

Origin and distribution

Rhubarb was first grown for its root, which was used for medicinal purposes (approximately 5 000 years ago in China). It was grown in Europe in the 1700s but not until 1778 was it definitely recorded as a food plant. Rhubarb was introduced into Britain in the sixteenth century and became a crop in North America in the eighteenth century.

Soil and climatic requirements

Rhubarb grows best on fertile, well-drained soils that are high in organic matter. It can tolerate a soil pH as low as 5,0, but maximum yields are attained at a pH of 6,0 to 6,8. Rhubarb requires a temperature below 5 0C to break dormancy and stimulate vegetal growth. It is rarely grown where the summer mean stimulate temperature is above 20 0C or where the winter mean is above 5 0C.

Uses

It is usually stewed with sugar or used in pies and deserts, however, it can also be added to savoury dishes or be pickled. Rhubarb can be dehydrated and infused with fruit juice.

HUMAN HEALTH BENEFITS AND CONCERNS

For medicinal uses it is useful for constipation, diarrhoea, jaundice, gastro-intestinal haemorrhage, menstrual disorders, conjunctivitis, traumatic injuries, superficial suppurative sores and ulcers. It is also useful as hair colourant owing to being a fairly strong dye that can produce a more golden colour; it can also be used to clean burnt pots and pans, as well as a repellent for any of the leaf eating insects.

Cultural practices

SOIL PREPARATION

A well-drained but moisture-holding soil with a pH of 5.5 to 7.0 is mostly preferred for this crop. The lighter soils will produce an earlier crop but may require irrigation. Fields to be planted should be ploughed deeply and worked in the fall and spring to prevent the weeds from going to seed.

PLANTING

Rhubarb is propagated by stock because seedlings are not true to type. Plants are selected while they are dormant, either in the fall or early spring and stored in a cold place to protect them from successive freezing, thawing, drying out and damage to the buds. Close to planting time in the spring, cut each plant into as many divisions as possible—each with one or two well-developed buds and as large a piece of the adjacent root material as possible. Protect divisions from drying out before and during planting

Planting can be carried out from October to March provided that the plants are dormant. Crown pieces should be planted 8 to 15 cm below the soil surface. Rhubarb intended for mechanical harvesting is planted with an in-row spacing of 46 cm and rows 1 cm apart (17,784 plants per hectare).

FERTILISATION

Lime should be applied if the pH is below 5.6. Do not apply manure or fertiliser within 2 weeks of the lime application. Manure at 22 to 45 tons/ha maybe applied in the fall or as early as possible in the spring. In subsequent years apply 170 kg/ha nitrogen, the required phosphate

and potash. Fertiliser applications should be split into three side-dressings, before growth starts in the spring, after growth starts and after harvesting. Nitrogen rates may be reduced in the first two years with manure applications.

IRRIGATION

Application of irrigation is essential to maintain vigorous growth. Rhubarb thrives in moist soil conditions. Once every week to 10 days, an application of approximately 1 litre of water is recommended, particularly during July when summer temperatures are the highest. Water can effectively cool down rhubarb.

WEED CONTROL

Perennial weeds must be eliminated before establishing a rhubarb planting. Annual weeds are best controlled through a good shallow cultivation and planting distances between rows should be designed to accommodate tillage equipment. Deep tillage over the crown should be avoided as most buds are concentrated near the soil surface. The herbicide can be applied directly over the crowns. The absence of leaves attached to crowns minimises herbicide uptake, yet perennial weeds are fully exposed for maximum contact with the herbicide.

PEST AND DISEASE CONTROL

In terms of pests, the main problems arise in propagation and with newly planted crops. The main threat is leather-jackets, especially if the preceding crop was turf or a weedy or fallow crop. These large grubs come up at night and will eat away any growth causing the set to die off. Slugs will cause similar damage.

Leaf spots—*Ramularia* and *Ascochyta* (fungi)

These fungi cause circular or angular spots, variable in size, having beige centres surrounded by a red zone. When affected tissue dies, it may drop out, leaving large, ragged holes in the foliage.

Fungi overwinter in infected plant debris and in infected propagation stock. It can be controlled by removing and destroying the leaves following the first heavy frost. Stems with spotted leaves can be removed first during harvest.

Harvesting and handling

The plants should not be harvested in the first summer following planting. During the second season, one harvest can be made, and in subsequent years, two harvests are possible each season. The number of harvests made each season will be guided by the overall vigour of plants. Every second or third year, only one harvest each season can be made if vigour is declining. When harvesting, stalks should be pulled from the crown and not cut. Cutting makes open wounds, which serve as entry points for disease infection. Essentially, all leaves can be pulled at each harvest; however, there is some benefit to leaving the lowest leaves attached to the crown.

These attached leaves will continue to supply strength to the crown until new leaves form. Yield varies considerably with variety and plant density. It is important to reduce the number of harvests when there is a noticeable decline in yield. Reducing harvest times, allows crowns to build up strength for future production.

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Rhubarb (*rheum rhaponticum*)

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