



Seed Availability, Saving and Banking

Banking

Elements of effective seed banking include planning, record keeping, germination testing, storage, and distribution.



ECHO ASIA Regional Impact Center

An Introduction



MISSION:

ECHO is a global Christian organization that equips people with agricultural resources and skills to reduce hunger and improve the lives of the poor.



www.ECHOcommunity.org

Where is ECHO Based?



ECHO Asia Seedbank



ECHO[®]
Asia Impact Center
Seed Catalog

- 175 Seed Varieties
- Appropriate Seed Storage Methods for the Tropics
- Seed Production Plots

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- A collage of various agricultural products including different types of seeds (beans, lentils, grains), chili peppers, and tomatoes. The ECHO Asia Impact Center logo is overlaid on the collage.
- Open-Pollinated
 - Locally adapted
 - Underutilized Crops

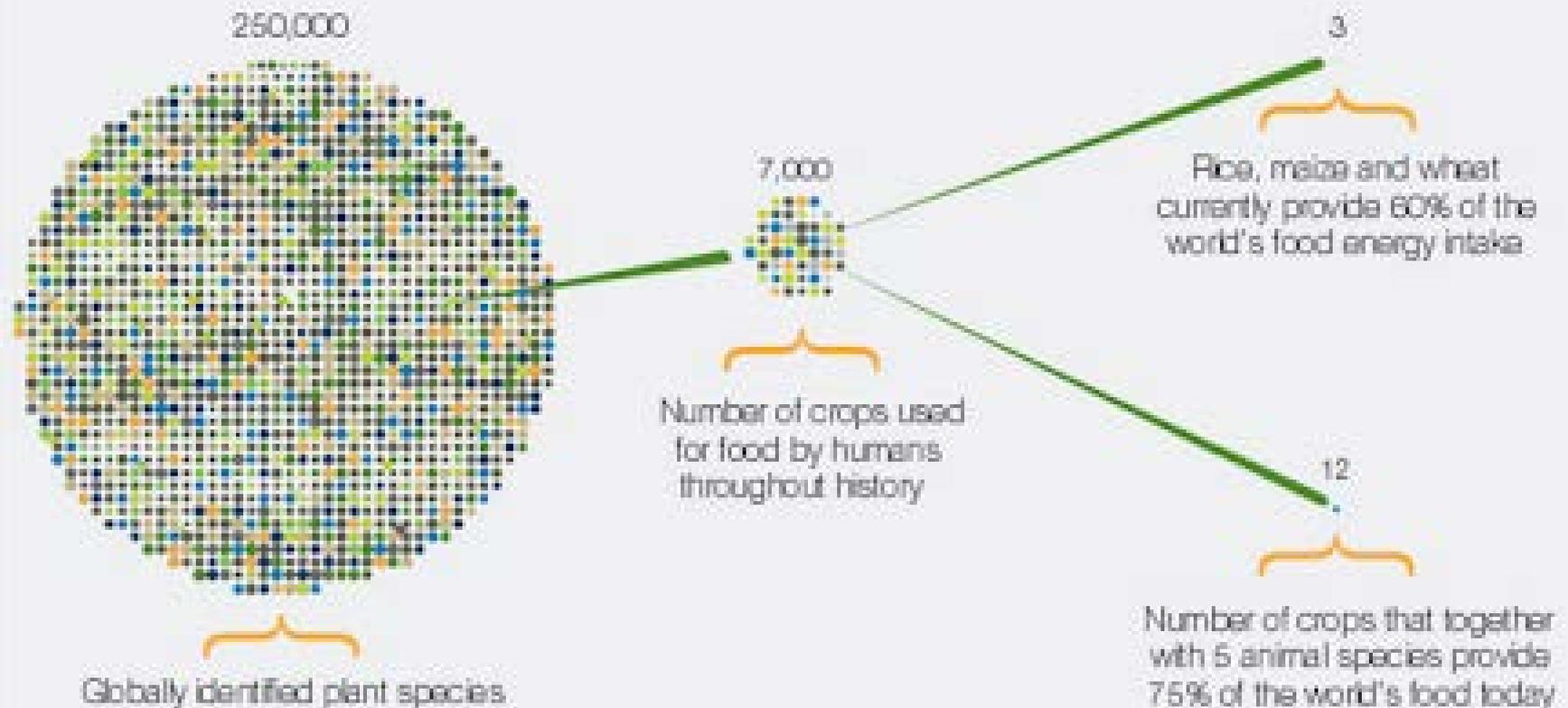


Benefits of Local Seed Banks



Shrinking Diversity

The heavy reliance on a narrow diversity of crops puts future food and nutrition security at risk.



