ABSTRACT
Mazri is the local name for dwarf palm (*Nannorrhops ritchieana*). About 65,000 people are involved in processing of Mazri leaves- 78% of them are women, in Pakistan. Average annual production of raw Mazri leaves in the country is 37,315 tones. Jhandey (Kalpani) is small town famous for its various products made from Mazri palm. 90% of the people of the area are dependent on Mazri products business. Price of the raw material (leaves) used in product preparation is Rs. 200-220 per 50 kg. Various products are prepared by the local people, which are really attractive to the domestic and international tourists. The number of products prepared per shop is 10-14. Various challenges are faced to the business of Mazri products like unsustainable processing of raw material, higher rates of raw material compared to prices of the products, lack of advertisement, improper marketing and substitution of Mazri products by polythene products etc. The study aimed at addressing issues and challenges faced to marketing and processing of Mazri in the area.

Key words: Mazri palm, status, market development, Jhandey (Mardan).

INTRODUCTION
District Mardan is located at distance of 58 km from Peshawar. The tree species are scrub type mainly dominated by *Zizyphus mauritania*, *Eucalyptus sp.*, *Dilbergia sisso*, *Acacia modesta*, *Morus alba*, *Oleo cuspidate* etc. Besides that, various fruit trees are cultivated in the area like *Ficus buxifolia*, *Ficus palmate*, *Eriobotrya japonica*, cherry, strawberry, wild persimmons, guava etc. Jhandey (Kalpani) is small town famous for its various products made from Mazri palm, situated 8 km from Mardan city.

Overall View of the situation
Mazri is the local name for dwarf palm (*Nannorrhops ritchieana*) (Fig. 1). It is a gregarious, tufted, and shrubby palm, growing naturally in dry tropical regions of Pakistan. Various other species of fiber plants are found in Pakistan. These are from *Sterculiaceae* family; *Sterculia villosa*, which is strong whitish pink fibers. The strips of tree have long broad flakes with peculiar net like appearance. Other species are; *Sterculia urens*, *Sterculia foetida*, and *Sterculia colorata*. *Trema oricatalin* is found in the plain areas of Pakistan, yielding light brown fibers. Others species of fibers yielding trees are *Bochmenia sp.*, *Antiavis boxicavia*, *Streblus asper* etc. Species of this family are used to prepare ropes. Jhandey (Kalpani, District Mardan), Swat, Totakan, Hazarnao, Anbar, Kohat, Bannu in NWFP, Bhakar, Saraie Alamgir, Qasoor, Gujrat, Kot Addu in Punjab, Loralie, Sharag, Abdul Khail etc in Baluchistan are famous for various decorated and fascinating commodities (Latif, A.L, 2003).

Mazri palm is mostly found on either side of Suleiman Range with the height ranging from 600-1100 m in
sandy soil depressions (Champion et al, 1965). In NWFP, it is distributed in the areas of Orakzia Agency, North and South Waziristan, Kurram, Kohat, Hangu, D I Khan, etc and in Baluchistan, Loralai, Sharag, Abdul Khail and adjacent tribal belt of Suliman Range. In Punjab, it is distributed in Potohar areas. In Kohat division, its distributed on area of 24, 500 ha (Iqbal, 1991).

Fig. 1. Mazri Palm.

Mazri is found in the wild while in patches, it is also cultivated. About 65,000 people are involved in processing of Mazri leaves- 78% of them are women. The women are doing most of the job starting from harvesting to finished products. Men and women with the help of sickle harvest the Mazri from the growing areas from October to April. Both fresh and dried leaves are used for products making. One leaf yields about 30 to 40 pieces and 5 kg of leaves produces about 4 kg of products with waste of 20% (Iqbal, 1991). Average annual production of raw Mazri leaves in the country is 37,315 tones. It has been estimated that an average worker can process more than 0.5 tones of raw Mazri leaves per year (Iqbal, 1991). Baluchistan is the biggest producer of the Mazri in Pakistan with average annual production 27,265 tonnes. Mazri leaves are distributed in various parts of the country through railways and trucks i.e. to Billitong (Kohat), Kalpani (Mardan), Charsadda and Kot Addu (Punjab). About 3,400 tonnes of Mazri was produced in 1999-00(Agriculture Statistic of Pakistan, 99).

Average sale price of Mazri leaves in the Kohat district was Rs. 100 per 40 kg (Abbas, 2002). But in other areas like Kalpani (Mardan) its price was Rs. 210-220 per 40 kg. There were total exports of 126 millions
rupees in 1991 from various products prepared by the rural people (Iqbal, 1991).

METHODOLOGY

To collect primary and secondary data, two types of techniques were adopted. One was literature review and the other was questionnaire survey. For literature review various related literature was cited like journals, books and forestry working plans etc. The source of these literatures was Pakistan Forest Institute, Peshawar, Central Library University of Peshawar, Directorate of Research and Development NWFP Forest Department, Peshawar etc. For survey, mixed questionnaire was designed comprising both structured and unstructured questions. Community and individual meetings were conducted for data collection. Interviews of the concerned departments were also taken in consideration for having a thorough look at the situation.

RESULTS AND DISCUSSION

People and living status
The main trading and production places in District Mardan are Jhandey and Paar Hooti. 90% of the people of the area are dependent on Mazri products business. Agriculture is second main profession of the local people. Total population of Jhandey is 21,500. Average family size is 8. Most of the people are living in muddy houses, with improper facilities of water supply and sanitation. Joint family system is predominant in the area. The people are very religious minded, influenced by “Tablighi Markaz” located nearby the town. Literacy rate in the area is less than 30%. Most of the people belong to Utman Khail Tribe, migrated 90 years ago from Afghanistan, Bajawar and Malakand Agency.

