

DURIAN

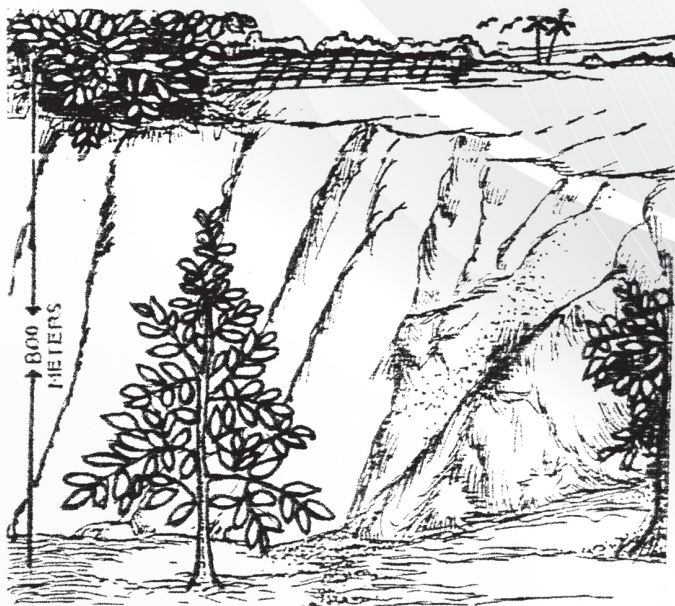


DURIAN (*Durio zibethinus* Murr.) is an exotic fruit popularly known as the “King of Tropical Fruits.” It is one of the most highly valued and most desired among the seasonal fruits in Southeast Asia. The fruit has an indescribable odor but it is delicious.

Durian pulp and seeds are very nutritious and are important sources of carbohydrates, vitamins, and minerals. The seeds contain pure starch.

The pulp or aril of ripe fruit is usually eaten fresh and is known as a delicacy. It is claimed to have a pronounced aphrodisiac quality. In processed form, durian may be made into jam, preserve, candy, filling for jelly roll or used as ice cream flavoring.

Durian requires a moist environment with an even distribution of rainfall. It thrives best on deep, well-drained sandy loam soil rich in organic matter. Since it could not tolerate low temperatures, it is restricted to areas below 800 meters elevation.



RECOMMENDED VARIETIES

I. Philippine Cultivars – have moderate to strong aroma.

- a) **Arancillo (ACC 1497)**. Prolific and consistent bearer; bears off-season fruits; has excellent, creamy taste with an edible portion of 38.39 percent.
- b) **Atabrine (DES 806)**. Prolific and consistent bearer; bears off-season fruits; has excellent eating quality; flesh is naples yellow, aromatic, smooth, and firm with edible portion of 24.73 percent.
- c) **Mamer (DES 916)**. Prolific and consistent bearer; pulp color is barium yellow; has excellent eating quality with edible portion of 24.93 percent.

II. Introduced Varieties – have high percentage edible portion and mild aroma.

- a) **Chanee (ACC 2815)**. Prolific and produce off-season fruits; taste is sweet, flesh is thick-yellow orange in color, non-fibrous, slightly glutinous with an edible portion of 31.654 percent.
- b) **GD 69 Prolific**. Bears fruit three years after planting; produces off-season fruits; yield 50 fruits; flesh is very thick, yellow orange in color with sweet melting taste; non-fibrous and with mild aroma. Edible portion is 44.82 percent.
- c) **Monthong**. Has intermediate aroma. Flesh is bright yellow with sweet buttery flavor. Texture is smooth, firm, moderately fibrous. Edible portion is 30 percent. There is a distinct protruberance at distal end.

