PLANT FACT SHEET

Dactyloctenium aegyptium (L.) Willd.

GENUS *Dactyloctenium* **FAMILY** Poaceae

COMMON NAMES Comb fringe grass, Coast Button Grass

EDIBLE PARTS AND USES

Edible parts: Seeds, Cereal, Rhizome, Root

The seeds are husked then boiled into a porridge. They are also roasted in a hot pot to soften them. It is then pounded into flour and cooked into porridge.
The rhizome or runners are eaten raw.
It is used in kreb a grain mixture eaten in Chad and Sudan.

DESCRIPTION

An annual grass. The stems are slender. They can lie along the ground. These can form roots at the nodes. They can have runners and form mats. It is 15-60 cm high. The edges of the leaf sheaths have small hairs. The leaf blades are flat and 5-20 cm long by 0.2-0.6 cm wide. The surfaces are lumpy/hairy. It tapers to the tip. The flowers spread like fingers on a hand. There are 2-9 flower stalks. They are long and narrow. They often spread out horizontally. The spikes are on one side of the stalk. The tip is bare. The seed grains are about 1 mm across.

HABITAT

A tropical plant. It grows in disturbed weedy places especially on sandy soils in S China. It grows in tropical to warm temperate regions. It grows on clayey, sandy or black soil along the borders of ponds, swamps and bogs. In West Africa it grows from sea level up to 2,000 m altitude. It grows in alkaline and salty soils. It grows in areas with an annual rainfall between 100-1,580 mm. It can grow in arid places. In Sichuan and Yunnan.

PRODUCTION

Cultivation

Plants can be grown from seeds.

Harvesting and Seed Production

The seeds are collected during the dry season. The seeds can be stored for several months.

NOTES

There are 13 Dactyloctenium species. Chemical composition (Sudan sample): Protein (crude) = 13.1% (dry). Oil = 1.9% (dry). Fibre (crude) = 4.4% (dry). Ash (insoluble) = 8.3% (dry). Sulphur = .18% (dry). Potassium = 0.39% (dry). Manganese = 0.22% (dry). Calcium = 1.07% (dry). Na = 0.02% (dry). K = 0.30% (dry). Zinc = 69 mg/kg-1 Iron = 121 mg/kg-1 (dry). Mn = 425 kg/kg-1 (dry). Copper = 7 mg/kg-1 (dry). Aluminium = 172 mg/kg-1 (dry).

Carbohydrate (soluble): Starch = 46.9% (dry). Sucrose = 1.2% (dry). D-glucose = 0.2%(dry). D-fructose = 1.4% (dry). Amino acids (g [16g N]-1): Aspartic acid = 6.1g. Threonine = 3.7%. Serine = 4.8g. Glutamic acid = 27.6g. Proline = 7.1g. Glycine = 3.5g. Alanine = 7.5g. Valine = 5.8g. Cysteine = 1.5g. Methionine = 3.2g. Isoleucine = 4.8g. Leucine = 9.9g. Tyrosine = 3.5g. Phenylalanine = 6.8g. Histidine = 2.4g. Lysine = 2.0g. Arginine = 4.2g. Fatty acids (saturated): 14:0 = <0.1g/100g-1. 16:0 = 21.5. 18:0 = 5.2. 22:0 = 0.6. 24:0 = <0.1g/100g-1; (monounsaturated): 16:1 = 0.1. 18:1 = 42.0. 20:1 = 0.4; (polyunsaturated): 18:2 = 28.5. 18:3 = 1.5. (Chemical composition (after Paton & Dunlop (grams per 100g) (Anchu Manchu): Protein = 12.87g. Fat = 2.08g. Carbohydrate (soluble) = 64.03g. Fibre = 4.86g. Ash = 4.58g. Water = 11.58g. Calories = 335. (Mali): Protein = 8.41g. Fat = 1.45g. Carbohydrate (soluble) = 38.97g. Fibre = 36.95g. Water = 8.48g. Calories = 201.

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

ABDELMUTI,

Ambasta, S.P. (Ed.), 2000, The Useful Plants of India. CSIR India. p 160

BHANDARI,

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 1 (A-H) p 758

Busson, 1965,

Chen Shouliang, Lu Shenglian, Wu Zhenlan, et al Poaceae Tribe 19 Eragrostidae Flora of China

Cowie, I, 2006, A Survey of Flora and vegetation of the proposed Jaco-Tutuala-Lore National Park. Timor-Lests (East Timor) www.territorystories.nt/gov.au p 52

CRÉAC'H,

Cribb, A.B. & J.W., 1976, Wild Food in Australia, Fontana. p 103

Duarte, M. C., et al, 2022, Diversity of Useful Plants in Cabo Verde Islands: A Biogeographic and Conservation Perspective. Plants 2022, 11, 1313 p 6

Enum. pl. 2:1029. 1809 "aegyptiacum" (As (L.) Willd.)

