Legacy of Kum Dye: A case study with the Meitei community in Manipur, Northeast India

D.S. Ningombam, Sanjoy Singh Ningthoujam, P.K. Singh and Oinam Brojendro Singh

Research

Abstract

Kum (Strobilanthes cusia (Nees) Kuntze) dye is used for applying black and indigo color to loin loom phanek, a Meitei women’s formal folk dress known as kum dyed phanek (KDP). The legacy of the kum plant still exists in the public domain, however, it competes with chemically dyed cloth, branded as KDP. Interviews were conducted in three villages of Imphal valley with KDP producers. A significant correlation was found between use of traditional kum dye (KD) and age of knowledge holders. Economic viability and demand for KDP are also significantly correlated. A major drawback of original KDP weaving is the brittleness of thread and unavailability of kum plants. The study focused on economic activities and feedback that could revive the KD and KDP cultural traditions.

Introduction

Kum is a popular term applied for the Meitei women’s phanek known as kum dyed phanek (KDP). There is an underlying assumption by the public that traditionally dyed salu phanek or kum phanek are still prevalent in Manipur. However, what people are usually buying is falsely branded as KDP and is rather chemically dyed phanek produced by commercial artisans.

Kum dye (KD) is obtained from the kum plant (Strobilanthes cusia (Nees) Kuntze). Phanek is cloth woven on a loin loom cloth. Together these are called kum phanek although the original name is salu phanek. Manipuri women cover the upper portion of the body by a phimatak and a skirt type loin cloth called phanek which is wrapped around the waist up to ankles. It is tied at the waist by a simple adjustment knot by arranging the wrapping ends of the cloth. Kum phanek possess unique qualities which makes them novel products. The Meitei women wear kum phanek for all sorts of formal outings, social gatherings, cultural activities, and religious ceremonies. Women possessing kum dyed phanek (KDP) hold them as a matter of pride among other women.

The people of Manipur are well-known for their hand looms and handicrafts. Manipuris have practiced their own dyeing method which flourished along with royal patronage (Mutua 1997, 2000). Colorful fabrics and clothes of the Manipuri people are the outcome of an indigenous dyeing technology that has been passed from generation to generation. The traditional skill of hand loom weaving and dyeing forms not only a status symbol but also an indispensable aspect of socioeconomic life.

Strobilanthes cusia (kum, Manipuri) is the most important plant used in the dyeing of clothes by various communities in Manipur (Akimpou et al. 2005, Sharma et al. 2005, Singh 2003, Singh et al. 2009). “There is an inextricable link between indigenous ethnic culture and biological diversity” (Gosh 2003, Krattiger 1994, Maheshwari 1996, Shiva 1994). The Kharam tribe of Manipur used to bar-
ter *S. cusia* leaves and walnuts (*Juglans regia* L.) with the Thadou tribe. The Maring, Thangal, Chothe, Makhan tribes used *S. cusia* as a tribute to the Meitei kings from the reign of the King Khagembha (Mutua 1997, 2000). Before the advent of the chemical dyes, the Meitei communities had used the leaves of *S. cusia* for producing a unique blue-black and indigo colored dye.

Among the Meitei, the production and maintenance of KD fabric qualities are believed to be the blessing of the goddess Kum lairemma. A strict taboo is associated with KD preparation and whoever broke the taboo is believed to be stricken with a disease called *kumlaichuba* (Mutua 1997). The extraction of dye and dyeing clothes and fabrics are considered as important cultural activities and therefore, the Meitei sovereign country assigned particular clans for dyeing particular colors. Traditional institutes such as *hijang saingsenba losang*, *sangsaroi losang*, *kumsang*, *kum lairemma*, etc. existed to look after the dyeing technology in the state. Traditional *kum* fermenters, dyers and weavers are employed with the designation as *kum sublis*. The knowledge about extraction and dyeing methods dates back to the 11th century A.D. and still persists in a few valley localities (Mutua 1997, 2000). The *kum phanek* cottage industry was earlier carried out in three localities assigned with divisions of labor including: *kum* fermenters, *kum* dyers, and *kum* weavers. From, the middle of the 20th century, chemical dyes became available in the markets and there was subsequently a decline in use of *kum* dye. The division of labor for KDP degraded, as weavers started dyeing threads by themselves with the easily available chemical dyes.

