



How To Grow Tomato

Tomato (*Lycopersicon esculentum*) can be grown throughout the year. You can start harvesting tomato fruits 8 - 9 weeks after transplanting. One tomato plant can yield 4 - 6 kg (10 - 15 lbs.) of fruits.

Tomato belongs to the Solanaceae family. Other crops belonging to this family include pepper and melongene.

Tomatoes are high in vitamins A and C and lycopene.

VARIETIES

Some recommended varieties are:

Royal Pearl	Royal Gold
Chandini	Dianne
Hybrid 61	Akash

PREPARATION OF THE GROWING MEDIUM

Tomatoes can be planted both in the ground and in containers. They require a well-drained, fertile growing medium.

Land preparation

If planting in the ground, loosen the soil using a garden fork to encourage drainage and aeration. Remove all stumps and large stones. Make drains to remove excess water from the garden if needed.

Too much water in the soil will kill the plants and encourages disease.

Container preparation

If planting in containers, use a container at least 45 cm (18 inches) by 40 cm (16 inches) and 30 cm (12 inches) deep.

Prepare the container and the growing medium and transplant your seedlings as described in the home gardening factsheet on "Container Planting".

SPACING

Planting tomato seedlings in the ground:

Space seedlings 30 cm (12 inches) within rows and 60 to 90 cm (2 - 3 feet) between rows.

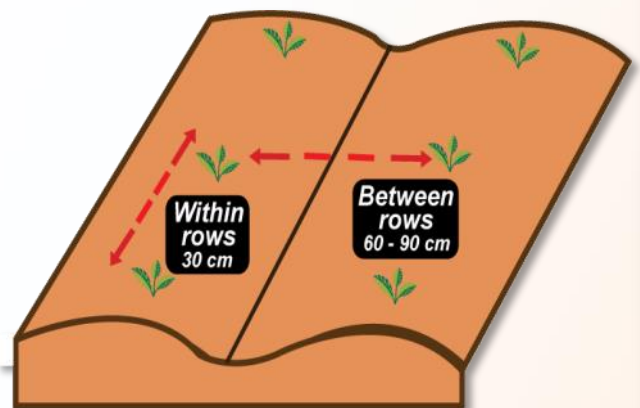


Figure 1: Aerial view of tomato plot showing plant spacing

Mixed cropping:

Tomato can be interplanted with other crops in the home garden. Allow 0.5 m² (5 feet²) per tomato plant.

TRANSPLANTING

Transplant healthy seedlings late in the afternoon (3:30 - 4:30 p.m.) when they are 3 - 4 weeks old.

Make a hole 10 cm (4 inches) in diameter and 10 cm (4 inches) deep.

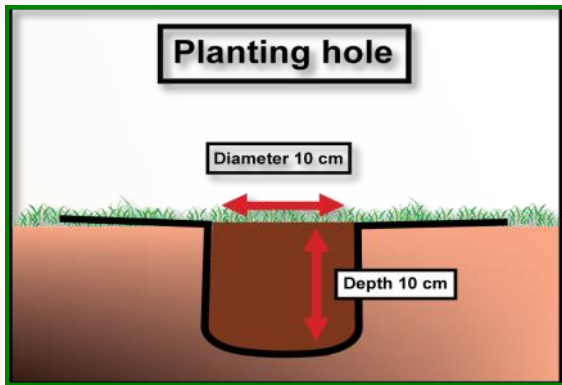


Figure 2: Dimensions of 'planting hole'



Figure 5: Planted Seedling



Figure 3: Planting Hole

Agricultural limestone is required since most soils in Trinidad are too acidic for tomato. Mix 1/2 cup of limestone and two handfuls of cured (well-rotted) pen manure or compost with the soil that was removed and refill the hole with the mixture.

Make a hole just big enough to hold the seedling's root ball.



Figure 4: Transplanting

Place one seedling in each planting hole. Pull the mixture around it and press it lightly to hold plant upright and firmly in position.

