

Construction Technology of Home garden

1 Goal

Focusing on the improvement of people's livelihood, select efficient economic plants and high ornamental value flowers and plant them in the vacant land in the front and back of the farmer's house, which will achieve the dual goals of improving people's livelihood and improving the quality of the living environment.

2 Site and scale

Build a family garden of 10 hectares in Bos Thom village, Siem Reap, Cambodia.

3 Selection of the economic plants and flowers

Economic plants: bananas, papaya, cashews, coconuts, beans, green vegetables, etc.

Flowers: Bougainvillea, poinsettia, etc.

4 The principles and examples of models

(1) Principles: Combining long, medium and short term, taking into account the economic benefits and landscape effects.

(2) Examples of models:

Three main models are fruit-flower, vegetable-flower and fruit-vegetable-flower. The specific planted species and their number can be adjusted according to the individual wishes of the villagers.

The species configuration is shown in Figure 1. The row spacing of bananas or papaya is 6×6 m; the row spacing of cashews or coconuts is 12×12 m; the row spacing of beans is 25×65 cm; the row spacing of green vegetables is 15×20 cm. Flowers are only suitable decoratively in front of the house.

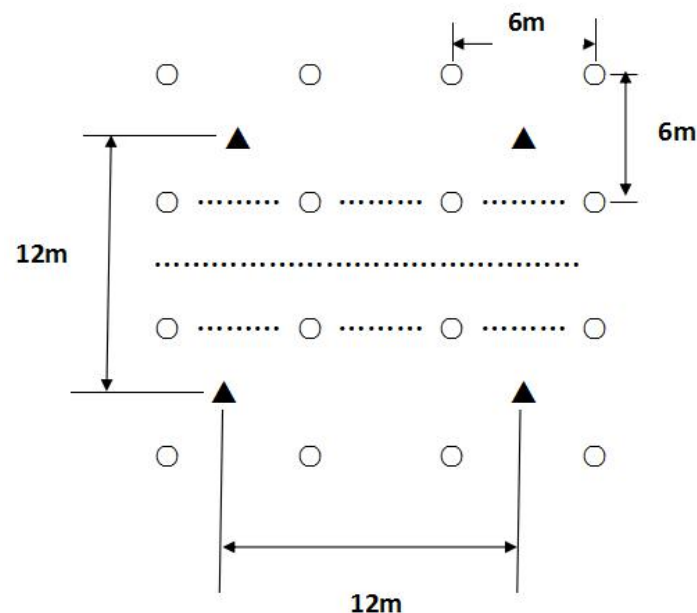


Figure 1 The species configuration

Note: ○: banana or papaya ▲: Cashew or coconut .: beans or vegetables

Annex 1 Key points of papaya cultivation techniques

(1) Site selection and planting

--Site selection

It is better to choose a site with thick soil layer, good drainage and irrigation, fertile sandy loam and clay loam soil.

--Site preparation

Spread 20 kg of lime per acre to sterilize and adjust the pH of the soil after plowing (deep plowing reaches more than 40 cm), and then perform a second plowing.

-- Colonization

The planting time is better from October to December, flowering from April to May, fruit picking from August to September, and the market price is good. The row spacing is 3 × 2m. Planting hole is 60 × 60 × 40cm. After opening the hole, it is exposed to the sun for 5-7 days. Each hole is applied with 2.5-3.0 kg of cooked farm manure such as chicken manure or pig manure. After the soil and fertilizer are mixed well, the soil returns to hole until the soil surface and can be planted in 5-10 days.

(2) Field management

--Weeding in time: Weeds and papaya compete for fertilizer, and are prone to parasitic diseases and insects, so weeding should be timely. It is required that the melon garden is free of weeds, and the weeds are covered with weeds after weeding. In dry weather, irrigate the water to keep the soil moist and the humidity above 45%.

--Trenching and soil cultivation: Flat lands and plots with easy accumulation of water should be ditched and drained in time. Add the soil to the trunk base can promote the growth of papaya root system. This work should be done before the rain season.

--Remove axillary buds: Axillary buds between the axillary leaves of young leaves will consume water and nutrients, delay flowering and fruiting, hinder ventilation, and easily cause diseases and insect pests, so axillary buds with a length of more than 5 cm should be removed early on sunny days.

--Fruit thinning: Fruits with poor pollination, deformed shapes, diseases and insect pests, and overcrowding should be removed at any time during the fruiting period. Generally, 1-2 best-shaped fruits should be kept on each leaf. Thinning should be carried out once a month. If there is enough space in the leaf axils, two uniformly sized fruits can be retained.

--Cut off the dead old leaves: Dead old leaves are easy to induce diseases and insect pests, and scratch the peel when the wind is strong, which will affect the value of the fruits, so they should be cut off at any time.

(3) Management of water and fertilizer

In June, 2.5 kg of cooked organic fertilizer and 0.25 kg of high potassium compound fertilizer were applied per plant. If it does not rain within three days after fertilization, water should be supplemented in time. Soil moisture content is preferably up to 70%.

Annex 2 Key points of banana cultivation techniques

(1) Site selection and planting

--**Site selection:** It is better to choose a site with thick soil layer, good drainage and irrigation, fertile and loose sandy loam, and clay loam soil.

--**Site preparation:** Deep plowing 30-35cm, raking and ditching. The row spacing is 6×6 m and the planting hole size is $60 \times 60 \times 40$ cm.

--**Planting:** Spring planting: mid-February to late February; Autumn planting: mid-September to late September.

(2) Management

--**Watering and weeding:** Irrigating immediately after planting and in drought season. Weeding should be timely conducted because weeds compete for fertilizer with bananas.

--**Removing sucking buds, dead and diseased leaves:** Sucking buds consume nutrients and affect yield, dead leaves are prone to insects, and diseased leaves are easily contagious, so sucking buds, dead and diseased leaves must be removed in time.

--**Flower buds:** The flower buds supported by the petioles cannot sag normally. The leaves of the buds should be artificially removed to make flower buds sag normally.

--**Cut leaves to protect the fruit:** Cut the leaves that affect the growth of the fruit to provide room for the fruit to grow.

--**Fruit thinning:** The fruit squeezes each other and affects the uniformity of the fruit, but also affects the quality and value. Therefore, the fruit thinning should be done in time.

--**wiping flowers:** can avoid withered dried flowers stabbing the banana skin and piercing the set of fruit bags to affect the appearance and quality, so you should wipe the flowers in time.

--**Broken buds:** The female flowers are over and the buds break when the ears sag normally to perpendicular to the ground. Banana only has strong female flowers. Neutral and male flowers cannot bear fruit, but it consumes nutrients. Failure to break buds in time will affect fruit development, delay harvest time, and reduce yield.

--**Bagging:** Bagging is good to keep warm, reduce pest and disease hazards, avoid trauma, good coloring. Generally, it is better to bag when the bud breaks, the fruit is turned up, and the peel starts to turn green.

--**Pole protector:** Poles are used in crop cultivation for buds protection, windproof and avoiding bananas falling.

--**Harvesting:** Harvest timely after the banana fruit is mature.