

# Best Practices for Saving Seeds; A small farmer coping strategy for self-reliance in Conflict areas



- Background-What is seed saving?
- Why should small farmer save seeds?
- Why farmer saved seed resolves challenges of a small scale farmer?

Sophia Kasubi  
ECHO East Africa Impact Center

# Biography and Session Introduction

- Sophia Kasubi holds a Bachelors Degree of Arts in Sociology from the University of Dar es Salaam, with specialization in Social Policy, Planning and Administration (2008). She worked with Global Service Corps as a Personal Assistant/ Administrative Assistant and Africa Agribusiness Academy as Project Assistant. She is currently working with ECHO East Africa as Administrative Assistant.
- Her presentation elaborates how small holder farmers can break out of the dependency syndrome, hence they can manage to produce and serve their own seeds for better farming practices.

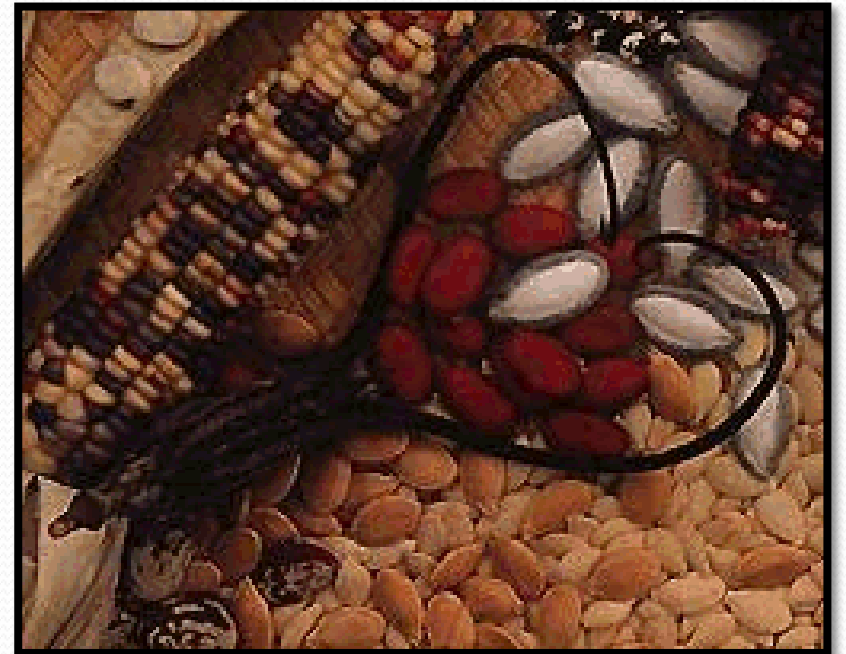
# Background – what is seed saving?

As we discuss about seed saving, we need to distinguish it from storage of grains for food. Seed quantity saved by small farmers is determined by the size of the land used to cultivate.

Normally farmers keep small quantities of seed at home, in suitable bags or small containers (glass/plastic) such as jars or traditional earthen pots, protected with traditional chemical pesticides and must be free from pests and diseases. This is done so, as to make sure seed do not lose their germination capacity.

# Why should small scale farmers save seeds?

- A Seed is life.
- Small scale farmer relies much on seeds
- Purchase of seeds can be expensive
- Some seeds cannot be purchased
- To discourage the dependency syndrome
- Saving to be used in other farming seasons
- Save 'quality declared seed'



# Why farmer saved seed resolves challenges of a small scale farmer

- using local resources they have in their surroundings.
- self reliant and not dependent on outside resources
- reduces dependency syndrome among small scale farmers
- Some local seeds are more adapted

# Tips for having viable seeds

- Possibly choose separate plants to be kept only for seeds.
- Save seed from healthy plants, i.e., free from pests and diseases.
- To obtain good seed, follow the spacing criteria for seed production according to seed/plant type
  - Maize spacing: 60cm x 30cm
  - Bean spacing: 15.5cm x 15.5cm
- Make sure to harvest on time. (demonstrate immature, over-mature)
- Dry properly: the ideal seed moisture content for saving is 5-10%



