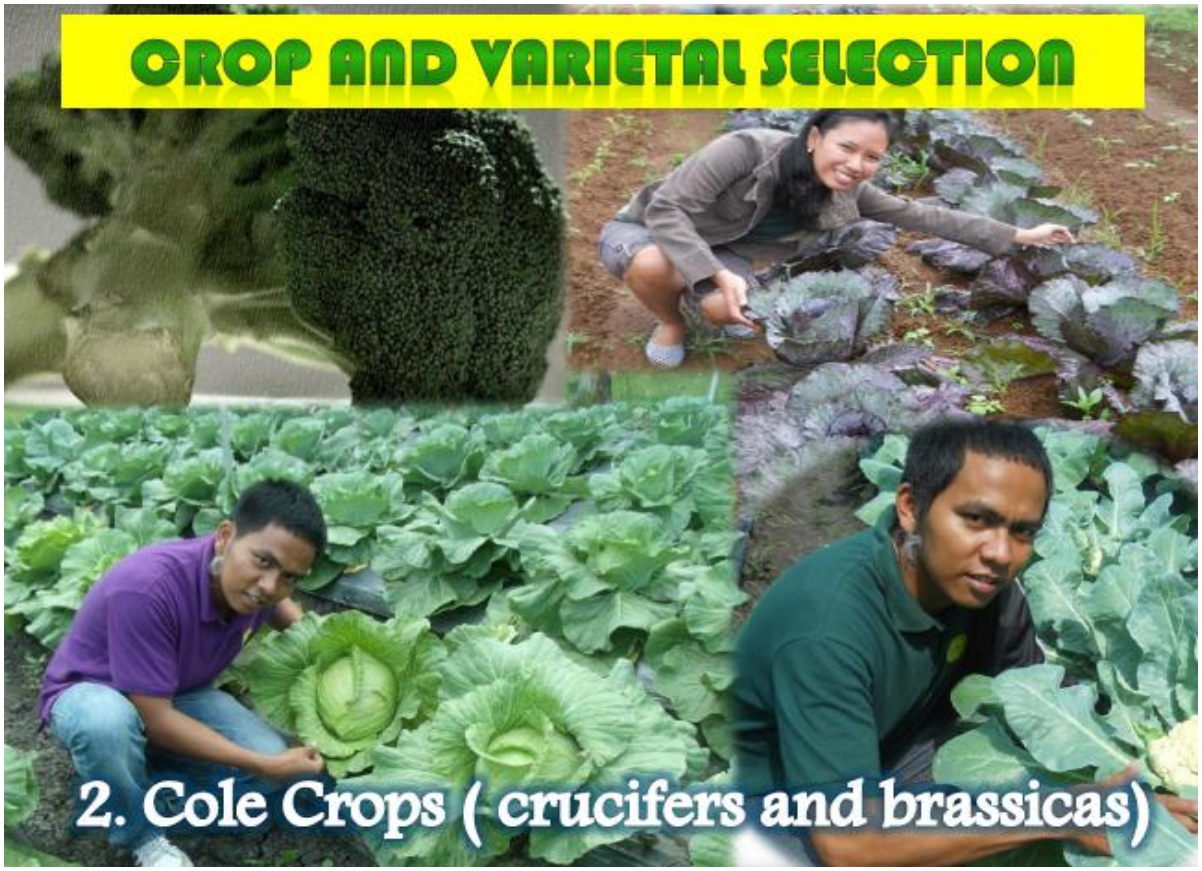
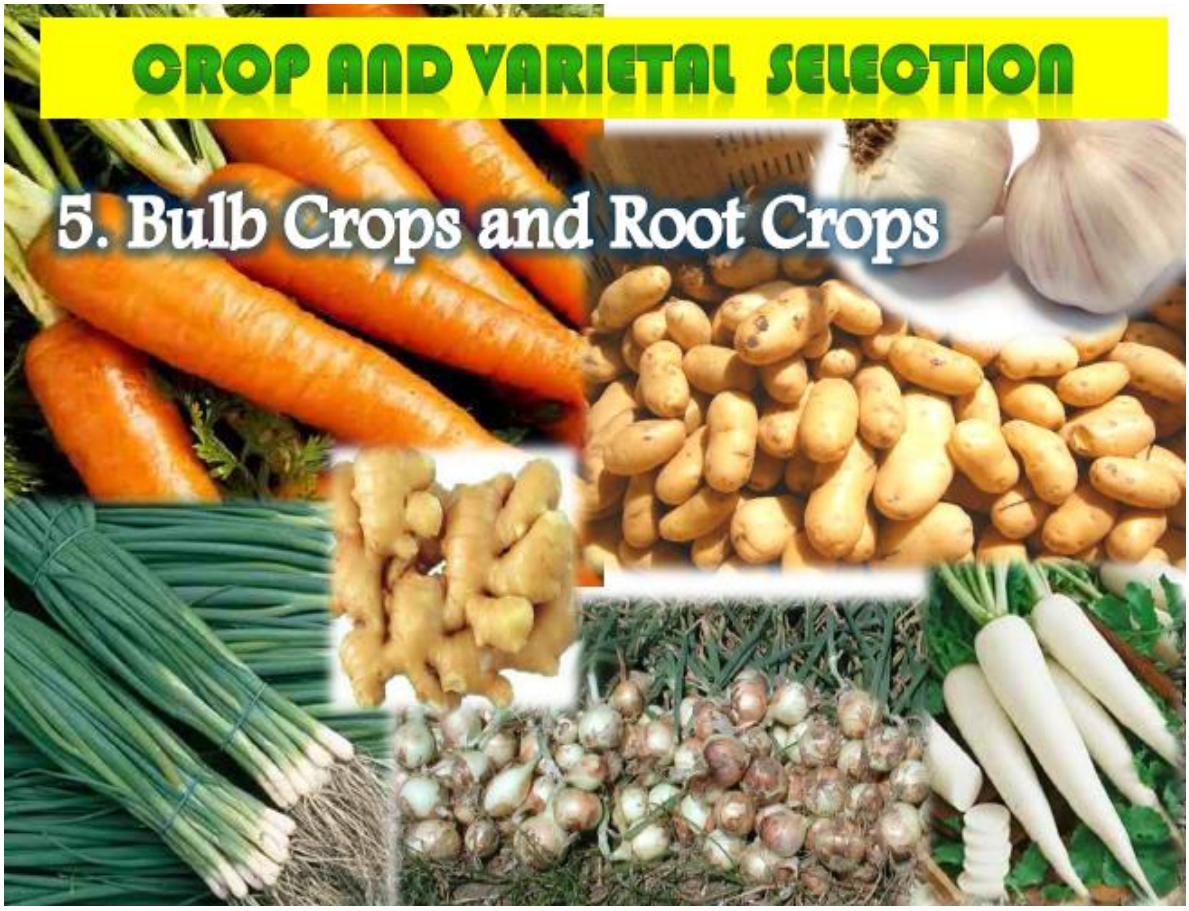
Session 1: Seed Preparations/ Seed sowing/ Nursery


