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Popular Article

Indian Origin fruits for nutritional security

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India, the rich biodiversity resource country has as many as 139 species of underutilized fruit crops belonging to 42 families 94 Genera . World fruit production is estimated at 676.9 million tonnes, Vegetable production has been estimated at 879.2 million tonnes.. India is second largest producer of fruits and vegetables in the world. Indian origin fruit crops are being recognized as crops of the future, because of their multiple benefits such as nutraceutical values, medicinal properties, climate resilience etc.

Aonla /amla (*Emblica officinalis*)

Aonla is a native deciduous fruiting plant grown in many states of India. The tree is hardy, prolific bearer and a suitable choice for arid regions of the country. Amla is the most concentrated form of vitamin C (500- 600mg/100g) found in the plant kingdom, and when the whole fruit has been found to have great antioxidant properties. It also contains proteins and minerals like calcium, and hypotensive. It is used internally to treat asthma, coughs, bronchitis, oedema, hypertension and diabetes. The bark is anthelmintic and purgative and can be used to expel tape worms. Popular varieties are „Black Persian“, „Kaestar“, „Riviera“, „Shangri-La, Banarasi, NA 7, Krishna, Kanchan, Chakaiya, BSR 1.

Jackfruit (*Artocarpus heterophyllus*)

It belongs to the family Moraceae and presently cultivated throughout the tropical low land areas. Trees are large with oblong, oval or elliptical glossy, leathery and dark green leaves. Juvenile leaves are lobed. These evergreen trees attain a height upto 15m. Fruits are rich in carbohydrate, protein, vitamin C and minerals like Fe, P, K and Ca. Immature fruits are used



as vegetables. Unripe fruits are made into pickle and slices. Ripe fruits are used for preparation of dried products, canned products, pulp, beverage, jelly, and nectar. The rind may be used for making jelly, the skin of ripe fruits and leaves are used as cattle feed. The seeds can also be boiled or roasted and eaten like nuts. The ripe bulbs are fermented and the distilled, produce potent liquor. Starchy flour is made from seeds. Seeds are popular ingredients in many cooked preparations. The roots and leaves possess medicinal properties. Hot water extracts of leaves are given to diabetic patients. The fruit parts contain pectin, the extracted pectin can be used for food industry. Popular varieties are „Bhadaiyan“, „Bhusila“, „Champaka“, „Gulabi“, „Handia“ „Hazari“, „Khaja“, „Rudrakshi“, „Safeda“. The hybrids are „Burliar-1“, „PLR-1“, „PPI-1“

Phalsa (*Grewia asiatica*)

It is a subtropical plant, can be grown upto an elevation of 900m above sea level. Plants are deciduous, hardy, tolerant to higher temperature upto 44°C and freezing temperature for a few days. High temperature helps in ripening of fruits. Fruits are rich in vitamins A, C and minerals like Fe and P. Fruits contain 55% juice with 11-12% TSS and 3% acidity. Flowers contain grewinol. The seeds contain a bright yellow oil having 8.3% palmitic acid, 11.0% stearic acid, 13.4 % oleic acid, 64.5% linoleic acid. Fruits are eaten fresh or made into syrup and commercially used in the preparation of soft drinks. Leaves are used as fodder. The bark is used as a soap substitute in Burma. The fruit is astringent and stomachic. Unripe fruits are administered against in respiratory, cardiac, blood disorders and fevers. The bark infusion is used as a demulcent, febrifuge and treatment for diarrhoea. The wood is used for golf shaft. The root is effective in curing rheumatism

Wood apple/kaith (*Feronia limonia*)

The tree can be grown upto an altitude of 1000m from sea level. It is said to require a monsoon climate with a distinct dry season. Fruits are rich in in pectin, unsaturated fatty acids. Unripe fruits contain 0.015% stigmasterol. The fruit pulp contains 18% carbohydrate, 7% protein, 4% fat, 5% fibre and 2% mineral matter as well as vitamin C, niacin, thiamin, riboflavin etc. Leaves contain stigmasterol and bergaten. The bark contains 0.016% marmesin. Root bark contains auraptin, bergapten, isopimpinellin and other coumarins. The scooped pulp which is sticky is eaten raw with or without sugar, or is blended with coconut milk and palm sugar syrup and drunk as a beverage or frozen as an ice cream. It is also used in chutneys and for making jelly and jam. Nectar can be made by diluting the pulp with water. The rind of fruits can be curved and used as a utensil such as a bowl or ashtray. The fruit is used as a liver and cardiac tonic and when ripe, as an astringent to halt diarrhoea and dysentery and as an effective



treatment for hiccough, sore throat and diseases of gum. Juice of young leaves is mixed with milk and sugar candy and prescribed as a remedy for biliousness and intestinal troubles of children. Leaves, barks, roots and fruit pulp are all used against snakebite.

Kokam (*Garcinia indica*)

It is native to East Indies. Cultivated in South India and Maharashtra. Trees are large, borne with small apple sized fruits. Fruits are acidic with purple sour taste and made into a vinegar. Seed oil is used to adulterate butter. Fruits are edible and useful in cooling effect during summer. It reduces indigestion, acidity, flatulence, constipation and diarrhoea. This is an important immunity booster because it is rich in anti-oxidants and it possesses anti-viral, anti-bacterial and antihelminthic properties.

Karonda

Carissa carandas is a species of flowering shrub in the family Apocynaceae Karonda is rich in iron, vitamin C, vitamins A calcium and phosphorus. Its fruit is used in the ancient Indian herbal system of medicine, Ayurvedic, to treat acidity, indigestion, fresh and infected wounds, skin diseases, urinary disorders and diabetic ulcer, as well as biliousness, stomach pain, constipation, anemia, skin conditions, anorexia and insanity, Leaf decoction is used to treat fever, diarrhea, and earache, The roots serve as a stomachic, an anthelmintic medicine for itches and also as insect repellents. In India, the mature fruit is harvested for Indian pickles. It contains pectin and accordingly is a useful ingredient in chutney. Ripe fruits exude a white latex when severed from the branch. The biggest use of this fruit is as a faux cherry in cakes, puddings and other preparations. It is easily available in the market in bottled form as pitted cherries after processing it like traditional candied murabba

Bael:

Aegle marmelos is a deciduous shrub or small to medium-sized tree Rich in vitamin C, the fruits can be eaten either fresh from trees or after being dried and produced into candy, toffee, pulp powder or nectar.

Indian Originated Fruits



Jamun- *Syzygium cumini* (L.)

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Bael-*Aegle marmelos* (L.)



**Wood Apple- *Limonia acidissima*
Groff**





Indian Ber- Ziziphus Karonda- *Carrisa carandas*

Kokam *Garcinia indica*



PLR 1



PPI 1



PLR (J) 2

Jack- Artocarpus heterophyllus



BSR 1



Chakalya



NA 7

Aonla /amla (*Emblica officinalis*)

