ORIGIN SOIL NUTRITION

TECH TALK

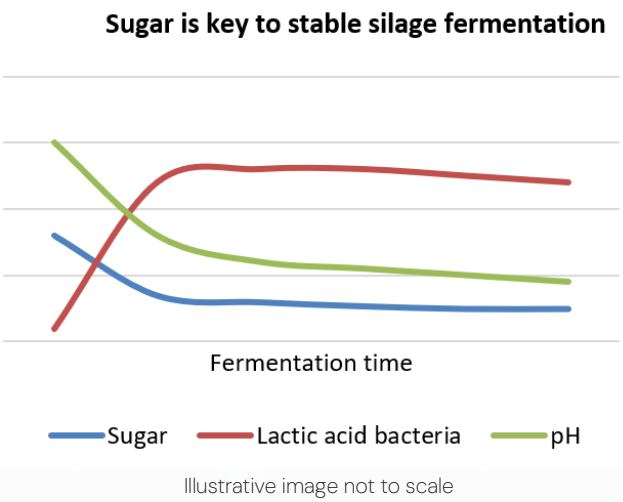
SODIUM FERTILISER CAN IMPROVE SILAGE FERMENTATION

Quality silage fermentation occurs when sugar is converted into lactic acid by bacteria to rapidly reduce the pH.

Harmful bacteria and butyric acid dominate when sugars are low, producing unpalatable silage with low feed value and poor intake.

University research has shown that sodium fertiliser increases grass sugar levels by c. 10–20%, which drives stable fermentation for palatable, high-intake silage.

University trials	Grass sugar content	
	Zero Na	Na applied
Bangor University	100%	109.9%
NUI-Galway	100%	121.0%



Illustrative image not to scale

Sodium fertiliser: a cost-effective silage additive:

- Silage additives use bacterial inoculants to rapidly reduce the pH for stable fermentation. The typical cost of silage additives is £1 per tonne of silage*
- The bacteria added in silage additives need sugar as their food source
- As above, sodium fertiliser can increase sugar levels by 10 – 20%
- The cost of adding sodium to silage fertiliser is c. 28p per tonne of silage*

* Based on a yield of 17 tonnes per ha

Additional benefits of sodium in silage 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

SWEET SILAGE delivers the benefits of sodium:

SWEET SILAGE*	Recommendation	Rate (kg/ha)
23-0-13 + 5 SO_3 + 3 Na_2O	Apply for mid-season silage cuts where soil P index is 2 or above	250-400
22-3-13 + 5 SO_3 + 3 Na_2O	Apply for mid-season silage cuts where soil P index is 1 or below	250-400

* SWEET SILAGE products are available with selenium, cobalt and iodine.

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