Some earlier workers have commented that “natural dyes” were used for their easy availability, economics and eco-friendliness, by the weavers for imparting different shades of colors to different clothes or threads (Akimpou et al. 2005, Gokhale et al. 2004, Singh 2003, Singh et al. 2009, Siva 2007). A number of traditional vegetables dyes that are important legacies of the state are thus being discarded due to ignorance of their real value. With the global acceptance and revival of natural dyes, there is an urgent need to bring back to life the knowledge and use of traditional dyes. This study focuses on three aspects: i) documentation of traditional *S. cusia* fermentation (*kum* fermentation) and dyeing techniques, ii) exploration of the reasons behind the disappearance of KD, and iii) assessment of the drawbacks, commercial value and possible revival of KDP.

**Strobilanthes cusia**

*Strobilanthes cusia* (Acanthaceae) is a shrub about 1 meter high. Its leaves are 10-18 cm long, membranous, having 6-7 lateral nerves on either half and a cuneate leaf base which narrow into a three cm long petiole. Flowers are blue and arranged in densely panicked spikes. Flowers are usually opposite with ovate, deciduous bracts. Calyx segments are linear-spathulate and corollas are 4 cm long and glabrous (Deb 1961).

In the past the plant was reported to be found wild distributed but it was overharvested for KD and now considered extinct in the wild. During the present field survey it was found conserved as a sample species by some conservationist and museum authorities since it is closely associated with Meitei community cultural and social aspects.

**Methods**

**Study site**

The state of Manipur lies in the North-eastern part of India. It is within the Indo-Burman hotspot region which ranks 8th among 34 biodiversity world hotspots (Meyers et al. 2000). It is situated between 23°50´N and 25°41´N latitude and 93°2´E and 94°47´E longitude with a total area of 22,327 km² (Vedaja 1998). Manipur is primarily inhabited by the Meitei along with a number of hill tribes. It has a population of 22,93,896, with members of the Meitei community constituting about 40% of the total population (Census Report 2001). The state has 9 districts in two categories: valley (Imphal east, Imphal west, Bishnupur & Thoubal) and hill (Churchandpur, Ukhrul, Chandel, Tamenglong & Senapati). Valley districts are dominated by Meitei while hill districts are dominated by tribal peoples.

Three villages in Imphal east and west (Kodompokpi, Lilando lampak, Maibam leikai) have inhabitants associated with the *kum* tradition (Figure 1). These villages are small rural Meitei communities, having about 570 persons with agriculture as the main economic activity. The villages have an ancient division of labor for the KDP industry, but with the availability of chemical dyes, the division of labor is degraded. The whole KDP market of the state was under the control of these villages.

**Sampling and surveys**

Surveys were conducted by the authors during November, 2008 – February, 2011 in 3 villages (Kodompokpi, Maibam leikai and Lilando lampak) in Manipur, India. The people residing in these sites are similar in that they are ethnically Meitei, with Meitei religious laws, cultural norms, and speak Manipuri. Traditionally, the *kum* industry was based only in these 3 villages. For this study, artisans (defined as traditional *kum* dyers, *kum* weavers and KD fermenters) presently working on KDP related work, were selected as knowledge holders. In order to maximize the value of research time and resources, the researchers preferred to work with a selected number of knowledge holders who are the oldest or longest term residents in an area (Pfeiffer & Butz 2005).

