

IMPORTANCE OF MAHUA TREES ON TRIBAL LIVELIHOOD OF SATPURA IN NANDURBAR DISTRICT.

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Abstract

Mahua (Madhuca indica) is a deciduous tree, found in mixed deciduous forest of Satpura in northern part of Nandurbar district (Tehsil Akkalkuwa and Dhadgaon) as well as central India. This area is very rich in ethnic as well as floristic diversity. The tribal communities like Bhil, Pawra, Dhanka Tadvi, Tadvi Bhil is about 85% of the total population and near about 55% area out of total geographical area covered by forests. Most of the tribal community living in and around the Satpura forest area depends on the natural resources. They use several plants to their basic needs of their art of living. Among the plants used Mango, Mahua, Chiranji, Jamun, Hirada, Behda, Jatropha, Rosha grass, Dhawda, etc. Plays an important role in socio-economic life of tribal groups. They use these plants for food, medicine, fodder, fuel, nut, gum, amchoor powder, edible oil, liquor (NTFPs) and timber etc. The present study is focused on the multiple uses of mahua trees on tribal livelihood.

Keywords; *Tribe, Mahua, Liquor, edible oil.*

Introduction

Mahua-butter tree (*Madhuca indica*) commonly known as mahua, mahoo and moave/mowada in local name, is a tropical mixed deciduous forest tree found largely in the Satpura in Nandurbar district. The tribes like Bhil, Pawra, are involved in the collection of mahua flower and seeds and production of edible oil, liquor. In the Study area, the wild trees are found such as Teak, Bamboo, Hirada, Behda, Dhavada, Bahawa, Amla, Sadla, Mango, Jamun, Mohua, Rosha etc. as the other economical resources for the above said tribes. Mahua has a significant place in tribal culture. Every tribal household retains a part of the annual collection for various rituals. Apart from providing cash income, it also plays a role in food security. They consume mahua liquor, which is a part of their socio-cultural life from birth to death. Mahua tree is a family jewel which is passed on from one generation to another; but is never sold. The mahua flower and seed production depends on favorable climatic condition. There is need to increase the production, the proper guidance to be made available to the people by Research centre. The tribal area to be known as the special mahua production area. The most of the people rely on this production economically. There is a need to establish edible oil and liquor and other products, manufacturing centre in the area to guide the concerned people in a proper way. The economical development is possible by easy market availability and quality production.

Study Area:

The Study area is in the Akkalkuwa and Dhadgaon Tahsil in district Nandurbar, in the Maharashtra state. The sixth and seventh ranges of Satpura are in the area of Narmada and Tapi valleys. The sub-region of the area extends from 21° 30' north to 21° 50' north Latitude and 73° 47' east to 74° 32' east Longitude. Nandurbar district lies in the north western part of Maharashtra, Nandurbar district was created with bifurcation of Dhule district on 1st July 1998. The region is bounded by Dhule district on east and south while on the west by Surat district of Gujarat state and the north by Badwani and Jhabua district of Madhya Pradesh state.

Data base and Methodology:

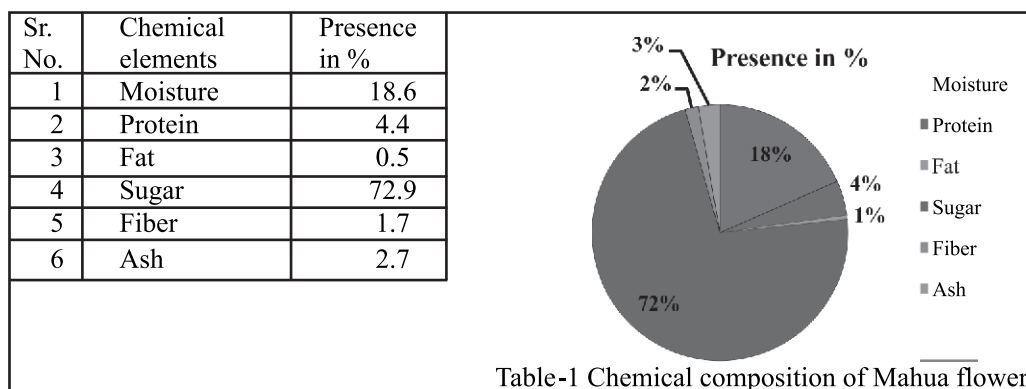
The primary and secondary data and information is collected about mahua collection, production process of edible oil and liquor by the field visits in the study area. The information is sought through the discussion and interview with the tribal people, local traders and the people involved in this activity directly or indirectly. The maps are used for the study from *Land use Pattern* regarding mahua area demarked from SOI toposheets i.e. 46 K/1, 46 K/2, 46 G/13, 46 G/14, 46 K, and 46G. The actual photographs of the area of mahua production.

