

Celery is a half hardy vegetable that's available from July to December from outdoor production. In 2008 a total of 46 hectares were grown which represents an 8% decrease from the 2004 figures. Celery is propagated in blocks or modules under protection and transplanted out into the field. Most growers buy in their plants from specialist propagators and these notes do not cover the plant raising phase. The major input for this crop is water.

SOIL TYPE Celery will grow on a wide range of soil types such as sandy or silt loams but avoid heavy clay soils. Moisture retaining soils are best.

PH Celery is sensitive to soil acidity and below a pH of 6 growth becomes increasingly restricted. The pH of the soil should preferably be around 6.5.

FYM This is a crop that will benefit from additions of organic matter such as farmyard manure, spent mushroom compost or municipal compost.

ROTATION Allow a break of 4-5 years between all crops in the Apiaceae family. These include celery, carrot, parsnip, coriander and parsley.

SYSTEM Celery can be grown on the flat or on raised beds.

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

Index	1	2	3	4
N	120	85	65	50
P	88	65	55	28
K	375	270	230	175

Compounds Normally a boronated compound is used such 8-5-18, 8-3-18 or 6-10-18.

Nitrogen Celery has a high nitrogen requirement. The crop can be top dressed with CAN up to the equivalent of 180 kg/ha about 4 weeks after transplanting.

Boron Celery is susceptible to both boron deficiency and toxicity. Boron deficiency is called 'cat's claw' (splitting of the epidermis along the vascular veins). Apply a couple of foliar boron sprays after planting.

CULTIVARS The old traditional self blanching white varieties have now being almost completely replaced by green varieties. Hybrid varieties have also been developed for this crop. The standard cultivars are Victoria F1, Plato and Greensleeves. The best variety for planting late is Greensleeves.

PROPAGATION Celery is normally propagated by single seeding blocks or modules with Quick Pills which are pre-germinated coated seeds. They are then grown on for a number of weeks under glass, before being hardened off and planted out.

PLANTING OUT Celery is always planted out on beds, usually 4 rows across a 140 - 150 cm bed using a 4-row planter or by hand planting. Plants are spaced in a diamond shaped pattern. Celery is planted from around 20 April to 20 July to crop from mid July to December. The early planting can be subject to bolting and the latest planting can be caught by early frosts. The main season crop is planted in May and June. It takes approximately 3 months for a crop of celery to mature

SPACING 325x325 mm, 300x300 mm, 300x250 mm

SUCCESSION For succession plant every 10 days.

IRRIGATION Do not grow celery without access to irrigation as water it is an essential crop input. Letting the crop go dry may induce calcium deficiency.

WEEDS Apply Afalon Liquid (1.35 l/ha) post-planting once the transplants have established and while the weed seedlings are still small. It can be tank mixed with Defy (2 + 0.7 l/ha) to improve control of cleavers, speedwell and volunteer potatoes. The other alternative is a pre-planting application of Stomp Aqua (2.9 l/ha). It may be preferable to apply it post planting but this use is at the growers own risk – to reduce check to the crop apply it within 2-3 days of transplanting.

PESTS Carrot fly, aphids and slugs are the three commonest pests to attack celery. Celery fly (leaf miner) may be an occasional problem.

Carrot fly Worst attacks are with the first planted crops in May and June. Eggs are laid at the base of the plant which hatch to very small larva that eat the roots which checks the growth of the plant. There is an off-label recommendation for the use of Karate Zeon on celery for carrot fly control at a rate of 50 ml/ha with a maximum total dose of 150 ml/ha. it is debatable if you will get adequate control of the pest at this rate.

Aphids: Aphids can sometimes be a problem especially with later maturing crops. Apply an aphicide as soon as seen.

Product	Rate	Max. No.	HI
Pyrethrum 5 EC	0.02% solution	-	1 day
Barclay Cypersect	250 ml/ha	-	Zero

Celery Fly This is an occasional pest of celery and the larva feed in the leaves causing large blisters. Unless the attack occurs when the plants are small the damage is usually cosmetic but there may be market resistance if blistered leaves are present. The adult flies emerge from April to June. There are no approved insecticides for the control of celery fly.

Slugs Slugs can directly damage the plants and also cause problems by moving up into plants that are close to harvest. Apply 1-2 applications of a metaldehyde based slug pellet. Draza is not allowed.

Other pests Pigeons are not a problem but crows may root up recently planted transplants. Keep an eye out for rat damage on late crops.

DISEASES The major disease of celery is leaf spot and occasionally pink rot can show up. Pythium root rot can also occur if rotation is poor.

Leaf spot This common disease of celery is caused by *Septoria apiicola*. It causes brown spots on the leaves particularly in cool, damp weather. Occurs every year and a preventative spray programme needs to be carried out every 10-14 days from July on or earlier if disease is seen.

Product	Rate	Max No.	HI
Bravo	3 l/ha	3	1 week
Score	0.5 l/ha	2	2 weeks
Penncozeb WDG	2.4 kg/ha	-	2 weeks
Cuprene 50	5 kg in 1000 l	-	-

Pink rot Pink rot is caused by *Sclerotinia* and can attack a wide range of vegetables including celery especially crops grown under protection. It causes a water soaked appearance on the leaf stalks which often turns pink; a white fluffy growth subsequently appears in which the resting black sclerotia develop. There are no chemicals available for the control of pink rot. Practice long rotations to minimize outbreaks of this disease.

DISORDERS

Blackheart This disorder is associated with calcium deficiency and causes the centre of the plant to turn black. It may cause the complete loss of a field or affected plants may be scattered in occurrence. Calcium is not very mobile within the plant and to ensure maximum uptake keep the crop evenly supplied with water. Irregular watering can induce the disorder especially a heavy application to a dry field. At the first signs of blackheart spray on calcium nitrate at 10-20 kg in 1000 litres per ha.

HARVESTING Celery is normally harvested from about mid July to December. The late crop is a bit of a gamble and will depend on weather conditions as celery won't stand heavy frosts. The crop is usually cut from a face, packed directly into a plastic sleeve and put into crates.

COOLING Celery will normally be cooled in a fridge prior to sale

YIELD A good cut of celery would be 90-95% which would represent about 80,000 heads per ha.