CROP AND VARIETAL SELECTION
2. Cole Crops (crucifers and brassicas)


CROP AND VARIETAL SELECTION
3. Cucurbits


CROP AND VARIETAL SELECTION
3. Solanaceous Crops


CROP AND VARIETAL SELECTION
4. Legumes and Pulses


CROP AND VARIETAL SELECTION
5. Bulb Crops and Root Crops


SEED GERMINATION
Factors affecting seed germination
1. Biological Factors
2. Environmental factors

Environmental Factors

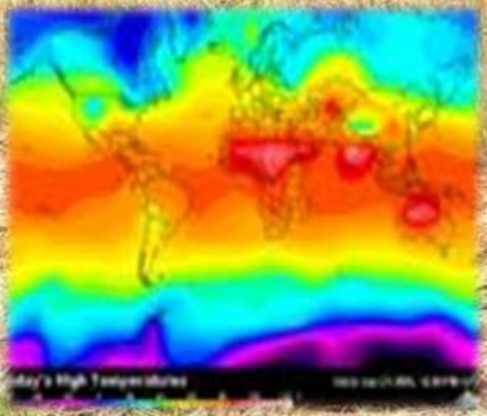
. Water

. Air

At least 20% soil air is present in the soil

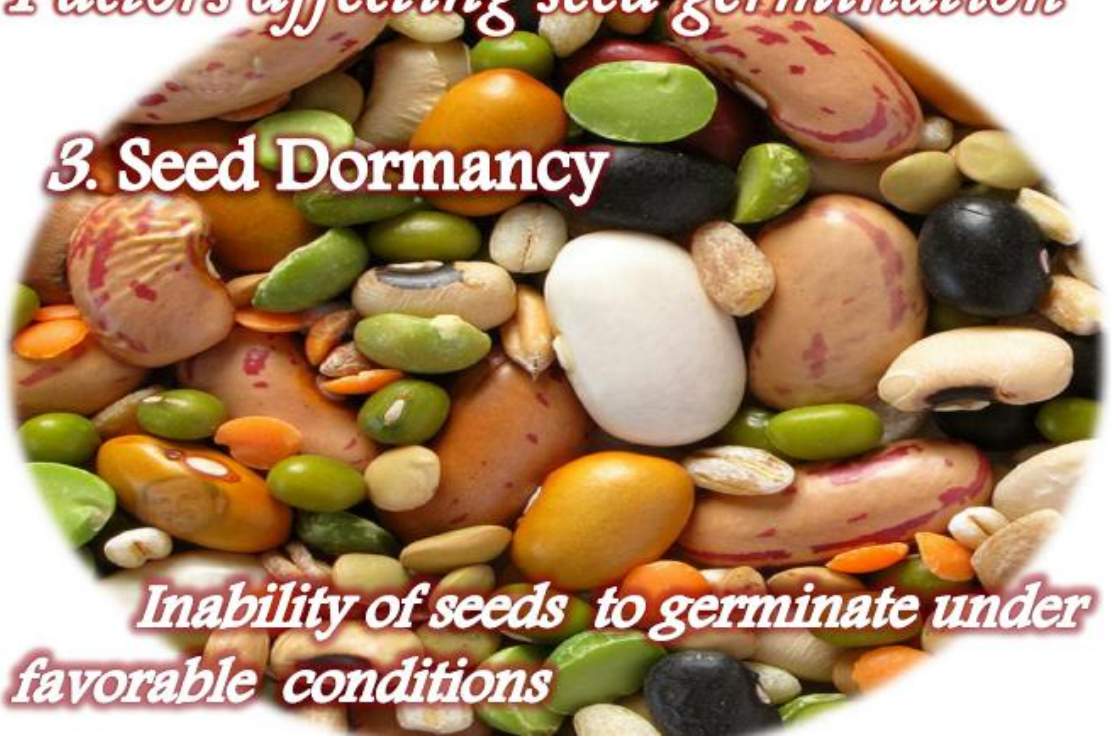
Environmental Factors

. Temperature



5° to 45°C with optimum around 20°C to 30°C

Factors affecting seed germination



3. Seed Dormancy

Inability of seeds to germinate under favorable conditions