Cluster sampling was used to select informants with the three villages considered as clusters. Random sam-
pling was performed within each cluster to select knowledge holders. A questionnaire with semi-structured and open-ended questions was prepared. Interviews were conducted in Manipuri within the home for each knowledge holder loosely following recommendations of Martin (1995). Questions focused on knowledge about kum plants, modes of KD preparation, dyeing technique, weaving methods, KDP characteristics, popularity, demand, and revival of traditions. Demographic characteristics were collected including: artisan ages (sorted in intervals 20-40, 41-60, & 61+), gender, and occupation (kum fermenter, dyer, weaver). Kum product characteristics were also recorded including: quality (luster after washing, comfort and flexibility, color (black / indigo), and smell), popularity (social value, traditional attire, unique quality), year of replacement (before 1970, 1971-1980, & 1981-1990), limitations (unavailability of plants, lack of skilled labor, cumbersome process, easy availability of chemical dyes), source (wild, market, and other sources), knowledge of KD making process (expert, familiar, or no idea), drawbacks in weaving (thread brittleness, dependency on weather conditions, time consumption, no idea), reduction of kum availability (habitat loss, over exploitation, pollution, or forest fires).

Opportunistic discussions, group discussion of the interview results, and market surveys were also conducted by the authors. These served to assist in the interpretation and contextualization of the results.

Data were analyzed (Brim & Spain 1974, Kottak 1991) using SPSS Version 19. Based on previous research and a familiarity with cultural norms, we began this survey with the assumptions that: 1) the KDP is no longer existing at present but, chemical dyes are being used instead, and 2) knowledge of traditional KDP increases with age of informant.

Results

Traditional kum industry division of labor in study sites

Kodompokpi village (Imphal west): The main role of residents in the past was kum fermentation or dye making. Presently, no one works commercially on kum fermentation. Our inquiries were able to identify seven knowledge holders whose ancestors were previously worked on KD.
making. They provided a practical demonstration of KD fermentation for the study. We were also able to interview the grandson of belated Keina Devi who was known as the mother of KD making in the Kodompokpi area. They reported some areas where they used to collect the plant leaves in the past and areas this plant might be growing now, but, when the authors examined those areas, the plant was not found.

Lilando lampak village (Imphal East): We recorded only two families that previously worked on thread dyeing. These dyers used to get the KD from the previous site Kodompokpi, and they used to dye the threads brought by the later Maibam lekai weavers. The authors were lucky to interview a lone woman, Waikhom Punimashi Devi (aged 86) (Figure 2), who was a kum dyer as her only profession, and still surviving with sound health. Only two informants were able to be interviewed here.

Maibam lekai (Imphal West): This village is presently working on kum weaving. Since time immemorial, people of this village are engaged in weaving and marketing of the KDP. People from all over the state buy KDP from this area. Every household had one or more artisans who are weaving KDP for their livelihood. Since market products are low priced, they use chemical dyes but sell as KDP. A majority of informants (52) were from this site.

Profile of informants

The knowledge holders were all skilled weavers, dyers and kum fermenters. Most of the oldest informants were doing the work of dyeing and weaving simultaneously. The profile of the knowledge holders is shown in Table 1. Altogether, 61 knowledge holders interviewed were dyers and weavers (30), weavers (22), dyers (2) & kum fermenters (7). Educational levels of knowledge holders were well distributed with 23% (illiterate), 48% (able to read and write), and 29% (attended school up to 10 standard+). The study was based on the information of these knowledge holders.

<table>
<thead>
<tr>
<th>Knowledge holder age</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 40</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>41 - 60</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>61 &gt;</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>44</td>
</tr>
</tbody>
</table>

Traditional dyeing Process

The preparation of KD and subsequent dyeing are tedious processes requiring strong attention. The generalized process of the traditional KD technology is outlined in Figure 3. The steps in the process are outlined below.

