

## LESS IS MORE

This Insight is about the 'Ask the Doctor' inquiry of **Greg Kaynes – Area Sales Manager (NSW / QLD)** about the effectiveness of foliar products in acid soils than with foliar of alkaline pH.

by Dr. Hooshang Nassery Ph.D



### 'Ask the Doctor'

*Distributors in the New England are now on the liquid fertiliser bandwagon, and are pushing Pasture Foliars with a pH of around 7. One example is Yara's Pro Ant P. RLF's Pasture Plus has a pH of around 3. Will foliars with a neutral pH be as effective as the RLF products?*



**Mr. Greg Kaynes**  
 RLF's Area Sales Manager  
 (NSW/ QLD)

### 'Ask the Doctor' answer from Dr. Hooshang Nassery

Acid foliar products do a few things that alkaline foliars cannot do. A few of these actions are as follows:

1. Fast and efficient uptake of nutrients in acid foliar versus slow and difficult passage of nutrients in leaf when alkaline foliar is used.
2. Stimulating photosynthesis by increasing the gradient of hydrogen ion across chloroplast membrane thus generating more energy (ATP) by utilising more of light energy in Photosystem I.
3. Stimulating sugar transport since sugar loading into phloem tissue happens when hydrogen ions (acidity in apoplast of leaf cells coming from acid foliar) combine with sucrose molecule to enter phloem tissue (sieve tube cells).
4. Higher ATP production as a result of acid foliar prevents the leaves from light damage (photo-oxidation) since energy flow from light to sugar occurs smoothly.
5. Osmotic stress of applied foliar is less when the cation associated with phosphate is hydrogen ion.

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