METHODS TO OVERCOME SEED DORMANCY

A. Use of suitable temperature regime

B. Modification of seed coats by:

. Milling

. Cutting

. Scarification

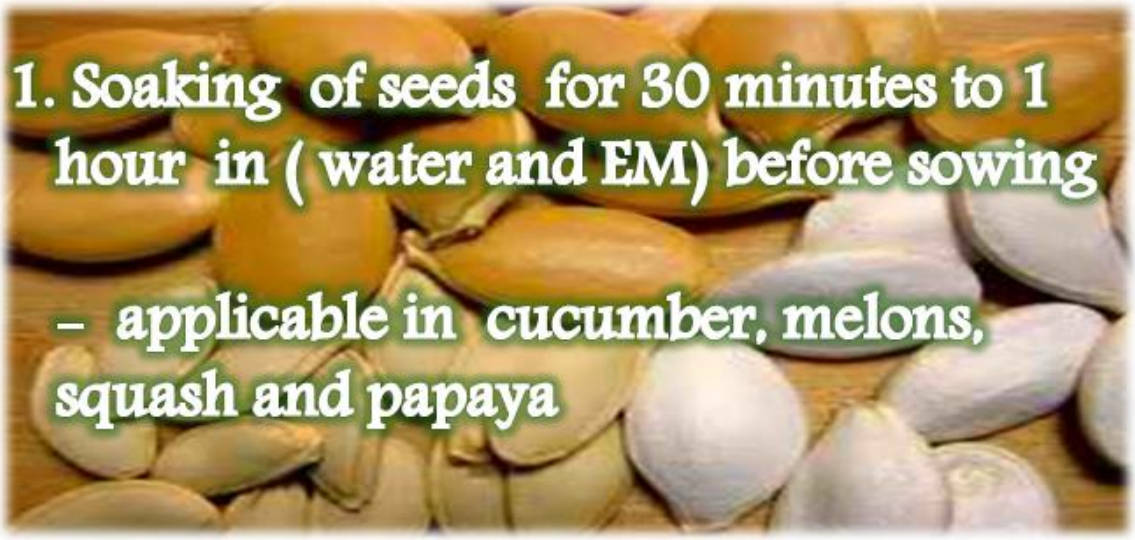
METHODS TO OVERCOME SEED DORMANCY

C. Chemical treatment with plant growth regulators like gibberellins, auxins, cytokinins, and ethylene

D. Seed Treatment with beneficial micro-organism

SEED SOWING

Field Practice



1. Soaking of seeds for 30 minutes to 1 hour in (water and EM) before sowing

– applicable in cucumber, melons, squash and papaya

SEED SOWING

Field Practice

2. Cracking / Cutting before soaking

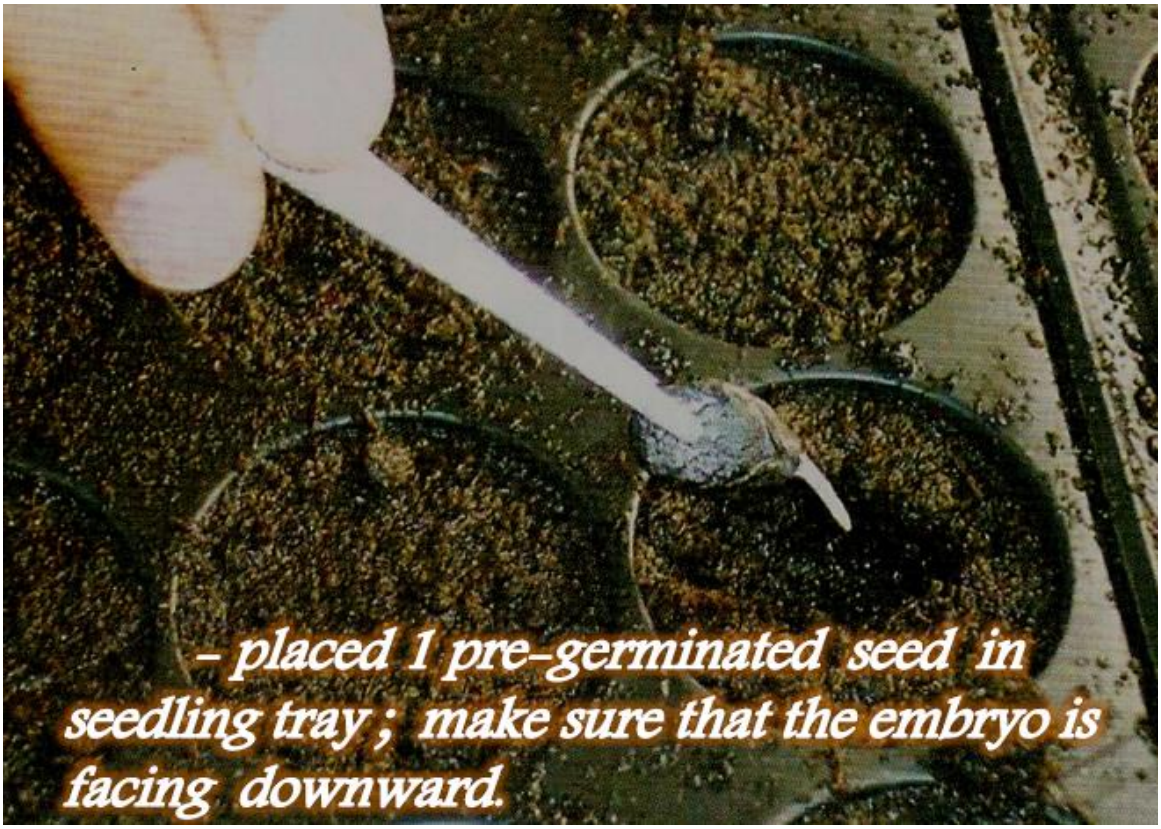
– applicable in ampalaya, upo and patola