Preparation of kum leaf and shoot paste

Mature leaves and young shoots of S. cusia are collected from January to March. These are put inside earthen pots. The pot is then filled up with water and allowed to ferment in sunlight for 3 days. When the plant materials have fermented, a thick dark colored liquid mass is formed. Then the material is transferred to a new pot.

Preparation of lime solution or paste

For traditional kum dyeing, a special lime paste, locally known as kum-sunu, is used. Oyster (Unio sp.) shells are collected, particularly from the Kongba River, and are used as the main source of this paste. A straw bed (90 x 7 cm) is laid out with about 500 shells on it. Dried cow dung cakes (5-7 cm) are spread over the straw bed. The shells are sandwiched between cow-dung cakes and covered with straw and further covered with cow dung-cakes. A fire is then lit on the top as well as on two sides and the whole heap is burned for five to six hours. After allowing the whole thing to cool, the brittle and dark grey remains of the oyster shells are collected by hand and powdered with a mortar and pestle. The powder is sieved through a gamsha (muslin cloth) and is then stored in a metal tin for further use. For making the lime solution, lime powder is added to an earthen pot or metal pot. Water is heated separately on a low flame of firewood. When fairly hot it is slowly transferred to the heated lime powder pot by
Figure 3. Process of traditional *kum* dye production and yarn dyeing by Meitei community in Manipur, India. Materials for dye production are: Fresh *Strobilanthes cusia* (Nees) Kuntze leaves/shoots, straw, dry cow dung, *Pasania pachyphylla* (Kurz) Schottky bark, banana leaf ash, mustard oil (to control effervescence), molasses, water, and earthen pots.
stirring vigorously with a long bamboo ladle. Usually 1/3 proportion of a pot of burnt shell powdered is heated and treated slowly with hot water, filling the pot almost to the brim to give a thin lime paste.

The dark color liquid mass of kum is mixed with the lime paste slowly stirring all the time with bamboo ladle. For about 18 to 20 liters of fermented kum mass (Figure 4B) about four handfuls of lime paste (about 200 g) is required. The mass of lime is vigorously stirred continuously. Production of effervescence is controlled by mixing in mustard oil. When the paste becomes deep black it is allowed to settle down leaving an upper clear liquid. Then the liquid layer is removed by decantation leaving only the black paste at the bottom of the pot. The latter is collected using a cotton cloth to drain the excess liquid. The thick dark paste serves as the kum dyeing paste which should be kept moist all the time.

Dry paddy straw (Oryza sativa L.) or dry banana leaves (Musa acuminata X balbisiana Colla) are burned and ash is collected. The ash is dissolved in water and filtered several times through a bamboo basket. This process is continued until an adequate alkaline solution is collected in an earthen pot. This alkaline solution is used to fix the dye to the thread (acting as a mordant).

Kuhi, Pasania pachyphylla (Kurz) Schottky bark is collected and boiled in water until a deep brown colored liquor is obtained. The kuhi extract can be kept for a fairly long time (months) with water being added from time to time to keep the level of the liquor. The kuhi extract is used to improve dye uptake of fabric, and to improve color.

**Dyeing of cloth yarn with kum dye paste**

The kum paste, kuhi solution, lime solution, and alkaline solution are mixed with some molasses in an earthen pot. The kum paste is first added in the pot and other solutions are added later in any order. The mixed solution is stirred thoroughly and kept overnight. A successful mixed solution attains a pale yellowish color. Three pots (15-20 liters each) were arranged in a row for regular transfer from the stock solution.

