JUST AGRICULTURE
multidisciplinary e-Newsletter

LASURA: Potential and beneficial underexploited vegetable

Nivedita Gupta*[1] and Sonia Sood[2]
[1]Departmnet of Agriculture, Baba Farid College, Bathinda
Department of Vegetable Science and Floriculture
[2]College of Agriculture, C.S.K. H.P.K.V., Palampur, Himachal Pradesh, India
Corresponding author: guptanavi38@gmail.com
ARTICLE ID: 031

INTRODUCTION:

Indian cherry also known as Lasura or Gonda, is an underutilized vegetable that grows throughout India in arid and semi-arid regions. Indian cherry grows in the sub-Himalayan tract and outer ranges, ascending up to 1500 m above mean sea level. The plant is a medium-sized deciduous tree and can tolerate drought and moderate shade. Yet, it is not grown in orchards and grows wildly in wastelands along farm boundaries or in avenues. Green mature fruits are utilized for making good quality pickle and vegetable, while nutritive ripe fruits have mucilage and may be used for fresh consumption and in liquor. The fruits are used as medicine, astringent, anthelmintic, diuretic, demulcent, and expectorant. They are also used in the diseases of the chest and urinary passage. Hence, its cultivation may be helpful to solve continuing food scarcity and malnutrition.

Cordia myxa (*Boraginaceae*), commonly known as Lasura or Indian cherry is an underutilized, drought-tolerant medium-sized deciduous fruit-tree, spread over to arid and semi-arid regions of the North India, ascending up to 1500 m. It has originated in India, besides also found in Myanmar, Egypt, Sri Lanka, and tropical Australia. Its fruits are globose, yellowish-brown, pink or black, and pulpy. Fresh fruits are highly nutritive and contain carbohydrates (12.2g), protein (2.06g), fat (1.0g), minerals (2.6g), magnesium (67mg), calcium (62mg), phosphorus (91mg), iron (5mg), potassium (1.07mg) and pectin (4.5g) per 100 g of edible portion. Its tree of about 15 meters in height grows wild in the northern part of peninsular Malaysia but is commercially cultivated in the South. The genus *Cordia* has about 300 identified species and worldwide distribution, is one of the largest genera in the family *Boraginaceae*.

JUST AGRICULTURE
multidisciplinary e-Newsletter

VARIETIES

There is no well-defined cultivar of Lasura. However, great variation exists in the size of fruits and their pulp content. Large fruited varieties in Gujarat are recognized as **Paras Gonda**. In general, there are two types of plants viz., large-fruited (average fruit weight not less than 8g) and small-fruited (average fruit weight of 3g). Large fruited cultivars have comparatively more pulp and are suitable for consumption.

BOTANICAL DESCRIPTION

Cordia myxa is a medium sized deciduous tree with a short bole, short crooked trunk, and spreading crown. The stem bark is greyish brown smooth or longitudinally wrinkled. Leaves 7-15 cm long having 2.5-5 cm peduncles, simple, entire, and slightly dentate, elliptical-lanceolate to broad ovate with a round and cordate base. Flowers are short-stalked, bisexual and white in colour, appear in loose corymbose cymes. Flowering takes place from March to May with the new leaves. The inflorescence, mostly terminal, is, white in color. Individual florets are nearly 5 mm in diameter. The fruit is a yellow or pinkish-yellow shining globose or ovoid 1.2-2.5 cm long drupe seated in a saucer-like enlarged calyx having a characteristic odour and sweet taste. The hard stone is 1-4 seeded.

USES

The seed kernel has medicinal properties. It is often cultivated for its fruits throughout the range of its natural distribution. It is popularly used for the treatment of chest and urinary infections and as an anthelminthic, diuretic, astringent, demulcent, and expectorant agent. Immature berries are used as a vegetable and to make pickles after removing the stone and sticky white pulp. The sticky pulp is used to make glue. The immature fruits laden shoots are used as vegetable fodder.

In addition to fruit, lasura bark and roots are also very effective as a local remedy against cough, cold, and various other ailments connected with indigestion and throat problems. It is generally used for making ornamental furniture, house posts, beams, scantlings, planks, dugout canoes, boats, tea boxes, cart shafts, axles, yokes, well-curbs, agricultural implements, combs, gun stocks, naves, spokes, etc. It is also used for making quality toys, bowls, and wooden utensils.

JUST AGRICULTURE
multidisciplinary e-Newsletter

CULTIVATION:

Climate

It thrives well under tropics as well as subtropics up to an elevation of 1500 m. It grows well in arid as well as semi-arid regions and does not require much care. It remains dormant during the winter season. High temperature coupled with good sunshine and dry winds is most congenial for its fruiting. It tolerates annual precipitation of 760-2250 mm and optimum temperature of 22-25ºC. It has a great capacity to tolerate drought once established.

Soil

It can be grown in almost all kind of soil ranging from sandy to clayey, medium soils like loamy with plenty of organic matter is preferred. The well-drained deep fertile soil of good water holding capacity is the most suitable. The optimum soil pH for its growth and development is 5.5-6.4. It is highly salt tolerant.