Proper Sowing of Seeds

Best for ampalaya, patola, squash upo, melon and cucumber

SEED SOWING


Field Practice
3. Incubation
– applicable in cucurbits and best in watermelon
Incubate for 24 to 36 hours with temperature 25°C to 30°C


– placed 1 pre-germinated seed in seedling tray ; make sure that the embryo is facing downward.

SEED SOWING

SEEDLING TRAY

SEEDLING TRAY


Advantage of using seedling tray
Less in labor
Water Saving


Advantage of using seedling tray
Easy transport during transplanting

POTTING MEDIUM

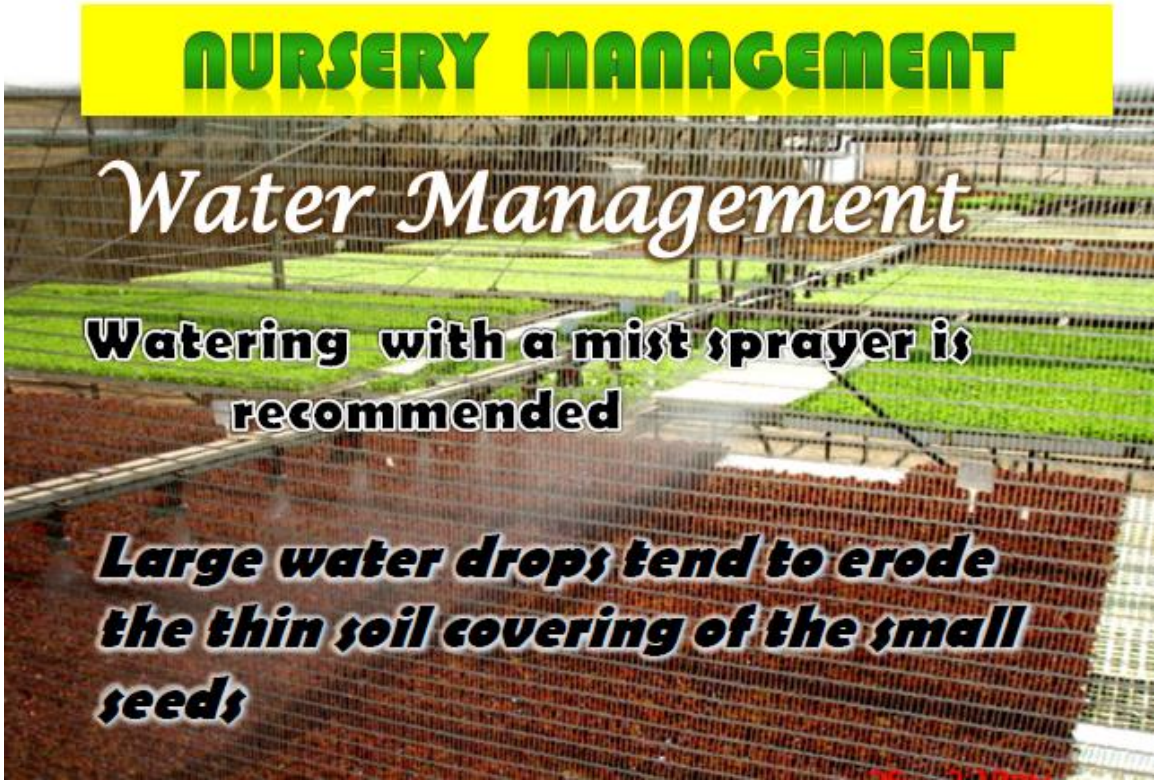
Characteristics of ideal nursery medium

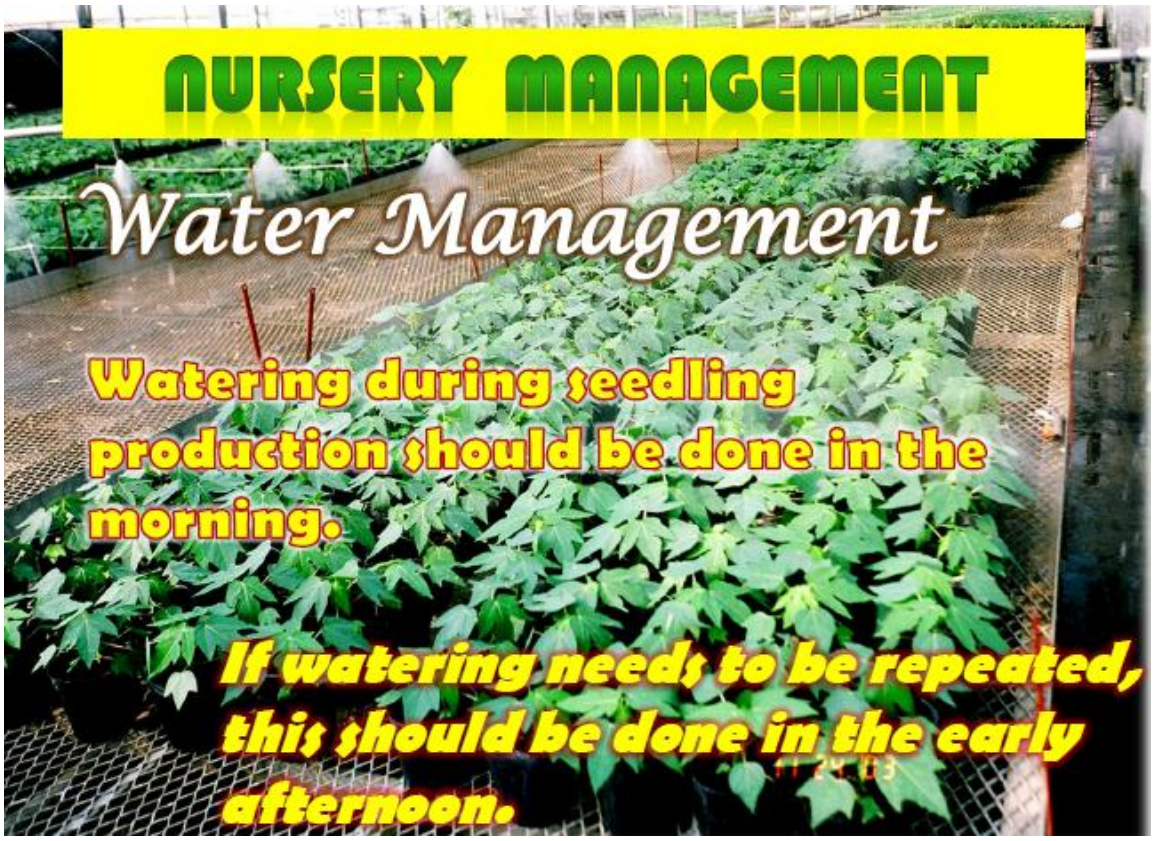
1. Water holding capacity and aeration
2. Capacity to supply nutrient
3. Free from soil-borne diseases
4. Light weight
5. Easy to drain

