

LEEKS

CROP PRODUCTION GUIDES

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Leeks are one of the emblems of Wales. For this reason, there is particular interest in the production of Welsh leeks for sale either locally or further afield. Traditional over-wintering leeks are hardy, and they can be kept in the field until required, the downside of this is that they occupy land for a long period of the year.

SITE

Leeks require a deep, moist, but not waterlogged soil. If the soil is too light, irrigation will probably be needed. The pH should be 6.5 or slightly higher; leeks will not do well on acid soils.

A major consideration for site selection with winter leeks is the state of the land during winter as this is when the crop will be harvested and machine access will be required.

Leeks are a member of the allium family, along with onions and garlic. There should be at least a three year gap between crops of any member of the allium family on the same piece of land.

PLANTING

Although leeks can be drilled directly into the field, it is far more common to raise them in modules, usually in a glasshouse, and then transplant them. Weed control in directly drilled plants is particularly difficult.

When using modules for transplanting, it is critically important that they are kept moist at all times, and they need to be particularly well watered immediately after transplanting to ensure establishment.

Plant at a spacing of 10cm within the row and approximately 50cm between rows; within row spacings can be adjusted to suit machinery. These spacings will give a nominal population of 200,000 plants. With losses and out-grades, around 140,000 saleable plants should be harvested. Planting time will depend on markets and varieties, but as a rough guide summer leeks should be planted during April and winter leeks should be planted before the end of May.

CROP NUTRITION

Leeks need less fertiliser inputs than onions. Table 1, below, shows the recommendations from Defra, but these are probably on the high side, particularly for nitrogen. Too much nitrogen will encourage too much green top and not enough white bottom growth. With leeks, all fertilisers should be applied after transplanting, usually in three applications.

Table 1 – Fertiliser recommendations for leeks from RB209

	SNS, P, K or Mg Index							
	0	1	2	3	4	5	6	
	kg/ha							
Nitrogen	200	150	100	50	0	0	0	
Phosphate (P ₂ O ₅)	200	150	100	50	0	0	0	
Potash (K ₂ O)	250	200	150(2-)	100(2)	0	0	0	
Magnesium (MgO)	150	100	0	0	0	0	0	

Source: Defra – Fertiliser recommendations for agricultural and horticultural crops (RB209)

MANAGEMENT

Irrigation may be required to keep the crop growing steadily. Weed control is important. Regular inspection for critical thresholds of pests and diseases is required.

Ridging up the crop will result in a higher proportion of desirable white stem, but the cost of the operation needs to be compared with the potential improved revenue to determine whether it is worthwhile.

PESTS AND DISEASES

Leeks tend to be relatively trouble free. Practising good crop rotations will help to reduce the chances of soil borne diseases.

Cut worms (particularly turnip moth caterpillars) can be problematic, particularly in dry summers. Cut worms feed on both the leaves and the roots of the plants – once they are in the soil and feeding on roots they are almost impossible to control.

Onion thrips (*Thrips tabaci*) are a common problem on the continent, and an increasing problem in British grown leeks. Like cutworms, problems from thrips are worse during dry seasons, so irrigation can help to keep infestations down. Many commercial growers use an intensive routine prophylactic spray routine to prevent infestation. This may not be cost effective.

Rust (*Puccinia allii*) is an important disease of leeks, fungicides are available to treat it. **White tip** (*Phytophthora porri*) and **White rot** (*Sclerotium cepivorum*) are other potential fungal diseases to watch out for.

HARVEST

The size at which the leeks are harvested should be determined by your market. Smaller “baby” leeks may command a premium price, but will require intensive manual labour to prepare. On a small scale, leeks can be lifted by hand, using a fork to loosen the soil around the plant. On a larger scale, mechanised harvesting will be required. The crop is usually undercut and then lifted. The more sophisticated harvesting rigs vibrate to shake excess soil off the roots and incorporate rotating trimming knives to trim the roots and tops of the plants. On a smaller scale cleaning and trimming will all have to be done by hand. Final washing of the crop must be done in potable water.

Leeks are traditionally sold in bunches of three; all three should be as similar in size as possible.

After harvest ensure that all plant debris is thoroughly cleared from the site to minimise build up of pests and diseases.

Indicative margins for one hectare of leek production

	Item	Quantity	£/Unit	£ Total
Outputs				
Crop Sales	kg	16,000	0.75	12,000
			Total Outputs	12,000
Costs				
Casual Labour	Planting / harvesting	1000hrs	6.00	6,000
Contract Labour	Planting, spraying, harvesting	24hrs	25.00	600
Fertiliser Costs	Fertiliser	1	165.00	165
Other Costs	Packaging	1500	0.25	375
Plant Costs	Plants per '000	200	10.00	2,000
Spray Costs	Herbi-, fungi-, insecticide programme	1	600.00	600
			Total Costs	9,740
			Gross Margin	£2,260

Source: Various



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