Soil fertility - new pasture

Renew pasture

Sow

Correct soil fertility is critical for optimal plant growth and to obtain the best results from pasture renewal.

Soil test prior to sowing and apply remedial fertiliser as required.

Soil fertility levels

Soil test levels for near maximum pasture production

Soil test	Soil parent material			
	Sedimentary	Ash	Pumice	Peat
Olsen-P	20-30	20-30	35-45	35-45
Sulphate-S	10-12	10-12	10-12	10-12
Organic-S	15-20	15-20	15-20	15-20
Soil test K	5-8	7-10	7-10	5-7
Soil test Mg	8-10	8-10	8-10	8-10
pH	5.8-6.0	5.8-6.0	5.8-6.0	5.0-5.5

Adapted from: Fertiliser Use on Sheep & Beef Farms (1994), J.Morton et al.

To raise fertility levels

Amount of nutrient required to lift soil test by 1 unit

Soil test	Soil parent material			
	Sedimentary	Ash	Pumice	Peat
Phosphate (kg P/ha)	4-7	7-18	4-15	6-9
Potassium (kg K/ha)	100-250	45-80	35-60	-
Sulphur (kg S/ha)	30-40	20-30	40-50	20-40
pH (t lime/ ha)	10	10	10	varies

Source: Fertiliser Use on Sheep & Beef Farms (1994), J.Morton et al.

Phosphate for maintenance

Maintenance phosphate requirements

Dairy		Sheep/Beef	
Cows/ha	kg P/ha/yr	SU/ha	kg P/ha/yr
2	20-28	7	6-18
2.5	27-36	13	15-28
3	34-45	16	21-34
3.5	43.55	19	28-41
4	54-65	22	34-44

Source: Fertiliser Use on Sheep & Beef Farms (2018), J.Morton et al. Fertiliser Use on Dairy Farms (2016), A.Roberts et al.

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