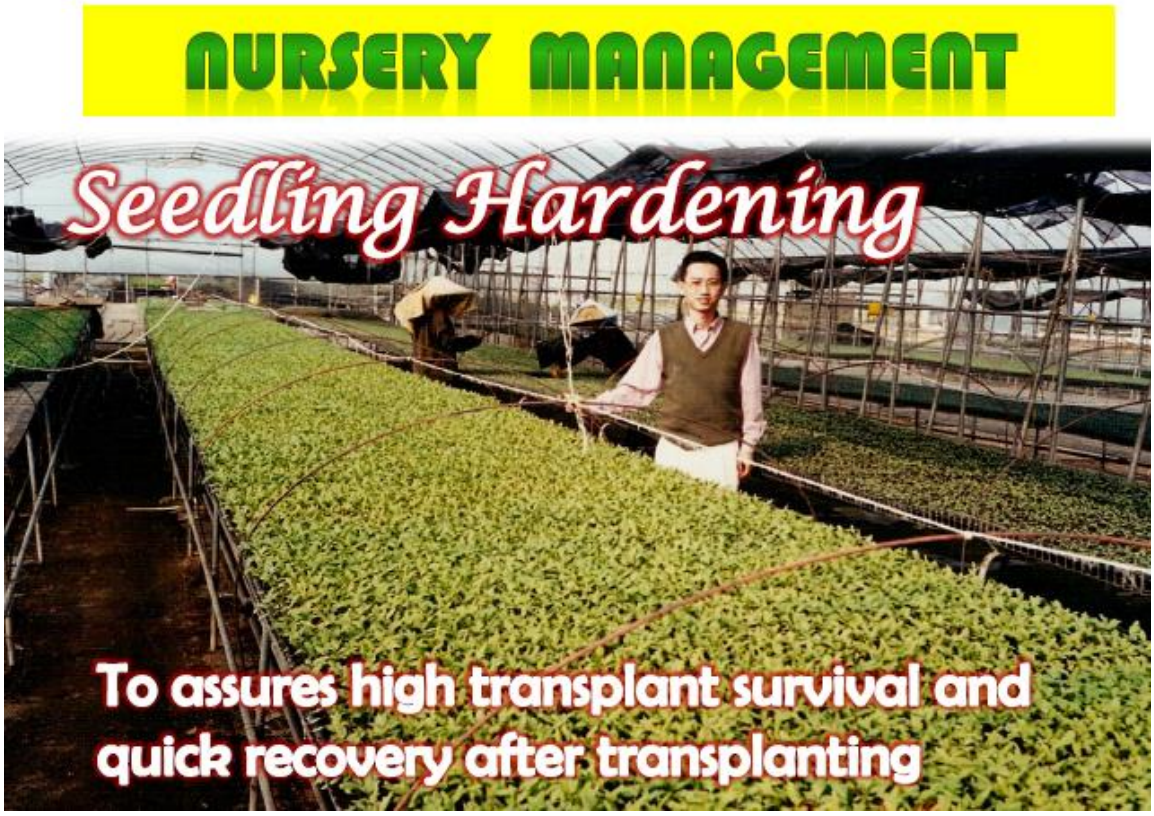

Growell potting medium
Composition
1. carbonized rice hull – for drainage and aeration
2. coconut coir dust – for water retention
3. organic matter – for nutrient/food for seedlings


Step 1
Step 2
Step 3
Step 4
Preparation of potting medium


NURSERY MANAGEMENT
Safety Reminders
The seedling tray should be elevated
Protect the seedling from strong wind and heavy rain
Protect from pests, including higher animals, such as chicken


NURSERY MANAGEMENT
Water Management
Watering with a mist sprayer is recommended
Large water drops tend to erode the thin soil covering of the small seeds


NURSERY MANAGEMENT
Water Management
Watering during seedling production should be done in the morning.
If watering needs to be repeated, this should be done in the early afternoon.


NURSERY MANAGEMENT
Seedling Hardening
To assures high transplant survival and quick recovery after transplanting