

A20-317-890FE

Efficacy of ozone applied alone and in mix, against Botrytis sp. and Sclerotinia sp. on transplanted lettuce. Italy 2020-2021

Trial ID: A20-317-890FE	Location: Italy	Trial Year: 2020
Protocol ID: 890A20FE8	Investigator (Creator): Giovanni Caputo	
Project ID:	Study Director: Renzo Bucchi - Agri 2000 Net Srl	
Official Trial ID: A20-317-890FE	Sponsor Contact: Giulio Senese - MET Srl	
	Trial Origin: C contracted trial	

TREATMENT LIST

Trt No.	Type	Treatment Name	Form Conc	Form Unit	Form Type	Description	Other Rate	Other Rate Unit	Appl Code	Comment 1	Comment 2
1	CHK	Untreated Check				not treated					
2	FUNG	Ozone			SN		3	PPM PR	ABCDEF	300-1500 L/ha	Spray application with water
3	FUNG	Serenade ASO	14,1	g/L	SC		8	L/ha	ABCDEF	300-1500 L/ha	Spray application
4	FUNG	Ozone			SN		3	PPM PR	ABCDEF	300-1500 L/ha	Spray application with water
	FUNG	Serenade ASO	14,1	g/L	SC		8	L/ha	ABCDEF	300-1500 L/ha	Apply Serenade ASO after Ozone on dry leaves
5	FUNG	Ozone			SN		3	PPM PR	ABCDEF	300-1500 L/ha	Ozone spray application in emulsified sunflower oil with water
	FUNG	Sunflower oil			EC		1%	V/V	ABCDEF	300-1500 L/ha	

OBJECTIVES

Objectives:

- Do the Ozone used alone have efficacy comparable to the standard Serenade ASO?
- Does the addition of Ozone to the standard Serenade ASO increase the efficacy of Serenade ASO used alone?
- Does the addition of Ozone emulsified Sunflower oil increase the efficacy of Ozone used alone?
- Are all treatments safe for the crop?

SITE DESCRIPTION

Trial Location	
City: Scanzano Jonico	Country: ITA Italy
State/Prov.: Matera	Region: Basilicata
Postal Code: 75020	Climate Zone: EPOMED EPPO Mediterranean

Crop Description	
Crop 1:	Lactuca sativa (Lettuce)
Variety:	Trocadero
Planting Date:	Sep-8-2020
Planting Density:	66666,66 P/ha
Rows per Plot:	1
Row Spacing:	0,5 m
Spacing within Row:	0,3 m

Pest Description	
Pest 1 Type:	Sclerotinia sp.
Common Name:	Sclerotinia sp.

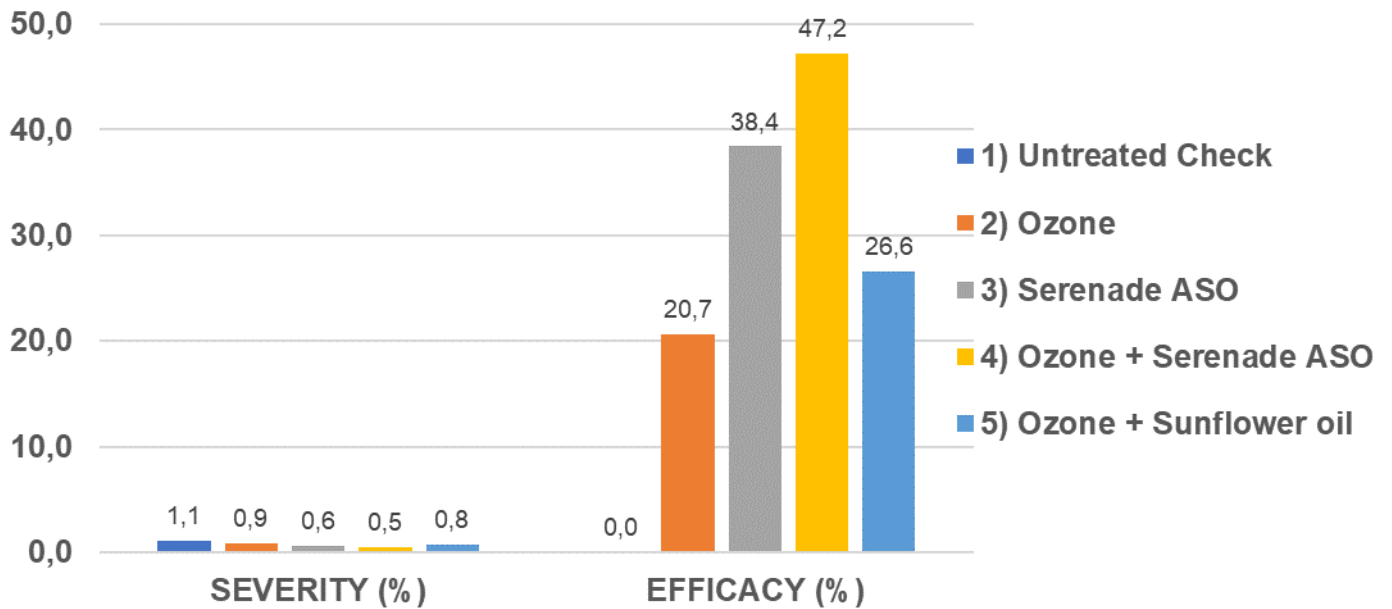
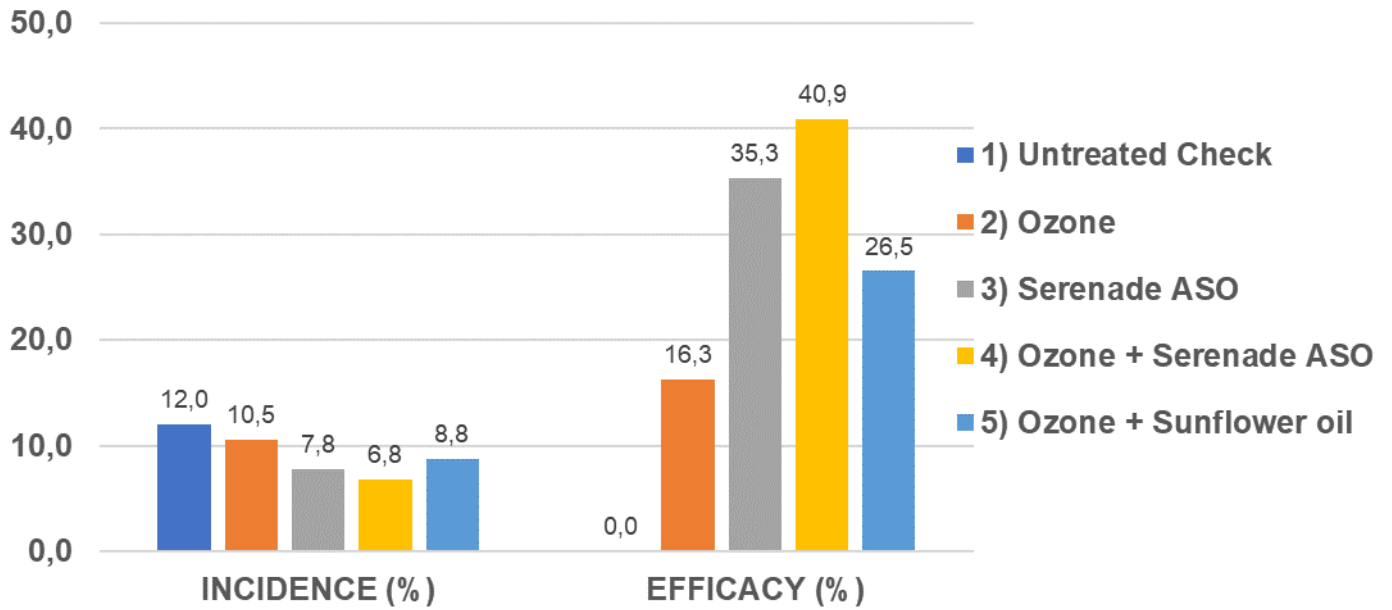
Site and Design	
Treated Plot Width:	1,5 m
Treated Plot Length:	7 m
Site Type:	greenhouse
Treated Plot Area:	10,5 m ²
Replications:	4
Study Design:	Randomized Complete Block (RCB)
Untreated Arrangement:	INCLUDED single control randomized in each block

