

## Workshop

# Tipping points in pest management what is the evidence?

15 September 2016

*C1040, Orion Building, Wageningen University Campus  
Wageningen, the Netherlands*



### SCOPE

Synthetic pesticide applications are standard practice in conventional farming systems because they are simple to use, cheap, and usually highly effective in providing short-term reduction in pest densities. Yet, their effectiveness as a long-term sustainable pest management strategy is debated. This debate has been fuelled by the introduction of recent technologies, such as neonicotinoids seed coatings and herbicide tolerant GMO crops, with uncertain outcomes for biodiversity and resistance development.

Historic cases show that the use of pesticides can set off a positive feedback process whereby natural enemy populations are decimated and pesticides become the only pest management option left. The positive feedback between pesticide use and natural enemy mortality suggests the possibility of tipping point dynamics where the system can “tip” from a biocontrol dominated state to a pesticide dominated state. Tipping the system back from the pesticide dominated state to the biological control state could be challenging and require persistent efforts to allow a recovery process of natural enemy populations. Such transition may depend on landscape context and involve complex interactions between human actors and the agro-ecological environment. The question remains: is there evidence for such tipping points?

### MORE INFORMATION AND REGISTRATION

See: [www.pe-rc.nl/tipping-points](http://www.pe-rc.nl/tipping-points)

Or contact:

Lennart Suselbeek (Graduate School PE&RC)

E-mail: [lennart.suselbeek@wur.nl](mailto:lennart.suselbeek@wur.nl)

Phone: +31(0)317 485 426



*Note: participation in this workshop is free of charge, but registration of participation is mandatory. It includes coffee/tea and drinks.*

### PROGRAMME OF THE AFTERNOON

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|---------------|--|
| 13:00 - 13:20 | Registration   |
| 13:20 - 13:30 | Welcome by the Chair of the Day<br>(Felix Bianchi, Wageningen University, Netherlands)   |
| 13:30 - 14:10 | <b>Insecticide-mediated regime shifts in aphid-ladybeetle population dynamics in the USA</b><br>(Doug Landis, Michigan State University, USA)                    |
| 14:10 - 14:50 | <b>Herbicide resistance in weed populations in the USA – how farmers get locked in</b><br>(David Mortensen, Penn State College of Agricultural Sciences, USA)    |
| 14:50 - 15:20 | Coffee / Tea break   |
| 15:20 - 16:00 | <b>Pest management in Argentina: indications of a pesticide treadmill?</b><br>(Pablo Tittonell, Instituto Nacional de Tecnología Agropecuaria (INTA), Argentina) |
| 16:00 - 16:30 | Group Discussion   |
| 16:30 - 17:00 | Plenary Discussion   |
| 17:00         | Drinks   |