PLANT FACT SHEET

Sechium edule (Jacquin) Swartz

GENUS *Sechium* **FAMILY** Cucurbitaceae

COMMON NAMES Choko, Chayote

EDIBLE PARTS AND USES

Edible parts: Fruit, Leaves, Seeds, Roots, Vegetable

The fruit are edible cooked. They can be pickled, baked, steamed, or made into fritters and puddings.
The young leaf tips are eaten.
The seeds can be eaten cooked. They are often deep fried.
The fleshy root can be eaten cooked. They can be boiled, baked or fried. Starch can be extracted from it.

DESCRIPTION

A herb. It is a pumpkin family plant. It is a vigorously growing climber that can last for several years. The vine can be up to 15 m long. It has strong tendrils which can attach to fences and trees so that the plant can climb well. The choko leaves are about 15-20 cm across and have a rough feel. The fleshy fruits contain only one large seed. The stems have furrows along them. The choko fruit is produced in the angle where the leaf joins the vines. Fruit can be up to 20 cm long and they are rough or irregular shaped on the outside. There are white and green fruited varieties. Some fruit have sharp spikes on the skin. Inside the fruit there is one seed about 4 cm long. The flowers are separate. Male flowers are in clusters and female flowers are on their own. A choko plant produces a large thickened root tuber and the plant can re-grow from this tuber and go on growing year after year. Fruit can be green or white and can have soft spines.
Possibly now Sicyos edulis

HABITAT

A tropical and subtropical plant. Choko requires relative humidity of 80-85%, annual rainfall of at least 1500-2000 mm and average temperatures of 20-25°C with limits of 12-28°C. In equatorial tropical regions chokos will grow from sea level to about 2200 m altitude, but do best between 350 and 1000 m altitude. In Nepal they grow to about 2000 m altitude. In the lowlands it is best in shade. Chokos need a reasonably well drained soil. It can grow in arid places. It suits hardiness zones 9-12.

PRODUCTION

Cultivation

The entire fruit is planted as the seed cannot withstand drying out. It is planted flat and thinly covered with soil. Often chokos start to develop shoots and roots while they are still attached to the original plant. These eventually fall off and continue growing if they fall on soft moist dirt. A spacing 2 m apart along a fence is

suitable. Trellis support is required. A well drained fertile soil is needed. Cuttings can be used for planting. Plants do not breed true and a large variability of fruit types can occur.

Harvesting and Seed Production

Fruit can be picked starting 3-5 months after planting and continued for many months. The fruit can be stored for several weeks. Tips can be picked regularly. Annual yields of 75-300 fruit per plant are possible. Fruit can weigh 400 to 500 grams. Tubers of 5 kg weight have been recorded. These are normally produced during the second year of growth and after a time of arrested development such as a dry season.

NOTES

There are 10 Sechium species.
It has some anticancer properties.

Possibly now Sicyos edulis Jacq.

PICTURES



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



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REFERENCES

Abbiw, D.K., 1990, Useful Plants of Ghana. West Africahnology Publications and the Royal Botanic Gardens, Kew. p 39

Ambasta, S.P. (Ed.), 2000, The Useful Plants of India. CSIR India. p 563

Anderson, E. F., 1993, Plants and people of the Golden Triangle. Dioscorides Press. p 220

Arora, R. K., 2014, Diversity in Underutilized Plant Species - An Asia-Pacific Perspective. Bioversity International. p 50, 129

Astrada, E., et al, 2007, Ethnobotany in the Cumbres de Monterrey National Park, Nuevo Leon, Mexico. Journal of Ethnobiology and Ethnomedicine 3:8

Bianchini, F., Corbetta, F., and Pistoia, M., 1975, Fruits of the Earth. Cassell. p 106

Bodner, C. C. and Gereau, R. E., 1988, A Contribution to Bontoc Ethnobotany. Economic Botany, 43(2): 307-369

Burkill, H. M., 1985, The useful plants of west tropical Africa, Vol. 1. 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 2023

Call, C. A., et al, 2004, Participatory Rural Appraisal in the Upland Ecosystem of Mt Malindang, Misamis Occidental, Philippines. Biodiversity Research Programme for Development in Mindanao. p 53

