

c. Remove disease-infected plant parts or spray fungicide for those attacked by diseases caused by fungus.

11. Harvesting and Storage

Fruits are harvested 28-32 days after flowering. The indices are full red coloration and swelling of the navel. Store at 5 °C with 90 % relative humidity up to 40 days but they last less than 10 days at room temperature.

12. Intercropping

Intercropping is recommended when the distance of planting is wide. Plant vegetables like ginger, mungo, pigeon pea, and other short statured crops and vine plants that creep on the ground.

Off-season dragon fruit production

The flowering of dragon cactus during off-season (November-March) can be induced by breaking the dark period with supplemental lighting between 10 o'clock in the evening until two o'clock the following morning by suspending 6-watt LED bulbs or 26-watt compact fluorescent lamps. These are positioned at the center of the four posts of dragon cactus about five feet above the ground.

How much is earned from this technology in a hectare?

| Items | Year 1 | Year 2 | Year 3 |
|--------------------|--------------|--------------|--------------|
| Yield (kg) | - | 14,000 | 24,000 |
| Price per kg | - | 80.00 | 80.00 |
| Gross Income | | 1,120,000.00 | 1,200.00 |
| Expenses | 608,620.00 | 454,540.00 | 157,040.00 |
| Net Income | (608,620.00) | 985,460.00 | 1,762,960.00 |
| Accrued Net Income | - | 376,840.00 | 777,500.00 |

How much money is invested in a hectare (1,600 posts)?

| Items | Requirement | Price (PhP) |
|------------------------------------|--------------|-------------------|
| First year: | | |
| Supplies & Materials | | |
| Concrete posts | 1,600 pieces | 320,000.00 |
| Stem cuttings | 6,400 pieces | 160,000.00 |
| Steel bars, 10 mm | 300 pieces | 36,000.00 |
| Old motorcycle tires | 1,600 pieces | 8,000.00 |
| Organic fertilizer | 96 bags | 24,000.00 |
| 14-14-14 | 7 bags | 8,400.00 |
| Urea | 4.5 bag | 5,400.00 |
| Muriate of potash | 1.7 bags | 4,080.00 |
| Foliar fertilizer | 5 gal | 7,500.00 |
| Fuel | 160 liters | 7,040.00 |
| Insecticide | 1 liter | 1,200.00 |
| Labor | | 50,000.00 |
| Total | | 631,620.00 |
| Succeeding years (per year) | | |
| Supplies and Materials | | |
| Organic fertilizer | 192 bags | 48,000.00 |
| 14-14-14 | 28.5 bags | 34,200.00 |
| Muriate of potash | 6.6 bags | 15,840.00 |
| Foliar fertilizer | 5 gal | 7,500.00 |
| Fuel | 160 liters | 7,040.00 |
| Insecticide | 1 liter | 1,200.00 |
| Labor | | 35,800.00 |
| Total | | 149,580.00 |

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How to Grow Dragon Cactus

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Why invest on Dragon Cactus Production?

Dragon cactus, locally known as “saniata,” is becoming a favourite of many Filipinos for its known therapeutic properties and is being considered as “Healthy Food for the Table”. It is now gaining popularity ,hence, poses a great demand among local consumers. This is therefore becoming an emerging champion in the local fruit industry. It is excellently grown in the country most especially in Ilocos Region because of its adaptability to the climatic and soil conditions. This crop is recommended in marginal upland areas, thus, converting these unproductive lands into productive ones.

Dragon Cactus cultivars

1. Saniata 1 (Imee)- red flesh with red skin
2. Saniata 2 (Imelda)- red flesh with red skin
3. Saniata 3 (Miriam)- white flesh with pink skin
4. Saniata 4 (Edit) - red flesh with red skin
5. Saniata 5 (Mimi) - red flesh with red skin
6. Saniata 6 (Elena)- white flesh with yellow skin

How is this cultivated?

1. Area Selection

Dragon cactus can be grown in well-drained soil with pH value from 5.3 to 6.7. It prefers sandy soil with high organic matter. The crop also needs full sunlight.

2. Planting Schedule

Planting during the rainy season is encouraged to save irrigation cost in the plant establishment and to ensure that the crop coincides with the flowering season when the plants reach eight month old or more.

3. Nursery Management

Prepare the planting materials either from the entire stem segment or 15 to 20 cm long. Make a slanted cut on the stem end to improve rooting. Treat stem cuttings with rooting hormones and place in a cool, dry area for five to

seven days before planting. Plant the rooted cuttings individually in plastic and pots or in plots using a well-drained potting medium.

4. Plant Establishment

Clear the area. Use kakawate wooden posts (40 to 50 cm diameter and 2 m long) or cement posts (15 x 15 cm x 2 m). Bury 45 cm length of the posts and arrange at the distance of 2 m to 3 m between posts. Place old motorcycle tires as crown at the top of the post supported by three to four L-shaped 10 mm steel bars.

Plant four stem cuttings or propagules around the post. Tie the stems in the post. In sandy areas, it is advisable to replace the soil with high in organic matter.

5. Nutrient Management

a. Fertilizer recommendation at different stages of the crop

| Plant Age/Month | Approximate fertilizer requirement/post | | | |
|---------------------------|---|------------------|------------|-------------------------|
| | Organic (shv*) | 14-14-14 (tbs**) | Urea (tbs) | Muriate of potash (tbs) |
| From planting to one year | | | | |
| At planting | 1 | 4.5 | 3 | 1 |
| 3 months | - | 4.5 | 3 | 1 |
| 6 months | 1 | 4.5 | 3 | 1 |
| 9 months | - | 4.5 | 3 | 1 |
| One year and up | | | | |
| November | 2 | 18 | | - |
| January | - | 18 | | - |
| April | 2 | 18 | | 7 |
| June/July | - | 18 | | 8 |

*shovelful **tablespoonful

b. Method of application

Saniata is a shallow rooted plant and most of the roots appropriate to split the application of fertilizer to prevent the fertilizer leaching.

Apply the organic fertilizer liberally at the base of the post and incorporate in the soil. Dibble the inorganic

fertilizer 5-8 cm away from the base of the plant to prevent the fertilizer in contact directly with the plants.

c. Foliar Fertilization

Apply foliar fertilizer late in the afternoon every two weeks. Follow the manufacturer’s recommendation.

6. Tying, training and topping the shoots

Train the stem canopies leaning towards the post and tie them using stripped cloth. Top the shoots when the plants reach about one meter. Before the shoots reached the crown, top these to allow the production of numerous shoots. Train the shoots to spread out producing umbrella-like structure.

7. Irrigation

Irrigate the newly planted dragon cactus and twice a week thereafter and just after applying fertilizers except during rainy days. Wet the posts to enhance the growth of aerial roots from the underside of the stems which provide anchorage for the plants in climbing.

8. Pruning

Prune the stems to obtain an open, manageable, and productive umbrella canopy. Remove the shoots developing at the base of the plants. These shoots can be used as planting materials.

9. Weeding

Hand weed within the inner 30 cm diameter of each post and cut the weeds using grass cutter in between posts.

10. Pest Management

a. Ants attack the shoots and fruits of the dragon cactus. Scale insects attack the stems which cause rotting. Spray soap solution or insecticide only on those affected plant parts.

b. Fruit fly larvae attacked the fruits causing them to rot. Use methyl eugenol as pheromone traps to control this pest. It can also be prevented by bagging using plastic bags, newspapers, and *katsa* bags. Color coding helps determine the time of harvesting fruits.