The dyeing is done usually in the morning. Beforehand in the evening, prior to actual dyeing, the pot of KD stock is replenished with fresh lime solution. For four knots (about 300 g) of cotton yarn, a quarter of the kum paste in a pot (about 1/2 liter) is required for two to three dyeing sessions. Thus, the stock of two liters of KD paste can be used for eight to 12 dyeing sessions of about 300 g of cotton yarn. These may be twice or triple dyed each day according to convenience. The optimum color is obtained in about 8 or 12 dyeing sessions. For every two to three dyeing ses-

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**Figure 4.** Process of kum dye production and yarn dyeing by Meitei community in Manipur, India. A. Strobilanthes cusia (Nees) Kuntze (kum) plantlets being vegetatively propagated; B. Kum cakes or paste; C. Chemical dyed yarn; D. Kum dyed yarn; E. Yarn preparation using the traditional instrument called tareng; F. Weaving with a loin loom (khwang).

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sions, fresh ingredients are added. Lime solution of about 100-150 mg, alkaline solution of about 400-500 ml, and liquid molasses of about 200-250 g were required for every two to three dyeing sessions. Yarn to be dyed is put in the KD solution for two to three minutes, then taken out, squeezed and air-dried. The process is repeated in the second and third pots. Then the fabric is hung in the open yard for some time for partial drying. A deep bluish black color is developed in the yarn usually after repetition of eight or more dyeing sessions. Before, the final dyeing step, the yarn is treated in the kuhi bark solution. Then, it is dipped in the KD solution for the last time to give a very deep bluish black shade. After the final dyeing the yarn is washed thoroughly and allowed to dry which gives the final shade (Figure 4D).

**Popularity of Kum phanek**

Most of the informants (48%) credited the popularity of KDP in the Manipur Meitei community with its unique quality. 30% indicated that social status, and 23% popularity of traditional attire. The popularity of KDP at various age intervals is given in Table 2.

KDP possesses characteristics which make it quite different from presently available chemical dye phanek. 38% of artisans reported that luster after the first wash, 33% comfort and flexibility, 18% blue black effect, and 13% pleasant smell as superior qualities of the natural dye. The presently available chemical dye is below par when compared with the KDP. It is only good for single use as its color fades away after a wash (67%), has a distracted effect (13%), no pleasant smell (5%), and is uncomfortable or rigid (15%).

**Loss of Traditional Knowledge**

In the past, during the KDP golden-age, there was a division of labor between villages serving as kum fermenters, kum dyers, and kum weavers. Recent use of chemical dyes by weavers has reduced this division. Although KD has remained as a legacy, there were very few people who consider themselves as “experienced” having practical experience with kum fermentation or KD production processes. A majority of people interviewed have “heard” about the process steps but do not have practical knowledge. A third of those interviewed had no idea about fermentation steps and techniques. The distribution of traditional knowledge of KD production processes is shown in Table 3.

**Table 3. Occupation and knowledge of traditional way of kum dye processing among informants in Meitei communities in Manipur, India.**

<table>
<thead>
<tr>
<th>Informant occupation</th>
<th>Experienced</th>
<th>Heard</th>
<th>Not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kum dyer/weaver</td>
<td>9.8</td>
<td>36.1</td>
<td>3.3</td>
</tr>
<tr>
<td>Weaver</td>
<td>1.6</td>
<td>3.3</td>
<td>31.1</td>
</tr>
<tr>
<td>Dyer</td>
<td>3.3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Kum fermenter</td>
<td>8.2</td>
<td>3.3</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>23.0%</td>
<td>42.6%</td>
<td>34.4%</td>
</tr>
</tbody>
</table>

KD production is the process of making KD paste from the kum leaves. Traditional KD knowledge is gradually changing with generations. The spearman’s rho correlations between knowledge of traditional KD making processes and age of the knowledge holders is -0.651 which is significant at the 0.01 level. This indicates that gradual loss of traditional knowledge is happening from older to younger generations.

The market of KDP is controlled by the artisans or knowledge holders so they are the ones who decide the value of kum cloth in the market. They used to sell the falsely branded chemical dye phanek as high grade KDP as well as low grade. When asked about the demand of KDP by the customers, 98% preferred original KDP over the chemically dyed phanek. Women are used to purchasing kum phanek as this is a part and parcel of life. There is every reason to believe that this will continue to be economically viable. Earlier, the artisans were not in a mood to agree that the original KDP does not exist, but later in the course of interviews, they agreed.

