



BODO FARMERS AND THE CONSERVATION OF INDIGENOUS CROP SEEDS

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Abstract:

Seeds are vital for plant reproduction, human and animal sustenance and the overall economy of agriculture. They are the foundation of our food system, without them we could not grow the food. It also contributes to the preservation of the diversity of plant life on Earth, which is necessary for a healthy environment. Seed storage is an ancient practice that helps to preserve the genetic diversity of crops and ensure the availability of seeds for future generations in a traditional way. The Bodo or Boro Community is one to the largest scheduled Tribe in North-East-India. They are the earliest Inhabitants of Assam valley. They came to old Assam via Tibet just after the arrival of Austric and established over the valley of Brahmaputra. According to the 2015 census there were 3.3 million Boros in Assam. The Boros are generally agriculturists and more than half of their total population lives in rural areas. Agriculture is the main occupation of this Community, They are generally cultivators. They mainly depend on paddy cultivation. They also cultivate various types of crops and vegetables in different seasons in the same plot of land. For cultivation, they conserve seeds in traditional method. There are many traditional methods of seed storage among the Bodos which are protecting seeds from damage and decay. This paper explores the traditional knowledge system of seed conservation of the Bodos.

Keywords: Bodo Community, Farmers, Conservation, knowledge, seeds.

Introduction

The Bodos are a race of the Mongolian people who are described to be the inhabitants of a country north of the Himalayas and west of china. This land is known as Bod. The inhabitants of Bod Country are known as the Bodo-Ficha or Bodocha or Bodosa (Bodo means land and Ficha or cha means children, hence children of the Bod Country). In course of time they come to be known as simply Boddo-Bodo-Boro. They are known to be the first to cultivate, first to rear silkworms, weave silk clothes like Endi (eri in Assamese) and

Muga and to construct bricks house. Their main occupation is agriculture. They mainly depend on paddy cultivation. They also cultivate various types of crops and vegetables like besor (mustard), phathw (Jute) Masur dail or dali (Red lentil), Sobai (Black gram) Bokhla (kola dali), Sibing (Sesame), orohor dali (pigeon pea), khuser (Sugar cane) matar (peas), radish, potato, Cabbage, bottle gourd Cauliflowers, phwrla (sponge gourd), cucumber, Ridge gourd, green leaves, beans, small beans, papaya, pumpkin, brinjal, chilli, Coriander, turmeric, ginger, garlic etc. both for family



consumption and for marketing. The Bodo people those crops and vegetables by using their own traditional tools. The Bodo people naturally conserve seeds by continuing to grow their traditional and indigenous varieties of crops and vegetables. Their seed conservation is deeply integrated into their traditional agricultural practices, focusing on the preservation of diverse rice varieties and indigenous seeds to ensure food security and climate resilience. The traditional method of seed storage is often compatible with organic farming practices. They are vital for maintaining genetic diversity, enhancing climate resilience and promoting sustainable agriculture by preserving open-pollinated seeds that support natural farming Practices. They also have much nutritional Value and helps in cultural preservation. Traditional methods of seed storage have some disadvantages also. They are time consuming, not effective as modern methods of seed storage and not suitable for all types of seeds.

Aims and Objectives of the Study:

The aims and objectives of the present study are:

1. To discuss about the livelihood and cultivation of the Bodos.
2. To study the traditional Knowledge system of seed conservation of the Bodos.

Methodology:

To study about the traditional Knowledge system of seed conservation of the Bodos, both the descriptive and analytical methods to investigation are followed. Both primary and secondary

sources have been used in this paper to collect required data. The primary data and information have been collected by adopting questioning and interviewing method to the farmers in the Boro villages. The secondary data and information have been collected from various books, Articles, journals, Magazines Wikipedia and Websites etc.

Discussion and Analysis:

Discussion and Analysis: There are many methods of seed conservation among the Bodos that are passed down through generations. The Bodo farmers preserve seeds in a traditional way for future cultivation from the healthiest plants after harvest. One of the popular method of seed conservation is to sun dried the seeds and then stored them in earthen pots, bamboo containers or granaries and then sealed the mouth tightly to keep out moisture. This method kills the insects, prevents fungal growth and protects the seeds from pests, diseases and environmental damage. The Bodo farmers use airtight containers and they also tie vegetable seeds inside clothes for storage. The paddy seeds are stored in cylindrical containers made of bamboo called 'majli kho' in Bodo language and mud plastered granaries known as Bakhri or Duli. To store and protect maize, Okra, ridge gourd, sponge gourd, eggplants seeds, they kept these grains in the kitchen over the fireplace, so the smoke and heat would keep pests away. The Bodo farmers use cow dung, neem, garlic, turmeric powder, castor powder, red chilli, ginger etc. to prevent the pests while storing seeds. The seeds are stored in a cool and dry place to prevent the growth of pests and deterioration of the seed. The traditional method of seed storage