Objectives:

- 1) To understand the traditional way of mahua flower and seed collection, production of liquor and edible oil in the tribal Area.
- 2) To guide the different schemes of the Government regarding new and high quality mahua trees.
- 3) To promote people for national and international market for different mahua products.
- 4) To find out the potential of mahua flowers and seeds in food, liquor and edible oil industries.

Results and discussion

- 1) **Land use pattern of study area:** - Land use includes the study of individual villages with reference to total geographical area are 147622.6 hectares, and its distribution into various features like area under forest are 81913.31 hectares(55.48%), cultivable area 36079 hectares (24.44%), cultivable waste and area not available for cultivable are 5652.6 hectares(3.82%).
- 2) **Methods of mahua flowers collection:** - Mahua trees are found both in forest lands and in lands owned by the individuals. Farmers with more lands are expected to have more number of Mahua trees. The practice is to collect Mahua flower from own trees first and then go to the forest for collection. Mahua flowering happens for around 2-3 weeks between March to April. The process of collection starts with cleaning on the previous day. Next day early in the morning the women and children go to the tree/forest for collection. It continues from early in the morning till the sun is right above the head. The effective collection days per household are 15 to 20 days in a season. Collection is done by women and children of the household in the baskets, which are hand made out of bamboo. On an average one family manages to collect 80 to 90 Payly (160-180 kgs) of Mahua in a season (depends on available own mahua trees), then dried into open place known as '**Khoda**' for 2-3 days in the sunlight. Collection from one Mahua tree varies from 22 to 30 payly (44 to 60 kgm.) depending upon the age and the growth of the tree and number of family members.
- 3) **The chemical composition of mahua flower** is given in table-1. In addition, phosphorus, calcium, iron, magnesium and copper are present in small quantities. From the table, it is clear that it is an intoxicant in itself. It becomes liquor only when it is fermented and other materials are added. Second it is a rich source of sugar and protein.



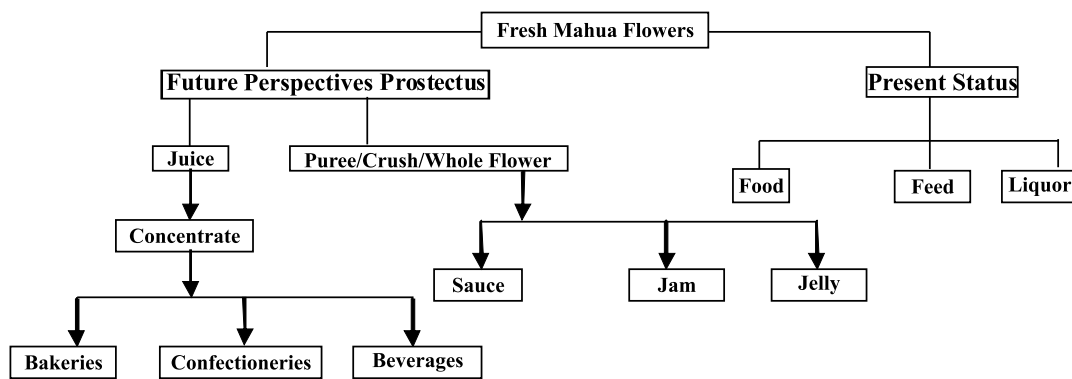
(Source: *The Wealth of India: Raw Materials, Vol. VI; LM, CSIR, New Delhi, 1998*)