Most of the knowledge holders (56%) attributed the decline of the kum culture to the unavailability of the plant itself. 21% cited lack of skilled manpower, and 15% reported that the cumbersome process is the reason for the decline. Only 8% of the knowledge holders proposed that the easily available chemical dye is the cause of decline in the kum culture.

Another possible reason for the decline in the kum culture is the problems faced during the weaving pro-

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**Table 2. Reasons for popularity of kum dyed phanek (KDP) among key informants in Meitei communities in Manipur, India.**

<table>
<thead>
<tr>
<th>Knowledge holder age</th>
<th>Why do you like to possess KDP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Social value</td>
</tr>
<tr>
<td>20 - 40</td>
<td>6</td>
</tr>
<tr>
<td>41 - 60</td>
<td>10</td>
</tr>
<tr>
<td>61 &gt;</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
</tr>
</tbody>
</table>
cess. Brittleness of kum thread dyed and heavy time consumption in the traditional weaving process are some of the major hurdles faced in kum-dyed weaving (Figure 4E,F). This traditional method of weaving also depends on the weather conditions the cloth cannot be woven during the rainy season (it will become frizzy). Artisans with expertise in traditional weaving methods cited heavy time consumption (51%) as the main hurdle. They only considered the weather conditions (10%) and brittleness (21%) of the thread as limitations in weaving method.

Collection of the plant

When kum dye was flourishing, the dyers used to collect the leaves from the wild (90%), while 2% cited markets as the source of kum plants, and 8% reported that they found the plants growing in other localities. There are diversifying opinions regarding the decline of kum plants in their natural habitat. Reduction of the natural habitat is considered an important reason for decline by 35% of the knowledge holders. 25% proposed that extensive harvesting, and 13% pollution is the problem.

Revival of kum

Chemical dyed phanek branded as KDP is still commonly purchased so there is a demand for products called KDP. Even though there is concern for revival of kum among the professional kum workers, only a fraction of those surveyed are actually involved in conserving kum plants. Most of the weavers (85%) are not growing plants, while the remaining 15% are actually conserving kum plants as sample species.

Even among the kum growers, reasons for using kum vary. Among kum growers, 56% are growing kum for social purposes and 11% for medicinal properties. Interestingly, 33% are growing kum for dyeing purposes although they used to use chemical dyes. Their reason now is to have the pleasant smell of KDP.

Out of the knowledge holders (Figures 2,5) who recently started to grow kum, 89% are formerly collected kum from the wild (Table 4). Knowledge holders who purchased kum from the market did not also grow kum plants. Professionals who collected kum from the wild mostly did so for social purposes (44%). The Pearson chi-square test between mode of collection of kum plants and reason for Table 4. Reasons for growing and collection method of kum in Manipur, India.

<table>
<thead>
<tr>
<th>Reason for growing kum</th>
<th>Mode of kum collection (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wild</td>
</tr>
<tr>
<td>Dyeing</td>
<td>33.3</td>
</tr>
<tr>
<td>Social</td>
<td>44.4</td>
</tr>
<tr>
<td>Medicinal</td>
<td>11.1</td>
</tr>
</tbody>
</table>

Figure 5. Traditional knowledge holder of kum dye and weaving processes in Manipur, India.

revival of kum culture is 12.689 that is significant at 0.05 indicating an association between the two variables.

Alternative uses of S. cusia

In addition to the dyeing, S. cusia is used for medicinal purposes and other social purposes (Sinha 1996). Recently, some conservationists or museum authorities have conserved this plant because it is culturally and socially valuable in the Meitei community in Manipur. Some of the knowledge holders used to grow it for its medicinal purposes including treatment of skin infection, snake and poisonous bites.

