

**OVER 2,000
TOMATOES**

Copyright Notice

This e-book and its contents, original text and photographs are copyright © Karen Platt 2007.

All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form, by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission from the publisher or a licence permitting restricted copying.

Purchase of this ebook allows only the purchaser to read and use the ebook on screen and to print the ebook once for his or her personal use but not to copy, print for sale or distribute in any way or form, to any third party, the e-book or any part thereof, whether financial gain is involved or not.

Introduction

Tomatoes may be the very food of love. The love apple. Often classified as a vegetable, but actually a fruit, the tomato is eaten all over the world. Originating in the Andes of South America and in Mexico, tomatoes were unknown to the world until the Spaniards returned from their exploits in South America and introduced these luscious fruits in Spain in the 1500's. For years they were only grown as an ornamental, the fruits thought to be poisonous until the 1800's.

Lycopersicon esculentum is the botanical name for tomatoes, which belong to the Solanaceae (potato or nightshade) family. In fact, some tomato varieties have potato-like leaves.

Tomatoes are not just red, as you will find in these pages, and some of the first fruits grown were yellow. There are wonderful, colourful heirloom tomatoes to discover from orange to green through purple to black.



Tomato 'Pomodoro'

Growing in Small Spaces

Choose a patio type determinate very compact variety. Apart from containers and pots, you can also try growing your tomatoes vertically. Spacing with this method is one plant per square foot. Plants are grown on 6 foot strings attached to a bar suspended above the plants. Wind the string around the tip of the plants every week, and remove new suckers from the leaf axils. Yields of 20-40 pounds per plant are common with this method of growing.

Personally, I avoid gro-bags, I believe they limit the potential of the vegetable or fruit and cause more growth problems than their space-saving ability makes up for.

No garden? Never fear, basket tomatoes are here to stay enabling anyone to grow a taste of the sun. Plants as tiny as 15cm (6") can be grown on your window sill or in a relatively small pot.

Unbelievably under-represented in supermarkets, there are seed catalogues which specialize in nothing but tomatoes and others that have a special tomato selection. So walk away from those round red supermarket tomatoes with their bland taste and enter the world of real tomatoes. Choose your favourites and a few new to you every year. I grow 95 per cent heirlooms and often concentrate on anything but red.



Organic Tomato Seeds, UK Based Supplier

We offer a selection of interesting, tasty and colourful heirloom tomato seeds some of which are organic. We also have one of the largest stocks of Chilli Seeds on offer.

Once your tomatoes have grown they will provide you, your family and friends with an abundant supply of some of the greatest tasting tomatoes you can get!

The Chilli Company, Stoney Bridge, Cark-in-Cartmel, Cumbria, LA11 7PE
<http://www.chileseeds.co.uk>
Telephone - 0044 (0) 15395 58110
Fax - 0044 (0) 15395 59100

Why Grow Your Own Tomatoes?

The taste of tomatoes is what makes you come back for more, whether you want an acidic stomach stripper or a sugar high, sweet cherry tomato, you will find plenty of each. I still prefer the taste of open-pollinated heirlooms which give that old fashioned tomato flavour. Taste is everything, some of those old heirlooms are anything but regular in shape, but they taste terrific. They might not give big yields but they are perfect for the backyard and allotment gardener.

Hybrids tend to be pretty bland and descriptions of taste throughout the book are relevant. A hybrid has never matched the taste of an heirloom. Hybrids are uniform, usually red, round and offer big yields.

If you are worried about disease, then choose a heirloom which is pretty much disease-free or go for an F1 hybrid if you absolutely feel you must, bearing in mind that improved disease resistance is usually made at the cost of taste, not to mention firmness.

Whichever you choose, you simply must grow them yourself for the best tasting tomatoes ever. I have never encountered any difficulties with growing tomatoes myself, having been lucky enough to grow in disease-free soil and I often opt to grow in containers. Don't be put off by tales of disease disasters. If you live in a disease ridden area, search out appropriate heirlooms adapted to your area.

It's not just the taste, tomatoes really are good for you. At least 15 of the 20 amino-acids needed for protein synthesis are found in tomato juice, which is also an excellent rich source of vitamins A and B.

How to Grow

There are two types of tomato: determinate (bush) and indeterminate (cordon) varieties. Some tomatoes are semi-determinate. Tomatoes are available as greenhouse and outdoor types. You will see at a glance that many of these are open-pollinated, they are so if they do not state F1.

