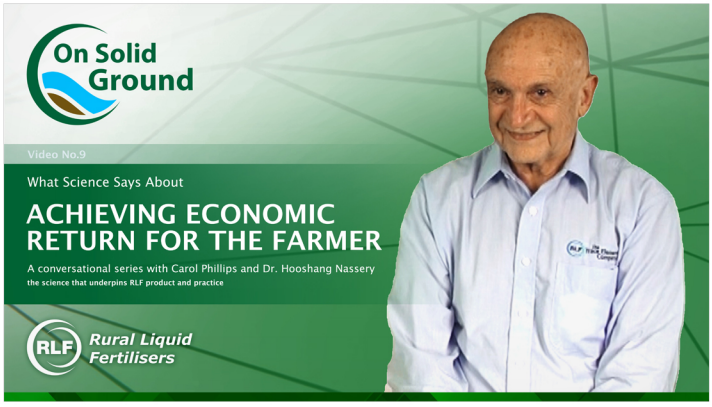

On Solid Ground

What Science Says About
ACHIEVING ECONOMIC RETURN FOR THE FARMER

About this Series

An engaging series of 11 videos that feature Dr Hooshang Nassery and Carol Phillips in a conversational style presentation about the science that underpins RLF product and practice.

It has been called ON SOLID GROUND for good reason, because the science of plant physiology provides the indisputable basis upon which all RLF products are developed.

This series will bring a relaxed and simple understanding for farmers and growers everywhere about the science that underpins the RLF brand, and the expertise that goes into every specialised crop nutrition product that RLF manufactures.

Carol Phillips talks with Dr Hooshang Nassery about Achieving Economic Return for the Farmer

Carol Phillips (CP) : Hooshang, I read and write quite a lot about economic return for the farmer. I'm wondering if you can explain how RLF products deliver in that respect, so they support the farmer in that economic growth.

Dr Hooshang Nassery (HN) : I hope I can explain this briefly – because it's a topic that can expand a lot. There are two aspects to this – one is that optimisation of nutrients will bring in a lot of optimum crop responses, root growth, and activity of the root in terms of rhizosphere bacteria – which is very important in mineralisation, or making unavailable nutrients into available form. There are a huge number of publications that relate to, for example, citric acid and similar organic acid unlocking phosphorus in the soil. Or, for that matter, acid or alkaline soils, because in acid soils these acids bind with aluminium – and in alkaline soil they bind with calcium, which is really the hard structure of phosphorus that is immobile. Naturally, by increasing the bacterial activity in the root system we bring in a lot of benefits, which, part of it is hormonal, part of it is defending the root system from diseases. And then the end result, is accumulating organic matter in the root rhizosphere. So, early in the day, for example, when I was inspecting crops in which BSN was used, or foliar was used, all our licensees or our field staff used to say, "well, compare the root system. One has got a lot of moisture around it, and the other one which hasn't been sprayed is dry". And what's the reason for that? The reason is that where you increase rhizosphere activity, you can actually increase humus in a matter of week or two. And it's the humus that holds the nutrients and water.

CP : And that's building new soil?

HN : And that's building soil where it comes around the root system. Soil with good water holding capacity, with good nutrient exchange. And in the long term, obviously if I get 10% extra yield, or 15% extra yield, I also will get 15% extra humus in my soil. And the relationship goes back, with for example, 2 tonne of crop might leave behind 1 tonne of root system, that 1 tonne of root system might leave behind 200kg of humus, and a lot of farmers not understanding the significance of seed treatment and foliar in stimulating rhizosphere activity – and increasing humus – will go and pay money for these things. They buy humic substances and then apply it to the soil.

CP : So, it's actually increasing the natural soil fertility?

HN : Yes absolutely. And of course, as we know with Integrated Fertiliser Management you do have to reduce your granular fertiliser so there is less leaching, and less loss of nitrogen – for example as gas, and at the same time not inhibiting, or prohibiting the root growth by that reduction.

CP : Yes. So it sounds to me that there's economic benefit at the farm gate, because there's more cash for crop, because there's more yield, and there's also economic benefit in soil renewal and the sustainability of that soil for future crops.

HN : Sustainability of that soil, and at the same time if I'm getting more yield, and not spending a lot more on fertiliser I'm getting more profit.

CP : So again, more benefit?

HN : Yes. So, basically the three ways you benefit. One is soil sustainability, less leeching which is very important for the environment, especially in light soils. And then there is increasing yield as a result of Integrated Fertiliser Management, and then there is more benefit from cutting back the fertiliser. You may not decide to cut back the fertiliser, (and spend it with more extra money), you still get enough money to pay for that and some extra benefit or yield will basically give you more income. But we do like, let's say, we do like the right amount of fertiliser not to inhibit the root growth, because Integrated Fertiliser Management means I'm trying to make optimum root growth. If I put too much fertiliser in the soil, I limit that optimum root growth – optimum root growth, or extra root growth, whichever way you want to interpret it. So, that is the concept.

CP : But it is economic benefit for the farmer to think about all of those issues.

HN : All of those issues. That's right.

CP : It's a good message.

About Dr Hooshang

Hooshang is RLF's Plant Physiologist and he heads the company's Research, Development and Technical team. He brings the knowledge and enthusiasm for the industry with over 40 years of experience and he has played a central role in a number of new product developments, including the world-leading and innovative seed nutrition technology BSN. Contact Hooshang.

About Carol

Carol is RLF's Communications, Media and Policy consultant. She is the main author of information, marketing and website publications and part of her role is to plan targeted marketing and information strategies and resources for both customers and the wider RLF team. Contact Carol.

RLF Product Categories

RLF has 11 key product categories.

They all include specially developed and technically advanced crop nutrition products for all crop types, deficiencies and conditions.

The links at the following categories identify the specific, high-technology products available in each of the product categories.

- Seed Priming
- Ultra Foliar
- Rapid Foliar
- Crop Specific Foliar
- (Single Element) Foliar
- NPK Foliar
- Nutrient Charger
- Pasture
- Fertigation
- Root Boost
- Bulk Liquids

Contact Details

1800 753 000 FREE CALL
+618 9334 8700 (Outside Australia)

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