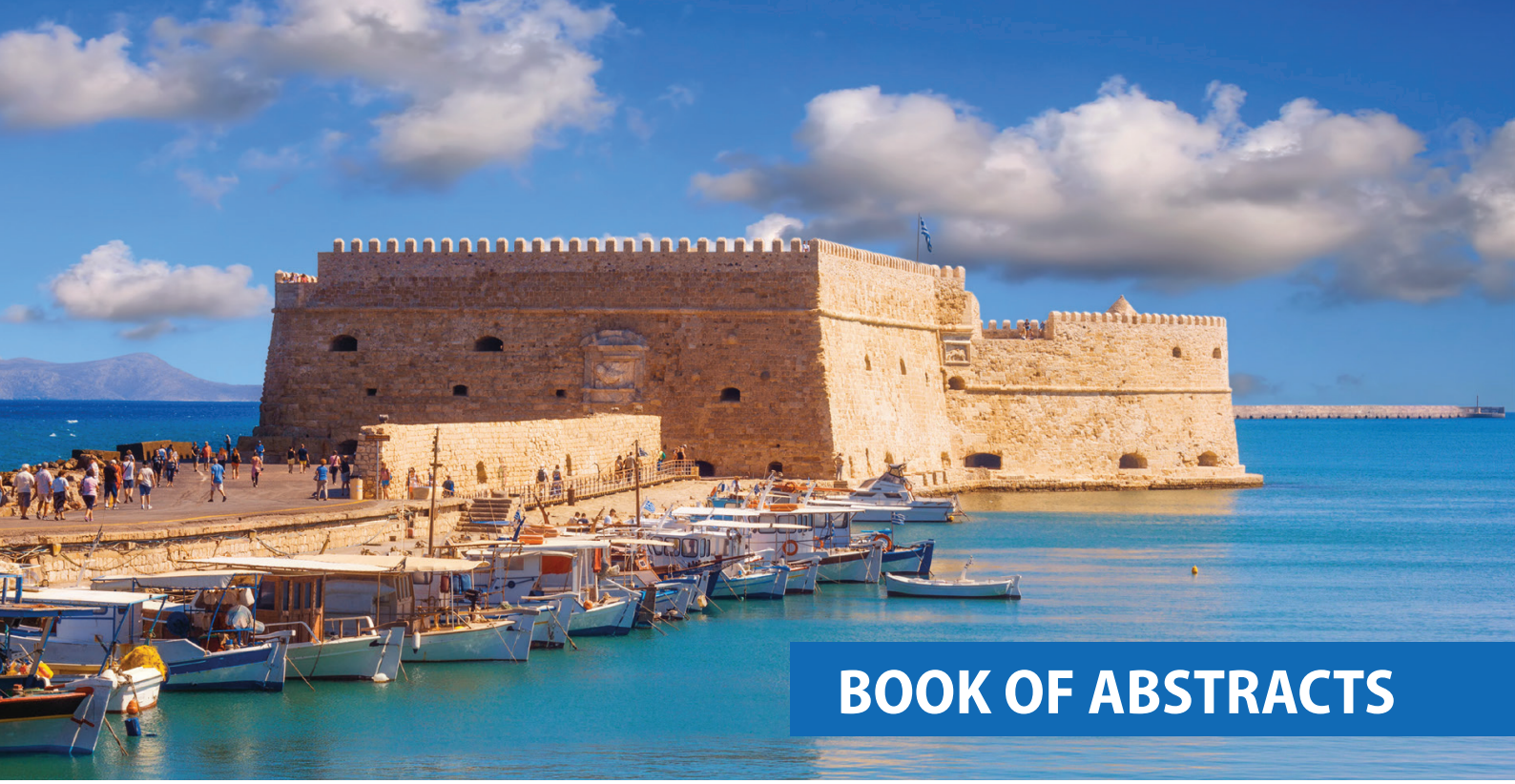

BOOK OF ABSTRACTS

ECE 2023 CRETE

European Congress of Entomology

XII European Congress of Entomology

16-20.10.2023

Cultural Conference Center of Heraklion

Crete, Greece

www.ece2023.com

Organised by

Hellenic Entomological Society 1979

Under the Auspices

HELLENIC REPUBLIC
Ministry of Rural Development and Food

HELLENIC REPUBLIC
MINISTRY OF TOURISM

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mirid bugs accumulated a similar amount of TYLCV as plants not previously exposed to mirids. Overall, in our system of study, induction of plant defences by an omnivorous mirid did not influence TYLCV transmission by whiteflies on tomato.

Keywords: plant defences, plant-virus-vector interactions, whitefly, tylcv, mirid, plant virus

P278. The long and challenging road to capitalize on knowledge of plant-based extracts

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Europe has planned to halve pesticide use by 2030 as part of the Farm to Fork strategy to achieve the European Green Deal. Global warming combined with all year-round availability of host plant for a majority of pests is likely to favor the installation of invasive alien species (IAS) in Europe. The reduction of the range of authorized chemical molecules, initially intended for the control of native species, challenges research to propose sustainable solutions to manage IAS.
Plant-based products are an alternative to synthetic products, already adopted in organic agriculture, such as *Tanacetum cinerariifolium* (natural pyrethrum), formulated as aqueous, organic extracts, or essential oil. The knowledge-based system Knomana has identified, in the scientific literature, 397 plant species used or experimented to protect 64 crop species in Africa against pests and diseases. A knowledge mining software is being developed, based on a method derived from artificial intelligence, i.e. formal concept analysis, to propose to the final user (e.g. producer, technician) potentially usable local plants. As some IAS are coming from the African continent, using Knomana can allow European researchers to identify interesting plant species present in Europe, or plant extracts to be imported from Africa, to control IAS once their official approval is obtained. Examples are given with the Noctuidae species *Spodoptera littoralis* and *Helicoverpa armigera,* already present in Europe, or the fall armyworm, *Spodoptera frugiperda*, that has been observed on maize in many African countries since 2016.

Keywords: biopesticide, botanicals, insect pests, Knowledge base

P279. Preferences of snap bean cultivars by the sweetpotato whitefly, *Bemisia tabaci* for egg laying and development

The sweetpotato whitefly, *Bemisia tabaci* Gennadius Middle East-Asia Minor 1 (MEAM1), is a global pest on vegetables that inflicts losses in crop production. Losses result from bot whitefly damage and disease transmission. Chemical insecticides are routinely used by vegetable growers to control MEAM1 but this pest has developed considerable resistance to most insecticide labels. Therefore, alternative plant protection strategies are required, such as using host plant resistance. In this study, 24 local and commercially available cultivars of snap bean (*Phaseolus vulgaris* L.) in the southern United States were determined for their susceptibility to MEAM1 during three seasons (2020 fall, 2021 spring, and 2021