Crop Guide KB Item 3446v5

Celery

Sampling Notes

The nutritional status of this vegetable crop is monitored using soil tests and plant analysis. Monitoring regularly is important to help sustain optimum levels and avoid nutritional disorders. If disorders do occur, rapid diagnosis is necessary to assist correction.

Leaf

Sampling Time:	When plants are half grown.
Plant Part	Youngest mature leaf (blade & petiole).
Collect From:	-
Quantity per Sample:	20 - 30 leaves.
Recommended Tests:	Basic Plant (BP).
Comments:	To help diagnose an obvious problem, leaves showing the first signs of the distinctive symptoms should be collected as soon as abnormalities appear. If sampling outside the normal sampling time it is useful to take a second sample of similar, healthy leaves from nearby unaffected plants for analysis as a comparative standard.

Soil

Sampling Time:	Prior to crop establishment.
Core Depth	15cm.
Collect From:	Randomly throughout the area to be planted.
Quantity per Sample:	12 - 20 cores.
Recommended Tests:	Basic Soil (BS), Sulphur profile (S), Available Nitrogen (AN).
Comments:	If a problem is suspected during the growing season, then a sample should be taken from the rooting zone immediately adjacent to the plant. Collecting a second sample from an unaffected area may help identify the cause of the problem.

Comments

Celery is susceptible to boron deficiency, with some varieties being more so than others.

Celery has a high requirement for nitrogen, phosphorus and potassium, and fertiliser inputs are usually quite high.

Nitrogen deficiency first appears in older leaves, turning them uniform yellow and eventually white.

Calcium deficiency can occur, causing a disorder known as Black Heart, where the growing tips blacken and die off. This can be caused by drought conditions, or excess levels of potassium and sodium.

Results for copper, zinc and manganese in leaves sprayed with fungicides will not be reliable due to adhering spray residues on the leaves.

Iron deficiency symptoms may exist even when leaf levels appear satisfactory. This may be due to the presence of physiologically inactive forms of iron within the tissue. Also, soil contamination of leaves growing near the ground may elevate total iron results.

References

Fertiliser recommendation for horticultural crops. HortResearch HortNET, 1997.

Blackmore, L.C; Searle, P.L and Daly, B.K. 1987. Methods for chemical analysis of soils. NZ Soil Bureau Scientific Report 80. NZ Soil Bureau, DSIR.

Weir, R.G. and Cresswell, G.C. 1995. Plant nutrient disorders 3. Vegetable crops. Inkata Press.

Disclaimer

Normal Range levels shown as histograms in test reports relate specifically to the sampling procedure provided in this crop guide. The Normal Range levels in test reports and Comments provided in this Crop Guide are the most up to date available, but may be altered without notification. Such alterations are implemented immediately in the laboratory histogram reports. It is recommended that a consultant or crop specialist be involved with interpretations and recommendations.