



Vegetables



Rapid  
Foliar



Ultra  
Foliar

# RESULTS OF RLF PRODUCTS IN BANGLADESH

## R & D Trials on Vegetable Varieties

29<sup>th</sup> July 2015



## INTRODUCTION

During January 2015 to April 2015 several trials were conducted at the Research and Development Farm in Bashon, Gazipur, Bangladesh. These trials were carried out by RLF's partner in Bangladesh, Lal Teer Seed Limited, and the map plots the location of the R & D Farm. This area historically receives approximately 90mm rainfall during these four months from an approximate number of 10 rain days.

## DESIGN OF THE TRIAL

The field trial was specifically designed and conducted to judge the effectiveness of four RLF foliar products.

The fertilisers were :

- RLF Ultra Foliars **Broadacre Plus, Fruits & Veggies** and **Pasture Plus**
- RLF Rapid Foliar, **Rapid Zinc**

The vegetable crops trialled were :

- Red Amaranth (variety : Lolita)
- Cabbage (variety : 75-days)
- Spinach (variety : Sathi)
- Tomato (variety : Mintoo)



## DESIGN OF THE TRIAL

The trial design was in accordance with the documented framework for trials using a Randomised Complete Block Design (having the same number of blocks as replicates) with three replications.

The standard treatments used were coded as follows :

<b>T1</b>	Conventional (i.e. <b>CD + Full N</b> ) ( <i>considered Local Practice</i> )
<b>T2</b>	Conventional + Broadacre Plus
<b>T3</b>	Conventional + Fruits & Veggies
<b>T4</b>	Conventional + Rapid Zinc
<b>T5</b>	Conventional + Pasture Plus
<b>T6</b>	20% less N + Broadacre Plus
<b>T7</b>	20% less N + Fruits & Veggies
<b>T8</b>	20% less N + Rapid Zinc
<b>T9</b>	20% less N + Pasture Plus

There was further extension to these treatments for some the varying crop types and these are discussed under the performance of each crop type.

Photographs taken at the time of the trials also contribute to the performance outcomes of the crop.


## 1. Spinach

The treatments used for the spinach crop were coded as follows :

<b>T1</b>	Conventional (i.e. <b>CD + Full N</b> ) (considered Local Practice)
<b>T2</b>	Conventional + Broadacre Plus
<b>T3</b>	Conventional + Fruits & Veggies
<b>T4</b>	Conventional + Rapid Zinc
<b>T5</b>	Conventional + Pasture Plus
<b>T6</b>	50% less N + Broadacre Plus
<b>T7</b>	50% less N + Fruits & Veggies
<b>T8</b>	50% less N + Rapid Zinc
<b>T9</b>	50% less N + Pasture Plus

The performance outcomes for this crop type were :

Treatment	Plant height (cm)	Single plant weight (gm)	Yield (tonne/ha)	% Yield increase over Conventional
<b>T1</b>	25.33	25.33	19.05	0
<b>T2</b>	25.70	25.70	20.56	7.92%
<b>T3</b>	26.46	28.05	22.44	17.79%
<b>T4</b>	26.03	29.67	23.73	24.57%
<b>T5</b>	25.73	30.36	24.28	27.46%
<b>T6</b>	25.70	28.95	23.16	21.58%
<b>T7</b>	26.00	26.50	21.20	11.28%
<b>T8</b>	26.00	26.80	21.44	12.25%
<b>T9</b>	25.83	31.04	20.66	8.45%

 **19.4%**  
Increase Average

Conventional Practice +  
RLF Ultra Foliar T2-T5

 **13.4%**  
Increase Average

50% Less N +  
RLF Ultra Foliar T6-T9


## 2. Cabbage

The treatments used for the cabbage crop were coded as follows :


<b>T1</b>	Conventional (i.e. <b>CD + Full CF</b> ) (considered Local Practice)
<b>T2</b>	Conventional + Broadacre Plus
<b>T3</b>	Conventional + Fruits & Veggies
<b>T4</b>	Conventional + Rapid Zinc
<b>T5</b>	Conventional + Pasture Plus
<b>T6</b>	50% less CF + Broadacre Plus
<b>T7</b>	50% less CF + Fruits & Veggies
<b>T8</b>	50% less CF + Rapid Zinc
<b>T9</b>	50% less CF + Pasture Plus

The performance outcomes for this crop type were :

Treatment	Head length (cm)	Head diameter (cm)	Single Head weight (kg)	Yield (tonne/ha)	% Yield increase over Conventional
<b>T1</b>	12.96	18.06	1.05	21.00	0
<b>T2</b>	13.36	19.13	1.22	24.32	15.80%
<b>T3</b>	12.66	18.06	1.11	22.18	5.61%
<b>T4</b>	13.60	19.33	1.29	25.84	23.05%
<b>T5</b>	13.13	19.00	1.10	22.06	5.04%
<b>T6</b>	12.43	17.80	0.92	18.36	-14.37%
<b>T7</b>	13.60	19.00	1.20	23.92	13.90%
<b>T8</b>	12.86	18.46	1.12	22.42	6.76%
<b>T9</b>	13.46	18.60	1.21	24.16	15.04%

