

# GUTCHICHYAU

## *Morchella conica*

Gutchichyau is one of the high valued commercial forest products of Nepal and mostly found in Karnali zone. It is collected from national forest, and community managed forest in Jumla district. It is locally consumed as a delicious vegetable. Jumla district alone produces almost 1,294 kg of dried Gutchichyau per year (DFO, fiscal year 058/59 (2001-2002)). It is sold to village traders who airlift to Nepalgunj to sell to a wholesaler. It is one of the major income generating resources of the rural population.

### 1. BIOLOGY

#### A. Taxonomy

The following five species of *Morchella* are reported to be found in Nepal (Pokhrel, Nabin)

- 1) *Morchella angusticeps*
- 2) *M. conica* (Pers.)
- 3) *M. deliciosa*
- 4) *M. esculenta* (L.) Pers.
- 5) *M. vulgaris* (Pers.) Boud.

*Morchella conica*, *M. esculenta* and *M. vulgaris* are the species found in Dolpa District.



Family - Morchellaceae

Local name - Gutchichyau, Morelchyau, Chyau, Guche, Pote Chyau.

English name - Morel Mushroom

It is an annual, non-chlorophyllous and saprophytic fungus. The fruiting structure 'ascocarp' comes from the mycelium which is differentiated into conical cap shaped 'Pileus' and cylindrical stipe. The stipe is 2-3" in height and ½ to 1" in width. The stipe is composed of compact interwoven hyphae. The Pileus has small depressions or ridges, which are asci, and contain ascospores. The fruiting body is creamy colour, which is always fleshy and leathery.

## B. Habitat and Range

Gutchichyau is distributed from temperate to sub- alpine in wet and shady coniferous forests, especially on the north facing slopes. It is found in the western Himalayas of Nepal from west of Budhigandaki river to Darchula district in the far west at the altitudes of 2000-3500 metres.

In Jumla Gutchichyau is predominantly found in the following northern sector-Sinja belt VDCs: Bumramadichaur, Malikabota, Kanakasundari, Birat, Pandugupha, Dhapa, Narakot and Shanigaun. In addition, in three VDCs of Tila and Gothichaur Valley namely; Kartikswami, Depalgaun and Garjyangkot.

## C. Ecology

Gutchichyau is an annual saprophytic fungus that grows on dead and decaying woods in coniferous forests. The fruiting bodies are usually seen in clusters on organic substrata. It starts to grow in the beginning of summer from March to May (Falgun - Jestha), rarely found growing until August. The fungus grows vigorously near and beneath the fallen trees of the previous year, where good humus has been formed. It is found nicely grown in fire burn and dense coniferous forest. The availability and abundance of the species in its natural habitat depends upon the rainfall/snowfall in the month of March and April. If there is not sufficient rainfall, the production of Gutchichyau decreases. Gutchichyau is reported to have a short life span. Gutchichyau growing in conifer forest is visible for a maximum of five days from mid-March on.

The associated plant species of Gutchichyau are: Bhojpatra (*Betula utilis*), Bugre Salla (*Tsuga dumosa*), Buke Phool (*Anaphalis sp.*), Chimal (*Rhododendron companulatum*), Dhupi (*Cupressus torulosa*), Gobresalla (*Pinus wallichiana*), Jhule Sallo (*Picea smithiana*), Kharsu (*Quercus semicarpifolia*), Khotessalla (*Pinus roxburghii*), Lahare pipal (*Populus ciliata*), Laligurans (*Rhododendron arboreum*), Nigalo (*Arundinaria falcata*), and Thingre Sallo (*Abies spectabilis*).

## D. Regeneration

Natural regeneration takes place from the spores. No information is available on cultivation of this product in laboratory as well as in field.

## 2. RESOURCE MANAGEMENT

### A. Management System

The stipe and pileus are the commercial parts of the fungus that are collected from March to May. Gutchichyau is found in CFUG as well as government managed forests. It is not included in the operational plan of community-managed forests. Although there is a provision that a CFUG can collect royalty from the products collected from its CF, the royalty is not collected by the CFUGs in Jumla district.

