POPULARLY known as Queensland nut, Macadamia integrifolia is a native of Australia. It grows naturally in the coastal district of South Queensland and Northern New-South Wales. There are seven Australian species of Macadamia and only two of them namely Macadamia integrifolia and Macadamia tetraphylla are considered edible and commercial species.

Macadamia is one of the most recently domesticated crops and is the only plant food native to Australia that is produced and exported in any significant quantity. It was introduced into Thailand and India since the past 3-4 decades.

The Macadamia trees are large and spreading, attaining a height of 18 m and a spread of 15 m. The bark is rough (but not furrowed), brown and dark red when cut. Branchlets are cylindrical and clothed with small raised lenticels. The primary function of its roots appears to be increasing the surface area of the root system for maximum absorption.

Growth in the matured tree occurs in two flushes, a mid summer and spring flush. The latter is associated with or follows flowering. In young trees four flushes may occur.

The leaves are 10 to 30 cm long and adult leaves are entire few spines at the margin. New growth of leaves is pale green. It blossoms in spring, March to April and flowers are creamy white. Flowers are borne on long narrow raceme arising from the axils of leaves. Mature fruit is a follicle, green, globose and slightly oblique, 25 mm or more in diameter. The nut is a true seed with a thick hard coat. It takes about 215-230 days for nut development and maturity.

Macadamias are highly nutritious nuts. They have the highest amount of beneficial mono-saturated fats of any nut. The dried nuts contain approximately 73% Oil, 9% Sugars, 9% Protein, 2% dietary fibre and no starch.

They are also a source of calcium, phosphorus, potassium, sodium, selenium, iron, and the vitamins thiamine (B1) riboflavin (B2) and niacin (B6). It is widely recognized for its richness in oil than most edible nuts and for its appetizing and sweet flavoring kernels.

Macadamia grows on a wide range of soil types from open sands and lava rock soils to heavy clay soils but it is affected by water logging—restricted drainage impedes root development. Soils of high fertility and well drained to at least 0.5 m are preferred, greater response has been recorded with organic matter additions in sandy soils, hence soil organic levels are important.

The plant is propagated through seeds but vegetative propagation, both grafting and budding are used. Grafting is recommended in spring or autumn, side grafting or simple whip is used with success. Air layering of one-year-old branches during monsoon (July-

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The macadamia maintains its status as a high quality nut, even at the high prices demanded, twice that of cashew, and markets are still expanding. Market exists for various form of combined confectionery, such as chocolate and candy, and also in the ice cream and prepared dessert trade. Macadamia oil is prized for containing approximately 22% of the Omega-7 palmitoleic acid, which makes it a botanical alternative to mink oil, which contains approximately 17%. The oil is also considered as a desirable ingredient in cosmetics, especially skincare for its relatively high content of palmitoleic acid and high oxidative stability. Scientists have established that consumption of macadamia oil as cooking oil reduces the risk of cardiovascular diseases.

Macadamia also ranks high among ornamental trees for its handsome symmetrical appearance, dark glossy foliage and drooping racemes of pale cream or pinkish flowers, very attractive to bees and finds place in avenues, street planting and landscaping work.

In view of the immense potential of Macadamia as a nutritious and oil-bearing edible nut, seeds of two varieties of *Macadamia integrifolia* i.e., Renown (EC 135016) and Nutty glen (EC 135017) obtained from Australia were introduced to Orissa in July 1980 by the State Soil Conservation Department. Its performance over this period appears to be promising both under coastal plain (Soil Conservation Demonstration Centre, Biswaahahkani, Cuttack) and Eastern ghat (Soil Conservation Demonstration Centre, Koraput). The Macadamia plants have come to fruiting stage at both the centers even with least maintenance and care. However, its vegetative and reproductive performance at the Koraput Centre was observed to be excellent.

The Macadamia in its homeland occurs largely on alluvial situation bordering rivers and creeks where the fertile and humus rich soil and subtropical climate provides very favorable conditions to its growth. At the Koraput centre with warm humid climate the flowering and fruiting of macadamia is quite good and self-natural regeneration of fallen seeds under mother tree have been observed since 1998. This indicates its promising adaptability to hilly tracts of Orissa with success.

Moreover, work at the Indian Institute of Horticultural Research, Bengaluru indicates that Macadamia is very similar in its requirement of soil and climate to guava and could be grown where the guava thrives with ease. Macadamia may be taken up for international trade to accrue good foreign exchange.

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