

33th Symposium of the European Society of Nematologists

Ghent, 9 – 13th September 2018

Abstract book



A 'worm' welcome to Ghent!

ILVO



For the third time in ESN history the medieval city of Ghent welcomes nematologists for its biennial symposium. When we launched the idea of organising the 33rd ESN symposium, memories from 1994, the previous time in Ghent, were shared with us. Vivid memories of a splendid symposium means we now have a challenge to do better.

Ghent has changed a lot since then. Historic buildings have been restored, the bar and restaurant scene gets high ratings in travel guides and the historic city centre is now one of Europe's biggest pedestrian zones. In 2017, Belgian beer culture was acknowledged as a cultural world heritage by UNESCO.

With Ghent University and the Flemish Research Institute for Agriculture, Fisheries and Food (ILVO), the Ghent region can be considered as a hotspot for nematological research and education. Both institutes jointly organise the 33rd ESN symposium.

Our team is enthusiastic, the scientific programme looks promising and we hope you will have a fantastic stay in Ghent!

Wim Wesemael

Wim Bert

Godelieve Gheysen

Tina Kyndt

Nicole Viaene

Scientific committee

Matthew Back
Wim Bert
Philippe Castagnone-Sereno
Sofia Costa
Danny Coyne
Etienne Danchin
Keith Davies
Ralf-Udo Ehlers
Godelieve Gheysen
Aska Goverse
Eric Grenier
Johannes Helder
Tina Kyndt
Catherine J. Lilley
Maurice Moens
Leendert Molendijk
Roland N. Perry
Robbie Rae
Sara Sanchez-Moreno
Sergei Spiridonov
Sergei Subbotin
Soledad Verdejo-Lucas
Nicole Viaene
Wim Wesemael

B06_Toward conservation biological control in vineyards: how the implementation of different cover crops can affect the activity of native entomopathogenic nematodes?

Rubén Blanco-Pérez^{1*}, María Gloria Sáenz-Romo¹, Sergio Ibáñez-Pascual², Elena Martínez-Villar¹, Ignacio Pérez-Moreno¹, Vicente S. Marco-Mancebón¹ and Raquel Campos-Herrera²

¹Department of Agriculture and Food, Universidad de La Rioja, Calle Madre de Dios, 51, 26006, Logroño, Spain; ²Instituto de Ciencias de la Vid y del Vino (CSIC-Universidad de La Rioja-Gobierno de La Rioja), Finca La Grajera, Ctra. de Burgos Km. 6, 26007 Logroño, Spain. rublanco@unirioja.es

Cover crops are increasing as sustainable agronomic measurements to provide various ecosystem services, for example, protection against soil erosion, release of nutrients and support aboveground and belowground biodiversity, including soil beneficial organisms such as entomopathogenic nematodes (EPN). We hypothesise that the presence of cover crops, associated with the vineyard and its stable rhizosphere as perennial agroecosystem, might enhance the prevalence of EPN. In addition, we speculate that the type of cover will modulate the EPN soil food web assemblage. Here we evaluated the presence and activity of native EPN associated to four types of covers (n = 3 per treatment): tillage, spontaneous, flower-driven, and seeded with *Bromus perenne* (Poaceae). Composite soil samples (12 cores, 2.5 cm diam. × 20 cm depth) were taken in the ongoing experiment site in the vineyard, *Vitis vinifera* var Tempranillo (clon RJ-26, rootstock '110-Richterin') during late spring and early autumn 2017 in La Grajera (Logroño, Spain). To ensure balanced spatial distribution, four samples were taken per plot, comprising two pairs of vineyard-cover crop. By using qPCR approaches, each sample (n = 48 per sampling) was tested for the presence and abundance of nine EPN and other related organisms: six nematophagous fungi (NF), five free-living nematodes (FLN), and two ectoparasitic bacteria. In addition, we assessed the EPN activity by the traditional insect-bait. In spring 2017, nematode activity was higher ($P = 0.068$) in covers than in vineyard, while later autumn-time this trend was only observed for the covers tillage and seeded. The species *Steinernema feltiae* and *Heterorhabditis bacteriophora* were isolated from the vineyard (the second one for the first time in La Rioja). EPN suffered low competition with other nematodes for the cadaver, resulting in low EPN-FLN incidence in the isolates. Ongoing studies and surveys in 2018 will provide additional evidence on their natural distribution and assemblage.