# Seed saving: Ways to pre-dry seeds before saving?

## METHODS:

- Solar drying- this is the ideal local method which is affordable to many small scale farmers.
- Simple food dryer

## PRINCIPLES AND ACTIVITIES TO BE CONSIDERED IN SMALL SCALE SEED SAVING PRACTICES

- Physical factors that affect seed saving, i.e.,
  - Moisture, temperature & humidity
- Common pests and diseases
- Use Heirloom varieties (= open pollinated varieties) and NOT HYBRIDS
- Pre-saving handling – care not to damage seeds
- Small-scale saving facilities – air-tight containers are best



# Some Locally Appropriate Seed Drying Methods



**Hanging on  
piece of wood**



**Curing Table**



**Drying Seeds  
on Tarps, in  
sun**



**Simple Local  
Drier**

# Preconditions to Storing Seeds

- Pest management in seed saving begins in the field
  - Make sure to keep plants healthy from pest damage or diseases
- Make sure seeds are fully mature before harvesting
- Be sure your storing container is clean and free of any pests, bacteria or diseases



*Cowpea seed damaged from piercing insect activity*

# Traditional Seed Saving Practices

- Storage Containers
  - Earthen Mud Pots
  - Dried Cow Dung Plates
- Seed Treatments
  - Neem Oil or Leaves
  - Ash
  - Salt
  - Lime



## Seed Saving: in the Kitchen

- Many people around the world hang their seeds in the kitchen above the fire/cooking place:
  - low humidity
  - smoke drives away insects
  - not accessible to rats and mice



# Seed saving Jars



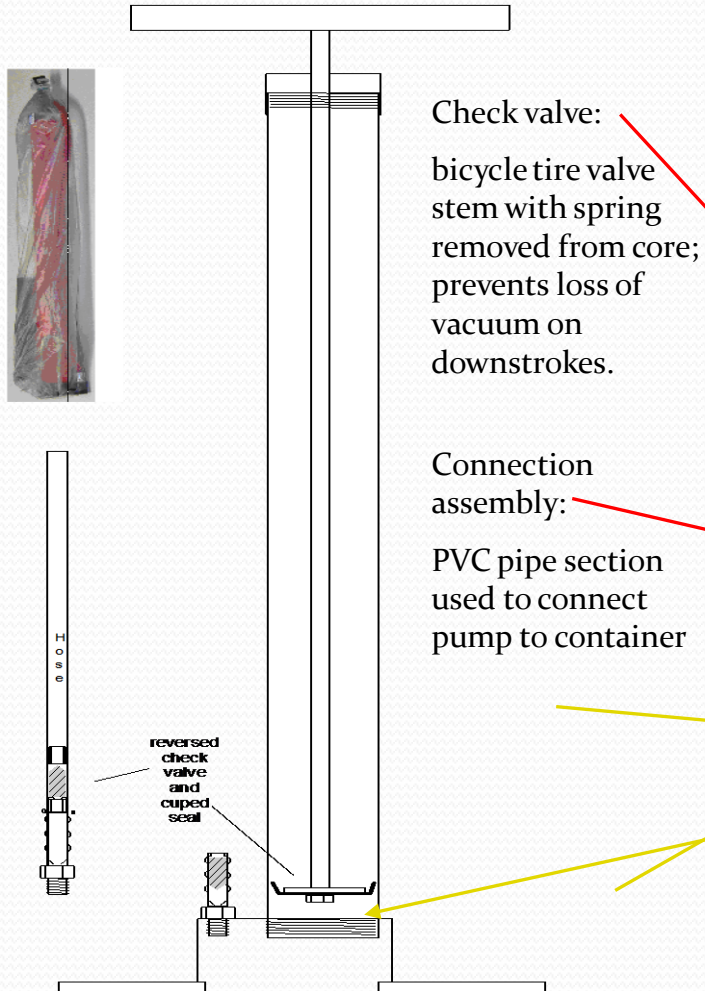
Rubber O-  
Ring Seals the  
Bucket and  
keeps more  
Oxygen from  
coming in

# Seed Saving: small containers made up of glass or plastic

- Glass Jars are better for seed storage than plastic because glass does not allow oxygen to enter the container, but plastic does.



