recipe: Super-Delicious Fonio Casserole

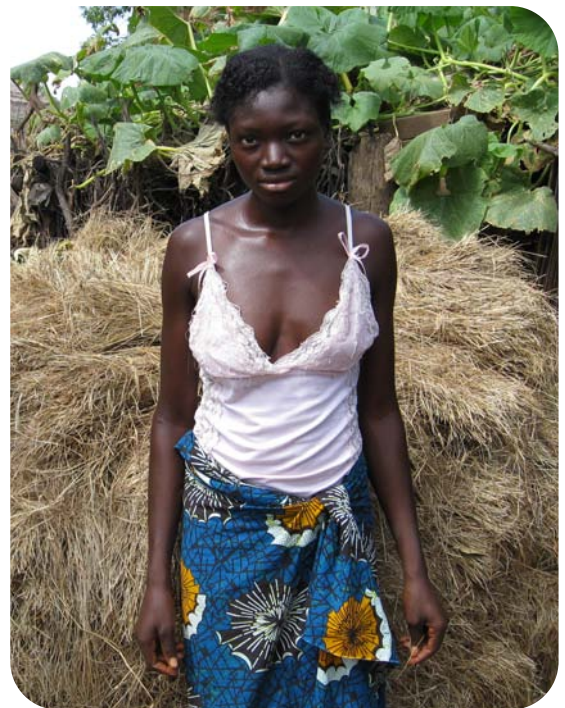
-  180g fonio
-  1.2 litres vegetable broth (or water + bouillon powder)
-  2 large carrots, diced
-  1 large onion, chopped
-  450g cooked or canned chickpeas
-  1 can chopped tomatoes
-  chopped garlic, to taste
-  1 tablespoon cumin
-  1 teaspoon cayenne
-  2 teaspoons turmeric
-  1 teaspoon cinnamon (optional)
-  30g fresh parsley, mixed in just before serving

Mix everything in a casserole dish, cover and bake at 350F/180C/gas mark 4 for 35min. Stir, add water if too dry and bake until carrots are tender (approx. 30 min more). Let casserole sit for a few min, then add the parsley. Delicious served with milk or soya-based yoghurt and fresh coriander sauce (chopped then blended with a little salt and lemon juice).

More recipes in English at <http://fonio.cirad.fr/en/technologie/consumption.html>



Grain head of fonio. Credit: Enda Pronat



Young farmer with her rick of fonio stalks, Koussanar, Senegal. Credit: Enda Pronat



Fibre, Food & Beauty for Poverty Reduction is a joint project of PAN Germany, PAN UK, OBEPAB from Benin and Enda Pronat from Senegal. It aims to raise awareness about the many different food crops grown by organic cotton farmers in Africa and help them to find better marketing options for these, in local or export markets.

The project is funded by Europe Aid Co-operation Office, InWent and TRAIID.

<http://www.pan-uk/foodAfrica>

<http://www.pan-germany.org>

