



*Minute Report
Meeting WG 4 of COST Action FA 1303
Logroño, Spain, 6th -7th Oct, 2016*

Chair Fontaine, F, University of Reims Champagne-Ardenne, FR
Vice-Chair Armengol, J, Polytechnic University of Valencia, SP

WORKSHOP by David Grama, ES



Local organizer David Grama,
Number of participants 46 *Proportion of female* 34 %
Number of ESC participants 3
Number of ESRs among participants 1 *Proportion* 20 %
Invited speakers 1, Ilariat Pertot

SCIENTIFIC PROGRAMME

Program WG4 meeting – COST ACTION FA1303 – Logroño, 6-7 October 2016

Thursday, 6 October

09:00-13:00 MC Meeting – synthesis of the third year and discussion on the work plan of the next year

13:30 Lunch MC Meeting members at Restaurante el 1

14:00 Welcome to participants – bus transport sponsored by ISAGRO ESPAÑA

14:15 Presentation WG4

*Afternoon Session – Session Chairs – Stefano di Marco & David Gramaje
Management of GTDs in nurseries and in the vineyard - biocontrol agents*

15:30 – 16:00 Ilaria Pertot – invited speaker – *Trichoderma atroviride* SC1 CA – PREVENTION OF INFECTIONS OF *Phaeoacremonium* AND *Phaeomoniella* IN VITIS

16:00 – 16:30 Francois Halleen – *ECOLOGICAL CONTROL OF GRAPEVINE TRUNK DISEASES IN SOUTH AFRICA – A PERSPECTIVE*

16:30-17:00 Coffee break

17:00 – 17:30 Pedro Reis – *TRICHODERMA ATROVIRIDE* STRAIN I-1237

COLONIZATION OF PRUNING WOUNDS AS A FIRST GRAPEVINE WOOD DISEASES

17:30 – 18:00 Stefano Di Marco – *EXPERIMENTAL EVALUATION OF *Trichoderma gamsii* AND*

Trichoderma asperellum FOR THE PROTECTION OF PRUNING WOUNDS TOWARDS ESCA COMPLEX AND ASSOCIATED PATHOGENS

18:00 – 18:30 Patrice Rey – *INVESTIGATING THE EFFICIENT MICROORGANISMS COLONIZING THE WOOD TISSUES AND THE RHIZOSPHERE OF GRAPEVINES*

18:30 - 19:00 Discussion

19:00 Closing

19:15 Visit to the institutional winery of La Gradera

21:30 Social dinner at Restaurante En Ascuas – sponsored by DELCHIM CROP PROTECTION

Friday, 7 October

*Morning Session – Session Chairs – Laura Mugnai & Josep Armengol
Round Tables - biocontrol agents*

09:00 – 10:30 Separated round tables with turn over

Table 1 – Round table chair – Laura Mugnai

Table 2 – Round table chair – Josep Armengol

10:30 Coffee break – sponsored by SIPCAMIERIA

11:00 – 12:30 Round tables

12:30 – 12:30 Pascal Lecomte & Stefano Di Marco VIEARD SERVE

13:30 Lunch at Restaurante La Gràera

Round tables

14:00 – 16:30 Summari of round tables & Discussion

16:30 – 16:40 Short presentations

16:40 – 17:10 Coffee break sponsored by SIPCAM IERIA

17:10 Josep Armengol TRAIIG SCHOOL ISOLATIO AD IDENTIFICATIO OF GRAPEVINE FUNGAL TRIPATHOGENS Valencia, June 2016

17:20 Closure of the meeting Florence Fontaine and Stefano Di Marco

Conclusion of the third year project

Presentation of the next working plan and information on 10th ICGTD

17:40 End of the meeting

The pdf file of the lectures and the main points discussed during the round table session are do available on the COST Action website to be available for all the COST Action members

Main points discussed at the round table on BIOLOGICAL CONTROL IN THE ORSER

Available solutions are mainly Trichoderma, which can also produce side effects, plants increase in quality

Studies on Pythium oligandrum activity at root level are underway

The role of Mycorrhizae in helping plant response to diseases is also an aspect to investigate

Biofumigation – cover crop a year ahead with legume crops to build up organic matter, help degradation and accelerate humification – can have a role in reducing the inoculum load of soil pathogens as black root agents

Bacterial strains are tested in some nursery sample in Spanish nurseries to be introduced in the nursery process and seem promising. A cocktail of 3 bacteria is tested no more information were given since the works were ongoing

