

A20-320-890FE

Efficacy of ozone applied alone and in mix, against *Sclerotinia* sp. and *Erysiphe* sp. on cucurbits. Italy 2020-2021

Trial ID:	A20-320-890FE	Location:	Italy	Trial Year:	2020
Protocol ID:	890A20FE9	Investigator (Creator):	Giovanni Caputo		
Project ID:		Study Director:	Renzo Bucchi - Agri 2000 Net Srl		
Official Trial ID:	A20-320-890FE	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									
2	FUNG	Ozone			SN		3PPM	PR	ABCDEF	300-1500 L/ha	
3	FUNG	Zolfis 80 Sector	80%		WG		5kg/ha		ABCDEF	300-1500 L/ha	
4	FUNG	Ozone			SN		3PPM	PR	ABCDEF	300-1500 L/ha	
	FUNG	Zolfis 80 Sector	80%		WG		5kg/ha		ABCDEF	300-1500 L/ha	Apply Zolfis 80 Sector after Ozone on dry leaves
5	FUNG	Ozone			SN		3PPM	PR	ABCDEF	300-1500 L/ha	Emulsified Sunflower oil
	FUNG	Sunflower oil			EC	Rate 1-5 %V/V	5% V/V		ABCDEF	300-1500 L/ha	

OBJECTIVES

- Does the Ozone used alone have efficacy if compared to the standard Zolfis 80 Sector?
- Does the addition of Ozone to the standard Zolfis 80 Sector increase the efficacy of Zolfis 80 Sector used alone?
- Does the addition of Ozone emulsified Sunflower/Soybean oil increase the efficacy of Ozone used alone?
- Are all treatments safe for the crop?

SITE DESCRIPTION

Trial Location	
City: Eboli	Country: ITA Italy
State/Prov.: Salerno SA	
Postal Code: 84025	Climate Zone: EPOMED EPO Mediterranean

Crop Description	
Crop 1: C CUMME Cucumis melo muskmelon	BBCH Scale: BVVT
Entry Date: Sep-27-2020	Stage Scale: BBCH
Variety: Talento F1	
Planting Date: Apr-16-2020	
	Planting Density: 6700 P/ha
	Planting Method: TRAHAN transplanted - hand
Row Spacing: 1,5 m	
Spacing within Row: 1 m	

Pest Description	
Pest 1 Type: D	Code: ERYSSP Erysiphe sp.
Common Name: Erysiphe sp.	Entry Date: Sep-27-2020
	Stage Scale: BBCH
	Artificial Population: N

Site and Design		
Treated Plot Width: 1,5 m	Total Plot Width: 1,5 m	Site Type: GREENH greenhouse
Treated Plot Length: 5 m	Total Plot Length: 5 m	Experimental Unit: 1 PLOT plot
Treated Plot Area: 7,5 m ²	Treatments: 5	Tillage Type: CONTIL conventional-till
Replications: 4		Study Design: RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED	single control randomized in each block	
Block Arrangement: BUPPSS	all blocks lying upon each other, plots side by side	
Distance between Blocks: 0 m		

