

# Institutionalizing Traditional Seed Exchange Networks through Community Seed Banks in Kollihills, India



**M**ost small and marginal farmers are self sufficient in seeds of preferred cultivars and resort to seed exchange with neighboring farmers only following a drought or other emergencies. This 'self-contained' traditional seed system serves as a backup source of seed for the region or community.

Various exchange mechanisms are practiced to exchange seed between individuals and include barter and exchange based on social obligations decided by the community. The practice is informal and varies between locations and is strongly influenced by cultural traditions and relationships. The horizontal seed networking among farmers in different communities is a traditional approach that ensures the availability of seeds.

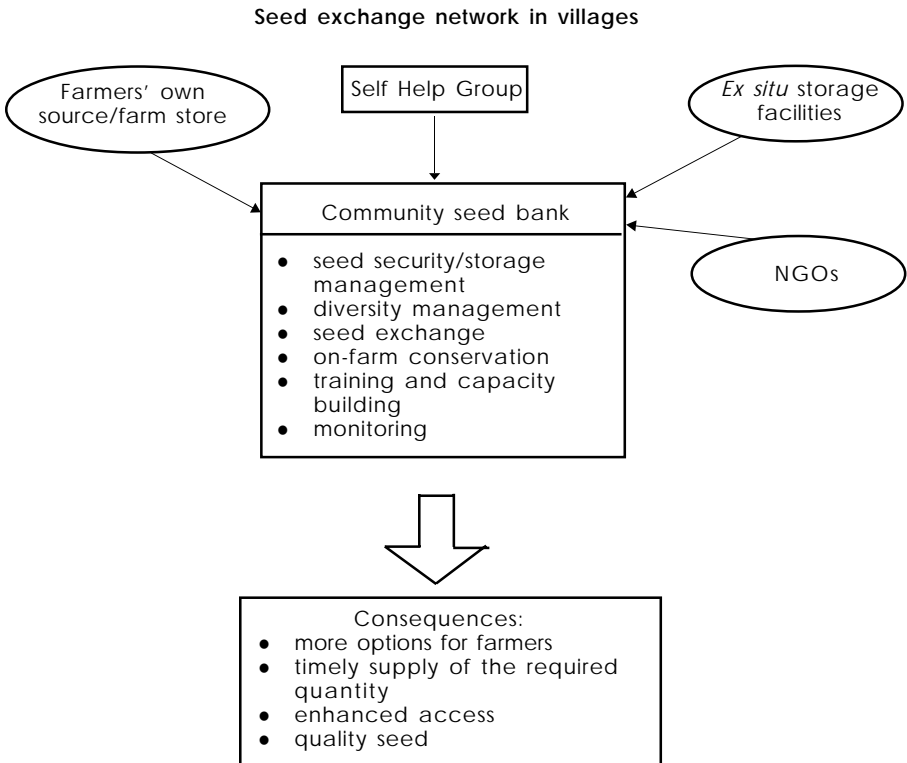
The introduction of high-yielding varieties and commercial crops affected the availability of seeds of traditional cultivars. Strengthening the access and availability of traditional varieties helps promote on-farm conservation.

In Kollihills, south India, which is known for its inter and intraspecific minor millet diversity, the seed system is characterized by local seed production, selection, storage, and exchange among local communities. One-tenth of the harvested quantity is normally stored as a seed material. Exchange takes place among relatives and neighbors and generally seed could be given to all. Repayment is a must and customary, sometimes motivating the farmer to revitalize the cultivation. Women play a dominant role in seed management and decision-making, and undertake all seed production activities.



## Establishing a Community Seed Bank

Seed exchange is common and takes place at the individual level. The practice may be institutionalized through a community seed bank (CSB) as a common property resource. Such seed banks, managed by the local communities, could be established at the village or community level to facilitate seed availability. The establishment of such seed banks must build upon traditional practice.



Community seed banks are established and operated through a seed exchange network in the village managed by a group of local people. The objectives are to:

- ensure the sustainable supply of required planting materials;
- serve as a community based *ex situ* conservation facility and as a backup source; and
- enhance the access and availability of locally adapted crops and their varieties.

A Self Help Group, consisting of 10-15 women and men farmers, manages the unit. The SHGs are primarily credit-based institutions that are recognized by the formal banking system. Two selected women from the group serve as seed bank managers. Necessary training and capacity building programs are organized periodically, essentially focused on seed quality, monitoring, storage and management.

