

VITEN SAS di Albino Morando & C.

Evaluation the efficacy of fungicides, fertilizers or elicitors against Esca disease in Vitis vinifera.

Protocol ID: 2018 ESCA BLH 1 Location: Calosso Trial Year: 2018
 Trial ID: By: ALBINO MORANDO
 Project ID: Study Director: Simone Lavezzaro

Trt Treatment
 No. Name
 1 Untreated Check
 2 Product 1

Replications: 4, Untreated treatments: 1, Conduct under GLP/GEP: Yes (GEP with no protection), Design: Randomised Complete Block (RCB), Treatment units: Treated 'Plot' experimental unit size, Dry Form. Unit: %, Treated 'Plot' experimental unit size Width: 4 meters, Treated 'Plot' experimental unit size Length: 6 meters, Application volume: 200 L/ha, Mix size: 1.92 litres, Format definitions: G-All7.def, G-All7.frm

Trial Establishment Guidelines

Revision Status: I Interim
Revision Date: 25/1/2018
Site Type: VINEYA O vineyard
Treated Plot Width: 2,5 m
Country: ITA Italy
Treated Plot Length: 5 m
Climate Zone: EPOMED EPPO Mediterranean
Treated Plot Area: 12,5 m2
Experimental Unit: 1 PLOT plot
Replications: 4
Tillage Type: CONTIL conventional-till
Study Design: RACOB L Randomized Complete Block (RCB)

Responsible

Simone Lavezzaro

Total Trials: 1

Conduct Under GLP: No
Conduct Under GEP: Yes
Study Rules: Default
Officially Recognized Organization:
 Vit.En.

No. Guideline Description

1. PP 1/181(4) Conduct and reporting of efficacy evaluation trials including GEP
2. PP 1/152(4) Design and analysis of efficacy evaluation trials
3. PP 1/135(4) phytotoxicity assessment
4. CEB MG14 Principes gén. d'expérimentation stimulateurs des défenses des plantes (SDP)

Objectives:

1 - To evaluate the efficacy of Product 1 against Esca disease in grapevine

Crop Description

Crop 1: VITVI Vitis vinifera Grapevine
Variety: Various
BBCH Scale: BGRA
Planting Rate, Unit: 4000 P/ha **Row Spacing, Unit:** 2,5 m

Target Pest Description

Pest 1 Type: D **Code:** PHMOCH **Phaeomoniella chlamydospora**
Common Name: Esca of grapevine
Artificial Population: N **Establishment Date:** 1/5/2018

Pest 2 Type: D **Code:** FOMPME **Fomitiporia mediterranea**
Common Name: Esca of grapevine
Artificial Population: N **Establishment Date:** 1/5/2018

Field Prep./Maintenance:

Any operation except application of Biolchim product 1 is kept similar between untreated and treatments 1. Including fungicides applications, fertilizers, winter pruning and canopy management.

Application Directions:

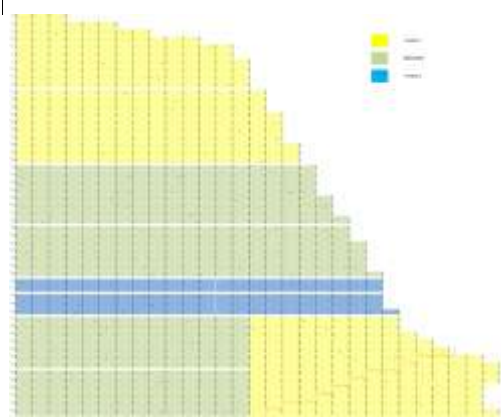
Assessments made at each application

- rainfalls
- soil and air temperature
- wind speed
- relative humidity
- cloud presence
- leaf wetness
- phenologic stage
- **The characteristics of the plans will be specified for each application:** height of canopy, LAI, etc...
- **Application timing and methodologies**
- The product could be administered by root application or canopy application, in accordance with Sponsor. Timing also.

Geographic Area/Environmental Considerations:

The experimental vineyards will be chosen in areas with high incidence of Esca disease.

The experimental plots consist about 300 plant per treatment. Each treatment has 3 or 4 plots, organized inside the vineyard according to the system of randomized blocks (fig. 1).



Data to Collect:

Phenologic stage

- The BBCH code will be specified for each application and assessment.
- The numeric results will be completed by appropriate iconographic material.

Meteorological data

- detailed weather reports will be made during the whole experimental period: hourly and daily temperatures, rainfalls, soil and air humidity, wind.

Assessments - efficacy

The efficacy of each product will be measured in terms of quantity of affected plants at the end of the agronomic season. Two controls will be made (middle of July and middle of September) in each vineyard and the affected plants with at least three specific symptoms of Esca disease will be specified.

Assessments - selectivity

The possible phytotoxicity on the plant due to the tested products will be evaluated. Vigor, necrosis, color changes will be considered accurately. Any anomalous symptom will be photographed in support of the analytic evaluations.

Assessments- Non target organisms

- each effect (positive or negative) on other diseases will be reported.
- each effect (positive or negative) on pollinating insects or useful entomofauna will be reported.
- each effect (positive or negative) on the next crops will be reported.

Statistical Analysis:

The data will be worked out through the variance statistical analysis and compared with the Duncan test, with a significance level of 0.5%

General Comments

Time schedule

Beginning of the field trial: May 2018

End of the field trial: November 2020

Every year a complete report of the trial progress will be made. After the first assessment (in the month of July) a first report with the partial results will be delivered. At the end of the season, in the month of October, the final report will be delivered.

Archiving

The protocol, raw data and a copy of the final report are lodged in the record office of VitEn s.a.s., Via Bionzo 13 Calosso (AT) 12051 - Italy.

Reporting

The study will be reported using the VitEn standard form:

One paper copy of the final report and a Project Summary Disc (containing the study data and the report in Excel format and PDF format along with any other relevant study information)