

Ampalaya

Open Field Production

Crop group: Cucurbit (ampalaya, melon, cucumber)

Crop Rotation

Follow this crop with leafy vegetables, brassicas, tomato, eggplant, sweet pepper or sweet corn. It is also advisable to rotate leguminous crops such as mungbean and peanut. Avoid following with ampalaya, melon or cucumber.

Climate & Soil

Ampalaya is a summer crop which prefers a warm humid climate with temperatures ranging from 20–35°C. It grows in most areas up to 1000m above sea level. Excessive rain during its production promotes soil-borne diseases and susceptibility to rotting in waterlogged areas. It thrives well in a well-drained sandy loam, rich in organic matter soil.

Land preparation

Clear the area and remove weeds. Plow and harrow area twice at weekly interval to break down soil clods, level the area and remove the weeds.

Prepare raised beds 1m wide and 2.5m apart. Make drainage canal along the sides of the area.

Seedling management

Pre-germinate seeds using the rolled towel method. Sow seedlings individually at radicle break in the seedling tray filled with 2:1:1 sterilized garden soil, carbonized rice hull and vermicast and place under shade. Apply starter solution using calcium nitrate (15.5%N & 19%Ca) at a rate of 2.5g/liter of water one week before transplanting. Harden seedlings by reducing water to temporary wilting and gradual exposure to full sunlight 1 week before transplanting.

Transplanting

Transplant the 10–15-day-old ampalaya seedlings into the holes, avoiding the roots so that they do not come in contact with applied inorganic fertilizers. Transplanting late



Ampalaya seedlings ready for transplanting.



Young ampalaya plants growing well in an organic mulch.

in the afternoon (3pm onwards) minimizes shock from intense sunlight and hot temperature. Water immediately after transplanting.



Trellising system as applied to an ampalaya crop.

Trellising

Tie or nail bamboo poles 6m long into each opposite post of the protective structure. Beside each plant spaced 1m between hills, install two 12-inch bamboo sticks on both sides. Securely attach straws going upward and tie another straw in zigzag position that will serve as support for the growing vines. Install trellising net on top to support spreading of vines.

Pruning

Pruning removes lateral shoots starting about 2 weeks from transplanting. All laterals below 1.5m length of vine must be removed using pruning shears or sharp cutters. Pruning should be hygienic and avoid all sources of infections or contamination. The cutting tool should be dipped in 70% ethyl alcohol after cutting. Re-pruning will be done as new lateral shoots arises.

Fruit Bagging

Bagging of fruit is done daily to prevent fruit fly infestation. Wrap the fruit individually when petals turn pale yellow (indicating successful fertilization) using 10cm x 16cm cellophane or other similar wrapping materials.

Harvesting

Marketable fruits can be harvested about 45–50 days after sowing. Fully developed fruit for market is thick, green, and juicy. Cut the fruit stem using a sharp knife or scissors. It is best to harvest the fruit early in the morning to have heavier fruit weight than in late afternoon. Harvest frequently with an interval of 2–4 days because the fruit ripens easily. Apply 5g of complete fertilizer and 5g muriate of potash at 2 week intervals.



Bagging ampalaya fruit is done to stop fruit flies getting to it.

Postharvest Handling

Harvested fruit should be placed directly in dry, shady place to minimize field heat, which is responsible for faster respiration rate. Transport the fruit in well cushioned boxes or crates. Banana leaves make good packing cushions. Avoid overpacking to stop damage and losses.





Follow up in the field

Finished crop should immediately be removed and destroyed, and the ground ploughed to prevent pest and disease populations spreading to other crops. This is extremely important!



These harvestable size fruits are ready for market.

