

Supplementary Materials

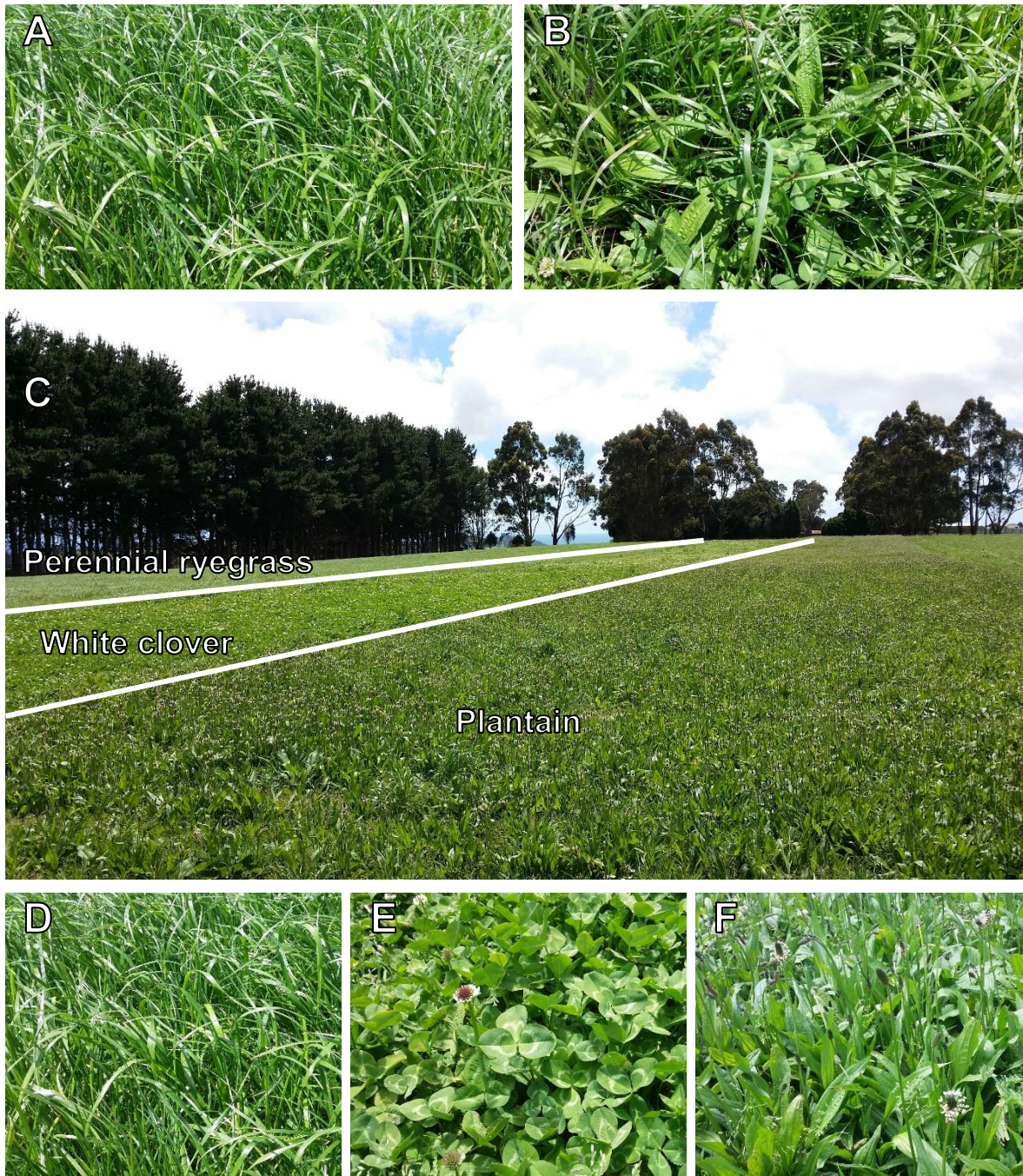


Figure S1. Photographs of evaluated forage types, which included: (A) perennial ryegrass monocultures (PRG); (B) perennial ryegrass, white clover, and plantain mixtures (RCPM); and (C) spatially adjacent monocultures (SAM) of perennial ryegrass (D), white clover (E) and plantain (F).