#### Local Ethics and Norms Followed in the Exchange Process

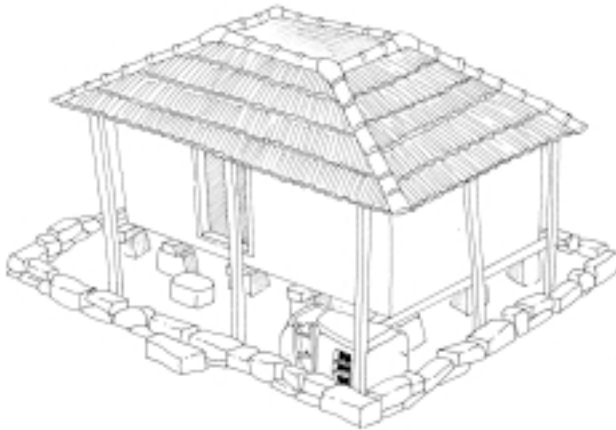
- The borrower has to return two or one-and-a-half times the quantity of the seed borrowed.
- The transaction is through the exchange of seeds and never through cash.
- Seed has to be returned; otherwise, borrowers will not be able to avail of this seed support again.
- If the quantity is not returned after a crop harvest in the year, the interest doubles.
- If the quantity is not returned, the village *panchayat* meetings are used to resolve the matter.
- The lender ensures the seed quality and trusts the “neighborhood certification”. If the quality is poor, with inert dust particles and chaffs, the lender cleans it before the transaction.
- Materials are exchanged for products having equal value. For example, little millet and Italian millet are not exchanged for paddy because paddy gives only nearly 60% of the edible part after threshing. Little millet and Italian millet give around 75% of the edible portion, leaving the husk.
- Similarly, products that need to be processed are never exchanged unless they have been converted into useful products. For example, a landrace of Italian millet *killanthinai* could be threshed easily with less energy than *koranthinai*, hence, they cannot be exchanged.

The system links a formal *ex situ* system to a dynamic *in situ* system. The bank maintains a core and working collections of the accessions.

The design for the seed storage facility is derived from the 'Thombai', a traditional grain storage structure built with red soil, paddy/wild grass straw, and wood. The size of the structure is 5" x 9" with a capacity of 500-900 kg of seed material.

**Thombai** is a traditional grain storage structure; size varies from small compartment within a house to a separate hut-like structure near the home. The general structure is located 2-3 inches above the ground level to avoid rat damage. Generally, there are two compartments inside and closed on all four sides with a small opening at the top. The roof materials are millet straw in earlier days and slowly it shifts towards tiles and asbestos and aluminum sheets.

There are two types of ownership: individual single household; and kinship basis by more than one household and at the community level. Size of the granary directly correlates with the landholding categories. Women usually manage the granary and use plant-based materials as a storage pest repellent like pungam (*Pongamia glabera*) dried leaves.



Considering local preferences, the required quantity of preferred varieties of seed are mobilized. Seeds are distributed on a loan basis to local farmers and recovered after harvest. The exchange uses the traditional mode of transaction; if a person borrows one unit of seed before planting, she/he returns two units of the seed to the seed bank after harvest.

#### Traditional Methods of Seed Storage

Seeds are stored in the fruits of *Lagenaria ciseraria* and also in the leafy granary made from the leaves of *Bauhinia vahlii*. The Konda Reddy women mix domestic ash to the seeds and preserve them in earthen pots. Only during sowing time are the seeds touched to avoid contamination.

Source: Ethnobotany and agrobiodiversity conservation practices of Konda Reddys of Papikonda Hills in East Godavari District, Andhra Pradesh, India. T Ravishankar, M.S. Swaminathan Research Foundation, A.P., India.

(Website: <http://www.mssrf.org>)



The managers ensure the germination and physical purity of the seed material while lending and getting it back. Also they constantly monitor the seed stock for storage pests. The availability of the seed stock in the bank and the balance sheet is discussed in monthly group meetings. The SHG members informally pass information on available varieties and quantities to neighboring farmers.

The bank offers community services such as seed security, conservation in the original agro-system, exchange, and revitalization in addition to the indirect incentive of diversity management for society. Five such CSBs operate in Kollihills.

Community seed banks are good tools to revive the conservation traditions of rural and tribal communities. In on-farm conservation sites where agricultural biodiversity is under threat with limiting farmers' options, CSB could be a tool for revitalizing on-farm conservation and for providing farmers with options.



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