

Collecting and handling fresh seed in the field

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AVRDC- The World Vegetable Center**

34th International Vegetable Training Course
Module 1: Vegetables: From Seed to Table and Beyond

15 September 2015

AVRDC Research and Training Station ESEA
Kamphaeng Saen, Nakhon Pathom, Thailand

Regeneration of Angiosperms – flowering plants

- **Plants without seed (ex: garlic)**
- by bulb (clove) or other types

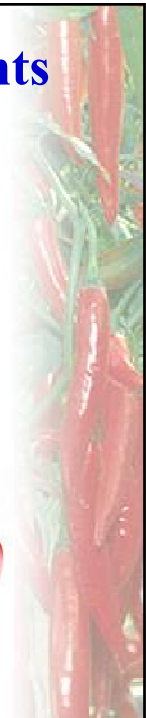


- **Plants producing seed**

1. Recalcitrant seed (mostly in tropical fruit)

2. Orthodox seed

3. Intermediate



What to do if there is no seed?

Bulb or Root

- Collect and keep the surface dry

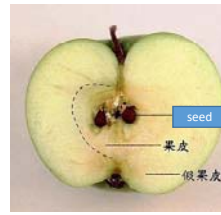
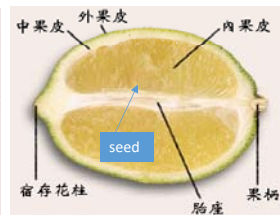
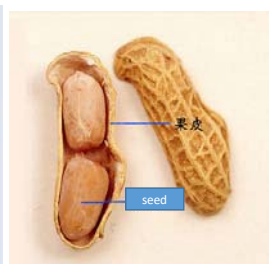
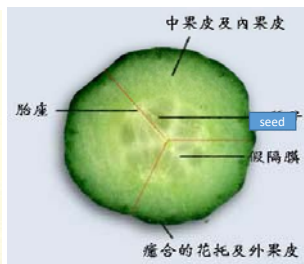


Living material (plant)

- Collect and keep it alive



Where is the seed?



Fruit

Seed is dry in:

- Capsules
- Pods
- Nuts

Beans, okra, pepper,
basil, onion, carrot,
luffa

Seed is wet in:

- Berries
 - Drupes (peach, plum, cherry)
 - Pome/citrus fruits
 - Gourd fruits
- Tomatoes, eggplant, squashes,
melons

Fermentation: tomatoes, squash, eggplant



Where you may get your seeds from

- Seed pack from research institute or seed company
- Local market
- **Farmer's seed stock**
- Farmer's field (home garden)
- **Field border**
- **Wild population**
- **Your regeneration field**



Local seed shop



In simple container or drying place



What to do before you store your seed?

- Clean the seed – remove foreign material
- Seed moisture content determination

Low SMC : $< 7\%$

Can be packed and stored in cold store/fridge

High SMC : $> 7\%$

Re-drying seed to low SMC; then seed packing and storage

Fruit sold in market



Production field or backyard of house



Field border



Regeneration field of GRSU



Harvest your materials from the field



How to treat the seed in fruits

- Extract the seed from the fruit
- Remove the fruit flesh and clean the seed
- Put the seed in net bags with labels (for identification), for air drying
- Add desiccant to the seed (if available)
- Bring the seed back to your institute ASAP
- Dry the seed to proper SMC
- Pack and store the seed



How about material with young fruit (immature seed) ?

- Collect the young fruit
- Keep fruit fresh
- Fruit may continue to ripen after harvest leading to physiological maturity of the seed
- Non-climacteric fruit do not mature after harvest
- Bring the fruit back to your institute
- Open fruit and extract the immature seed
- Use tissue culture techniques for embryo rescue





Thank you