



NZ Forage Systems Fact Sheet

Plantain — Establishment and management

Key Points

1. Plantain is a high performing, short term, crop.
2. Autumn sow at rates of 6-8 kg/ha into a well prepared, weed-free seedbed.
3. Along with perennial clovers (white and red) the inclusion of 2-3 kg each of balansa and Persian clovers can significantly increase legume content in Year 1. Plantain/clover stands typically last 2-4 years.
4. Post establishment graze once there are six fully developed leaves (approx. 30 cm with cv. Tonic).
5. Plantain should only be rotationally grazed to residuals of 8 cm. Over-grazing / set stocking reduces production and stand life.
6. Plantain stands need regular monitoring for pest and diseases.
7. Less winter active cultivars will produce ~ 2000 kg less winter DM



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Introducing plantain

Plantain is a high performing, short term crop which typically lasts 2-4 years. As with other specialist plant options, care is needed in establishment and management to get the best from it. It is highly palatable and will be preferentially grazed. Plantain grows on a wide range of soil types with varying acidity (pH 4.2-7.8) and fertility. Although plantain has both tap and fibrous roots it is less tolerant of drought than chicory, red clover and lucerne. In a number of trials, faecal egg counts and incidence of dags have been reduced in ewes and lambs grazing plantain.



Establishing plantain

Plantain should be sown in autumn at approximately 8 kg/ha (320 seeds/m²) into a well prepared weed-free seedbed at a depth of 10 mm, when sown as a pure species or 1-3 kg/ha when sown as part of a pasture mix. Whilst plantain is a good companion plant with clovers, it does not compete well with grasses and ideally should be sown as a pure sward (with clovers). Whilst typically sown with red and white perennial clovers, the inclusion of 2-3 kg/ha each of balansa and Persian clovers gives an extra boost to legume production in the establishment year. Whilst there are few spray label recommendations for plantain, some farmers are having good success with post emergence weed and grass sprays of Haloxypop-P (130 g ai/ha), Diflufenican (500 g ai/ha) and Bentazone (1440 g ai/ha) in 125 litres water/ha. Chlorpyrifos (500 g ai/ha) can also be added to control springtails and plantain moth caterpillar.

Grazing management

Grazing management is critical to maintaining plant numbers. Timing and severity of the first grazing after sowing will affect plant survival and persistence. If plants are only grazed when they have six fully developed leaves (30 cm with Tonic) plant losses are generally less than 10%. Grazing earlier reduces overall persistence as root reserves will have not built up to enable optimum post grazing regrowth. Plant density will also be decreased by repeated hard grazing or by pugging in winter. Don't overgraze. Graze down to 8 cm or so then leave for 2-6 weeks before re-grazing when regrowth should be about 15-25 cm high. Pre-graze of 2000-3500 kg DM/ha with residuals post-grazing of 1000-2000 kg DM/ha. Grazing frequency is a compromise between maximizing animal production (grazing early on fresh young leaves) and allowing plants time to recover from grazing, which will reduce the proportion of very young leaves. Best practice currently involves rotational grazing (every two weeks) down to 8 cm — i.e. frequent light grazing. Quality and palatability decline with flowering as the proportion of stalk increases.

Whilst winter growth is good in winter warm areas, be aware that there are cultivars on the market which have lower winter activity and will typically produce around 2000 kg DM/ha less during winter than winter active cultivars.

Appropriate grazing residual



Overgrazed—will reduce stand persistence and productivity