WATERING

Water tomato seedlings immediately after transplanting and twice daily, in the absence of rain.

Water plants in the morning and early afternoon to prevent fungal problems.

A mature tomato plant needs 2 - 3 litres of water daily.

Insufficient water will cause flower drop and blossom end rot.

FERTILISING

Plants need nutrients in the correct proportions for healthy growth and production. Nutrients are usually provided by the growing medium. **Use fertilisers to provide additional nutrients as needed.** You can use granular, or foliar fertilisers.

Method of application

If using a granular fertiliser, apply it at the drip circle of the plant.

If using a foliar fertiliser, dissolve it in water and apply to the plants' leaves.

Timing of fertiliser application

One week after transplanting:

Use a complete NPK fertilizer high in phosphorus e.g., 10:40:10 at the manufacturer's recommended rate.

Repeat once in the 3rd week after transplanting.

When new leaves appear (2 - 3 weeks after transplanting):

Use a complete NPK fertiliser high in nitrogen e.g. 20:10:10 at the manufacturer's recommended rate.

When flowers form (4 - 6 weeks after transplanting):

Use a complete NPK fertiliser high in potassium (e.g. 12:12:17+2) according to manufacturer's recommendation to promote flowering and fruit development.

A tomato plant can continue to flower and fruit for 3 - 4 months.

PEST AND DISEASE CONTROL

If pests and diseases are left unchecked, they will affect the health of plant and its yield. These problems can be managed using a combination of recommended cultural practices, biological control and use of safe pesticides.

This is known as Integrated Pest Management. Use the information provided in the factsheet on "Integrated Pest Management for Home Gardeners" as a guide to controlling pests and diseases in your garden.

CULTURAL PRACTICES

- Prepare the growing medium as recommended.
- Put in **enough drains** to remove all excess **water** from the garden.
- As far as possible, **plant varieties that are resistant to diseases**.
- **Practice crop rotation**; Don't plant tomato or any member of the solanaceous family in the same spot continuously. Members of this family include tomato, melongene and pepper. **After a crop of tomato, plant a crop from another family such as lettuce or cabbage.**

- **Practice mixed cropping:**
 - Plant different crops within the same plot. For example intercrop tomatoes with lettuce. Remember to leave adequate root room for all plants.
- **Control weeds** as soon as you see them throughout the life of the crop.
- Grow **pungent plants** such as **marigold** and **basil** in the garden to keep away some pests.
- **Stake tomato plants.** Tomato stems are weak and grow along the ground. Staking keeps the plant upright and prevents the soft fruits from lying on the dirt. Stakes should be at least 2 metres (6 feet) tall. Plants can be individually staked, or if many are planted together they can be staked in rows. The stakes should be put in when preparing the growing medium at transplanting.



Figure 6: Individually Staked Tomato plants



Figure 7: Tying plants to stake

When staking in rows, insert the stakes next to every fourth plant. Tie the twine from stake to stake on each side, enclosing the plants. Continue tying the plant as it grows.



Figure 8: Staking plants in row

BIOLOGICAL CONTROL

There are many beneficial insects that can help control pests and diseases that affect tomato. Encouraging helpful insects such as ladybird beetles, spiders and dragonflies can help to reduce pest problems in the garden.

PEST CONTROL USING NATURAL PESTICIDES

Natural pesticides are recommended for use in the home garden. Use the information provided in the factsheet “Making Natural Pesticides Using Local Materials” as a guide.

HARVESTING

Harvest fruits when they are mature or ripe. Tomato fruits are ready for harvest when they have changed colour from green to streaks of red, all grooves are filled and they have lost their shine.

Do not harvest fruits when they are wet or when it is raining because this can lead to rotting.

Harvest the fruit with the stem attached to it. This will encourage continued flowering.

Hold the fruit and snap upwards; mature tomatoes will easily separate from the main stem of the plant.



Figure 9: Harvesting fruit

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