

# TEACHING SEED SAVING TO DIVERSE AUDIENCES

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ECHO Asia Conference 2019

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# Introduction

The world, seeds, people → diversity

How do we effectively teach seed saving to diverse audiences that:

- have varying degrees of experience, knowledge, education and literacy
- depend on saving seeds for their livelihood, or have never saved seeds before
- are learning about seed saving in order to help small scale farmers
- are university professors or plant breeders wanting to teach the next generation about seed saving
- are development workers or community members wanting to start a seed bank
- or a combination of the above?



# Workshop Objectives

Recognize steps in preparing to teach diverse audiences about seed saving

Discover basic seed saving content and tools for teaching the content

Content

Activities/Tools



# Training Preparation: Considerations

- Gain experience and knowledge in seed saving
- Approach teaching others with a learner's attitude
- Learn about your audience
- Build a lesson plan and content according to your audience's needs and interest
- Include hands-on activities whenever possible
- Encourage questions and discussion and discovery
- Use the training time to draw out solutions and answers that are in the room
- Expose people to new ideas and perspectives
- Bring everyone along together



Objetivos del Grupo 2  
del banco de semillas

- \* No tener que comprar semillas
- \* Preservar y rescatar semillas que se están perdiendo
- \* Asegurar de la calidad de semillas
- \* Tener acceso a semillas adaptadas a las zonas
- \* Tener condiciones de almacenamiento
- \* Conservar semillas para...

# Learner's Attitude

- Teachers are learners
- Equipping people to do seed saving in their context means listening, asking questions, and learning
- Every time you teach about seed saving, you learn something new



# Learning about Your Audience

Before the session if possible, or at the beginning of the session:

- ❑ Ask questions to learn about your audience's experiences and expectations
  - ❑ Where do they get their seeds? What is their experience in seed saving? What kinds of seeds do they save? What areas would they like to grow in or improve in with their seed saving? How do they save seeds in their context? Why is seed saving important to them?
- ❑ Highlights topics they are interested in
- ❑ Bring their experience into the conversation throughout the session



Recolección	Expectativas	Utili
	Conocimientos	Compartir
	Conservar / Producción	Conserv.
Tipos de semillas →	✓ Almacenar	✓ ✓ Comunidade
	Calidad	✓ Lugar de
Capacitación de productores	✓ ✓ Semilla criolla	Agentes
	Uso	✓ Producción
	competencia?	Compañ
Técnicas adecuadas	Época de cosecha	Zona r
Buen manejo	Convencerse	Proyect
Biodiversidad	Ventajas / desventajas	
	Desafíos	

# Building a Lesson Plan

Based on the answers to the questions you asked previously, build a lesson plan.

- Tailor the content to their level
- Make it simple and practical



# Basic Seed Saving Content

- ❑ Why save seeds?
- ❑ Make seed saving objectives/goals
- ❑ Variety trialing
- ❑ Sexual plant reproduction and seed biology
- ❑ Deciding what to multiply
- ❑ Seed plot management, production, and selection
- ❑ Seed harvesting, drying, and processing
- ❑ Seed storage and viability testing
- ❑ Record keeping and labeling
- ❑ \*Seed banking



Abelmoschus caillei	African Okra	01008FL-011A	N/A	GO	TP 2x
Abelmoschus caillei	African Okra	12125FL-121D	N/A	GO	TP 2x
Aeschynomene americana	American Jointvetch	Farm or 08091FL-081	70%	GO	TP 2x
Capsicum frutescens	Hot Pepper	07051FL-161E, 162E & 80%	GO	TP 3x	
Capsicum sp.	Hot Pepper	16043FL-181D (Work)	N/A	GO	TP
Crotalaria longirostrata	Cupilín	98063FL-091E (work)	N/A	GO, MS	TP 2x
Crotalaria longirostrata	Cupilín	0007FL-091E (work)	N/A	GO	TP 2x
Crotalaria longirostrata	Cupilín	Farm Seed (5/2012)	N/A	GO	TP 2x
Crotalaria longirostrata	Cupilín	9807FL-091E (work)	N/A	GO	TP 2x
Crotalaria longirostrata	Cupilín	TP	N/A	GO	TP
Cucurbit	Siant Pumpkin	0111FL-181D	N/A	GO	TP
Cucurbit	Seminole Pumpkin	0003FL and 02108F	N/A	GO	DS
Cyclanth	Pepino	0033FL-181D	N/A	GO	DS
Lactuca	Lettuce	02104FL-131D	85%	GO, CG	TP, plugs
Lagenaria	Bush Gourds	18036FL-181A	N/A	GO, RF	DS
Phaseolus	Lima Bean	18018FL-181A	N/A	GO, SA	TP
Psophoc	Winged Bean	83109FL-0	50%	LL, GO	TP 2x
Sesamum	Sesame	12202FL-171E	N/A	GO, MS	TP 2x
Talinum tr	Sour Waterleaf	13031FL-181A and a	98%	GO, MT	TP
Vigna ungu	Common Bean	9003FL-081E	5%	GO	TP
Vigna ungu	Sesquipedal Bean			S GO	
Ocimum	Holy Basil			S GO	
Ocimum	Thai Basil				
Brassica o	Ethiopian Kale	00015FL-012E	95%	MT, SA	TP
Helianthu	Jerusalem Artichoke	tubers	N/A	MT	DS
Vigna ungu	Sesquipedal Bean	98102FL-091E	95%	LL, UG	TP

