

CAMBODIA'S FIRST EXPERIENCE WITH RLF CROP NUTRITION

XFoliar-1 & XFoliar-2 Specialty Fertiliser Delivers Excellent Outcomes

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What's in this Insight

This IN gives a pictorial overview of the results of an evaluation trial of **XFoliar-1** and **XFoliar-2** specialty fertiliser on rice fields in Cambodia.

Background

Cambodian crop science products Distributor Jebson & Jessen (Cambodia) (www.jjsea.com) completed two field trials on rice crops of the 2-part Specialty Fertiliser product **XFoliar-1** and **XFoliar-2**. This formed part of their trials and evaluation programs.

Observations were made throughout the course of the trials, and the following comments given:

- **XFoliar-1** was applied at growth (establishment) stage
- **XFoliar-2** was applied at reproduction stage (late stage)
- performance was outstanding, and crop yield was significantly higher than the control group – in fact somewhere between 15%-20% better on average
- the grain quality was also improved
- use and application was less complicated and less labour-intensive, given that the crops needed only two products for the whole crop growth cycle, as against the three products needed for traditional practice



Economic Comparison

Description	X1, X2 per hectare	Control per hectare	Gain over Control per hectare
Fertiliser, Pesticides, Seeds	\$200.17	\$199.13	\$1.04
Extra Earning from Yield Increase	\$352.83	\$254.87	\$97.96
Gain	\$152.66 per hectare	\$55.74 per hectare	\$99.00 per hectare

A Cost-effective Solution

The **XFoliar** package was developed to provide a cost effective foliar solution suited to the agronomic needs of the crop. This ensures effective nutrient delivery by using existing RLF nutrient delivery technologies (**XFoliar-1**) combined with a newly engineered formulation using high-uptake acetate (**XFoliar-2**).

RLF customers wanted the same benefits achieved with the RLF's high-performance Ultra Foliar phosphorus and trace elements range of products. They also wanted a product suited to an affordable price range for small-holding farmers. Accordingly RLF developed the **X1** and **X2** range.

XFOLIAR1
XFOLIAR2

Dr. Hooshang Nassery, RLF's Head of Technical led the agronomic development of the product (based solely on plant physiology), and was supported by Dr. Carl Urbani, RLF's Product Research Manager and his team working the difficult chemistry and formulation development process. What resulted was this 2-part, targeted, cost effective and easy to use agronomic fertiliser solution.



Trial Summary and Conclusions

- X1, X2 trials with short-term rice variety (90 days)
- Application Rate: 2L/Ha (X1=1L, X2=1L), Cambodia Application Rates ONLY
- Outgrowth from Control group, observed from 3 days after X1 application till crop harvest
- Easy to apply, requiring only 2 products (X1, X2) with 2 applications vs 3 products, and 3 applications for generic products
- Yield achieved was 20%-30% higher than the Control group (using farmer's traditional practices)
- Economic Gain over Control (standard farmer practice) is \$99 (USD) per hectare
- X1, X2 Economic gain is US \$152.66 per hectare

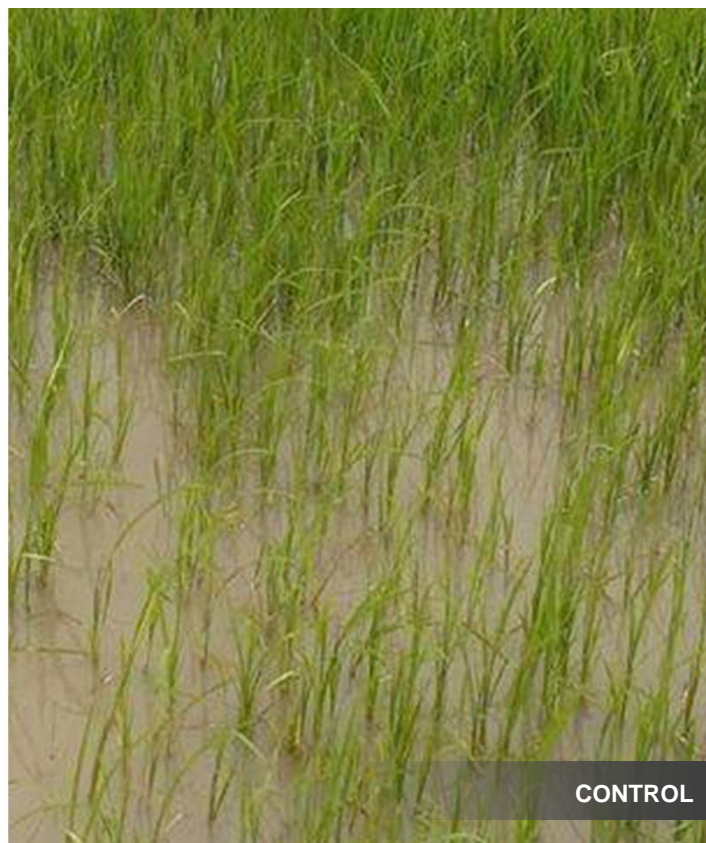
What these Products Deliver – Doing More with Less

Optimal levels of plant-available phosphorus (vital for the plant), supported the very high levels of nitrogen in **XFoliar-1**, and potassium in **XFoliar-2**. Both have the important trace elements included for each phase of crop development to give agronomic effectiveness to the full product package.

XFoliar-1 applies low pH RLF technologies, reliable and well tested over 20 years.

XFoliar-2 uses a new active ingredient formulations to achieve uptake efficiency, namely potassium acetate.

Both products are formulated with the focus on ensuring superior nutrient uptake (leaf and cells) typical of RLF's high-end foliar products. This means that uptake efficiency will deliver more plant-available nutrient to the plant, in effect doing more with less. **X1** and **X2** are also different formulations providing the crop with the important and required nutrition needed at the different growth stages.



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