

Advancements on European canker control research

Silvio André Meirelles Alves¹, Ana Beatriz C. Czermainski²

¹Embrapa Grape and Wine, Rod. BR 285, km 115, Vacaria, RS. silvio.alves@embrapa.br.

²Embrapa Grape and Wine, Rua Livramento, 515, Bento Gonçalves, RS. ana.czermainski@embrapa.br.

Following the detection of European canker on apple in Brazil in 2012, a cooperation agreement between the Ministry of Agriculture and Embrapa Grape and Wine originated a research project that comprised actions between November 2012 and April 2015, which involved researchers, professors, undergraduation and graduation students from several partner institutions such as UCS, UDESC, ProTerra, UFPR, ABPM, as well as technicians and apple production companies. Several studies were conducted in different fields: chemical and culture control; genetic diversity of the pathogen; disease gradient and progress; damage function and favourability. The objective of the project was to validate the recommendations used in other countries where the disease occurs. During the execution of the research activities, several meetings with farmers, students and technicians from several locations in the states of Rio Grande do Sul, Santa Catarina and Parana were performed. Phytosanitary certification workshops were provided in the three southern states of Brazil, in partnership with researchers and state sanitary defence departments (Adapar, Cidasc and Seapi). All the 18 activities resulted in advancements on the specific knowledge regarding the disease behaviour and control in the Brazilian context. The disease is very much influenced by the local meteorological conditions and by the predominant fungal isolates of the pathogen. The climate conditions of the productive regions in the south of Brazil are very favourable to the development of the disease, and its consequent losses may financially undermine production. Based on the results, it was possible to recommend chemicals to control the disease, mitigating its effects. The tested sanitizers were effective to control the pathogen's propagules within fruit washing water. Fungicides for pruning were tested and recommended. The progress of the disease is reduced when pruned branches are removed of the orchards. Conidia were present throughout the year and dispersion happens in short distances. Important information was generated about the biology of the fungus, the disease development, besides the control and monitoring methods. Information exchange was carried on with researchers from several countries, such as New Zealand, Chile, Sweden, the Netherlands, United Kingdom, among others. Information was spread in extension events, printed media and over the Internet.

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