Advantages in the use of Trichoderma rather than Hot Water Treatment (HWT)

- HWT general difficulty in setting up the technology,
- Easy to apply for the nursery man applicable in the same way and in the same phases, as chemicals,
- The efficacy of HWT is high but a good implement can be to subsequently colonise the plants by biocontrol agents,
- High variability in resistance to HWT of the cultivars

For the REDUCTION OF INFECTIO different tools should be integrated as there are different sources of infection, a combination of tools will be the best solution

To be developed and clarified the compatibility of Trichoderma commercial products with fungicides again use during plant production in nurseries

Relevant issue to be developed the endophytic activity of Trichoderma strains the data are available

To be noticed correct protocols and application times need to be definitely set up sometimes Trichoderma application can give negative effects, even rarely

You get good results in good quality material

It is everywhere accepted that we can not have pathogen free plants at the end of the nursery process but we can improve phytosanitary quality that must be maintained in the field, by growers, who must take some responsibility on this, and need protocols to maintain the vine in good conditions from the GTDs point of view. Growers need to understand the need of EARL GTDs control, starting from quality plant material

Need to detect limits to say that a plant material has a reduced infection. There are big differences among nurseries. Protocols to be established for each pathogen as for temperature and duration in HWT

Even if HWT does not eliminate the pathogenic mycoflora it is strongly reduced and in field trials the treated vines after 3 years showed still better conditions

As in flavescence dorée you produce clean plant material and you have to keep in avoiding new infections for all the plant life

Relevant aspects

- to keep mother vines as clean as possible,
- we need more research on rootstock mother plants, and we need more on pruning ground protection,
- to coordinate the germplasm collections, also with resistance to HWT,
- coordination on the various collections of germplasm in Europe could be very useful

Main points discussed at the round table on BIOLOGICAL CONTROL IN THE VINEYARD

The round table discussion was correlated to the first results of the VINEYARD SURVEY managed by Pascal Lecomte and Stefano Di Marco (see the pdf of the lecture on the e-cost Website)

Several speakers spoke during the vineyard survey mostly to present their situation in your respective country

In Montenegro, esca disease on grapevine occurs more intensely in the last 10 years. A flyer was prepared in 2008 on esca with basic information about the disease and its prevention, which were current at that time. Flyers are disseminated through the Extension Service, agricultural pharmacies, or directly at the university because we have good contacts with our grapevine producers. Regarding esca control, it is common in Montenegro that agricultural producers take out the plant debris from the vineyard which is made after pruning, which subsequently have been burned or used as a fuel or for barbecues. Special measures other than this for combating esca disease are not performed, except to make as small sections as possible when pruning and to make sections that are not horizontally but sloping.

In Hungary, the elimination of died or diseased grapevine parts is a widespread practice made by vinegrowers. It is thanks to the work and dissemination of Eutypa dieback results of Lehoczy in the 1970s. It is built in the education and spread among the vinegrowers. The pruning debris is used for heating the houses. Some practice and explanation (e.g. sap route connected pruning, stone splitting) remain unknown in Hungary.

In Romania, an interesting strategy of renewal was presented by Daniela Popescu who explained that some companies in order to avoid significant production losses due GTD, start renewal using 2 trunks per vine and every two years growers renew one of the trunks.

In Spain, the different steps along the life of the vine stocks, that can play a role on the GTD's development, were pointing as the quality of the grafting material, quality of the planting, and of the choice of pruning or training systems. All these points have to be taken in consideration and are ways to be explored.

In Italy, Gianfranco Romana confirmed that there is a high level of inoculum almost impossible to control.

In Portugal, to prevent the infections when the vineyards are young seems an important measure to generalise.

Conclusion of the third working group 3 meeting.

*The main points suggested in the COST Action plan were discussed during this meeting. The discussion was interesting as research topics of the participants were complementary: the use of biocontrol agents for the plant production in nursery and then in vineyard. A synthesis of the questionnaire in vineyard managed by Stefano Di Marco and Pascal Lecomte was presented to have a picture of cultural practices used in some European countries such as Spain, Portugal, Italy, France, Hungary. Nevertheless, some countries sent no feedback to this questionnaire. All the data collected on the nursery process (Gramma and Stefano, 2017), *Phytophthora mediterranea* and on the vineyard are necessary to have an overview of GTDs management in viticulture in Europe and will be useful for a H2020 project.*

Group

picture

