

## BACKED BY EXTENSIVE LOCAL RESEARCH & TRIALS

New Zealand trials carried out by AgResearch demonstrate greater liveweight gains in animals treated at docking/tailing.

Treatment at docking/tailing is recommended by Beef & Lamb NZ.<sup>2</sup>

⬆️ **100 g/day**

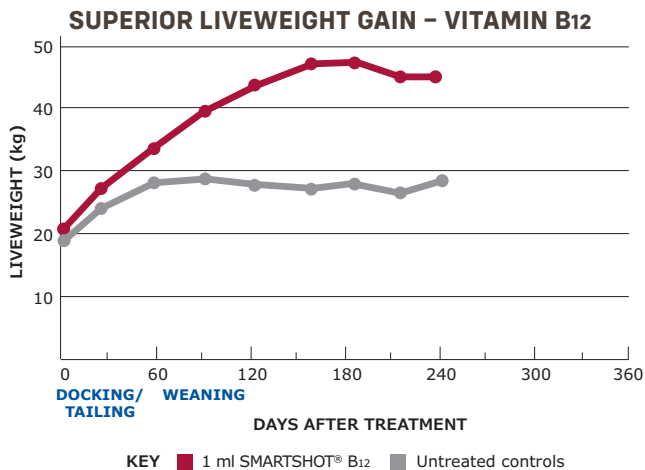
**4 kg (LW)**

⬇️ **1 cent/day**

**IMPROVED GROWTH RATE**

**HEAVIER AT WEANING**

**COST IN LAMBS**



ASK YOUR VET FOR  
**SMARTSHOT®**  
 THE SHOT THAT LASTS  
 SMARTSHOT.CO.NZ



## COST BENEFITS

Every day lambs are below adequate in their Vitamin B12 levels results in compromised growth rates, meaning reduced profit for your farming operation.

In lambs, a single 0.5 ml injection will provide at least 3-4 months above adequate levels for Vitamin B12 and/or selenium.

Gains as little as 5 gms per day will provide a return on investment of SMARTSHOT® over this period, meaning even flocks with marginal deficiencies will benefit.



Shaping the future  
of animal health

1. N.D. Grace & S.O Knowles (2012). Trace Element Supplementation of Livestock in New Zealand: Meeting the Challenges of Free-Range Grazing Systems, Veterinary Medicine International, DOI: 10.1155/2012/639472
2. Trace Element Nutrition of Sheep, Beef & Lamb New Zealand Fact Sheet, March 2020.

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SPPRO213



**THE SHOT THAT LASTS**  
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## COBALT/VITAMIN B12 DEFICIENCY

Dietary cobalt is converted to Vitamin B12 by rumen microorganisms – supplementation by B12 injection is a direct pathway that avoids this process. B12 is then involved in energy and protein metabolism, so is essential for growth and health.

Young, growing lambs are most susceptible to deficiency as they have the highest B12 requirements of any stock class, at the same time of year that cobalt levels are lowest in their diet. This can mean that production limiting deficiency can be seen in lambs even where soils are not deficient.

**Deficiency symptoms: poor growth rates, reduced DM intake, poor wool quality, watery eye discharge, anaemia.**

## SELENIUM DEFICIENCY

Selenium deficient soils are widespread in New Zealand, with many sheep farming regions affected. 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.

Adult sheep and cattle are also susceptible, with poor fertility a common symptom. As selenium plays an important role in the immune system deficient animals can also be more susceptible to infectious diseases.

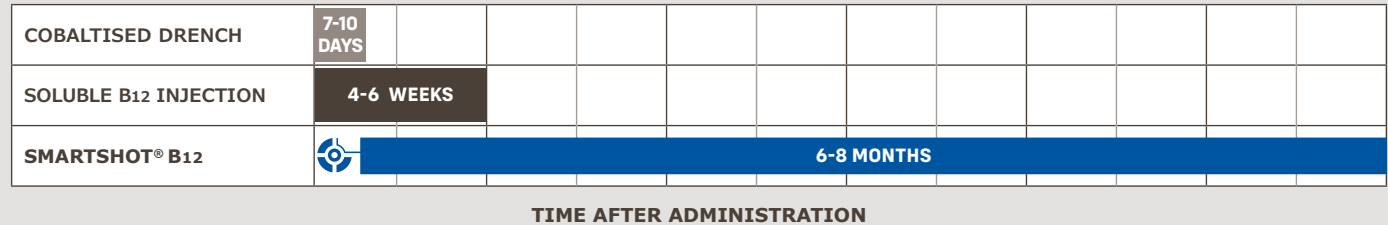
**Deficiency symptoms: ill thrift, poor growth rates, low conception rates, white muscle disease.**