DETERMINATE

These stop growing and bearing fruit naturally when they reach a certain height. Some are compact and excellent for limited growing space. Fruits tend to ripen at the same time. They are known as bush varieties. Fruits ripen all at the same time. This type is often considered easier to grow because it requires little aftercare.

INDETERMINATE

These continue to grow and bear until the first frosts. They grow into large plants and continue cropping throughout the season. They need to be supported with trellis, stakes or cages. Growing tips can be pinched out when the desired height is reached. They are known as cordon or vine varieties. I prefer indeterminates because you can harvest throughout the season.

I can never understand the myth that tomatoes are hard to grow. If I can do it, believe me so can you. I first became interested in tomatoes at the age of 10, a family friend grew yellow tomatoes in his greenhouse, and I became hooked on the taste. I grow all my tomatoes outdoors.

Follow these simple rules for seed-sowing and the professional tips for aftercare and enjoy your own fresh, tasty tomatoes.

Use a sterile potting medium and handle plants carefully, never bruise stems. A damaged stem can mean a dead or diseased plant. Handle plants by the leaves. Using scrupulously sterilized pots and equipment minimalizes any risk of disease.

There are approximately 8,000-11,000 tomato seeds per oz, 250-400 seeds per gram. 1oz of seed (28g) will produce between 3-6,000 plants in the greenhouse. Seeds are normally viable for 3 years when kept in optimum conditions. I find germination occurs anything between 5 and 14 days.

STORAGE

Some keep better than others. Store in a cool, well-ventilated, dry place. Ideal temperature is 8-10°C (50°F).

Sowing Seed

Sow early crops mid February, main season crops mid-end March. Dates will vary according to your area and location. Seed needs to be started indoors 6 to 8 weeks before the last frost date in your area. They take about 7-8 weeks to become large enough to be planted outdoors.

Germination takes one to two weeks at a temperature of 21°C (70°F) in good light or under a horticultural grow light. The absolute minimum for good germination is 16°C (61°F). Do not place in direct strong sunlight but in a warm room. If you have sterile soil and pots, disease should not be a problem and there is no need to use anything to prevent rot.

Sow (5mm) 1/4 inch deep and cover to keep moist. Sow 5 seeds per 7cm (3") pot and transplant into individual pots after the first two true leaves appear. Clearly label your pots.

Pricking out

Holding the seedling by the leaf, gently lift it out of the pot and in to its own 7cm (3") pot. Take care not to handle the stem and roots.

Seedlings produce better roots when they are just moist at 60°C (16°C). Ideal temperature from seedling to planting out is 60-70°F (16-21°C).

Growing on

When the roots can be seen at the bottom of the pot, it's time to transfer them to a bigger pot. Again, handle with care, taking care not to damage stems or roots. Choose a 12cm (5") pot. Place sterile soil in the bottom and around the sides, ready to put the plant straight into the hole in the middle. Water in well and support if necessary with canes, trellis or cages.

Transplanting

Harden off plants gradually. When all danger of frost is passed and night temperatures are above 50°F (10°C), plants can be placed outdoors. They can continue to grow in pots or be put into the ground. Warm the soil with fleece to give plants a head start.

Transplant the tomato plants, now at least 8"-12" high, out into their permanent sunny positions in organic-rich soil with 60cm (2ft) between plants, 150cm (6ft) between rows. Tomatoes can be planted deep, with a portion of the stem being submerged in deeply dug, previously well-manured soil which is rich and light, preferably pH 6-6.5.

When four trusses have formed it is normal to remove the growing tip to hasten ripening.

Extending the season

Extend the season by using horticultural fleece. At the beginning of the season this will give an early start, and at the end of the season help to ripen fruits. A cloche or cold frame are other ways of achieving the same results. Tomatoes cannot tolerate any frost.

Better yields

Tomatoes like a rich soil. They also need a uniform supply of water. Always water at the base of the plants, not overhead. They are shallow rooted plants and it is best to water thoroughly at each watering. Wide variation in moisture levels can damage the fruits and is associated with blossom end rot. Overwatering can lead to deterioration in taste. Plants can be mulched to conserve water. Fertilize with a high-phosphorus complete fertilizer when the first flowers appear. Too much nitrogen encourages vigorous growth with little fruit.

Pruning

Indeterminate varieties can be pruned (removing sideshoots) and pinch out the top 2 leaves above the last truss. 7cm (3") side shoots can be removed from the parent plant and rooted as cuttings. Determinates need no pruning. Whilst there are many pruning methods, the following is a reliable way of producing increased yields.

