RE-IMAGINING THE FERTILISER FRAMEWORK AS PRIORITY TECH

RLF's Integrated Fertiliser Management (IFM) Already Fits the Soil Carbon Future for Agriculture

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LET'S DEFINE THE WORD RE-IMAGINE.

It means 'to think about again – especially in order to change or improve'.

LET'S CONSIDER THESE TRIAL CROP OUTCOMES.

Each has been conducted with, and evaluated after, using an RLF crop nutrition program.

CONTROL CROP	RLF-TREATED CROP	DETAILS AND OUTCOMES
		**Description:** **WHEAT** comparison **Location:** Turkey **Date:** May 2017 **Outcomes and Benefits:** This trial shows early root growth with soil still attached after using BSNSS. Much stronger root growth and exploration of the soil can be seen.
		**Description:** **WHEAT** comparison **Location:** Australia **Date:** August 2014 **Outcomes and Benefits:** This trial shows early root growth after the priming of the seed with BSNSS in addition to traditional practice. Much stronger root growth and exploration can be seen. This establishes vigorous plants that set for greater yield potential.

CONTROL CROP	RLF-TREATED CROP	DETAILS AND OUTCOMES

Description:

WHEAT comparison

Location:

New Zealand

Date:

August 2015

Outcomes and Benefits:

This trial was conducted using IFM with Seed Priming with BSNSS and foliar spraying with Plasma Fusion. The comparison images clearly show the difference in early plant strength and health. As a result farmers may expect better yield and improved financial gain.

Description:

RICE vegetative growth comparison

Location:

Bangladesh

Date:

January 2015 to April 2015

Outcomes and Benefits:

This trial was conducted to evaluate the effectiveness of BSN Ultra - a specialty Seed Primer for rice. Stronger, greener, healthier plant growth was observed and at harvest an 11.7% increase in yield was measured over traditional practice.

Description:

RICE harvest comparison

Location:

Sri Lanka

Date:

April 2014

Outcomes and Benefits:

The trial was conducted using RLF speciality Seed Priming fertiliser for rice - BSN Ultra. Some of the benefits observed throughout the trial were longer root length with more fibrous roots, a bigger and stronger plant base with more uniform, greener top growth and less weeds.

CONTROL CROP	RLF-TREATED CROP	DETAILS AND OUTCOMES

Description:
CORN root comparison

Location:
China

Date:
July 2013

Outcomes and Benefits:
This trial was conducted to evaluate the effectiveness of BSN Superstrike. The comparison images show the early strength and vigour of the root growth and the health of the soil around the plant roots.

Description:
PASTURE root comparison

Location:
Australia

Date:
September 2014

Outcomes and Benefits:
This trial pasture crop received one foliar spray with RLF Pasture Plus. The robust results are obvious. The soil around the root growth looks darker, more healthy and if you look carefully the earthworms can be seen.

Description:
PASTURE on lucerne variety 'Silverado'

Location:
Australia

Date:
October 2016

Outcomes and Benefits:
This trial crop was foliar sprayed with RLF Pasture Plus. It was left to grow for 28 days and then harvested. Overall yield increased by 14.1% with 20 extra bales per hectare being realised from the RLF-treated pasture.

Description:
CANOLA comparison

Location:
Australia

Date:
May 2017

Outcomes and Benefits:
These photo images were taken one month after the trial crop had been sown with RLF's Seed Primer as opposed to an alternative seed treatment. They show the advantage given to the crop when 'kick-started' by seed priming with BSN Superstrike.

There are further examples, together with considerable supporting on-farm evidence and scientific evaluation of the results in an INSIGHT recently written by Dr Hooshang Nassery, RLF's Global Technical Director. It is titled 'How to Increase the Profit of Integrated Fertiliser Management. Consider the Cost Benefits as Carbon Credits'. You can read it here.

LET'S VISUALISE THE FERTILISER FUTURE IN LIGHT OF AUSTRALIAN GOVERNMENT PRIORITIES.

