COBALT AND SELENIUM SUPPLEMENTATION IN LAMBS – THE MOST SUSCEPTIBLE STOCK CLASS

Cobalt and selenium are two of the most important trace elements contributing to successful sheep farming. As most trace element deficiencies occur in lambs, prevention is the best approach. Keeping both at optimal levels gives lambs the best chance to reach ideal slaughter or mating weights.

COBALT DEFICIENCY

Cobalt is converted to Vitamin B12 in the rumen. B12 is involved in energy and protein metabolism so is essential for growth and health, particularly in lambs.

Cobalt deficient soils are found throughout NZ, however even where soils are not deficient lambs will often respond to supplementation.

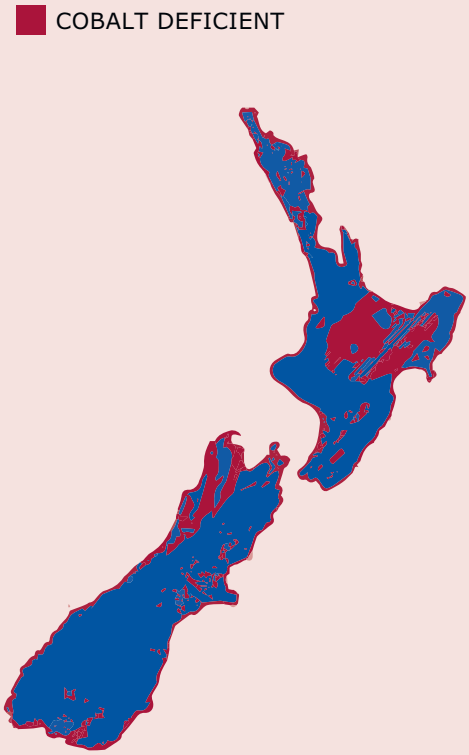
BENEFITS OF B12 SUPPLEMENTATION

Consistently maintaining serum B12 levels at 350 pmol/L or higher will give lambs the best chance of hitting target weights. Supplementation by injection provides a more rapid and direct pathway to prevent and correct deficiencies.

CHOOSING THE RIGHT B12 SUPPLEMENT

Beef & Lamb NZ recommends: "Treat with 3 mg of microencapsulated vitamin B12 as a long-acting injection given subcutaneously in the neck region once at docking/tailing." [1]

COBALT SUPPLEMENTATION EFFICACY[2]



SELENIUM DEFICIENCY

There is a strong correlation between soil selenium levels and animal deficiency, with reduced growth rates due to marginal deficiencies the most common sign in lambs. Essential for muscle development, pregnancy and immunity, deficiency presents as poor growth (white muscle disease when severe), fertility issues and increased levels of disease.

CHOOSING THE RIGHT SELENIUM SUPPLEMENT

Beef & Lamb NZ recommends: "If ewes have not been treated [with a long-acting injectable product containing barium selenate 4 weeks prior to mating] and their lambs are selenium deficient, then they [lambs] can be treated at 3 - 4 weeks of age at docking/tailing." [1]

SELENIUM SUPPLEMENTATION EFFICACY[2]

WHAT IS SMARTSHOT®?

Developed by AgResearch and with extensive local trial work, SMARTSHOT® B12 and SMARTSHOT® B12 Plus Se is a long-acting trace element injection, containing microencapsulated vitamin B12 (and barium selenate if SMARTSHOT® B12 Plus Se is used).

Supplementation with SMARTSHOT® B12 (or SMARTSHOT® B12 Plus Se) long-acting injections can consistently maintain B12 levels at 350 pmol/L with a single injection, during the lamb's rapid growth period.[2]

If SMARTSHOT® B12 Plus Se is used, selenium supplementation will be provided for at least 240 days.

USING SMARTSHOT® IN LAMBS

Based on local studies and as recommended by Beef & Lamb NZ: "Preference should be given to injecting at docking/tailing because lambs should be treated as early as possible." [1]

0.5 ml dose: 3-4 months above adequate B12

Designed to ensure lambs have the right amount of trace elements from a single injection, to achieve slaughter weights as quickly as possible.

1 ml dose: 6-8 months above adequate B12

Administered at docking/tailing or weaning to allow replacement ewes to reach their full potential during their most rapid growth phase.

SMARTSHOT®'s patented microencapsulation process makes it the only long-acting injectable B12 supplement on the NZ market.

SMARTSHOT® ADMINISTRATION CALENDAR – LAMBS

	DOSE	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
SMARTSHOT® B12	FOR SLAUGHTER 0.5 ml				3-4 MONTHS								
	AS EWE REPLACEMENTS 1.0 ml						6-8 MONTHS						
SMARTSHOT® B12 PLUS SE	FOR SLAUGHTER 0.5 ml				3-4 MONTHS								
	AS EWE REPLACEMENTS 2.0 ml						6-8 MONTHS						

DOCKING/TAILING — WEANING

KEY: SMARTSHOT ® administered — Vitamin B12 and/or Selenium levels above adequate

BACKED BY LOCAL RESEARCH

NZ trials carried out by AgResearch demonstrate greater liveweight gains in animals treated with SMARTSHOT® at docking/tailing.[2] The scale below illustrates the response to B12 supplementation in lambs over a 120 day period. Even lambs with a marginal deficiency (250 pmol/L) could potentially gain an extra 30 grams/day if serum levels are maintained at 350 pmol/L or higher.

1 cent/day
COST IN LAMBS

HIGHLY DEFICIENT
150 p/mol
110 g/day
LIVEWEIGHT GAIN

MODERATELY DEFICIENT
200 p/mol
50 g/day
LIVEWEIGHT GAIN

MARGINALLY DEFICIENT
250 p/mol
30 g/day
LIVEWEIGHT GAIN

Talk to your vet or visit smartshot.co.nz to find out more.

1. Trace Element Nutrition Of Sheep. Beef & Lamb New Zealand Fact Sheet. April 2021. 2. N.D. Grace & G.R. Sinclair (1999) Growth response in lambs injected with a long acting microencapsulated Vitamin B12, 47:6, 213-214, DOI:10.1080/00480167.1999.36148.