People involved in Mazri Products
More than 300 households are directly related with the profession. While the remaining proportion is in one way or the other involved with the profession as second livelihood source. The products are also produced in few patches in Shergar and Lundkhowar. Among all these Jhandey is of utmost importance.

Economic condition and level of income from the Mazri Business
The economic condition of the people is lowering day by day. Average monthly income of the people is Rs. 1300-1600. The economic condition of the people, related with Mazri profession as second alternatives for livelihood, is better than others. Their average monthly income ranging from Rs. 3000-5000. Level of income from Mazri is decreasing day by day. The number of dependent person per income is 6 to 8.

Imported Raw Material Use
Mainly there are two types of raw materials used for making products. These are Mazri and kana (Saccharum munja). Most of the raw material is imported from Shahrags, Lorali, Khulu, Dosai in Baluchistan, Kohat, Hangu, Sadda, DI Khan, Paniala in NWFP, D.G.Khan, Saria Alamgir, Gujrat, Qasur, Kot Addu, Abdul Khalid, in Punjab and Khusat in Afgaunistan.
Seventy percent of the products are prepared at local level while 30% of products are imported. Estimated quantity of raw material imported from different areas in different months is given in the Table 1.

Table 1. Raw material imported to the Jhandey

<table>
<thead>
<tr>
<th>Ser. No</th>
<th>Months</th>
<th>Amounts (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>February</td>
<td>4,500</td>
</tr>
<tr>
<td>2</td>
<td>March</td>
<td>4,600</td>
</tr>
<tr>
<td>3</td>
<td>August</td>
<td>3,500</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>12,600</td>
</tr>
</tbody>
</table>

More than 35-40% of the raw material is wasted during the processing for finished product. Main cause for excessive loss is improper storage facilities of leaves, unsustainable extraction at source and processing technologies etc. Number of shops in the area are 37. Price of the raw material (leaves) used in product preparation is Rs. 200-220 per 50 kg.

Types of Products prepared
Various products are prepared by the local people, which are attractive to the domestic and international tourists (Fig. 2). The professionals own 100% of the shops. The number of people working per shop is 2-3. Most of the shopkeepers are maker and sellers. The number of products prepared per shop is 10-14. The names of these products are:

- Caps
- Mats
- Ropes
- Banns (used for making bed)
- Decoration products
- Baskets
- Cordage
- Cupboards
- Brooms
- Trays
- Hand fans
- Grain bins etc.

The daily sale of these shops ranging from Rs. 50-200 per day (70%) and 100-600 per day (30% shops).
Main buyer of the products
Based on the data collected during the survey, main buyers of the products are local people as most of the products are used for domestic purposes. Since the area is situated on the main road to Swat— the famous tourist spot in Pakistan that’s why these fascinating products attract both the domestic and international tourists. Summer season is always good for business— according to one of the respondent. For further details, see Diagram I.

![Diagram I. Main buyers of the Mazri Products in the area](image)

Diagram I. Main buyers of the Mazri Products in the area
Average level of profit per product from the local people is 20-30% while from tourists it is 50-60%.

Change in trends and Practices
Various challenges are faced to the business of Mazri products. Based upon the data collected from respondents, there is 70% decrease in the business. Ten years ago, the trend in business was good but due to certain discrepancies the level of profit as well as sale has been decreased. It was good due invasion of
domestic and international tourists who if buy one product per day then that was good for whole day.

There is ban by forest department on Mazri known as “Mazri Control Act 1953” and other taxes. It affected the whole trade and production of different products prepared by the communities. Simultaneously excessive damage by unsustainable harvest also affected the supply base, which is gradually shrinking and incomes of families is decreasing. Rehabilitation of Mazri forests is essential in order to maintain the supply base. Farmers are practicing Mazri cultivation to obtain maximum possible money return in Paniala (DI Khan). The synthetically made fiber and various products affected the community’s income related with Mazri. Decrease in tourists (both domestic and international) invasion also affected the trade and marketing of Mazri products. Product preparation is really tedious job, involving too much fatigue and hard work but resulting in lesser economic benefits. This situation created lack of interest of coming generation for this profession.

**Constraints to Mazri Products**

Following are the main constraints faced to the Mazri products:

- Unsustainable processing and production of raw material during product preparation
- Dust on the products, makes the products old and unattractive, as the shops are located along the roadside
- Loss of interest of people due to lesser economic benefits
- Lack of availability of investments for the raw material as product selling is less
- Higher rates of raw material compared to prices of the products
- Increase in number of related people to this profession
- Lack of advertisement for the products prepared
- Lack of government and non-government agency’s efforts for promotion of this profession
- Lack of concentration for exhibition of the product prepared
- Improper marketing of the products
- Decrease number of tourists to the northern areas
- Substitution of Mazri products by polythene products

Up-till now none of the agency/department has taken any initiative for the promotion and conservation of the plant except few small project concentrated in specific areas.

**RECOMMENDATIONS**

Following are the few recommendations for sustainable production and marketing of Mazri products:

1- Intervention of various government and non-government departments/agencies is necessary for sustainable income and conservation of Mazri palm
2- Proper advertisement and exhibition for the promotion of products as well as local people should be intercede
3- There is need to promote the products both at national and international level, which will ultimately increase the income of the people and conservation of Mazri palm
4- Small enterprise at household level should be established
5- Training on sustainable production should be imparted to the local people for improved quality
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