



## What Science Says About PLANT NUTRITION AND WHY IT IS VITAL

### 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 Plant Nutrition and Why it is Vital

**Carol Phillips (CP):** I know that plant nutrition is important Hooshang, but why is it so vital?

**Dr Hooshang Nassery (HN):** Well, the plant nutrition science of the field really developed from the general field of plant physiology. And the importance of this fact is that for all plants – outside of water and carbon dioxide and air – the only available factor influencing yield, or increasing yield, is nutrition. And nutrition primarily is supplied through the soil. But there are other means of applying nutrients to the plant as well. So the science has developed over the past – probably few decades – extensively, such that we now have different aspects of nutrient transport and nutrient requirement across the whole field, engaging a lot of researchers.

**CP:** So you're saying that we've learned so much more about what role every aspect of crop development plays in the health of the plant, so that it can produce more.

**HN:** That's right. Well actually you've prompted me to just expand a little bit, because it's not only that nutrients give the maximum yield, or the required yield; but if they are not in balance, and if they are not scientifically formulated, then you're going to suffer from excesses or toxicities, or your resistance to diseases can change. And so, for that reason mineral nutrition really now enters into so many other divisions of plant physiology, and even plant pathology – which then signifies its importance.

**CP:** Okay. So it sounds to me like everything has to be finely tuned and perfectly balanced. Is that right?

**HN:** That is correct. Yes. Not only do we go with specific plants, and specific nutrients, but with any plant that requires a number of essential elements – and normally there are about 13 from the soil. We do have an optimum level for each. And when we start to increase a particular element, we have to watch that we are not overdoing it, and affecting the uptake or function of other nutrients.

**CP:** Is that the basis for the development of RLF products in plant nutrition?

**HN:** Yes, yes. We have actually, I can say that when we started developing RLF products more than the one that was there nearly 25 years ago (K-Komplex), the aim was how to bring the optimum level of nutrients during the life cycle of the crop. And primarily by involving other parts of the plant, which is seed and leaves. And very, very early in RLF development we actually developed products that are specific not only to crops, but also to be applied during the plant life cycle. And in a particular phase to give the maximum impact that we are offering.

**CP:** Is there any one RLF product that demonstrates just how finely balanced and how optimal those nutrients are that are delivered to the crop?

**HN:** Yes, yes. Well in fact, what we call 12 nutrients, or Ultra Foliar, are good examples of these products that are well balanced. Sometimes the balance is also changed toward a specific crop or crop type. And the aim of these products is basically to prevent deficiency, and because they're Broad-spectrum and with the impact that they'll have on the root growth, we actually recommend them on large-scale in paddock for different crops, although they are specific ones. But basically, they are called 12 nutrients.

**CP:** Okay. Well thank you, Hooshang. I think that's captured just how important plant nutrition is for the crops. Thank you.

**HN:** Thank you.

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

### Contact Details

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

