Version 2023

EAST-WEST SEED FOUNDATION

KNOWLEDGE TRANSFER

Crop Guide
LETTUCE

ENGLISH

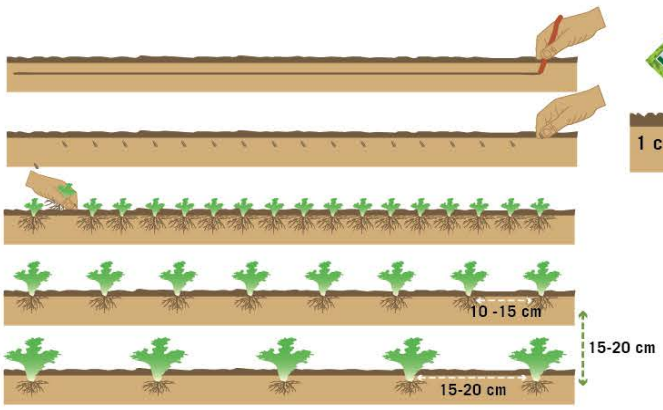
• Land Preparation

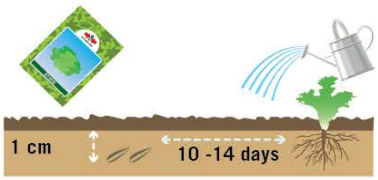
» Narrow paths help with irrigation and drainage
» Organic mulch may be installed to conserve soil moisture especially during dry season and minimize weed growth
» 166,666 - 266,666 plants/ha (adjust according to the variety and season)

• Sowing and Seedling Production

Direct sowing

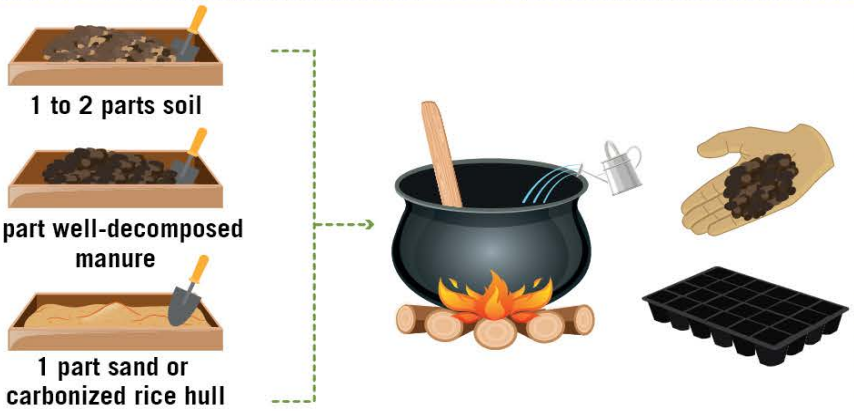
» Make rows and planting distance (using stick)
» Dig shallow rows (1cm) and sow seed thinly
» Gradually thin:
- To 10-15 cm for baby leaves
- To 15-20 cm for mature plant
» Thinned plants can be sold or eaten





Container seedling production

◆ Substrate preparation: Heat for 10 minutes or place in full sun for half a day, then fill tray



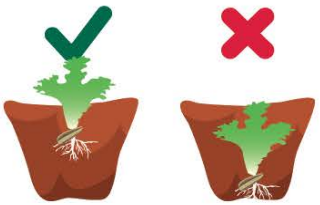
» Optional: Pregermination

1.Place the seeds on moist paper towel

2. Put in container or zip bag; keep it moist; away from direct sunlight

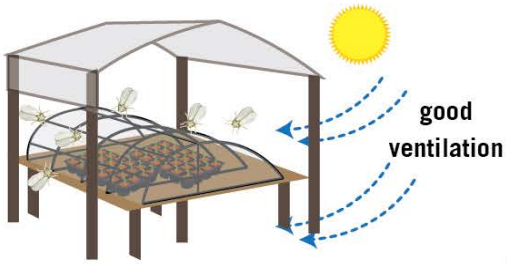
3. After 2-3 days, or when a small root appears (1-2 mm), gently move them to the seed tray.

◆ Sow seeds and protect seedlings



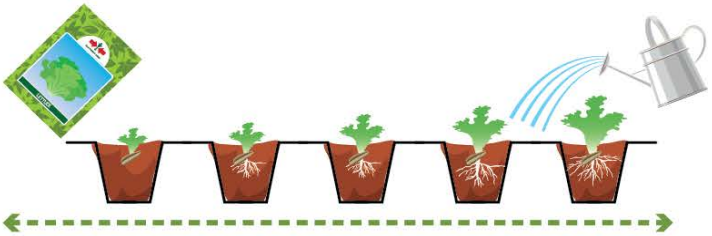
Sowing depth = size of 2 seeds

Put one seed into every cell of seed tray



◆ Maintain constant moisture

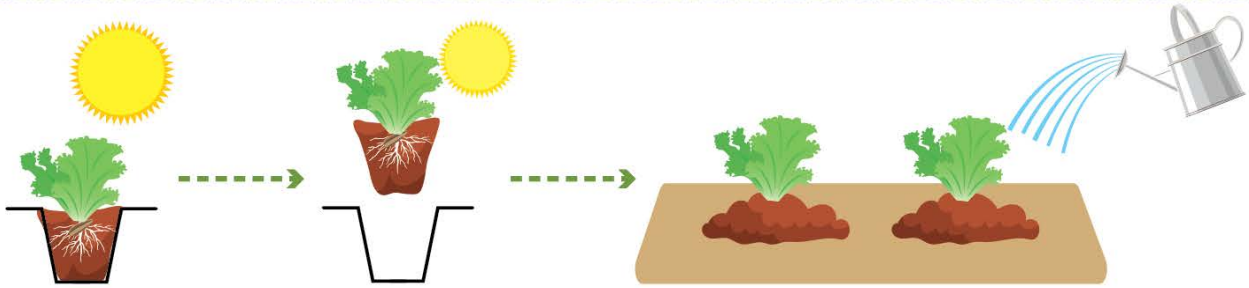
Morning Evening



Transplanting
» cool season 25-30 DAS
» summer season 15-20 DAS

• Sowing and Seedling Production

◆ Reduce water and expose to more sunlight 2-3 days before transplanting late in the afternoon



