

Nepalese *Allium* (Jimbu)

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Background

Jimbu is one product that is native to the North-Central mountainous regions of Nepal, and is of high value to Upper Mustang Nepalese (Nepal, 2006). Jimbu refers to two species of *Allium*, *A. hypsistum* and *A. przewalskianum* (Nepal, 2006). Both species are perennial and bulbous flowering plants part of the Amaryllidaceous family (IUCN Nepal, 2000). After harvest, people store Jimbu dried for later use since it is a seasonal herb (main harvest between June and September)(Nepal, 2006).

Uses of Jimbu

The above ground parts of these plants are used for spices and traditional medicines (Nepal, 2006). The use of the spice is primarily for flavoring and seasoning, although it is considered nutritious by people in the Upper Mustang region (Nepal, 2006). Almost all (90%) households in the Upper Mustang region use Jimbu as a spice in curries, soups, pickles, and meat items (Nepal, 2006). Populations throughout the rest of Nepal and parts of Northern India consume the spice as well (Chhatre, Ojha, & Persha, 2009). Jimbu is also considered to be a high value medicinal plant collected from Nepalese hillside pastures (IUCN Nepal, 2000). In Upper Mustang and other North-Central parts of Nepal, households use Jimbu to cure various medical illnesses such as flues, coughs, and stomach pains (IUCN Nepal, 2000). This could be related to the isolated nature of these villages, living in regions that do not have basic health facilities.

Economic Benefits of Jimbu

After collection, the Jimbu plant is dried in a closed area, such as a shed, for several days before it is completely air-dried (Nepal, 2006). About 3288 kilograms of air dried Jimbu was estimated to be collected in Upper Mustang during 2004, and almost all of that was used for to sell (Nepal, 2006). Most household income in alpine regions of Nepal is from collection and trade in medicinal plants (Bhattarai et al., 2010). In the Upper Mustang Region of Central Nepal, agriculture, wild-plant collection, and seasonal trading are the most important economic activities for local livelihoods (Bhattarai, Chaudhary, Quave, & Taylor, 2010). Most households in the Upper Mustang region are involved in the collection of wild Jimbu (Nepal, 2006). The sale of Jimbu makes a significant (10%) contribution to the annual household income in Upper Mustang (Nepal, 2006). The income derived from Jimbu is significantly

influenced by the involvement of a household in the seasonal trade (Nepal, 2006). On average, the annual income from Jimbu sale for households involved in the trade was about \$70 USD in 2003 and 2004 (Nepal, 2006). People usually act as both the collectors and traders of Jimbu in order to maximize profits earned (Nepal, 2006). The primary mode of trade for Jimbu was door-to-door selling, although it is common for traders to travel to Kathmandu and other parts of Nepal and India to take part in seasonal trade (Nepal, 2006). This means that people involved in the Jimbu trade are currently looking for consumer markets to sell to, and would benefit from supplying to foreign markets. Furthermore, spices like Jimbu can be “high value, low volume cash crops”, and international trade in this product can enhance rural Nepalese incomes and livelihoods (Jack & Matthews, 2011).

Availability and Practicality of Jimbu

There is a consistent availability of *A. hypsistum*, however *A. przewalskianum* was considered to be vulnerable in the 1990s (Dinerstein, Loucks, & Wikramanayake, 2002). There are some agronomic constraints for Jimbu collected in the wild that contribute to the vulnerability of this product. One constraint is the degradation of the plants due to sheep, goat and other livestock grazing (Chhatre et al., 2009). This is mainly because wild Jimbu is generally found on communal land, and there is no active management to control access to the plants (Nepal, 2006). One natural constraint to the availability of Jimbu is the reliance on rainfall, especially during the early summer months, which is critical for the growth and survival of the plant (Bhattarai et al., 2010). There are no diseases known to the author of this paper that are directly affecting the Jimbu plants. Most of the hillside land surface within the Mustang region lacks vegetation, and the sandy soils can easily become eroded by wind, snow, and rain, resulting in challenges for local livelihoods and agriculture (Dinerstein et al., 2002). The Jimbu plant species can be seen as an answer to erosion, as they grow in clumps in high-arid regions with sandy soils (Nepal, 2006). Because of the remote, mountainous areas where Jimbu is found, collection mainly involves physically able and energetic people. This means that collection is not always practical for elders or physically unable people to take part in.

A Need for Management

There are currently no active management systems in Upper Mustang for the collection and trade in the Jimbu industry (Nepal, 2006). Formal management systems like farmer groups and cooperatives are necessary in order to overcome the agronomic restraints of Jimbu, such as controlling livestock grazing. Farmer cooperatives can improve community organization for Jimbu collection and increase earnings through shared buying and selling in bulk (Jack et al., 2011). There are also few alternative systems for

collecting Jimbu besides in the wild. This means that, through active management, further domestication can be seen as an opportunity to enhance production and development of the Jimbu industry.

Sustainable collection of Jimbu can be further developed if rotational harvesting sites (crop rotation) are introduced both on communal and private land (Nepal, 2006). Jimbu, along with other spices, does not require extensive inputs of cash, machinery, land or labor in order to profit from (Jack et al., 2011). This means that Jimbu can be planted in gardens or close proximity to a poorer Nepalese household in the Mustang Region, and especially on hillsides where the plants grow. A profitable crop near the household can benefit women in particular, mainly because it is easier for them to be involved and tend to the Jimbu plants (Jack et al., 2011).

Export Potential

There is growing demand for healthy, organic and unique tasting spices and herbs, especially when they originate from producer friendly sources (Agriculture and Agri-Food Canada, 2013). Additionally, there is a growing South and East Asian population in Canada. There is export potential for a spice like Jimbu because it offers 1) a traditional taste for these Asian cultures in Canada, 2) a unique and organic taste for non-Asian consumers, and 3) a healthy seasoning alternative to salt and fats in a health-aware society. Spices are high-value but low-weight products, which means that transporting Jimbu to foreign markets would be cheap comparing to heavier crops. The dried Jimbu is generally stored in a dry, low-humidity, enclosed area after it is harvested, meaning there would be no need to refrigerate the spice when exporting it. Jimbu does not require a Phytosanitary Certificate or a Permit to Import, and like other spices would be regarded as a low-risk import product (Canadian Food Inspection Agency, 2014). Fortinos and No Frills have expressed interest in Jimbu over the phone because it is a spice from the Indian region (Loblaw Companies Limited, 2014), although a formal letter sent to the Loblaw Companies Limited is required. Jimbu would be entitled to Least Developed Country Tariffs, although a Certificate of Origin or Statement of Origin is required by the exporters in Nepal for proof of origin (Canadian Border Services Agency, 2014). There are no current duty rates for Jimbu as there is no formal Harmonized System (HS) code (Canadian Border Services Agency, 2014). It is encouraged that further research goes into the proper management of Jimbu. This is because organization run by local Nepalese is critical in order to access foreign markets while maintaining sustainable use of Jimbu on a domestic level.

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