

**Study Report on Control efficacy of Selected Bio-Pesticides against
Sclerotinia Rot in Lettuce**

Sponsor

Company Name : Atlatech Ltd.

Issued

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Test Organization

Korea Plant Environment Research Institute

Control Efficacy of Selected Bio-Pesticide against Sclerotinia Rot in Lettuce

This trial was conducted according to the Criteria and Method of Agrochemical Trial noticed by RDA

1. General

2) Purpose : to use in National Notice of Organic Agriculture Input Material

1) Test Period

- Start date : July 29, 2014

- End date: Dec. 22, 2015

3) Tester : Kim, Jong-Sung

4) Test Place : Suwon

2. Method

1) Target pest : Sclerotinia Rot (*Sclerotinia sclerotiorum*)

2) Crop (Var) : Lettuce (Sunpoong)

3) Treatment

Test Product	a.i. (%)	Efficacy		Phytotoxicity		Sponsor
		Dilution rate	Application time and method	Std. Dose	Double Dose	
D product	55.37	250x	Soil drench before transplanting (October 7, 2015)	250x (10/7)	125x (10/7)	Atlotech Ltd.
Botyzen WDG (<i>Ulocladium oudemansii</i>)	2.5×10 ⁸ cfu/g	500x	3 times folia spray with 7 days interval from early stage of disease outbreak (December 1, 8, and 15)	500x (12/1)	250x (12/1)	"
TG	23.8	1,000x	"	1,000x (12/1)	500x (12/1)	"
Benlate WP (Reference)	50	1,500x	"	-	-	-
Untreated	-	-	-	-	-	-

4) Cultivation

- Cultivation type: vinyl multhing under plastic house
- Transplanting date: October 8, 2015
- Planting space: 18 × 18 cm
- Other pesticide application: None

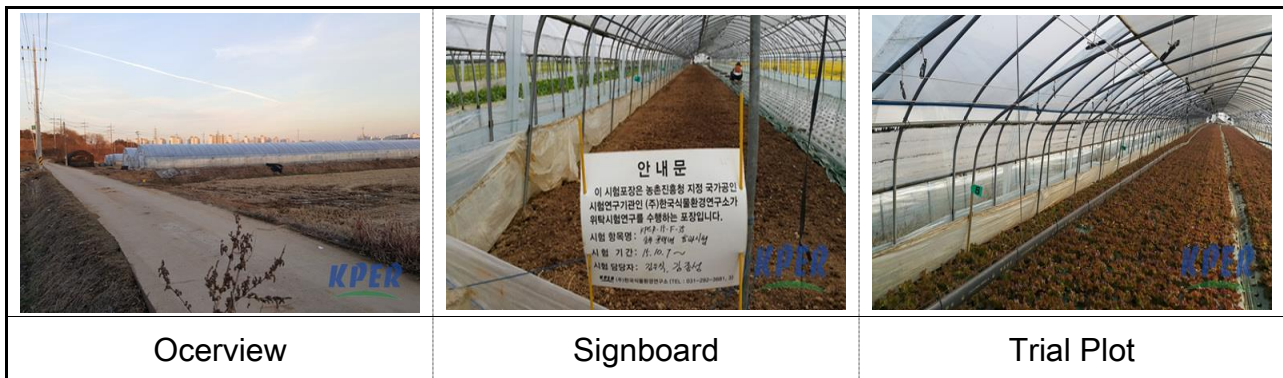
5) Test plot design and Plot area

	Nr. of treatment	Replications	Nr. of plots	Plot area	Total area	Total
Efficacy	5	3	15	20m ²	300m ²	405m ²
Phytotoxicity	7	3	21	5m ²	105m ²	

6) Climate influence

- There were no climate influence before/after application of test products because test was done under plastic greenhouse

7) Overview on Test Field



3. Assessment

	Investigation	Nr. of investigation	Date of Investigation	Investigation method
Efficacy	% of invested plants	1	December 22, 2015	Investigated infested plants over total plants per plot on 7*1 and 46*2 after final application
Phytotoxicity	Visual rating on damage	6	October 13, 15, 22, December 4, 6, and 8, 2015	In case of Botryzen and TG, investigated on 3, 5 and 7 days after application. In case of D product, investigated on 5, 7 and 14 days after transplanting

<Note> *1: Botryzen and TG, *2: D product

4. Results

1) Efficacy

○ Control efficacy against lettuce sclerotinia rot

Test Product	Nr of infested plants (%)				Significance (DMRT)	C.V. (%)
	RI	RII	RIII	Mean		
D product ※ ¹	6.7	2.9	5.0	4.9	b	69.0
Botryzen WDG ※ ²	5.0	6.3	4.2	5.2	b	67.1
TG ※ ²	4.6	2.5	4.6	3.9	b	75.3
Benlate (reference) ※ ²	5.0	3.3	5.4	4.6	b	70.9
Untreated	20.0	14.6	12.9	15.8	a	-

