PLANT FACT SHEET

Cyperus esculentus L.

GENUS *Cyperus* **FAMILY** Cyperaceae

COMMON NAMES Yellow Nutsedge, Tiger nut

EDIBLE PARTS AND USES

Edible parts: Tubers, Oil, Bulb, Vegetable, Root, Coffee

The tubers are eaten raw or baked. Sometimes they are ground into flour and boiled into a porridge. (If eaten raw they can carry contaminants that cause sickness)
The oil from the tubers can be used for cooking. It is edible.
The roasted tubers are used as a coffee substitute.
The tubers are used as a source of potash for softening and flavouring green leafy vegetables.

DESCRIPTION

An upright grass like sedge. It continues to grow from year to year. It is usually 30-90 cm high. The leaves are long and narrow. They are shiny. The leaves are arranged on 3 rows around an angular stem. The leaves often have a pointed tip. The leaves are light green. The flowers are yellow spikes. They are 1-1.5 cm long. There are many creeping underground stems (rhizomes). These spread out then end in a swelling. This tuber is round and 5-20 mm long. It has a thin brown skin. They are crisp and nutty.

HABITAT

A tropical plant. It grows throughout the tropics and warm temperate zone. It is common in seasonally dry grasslands. It does not tolerate shade. High temperatures (27-30°C) and low nitrogen favours tuber production. It grows best in sandy soils with pH 5.5-6.5. It can tolerate salty soils. Day lengths of 8-12 hours favours tuber production. Day lengths of over 16 hours favour vegetative growth. It can grow in arid places. In Yunnan.

PRODUCTION

Cultivation

Plants are grown from tubers. Tubers are soaked in water for 24-36 hours before being planted out. Sometimes tubers remain dormant but if they are chilled they grow better and produce more tubers. A spacing of 10-15 cm apart along rows 60 to 90 cm apart are suitable. Tubers should be placed 2.5-4 cm deep. The tubers are dug, washed and dried for 1-3 days before being sold or used.

Harvesting and Seed Production

Yields of 800-900 kg per hectare of tubers are achieved on sandy soils. Yields of 8000-14000 kg per hectare are possible. Tiger nuts take 90-120 days to reach maturity.

NOTES

There are 550 Cyperus species.

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 30

Abano, E. E. and Amoah, K. K. (2011), Effect of moisture content on the physical properties of tiger nut (Cyperus esculentus), Asian Journal of Agricultural Research 5, pp. 56-60

Adejuyitan, J. A., Otunola, E. T., Akande, E. A., Bolarinwa, I. F. and Oladokun, F. M., 2009, Some physicochemical properties of flour obtained from fermentation of tiger nut (Cyperus esculentus) sourced from a market in Ogbomoso, Nigeria, African Journal of Food Science, Vol 3(2) pp. 51-53.

Ambasta, S.P. (Ed.), 2000, The Useful Plants of India. CSIR India. p 157

Asfaw, Z., Conservation and use of traditional vegetables in Ethiopia. FAO

Asfaw, Z. and Tadesse, M., 2001, Prospects for Sustainable Use and Development of Wild Food Plants in Ethiopia. Economic Botany, Vol. 55, No. 1, pp. 47-62

Beckstrom-Sternberg, Stephen M., and James A. Duke. "The Foodplant Database." http://probe.nalusda.gov:8300/cgi-bin/browse/foodplantdb. (ACEDB version 4.0 - data version July 1994)

Belewu, M. A. and Abodunrin, O. A., 2008, Preparation of Kunnu from Unexploited Rich Food Source: Tiger Nut (Cyperus esculentus), Pakistan Journal of Nutrition 7: pp. 109-110.

Blamey, M and Grey-Wilson, C., 2005, Wild flowers of the Mediterranean. A & C Black London. p 529

Bodkin, F., 1991, Encyclopedia Botanica. Cornstalk publishing, p 316

Burkill, H. M., 1985, The useful plants of west tropical Africa, Vol. 1. Kew.