Cheifetz, A., (ed), 1999, 500 popular vegetables, herbs, fruits and nuts for Australian Gardeners. Random House p 95

Chin, H. F., 1999, Malaysian Vegetables in Colour. Tropical Press. p 70

Chizmar Fernandez, C., et al, 2009, Plantas comestibles de Centroamerica. Instituto de Biodiversidad, Costa Rica. p 161

Coe, F. G. & Anderson, G. J., 1997, Ethnobotany of the Miskitu of Eastern Nicaragua. Journal of Ethnobiology 17(2): 171-214

Cosiaux, A., 2014, Local uses of tree species and contribution of mixed tree gardens in Saleman. Village near Manusela National Park, Seram Island, Maluku (Indonesia) CIFOR working paper 137. p 41

Cruz, I. M., et al, 2015, Edible fruits and seeds in the State of Mexico. Revista Mexicana de Ciencias Agricolas. Vol. 6. Num. 2 pp 331-346

Cundall, P., (ed.), 2004, Gardening Australia: flora: the gardener's bible. ABC Books. p 1328

Dahlgren, B. E. & Standley, P. C., 1944, Edible and Poisonous plants of the Caribbean Region. Dept. of the Navy. p 66

D'Ambrosio, U., & Puri, R. K., 2016, Foodways in transition: food plants, diet and local perceptions of change in a Costa Rican Ngäbe community. Journal of Ethnobiology and Ethnomedicine (2016) 12:3 p 24

Diaz-Jose, J., et al, 2019, Traditional Knowledge of Edible Wild Plants Used by Indigenous Communities in Zongolica, Mexico. Ecology of Food and Nutrition.

Ekman Herbarium records Haiti

Engels, J.M.M., 2004. Sechium edule (Jacq.) Sw. [Internet] Record from Protabase. Grubben, G.J.H. & Denton, O.A. (Editors). PROTA (Plant Resources of Tropical Africa), Wageningen, Netherlands. < http://database.prota.org/search.htm>. Accessed 22 October 2009

Esquinas-Alcazar, et al, 1983, Genetic Resources of Cucurbitaceae. International Board of Plant Genetic Resources.

Facciola, S., 1998, Cornucopia 2: a Source Book of Edible Plants. Kampong Publications, p 88

FAO, 1988, Traditional Food Plants, FAO Food and Nutrition Paper 42. FAO Rome p 433

FAO, 1993, Valor Nutritivo Y Usis en Alimantacion humana de Algunis Cultivos Autoctonos Subexplotados de Mesoamerica. FAO, Santiago, Chile. p 82

Feld, D., 2021, A Systematic Checklist of Food Plants, including Herbs and Spices, and with an Index. p 10

Foo, J.T.S.(ed), 1996, A Guide to Common Vegetables. Singapore Science Foundation. p 62

Fl. Ind. occid. 2:1150. 1800

French, B.R., 1986, Food Plants of Papua New Guinea, A Compendium. Asia Pacific Science Foundation p 100

French, B.R., 2010, Food Plants of Solomon Islands. A Compendium. Food Plants International Inc. p 131

Goode, P., 1989, Edible Plants of Uganda. FAO p 26

Gouldstone, S., 1983, Growing your own Food-bearing Plants in Australia. Macmillan p 166

Grubben, G. J. H. and Denton, O. A. (eds), 2004, Plant Resources of Tropical Africa 2. Vegetables. PROTA, Wageningen, Netherlands. p 456

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

Hadfield, J., 2001, The A-Z of Vegetable Gardening in South Africa. Struik p 104

Harkonen, M. & Vainio-Mattila, K., 1998, Some examples of Natural Products in the Eastern Arc Mountains. Journal of East African Natural History 87:265-278

Hedrick, U.P., 1919, (Ed.), Sturtevant's edible plants of the world. p 601

Hermandez Bermejo, J.E., and Leon, J. (Eds.), 1994, Neglected Crops. 1492 from a different perspective. FAO Plant Production and Protection Series No 26. FAO, Rome. p18, 79

Hibbert, M., 2002, The Aussie Plant Finder 2002, Florilegium. p 289

Hu, Shiu-ying, 2005, Food Plants of China. The Chinese University Press. p 709

Jardin, C., 1970, List of Foods Used In Africa, FAO Nutrition Information Document Series No 2.p 100

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