

CROP NUTRITION FERTILISER AND CROP PROTECTION CHEMICALS WORKING TOGETHER

Broadacre Plus Ultra Foliar and Bactericide deliver better rice outcomes



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What's in this Insight

This IN compares a rice field that underwent three demonstration and evaluation treatments. RLF product **Broadacre Plus Ultra Foliar** was combined with a crop bactericide as part of the trial process and was shown to deliver many positive benefits.

Using Technology to the Best Advantage

The benefits of using a Broad-spectrum foliar fertiliser such as RLF's **Broadacre Plus Ultra Foliar** is well known. It is firmly established as an effective way to increase rice yield, improve rice quality and to save labour and time.

By utilising this technology, and combining it with a compatible and approved crop protection bactericide, even more benefits can accrue as the nutrient elements needed for strong growth and yield and the preventative measures against disease effectively work together.

To help rice growers understand the effects of RLF **Broadacre Plus Ultra Foliar** on rice, and the synergistic effect of **Broadacre Plus Ultra Foliar + bactericide**, the RLF Technical Team established an evaluation and demonstration field in Zhejiang Province in which different treatment programs were tested.



Establishing the Demonstration Field and Treatments

Sowing Date	20 th May 2017
Test Date	3 rd August 2017
Location	Liujabang Village, Tongxiang City, Zhejiang Province
Crop	Direct seeding Rice
Variety	Xiushui 134 (Single season conventional late japonica rice)
Rice Grower	Wang Jianhua
Timing/Crop Phase	Applied at the early tillering stage of rice growth
Method Used	Applied with a knapsack type electric sprayer to spray evenly on the leaves

NOTE : the Demonstration Field was divided into three with the three treatments all done simultaneously.



Treatment	Demonstration program	Dosage	Area
First Field	RLF Broadacre Plus Ultra Foliar Propiconazole and Azoxystrobin	20ml per 30 jin (15 litres) water	2.0 mu (0.13 hectare)
Second Field	Propiconazole and Azoxystrobin	20ml per 30 jin (15 litres) water	0.7 mu (0.47 hectare)
Third Field	Control		0.3 mu (0.02 hectare)

The RLF Team inspected the Demonstration Field on 16th August 2017 to investigate and record their observations. The plant height, number of green leaves on the main stem, effective tiller numbers and sheath blight of rice from the three treatments were recorded. The survey method uses the 5-point sampling method with five plants randomly selected from each of the treatments with an average taken to enable comparison.



The RLF-treated Demonstration Field



Results and Comparisons

Table 1 | Comparing the plant height

Treatment	Sample I	Sample II	Sample III	Sample IV	Sample IV	Average (cm)
Broadacre Plus + Bactericide	67.8	68	68.4	66.8	69.2	68.04
Bactericide	67.0	67.8	66.2	65.2	67.4	66.72
Control	67.2	65.4	66.8	65.6	67.8	66.56

This table shows that the plant height of the rice treated with RLF **Broadacre Plus** Ultra Foliar and the bactericide product is stronger and higher than the other two treatments.

Table 2 | Comparing the number of green leaves on the main stem

Treatment	Sample I	Sample II	Sample III	Sample IV	Sample IV	Average (cm)
Broadacre Plus + Bactericide	5.4	5.2	5.2	5.6	5.6	5.4
Bactericide	5.4	5.4	5.2	5.6	5	5.32
Control	5.4	5.2	5	5.2	5	5.16

This table shows a marginal advantage for the combined RLF-treated and bactericide treatment over that of bactericide alone. The Control treatment program is well behind at this evaluation.

Table 3 | Comparing effective tiller numbers

Treatment	Sample I	Sample II	Sample III	Sample IV	Sample IV	Average (cm)
Broadacre Plus + Bactericide	9.8	9.4	8.6	8.4	9.6	9.16
Bactericide	7.5	9.5	8	9.17	9.7	8.77
Control	7.2	9	8.2	9.2	9.6	8.64

This table shows that the combined RLF-treated and bactericide treatment has a positive effect on the effective tillering of rice. The application of RLF **Broadacre Plus** with bactericide in the rice tillering stage delivers all of the key nutrients needed for rice tillering. It promotes the growth of low nodal tillers and helps to increase panicle at a later stage.

Table 4 | Investigating the occurrence of rice sheath blight

Treatment	Total Number	Diseased plant		Disease classification						Disease index
		Number	Rate (%)	0	1	3	5	7	9	
Broadacre Plus + Bactericide	60	1	1.67	59	1	0	0	0	0	0.19
Bactericide	60	2	3.3	58	2	0	0	0	0	0.37
Control	60	7	11.67	53	7	0	0	0	0	1.30

This table indicates that the RLF-treated and bactericide treatment has the lowest incidence of sheath blight.



A Photographic Record of Comparison under the Three Treatments

The rice treated the RLF products has been shown to have taller plants, greener leaves and good growth. **Broadacre Plus** Ultra Foliar effectively promotes the strong growth of stems and leaves, enhances photosynthesis, increases the number of effective tillers and generally strengthens the plants against adverse conditions and events such as pest attack or disease.



The RLF Team investigating and recording the results of the three treatments





The rice treated the RLF products shows good healthy growth and strong disease resistance.



The rice field treated with **Broadacre Plus** Ultra Foliar + Bactericide has thicker leaf with larger leaf area which gives higher photosynthetic efficiency. This process is beneficial for the accumulation of organic matter around the root area of the plant, which helps it grow stronger.

The demonstration shows that the application of **Broadacre Plus** Ultra Foliar with bactericide has the function of promoting rice growth, accelerating tiller process, improving rice plant stress and disease resistance whilst achieving a balanced crop nutrition fertiliser program plus the added effect of support from crop protection program.

Broadacre Plus Ultra Foliar directly supplies nutrition for the rice plants by giving it all the nutrient elements needed for the growth and development of the rice crop in one single foliar spray application. The results show that this lays a good nutritional foundation for late panicle development and grain fill. This highly specialised RLF crop nutrition product delivers many beneficial benefits for rice growers, including increased production efficiency, yield and higher quality grain.

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