

Ethnobotany of *Sujen*—A local rice beer of *Deori* tribe of Assam

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Sujen, a popular local rice beer has a very important role in the socio-cultural life of *Deori* tribe of Assam. *Sujen* is drunk in all their festive occasions and celebrations. The paper deals with the ethnobotanical observation on the preparation of *Sujen* by *Deori* tribes. The Plant species used in the preparation of *Mod pitha* (natural starter) for brewing *Sujen* are enumerated with their botanical names, families, vernacular names and plant parts used.

Key words: *Sujen*, *Deori* tribe, Rice beer, *Mod pitha*, Assam

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Deori tribe is one of the ethnic tribes of Assam inhabiting the districts of Lakhimpur, Dibrugarh, Tinsukia, Dhemaji, Sibsagar, Darrang and Lohit districts in Arunachal Pradesh¹. The tribe belongs to the great Tibeto-Mongolian race belonging to the Tibeto-Burman linguistic family². The tribe is divided into four *Khel* (territorial group) namely, *Dibongyas*, *Tengapaniya*, *Borgongya* and *Patorgonya*. The name of each *khel* is derived from a particular river of their original homeland. During the early *Ahom* period, they were highly honoured by the *Ahom* kings and used to conduct magico-religious rituals in Royal temples. Even today, a *Deori* priest is invited to perform religious rituals during holy festivals by *Ahoms*.

Consumption of rice beer is a common practice among all tribal communities. Most of the tribes have been preparing rice beer since time immemorial³⁻⁵. There is not much difference in the preparation of rice beer by the various tribes, however in *Deori* tribe, the numbers of plant species used for *Sujen* preparation is much more in comparison to other tribes. In olden days, *Deori* tribe used more than 100 plant species for the preparation of *Mod pitha* (natural starter) for brewing *Sujen* but these days, only a few plant species that are commonly available are used. *Sujen* is not only a popular drink of the tribe but is also considered to be pure and used as holy water by *Deori Bhokots* (priests) during various festivals and ceremonies. In olden days, it was a tradition to offer this beer to every visitor to the house by the hostess. Even today, after a whole day hard work, the elderly male

members of family in the villages, relaxes by consuming *Sujen*. The study on *Sujen* preparation is based on *Deori* tribe belonging to three villages from three districts of Assam. The paper enumerates 32 plant species used and the steps involved in the preparation of *Mod Pitha* (natural starter) and *Sujen* brewing. There is need to document the nutritional value and microbial process involved in the fermentation of *Sujen*.

Methodology

Ethnobotanical study was undertaken during 2003-2004 by conducting survey in the three villages, Sunpura Deori gaon, Sadiya (Tinsukia district); Kololuwah (Dibrugarh district) and Rajabari (Sibsagarh district) of Assam. Village folks, who regularly prepare *Sujen* were interviewed and the entire process of preparation were observed and documented. Plant species collected and identified by consulting Regional Herbarium Assam, Botanical Survey of India, Eastern Circle, Shillong are enumerated alphabetically with botanical name, family, vernacular name and plant parts used.

Results

The methods of preparation were same in the three villages; however the number of plant species used varied from family to family. *Sujen* preparation consists of two parts, *Mod pitha* (natural starter) preparation, and *Sujen* brewing.

Mod pitha (natural starter) preparation

Saol (rice grains), plant species (Table 1), *Kula* (a round bamboo utensil), *Saloni* (round bamboo utensil)

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for sieving), *Dheki* (wooden grinder), *Dhua sang* (a rectangular frame made of bamboo), *Soriya* (aluminium utensil) and *Kher* (straw) are required for the preparation of *Mod pitha* (Figs. 1-3). A handful each of cleaned leaves, fronds, barks, roots and bulb of the plant parts are put in a *Saloni* and kept for a day for sun drying. 3-5 kg of *Saol* is soaked in water for about 2 hrs, mixed with the dried plant materials and grounded in a *Dheki*. The grounded powder is taken out, sieved in a *Saloni* and the coarse part is returned to the *Dheki* for grinding. The process is continued until a fine powder is obtained. 2-3 old *Mod pitha* are added to the mixture while grinding, which acts as an inoculant. Grounded powder is put into a *Soriya*, water is added to make a sticky paste and small round cakes (2-3 cm in diameter and ca.1 cm in thickness) are prepared. Cakes are then kept on clean, dry paddy straws spread on a *Kula* (a round bamboo utensil) and again covered with straws. *Kula* is then kept on a *Dhua sang* tied about 1 m above the fireplace in the kitchen for drying. This procedure of baking continues for a couple of weeks until the *Mod pitha* becomes hard. *Pitha* is then ready for use in *Sujen* brewing. Unused *Mod Pitha* is stored in *Tekele* (small earthen pot), mouth of which is covered with a bunch of straws. It can be stored for 2-3 months and can be used as and when required.