PREPARATION OF PLANTING MATERIALS

DURIAN SEEDS



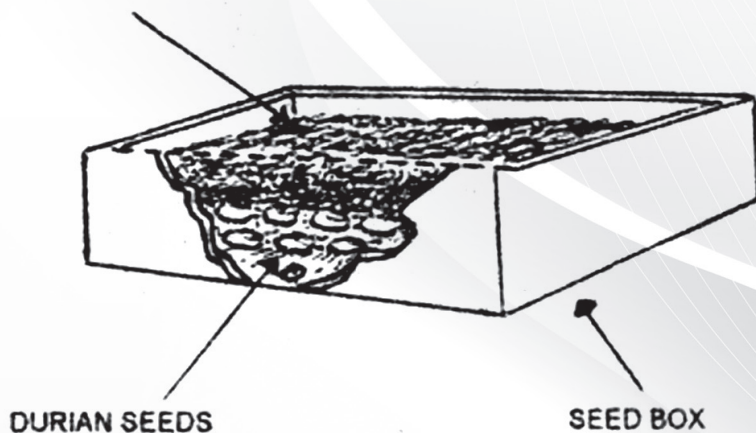
WELL-DEVELOPED SEEDS



DEFORMED SEEDS

1. Select well-developed seeds from mature and ripe fruits.

COIR DUST



2. Germinate the seeds in a seed box or seedbed with coir dust or saw dust, or fine river sand as medium.

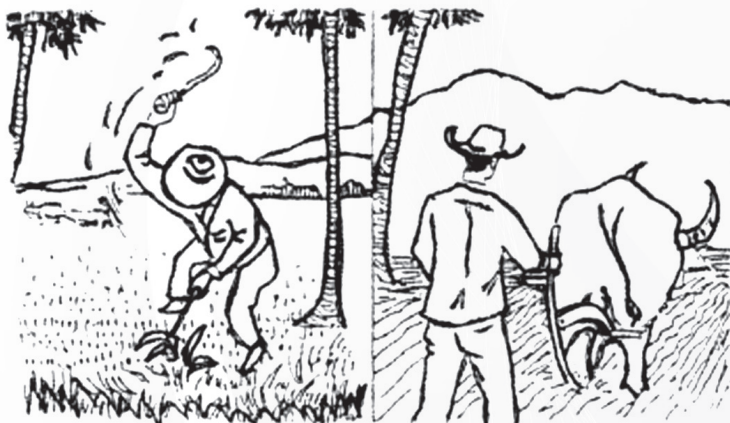


3. Prick the seedlings 9-12 days from germination in 7" x 11" x .003 mm polyethylene bags with medium composed of garden soil, fine river sand, and compost. Place the seedlings in a nursery shed.



4. Water them immediately after pricking and every two to three days thereafter, or as the need arises.
5. Reduce nursery shade and increase gradually from 30% to 70% full sunlight two months after pricking.
6. The seedlings are ready for grafting 21-30 days after pricking. Use hypocotyl method. Two to four months use epicotyl side grafting and dive to seven months use cleft grafting method.
7. Harden the grafted plant materials two weeks before field planting.

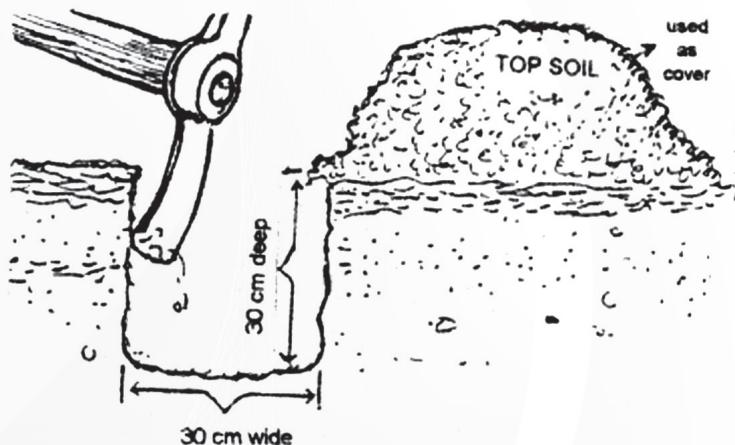
LAND PREPARATION



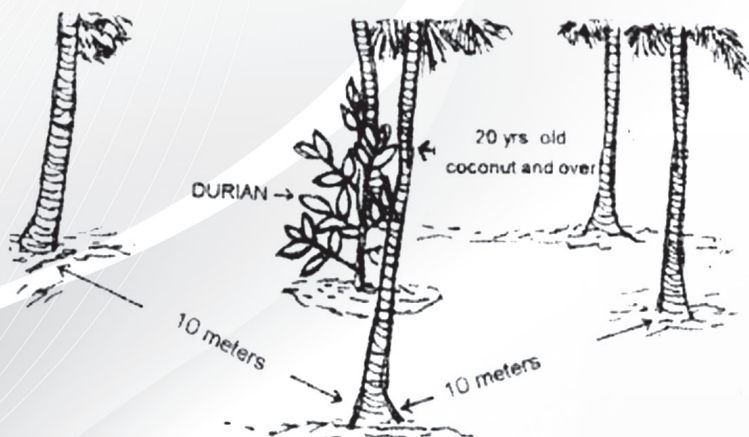
1. Clear underbrush and remove all stumps.
2. Plow and harrow thoroughly to loosen the soil.



3. Stake at a distance of eight meters (8m) between hills and eight meters between rows. High density planting is also recommended for maximum utilization of the land, with a distance of 6m between rows and 6m between hills.