During dry and hot season, low tunnel shade net can be installed.

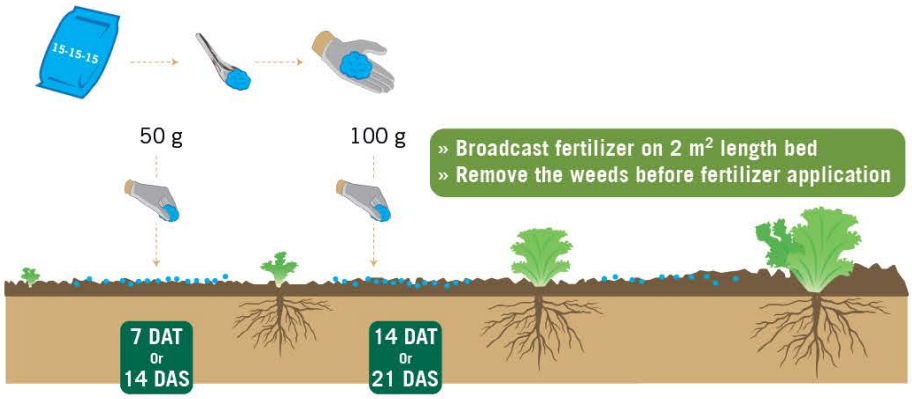
• Fertilizer Application

Seedling stage

» 10 liters water + 10-15 g calcium nitrate; drench seedlings 10 days after emergence (when needed). Spray the seedlings with water if the solution touches the leaves.
» Apply fungicide for damping-off, when needed.

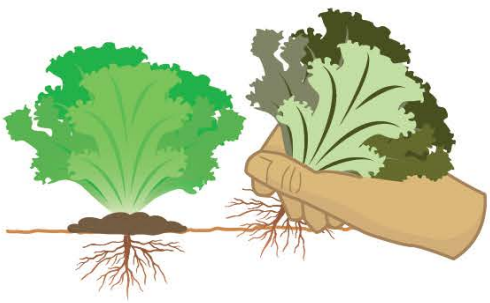
After transplanting

Use recycled spoon (do not use for eating) or bottled water cap to measure application



Recommended amount based on crop optimum nutrient requirement and plant population of 166,666 - 266,666 plants/ha. Adjust application according to season, soil conditions and plant growth status.

• Integrated Pest Management



To prevent infection from spreading, sick plants, old crops and weeds must be removed and destroyed.

Crop rotation prevents build up of insect pests and diseases and restores soil fertility.

• Integrated Pest Management and Responsible Use of Pesticides

» Alternate MoA groups to prevent resistance
» Avoid the use of pesticides for leafy vegetables. If necessary, reduce spraying one week before harvest
» Always read pesticide label and intended use (registered crop and pest)

Kinds of Insects

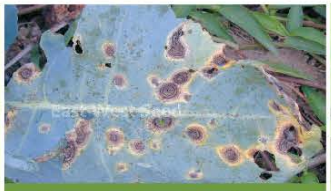

Aphid


Caterpillar

Active Ingredient	MoA	Action	Aphid	Caterpillar
Lambda-cyhalothrin	3A	SC	✓	✓
Dinotefuran	4A	S	✓	
Spinosad	5	S		✓
Spinetoram	5	SC		✓
Abamectin	6	SC (slight S)		✓
Thiocyclam oxalate	14	SC	✓	
Chlorantraniliprole	28	S		✓
Flubendiamide	28	S		✓
Bacillus thuringiensis	11A	C		✓
Azadirachtin (neem extract)	UN	unknown	✓	✓
Pyroligneous acid (Wood vinegar)	UN	unknown	✓	✓
Beauveria bassiana	UN	unknown		✓

Mode of Action (MoA) based from IRAC; SC (Stomach + Contact); S (Systemic)

Kinds of Diseases


Alternaria Leaf Spot


Cercospora leaf spot

Active Ingredient	MoA	Action	Remarks	Alternaria Leaf Spot	Cercospora leaf spot
Copper-based Fungicides	M 01	P		✓	✓
Chlorothalonil	M 05	P		✓	✓
Mancozeb	M 03	P		✓	✓
Azoxystrobin	11	P + C	Maximum 2 times per crop cycle	✓	✓
Trichoderma spp.	BM02	P		✓	
Bacillus subtilis	BM02	P		✓	✓

Mode of Action (MoA) based from FRAC; P = preventive (only effective when disease symptoms have not appeared yet), C = curative

1 
Wear protective gear

2 
Good weather

3 
Good nozzle

4 
Wash after spraying

https://growhow.eastwestseed.com

Agrochemical recommendations have been developed in cooperation with Wageningen University & Research

WAGENINGEN UNIVERSITY & RESEARCH