Double Stem Pruning.

After transplanting plants into their permanent positions outdoors, break off the new non-flowering shoots or suckers which grow from the main stem in the leaf axils. Allow the first of these below the first flower cluster to grow, it will develop into a second main stem. Keep all subsequent suckers removed by pruning weekly.

Single Stem Pruning.

All suckers are removed allowing only one main stem. This allows for close spacing. There is usually a greater chance of fruit cracking.

Perennials

Tomatoes are perennials and have a much longer season in warm areas. Seed can even be sown directly in situ if your last frost date is in March, but it is much better to start under cover.

Unripened tomatoes can be taken, on the plant under cover at the end of the season in order to ripen. Some varieties ripen off the plant.

Companions

Your tomatoes will do better planted with asparagus, basil, carrots, celery, chives, marigolds, nasturtiums, onions and parsley. Do not plant near other Solanaceae members nor cabbage, kohlrabi or fennel.

Aftercare

Staking

Indeterminate varieties usually need some kind of support. Vigorous determinates may also need staking. Use a single cane per plant, 30cm (1ft) driven into the ground and 1.2– 1.8m (4-8ft) above the ground. The stake should be 5cm (2") away from the stem, tied correctly. Some plants need more than one stake. Trellis or cages are needed for vigorous plants. All support should be in position when you make the final transplant.

Feeding

Feed every 10-14 days with a general fertilizer. When the first fruits start to set, change to a high potash feed.

Special conditions

Extremely hot areas need to choose plants resistant to scald or sunburn and are best opting for leafy varieties. Cold areas need the hardiest fruits that mature early.

Pollination

You can aid pollination by tapping the plant every day.

Maturity

This is the number of days from transplanting that you can expect to start picking fruit. This will vary with your climate, soil and other environmental factors. Outdoor crops are always

later than indoor crops. Cropping is usually anything from 55-110 days, which affects what you can grow. If you live in a short-season area, for example, don't grow late maturing varieties, but go for early varieties instead.

Parthenocarpic Fruit:

These fruit at cooler temperatures as they do not require pollination to set fruit which is usually seedless, and are therefore usually the earliest producers.

Earlier Flowering:

When the first true leaf has formed, earlier flowering can be increased by a one-week period at 12°C (54°F). This needs to be well-timed.

Harvest

Most tomatoes are ready to harvest when they are showing their true colour. However, some can be picked green and kept, see the individual descriptions. Green tomatoes are ready to harvest green.

Use the days to maturity as a guide. Another reliable indicator is the size of the fruit. Most fruits need eating as soon as they are ripe. All fruits must be harvested or plants brought under frost-free cover when frost is expected. Unripe fruit can be ripened in a drawer with a banana.

Diseases

It is often considered perfectly normal to grow tomatoes in the same soil year after year, but rotation helps to avoid disease. Vines can also be destroyed at the end of each season.

Blossom End Rot - a brownish-black sunken area forms on the bottom of the fruit. Not all fruits are affected at the same time. More likely to affect container grown plants. Small-fruited varieties are rarely affected. Caused by calcium deficiency, uneven watering and plants that are dry at the roots. If you find this a problem, pick off affected fruits, regulate your watering and add a handful of bonemeal when planting out.

Blight - brown patches develop on the leaves which dry and curl. Infected fruits become brown and shrink inwards. They can rot on the plant or a few days after picking. Affects outdoor tomatoes more than those grown under glass. Caused by a fungus which is encouraged in warm, humid conditions, especially where foliage has been left to trail on the ground. Spray with a copper-based fungicide. (*Alternaria*).

Tobacco Mosaic Virus - smokers should avoid handling transplants. There are many other viruses which affect tomato plants which can result

in a variety of symptoms from smaller leaves to yellow striping of fruit. Cucumber mosaic virus is similar.

Fusarium and Verticillium wilt are present in many soils. These are encouraged by dry soil conditions. Fusarium wilt causes stems to wilt and the plant dies. Verticillium wilt causes foliage to wilt although the whole plant is unlikely to be affected. Remove and burn infected plants as there is no chemical control, do not replant members of the same family in the soil for 5 years.

Potato Cyst eelworm affects tomato plants. This develops inside the roots, affected plants die prematurely.

Fruit Cracking - this can occur because of rapid intake of water. Ensure even watering and mulch well.

Botrytis - grey mould usually occurs on greenhouse-grown tomatoes.

This is not a complete list, but the most common diseases.