4. Dig holes 30cm wide and 30cm deep, separating the top soil from the subsoil. Top soil will be used to cover the hole after planting.



5. Areas planted to coconut could be intercropped with durian, provided that coconut trees are already tall (20 years old or more) and spacing should be wider, usually 10 meters x 10 meters or more.

PLANTING



1. Plant at the start of the rainy season.

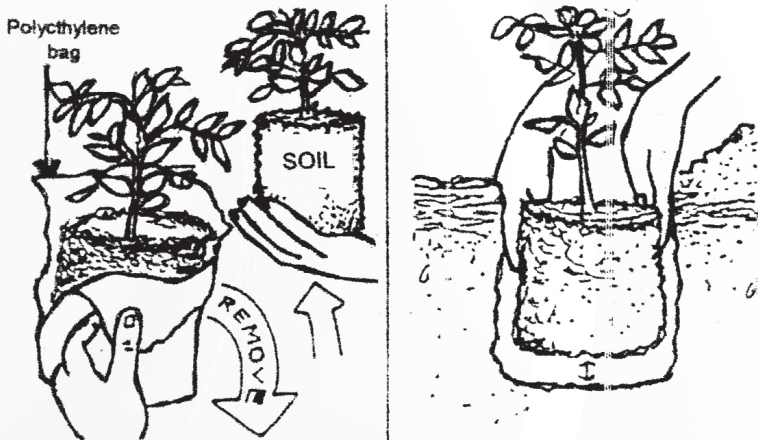
2. For best results, use large planting materials (LPMs). LPMs are produced by maintaining the plant materials in the nursery more than a year or two.



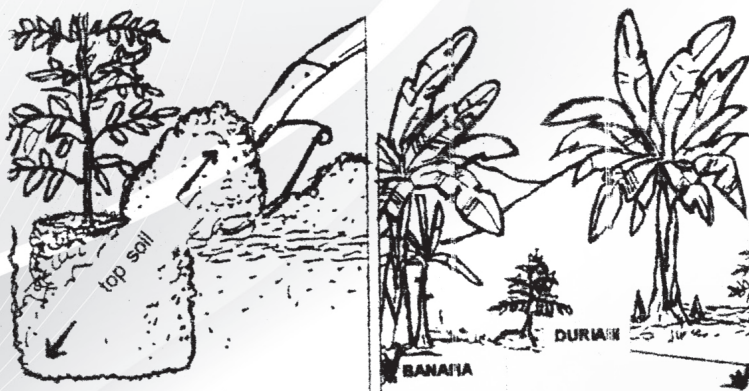
5 tbsp
14+14+14



3. Apply 50 grams (5 tbsp) complete fertilizer.

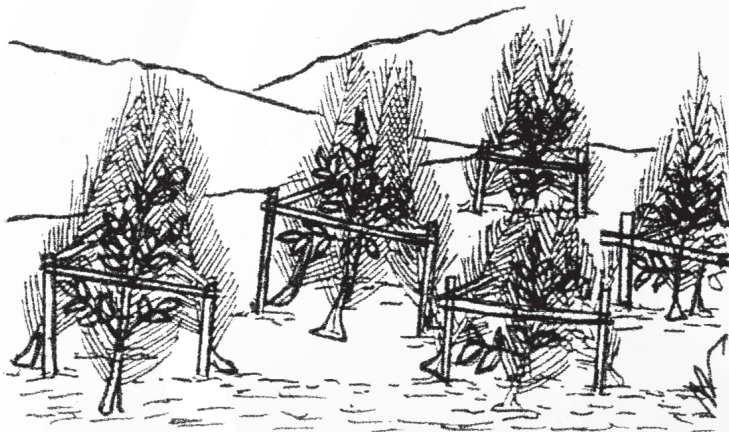


4. Remove from the polyethylene bags.
5. Plant the seedling an inch from the original soil line without breaking the ball of soil.

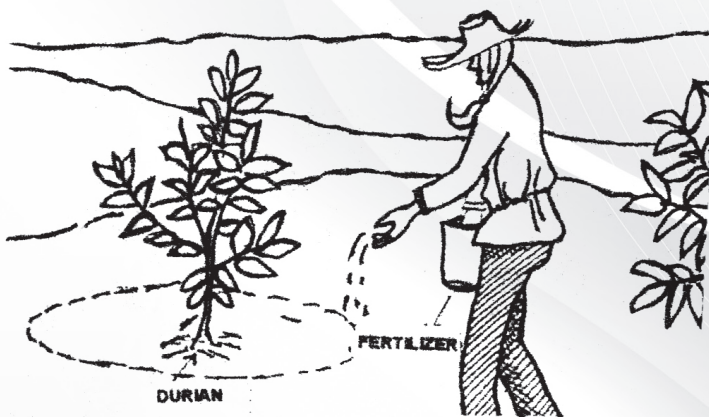


6. Cover the hole with top soil and press gently.
7. To maximize land use, intercrop with banana (cv. Lakatan). Banana should be planted ahead so they could provide shade to the young durian trees.