 **12.4%**  
Increase Average

Conventional Practice +  
RLF Ultra Foliar T2-T5

 **5.3%**  
Increase Average

50% Less CF +  
RLF Ultra Foliar T6-T9



## PERFORMANCE OF CABBAGE UNDER DIFFERENT TREATMENTS



Overview of the experiment



Conventional









**RAPID**  
ZINC

**Pasture**  
**Plus**



## 3. Red Amaranth

The treatments used for the red amaranth crop were coded as follows :


<b>T1</b>	Conventional (i.e. <b>CD + Full N</b> ) (considered Local Practice)
<b>T2</b>	Conventional + Broadacre Plus
<b>T3</b>	Conventional + Fruits & Veggies
<b>T4</b>	Conventional + Rapid Zinc
<b>T5</b>	Conventional + Pasture Plus
<b>T6</b>	50% less N + Broadacre Plus
<b>T7</b>	50% less N + Fruits & Veggies
<b>T8</b>	50% less N + Rapid Zinc
<b>T9</b>	50% less N + Pasture Plus

The performance outcomes for this crop type were :

Treatment	Plant height (cm)	Single plant weight (gm)	Yield (tonne/ha)	% Yield increase over Conventional
<b>T1</b>	22.00	4.26	17.04	0
<b>T2</b>	21.68	4.02	23.03	35.16%
<b>T3</b>	22.26	4.42	17.68	3.75%
<b>T4</b>	21.40	5.90	23.68	38.97%
<b>T5</b>	22.00	4.28	17.12	0.46%
<b>T6</b>	23.00	5.18	20.72	21.60%
<b>T7</b>	22.20	4.85	19.40	13.84%
<b>T8</b>	21.93	4.38	17.52	2.81%
<b>T9</b>	22.50	5.15	20.60	20.90%

 **19.6%**  
Increase Average

Conventional Practice +  
RLF Ultra Foliar T2-T5

 **14.8%**  
Increase Average

50% Less N +  
RLF Ultra Foliar T6-T9

## PERFORMANCE OF RED AMARANTH UNDER DIFFERENT TREATMENTS



Overview of the experiment



Conventional









**RAPID**  
ZINC

**Pasture**  
**Plus**



## 4. Tomato

The treatments used for the tomato crop were coded as follows :

<b>T1</b>	Conventional (i.e. <b>CD + CF</b> ) (considered Local Practice)
<b>T2</b>	CD + Full N + Broadacre Plus
<b>T3</b>	CD + Full N + Fruits & Veggies
<b>T4</b>	CD + Full N + Rapid Zinc
<b>T5</b>	CD + Full N + Pasture Plus
<b>T6</b>	20% less CF + Broadacre Plus
<b>T7</b>	20% less CF + Fruits & Veggies
<b>T8</b>	20% less CF + Rapid Zinc
<b>T9</b>	20% less CF + Pasture Plus

The performance outcomes for this crop type were :

Treatment	Plant height (cm)	No. branches per plant	Single fruit weight (gm)	Yield (plant/kg)	No. marketable fruits per plant	Yield (tonne/ha)	% Yield increase over Conventional
<b>T1</b>	57.23	5.80	57.88	0.70	18.00	14.00	0
<b>T2</b>	61.33	6.30	62.23	0.72	17.00	14.36	2.57%
<b>T3</b>	61.63	6.75	60.10	0.80	20.00	16.04	14.00%
<b>T4</b>	60.46	6.20	66.63	0.86	19.00	17.22	23.00%
<b>T5</b>	57.86	6.15	61.76	0.71	17.00	14.30	1.42%
<b>T6</b>	58.23	6.75	63.11	0.73	17.00	14.66	4.71%
<b>T7</b>	58.90	6.10	64.23	0.76	17.00	15.04	7.42%
<b>T8</b>	59.06	6.70	64.25	0.71	16.00	14.16	1.14%
<b>T9</b>	61.03	5.95	60.16	0.72	18.00	14.46	3.28%

 **10.2%**  
Increase Average

Conventional Practice +  
RLF Ultra Foliar T2-T5

 **4.1%**  
Increase Average

50% Less CF +  
RLF Ultra Foliar T6-T9

## PERFORMANCE OF TOMATO UNDER DIFFERENT TREATMENTS



Overview of the experiment



Conventional









**RAPID**  
ZINC

**Pasture**  
**Plus**



## RLF PRODUCTS USED IN THE TRIAL

### RLF Ultra Foliar

Broadacre Plus, Fruits & Veggies and Pasture Plus



For more information see :

[www.ultrafoliar.com](http://www.ultrafoliar.com)

| [www.rapidfoliar.com](http://www.rapidfoliar.com)

| or visit [www.ruralliquidfertilisers.com](http://www.ruralliquidfertilisers.com)



Rapid Foliar



Ultra Foliar

# CONCLUSION

## 1. Spinach

### Results

Average of 4 RLF Ultra Foliars Products + Conventional Practice



## 2. Cabbage

### Results

Average of 4 RLF Ultra Foliars Products + Conventional Practice



## 3. Red Amaranth

### Results

Average of 4 RLF Ultra Foliars Products + Conventional Practice



## 4. Tomato

### Results

Average of 4 RLF Ultra Foliars Products + Conventional Practice





# THANK YOU FOR VISITING OUR PRESENTATION

[www.ruralliquidfertilisers.com](http://www.ruralliquidfertilisers.com)

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