Source: 'Dimensions of Need: An atlas of food and agriculture'. FAO, 1995.



Considering Seed Banks

Situations in which a local seed bank might be considered:

- Local crop diversity is declining
- There are few places, locally, where farmers can access seeds of new crops/varieties
- Seed stores/dealers in the area only carry a narrow selection of crops





Purpose of Seed Bank:

Place to preserve crop diversity by:

- Storing seeds indefinitely under freezing temperatures
- Storing seeds 1 to 5 years to share with farmers (focus of this competency)
- Primary role different than a 'Genebank'





Benefits of Seed Banks

- Prevent loss of existing crop diversity
- Expand crop options available to farmers
- Protect locally adapted crops
- Facilitate training on seed saving and crop improvement
- Improve accessibility of seeds to farmers
- Raise awareness about seed issues and laws





Planning Seed Banks





Purpose

Questions to ask yourself:

1. What are the strengths and gaps of the local seed system?
2. Who are the stake holders?
3. How big of an area will the seed bank serve?
4. What types of crops will it supply seeds of?
5. Will it be run by volunteers, a cooperative, or paid staff?
6. What types of crops will it supply?
7. Where will it obtain funding or resources?



Crops

Questions to ask yourself:

1. What traits are farmers looking for?
2. What types of crops will be carried by the seed bank?
 - Legumes
 - Leafy greens
 - Trees
 - Indigenous
 - Exotics
3. Where will the initial seed be sources from?
4. What criteria will be used in deciding whether or not to include/carry a given variety in the seed bank?





Budget and Funding

Smaller Seed Bank vs. Larger Seed Bank

- A small seed bank can operate with membership dues, saved income from seed sales, volunteer labor, or a combination of these
- A larger seed bank will likely require funding from grants, government sources, and/or seed sales



* Note that sometimes a seed bank may start as a small volunteer bank and grow when funding sources grow.



Operating Seed Banks



Storage



The main goals of seed storage are to keep seeds alive, slow down their use of food reserves, extend their viability and maintain the energy they need to germinate at planting time

Key factors:

- Protect them from pests and environmental factors
- Store them in a a dry cool area





Germination Testing

- Germination testing is an important part of a seed bank's operation
- Testing allows the workers to know if the seeds will germinate and at what rate
- Be aware of dormancy issues





Record Keeping

Benefits:

- Traces problems with seeds
- Ensures information
- Improves function of seed bank and quality over time
- Tracking is kept by the accession number

The Source is Important:

- How
- Where is it from
- When seeds were acquired
- The data should always be collected in a consistent way

Crop Information Sheet

Scientific name: _____ Intern: _____

Crop: _____

Variety: _____

Accession number (include lot#): _____

Purpose: _____

Date seed started: _____

If transplant, date transplanted: _____

Planting location: _____

Spacing: _____

Soil/ bed preparation (raised bed; plot size; trellis; manure, mulch, compost added):

To do during season (hand pollination, staking, pruning):

Required pictures (please list others taken below #3)	Date(s) pictures taken:
1. Crop stand – distance shot	_____
2. Flowers/Leaves/Fruit	_____
3. Fruit/Seed-pod close-up	_____

Special features of this accession (e.g. color, height, early maturity, heat/ disease tolerance, day-neutral, etc.): _____

Flowering date (50% of all plants): _____

Days to flowering from seed: _____



Labeling



Items that must be clearly marked with the accession number:

- Seed packets
- Containers
- Bags

Labels should also include:

- Variety name
- Year
- Sources