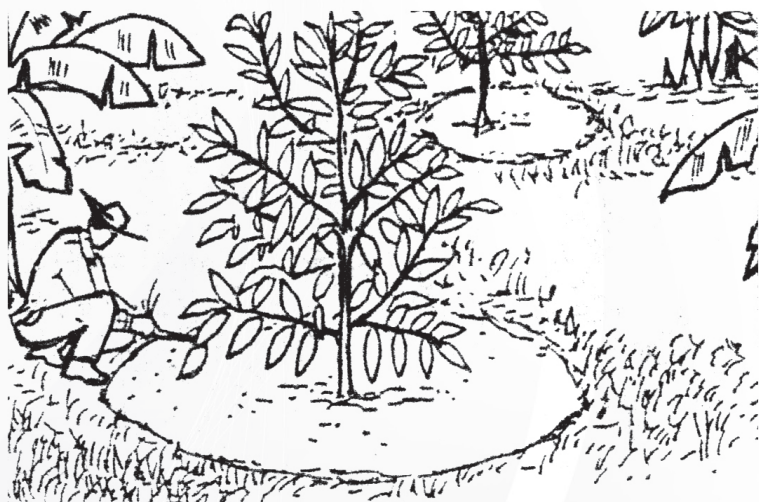
MAINTENANCE



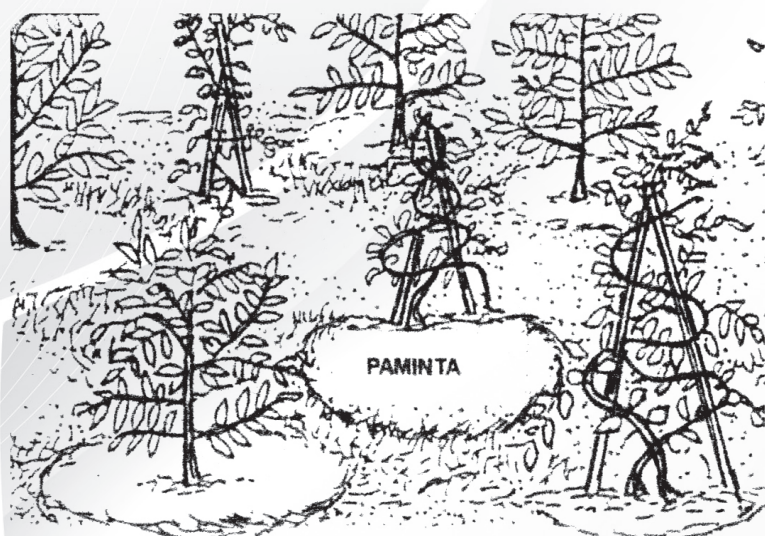
1. Provide shade to the newly planted seedlings for a period of two weeks to a few months depending on the weather conditions. This enables the plants to recover from transplanting shock and protects them from strong sunlight.



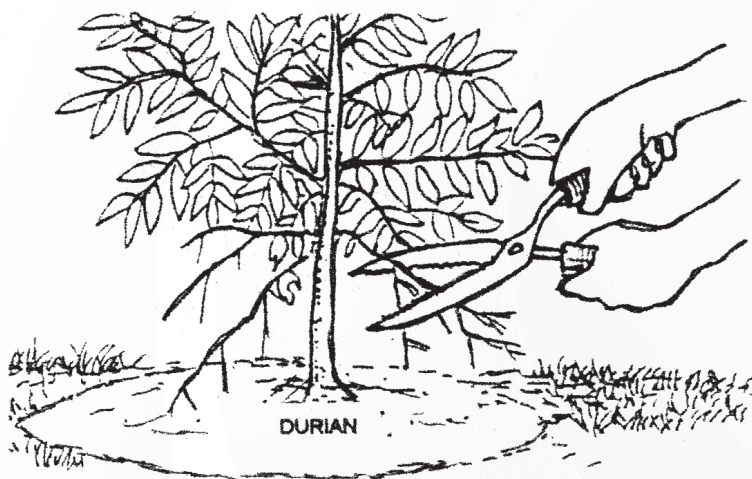
2. In the absence of soil analysis, apply fertilizer with NPK ratio of 12-4-7 at 100gm per tree for the first five years. Increase fertilizer application progressively to 4kg per tree during the 12th year.