- 4) **Processing of mahua flower into liquor:** - Mahua flower is converted into an alcoholic brew (liquor) '*Horru*' is local name which is generally prepared and consumed by the tribal households. The most important processing done with mahua flower is brewing. For household use, the local tribes brew it at home or river side. However occasionally (at the time of diwali, holy, marriage etc.) it is undertaken by *Bhattis* (Chulha) or large scale brewers. Mahua flower are put in earthen or open place pots filled and fermentation with water three to five days (depends on air temperature) before it goes into brewing. After the bubbles stop, pot of flowers is fit for further processing in the furnace and transferred to the brewing brass pot on the bottom. The brewing room or place has a hearth/furnace with two pots put on one another and one pot put on small pit with cold water or one small pot inside the two larger pots. The pot with cold water placed near the furnace is connected to the brew pot with a pipe. The process often takes five to six hours (depends on quantity of mahua flowers).
- 5) **Collection and Processing of mahua seeds:** - Locally named as '*Dole*' or '*Talambi*' the fruits of the Mahua tree are ovoid in shape, fleshy and greenish in colour. The fruits either fall down or are felled by the villagers at the time of ripening. The seeds are then collected by breaking of these fruits. Mahua seeds are usually collected in the months of May to July. Each fruit contains about 1-2 seeds. The outer cover of the fruit has to be removed to obtain the inner Mahua seeds. These seeds have to be broken in order to obtain the inner kernels. This is done usually by hand and the outer coat is broken by a stone to remove the kernel. The seeds (kernels) are then sun-dried to remove the moisture content from the seeds and stored for oil extraction purposes. The best quality Mahua seeds are said to contain 40-45% oil. Proper storage of seeds is of major importance in order to maintain the oil content in the seed. The seeds need to be stored in dry and airy conditions devoid of moisture in order to retain their oil content. The oil cakes obtained after oil extractions also have industrial uses as well as fertilizers. Even with proper extraction, some oil content (about 5-10%) still remains in the oil

cakes. The mahua oil is tribes' uses directly consumption as well use of medicinal purposes.

- 6) **Marketing of the Mahua flower and seed:** - Local traders (retail shop) play an important role in the rural economy and the nerve centers of the economic, social and cultural life of tribal. The traders reflect the demand pattern of the local area. Mahua Collectors depend on the trader not only for selling of the produce, but also for procurement of items needed in their daily life.

Flowers of mahua: Present status and future perspectives.



- 7) **Future Perspectives:** - The fresh mahua flowers are a rich source of wholesome nutrition and can be utilized as a food supplement especially for the malnourished people in tribal areas. Excellent bakery and confectionary goods (candy, biscuits and cake) were prepared using the mahua concentrate as a liquid sweetener. Apart from exaction of juice, the fresh flowers were crushed to puree and processed into sauce. Mahua jam and jelly were also prepared using fresh mahua. The developed products were tested for their colour, flavor, taste, texture and overall acceptability, using hedonic test. According to the findings of hedonic test all the developed mahua products were found to be highly acceptable.

Conclusion

Mahua trees are available in Tahsil Akkalkuwa and Dhadgaon (Akrani) in district Nandurbar of Satpuda region. The present tribes are mainly depends on the Agriculture (farming) and support themselves by production and collection of Mahua flower and seeds. Mahua has a significant place in tribal life. Every tribal household retains a part of the annual collection for various rituals. Apart from providing cash income, it also plays a role in food security. They consume mahua liquor and edible oil which is a part of their socio-cultural from birth to death. Therefore, the potential of Mahua flower and seeds are grossly underutilized. Hopefully, this will ensure more collection of flower and seeds and therefore, additional income for the tribal families.

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