PLANT FACT SHEET

Pennisetum glaucum (L.) R. Br.

GENUS *Pennisetum* **FAMILY** Poaceae

COMMON NAMES Bullrush millet, Pearl millet

EDIBLE PARTS AND USES

Edible parts: Seeds, Cereal

The seeds are eaten like rice. They are also ground into flour and made into bread and cakes and porridge.
They are used to make alcoholic drinks. Caution: Alcohol is a cause of cancer.
They are mixed with other grains and seeds to make fermented foods.
Some kinds have sweet stalks that are chewed.
The young ears can be roasted and eaten like sweet corn.
The plant is also infested by a fungus which is eaten.

DESCRIPTION

A millet grass. It is an annual grass. It grows to 3 m tall. The leaf blades are 20-100 cm long by 2-5 cm wide. The flower is dense and 40-50 cm long by 1.2-1.5 cm wide. They also vary a lot in shape and size. Plants that tiller produce smaller heads. The species varies a lot. There are 13 cultivated, 15 weed and 6 wild races of this grass. It has a cylindrical ear like a bullrush. The grains are small and round and have a shiny grey colour like pearls. There are thousands of cultivated varieties.

Possibly now Cenchrus americanus (L.) Morrone

HABITAT

A tropical plant. It suits regions with a short growing season. It grows in areas with less than 600 mm of rainfall. It is often in hot places. (It is replaced with sorghum between 600 and 1200 mm rainfall and then by finger millet or maize above 1200 mm rainfall.) It is important in the drier areas of India and Pakistan. It can grow in arid places.

PRODUCTION

Cultivation

Plants are grown from seed. It is usually sown directly into the field. The plant density is adjusted to suit rainfall and soil fertility. The spacing is 45 cm apart up to 200 cm apart. It is also intercropped with other crops such as cowpea, sorghum and peanut. Crops are normally weeded 2 or 3 times.

Harvesting and Seed Production

It takes from 75-180 days to maturity. The heads can be picked by hand or the plant removed. Some types need to be picked 2 or 3 times as heads mature.

NOTES

There are about 100 Pennisetum species. Chemical composition: Protein = 11.5%. Fat = 6.03%. Carbohydrate = 40.73%. Ash = 8.23%.

PICTURES



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)

REFERENCES

Abbiw, D.K., 1990, Useful Plants of Ghana. West African uses of wild and cultivated plants. Intermediate Technology Publications and the Royal Botanic Gardens, Kew. p 25 (As Pennisetum americanum)

Ambasta, S.P. (Ed.), 2000, The Useful Plants of India. CSIR India. p 439 (As Pennisetum typhoides and Setaria glauca)

Andrews, D.J. & Kumar, K.A., 2006. Pennisetum glaucum (L.) R.Br. [Internet] Record from Protabase. Brink, M. & Belay, G. (Editors). PROTA (Plant Resources of Tropical Africa), Wageningen, Netherlands. < http://database.prota.org/search.htm>. Accessed 20 October 200919 October 2009.

Ara, R. I. T., 2015, Leafy Vegetables in Bangladesh. Photon eBooks. p 161

Baa-Poku, F. & Asante, I. K., 2020, Use of Neglected and Underutilized Crop Species (NUCS) in some farming communities in the Upper Afram and Upper Dayi River Basins in Ghana. International Journal of Technology and Management Research 5 (2): 48-63

Baidu-Forson, J.J., et al ,2014,. Assessment of agrobiodiversity resources in the Borotse flood plain, Zambia. CGIAR Research Program on Aquatic Agricultural Systems. Penang, Malaysia. Working Paper: AAS-2014-12.

Burkill, H. M., 1985, The useful plants of west tropical Africa, Vol. 2. Kew.

Burkill, I.H., 1966, A Dictionary of the Economic Products of the Malay Peninsula. Ministry of Agriculture and Cooperatives, Kuala Lumpur, Malaysia. Vol 2 (I-Z) p 1717

Cherikoff V. & Isaacs, J., The Bush Food Handbook. How to gather, grow, process and cook Australian Wild Foods. Ti Tree Press, Australia p 196 (As Setaria glauca)

Cobley, L.S. (rev. Steele, W.M.) 2nd Ed., 1976, An Introduction to the Botany of Tropical Crops. Longmans. p 50

Dansi, A., et al, 2012, Diversity of the Neglected and Underutilized Crop Species of Importance in Benin. The Scientific World Journal. Volume 2012, Article ID 932947, 19 pages

