

On the demand of our esteemed readers we have introduced this column to disseminate information on the introduction of new plants, under-utilized plants and cultivation practices of plants suitable for wastelands and other regions.

The information shall be contributed articles by authors or compiled by editors. Contribution of articles by plant growers with cultural practices, seed source and economics are solicited.

Cultivation of Henna in Rajasthan

Rajendra M. Lodha

Abhisek (India)

Manufacturer & Exporters of Henna Products

218, Vanijya Bhavan, near Kankaria Yard, Ahmedabad-380 022

Henna, *Lawsonia inermis* Linn. (Hindi-*Mehndi*) is a shrub or small tree, found wild or grown commonly as hedge. The paste of fresh leaves or powder of dried leaves are used to dye the hair and for colouring the finger nails, palms and sole of feet. Henna leaves are also used for medicinal purposes. It is used for arresting secretion or bleeding, and preventing skin diseases. The seeds are powdered, mixed with *ghee*, and made into small pellets to be given with water to cure dysentery. The decoction, in controlled doses, from the bark of the plant prevents jaundice and enlargement of the liver. Henna leaves are added to boiling oil. The filtered oil when lukewarm can be applied to the hair and massaged into the scalp for a luxuriant growth of hair. Henna mixed with lemon juice and yogurt can help prevent and control dandruff. Weekly

treatment with henna is recommended. Leaves ground with water and applied on the affected area cures prickly heat. Headaches owing to sun-stroke can be relieved by a plaster made of henna flowers in vinegar, and applied over the forehead. Henna leaves cure skin problems like boils, burns and also given in rheumatic conditions, inflammatory swellings, bruises and



Henna plant and fruits

leprosy. Gargle with a decoction of leaves can cure sore throat.

Propagation

Henna is found in tropical and subtropical regions. As a commercial dye crop, it is cultivated mainly in Punjab, Haryana, west Rajasthan, Madhya Pradesh and Gujarat. It is propagated by seeds or stem-cuttings. The plants grow on any type of soil, from loam to clay loam. It tolerates a little alkalinity in the soil.

Before sowing (8-10 days) seeds are soaked in water with frequent change of water for best sprouting and then in the month of March the germinated seeds and fine sand in equal quantity are mixed together and spread sown in already prepared nursery soil. About 7- 10 kg seeds are required to develop seedlings to cover one hectare land.

The sown seeds are then covered by fine manure. In beginning irrigation is done daily, later on as and when required.

Transplanting/Manure/Irrigation

In 3-4 months i. e., during July-August seedlings attain a

height of about 30-40 cm, at this stage seedlings are transplanted in fields at 30 × 45 cm distance in row. For good growth 40 kg/ha nitrogen is to be applied at the time of transplanting. Henna is a rain-fed crop hence, frequent irrigation should not be done. The field is occasionally hoed and weeded.

Once henna is planted it continue to flourish and yield successive crops of leaves for about 50-60 years during October-November each year.

Harvesting

After 3 years of planting, plants become ready for harvesting its leaves. Harvesting is done twice a year. Main crop is harvested in the month of October-November and second in April- May. The branches bearing leaves are cut close to the ground and dried in shade. Dried leaves are separated by beating and processed for making powder.

Indian Standard — Specification for henna powder

1. Henna powder quality is determined by its colour, purity, its dyeing property and fineness. The principal colouring matter is lawsone.
2. At times henna powder may be adulterated with sand, stems, fruits of henna plant, husk of paddy, leaves and twigs of other shrubs, etc. Certain requirements and tests, as in case of powdered spices have been included to restrict malpractices.

The materials shall also comply with the requirements given in following tables

Product Specification

Indian Name	Mehndi or Mehandi
Arabic Name	Henna
Latin Name	<i>Lawsonia inermis</i>
ITC/HS Code (Henna Leaves)	1404.10.12
ITC/HS Code (Henna Powder)	1404.10.13
Test Method	IS 7159:1984
Country of Origin	India

Yield

An average yield of about 10-15 qt/ha is obtained depending upon rain availability. Deep green leaves impart better colour.

In Pali district of Rajasthan state henna is cultivated for the last 100-150 years. Earlier it was cultivated only on boundaries and about 500-700 kg henna leaves were collected annually for domestic use. Subsequently due to increasing demand commercial cultivation of henna was started on wastelands of Rajasthan especially in Sojat region. In this area henna is cultivated in about 20 thousand acre land.

For improving yield and quality of henna good quality seeds are to be prepared and biotechnological studies are required to increase lawsone content.

Protocols	Standard	Analysis Test Report
Description	Green coloured powder	Green coloured powder
Odour	Characteristics	Characteristics
Taste	Characteristics	Characteristics
pH (1% Solution)	4 to 6	4.23
Moisture & volatile matter (% by mass)	Max 8	3.022%
Crude Fibre	10 to 15	11.23%
Acid insoluble ash	3 to 6	5.70%
Presence of extraneous dyes	To pass the test	Not Detected
Extraneous sand	Max 5	0.12%
Passing through BSS 60 mesh (250 micron)	Minimum 95% of henna powder should pass through	98.71%
Mineral matter (% by mass)	8 to 12	10.15%
Cold water extract	25 to 32	33.33%

Note : Total vegetable matter, per cent by mass be approximately 95 per cent
 Total vegetable matter = 100 - (sand, per cent by mass)
 Henna is a natural material and gives better result in proper time.