# Modified bicycle tire pump



## Advantages of vacuum pump

1. A best way to save seeds for a long period of time, as it takes away oxygen and humidity
2. Kill pests
3. It is most affordable to many people

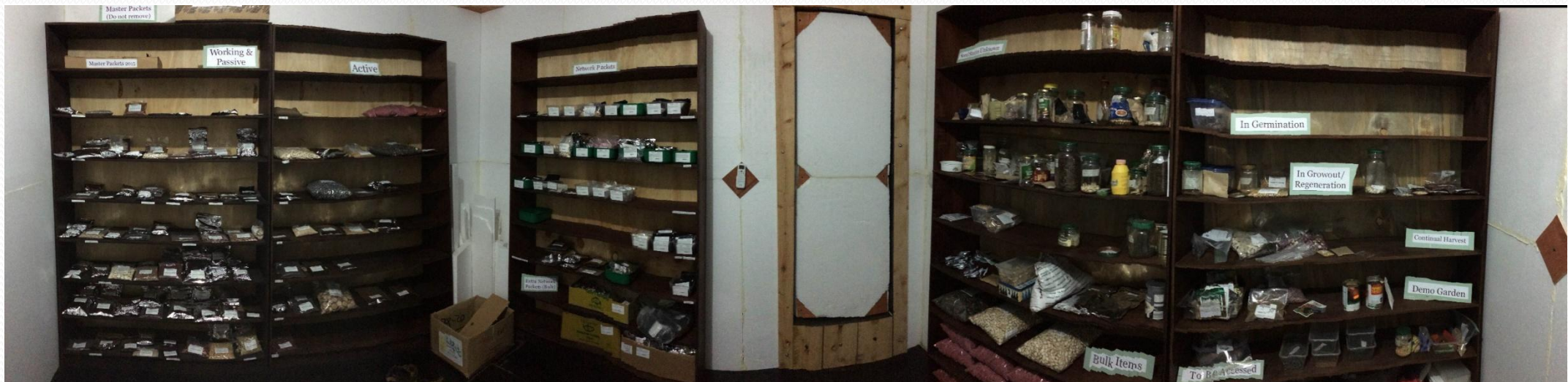


# Modern way of storing seeds

- Cold room/cold store (freezers)

Golden rule for cold room

- Temperature + humidity must be below 100
- We are finding refrigeration not ideal: too humid unless you have an airtight container



# Conclusion

- East African Community Development workers, NGOs and other organizations should encourage small scale farmers to save their own seed to help prevent dependency on seed suppliers as well as to resolve or to abolish conflicts



# Literature

- ECHO Website ([www.ECHOcommunity.org](http://www.ECHOcommunity.org)); see “Publications” tab)
  - Technical Note: Seed Saving Steps & Technologies
  - EDN 86: Extending the Life of Your Seeds
  - ECHO Asia Notes Issue 14: Vacuum sealing versus refrigeration
  - Info on making a vacuum pump from a bicycle tire pump
- ECHO bookstore:
  - Breed Your Own Vegetable Varieties (Carol Deppe)
  - Agrodok 25: Granaries (check Agromisa website for Agrodok 37)
- Online:
  - Saving Vegetable Seeds AVRDC: <http://www.avrdc.org/>
  - Seed Saving Chart - Seed Matters [www.seedmatters.org](http://www.seedmatters.org)
  - **Seed Issues In Disaster-Struck Areas:**  
[http://webapp.ciat.cgiar.org/africa/practice\\_briefs.htm](http://webapp.ciat.cgiar.org/africa/practice_briefs.htm)
- Books
  - Seed to Seed (Suzanne Ashworth)
  - The Seed Savers' Handbook (Michel and Jude Fanton)
  - Farmers' Seed Production (Conny Almekinders and Niels Louwaars)

