

A20-304-890FE

Efficacy of ozone applied alone and in mix against Botrytis cinerea on grape. Italy 2020-2021

Trial ID:	A20-304-890FE	Location:	Italy	Trial Year:	2020
Protocol ID:	890A20FE3	Investigator (Creator):	Matteo Freddi		
Project ID:		Study Director:	Renzo Bucchi - Agri 2000 Net Srl		
Official Trial ID:	A20-304-890FE	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	FUNGO	Ozone			SN		5PPM	PR	ABCD	500-1200 L/ha	Spray application with water
3	FUNGO	Serenade ASO	14,1g/L		WG		4L/ha		ABCD	500-1200 L/ha	Spray application
4	FUNGO	Ozone			SN		5PPM	PR	ABCD	500-1200 L/ha	Spray application with water
	FUNGO	Serenade ASO	14,1g/L		WG		4L/ha		ABCD	500-1200 L/ha	Apply Serenade ASO after Ozone on dry leaves
5	FUNGO	Ozone			SN		5PPM	PR	ABCD	500-1200 L/ha	Ozone spray application in emulsified sunflower oil with water
	FUNGO	Sunflower oil			EC	Rate: 1-5 %V/V	2,5%	V/V	ABCD	500-1200 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	
Latitude of LL Corner °:	44,541414 N		
Longitude of LL Corner °:	11,475554 E	ITABO	44,80 -44,06
GPS Accuracy of LL Corner:	10 m		11,84 -10,80
Altitude of LL Corner:	28,00 m	GPS Target:	G GPS for trial site
Angle y-axis to North °:	29	Map Reference:	Google Earth
Time Zone:	Europe/Rome		

		Crop Description
Crop 1:	Vitis vinifera (European grape)	
Variety:	Pignoletto	
Perennial Age:	20 YR	
Planting Density:	1900 P/ha	
Rows per Plot:	1	
Row Spacing:	3,5 m	
Spacing within Row:	1,5 m	

		Pest Description
Pest 1 Type:	D	Botrytis cinerea
Common Name:		Brownish-grey mildew

		Site and Design
Treated Plot Width:	3,5 m	
Treated Plot Length:	6m	
Treated Plot Area:	21 m ²	
Replications:	4	
Study Design:	Randomized Complete Block (RCB)	
Untreated Arrangement:	INCLUDED	single control randomized in each block