#### B. Harvesting

The collection period of Gutchichyau starts in April (Baishak) and lasts three months. Harvesting is done manually. The fruiting body is hand picked together with pileus and stipe. The collected quantity is handled carefully otherwise pileus and stipe may break. The quantity harvested per day varies with availability in the habitat.

#### C. Sustainability Issues

It is found that the present trend and practice of Gutchichyau collection does not have any harmful impact on the availability and abundance of the species in its natural habitat. Harvestable cap or the fruiting body of the fungus disperses away its spores for regeneration before it is being collected for household consumption or trade. The fruiting body develops and matures within a short period, approximately within few hours to few days.

### **3. UTILIZATION**

#### A. Subsistence

Gutchichyau is sometimes harvested for local use as a substitute of vegetable and as a delicious foodstuff, but this practice is not very common in Jumla. Because of its high price, it is mostly sold to traders to generate cash.

#### B. Commercial

Gutchichyau is collected mainly for commercial purpose. It has high price with an increasingly high demand. It is also traded locally but mostly exported to international market. This product is consumed for the preparation of delicious food 'from the Himalayas' in expensive international star hotels and restaurants mostly in Europe and Japan.

### **4. MARKETING**

#### A. Production Volume and Trade

According to DFO information, an estimated annual collection of Gutchichyau is 1,294kg of dried Gutchichyau from Jumla. Gutchichyau buyers come to Jumla from Jajarkot, Salyan, Bardia, Rukum, and Nepalgunj. Because of its increasing demand in international market, many traders even from Kathmandu go to Dolpa, Jumla, and Humla to buy this product.

#### B. Current Market Channel

Farmers/Collectors --> Middlemen/Local traders -->Wholesalers/Exporters

#### C. Current processing

There is neither processing nor any kind of value-additive works currently being done in Nepal except drying, grading, and packaging. For storage purpose, Gutchichyau should get a treatment immediately after collection. This treatment does not require any sophistication but simply a fast drying process. If there is no sun, the mushroom is heated over an open fire for 5 to 7 minutes. Thereafter the mushroom beaded on a string, are hung at dry place at a bulk under the roof in the kitchen (Hertog 1993).

For commercial purpose, the freshly collected Gutchichyau is sun-dried and graded to avoid rejection by the buyers down at Nepalgunj, Dang and/or Kathmandu.

#### D. Variability and Risk

If there is no demand from the international market, no trading will happen except for local use. According to information drawn from exporters, 5-10 percent of total weight will be lost during storage and grading. Sometimes because of snowfall and lack of chartered flight, the collected product remains undelivered for several months in Jumla. In Gutchichyau too, there is a risk of adulteration with other resembling mushrooms.

### **5. SOCIO-ECONOMIC AND POLICY ISSUES**

#### A. Socio-economic Factors of Existing Activities

Gutchichyau is found not far away from the community. It takes few hours walk to reach Gutchichyau growing habitat in Jumla district. Normally one collector can harvest 2-6kg of fresh Gutchichyau per day depending upon the habitat, quantity and its availability.

Harvesting and collection of NTFP is based largely on casual involvement and more importantly because of cash need. Women and children mostly collect Gutchichyau, often as a supplementary activity to gathering fodder, fuel wood, and animal bedding.

Sometimes collectors get advance money from wholesalers or village traders. The money generated from the sale of Gutchichyau is utilized to buy clothes, food, and for other household expenses.

## B. HMG Policy on Collection, Processing, and Trade

### 1. Current Policy

It is necessary to get a collection permit from respective district forest office specifying the collection area, method of collection, quantity and objective of collection. Although collectors are legally allowed for collection only after getting the permission, there is no practice of getting permit by collectors. However, traders must have a collection permit before transporting the product from Jumla. Traders get release permission after paying royalty of Rs 200 per kg to DFO. Forest personnel are empowered to conduct search, undertake arrests, conduct investigation, and file cases to check the illegal collection and trade of this product.

### 2. Policy Constraints:

After paying royalty to DFO, the traders are legally allowed to release Gutchichyau from respective district of origin to their destination within 15 days. During this period, if the traders could not manage air transport again they have to extend date from DFO. Thus, most of the traders opposed this system.

## **6. REFERENCES**

Hertog, W D. 1993. Non-Timber Forest Products in Dolpa District. A report submitted to KLDP, SNV-Nepal.