Field Prep./Maintenance:
No maintenance products were applied during the trial

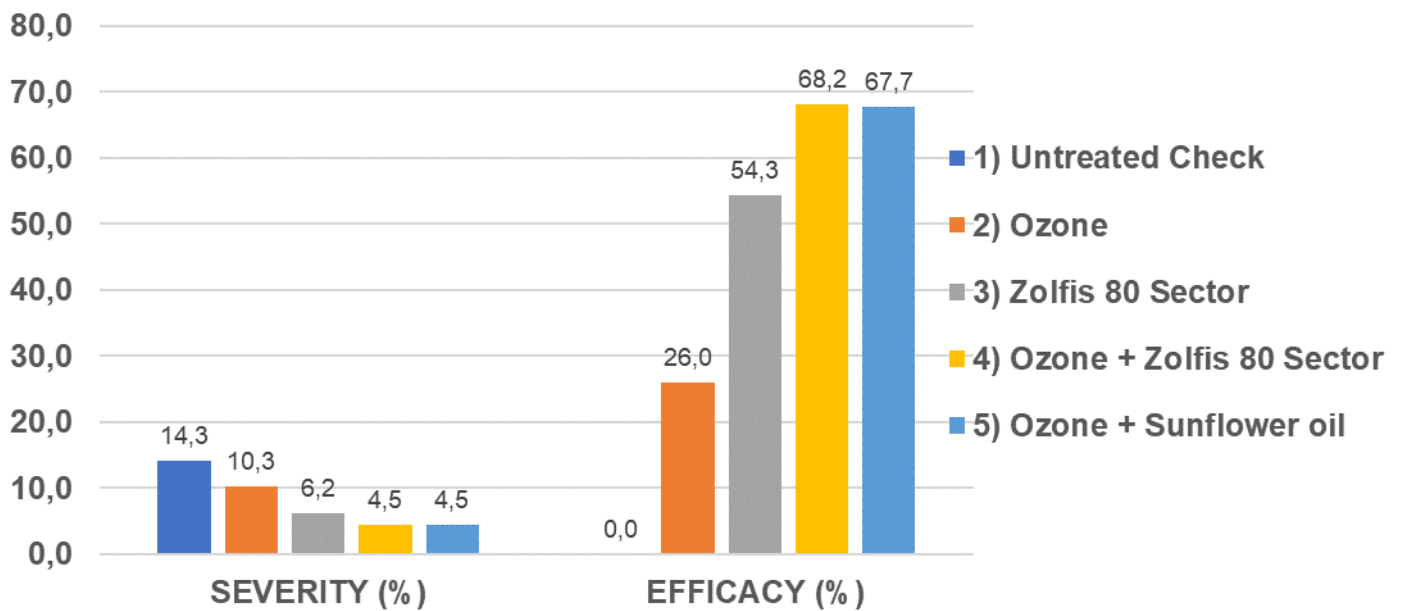
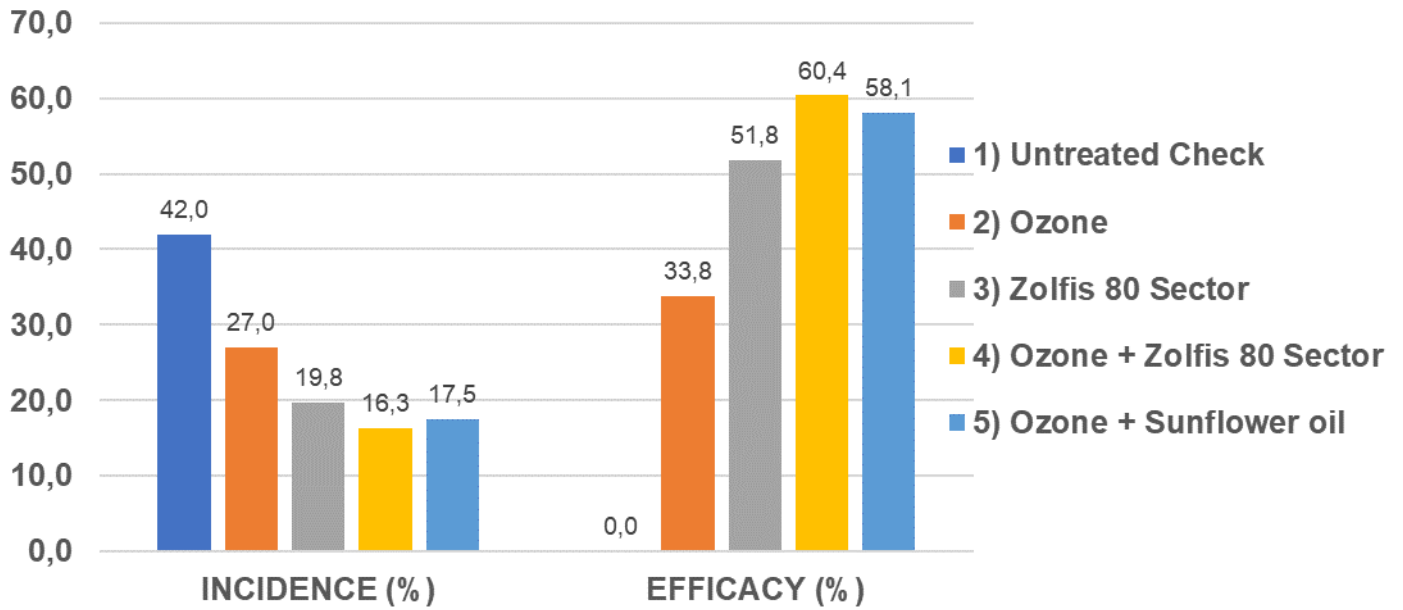
Soil Description		
% Sand: 28,8	% OM: 1,7	Texture: CL clay loam
% Silt: 40	pH: 7,6	
% Clay: 31,6	CEC: 15	Fert. Level: G good
Soil Drainage: G	good	

Application Description						
	A	B	C	D	E	F
Application Date	May-17-2020	May-25-2020	Jun-5-2020	Jun-13-2020	Jun-21-2020	Jun-29-2020

Application Directions	
Time and frequency of application	Application A: pre-infection Spray interval 8-10 days.
Doses and volumes	Use water volume variable following crop growth: 300-1500 L/ha

RESULTS

On leaves – 8 Days after the last application



COMMENTS

English version: At the end of the experimental program for the control of *Erysiphe sp.* on muskmelon, during which 6 applications were carried out based on susceptibility moments of the crop, the untreated check showed an incidence equal to 42.0%, 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 Zolfis 80 Sector, which reduced the *Erysiphe sp.* damage to 16.3%, 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 27.0% and 17.5% respectively.

Versione italiana: Al termine della strategia sperimentale per il controllo di oidio su melone, durante la quale sono state realizzate 6 applicazioni, basate su i momenti di suscettibilità della coltura, il testimone non trattato ha mostrato un'incidenza sui frutti pari al 42.0%, 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 Zolfis 80 Sector, che ha ridotto l'attacco da botrite al 16.3%, 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 27.0% e 17.5%.

CONCLUSION

Conclusions:

English version: Within the test aimed at controlling *Erysiphe sp.* on muskmelon with the use of organic products, Ozone alone showed efficacy on crop. Ozone in strategy with Zolfis 80 Sector 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. No symptoms of phytotoxicity were observed.

Versione italiana: All'interno della prova volta al controllo dell'oidio su melone con utilizzo di prodotti biologici, l'Ozono da solo ha mostrato efficacia su frutto. L'ozono in strategia con lo Zolfis 80 Sector 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. Non si sono osservati sintomi di fitotossicità.

CONTACT

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