



## Short Note:

# ARE WE GETTING THE BEST RESULTS FROM SUPPLEMENTS?

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### Introduction

The use of livestock supplements is becoming more accepted as a means to addressing potential limiting nutritional factors in livestock production. The use of readymade supplements containing most major nutrients and minerals combined with a trace of protein meal mixed with an oil base are often seen as a relatively expensive way to supplement livestock. Many producers revert to developing their own mixes, usually a basic combination of lime, salt and causmag. Just how effective are these respective supplement mixes in relation to livestock production, increasing growth rates and profitability?

### Methods

Seventy five (75) White Suffolk cross lambs with an average live weight of 44.8kg were randomly divided into 3 groups. Each group was weighed and placed on Lucerne pasture that had been cut in late spring, regrowth had been grazed lightly over the early summer period and then allowed to recover. Estimated Food-On-Offer (FOO) in these Lucerne stands was assessed at 1500-1800kg/ha with a high proportion of stem and some fresh Lucerne shoots. No analysis of nutritive value was conducted and the stocking rate was no greater than 5 dse/ha across the 3 treatments. One group grazed the Lucerne stand without any supplementation (Control), one group was supplied with a commercially available loose lick supplement (Plus Supp) while one group was given a mix of lime, salt, casmag and bentonite (Plus Salt). Weights were monitored on all groups at day 14 and day 23, with the supplemented groups swapping paddocks at day 14 to even out any potential nutritional differences between paddocks.

### Discussion

The lambs receiving both forms of supplements consistently grew at faster rates than the Control over the period of the trial. As seen in Table 1. The average growth rates from the lambs on a commercially available supplement exceeded the gains from the Plus Salt treatment.

Table 1. Non corrected average weight gains from lambs across treatments

<b>CONTROL</b>	<b>PLUS SUPP.</b>	<b>PLUS SALT.</b>
194 gms/head/day	431.4 gms/head/day	359.6 gms/head/day

The first 14 days of the treatment coincided with a sequence of extremely hot days and, as a result, the growth rates of lambs across all treatments was higher over the subsequent period of the trial. An analysis of the two supplement treatments shows acceptable gains in production using supplements for lambs on less than ideal Lucerne pasture with growth rates peaking at 599gms/head/day in the Plus Supp. treatment and 383gms/head/day in the Plus Salt treatment. The average gains in growth above the Control treatment resulted in an increase in weight gain of 85%

above the Control in the Plus salt treatment and 122% gain in the Plus Supp. treatment. When corrected for the difference in growth rates between the first and second stages of the trial (based on the Control), and for any differences in paddock between the supplement treatments, the Plus Supp treatment lambs grew at a rate 144gms/head/day faster than the Plus salt treatment.

The lambs seemed less keen to consume the salt/lime mix initially whereas the commercially available mix was immediately attractive to the lambs resulting in higher consumption levels initially. Later in the trial, consumption rates were more even across treatments. A rain event mid trial caused some aggregation in the salt/lime mix which did not affect supplement consumption.

Obviously, discussion around the relative cost of the 2 supplements used is the logical next step and for the purposes of this short report, will not form part of the discussion. The requirements for lambs across a range of feeds available will have a significant impact on the choice of supplement and the case for lambing ewes creates a whole new scenario as the best choice of supplement. The decision needs to be made with the objective to achieve maximum production. In the case of prime lambs, this is achieving the highest growth rates across a diverse range of feed types; for lambing ewes it is more likely a measure to avoid any potential health issues which will result in lost production opportunities.

The basic mix of salt, lime, causmag and bentonite would not normally be considered as the best choice for Lucerne pasture but is often used in grain feeding systems to supplement limiting nutrients in grain. It would also be used when grazing cereal crops and the benefits of feeding ewes supplements, especially during pregnancy and lambing, is well documented. The decision as to the use of a prepared supplement or home-made mix is entirely a personal choice and will be made with consideration to economic value, weight gain over time, previous experiences and availability. Ultimately the use of supplements to correct mineral deficiencies and increase production plays an important role in livestock production.

The relatively lower weight gains in lambs using a basic cheaper salt mixture needs to be evaluated against potentially faster growth rates using a prepared commercially available mix. Depending on feed quality and quality, seasonal outlook and the time taken to prepare a mix, the outcome of any evaluation may not always be the same.