Discussion

The pattern of observations supports our hypothesis. We saw the artisans using chemical dye only for dyeing the presently available phanek and moreover KDP started declining since the 1970s (and was almost lost in the 1990s) mainly due to the unavailability of the plant. With the loss of the habitat, extensive harvesting, and others factors including easily availability of chemical dyes, the practice of kum dyeing has ceased to exist. The presently available KDP is not the original one. However, a majority of the knowledge holders proposed that they should be called kum-shabee which implies imitation KDP. Interestingly, all of the artisans or knowledge holders prefer the prefix “kum” since it is most popular for loin cloths. Still now, common people were under the impression that KDP exists and that purchasing the duplicate or chemical dyed
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Phanek is original KDP. The present practice is to apply the chemical dye (Sulphur black) to the cloth and then use kum leaf paste to provide its characteristic smell to claim the loin cloth as KD which is sold for high prices (Mutua 1997).

Our results suggests that KDP is closely associated with the socio-cultural aspects of the Meitei community. Women must wear phanek for all sorts of formal outings, religious ceremonies, marriages, and it is the identity of Meitei women in India. We also had the privilege of seeing samples of original KDP possessed by some of the artisans as their personal belongings. Regarding the popularity of the KDP, it was evident that the majority of knowledge holders (41 aged - above) credited it for unique quality that is lustrous after every wash, comfortable, black-blue colored with a pleasant smell. While, the younger generation (20 to 40) was less aware of the quality, they were more conscious about the role of traditional Meitei attire.

The age and gender–based pattern of traditional knowledge about KD were very distinct. There is a gradual loss of traditional knowledge. The pattern observed also supported our second hypotheses. We saw a greater command of traditional kum knowledge with increased age and also with experience acquired irrespective of the present occupation of the artisans. A majority of kum processing activities were done by women. There is no longer a sharp distinction of labor in the process.

Among kum fermentation artisans, a majority (71%) have actual practical experience with the KD production process. Finally, in the age interval 20-40 were mostly weavers following in their parents footsteps (except one woman, Tampaklei Devi (39 years), who happens to be the kinsfolk of Keina Devi).

Though there is a desire for revival of the kum culture, limitations and drawbacks in the traditional method hamper the process. Its main drawbacks were source of plant material, cumbersome process, lacked of skilled artisans and brittleness of thread. However, we are suggesting that KD can be revived. A proposal is made by the authors to solve the main drawbacks in order to make the original KDP available on the market. The major drawback for source of plant material can be solved through vegetative propagation. Large scale cultivation can be done (Figure 4A). Secondly, the drawback of cumbersome processes can be reduced by hastening the KD production process through adopting new bio-technology methods. Mutua (1997) reported that addition of soda (Sodium bi-carbonate) hastens the fermentation process. Thirdly, there are some knowledge holders who are highly skilled in each division of work KD processing. These elderly artisans must be supported and assisted in training others before they expired. Finally, brittleness of the thread can be solved by increasing thread strength through techniques such as boiling, scouring and bleaching. Expertise in the textiles and vegetable dyeing should be organized with the artisans participation with specialists on handicraft marketing.

Localized or specialized traditional knowledge is more prone to loss than common knowledge. This study calls for development of guidelines that might enable revival of the original KDP to generate sustainable and supplemental incomes for kum growers, fermenters, dyers, and weavers.

Conclusion

The study indicates that KDP the loss of kum dye use lead to subsequent loss of the species from wild. It also reveals a formal recognition that KDP is almost lost and the presently available product is a synthetic duplicate. The traditional knowledge holders are slowly disappearing. KD making, kum dying, and kum weaving can yield practical benefits for communities. Support is needed from development agencies for integrating handicrafts into the national economic strategies and raising the status and productivity of kum dye workers. This research lays a foundation for a modern venture. Considering its commercial demand, it is high time for the revival of KD and also the conservation of kum plants.

Acknowledgments

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Literature Cited