Sujen brewing

Rice (*Saol*) (the best rice beer is obtained from the glutinous type of rice), *Kerahi* (iron pot), *Heta* (a long bamboo spoon), *Dola* (a round bamboo utensil), *Jolokia* (*Capsicum annuum*), *Koila* (charcoal, 3 pieces), *Bihlongoni* (Fronds of *Pteridium aquilinum*), *Dola* (a round bamboo utensil), *Koloh* (a big earthen pot), *Tuh* (rice husk), *Siya* (iron stand), *Sakoni* (a bamboo conical sieve), *Kolpat* (*Musa* leaves) are required for *Sujen* brewing (Figs. 4-8). 4-5 kg of *Saol* mixed with *Tuh* and water is cooked in a *Kerahi*. While cooking, it is stirred once in a while by *Heta* to avoid burning of *Saol* during cooking. Cooked *Saol* is poured to a *Dola* covered with clean banana leaves. 2-3 *Mod pitha* is then powdered in a *Pota* (wooden mortar) and *Mod pitha* is added to the warm *Saol* mixing thoroughly with clean hands. The mixture is then gathered into a round mount and on top of which 3 *Jolokia* and 3 pieces of hot burning *Koila* are kept in a triangular form to protect the preparation from spoiling by evil spirit. *Bihlongoni* are spread over the mount and covered with banana leaves above which a *Dola* is placed. *Koloh*, in which the mixture is

fermented, is thoroughly washed with wood ashes using *Kher* (straw) and clean water. After cleaning *Koloh* is kept upside down in a *Siya* on the fireplace where *Tuh* is spread over burning firewood for smoking and drying the *Koloh*. The incubated mixture is then poured to the sterilized *Koloh*, the mouth of which is closed by inserting a bunch of *Bihlongoni* and *Kolpat* (*Musa* leaves) and wrapped tightly with a cloth or closed with an earthen plate and stored for fermentation. The preparation is kept away from any *Citrus* plant species, which is believed to spoil *Sujen*. 3-4 days are required for fermentation during summers and a week in winter. *Bihlongoni* gives a strong aroma to the *Sujen*. *Meya*, a profuse whitish froth is formed when the *Sujen* is fermented. It is poured into a *Sakoni* for filtering the *Meya* and the filtrate is ready for consumption. Fresh *Sujen* has a sweet taste with a peculiar flavour and can be stored for up to one month during winter and 2-3 weeks in summer, after which it loses its taste and becomes sour. *Sujen* when drunk in concentrated form is intoxicating, therefore depending on the taste or as per requirement, it is diluted.

Discussion

Sujen plays a vital role in the sociocultural life of *Deori* tribe. No festivals such as *Bihu* (*Bhugali*, *Rongali*, *Kangali*), *Puja* (*Durga*) and ceremonies (birth and marriage) are celebrated without *Sujen*. In olden days, more than 100 plant species were used for the preparation of *Mod pitha*. However, now a days only a few plant species are being used. Of all the total 32 plants collected, 20 plants viz. *Artocarpus heterophyllus*, *Cinnamomum bejolghota*, *Costus speciosus*, *Desmodium pulchellum*, *Coffea bengalensis*, *Cyperus* species, *Equisetum* species, *Lygodium flexuosum*, *Melastoma malabathricum*, *Mussaenda roxburghii*, *Myxopyrum smilacifolium*, *Naravelia zeylanica*, *Pothos scandens*, *Psidium guajava*, *Pteridium aquilinum*, *Pycnarrhena pleniflora*, *Rubus* species, *Scoparia dulcis*, *Thunbergia grandiflora*, *Zanthoxylum oxyphyllum* were reported to be essential and the rest give flavour to *Sujen*. For brewing *Sujen* different types of rice are used, however the best beer was reported to be obtained from the glutinous type of rice widely cultivated by *Deori* tribe. Uses of many plant species for beer brewing has been reported in other tribes. There are reports that the Tea garden tribes of West Bengal also use as many as 15 plant species of which 4 plant species (*Artocarpus heterophyllus*, *Mussaenda*



Fig.1 Grinding rice with plant materials



Fig.2 *Mod Pitha* kept on *Dhua sang* for drying



Fig. 3 *Moth Pitha* cakes



Fig. 4 Cooking rice for *Sujen* brewing



Fig. 5. Mixing of cooked rice with *Moth Pitha*



Fig. 6 Cooked rice mixed with *Mod Pitha* are packed in banana leaves for incubation



Fig. 7 Sterilization of Earthen pot



Fig. 8. Earthen pot for *Sujen* fermentation and filtering of *Meya* to get *Sujen* for consumption