Table S1 Linear regression equations used for estimating forage biomass (y, kg DM/ha) from compressed forage height (x, mm) measured with an electronic rising plate meter. Abbreviations: PRG, perennial ryegrass monoculture; RCPM, perennial ryegrass, white clover and plantain mixture; SAM, spatially adjacent monocultures of perennial ryegrass, white clover and plantain. Each calibration was developed from 80 individual measurements.

Forage type	Plate meter calibration equation	R ²
PRG and perennial ryegrass component of SAM	$y = 10.8x + 393$	68.1
White clover component of SAM	$y = 11.3x + 419$	71.3
Plantain component of SAM	$y = 10.0x + 390$	82.6
RCPM	$y = 10.6x + 390$	59.2

Table S2. Nutritive value parameters for forage offered to cows grazing each forage type, including PRG, perennial ryegrass monoculture; RCPM, perennial ryegrass, white clover and plantain mixture; and SAM, spatially adjacent monocultures of perennial ryegrass, white clover and plantain. Nutritive value of concentrate is also provided. Values are means \pm SE (n = 10). Abbreviations include NDFD, neutral detergent fibre digestibility and NDF, neural detergent fibre.

Forage type	PRG	RCPM	SAM			Concentrate
			Perennial Ryegrass	White Clover	Plantain	
Starch (%)	0.5 \pm 0.2	0.6 \pm 0.2	0.5 \pm 0.2	1.4 \pm 0.2	1.0 \pm 0.2	54.7
Simple sugars (%)	9.0 \pm 0.4	11.1 \pm 0.5	8.9 \pm 0.4	9.0 \pm 0.4	12.7 \pm 0.4	1.8
Calcium (%)	0.39 \pm 0.08	0.72 \pm 0.13	0.38 \pm 0.06	0.8 \pm 0.15	1.07 \pm 0.16	1.97
Phosphorus (%)	0.35 \pm 0.06	0.35 \pm 0.06	0.35 \pm 0.06	0.35 \pm 0.07	0.35 \pm 0.05	0.34
Magnesium (%)	0.18 \pm 0.05	0.21 \pm 0.05	0.19 \pm 0.05	0.25 \pm 0.05	0.24 \pm 0.06	0.61
Potassium (%)	2.95 \pm 0.22	2.72 \pm 0.21	3.06 \pm 0.26	2.67 \pm 0.16	2.62 \pm 0.2	0.56
Sodium (%)	0.50 \pm 0.13	0.64 \pm 0.12	0.48 \pm 0.13	0.46 \pm 0.14	0.6 \pm 0.12	0.45
Iron (mg/kg)	398 \pm 5	341 \pm 5	388 \pm 5	1057 \pm 9	486 \pm 6	259
Zinc (mg/kg)	20 \pm 1	26 \pm 1	22 \pm 1	31 \pm 1	31 \pm 1	174
Manganese (mg/kg)	149 \pm 2	113 \pm 1	131 \pm 2	103 \pm 2	87 \pm 2	134
Sulphur (%)	0.31 \pm 0.06	0.38 \pm 0.06	0.31 \pm 0.06	0.33 \pm 0.07	0.41 \pm 0.08	0.16
Chloride (%)	1.42 \pm 0.14	1.67 \pm 0.19	1.62 \pm 0.19	1.13 \pm 0.18	1.86 \pm 0.14	0.78
NDFD (% of NDF)	74.6 \pm 0.7	69.2 \pm 0.8	73.5 \pm 0.7	67.4 \pm 0.8	54.5 \pm 0.7	47.0