## THE LONG-LASTING FORMULATION

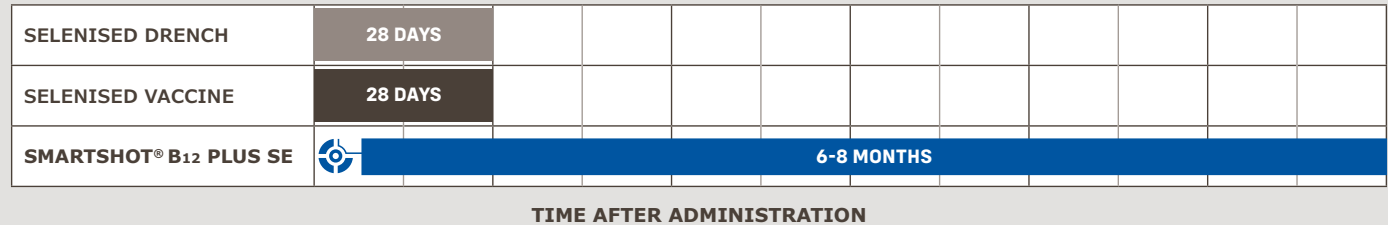
The SMARTSHOT® B12 products consistently maintain B12 levels with a single injection, compared with water soluble B12 products which have to be given every 4 weeks to maintain levels above adequate.

SMARTSHOT® B12 Plus SE contains selenium as barium selenate which has extremely low solubility. When injected, the barium selenate forms a depot beneath the skin which slowly releases over time, providing long-term selenium supplementation for at least 240 days.

### COBALT SUPPLEMENTATION EFFICACY<sup>1</sup>



### SELENIUM SUPPLEMENTATION EFFICACY<sup>1</sup>



<sup>1</sup>Based on label claims and dosage, and supporting published literature.

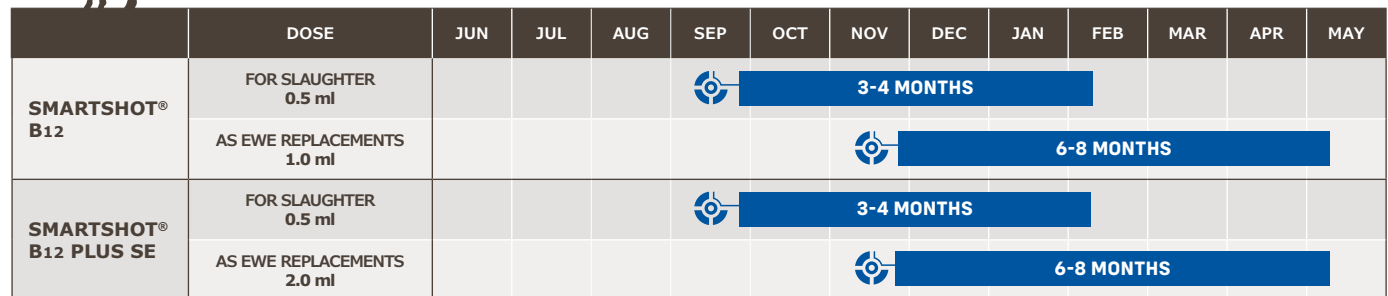
## RETURN ON INVESTMENT CALCULATOR

Use the SMARTSHOT ROI Calculator to find out the potential return on investment of using SMARTSHOT® on your farm.

Head to [nz.virbac.com/SMARTSHOTROI](http://nz.virbac.com/SMARTSHOTROI)



## SMARTSHOT® ADMINISTRATION CALENDAR – LAMBS



DOCKING/TAILING WEANING

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