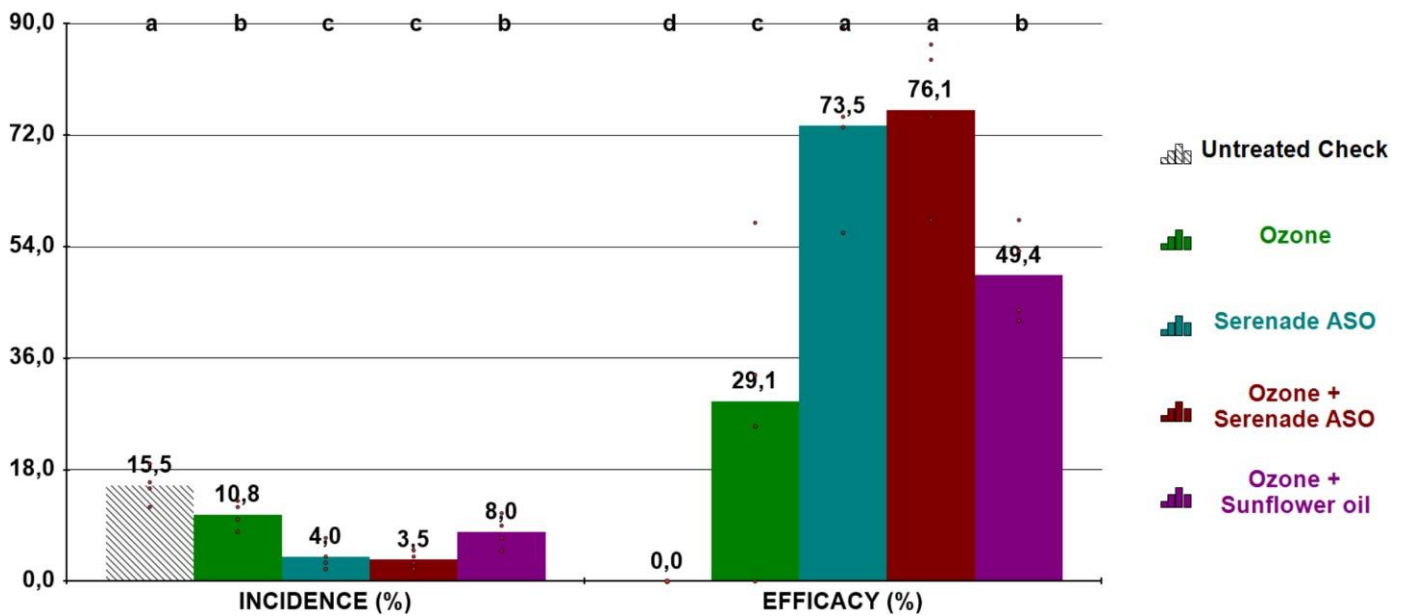
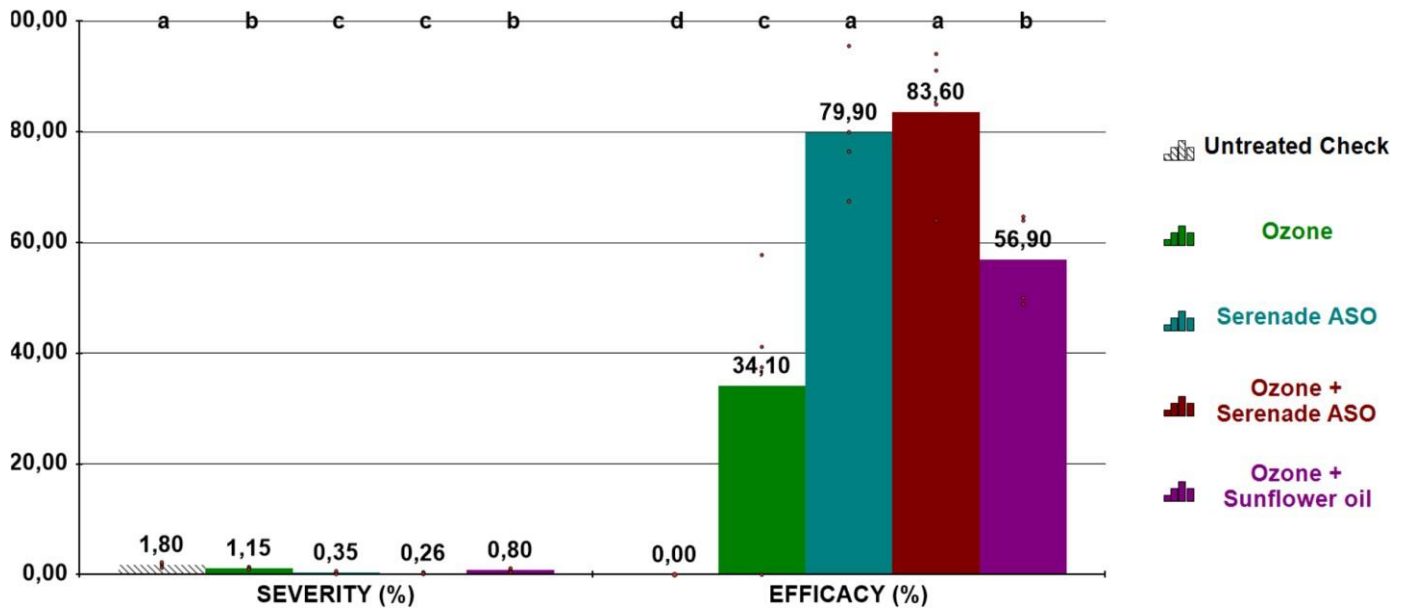
		Soil Description
Texture:	SICL silty clay loam	

Application Description

	A	B	C	D
Application Date	May-22-2020	Jun-25-2020	Jul-30-2020	Sep-14-2020

RESULTS

On bunches – 12 days after last application



COMMENTS

English version: At the end of the experimental program for the control of brownish-grey mildew of grapevine, during which 4 applications were carried out and positioned in the critical periods of crop susceptibility, the untreated check showed an incidence on bunches equal to 15,5% (15,5 attacked bunches on 100 bunches), with a disease severity of 1,80% (the 1,80% of the totality of the bunch 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 brownish-grey mildew damage to 3,5% of bunches, with a disease severity limited to 0,26%, 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 22,0% and 15,8% respectively and a severity of 4,03% and 2,66%.

Versione italiana: Al termine della strategia sperimentale per il controllo della botrite della vite, durante la quale sono state realizzate 4 applicazioni posizionate nei periodi critici di suscettibilità della coltura, il testimone non trattato ha mostrato un'incidenza su grappolo pari a 15,5% (15,5 grappoli colpiti su 100 grappoli), con una severità del 1,80% (il 1,80% della totalità della superficie dei grappoli), 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 della botrite al 3,5% dei grappoli con una severità del danno limitata al 0,26%, 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 10,8% e 8,0% e una severità del 1,15% e 0,80%.

CONCLUSION

English version: Within the test aimed at controlling brownish-grey mildew of grapevine with the use of organic products, Ozone alone showed efficacy on bunches. 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 della botrite della vite con utilizzo di prodotti biologici, l'Ozono da solo ha mostrato efficacia su grappolo. 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

Renzo Bucchi

Scientific Responsible

Agri 2000 Net Srl

www.agri2000net.com

bucchi@agri2000.it