

**Study Report on Control efficacy of Selected Bio-Pesticide against  
Sclerotinia Rot in Onion**

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 Onion

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

### 1. General

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

2) Test Period

- Start date: July 29, 2014

- End Date: May 27, 2015

3) Tester: Kim, Jong-Sung

4) Test Place: Buseok-myun, Seosan

### 2. Method

1) Target pest : Sclerotinia Rot (*Sclerotium cepivorum*)

2). Crop(variety) : Onion(New mars)

3). Treatment

Test Product	a.i. (%)	Efficacy Trial		Phytotoxicity Trial		Sponsor
		Dilution rate	Application time and method	Std. Dose	Double Dose	
D product	55.37	250x	soil drench before transplanting (Oct. 14, 2014)	250x (Oct. 14)	125x (Oct. 14)	Atlotech Ltd.
Botryzen ( <i>Ulocladium oudemansii</i> )	2.5×10 <sup>8</sup> cfu/g	500x	Soil Drench just after disease outbreak (Apr. 8, 2015)	500x (Apr. 8)	250x (Apr. 8)	"
D Product fb. Botryzen ( <i>Ulocladium oudemansii</i> )	55.37, 2.5×10 <sup>8</sup> cfu/g	250x, 500x	Soil drench before transplanting after disease outbreak (Oct 14, 2014 and Apr. 8, 2015)	250x (Oct. 14) 500x (Apr. 8)	125x (10/14, Apr. 8) 250x (Apr. 8)	"
Fluquinconazole WP(reference)	25	500x	Root dipping before transplanting (Oct. 14, 2014)	-	-	-
Untreated	-	-	-	-	-	-

#### 4) Cultivation

- Cultivation type: Vinyl mulching
- Transplanting date: October 14, 2014
- Planting space: 20 × 20 cm
- Other pesticide application : None

#### 5) Test plot design and Plot area: RBD 3 replications

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

#### 6). Climate influence (Seosan Weather Station): None

Date	Rainfall (mm)	High/Low temperature(°C)	Average temperature(°C)
Oct. 13, 2014	-	23.2/11.6	17.5
Oct. 14, 2014*	-	19.0/6.0	11.9
Oct. 15, 2014	-	19.4/4.6	11.2
Ap. 7, 2015	-	11.5/1.8	6.9
Ap. 8, 2015*	-	13.1/5.9	7.5
Ap. 9, 2015	-	14.2/1.1	7.4

<Note> \*: Date of application

#### 7) Overview on Test Field



### 3. Assessment

	Investigation	Nr. of investigation	Investigation date	Investigation method
Efficacy	% of infested plants	1	May 27, 2015	counted nr. of infested plants over 200 plants per plot 225 days and 49 days after final application
Phytotoxicity	visual ration on damage	7	Oct 21, 28 Nov 4, 2014 Mar. 11 Apr 15, /22, 29, 2015	visual ration on crop injury 7, 14, 21 days after application and over wintering

### 4. Results

#### 1) Efficacy

- Control efficacy against onion sclerotinia rot (225 and 49 day after final application)

Test Product	% of infested plants				Significance (DMRT)	Control Value (%)
	RI	RII	RIII	mean		
D product	4.5	1.3	3.1	3.0	b	78.7
Botryzen	1.3	2.2	1.8	1.8	b	87.2
D product fb. Botryzen	1.3	1.4	3.6	2.1	b	85.1
Fluquinconazole	2.2	1.8	2.7	2.2	b	84.4
UNtreated	14.3	12.5	15.6	14.1	a	-

C.V.(%) ----- 22.0

#### 2) Phytotoxicity (7, 14 and 21 days after application and overwintering)

Test Product	Crop	Crop injury (0~5)		Remark
		Std. dose	Double dose	
D product	Onion (New mars)	0	0	
Botryzen		0	0	
D product fb. Botryzen		0	0	

## 5. Conclusion

### 1). Efficacy

All test product showed good control efficacy equivalent to reference.



D product 250x

Botryzen 500x



D product 250x fb. Botryzen 500x

Reference



Untreated

## 2) Phytotoxicity

- No crop injury was observed.