Table 1—Plants used for the preparation of *Mod pitha* by the *Deori* tribes

Plant name (Family)	Local name	Parts used
<i>Allium sativum</i> L. (Liliaceae)	Nohoru	Bulb
<i>Artocarpus heterophyllus</i> Lamk. (Moraceae)	<i>Kathal</i>	Leaves
<i>Ananas comosus</i> (L.) Merr. (Bromeliaceae)	<i>Anaras</i>	Bark
<i>Alpinia malaccensis</i> Rosc. (Zingiberaceae)	<i>Dubushining</i>	Leaves
<i>Alternanthera sessilis</i> (L.) R.Br. ex DC. (Amaranthaceae)	<i>Khutura</i>	Leaves
<i>Capsicum annuum</i> L. (Solanaceae)	Jolokia	Fruit
<i>Cinnamomum bejolghota</i> (Buch.-Ham) Sw. (Lauraceae)	<i>Kotokou</i>	Leaves
<i>Centella asiatica</i> (L.) Urban. (Apiaceae)	<i>Mani moni</i>	Leaves
<i>Coffea bengalensis</i> Roxb. (Rubiaceae)	<i>Lata duamali</i>	Leaves
<i>Costus speciosus</i> J. E. Sm. (Costaceae)	<i>Jomlakhuti</i>	Leaves
<i>Desmodium</i> sp. (Papilionaceae)	<i>Bonguti</i>	Leaves
<i>Cyperus</i> sp. (Cyperaceae)	<i>Karkatua bon</i>	Leaves
<i>Desmodium pulchellum</i> (L.) Benth. (Papilionaceae)	<i>Sepeta bonguti</i>	Leaves
<i>Equisetum</i> sp. (Equisetaceae)	Nangoljuradia bon	Leaves
<i>Lygodium flexuosum</i> (L.) Sw. (Lygodiaceae)	<i>Sisia dhekiya</i>	Fronds
<i>Melastoma malabathricum</i> L. (Melastomataceae)	<i>Thut kola agg</i>	Leaves
<i>Mussaenda roxburghii</i> Hook.f. (Rubiaceae)	<i>Peseka</i>	Leaves
<i>Myxopyrum smilacifolium</i> (Wall.) Bl. (Oleaceae)	<i>Khorkhoria kula</i>	Leaves
<i>Naravelia zeylanica</i> (L.) DC. (Ranunculaceae)	<i>Garapchoi</i>	Leaves
<i>Oryza sativa</i> L. (Poaceae)	<i>Dhan</i>	Rice grains
<i>Psidium guajava</i> L. (Myrtaceae)	<i>Modhuri</i>	Leaves
<i>Pothos scandens</i> L. (Araceae)	Kokalsia	Leaves
<i>Pteridium aquilinum</i> (L.) Kuhn. (Pteridaceae)	<i>Bihlongoni</i>	Fronds and Roots
<i>Pycnarrhena pleniflora</i> Miers. (Menispermaceae)	<i>Khorkhoria pat</i>	Leaves
<i>Rubus</i> sp. (Rosaceae)	<i>Belipoka pat</i>	Leaves
<i>Saccharum officinarum</i> L. (Poaceae)	<i>Kuhianar</i>	Leaves
<i>Selaginella semicordata</i> (Wall) Spreng (Selaginellaceae)	<i>Kopau dhekia</i>	Leaves
<i>Scoparia dulcis</i> L. (Scrophulariaceae)	<i>Bon dhuniya</i>	Leaves
<i>Solanum torvum</i> Sw. (Solanaceae)	<i>Bhekuri</i>	Leaves
<i>Thunbergia grandiflora</i> Roxb. (Acanthaceae)	<i>Phirphiria pat</i>	Leaves
<i>Zanthoxylum oxyphyllum</i> Edgew. (Rutaceae)	<i>Tesmoi lota</i>	Leaves
<i>Zingiber officinale</i> Rosc. (Zingiberaceae)	<i>Ada</i>	Bulb

roxburghii, *Oryza sativa*, *Scoparia dulcis*) are also used by *Deori* tribe¹. *Deb Burman* tribes of Tripura use 2 plant species, one (*Artocarpus heterophyllus*) being common with *Deori* tribe⁵. However, no tribe uses as many plant species as *Deori* tribe for rice beer brewing.

The belief that *Sujen* is good for health and acts as a remedy for various ailments may be attributed to medicinal properties of the plants used in *Mod pitha* preparation. Many of the plants used are known to

have medicinal properties³. The superstitious belief that charcoal pieces used in the fermentation process protect the beer from evil spirits holds no scientific reason. However, charcoal is known to absorb dyes, toxic substances, etc. Therefore, charcoal may be absorbing unwanted substances produced in the process of fermentation without, which *Sujen* spoils. *Capsicum annuum* fruit may be used to ward off evil spirits/eyes and thus protect the preparation from spoiling. On the other hand, the belief to keep away

the preparation from any kind of *Citrus* species needs proper scientific study. The nutritional, medicinal aspect of *Sujen* also need detail study. For further improvement of *Sujen*, it will greatly depend on the scientific interest. The younger generation of today needs to acquire the knowledge of traditional wealth that holds valuable information for the future generation. Therefore, there is an urgent need to take every effort to document, preserve and encourage the practice of indigenous knowledge of the tribal people before it is too late for the prosperity of mankind.

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