<Note> ※¹: investigated on 46 day after application, ※²: investigated 7 days after application

C.V.(%) -----26.9

2) Phytotoxicity

Test Product	Crop	Crop injury (0~5)		Remark
		Std. dose	Double dose	
D product ※ ¹	Lettuce (Sunpoong)	0	0	
Botryzen WDG ※ ²		0	0	
TG ※ ²		0	0	

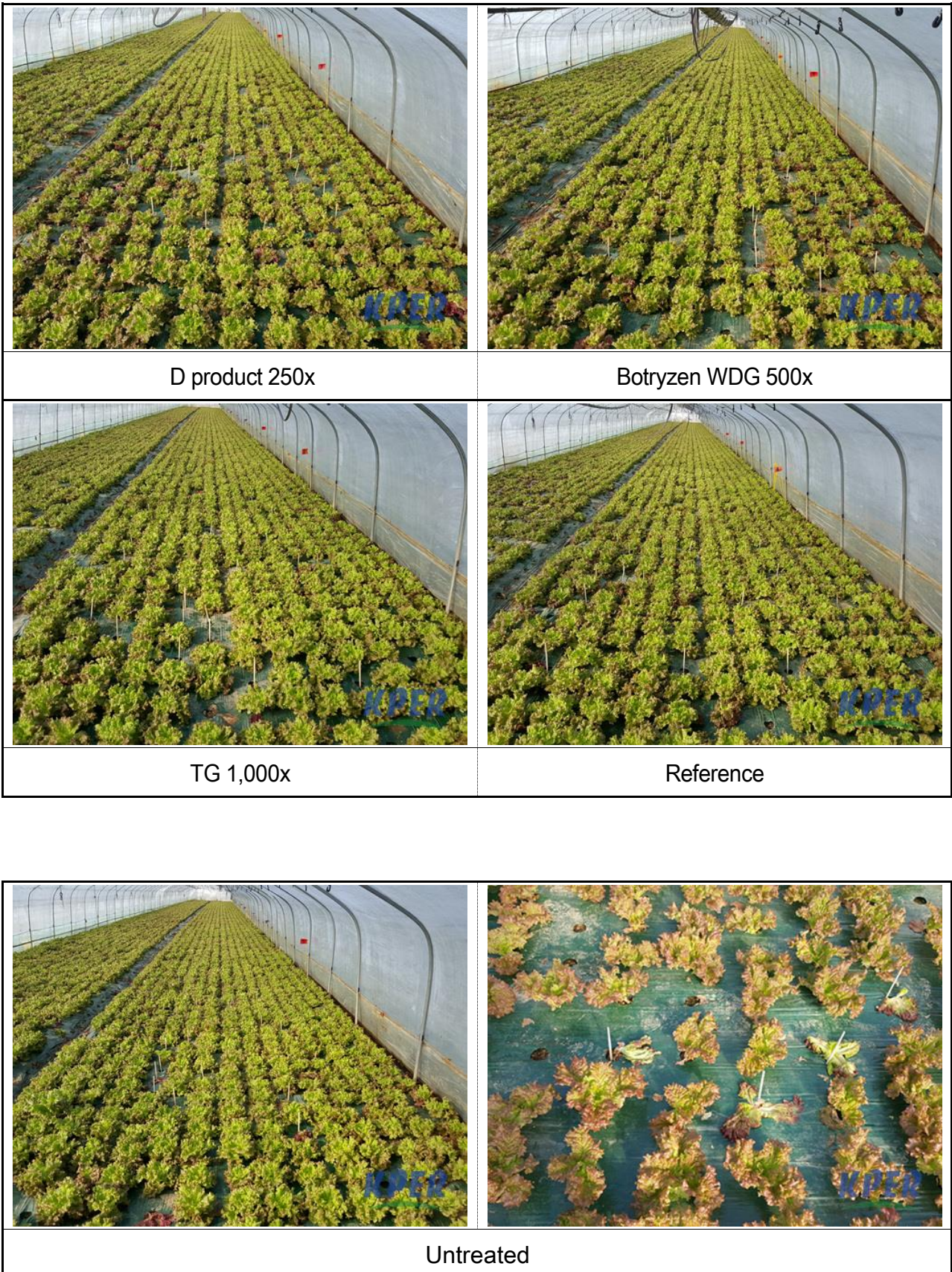
<Note>

※¹: investigated on 5, 7 and 14 days after transplanting, ※²: investigated on 3, 5 and 7 days after application

5. Conclusion

1) Efficacy

- All test products showed good control efficacy equivalent to reference.





Symptom of lettuce sclerotinia rot (Left: early stage, Right: late stage)

2) Phytotoxicity

- No crop injury was observed.