The Government's long-awaited technology investment roadmap was released on 23rd September 2020. Under the plan, energy saving technologies have been placed into different categories.

Particularly pertinent for agriculture, is the priority technology field of soil carbon capture and storage – the process by which carbon is stored in the earth, rather than in the air.

It is the expectation of the government that all priority technologies will have transformational impacts both here in Australia, as well as globally.

As such, the soil capture and carbon potential for products such as those researched, developed, trialled and distributed by RLF globally – all with proven beneficial outcomes – are rightly being re-considered by farmers and growers, not only because of the yield and quality benefits, but because of the potential to off-set (and thereby reduce) their input costs because of applied carbon credits.

This transformational technology is already available and ready for farmers and growers to incorporate into their future fertiliser framework.

LET'S REVIEW WHAT IFM DELIVERS.

The **positive impacts** involve efficiencies such as:

- a reduction in the amount of granular fertiliser required
- more efficient water use
- increased plant strength and health
- increased yield
- assured crop quality
- beneficial return of biomass to the soil

The success of an RLF fully integrated management crop nutrition program depends upon three key fertiliser concepts/ functions, being:

1. **Seed**
   Treating seeds with **BSN Superstrike** (RLF's seed priming fertiliser) to raise phosphorus and trace element levels to optimum or above optimum levels. This enables the seedlings to set a higher yield potential, form a greater root mass, together with the vigour and strength required to better handle stress and/or disease related challenges.

2. **Soil**
   Applying nutrient to the soil (usually in granular form) at optimum, **but not excessive** levels. This is determined by a combination of farm/orchard/greenhouse fertiliser history, soil testing data and potential or expected yield.

3. **Leaf**
   Using **Ultra Foliar Fertilisers** that avoid hidden hunger and hidden yield losses – the sub-clinical deficiency that occurs before the plant's nutrient deficiencies become noticeable and identified through visual crop inspection. This is achieved through the use of specially-formulated foliar fertilisers and tank mixes to extend the momentum of root efficiency and growth.

Important Note: The success of IFM is impeded by soil applications of granular fertilisers in excess of crop demand. Therefore, moderate NPK input, and step-wise nitrogen applications should be practised – and this often means a reduction in soil fertiliser inputs by 10% - 20%. When used in accordance with the RLF product's 'How to Use' instructions it will yield more financial return without greater financial outlay.

IFM is a powerful tool for the modern-day farmer who wants to improve not only his crop's potential today, but who wants to protect his land's potential for the future. You can read more about IFM, and the science and technology behind it at this website link http://www.ruralliquidfertilisers.com/what-is-fertiliser-integration/ .

LET'S REFLECT UPON THE IMPORTANCE OF SUSTAINABILITY AND RLF's COMMITMENT.

- Crop quality and yield is becoming increasingly important for the entire world. As such, the new technologies, proven products and the incremental gains delivered by modern agriculture are crucial.
- Farmers and growers everywhere are looking for crop advantage – in the quality and health benefits provided by their crops and produce – in increased crop yield – in better financial returns – and in the improved quality and nutrient-building of the soil so that it can continue to support their business enterprises for years to come.
- Equally, it is important for governments and international agencies charged with the responsibility of ensuring world-wide food security, as the sustainable supply of high yielding and nutritious food crops must be assured if this goal is to be met.
- As a major fertiliser company with world-leading technologies and products, RLF is committed to playing its role in a secure food future for the markets in which it operates. It is also committed to finding new ways in which to meet the targets and goals of governments around the globe in response to the clean energy future. These commitments underpin its core focus on building products, processes, advice and continuing service, based only upon the results delivered by independent trial data, demonstration field trials, real on-farm monitoring and evaluation, and laboratory-based scientific measurement and development.

LET'S GRASP THE FUTURE.

IFM is the result of this endeavour. It is a new and proven approach. It is the 'modern-farming future'. It is RLF's commitment to the continuous advancement of IFM for the betterment and sustainability of global agriculture.

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