Flora of Pakistan. www.eFloras.org

Fl. atlant. 1:85. 1798 (As Eleusine aegyptiaca)

Fowler, D. G., 2007, Zambian Plants: Their Vernacular Names and Uses. Kew. p 69

Franklin, J., Keppel, G., & Whistler, W., 2008, The vegetation and flora of Lakeba, Nayau and Aiwa Islands, Central Lau Group, Fiji. Micronesica 40(1/2): 169–225, 2008

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

Goode, P., 1989, Edible Plants of Uganda. FAO p 30

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 41

GUPTA & KANODIA,

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

Hedrick, U.P., 1919, (Ed.), Sturtevant's edible plants of the world. p 288 (As Eleusine aegyptiaca)

http://www.sabonet.org.za/downloads/20_namibian_grasses/d_namgrass_list1.pdf

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 50

Jackes, B. R., 2010, Plants of Magnetic Island. 3rd Edition. James Cook University, Australia. p 33

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

Kenneally, K.E., Edinger, D. C., and Willing T., 1996, Broome and Beyond, Plants and People of the Dampier Peninsula, Kimberley, Western Australia. Department of Conservation and Land Management. p 217

Lazarides, M. & Hince, B., 1993, Handbook of Economic Plants of Australia, CSIRO. p 76

Long, C., 2005, Swaziland's Flora - siSwati names and Uses http://www.sntc.org.sz/flora/

Maazou, R., et al, 2023, Diversity and socio-cultural importance of wild food herbs and cyanobacteria in the Lake Chad Basin (Niger). Ethnobotany Research and Applications 25:60

Masters, T., 2021, Traditional food plants of the upper Aswa River catchment of northern Uganda—a cultural crossroads. Journal of Ethnobiology and Ethnomedicine (2021) 17:24

Maundu, P. et al, 1999, Traditional Food Plants of Kenya. National Museum of Kenya. 288p

Menninger, E.A., 1977, Edible Nuts of the World. Horticultural Books. Florida p 147 (As Eleusine ægyptiaca)

Mutie, F. G., 2020, Conservation of Wild Food Plants and Their Potential for Combatting Food Insecurity in Kenya as Exemplified by the Drylands of Kitui County. Plants 2020, 9, 1017

Mutie, F. M., et al, 2023, Important Medicinal and Food Taxa (Orders and Families) in Kenya, Based on Three Quantitative Approaches. Plants 2023, 12, 1145

National Research Council, 1996, Lost crops of Africa. Volume 1 grains, p 258

Paczkowska, G. & Chapman, A.R., 2000, The Western Australian Flora. A Descriptive Catalogue. Western Australian Herbarium. p 100

PATON & DUNLOP,

Peters, C. R., O'Brien, E. M., and Drummond, R.B., 1992, Edible Wild plants of Sub-saharan Africa. Kew. p 20

Phillips, D.C., 1988, Wild Flowers of Bahrain. A Field Guide to Herbs, Shrubs, and Trees. Privately published. p 113

Plants of Haiti Smithsonian Institute http://botany.si.edu/antilles/West Indies

Rivera, D. et al, 2006, Gathered Mediterranean Food Plants - Ethnobotanical Investigations and Historical Development, in Heinrich M, Müller WE, Galli C (eds): Local Mediterranean Food Plants and Nutraceuticals. Forum Nutr. Basel, Karger, 2006, vol 59, pp 18–74

Roger, D. D., et al, 2012, Nutritional properties of "Bush Meals" from North Cameroon's Biodiversity. Advances in Applied Science Research, 2012, 3 (3):1482-1493

Royal Botanic Gardens, Kew (1999). Survey of Economic Plants for Arid and Semi-Arid Lands (SEPASAL) database. Published on the Internet; http://www.rbgkew.org.uk/ceb/sepasal/internet [Accessed 8th May 2011]

Ruffo, C. K., Birnie, A. & Tengnas, B., 2002, Edible Wild Plants of Tanzania. RELMA p 252

Full reference list (16 more) at https://www.echocommunity.org/en/resources/2e1196d4-601b-4f8b-86a6-11ec3ce74447

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/2e1196d4-601b-4f8b-86a6-11ec3ce74447