Ess. Agrostogr. 51, 169, 178. 1812 (As Setaria glauca)

Facciola, S., 1998, Cornucopia 2: a Source Book of Edible Plants. Kampong Publications, p 178 (As Pennisetum americanum)

FAO, 1988, Traditional Food Plants, FAO Food and Nutrition Paper 42. FAO Rome p 394

FAO, 2024, Compendium of forgotten foods in Africa – A companion publication for Integrating Africa's forgotten foods for better nutrition. Accra. https://doi.org/10.4060/cc5044en p 63

Flora of Pakistan. www.eFloras.org

Fowler, D. G., 2007, Zambian Plants: Their Vernacular Names and Uses. Kew. p 71

Fox, F. W. & Young, M. E. N., 1982, Food from the Veld. Delta Books. p 296

GAMMIE, (As Setaria glauca)

Glew, R. H., et al, 1997, Amino Acid, Fatty Avid and Mineral Composition of 24 Indigenous Plants of Burkina Faso. Journal of Food Composition and Analysis 10, 205-217 (As Pennisetum americanum)

Grivetti, L. E., 1980, Agricultural development: present and potential role of edible wild plants. Part 2: Sub-Saharan Africa, Report to the Department of State Agency for International Development. p 30 (As Pennisetum gambiense) p 41 as Pennisetum tiphoideum;

Guite, C., 2016, Study of wild edible plants associated with the Paite Tribe of Manipur, India. International Journal of Current Research. Vol. 8, Issue 11, pp. 40927-40932

Harris, F. M. A. and Mohammed, S., 2003, Relying on Nature: Wild Foods in Northern Nigeria. Ambio Vol. 32 No. 1. p 25-30

Shaheen, N., et al, 2013, Food Composition Table for Bangladesh. University of Daka. p 3 (As Pennisetum typhoideum)

Hedrick, U.P., 1919, (Ed.), Sturtevant's edible plants of the world. p 470 (As Pennisetum typhoideum)

Heywood, V.H., Brummitt, R.K., Culham, A., and Seberg, O., 2007, Flowering Plant Families of the World. Royal Botanical Gardens, Kew. p 394

http://www.botanic-gardens-ljubljana.com/en/plants

Hussey, B.M.J., Keighery, G.J., Cousens, R.D., Dodd, J., Lloyd, S.G., 1997, Western Weeds. A guide to the weeds of Western Australia. Plant Protection Society of Western Australia. p 62

Jardin, C., 1970, List of Foods Used In Africa, FAO Nutrition Information Document Series No 2.p 7 (As Pennisetum typhoides and Pennisetum pycnostachyum))

Jardin, C., 1970, List of Foods Used In Africa, FAO Nutrition Information Document Series No 2.p 6 (As Pennisetum echinurus and Pennisetum malachochaete and Pennisetum maiwa and Pennisetum ancylochaete and Pennisetum cinereum and Pennisetum gambiense and Pennisetum leonis and Pennisetum nigritarum)

Khasbagan, Hu-Yin Huai, and Sheng-Ji pei, 2000, Wild Plants in the Diet of Athorchin Mongol Herdsmen in Inner Mongolia. Economic Botany 54(4): 528-536 (As Setaria glauca)

Kiple, K.F. & Ornelas, K.C., (eds), 2000, The Cambridge World History of Food. CUP p 114

Koni, J. M. & Bostein, K., 2008, Noms et usages des plantes utiles chez les Nsong, DR Congo. University of Gothenburg. Department of Oriental and African Languages. p 32

Lazarides, M. & Hince, B., 1993, Handbook of Economic Plants of Australia, CSIRO. p 185 (Also as Pennisetum americanum and Pennisetum typhoides and Setaria glauca)

Lykke, A. M., Mertz, O, and Ganaba, S., 2002, Food Consumption in Rural Burkina Faso, Ecology of Food and Nutrition, 41:119-152

Full reference list (45 more) at https://www.echocommunity.org/en/resources/3f351b83-76b6-4ab7-9153-3f265347edc0

PROVIDED BY **Food Plants International**

French, B.R. & Maynard, A.R. Food Plants International Database. Food Plants International

LICENCE CC BY-NC-SA 3.0

ONLINE FACT SHEET https://www.echocommunity.org/en/resources/3f351b83-76b6-4ab7-9153-3f265347edc0