# Abstracts of presentations at ICE2022Helsinki

## Fruit fly invasion a global phenomenon with huge agricultural and trading implications

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**Abstract**: Fruit flies (Diptera: Tephritidae) comprise a major group of pests including several invasive species, such as the Mediterranean fruit fly, the oriental fruit fly and the peach fruit fly that threaten sustainable fruit and vegetable production worldwide. Because of the extremely high economic relevance invasion events have documented since the beginning of the last century. Intense government-mandated eradication campaigns are implemented after the documentation of an invasion event of a fruit fly of economic importance that almost always declared as successful. New invasion events following an eradication campaign often trigger debates regarding the success of the operation. The risks of arrival, establishment and range expansion of invasive fruit flies are expected to escalate because of global climate change, increased trade and human mobility. Establishment of an invasive fruit fly in a new area, besides having a huge direct impact on fruit and/or vegetable production, increases insecticide use and dramatically affects trading of fresh commodities and impose quarantine regulations. Incursion of invasive fruit flies in Australia, north America and Europe is estimated to result in losses of billions of Euros because of direct and indirect damage. And a single eradication campaign costs several million Euros. The current paper covers several aspects of the fruit fly invasion biology, including (a) historical perspectives, (b) the enormous impact on local, national and regional economies, (c) interception and detection efforts, (d) management of invasion event including eradication campaigns, and (d) predictive ecological and climatic modelling. The need for revisiting existing policies is also highlighted.