BACKGROUND

Origin and distribution

The origin of the garden pea is Egypt where it has been cultivated before the Christian era. Probable centres of origin are considered to be Ethiopia, the Mediterranean area and central Asia, with a proposed secondary centre of diversity in the Near East. Peas are grown in Europe, especially the UK and France, the former USSR, China, India and the US.

Climatic and soil requirements

Peas grow best at cool temperatures of 13 to 18 °C. They are hardy and able to withstand slight frosts. The pea plant is a cool-season crop, very sensitive to drought and grows best in regions of moderate rainfall or with irrigation. Peas can grow in a wide variety of soils, however, sandy loams are preferable. Peas grow best in soils with pH values of 5,5 to 7 and are very sensitive to lower pH values.

Uses

Garden peas are consumed as a fresh succulent vegetable, in soups, casseroles, stews and salads or as dried seed in soups and purées. The mature seed can also be dried, ground into a powder and then used to enrich the protein content of flour when making bread.

CULTURAL PRACTICES

Planting

In temperate climates where winters are severe, the crop is usually planted in the spring. Where there is little or no frost, the crop is planted in the late fall and early winter. In the tropics and subtropics, peas are planted at high elevations where the temperatures remain cool. Seeds are planted 2 to 4 cm apart in rows 38 cm in width or in double rows in beds that are 75 cm in width. The seeds are sown 2 to 4 cm deep.

Fertilisation

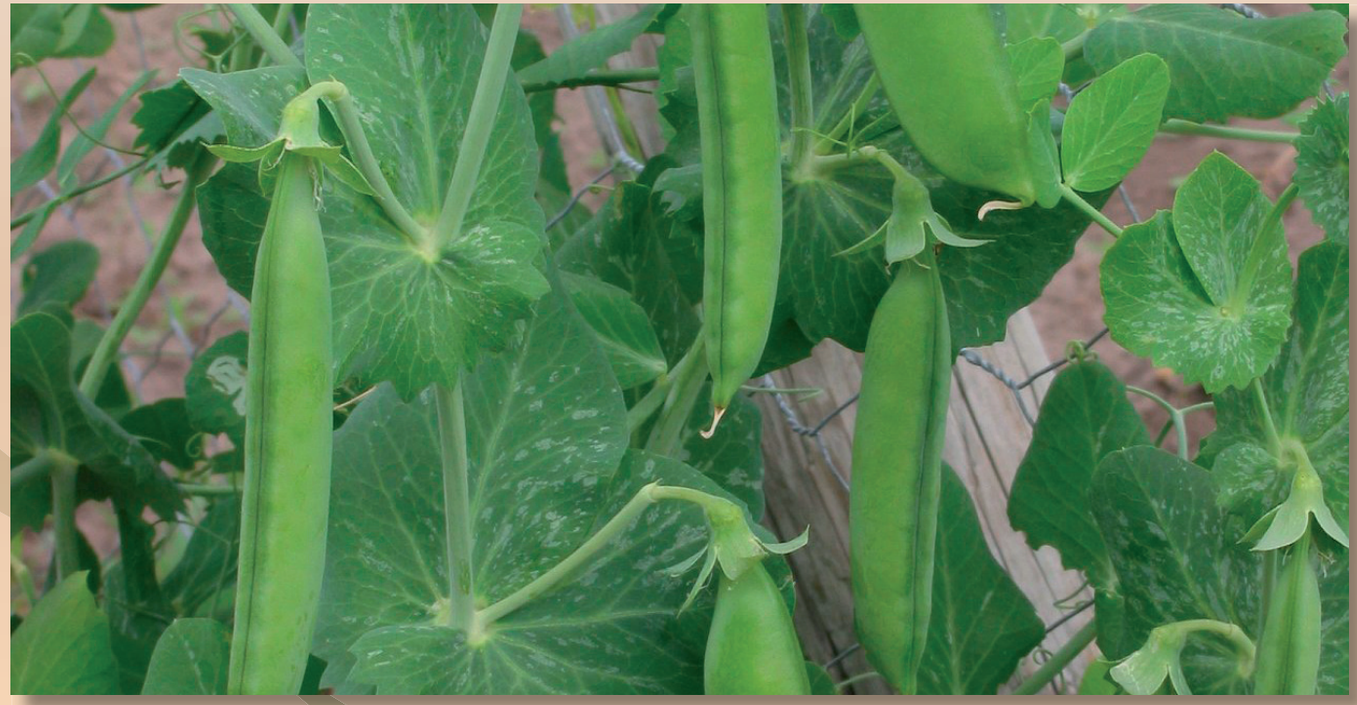
On some very rich, fertile virgin soils, only a maintenance application of fertiliser may be needed, while in some of the less fertile sections, the use of 1 760 to 2 200 kg/ha of fertiliser that is rich is nitrogen, phosphorus and potassium is recommended. The fertiliser is usually applied to the side and slightly below the seed or mixed thoroughly with the soil before planting. Soil analysis is the only technique for the sensible application of fertiliser to specific plantings.

Irrigation

If the weather becomes warm and the atmosphere dry, peas will need water, which should be supplied in furrows between rows. Overhead watering should be avoided because this encourages the development of mildew.

Weed control

Mechanical weed control is easier but can be labour intensive. Registered chemicals are also available that can



be used to control weeds. The use of these chemicals differs according to the growth stage of the weed.

Pest and disease control

Aphids

Aphids are controlled by applying registered chemicals. Use an integrated pest management programme.

Nematodes (various spp.)

These attack roots of plants, causing lesions that make them susceptible to bacteria or fungal attack or cause knotty swellings (galls) on roots, resulting in the poor growth of plants. Use only registered chemicals to control nematodes.

Downy mildew

Infected plants are characterised by a white to violet fungous growth on the lower leaf surface with corresponding yellow to brown spots on the upper leaf surface. It can be controlled by applying dithane. Crop rotation can be the solution in controlling most plant diseases.

Powdery mildew

A white powdery mould on the lower leaf surface showing as yellow patches on upper leaf surface, eventually covering the entire leaf appears on infected plants. Initially it can be seen on the lower leaves and it can spread rapidly. Use only registered chemicals.

Damping off and root rot

Symptoms include a brown, watery soft rot near the soil line and rotting of the root system which is favoured by high soil moisture content and poor drainage. Apply only registered chemicals as control.

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