# Content

- Savannah's seed saving training in Kenya and Tanzania (few hours to 2 days)
  - Interactive
  - Simple and practical
- Seed Production and Utilization Course at ECHO Florida (5 days)
  - Interactive
  - Classroom and outside
  - Complex, abstract ideas and concrete ideas
  - Hands-on



# Activities – making the content stick

- ❑ Flowers and pollination
  - ❑ Label a flower diagram
  - ❑ Identify flower parts and types in the garden
  - ❑ Observe flowers and pollinators in the garden
  - ❑ In groups of 2, look up a specific crop and what type of flower it has and how it is pollinated
  - ❑ Discuss saving seeds of open-pollinated varieties versus hybrids
  - ❑ Have them draw pictures of the different types of pollination
  - ❑ Make a seed chart together of the crops locally grown and how those crops are pollinated and isolated (hand-out)
  - ❑ Open up a seed and identify the parts; discuss physiology



# Activities: Resources

Community Seed Network - Seed Saving Resources

<https://www.communityseednetwork.org/assets/storage/csn-chart-guide.pdf>

Organic Seed Alliance - Publications

<https://seedalliance.org/all-publications/>

# Activities – making the content stick

- ❑ Seed plot management, production, and selection
  - ❑ Discuss what things need to be decided before planting
    - ❑ soil preparation, irrigation, fertilization, plot size, population, isolation, selection, timing, life cycle, special requirements
  - ❑ Controlled pollination demonstrations
  - ❑ Crop rotation: draw or write on poster
  - ❑ IPM - scouting and observations in field
  - ❑ Role play selection
  - ❑ Selection in a field of crops





# Activities – making the content stick

- ❑ Seed harvesting, drying, and processing
  - ❑ Discuss together when to harvest dry seeded and wet seeded crops
  - ❑ Sort crops by category
  - ❑ Harvest several different crops together in the field; touch and feel pods, fruit, & seeds
  - ❑ Thresh and winnow seeds using different technologies
  - ❑ Look at different drying methods
  - ❑ Build a thresher, winnower, and/or dryer
  - ❑ Pre-harvest seeds and display crops at different stages

# Activities – making the content stick

- ❑ Seed storage and viability testing
  - ❑ Test seed dryness testing using different methods (or most appropriate method)
  - ❑ Compare and contrast seed storage resources and requirements in two different situations (for home/family use vs. selling product on the market)
- ❑ Bicycle pump vacuum sealer
  - ❑ Build one together
  - ❑ Practice using
- ❑ Prepare germination tests for participants to view; allow them to do a germination test
- ❑ Brainstorm ideas for pest management



# Activities – making the content stick

- ❑ Record keeping and labeling
  - ❑ Brainstorm what records to keep
  - ❑ Create a crop calendar for the community or person
  - ❑ Write out a mock crop record together or fill out a record for something they planted
- ❑ Make a farm map
  - ❑ Label areas and crops
  - ❑ Use for crop rotation and isolation
- ❑ Create a number system for their seed inventory
- ❑ Create unique forms for the information they want to track

RAIN SEASON PLANTING RECORDS

Plant Name	Plant Type	Plant Source	Plant Date	Plant Location	Plant Status	Plant Notes	Plant Photo	Plant Harvest
CR0001-0001	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0002-0002	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0003-0003	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0004-0004	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0005-0005	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0006-0006	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0007-0007	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0008-0008	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0009-0009	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0010-0010	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0011-0011	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0012-0012	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0013-0013	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0014-0014	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0015-0015	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0016-0016	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0017-0017	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0018-0018	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0019-0019	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		
CR0020-0020	Watermelon	Homegrown	05/15/13	Field 1	Dead	Watermelon		

Seedbank Grow-Out Fall 2013

	25'	25'	NORTH 25'	25'	25'
1	Pigeon Pea	ICPL 8151	Pigeon Pea	ICPL 8151	Pigeon Pea
2	Apios americana	Apios americana	Apios americana	Yard Long Purple Mart? Taiwan black?	Wing Bean - Flat
3	Pigeon Pea	ICPL 8151	Pigeon Pea	ICPL 8151	Pigeon Pea
4		7 year lima			
5	Roselle	Large Red Pod?	Roselle	Large Red Pod?	Roselle
6	Momordica	charantia	Momordica	Cochinchinensis	Momordica
7					
8	Tomato trial	Tomato trial	Tomato trial	Tomato trial	Tomato trial
9	Carrots	Ensalada pepper	Tomato trial	Tomato trial	Tomato trial
10	okra trial	okra trial	Okra trial	okra trial	
11	Pumpkin - Crookneck	Pumpkin - Crookneck	Pumpkin - Crookneck	Pumpkin - Crookneck	Borneo Okra
12	Lablab -Red	Lablab Red	Cranberry Bean	Yard Long - Green Pod Kaoshing	Borneo Okra
13	TZ Cowpea	TZ Cowpea	TZ Cowpea		
14	Cranberry Hibiscus		Cranberry Hibiscus		Cranberry Hibiscus
15					
16		Scarlet Runner	Scarlet Runner		P. actinofolius - Tohono O'dhom Brown
			SOUTH		

# How to train diverse audiences

- Gain experience and knowledge; be a learner
- Get to know your audience and value their knowledge
- Empower and encourage participants to save seeds of locally adapted crops in a way that makes sense in their context and maintains the viability of the seeds
- Choose activities that will make the content stick
- Encourage discussion and discovery

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