Cherikoff V. & Isaacs, J., The Bush Food Handbook. How to gather, grow, process and cook Australian Wild Foods. Ti Tree Press, Australia p 194

Cribb, A.B. & J.W., 1976, Wild Food in Australia, Fontana. p 157

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

Devi, O.S., P. Komor & D. Das, 2010, A checklist of traditional edible bio-resources from Ima markets of Imphal Valley, Manipur, India. Journal of Threatened Taxa 2(11): 1291-1296

Dogan, Y., et al, 2004, The Use of Wild Edible Plants in Western and Central Anatolia (Turkey). Economic Botany 58(4) pp. 684-690

Duarte, M. C., et al, 2022, Diversity of Useful Plants in Cabo Verde Islands: A Biogeographic and Conservation Perspective. Plants 2022, 11, 1313 p 5

Duke, J.A., 1992, Handbook of Edible Weeds. CRC Press. p 82

Ekman Herbarium records Haiti

Elias, T.S. & Dykeman P.A., 1990, Edible Wild Plants. A North American Field guide. Sterling, New York p 130

Ertug, F, Yenen Bitkiler. Resimli Türkiye Florası -I- Flora of Turkey - Ethnobotany supplement

Esperanca, M. J., 1988. Surviving in the wild. A glance at the wild plants and their uses. Vol. 1. p 227

Facciola, S., 1998, Cornucopia 2: a Source Book of Edible Plants. Kampong Publications, p 90

FAO, 1988, Traditional Food Plants, FAO Food and Nutrition Paper 42. FAO Rome p 239

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 86

Flora of Pakistan. www.eFloras.org

Flowerdew, B., 2000, Complete Fruit Book. Kyle Cathie Ltd., London. p 209

Fowler, D. G., 2007, Zambian Plants: Their Vernacular Names and Uses. Kew. p 66

Fox, F. W. & Young, M. E. N., 1982, Food from the Veld. Delta Books. p 179

Gallagher, D. E., 2010, Farming beyond the escarpment: Society, Environment, and Mobility in Precolonial Southeastern Burkina Faso. PhD University of Michigan.

Geraci, A., et al, 2018, The wild taxa utilized as vegetables in Sicily (Italy): a traditional component of the Mediterranean diet. Journal of Ethnobiology and Ethnomedicine (2018) 14:14

Gouldstone, S., 1983, Growing your own Food-bearing Plants in Australia. Macmillan p 182

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 24

Grubben, G. J. H. and Denton, O. A. (eds), 2004, Plant Resources of Tropical Africa 2. Vegetables. PROTA, Wageningen, Netherlands. p 561

Hahn, K., et al, 2018, The use of wild plants for food: a national scale analysis for Burkina Faso (West Africa). FVSS FoodPlants Supplement

Hanawa, Y., 2013, Wild edible plants used by Guiziga people of far north region of Cameroon. Int. J. Med. Arom. Plants. Vol 3 (2) : 136-143

Hedrick, U.P., 1919, (Ed.), Sturtevant's edible plants of the world. p 262

Heywood, V.H., Brummitt, R.K., Culham, A., and Seberg, O., 2007, Flowering Plant Families of the World. Royal Botanical Gardens, Kew. p 364

Hibbert, M., 2002, The Aussie Plant Finder 2002, Florilegium. p 79

Hu, Shiu-ying, 2005, Food Plants of China. The Chinese University Press. p 299

Jardin, C., 1970, List of Foods Used In Africa, FAO Nutrition Information Document Series No 2.p 74

Kay, D.E., 1973, Root Crops, Digest 2, Tropical Products Institute, London, p 50

Full reference list (58 more) at https://www.echocommunity.org/en/resources/b0a369e3-e046-433c-9c24-8b964acf0a17

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/b0a369e3-e046-433c-9c24-8b964acf0a17