Soil Description	
Texture:	L loam

Application Description						
	A	B	C	D	E	F
Application Date	Sep-9-2020	Sep-16-2020	Sep-23-2020	Sep-30-2020	Oct-7-2020	Oct-14-2020

RESULTS

10 Days after last application



COMMENTS

English version: At the end of the experimental program for the control of *Sclerotinia* sp. on lettuce, during which 6 applications were carried out and positioned in the critical periods of crop susceptibility, the untreated check showed an incidence equal to 12,0% (12,0 attacked leaves on 100 leaves), with a disease severity of 1,05% (the 1,05% of the totality of the leaf surface), with a consequent serious damage to the yield. All the products tested in field showed significant results if compared to the untreated check. The best result is showed by the Ozone applied in strategy with the standard Serenade ASO, which reduced the damage due to *Sclerotinia* sp. to 6,8% of leaves, with a disease severity limited to 0,53%, ensuring a more qualitative production to the crop. Also the Ozone applied alone and the ozonated sunflower oil allowed a control of the disease, albeit lower, showing an incidence of 10,5% and 8,8% respectively and a severity of 0,88% and 0,78%.

Versione italiana: Al termine della strategia sperimentale per il controllo *Sclerotinia* sp. su lattuga, durante la quale sono state realizzate 6 applicazioni posizionate nei periodi critici di suscettibilità della coltura, il testimone non trattato ha mostrato un'incidenza pari a 12,0% (12,0 foglie colpite su 100 foglie), con una severità del 1,05% (il 1,05% della totalità della superficie delle foglie), con conseguente grave danno alla produzione. Tutti i prodotti applicati in campo hanno fornito risultati significativi rispetto al testimone. Il miglior risultato è stato fornito dall'Ozono applicato in strategia con lo standard Serenade ASO che ha ridotto l'attacco di *Sclerotinia* sp. al 6,8% delle foglie con una severità del danno limitata al 0,53%, garantendo una produzione più qualitativa alla coltura. Anche l'ozono applicato da solo e l'olio di girasole ozonato hanno permesso un controllo della malattia, seppur inferiore, mostrando un'incidenza rispettivamente del 10,5% e 8,8% e una severità del 0,88% e 0,78%.

CONCLUSION

English version: Within the test aimed at controlling *Sclerotinia* sp. on lettuce with the use of organic products, Ozone alone showed efficacy on leaves. Ozone in strategy with Serenade ASO contributes to an improvement of the efficacy of the latter and the use of ozonated sunflower oil showed a higher disease control than ozonated water.

Versione italiana: All'interno della prova volta al controllo di *Sclerotinia* sp. su lattuga con utilizzo di prodotti biologici, l'Ozono da solo ha mostrato efficacia su foglia. L'ozono in strategia con il Serenade ASO contribuisce ad un miglioramento dell'efficacia di quest'ultimo e l'utilizzo di olio di girasole ozonato ha un maggior controllo della malattia rispetto all'acqua ozonata.

CONTACTS

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