is often compatible with organic farming practices. They are vital for maintaining genetic diversity, enhancing climate resilience and promoting sustainable agriculture by preserving open pollinated seeds that support natural farming practices. They also have much nutritional value and helps in cultural preservation. Traditional methods of seed storage have some disadvantages also. They are time consuming, not effective as modern methods of seed storage and not suitable for all types of seeds. The Bodo people employ sustainable techniques for paddy cultivation and storage in traditional granaries like bakhris (granary) and duli (bamboo rice Containers), alongside preserving indigenous knowledge of seed preserving methods like soaking seeds in water to induce sprouting before planting them in muddy fields. The local vegetable seeds such as pumpkin, bottle ground, cucumber, okra, Ridge gourd etc. are preserved in hasung (bamboo container) or earthen pots.

There are many traditional seed storage techniques, among the Bodos to protect seeds from damage and decay.

The granary house is called bakhri in Bodo where the farmers keep their yielded paddy harvest. It is constructed towards the eastern side of the courtyard and symbolizes the economic status of a family. It is made from natural materials like bamboo, wood and tin or thatch roof. It features a distinctive circular or rounded wall constructed by weaving bamboo splinters. The entire structure is built on a high platform, usually 3 to 4 feet above the ground level to protect the grain from dampness and floods. The walls are

plastered with cow dung mixed mud. A small single dour is kept on top of the front wall through which the grains can be deposited or taken out from the granary.

2. Duli:

Duli is also a traditional Bodo tool made of bamboo for storing seeds of Paddy, mustard etc. It is made from woven split bamboo. This is a 'U' shaped basket where the paddy grains are stored and are taken outside to dry in the sun when needed. Duli may be a small or large in size depending on the harvest. A small duli can measure approximately 75-80 cm in length and 80-85 cm in breadth. A bigger duli can reach 185-213 cm in height and 100-110 cm in width.

3. Mud pot and bamboo storage:

The Bodos used the mud pot and owa hasung (a container made of bamboo stem) to store variety of seeds. Mud pot is called 'dwsrao' in Bodo. Seeds such as mustard, Sesame, Corm, black grams etc are stored in 'dwsrao'. Neem leaves are used to prevent the pests and insects while storing the seeds in mud pot. After storing the seeds the mud pot is covered with cloth piece tightly. In this type of structure about 70-80 kg of seeds is stored. The seed can be stored up to 5-6 months. The Bodos stored seeds in the container of bamboo stem. It is also good material to store seeds because it provides right temperature and airing to keep the seeds usable for longer time.

4. Hanging Method:

In these technique vegetables like okra, beans, ridge gourd, sponge gourd, eggplants are tied with jute rope and kept right straight above the fireplace called 'ordab' in Bodo. This technique helps in



removing the moisture content of the stored material and micro-organism like fungi and insects. The stock is kept for 5-6 months and after that the seeds are removed from the dried Vegetable stock and taken away for sowing in the field.

The Shelving Unit made of bamboo is called 'owadanda in Bodo are also used to store cobs of maize, garlic and onion in Kitchen in a typical Vernacular Bodo Kitchen, In this technique, the bamboo is cut into pieces in around 4-5 meters and it is tied with jute rope in the corner of Kitchen and then the Cobs do corn, garlic and onion are kept without de-husking. About 9-10 brunches can be stored this way for 5-6 months.

5. Gunny Bag:

In this technique, Seeds of bottle gourd, ladys finger, ridge gourd, coriander, garlic pods, reddish, pumpkin etc. are stored in the gunny bags after sun-drying them. The capacity of seeds to be stored in this bag is about 30-40 kg, its durability is about 5-6 months and after that those seeds are sown.

6. Seed pasting method (Injur lirnai):

In this method, seeds of cucumber, wax gourd, pumpkin, tomato, chilli etc are pasted on the wall made of cow dung mixed mud mainly on the upper side of the Kitchen wall to protect the seeds from flood water and moisture of rainy season. This technique protected the seeds for longer duration.

Conclusion:

The seeds in present time are preserved by using chemicals like Pesticides, insecticides and fungicides which may help in keeping the seeds protected for longer time. The chemicals protect seeds and seedlings from pests and diseases,

leading to improved crop yields, but their application carries risks to human health and the environment. The traditional methods of seed preservation have played a crucial role in safeguarding agricultural biodiversity, maintaining food security and preserving cultural diversity for future generations. But they also have drawbacks. In recent time there is realization that traditional knowledge is not redundant and it is still applicable in the present day also. It is not only valuable to those who depend on it in their daily lives but also to modern society, modern industry as well. So, for the preservation of the culture, identity livelihood, healthcare, biodiversity etc. of a community, it is very important to protect the traditional Knowledge system of that community.

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