A20-308-890FE

Efficacy of ozone applied alone and in mix, against Botrytis spp. on Blackberry. Italy, Spain and Morocco 2020-2021

Trial ID:	A20-308-890FE	Location:	Italy	Trial Year: 2020
Protocol ID:	890A20FE4	Investigator (Creator):	Matteo Freddi	
Project ID:		Study Director:	Renzo Bucchi - Agri 2000 Net Srl	
Official Trial ID:	A20-308-890FE	Sponsor Contact:	Giulio Senese - MET Srl	
		Trial Origin:	C contracted trial	

TREATMENT LIST

Trt No.	Type	Treatment Name	Form Conc	Form Unit	Form Type	Other Rate	Other Rate Unit	Appl Code	Comment 1	Comment 2
1	CHK	Untreated Check								
2	FUNG	Ozone			SN	3	PPM PR	ABCDE	500-1500 L/ha	Spray application with water
3	FUNG	Serenade ASO	14,1	g/L	SC	8	L/ha	ABCDE	500-1500 L/ha	Spray application
4	FUNG	Ozone			SN	3	PPM PR	ABCDE	500-1500 L/ha	Spray application with water
	FUNG	Serenade ASO	14,1	g/L	SC	8	L/ha	ABCDE	500-1500 L/ha	Apply Serenade ASO after Ozone on dry leaves
5	FUNG	Ozone			SN	3	PPM PR	ABCDE	500-1500 L/ha	Ozone spray application in emulsified sunflower oil with water
	FUNG	Sunflower oil			EC	1	% V/V	ABCDE	500-1500 L/ha	

OBJECTIVES

Objectives:

- Do the Ozone used alone have efficacy comparable to the standard Serenade ASO Sector?

- 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

Address (Location): Via Casoni
City: Dugliolo di Budrio **Country:** ITA Italy
State/Prov.: Bologna BO **Region:** Emilia R.
Postal Code: 40054 **Climate Zone:** EPOMED EPPO Mediterranean

Crop Description

Crop 1: Vaccinium myrtillus (Blackberry)
Variety: Gigante Nero
Planting Rate: 2 P/m2
Planting Density: 20000 P/ha
Rows per Plot: 1
Row Spacing: 1 m
Spacing within Row: 0,5 m

Pest Description

Pest 1 Type: BOTRSP Botrytis sp.
Common Name: Botrytis sp.

Site and Design

Treated Plot Width: 1 m
Treated Plot Length: 5 m
Treated Plot Area: 5 m2
Replications: 4
Study Design: Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

