LEEKS

Technical Note
May 2020
Horticultural Dept

Leeks is a vegetable that has increased in popularity over the last few years with an estimated 160 hectares being grown in 2016. It's a crop that can either be direct drilled or transplanted. Given the reduction in the number of herbicides available, which makes weed control more difficult with the direct drilled crop, virtually all of the crop is transplanted. Leeks are available from mid-July through to May.

SOIL TYPE — Leeks will grow on a wide range of soil types. However as harvesting the crop from heavy soils in the winter months can be difficult, lighter soils would be preferable for that period.

PH — Leeks are susceptible to soil acidity. The pH of the soil should preferably be around 6.5. Below a pH of 5.8 growth is increasingly restricted.

ROTATION — Allow a break of 4-5 years between all crops in the onion family. These include onions, scallions, shallots and garlic. White rot which attacks other members of the family is less likely to affect leeks. Poor rotations will increase the incidence of foot rot. White tip can also build up if rotations are too tight.

SYSTEM — Leeks can be grown on beds or on drills.

FERTILIZER — Apply the following amounts (kg/ha) according to soil analysis:

Index	1	2	3	4
N	150	130	100	80
P	65	45	35	20
K	250	200	150	100

Note: If P is greater than 15 ppm or K is greater than 250 ppm, no extra fertiliser is required

Nitrogen — Leeks are responsive to nitrogen. Hybrid varieties of leeks require more nitrogen than the older open pollinated varieties. Up to 150 kg/ha N may be applied as a topdressing in several splits. The maximum allowed is 300 kg/ha.

FYM — Organic matter such as well-rotted farmyard manure is beneficial for leeks. Quite apart from the nutritional value organic matter improves the water holding capacity of the soil. Apply 50-70 t/ha.

CULTIVARS — The old traditional open pollinated varieties have been almost totally replaced by hybrids. Early varieties tend to be taller, paler, longer white shaft, with the late varieties shorter, darker, less white shaft and hardier.
Early: Rally, Duraton, Krypton
Mid-season: Nunton, Skater, Lexton, Pluston
Late: Harston F1, Vitaton F1, Triton

PROPAGATION Leeks are either single seeded into modules or sown into seedbeds for bare root production. Usual module size is 600 or 345/336 for early varieties. The length of time from sowing to transplanting is normally 10-15 weeks. Most of leek crop is transplanted using imported bare root plants.

CROPPING PROGRAMME

Sowing	Planting	Harvesting
January - February	April	July-September
March	May-June	September-November
April	June-July	November - April
Late April - early May	July	March - May

PLANTING OUT Leeks are planted out from April to the third week in July. Best results are obtained from using a specialized planter that is able to plant deep and straight. Typically planted 10 cm deep.

SPACING Planting numbers per hectare will vary from 120,000 – 230,000 depending on spacing and size of leek required. 3-4 row beds or drills can be used. Plant spacing within bed or drill is usually 7-10 cm apart.

SUCCESSION Leeks are slow to mature and consequently will hold for several months. It depends on the size of operation but could get away with 4-5 plantings and varieties.

IRRIGATION Water after planting to aid establishment particularly on old ground. Thereafter irrigate during dry spells.

WEEDS Apply Wing P 2 l/ha + Butisan 1 l/ha after planting. For weeds that get through apply Lentagran at 2 kg/ha. Could also tank mix Lentagran 2 kg/ha + Defy 2 l/ha.

EARTHING UP To increase the white part of the shaft leeks can be clayed up. This is done several times during the season earthing up gradually moving the soil a little at a time. This operation also doubles up as mechanical weed control and also helps to aerate the ground.

PESTS Apart from thrips leeks are a remarkably pest free crop.

Thrips Worst attacks are in warm summers whilst rainfall tends to discourage their buildup. Feeding injury gives attacked plants a whitish silvery appearance and can check growth. Control by spraying can be difficult as the thrip stays hidden within the leaf sheaths during the day, coming out at night to feed. Do not let thrip numbers build up – spray as soon as seen and late in the evening. Apply Decis Protech 420 ml/ha, Calypso 0.2 l/ha or Tracer 0.2 l/ha.

DISEASES The commonest diseases of leek are rust, white tip and foot rot.

Rust

This common disease of leek is caused by *Puccinia allii*. Bright orange pustules appear on the leaves especially during warm weather. Optimum temperature for infection is 10-18°C. August to October are the worst months for the spread of the disease. Frost tends to knock it back. The fungus is not soil borne – it can only do so on green tissue. Leeks are in the ground 12 months of the year which ensures carry over from one year to the next. There are no resistant varieties but they do vary in susceptibility.

Product	**Rate**	**Max No.**	**HI**
Amistar	1 l/ha	3	3 weeks
Amistar Top	1 l/ha	2	2 weeks
Rudis	1 l/ha	3	3 weeks
Nativo	0.36 kg/ha	1	3 weeks

White Tip

Tends to occur where leeks have been intensively cropped. Tips of leaves appear waterlogged and finally die back, becoming white and papery as if bleached by frost. Similar symptoms may occur at margins, centre and bases of leaves. Often appears in patches in the crop. Spores can last in the soil up to three years and are rain splashed from the soil onto the leaves. Apply Acrobat 2 kg/ha or Infinito 1.6 l/ha

Foot Rot

This is a disease that attacks the roots and base of the leek. It's a soil borne disease that causes the leek to rot at the stem base causing the leaves to wilt from the outside of the plant inwards. The fungus is patchy in distribution and is worst in warm moist summers where leeks are grown in close rotations. Avoid soil compaction and practice good rotations. Seedbeds should not be sited on land where leeks grew previously. Bare root transplants are less effected by foot rot than modules. It is caused by *Fusarium culmorum*.

HARVESTING

The crop is lifted by hand or machine, taken into the packhouse in bins, washed, trimmed and packed into either 500g pre-packs and the larger leeks loose in crates.

COOLING

Leeks will normally be cooled in a fridge prior to sale.

YIELD

35 tonnes per hectare