PLASMA POWER DRIVES RETURN ON INVESTMENT FOR MILK PRODUCTION

Does your Pasture need Trace Element Deficiency Addressed?

By:

Greg Kaynes
Area Sales Manager
NNSW/SQLD

What's in this Insight

This IN details an evaluation trial of **Plasma Power** foliar fertiliser on a 14 hectare paddock carrying 200 Jersey cows on a dairy property in New South Wales. The study showed that the foliar spray extended the 7 day grazing cycle to 10 days due to increased pasture production.

Summary of Results

Existing 7 day Production Revenue	**$12,152**	**(7 days)**
After Fertiliser Program		
New 10 day Production Revenue	**$17,360**	**(10 days)**
REVENUE GAIN +	**$5,208**	

43% Revenue Gain

+ 3 Day Extra Grazing

Background to the Property Under Review

Dairy grower Todd Wilson runs 200 Jersey cattle on his property in Tamworth, NSW.

An evaluation was carried out on the 14-hectare paddock that carries these cattle. The paddock was planted with rye grass on 25th April 2017.

The grower runs a herringbone milking system with milk collection every 2 days. This in-line system allows him to utilise space requirements and milking equipment with maximum effect. Typically, the grower gets 7 days grazing from the paddock carrying the 200 Jersey cows – this being 2-hectare per day for the 200 cows. The average daily milk production from the cows is around 15.5-litres per day.

At this time, the grower receives $0.56 per litre. Therefore, a typical return from this traditional practice would be along the lines of:

200 cows x 15.5 litres/day = 3,100 litres/day x 7 days = 21,700 litres x $0.56 per litre = **$12,152**

The Fertiliser and Evaluation Program

RLF Crop Nutrition

Plasma Power Foliar fertiliser was applied at 2-litres per hectare, together with 5kg of granulated UREA per hectare.

This crop nutrition program was agreed upon following a soil evaluation by Dr Hooshang Nassery, RLF's Head of Technical. Dr Nassery based his recommendation on tests showing adequate soil reserves of NPK, but with alkaline soil conditions which demonstrated low levels of trace elements, particularly zinc and copper. With a trace element deficiency such as that identified, it is unlikely that the responses to nitrogen, phosphorus or potassium from the soil would be as effective as they should be. The crop was yellowing, further supporting the evidence of trace element deficiency.

Plasma Power was chosen because it contains more trace elements, in addition to the major element of phosphorus which lifts yield. It is a nutritionally balanced and effective foliar fertiliser when trace element deficiency is detected.

Grower's Standard Practice

The grower's fertiliser program is traditionally 150kg/ha UREA in spring, 150kg/ha UREA in summer, 150kg/ha UREA in autumn and 150kg/ha SSP in autumn. Normally at this time of the year Tamworth receives, on average, 84mm of rain for the August/September period. This year only 24mm rainfall has been received. The grower applied 35mm through irrigation to provide supplemental moisture.

Key Evaluation Dates

The key dates for the evaluation were:

Date 2017	Event
25th July	Cattle commence grazing on untreated pasture
1st August	Cattle taken off pasture

This represents 7 days on untreated pasture

Date 2017	Event
25th August	Pasture treated with RLF **Plasma Power** Foliar 2L/ha and 5kg/ha UREA
4th September	Cattle commence grazing on RLF-treated pasture
13th September	Cattle taken off RLF-treated pasture

This represents 10 days on treated pasture

Evaluation Results

- **Incomings from the RLF Crop Nutrition Program**

The results were significant.

The RLF crop nutrition program provided the grower with 10 days of grazing (an additional 3 days), for the SAME AREA, with NO DROP in the volume or quality of milk.

The **earnings result equation** for this paddock now works out to be:

200 cows x 15.5 litres/day = 3,100 litres/day x 10 days = 31,000 litres x $0.56 per litre **= $17,360**

So, three extra days grazing achieved, without additional feed or chewing grass too low, a **$5,208** increase in income from same 14-hectare site.

- **Revenue or Production Increase**

43% ↑

An increase of

$5,208 ↑

- **Outgoings for the RLF Crop Nutrition Program**

The costs for the evaluation were:

Expenses	$ Cost
Plasma Power Foliar Fertiliser	306.60
UREA x 70kg / hectare	35.00
Contract Foliar Spray Application	250.00
Cost of application for 14-hectares	**$591.60**

ROI | 9.1 ↑

Grower Observations

The grower made reference to the following key features as he watched for changes in both pasture and his herd following the implementation of the evaluation trial.

- the pastures were evenly grazed as opposed to selectively grazed
- the cattle appeared to retain more feed with less excretion (so, increased digestibility)
- there was an appreciable improvement in the quality of feed
- the rumen worked better

These observations are consistent with many previous experiences of trial evaluation programs such as this one having been implemented.

Animal carrying pastures have been shown to bring many additional benefits for the livestock they support (in this case dairy cattle), other than simply a financial return on investment, when nutritionally balanced feed and pasture is provided for the stock. Benefits such as the reduced need for food supplements, reduced veterinary expenses, improved birth rates, improved weight gain, higher quality and improved milk production have all been noticed and are not uncommon observations. There is much to be gained from giving all round, balanced nutrition to livestock.

About Plasma Power

Plasma Power contains phosphorous, manganese, sulphur, copper, zinc and magnesium.

It is a nutritionally balanced foliar product with the buffering capacity and wetter to effectively enter the leaves quickly for rapid uptake of the essential nutrients required by the plant.

It is a known scientific fact that trace element deficiencies are often the limiting factor in good crop outcomes, and that these trace element deficiencies can cost farmers and growers considerable yield potential loss before any symptoms are noticed. This makes **Plasma Power** an invaluable product, as the evaluation process undertaken in this trial testifies. The zinc, copper and manganese concentrations in **Plasma Power** are proportionate to the exacting crop-removal levels required to produce high yielding and quality crops and produce. These three trace elements alone provide crucial support to the major nutrient phosphorus. This allows application rates to be cost-effectively 'matched' to the desired target yield.

The pure efficiency of **Plasma Power** proves cost effective and productive.