ORIGIN SOIL NUTRITION

TECH TALK

SODIUM IMPROVES ANIMAL PERFORMANCE FROM GRASS

1. Sodium increases grass palatabaility

University research has consistently proven that sodium applied in fertiliser increases sugar content and digestibility of grass making it more palatable.

Parameter	Fertiliser		% +/-
	N only	N + Na	
Sugar content (%)	29.4	32.3	+9.9%
D-value (%)	71.6	72.9	+1.8%

2. Sodium changes grazing behaviour

The increased palatability from applying sodium fertiliser stimulates changes in grazing behaviour with increased grazing time, bites and rumination time which together drive an 18.6% increase in DM intake.

Parameter	Fertiliser		% +/-
	N only	N + Na	
Grazing time (mins per day)	424	534	+25.9%
Bites per minute	75.7	77.2	+2.0%
Rumination time (mins per day)	421	505	+20.0%
DM intake (kg per cow per day)	14.0	16.6	+18.6%

3. Sodium increase output

The increase DM intake drives higher milk yield and butterfat.

Parameter	Fertiliser		% +/-
	N only	N + Na	
Milk yield (litres per cow per day)	22.6	24.7	+9.3%
Butterfat (g per cow per day)	833	963	+1.8%

Additional benefits of sodium in grazing fertiliser:

- Sodium ensures optimal potassium to sodium (K:Na) = reduced risk of hypomagnesaemia
- Sodium reduces somatic cell count and increases butterfat; both can be affected by heat stress
- Sodium improves palatability which increases dry matter intakes and forage utilisation
- Sodium helps buffer rumen pH and reduces the risk of acidosis
- Sodium costs c. 2-3p per head per day providing cost effective mineral supplementation that more than pays for itself in increased animal performance

SWEETGRASS® delivers the benefits of sodium:

SWEETGRASS®	Recommendation	Rate (kg/ha)
23-0-0 + 5 SO_3 + 5 Na_2O	Apply for each grazing cycle where soil P & K levels are optimal and/or manures are applied	190-250
23-3-3 + 5 SO_3 + 5 Na_2O	Apply for each grazing cycle where soil P & K levels are low and/or manures are not applied	190-250

* SWEETGRASS products are all available with selenium, cobalt and iodine.

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