Session 3
Agricultural Entomology and Acarology
12:00

TOMATO GREENHOUSES WITHOUT PESTICIDES MYTH OR REALITY?

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Integrated pest management (IPM) and biological control (BC) have a long history in protected tomato production in north-western Europe. Already since the 1920s, *Encarsia formosa* is known as a control agent for whiteflies. It regained interest in the 1960s, when key pests developed resistance to pesticides and in 1970 the first biocontrol agents (BCA) became commercially available. In the 1990s pollination with bumble bees gave a strong stimulus to IPM. The spectrum of available BCAs widened and greenhouse environments proved especially suitable for BC. Simultaneously, concern about the negative effects of pesticides grew, which translated in pesticide reduction policies and consumers demanding residue-free food. All this led van Lenteren (2000) to state "During the first decade of this century a greenhouse without conventional chemical pesticides could become a fact!"
Our study evaluated whether 15 years later and a year after IPM became mandatory (Directive 2009/128/EC), pesticide free greenhouses have become reality or still are a myth?
We sought answers to this question by using a qualitative research approach. We performed in-depth interviews with tomato growers in Flanders, Belgium to evaluate their current level of IPM and BC implementation. During the interviews, we used an interview guide containing 1 the 8 IPM principles, to ask growers about their relating pest management practices; 2 the effect of legislation; 3 the feasibility of a greenhouse without pesticides and 4 possible research gaps or need for advice to lift their current IPM level. However, the interview form left enough openness to explore in-depth the experiences, motives and opinions of the growers, and learn to see pest management strategy in tomatoes from their perspective.
The results of this IPM and BC evaluation will be presented. Possible constraints of both control strategies are revealed. Furthermore, it is evaluated whether there is still room for improvement. The results give clues for future research and provide extension services with insights that may improve their interaction with tomato growers and make their communication even more effective.

Key words: Integrated pest management (IPM), biocontrol, tomato growers, implementation evaluation