Fertilizer, irrigation, pest and disease management

Ampalaya growth stages					
	Pre plant	Transplant / Establishment	Vegetative	Flowering/ fruit development	Maturity
					
Fertilizer	Before planting apply fertilizer into each planting hole and mix in with soil. During plant growth, apply fertilizer to each plant an inch away from the base of the plant. Ensure no fertilizer touches the leaf of the plant to avoid leaf burning. Additional application can be applied 2 weeks apart during fruit development and harvest. Use the following rates per plant.				
Timing	At transplanting	2 weeks after transplanting	4 weeks after transplanting	6 weeks after transplanting	Additional applications
Rate	500g compost or dried manure and 10g complete (16-16-16 N, P ₂ O ₅ , & K ₂ O) fertilizer per plant.	5g urea (45%N) and 5g of complete fertilizer per plant by side dressing. Cultivate or water in as soon as possible.	5g complete fertilizer and 5g muriate of potash (0-0-60) per plant. Cultivate or water in.	5g complete fertilizer and 5g muriate of potash (0-0-60) per plant. Cultivate or water in.	5g complete fertilizer and 5g muriate of potash (0-0-60) per plant. Cultivate or water in.
Irrigation	Lay out trickle irrigation drip tube along the beds. Use one tube along each planting row. The spacing of drippers in the tube should be about 25cm or closer. The best strategy is to fully wet the soil profile and encourage roots to grow out into the moist soil. To prevent rapid spread of fungal diseases, water only in the morning, not in the afternoon.				
		Water immediately after transplanting until soil profile is fully wet	Water every 2--3 days for 4--6 hours or until soil is fully wet	Water every 1-2 days for 2-3 hours or until soil is fully wet.	Water every 1-2 days for 2-3 hours or until soil is fully wet.
Pests	Monitor the crop regularly for pest infestations, look in growing points and on underside of leaves. Approved insecticide should be used as indicated on product labels. Where possible squash eggs and young larvae, prune leaf miner infested leaves and remove caterpillar infested fruit. Bury or bag pruned leaves and removed fruit. Avoid moving from a mite-infested crop into an uninfested crop.				
			Squash and flea beetles, Aphids, white flies, and leaf folder	Fruit worm, aphids, white fly, mites, mirids and leaf miner, fruit fly	Fruit worm, aphids, white fly and leaf miner, fruit fly
Diseases	Monitor the crop regularly for early disease symptoms. Rogue infected plants showing systemic symptoms and carefully prune away infected parts for localized diseases. If pruning needs to be done, i.e. disinfect pruning tools after use on every plant. Bacterial wilt and blight can be transmitted via pruning tools. Preferably carry a container for pruned plant materials (e.g. a plastic bag) during pruning and immediately place the pruned diseased or infested plant parts inside the bag to minimize dispersal of inoculum to healthy plants. Approved fungicides should be used as indicated on product labels.				
			Bacterial wilt, Cercospora, downy mildew, and Namamarako	Bacterial wilt, Cercospora, downy mildew, and Namamarako	Bacterial wilt, Cercospora, downy mildew, little leaf and Namamarako



Department of Primary Industries



QUEENSLAND GOVERNMENT
Department of Agriculture and Fisheries



ahr
australian horticultural research



Australian Government
Australian Centre for International Agricultural Research



EAST-WEST SEED PHILIPPINES



LANDCARE PHILIPPINES

Applied Horticultural Research Pty Ltd (AHR), the Australian Centre for International Agricultural Research (ACIAR) and NSW Department of Primary Industries (NSW DPI) make no representations and expressly disclaims all warranties (to the extent permitted by law) about the accuracy, completeness, or currency of information in this fact sheet. Users of this material should take independent action before relying on its accuracy in any way. Reliance on any information provided by AHR, ACIAR or NSW DPI is entirely at your own risk. AHR, ACIAR or NSW DPI are not responsible for, and will not be liable for, any loss, damage, claim, expense, cost (including legal costs) or other liability arising in any way from your use or non-use of information in this fact sheet, or from reliance on information AHR, ACIAR or NSW DPI provides to you by any other means.