


Eragrostis tef

<i>Eragrostis tef</i>	
	
Scientific classification	
Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Monocots
(unranked):	Commelinids
Order:	Poales
Family:	Poaceae
Subfamily:	Chloridoideae
Genus:	<i>Eragrostis</i>
Species:	<i>E. tef</i>
Binomial name	
<i>Eragrostis tef</i> (Zucc.) Trotter	
Synonyms	
<i>Eragrostis abyssinica</i> (Jacq.) Link	

Eragrostis tef, **Xaafii**, (Oromo), **teff**, **lovegrass**, **annual bunch grass**, **taf** (Amharic: ጥፍ? *tēff*); Tigrinya: ጥፍ? *taff*), or **mil éthiopien** (French 'Ethiopian millet'), is an annual grass, a species of lovegrass native to the northern Ethiopian Highlands and Eritrean Highlands of the Horn of Africa.^[1] The word "tef" is connected by folk etymology to the Ethio-Semitic root "tff", which means "lost" (because of the small size of the grain).

Description

Eragrostis tef has an attractive nutrition profile, being high in dietary fibre and iron and providing protein and calcium. It is similar to millet and quinoa in cooking, but the seed is much smaller and cooks faster, thus using less fuel.

Distribution

Eragrostis tef is adapted to environments ranging from drought stress to waterlogged soil conditions. Maximum teff production occurs at altitudes of 1,800 to 2,100 m, growing season rainfall of 450 to 550 mm, and a temperature range of 10 to 27 °C. Teff is day length sensitive and flowers best with 12 hours of daylight.

Teff is an important food grain in Ethiopia and Eritrea, where it is used to make injera, and less so in India and Australia. It is now raised in the U.S., in Idaho in particular, with experimental plots in Kansas. In addition to people from traditional teff-consuming countries, customers include those on gluten-restricted diets.^[2] Because of its small seeds (less than 1 mm diameter), a handful is enough to sow a large area. This property makes teff particularly suited to a seminomadic lifestyle.

History

Between 8000 and 5000 BC, the peoples of the Ethiopian highlands were among the first locales to domesticate plants and animals for food and teff was one of the earliest plants domesticated.^[3] Teff is believed to have originated in Ethiopia between 4000 BCE and 1000 BCE. Genetic evidence points to *E. pilosa* as the most likely wild ancestor. A 19th century identification of teff seeds from an ancient Egyptian site is now considered doubtful; the seeds in question (no longer available for study) are more likely of *E. aegyptiaca*, a common wild grass in Egypt.

Cultivation and uses

In 1996, the US National Research Council characterized Teff as having the "potential to improve nutrition, boost food security, foster rural development and support sustainable landcare."

Teff has been widely cultivated and used in the countries of Eritrea and Ethiopia. Teff accounts for about a quarter of total cereal production in Ethiopia.^[4] The grain can be used by celiacs (the gluten in teff does not contain the a-gliadin-fraction that causes a reaction in those with celiac disease) and has a high concentration of different nutrients, a very high calcium content, and significant levels of the minerals phosphorus, magnesium, aluminum, iron, copper, zinc, boron and barium, and also of thiamin. Teff is high in protein. It is considered to have an excellent amino acid composition, including all 8 essential amino acids for humans, and is higher in lysine than wheat or barley.^{[5][citation needed]} Teff is high in carbohydrates and fiber. In one 2003-2004 study in Ethiopia, farmers indicated a preference among consumers for white teff over darker colored varieties. Teff is gaining popularity in the western United States as an alternative forage crop, in rotation with a legume such as alfalfa, because it uses C4 photosynthesis, similar to that of corn. It is noted for its high quality and high yield, when compared to other forage rotations.^[6] It is also known as an "emergency crop" because it is planted late in the spring when the growing season is warmer, and most other crops have already been planted. It does not tolerate any type of frost.^[7] Teff is also valued for its fine straw, which is traditionally mixed with mud for building purposes.

References

- [1] <http://books.google.se/books?id=lcHM2488JoUC&pg=PA9&dq=injera+eritrea&hl=sv&sa=X&ei=MaeGUsrJDMrd4QTZpICoDQ&ved=0CF0Q6AEwBDgU#v=onepage&q=injera%20eritrea&f=false>
- [2] <http://www.matr.net/article-6172.html> Teff for gluten intolerance
- [3] Murphy, Denis J. *People, Plants, and Genes: The Story of Crops and Humanity*. Oxford: Oxford University Press, 2007.
- [4] Gabre-Madhin, Eleni Zaude. *Market Institutions, Transaction Costs, and Social Capital in the Ethiopian Grain Market*. Washington, DC: International Food Policy Research Institute, 2001
- [5] <http://www.tandfonline.com/doi/abs/10.1080/14786419.2010.538924?#.Ugi3QtK7Nyl>
- [6] <http://hayandforage.com/hay/teff-irrigated-alternative-forage>
- [7] http://alfalfa.ucdavis.edu/+symposium/2009/files/talks/09WAS19_Miller_Tef.pdf

External links

- Purdue University Center for New Crops & Plant Products - *Eragrostis tef* (http://www.hort.purdue.edu/newcrop/nexus/Eragrostis_tef_nex.html)
- Eragrostis abyssinica - Ethiopian Plant Names, Dr. Aberra Molla (<http://www.ethiopic.com/aplants.htm>)

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