Propagation

It can be propagated through budding by using *Cordia gharaf* rootstocks in the middle of August with 95.59% success. The vegetatively propagated plants start bearing in the fourth year after planting. It is also propagated through seeds obtained from the ripe lasura fruits picked during May-June.

The sowing is generally done in polythene bags during June-July at a depth of 2 cm in lines spaced about 20 cm apart. A seed rate of 80 g/sq. m of nursery area is preferred. Germination starts in about 3-4 weeks and completed in 6 weeks. At lower altitudes, seedlings can be transplanted after 3-4 months, but at higher altitudes, 9-12 months are needed.

Manures And Fertilizers

In order to get good vegetative growth and fruiting of trees, organic manure should be applied during land preparation. About 5.0-7.0 kg well rotten farmyard manure along with 250:30:150g NPK per tree is necessary for better growth and development and should be applied in December-January. The full dose of P and K should be applied as basal dose and N should be applied in two split doses; one at the time of planting and the remaining half after 30-35 days of planting.

JUST AGRICULTURE
multidisciplinary e-Newsletter

Irrigation

Normally first irrigation is given immediately after planting if there is moisture stress in soil. Subsequently, the crop should be irrigated at an interval of 10-15 days. No irrigation is required once the plants are established. Provision of proper drainage should be made to avoid water stagnation. Frequent irrigations promote the quick growth of plants. In tropical arid regions, the flowering can be monitored by application of water and thus fruiting can be regulated.

INTERCULTURAL OPERATIONS AND WEED CONTROL:

Frequent hand weeding during the initial stages of plant growth and root pruning is necessary. Generally, 2-3 shallow hoeing are sufficient for better plant growth. Pre-plant application of Fluchloralin @ 2kg/ha and Bromacil @ 1.5-2.0 kg/ha is found effective to check the weeds and resulted in better yield. Depending upon weed intensity three to four weeding at 40, 80, 110, and 150 days after planting are sufficient.

HARVESTING, YIELD AND STORAGE:

The fruits are ready for harvest by the middle of May when the fruit color is still green and the pulp is properly formed. It is always better to pluck the fruits along with fruit stalk so that fruits remain fresh and marketable for a longer period.

A grown-up tree can yield about 100 to 125 kg fruits/year. Although no post-harvest standards are available for distant transportation, it is always better to pack them in a bamboo basket. The fruits cannot be stored for a longer duration at room temperature as these turn yellow becoming unsuitable for cooking and pickle purpose. Ripe fruits are to be harvested for processing (for liquor), this can be done on the change of color to pink.

Unripe lasura fruits can be kept in a small plastic bag inside the refrigerator for about a month. Ripe fruits have higher perishability and keep only for one week in similar conditions. To avoid bruising and splitting of fruits, spread ripe fruits in a shallow container otherwise it can cause a slimy mess.

JUST AGRICULTURE
multidisciplinary e-Newsletter

INSECT-PESTS AND DISEASES:

As planned orchard of lasura are rare, therefore no serious efforts have been made to record the diseases and insect problems. However, it is an excellent host for lac insects, which may cause economic loss to crop. Secondly, leaf gall midge causes serious damage to leaves, which can be seen in the form of pustules on the undersurface of leaves leading to severe defoliation and reduction in photosynthetic activities. This can be controlled by a spray of 0.05% monocrotophos or any other systemic insecticide.

Barioscapus cordiae weevil adults also attack the fruits and feed on the green pedicel, sepals and pollen grains inside the buds. Spraying of Chlorpyriphos 20 EC @ 2.5 ml per litre of water or quinalphos @ 0.05% can control this

pest effectively.

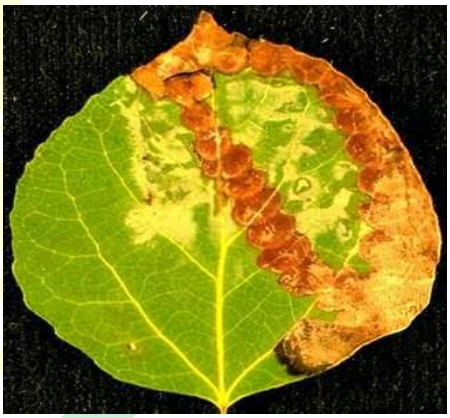
Brown leaf spot caused by *Drechslera australiensis* sometimes become serious. Leaves are often seen infected by fungal diseases. For precautionary measure, trees should be sprayed with a copper fungicide once before initiation of new growth and 1-2 times during active growth period and fruit development. Leaves are often seen infected by fungal diseases.

INFLORESCENCE AND HARVESTED FRUIT ALONGWITH FRUIT STALK

JUST AGRICULTURE
multidisciplinary e-Newsletter

PRODUCTS MADE FROM INDIAN CHERRY

CORDIA WEEVIL



BROWN LEAF SPOT ON LASURA LEAF