3. Ringweeding should be done regularly and before every fertilizer application.



4. Grow cash crops between the rows of durian before they reach productive stage.



5. Prune/remove dead, broken or diseased branches and water sprouts to obtain the desired canopy shape and enhance production of fruits.



6. During the dry season, irrigate the trees and mulch them with dried straw, leaves, cut grasses, coconut husk or banana pseudostem cuttings.



A well-cared durian tree starts bearing fruits as early as five years old. Harvest the mature fruits with a sharp knife before they fall.

MATURITY INDICATORS

Maturity indicators are used to determine if the durian fruits are ready for harvest before they fall without impairing its quality.

1. Age of fruit – Local varieties can be harvested at 106-108 days old; Chanee at 112-113 days old, and Monthong at 125 days old.
2. Changes associated with fruit maturity.
 - a) Husk color. From green to light brown with yellowish green tinge.
 - b) The suture of the abscission on the peduncle becomes very distinct.
 - c) The sound emitted by the fruit when tapped becomes dull and hollow.

- d) The fruit has strong perceptible aroma.
- e) The spine at the equatorial region of the fruit becomes pliable.
- f) The aril becomes sweet with full characteristic flavor of durian.

INSECT PESTS AND DISEASES AND THEIR CONTROL

Insect Pests	Plant Part(s) Attacked	Control Measures*
1. Beetles	Infest shoots and seedlings	Spray with Roxion
2. Twig borers	Small branches or twigs of young and old trees	Prune damaged branch and burn
3. Psyllids	Infest new shoots and leaves in young and old trees	Spray with Roxion or Decis
4. Brown	Young shoots and leaves	Spray with Roxion
5. Fruit borer <i>Tonica sp.</i> <i>Dichochrosis punctifrales</i>	Fruit	Spray insecticide when moth is present
6. <i>Haplaphalara sp.</i> (Bao-bao)	Young shoots and leaves, unopened flowers and fruitlets	Spray with Decis or Roxion

* For control measures involving pesticide dosages, these normally recommended are those which are specified in the labels of the chemicals.

DISEASES

1. Seedling dieback	Seedlings	Spray systemic fungicides (Aliette or Copper-based)
2. Foliar blight	Infects the leaves	Spray systemic fungicides (Aliette or Copper-based)
3. Patch canker or stem canker	Infects the trunks, Stems and twigs	Scrape off the infected parts and paint with Aliette or Copper-based fungicides
4. Foot rot	Infects the roots	Scrape off/cut the infected parts and apply systemic fungicides (Aliette or Rodomil) as soil drench
5. Pink disease	Twigs and smaller branches	Remove diseased parts Spray Tridemorph (Calaxin) Triadimefon (Bayleton); Copper hydroxide (Kocide) or Bordeaux mixture
6. Rhizoctonia	Afflicts the foliage	Spray Triadimefon (Bayleton) Spray Triophanate methyl (Topsin M)

Disclaimer: Trade names cited are solely used to provide specific information based on recommended practices or procedures from research results and the best information available, and do not endorse products named or imply criticism of similar ones not mentioned. /BPI-DNCRDC.

DURIAN CANDIES

Ingredients:

3 cups durian pulp
2 cups powdered milk
5 cups refined sugar
1 can condensed milk
2 tbsp. butter
2 tbsp. glucose

Materials:

stainless carajay
wooden spoon
measuring cups
measuring spoon
mixing bowl
stainless knife
rubber scraper or plastic ladle
3 rolls water cellophane

Procedure:

1. Combine durian pulp, powdered milk, refined sugar, and condensed milk in a stainless carajay/pan.
2. Cook over slow fire, stirring constantly until mixture is thick enough to roll.
3. Transfer the mixture to a board then, apply butter and spread to the desired thickness and cut into serving sizes and cool.
4. Wrap individually in water cellophane and pack.

(This recipe is good for a purchase of 150 purchase of candies).

Recipe is formulated by DA-Sulu

DURIAN PASTILLAS

Ingredients:

4 cups durian pulp
2 cups evaporated milk
4 cups sugar

Materials:

stainless carajay
wooden spoon
measure cups
measuring spoon
mixing bowl

Procedure:

1. Mix the milk and sugar.
2. Cook over Slow fire, stirring constantly until about to thicken.
3. Add durian pulp and continue stirring until the mixture forms into a hard ball.

Reference: ***The Philippines recommends for fruit processing and utilization.***



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