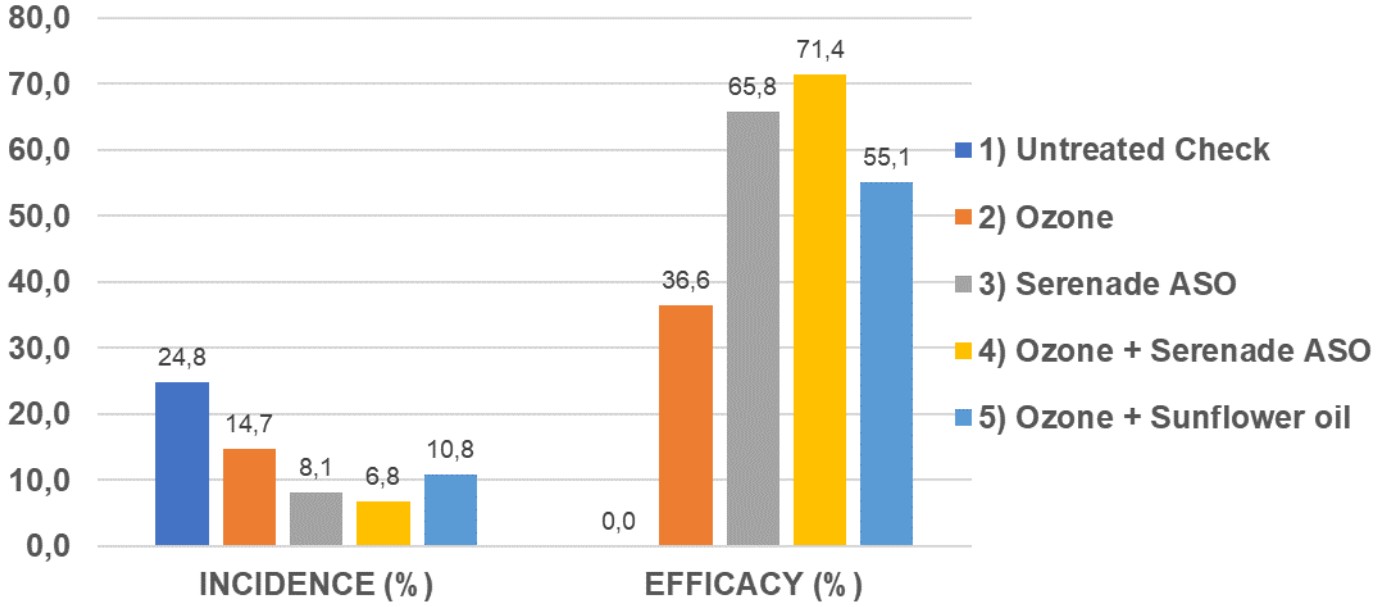
Texture: loam

Application Description

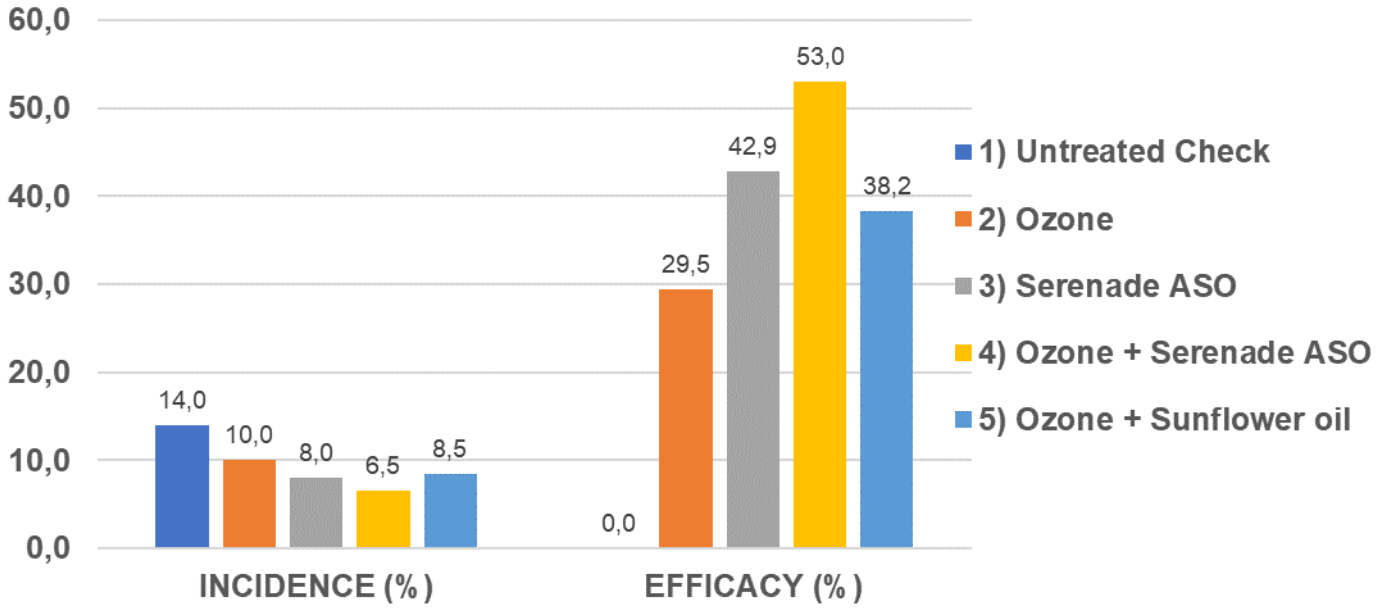
	A	B	C	D	E
Application Date	May-4-2020	May-15-2020	Aug-12-2020	Aug-20-2020	Aug-25-2020

RESULTS

On fruits – 1 day after last application



On fruits – 1 day after last application



COMMENTS

English version: At the end of the experimental program for the control of *Botrytis* on blackberry, during which 5 applications were carried out based on susceptibility moments of the crop, the untreated check showed an incidence on fruits equal to 23,0% (23,0 attacked fruits on 100 frutti), 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 *Botrytis* damage to 6,7% of fruits, 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 14,7% and 10,8% respectively.

Versione italiana: Al termine della strategia sperimentale per il controllo di botrite su mirtillo, durante la quale sono state realizzate 5 applicazioni, basate su i momenti di suscettibilità della coltura, il testimone non trattato ha mostrato un'incidenza sui frutti pari al 23,0% (23,0 frutti colpiti su 100 frutti), 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 da botrite al 6,7% dei frutti, 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 14,7% e 10,8%.

CONCLUSION

Conclusions:

English version: Within the test aimed at controlling *Botrytis* sp. on blackberry with the use of organic products, Ozone alone showed efficacy on fruits. 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. No symptoms of phytotoxicity were observed.

Versione italiana: All'interno della prova volta al controllo della botrite su mirtillo con utilizzo di prodotti biologici, l'Ozono da solo ha mostrato efficacia su frutto. 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. Non si sono osservati sintomi di fitotossicità.

CONTACTS

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