

Community Seed Bank – a Policy paper

Preamble:

Seed is the most valuable input in farming. It has gained the unique status as a natural resource evolved with human civilization. In other words it is a plant genetic resource, which is being inherited from the past generations of human being. One can imagine the role played by the nature as well as human beings over a long period in creating such a diverse and wonderful resource. If any portion of it is lost by one or other means it is going to be a loss forever. Unfortunately, the modern agricultural trend enhanced the erosion of agrobiodiversity resulting in lost of valuable local crop germplasm. In order to arrest further lost of traditional crops and varietal diversity global concern is gaining much importance in the form of preservation, conservation and enhancing the local agrobiodiversity for sustainable food and nutritional security.

Biopiracy of germplasm has been a hotly debated issue in the international circles. Much international legislation are introduced to protect the genetic diversity with IPR. It ranges from Patents, plant variety protection based on the UPOV model, GI and nationally recognized laws such as the seed bill. On examining the intricacies of the laws it is realized that in the name of protecting the germplasm from Bio piracy it also leverages the legalization of bio prospecting and theft. Alternatives to protect the farm

saved seeds have been examined. If seeds that belong to farmers have to be protected as a common property, the concept of community seed banks lends itself to farmer's access to seeds without legal formalities. However, it is imperative to restore the community ownership and protection that it requires from being infringed upon.

Community seed bank is one of the concepts being evolved for sustainable agriculture. It is the concept to make the farmers, mainly small and marginal farmers, to be self reliant for the most important input like seed. Additionally CSB could also function as local information centre for organic inputs like manures, pest and disease management formulations and to provide market linkage for organic produce.

Establishment of CSB:

The genesis of on farm conservation goes back to the convention on biological resources where more than 110 countries were signatories to the proceedings. It was realized that the gene banks under the consultative group Industrial agricultural research (CGIAR) were not sufficient to conserve the vast diversity. The germ plasm stored under cold conditions amounted to several millions. Due to the practical difficulty in continuing to grow them out, many of them failed to grow under changing environmental conditions. Recognising the farmer's fields as repositories of biodiversity the agenda 21 called for both ex situ

and in situ conservation and called on the governments to conserve their biodiversity and use their resources sustainably. Many Civil society organizations that were involved in conserving the diversity took it a logical level to initiate community seed banks as a way of making available the genetic resources needed by the community. Ever since there has been a growing awareness that CSB is among the major strategies for maintaining on site the genetic diversity in crop / plant species needed to ensure food security. The interested farmer groups, especially women's groups are mobilized and motivated for establishing a CSB in their locality. It is considered that at least 2 to 3 such CSBs can meet the seed requirement of different crops in a taluk. Partial financial assistance or structures like storage facilities for establishing CSB is required to keep the seed banks viable.

Surveying and collection of traditional varieties of local crops:

Extensive survey needs to be taken up in the locality to trace the traditional varieties of crops, including vegetables. By contacting elder persons in the region, the names of traditional varieties that were present in the past also has to be documented during survey, so that such varieties could be located in other places as well. The guidance of a technical person is necessary while conducting such a survey.

The collected seeds have to be sown and raised a good crop in the fields of one or more farmers in the group. Usually the seeds so collected contain lot of mixtures, while collecting the seeds the earheads / panicles of only those plants which have maximum resemblance and healthy have to be harvested at correct stage of maturity. The assistance of farmers who are familiar with the variety will be helpful in genetic purification.

The collected earheads have to be sun dried for two days before threshing them. Care should be taken while threshing, cleaning and storing the seeds so as to avoid any mixture of seeds of other varieties. Indigenous knowledge on the various aspects of seed selection, seed threshing, storage and germination have to be documented and applied.

Management of CSB:

Farmer requirement of seeds can be met under the following conditions

The concept of seed bank is drawn from the fact that more than 60 percent of the seed requirement is met by farmer produced seeds. Therefore with the objective of maintaining the diversity of the indigenous seeds in the subsistence crops the seed banks are based on the following principles.

1. Identification of the farmer preferred varieties of the crops grown in the area

2. Involve the farmers of the area in a process of participatory varietal selection
3. Identify farmers who are knowledgeable about the characteristics of the varieties to select the seeds before the harvest
4. Identify farmers who will grow the varieties and can be compensated for providing the varieties.
5. Involve the community in a participatory process to manage the seed bank
6. Maintain a register of the varieties brought in by the farmers
7. Manage the storage of seeds with indigenous methods
8. Involve the farmers managing the seed bank to ensure germination before distributing it to other farmers.
9. When seeds are returned back to the seed bank ensure that the same seeds are returned.
10. The seed banks are linked to external farmer's organizations like the co-operatives that provide a market for the farm saved seeds, thereby giving a financial stability to the seed banks .

The following are the important aspects for effective management of CSB

1. CSB management committee.
2. Book keeping and accounts management.
3. Planning and monitoring seed production activity
4. Seed procurement, cleaning, grading, packing and marketing.
5. Enriching seed diversity in CSB.

CSB Management Committee:

A committee consisting of three members is to be formed by the group responsible for CSB. This committee will be responsible for the overall management of CSB, with specific responsibility as given below

- Member 1: - Book keeping and account management. Different registers like dead stock, seed stock, procurement and selling details, list of seed producers, seed germination test records and accounts has to be managed by one of the eligible member.
- Member 2: - Planning, monitoring till harvest of seed production activity has to be looked after by another member of the committee.
- Member 3: - Procurement of seeds of different crops including vegetables from seed producers and selling them to individuals or to Janadhanya marketing network has to be monitored by the third member.

A proper co-ordination is required among the three members and all the activities have to be discussed in the group meetings. The committee members need monetary benefits as decided by the group.

Seed Production and seed quality maintenance: -

The most important activity of a CSB is the management of quality seed production and distribution. In order to function efficiently and effectively on sustainable basis, the CSB has to strive to maintain its reputation. A group of interested farmers who take up seed production need to be trained in seed production of different crops. Processing of seeds after harvest should be followed by appropriate seed handling and storage methods to maintain genetic purity and good physiological condition of seeds. Seed germination test before packing the seed should be carried out without fail at each CSB.

Enrichment of crop diversity by CSB: -

Though some of the farmers may involve in retaining the seeds of 1 or 2 varieties depending on their likings but usual trend is to keep on changing the varieties after 3 to 5 years. In order to increase the diversity of crops in a particular region CSB always try to look for seeds of different varieties of local crops as well as those of new crops in other regions.

It is also desirable that CSBs in a particular agro-climatic region should exchange seeds among themselves and also can workout strategy for taking participatory plant breeding to evolve new varieties on farmer's fields itself.