

Plantain & Chicory (Forage Herbs)

Sampling Notes

Plantain and Chicory are often grown in a diverse pasture species mix and have gained favour due to their deep-rooting ability, which allows persistence in summer-dry conditions. These forage herbs may also be grown as a pure sward, and therefore managed as a crop. There has been little research on the nutrient requirements of these herbs, but are generally considered to have similar requirements as for pasture.

Leaf

Sampling Time: At a vegetative growth stage, usually late spring or autumn flush.

Plant Part: Leaf blades.

Collect From: Cut at grazing height.

Quantity per Sample: 500g

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: 7.5cm (15cm sampling may be useful when soils have been cultivated).

Collect From: Random sites throughout the sampling area

Quantity per Sample: 12 - 20 cores

Recommended Tests: Basic Soil (BS), Sulphur profile (S). Optional: Available Nitrogen (AN) on 15cm samples (cultivated soils).

Comments: Soil samples are usually collected for analysis prior to planting the crop.

If trying to diagnose a problem with crop growth and yield, samples should be collected from the rooting zones of the worst affected areas. In these circumstances, a second sample taken for comparative purposes from the rooting zones of normal areas may be useful.

Comments

The root system of plantain means it can extract nutrients from deeper soil layers than other pasture plants.

The root system of chicory is characterized by a deep tap root, enabling good drought tolerance and the potential to forage for nutrients deeper in the soil profile.

Note that fertiliser applied to the soil surface will be taken up by other species preferentially (as shallower-rooted).

Plantain grows naturally over a wide range of soils, but does not tolerate saline or swampy soils.

Chicory grows over a wide range of soils, but heavy clays and poorly drained soils are not recommended due to the potential for treading damage and fungal disease reducing persistence.

Both herb species tolerate acid soils, but optimal pH is 5.8-6.2

References

Cornforth, I.S. and Sinclair, A.G. 1984. Fertiliser recommendations for pastures and crops in New Zealand. MAF Publication, Wellington.

Harrington, K.C., Thatcher, A. and Kemp, P.D. Mineral Composition and Nutritive Value of some Common Pasture Weeds. Massey University, Palmerston North, NZ. New Zealand Plant Protection, 59:261-265 (2006).

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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.
