

FRUIT VEGETABLES



What are fruit vegetables?

Vegetable-like fruit types are vegetables formed from the fruit of the plants that bear them.

Major production areas in South Africa

Fruit vegetables are produced in all the South African provinces. Limpopo Province is the major production area both in the Northern Lowveld and far northern areas of Limpopo. The other main producing areas are the Onderberg area of Mpumalanga Province and Border area of the Eastern Cape Province. Production is very limited in the winter months and tomatoes can only be produced in frost-free areas during winter, or under protection like tunnels.

Climatic requirements

This annual plant is classified as a warm-season crop. Low temperatures, even a few degrees above freezing, may cause serious damage to both the plant and fruit. The optimum temperature for growth, yield and fruit quality of tomatoes is an average daily mean of 20°C to 24°C. At temperatures below 12°C or above 35°C, flowers are often shed, with a consequent poor fruit set; the quality of the fruit produced under such conditions may also be detrimentally affected. Even in frost-free areas, winter production of tomatoes should not be attempted where mean temperatures frequently drop below the critical margin of 12°C. The best soil temperature for germination of tomato seed is from 15°C to 30°C. At such temperatures plant emergence occurs in about 7 to 10 days. At temperatures of only 10°C this period may extend to three weeks or longer, and emergence tends to be more uneven and poorer. The germination capacity is detrimentally affected at soil temperatures of above 35°C. Hot, dry winds may cause an excessive flower drop, even when soils are moist. Strong winds can cause serious physical damage. Continuous moist, rainy weather promotes the occurrence and spread of leaf diseases and makes their control more difficult. For best results, tomatoes should be grown in relatively dry areas under irrigation.

Soil requirements

Tomatoes should ideally be grown in deep, fertile, humus-rich, free-draining, but moisture retentive soils, which are free of nematodes. Sandy loam to clay loam soils, with a clay content of between 15 and 35%, are considered to be the most suitable. Sandy or gravelly soils are acceptable, provided the soil moisture content can be kept at the desired high level. Heavy clay soils are less suitable because the slower drainage can cause unfavourable waterlogging during periods of prolonged or heavy rains, particularly where these occur just after a good irrigation. In entirely unrestricted soils, a few tomato roots may penetrate to a depth of over 2 m, but the greatest concentration of roots occurs in the top 600 mm of soil, which is considered to be the effective rooting depth of this plant. Soils with a minimum depth of 600 mm should therefore be selected, with even deeper soils receiving preference. The tomato does well in humus-rich soils and will respond well if grown after a green manure or soil-improving crop.

Weed management

Weeds present problems either because they compete for light, water and nutrients, or because they transmit diseases and pests. Therefore, controlling weed growth is very important. It is best to remove weeds before they produce seeds. Weeds can be removed by pulling them out by hand or by hoeing just under the surface of the soil. To avoid damaging the roots, do not weed by hoe too often or too deep. Weed growth can be suppressed or slowed down by covering the ground with mulch. Mulch consists of plant remains such as rice straw, sugar-cane pulp (bagasse), grass and/or leaves. Be careful not to use weeds with seeds in the mulch. Also do not use plant remains from the Solanaceae family, as these can transmit pests and diseases.

Potential problems and management

Generally, peppers are problem free. The same pests and diseases that plague other members of the nightshade family (tomatoes, potatoes, and eggplants), however, will occasionally attack peppers. With a few precautions, you can keep your peppers "clean." Use organic pesticides to eliminate common pests. Destructive caterpillars like cutworms, tomato hornworms, and borers are easily controlled with *Bacillus thuringiensis* (BT or Thuricide). Rotenone and pyrethrum will readily handle pepper maggots and weevils, leafminers, flea beetles, and aphids. Plant disease-resistant pepper varieties, especially if anthracnose, mosaic, and bacterial spot are problems in your area. (Ask veteran gardeners in your neighbourhood or the local or district Extension Officer.) Avoid working in the garden after rain. Diseases can spread rapidly among wet pepper plants. Weed the garden. Weeds provide a refuge for garden pests and can spread fungi and viruses to nearby healthy pepper plants.

Production schedules

ACTIVITIES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Soil sampling												
Soil preparation												
Planting												
Fertilisation												
Irrigation												
Pest control												
Disease control												
Weed control												
Leaf sampling												

Acknowledgement

AMATI M., DEKKER E., VAN LINGEN T., PINNERS E. & TAM S.C.; 2002; AGRODOK17 (*How to grow tomato and peppers*); Agromisa Foundation. Wageningen
 HATUTALE G.; 2010; *The effect of plant production and mulching on green pepper (Capsicum annum L.) production under irrigation*; Faculty of Natural and Agricultural Science, Department of Soil, Crop and Climate Sciences, University of the Free State, Bloemfontein, South Africa
 Burpee accessed on 18 March 2013 <http://www.burpee.com/vegetables/peppers/growing-peppers-article10252.html>

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