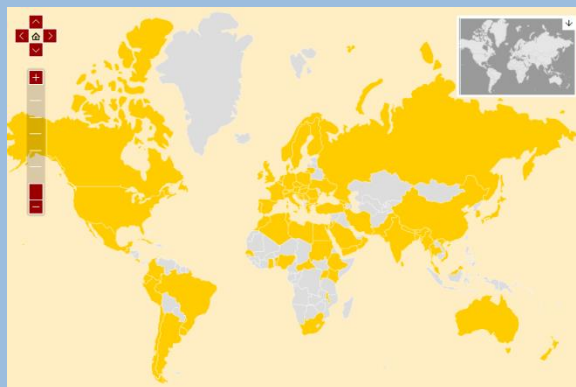
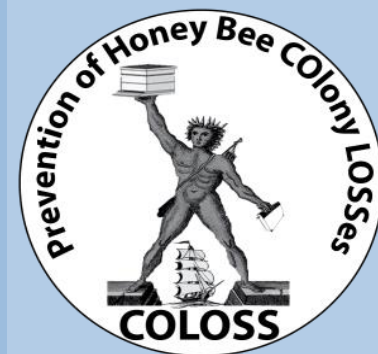


# COLOSS: “prevention of honey bee COlony LOSSes”



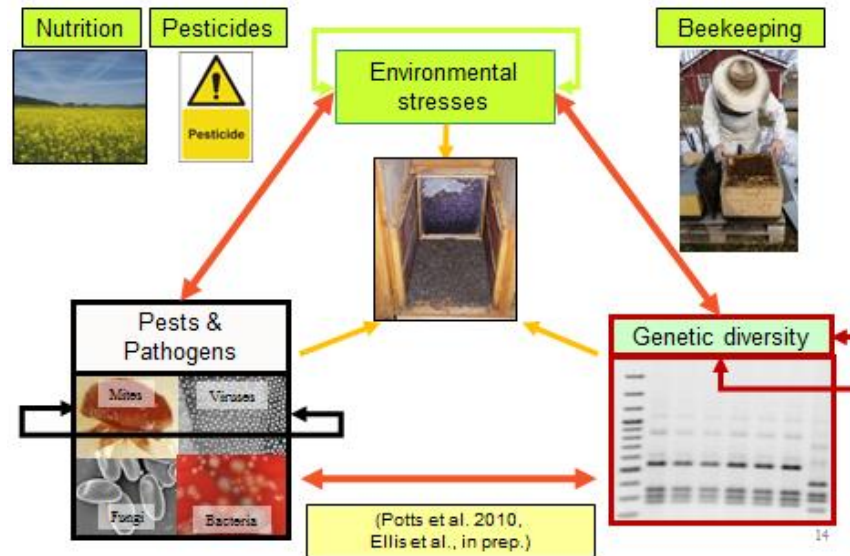
**Peter Neumann**  
on behalf of the COLOSS assocoation

Institut für Bienengesundheit, Universität Bern  
[www.bees.unibe.ch](http://www.bees.unibe.ch); [peter.neumann@vetsuisse.unibe.ch](mailto:peter.neumann@vetsuisse.unibe.ch)



# Main priorities of COLOSS

## Factors for honey bee health



**Improve the health of honey bees internationally by:**

a. coordinating honey bee monitoring and research, including the development of standard methods

b. disseminating knowledge and providing training related to improving the well-being of honey bees

# u<sup>b</sup> COLOSS network



## “prevention of honey bee COlony LOSSeS”



1049 members from 95 countries (11/2017)

**Ricola** Foundation  
Nature & Culture

**President:** P Neumann (Switzerland)

**Vice presidents:** P Chantawannakul (Thailand), G Williams (USA)

**Executive Committee:** M Bouga (GR), R Brodschneider (AT), K Crailsheim (AT), N Carreck (UK), R Dall'Olio (IT), V Dietemann (CH), G Formato (IT), A Gajda (PL), P Kristiansen (SE), F Mondet (FR), CWW Pirk (RSA), A Özkirim (Turkey), V Soroker (Israel),

**1. South America**  
K Antúnez (Uruguay)

**2. North America**  
G Williams (USA)

**3. Australia, New Zealand**  
A McLean

**4. Asia**  
P Chantawannakul (Thailand)

**5. Africa**  
CWW Pirk & H Human (RSA)

**Core projects**

**1. Monitoring Colony losses**  
R Brodschneider (AT),  
A Gray (UK)

**2. BEEBOOK**  
V Dietemann (CH),  
N Carreck (UK),  
J Ellis (USA),  
P Neumann (CH)

**3. B-RAP**  
(Bridging Research and Practice)  
P Kristiansen (SE)  
F Vejsnæs (DK),

**Task forces**

**1. Varroa - control**

**2. Apitox**

**3. CSI Pollen**

**4. Sustainable Bee Breeding**

**5. Small hive beetle**

**6. *Vespa velutina***

**7. Viruses**

**8. Survivors**

# COLOSS expertise

## 1. Networking and capacity building



13 Conferences



>50 workshops



>50 Short Term Scientific Missions

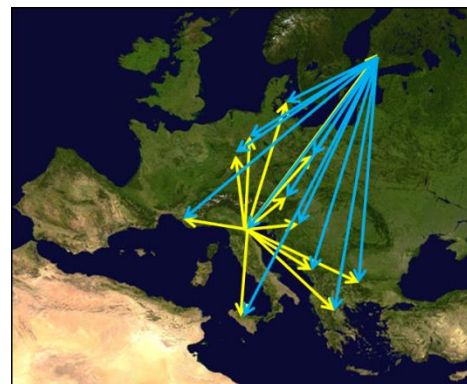
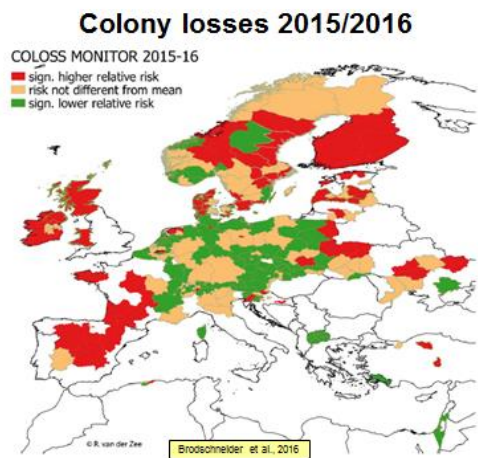


5 Training Schools



## 1. Networking and capacity building

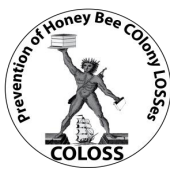
## 2. Coordinated monitoring and large-scale experiments



Established and stable network of national monitoring programs (~30 countries, 10 years of experience). Standardized estimates via active involvement of ~20'000 beekeepers. Inspired other programs (i.e. BIP).  
(van der Zee et al. 2012, 2013, 2014, Chauzat et al. 2013; Laurent et al. 2014; Brodschneider et al., 2016, Brodschneider et al., submitted)

For example:  
Genotype-environment interaction experiment (N = 621 colonies, 11 countries) (Costa et al., 2012; Büchler et al. 2014; Journal of Apicultural Research special issue, 2014, 53 (2))  
CSI Pollen with 700 individual citizen scientists across Europe  
(Brodschneider et al. In prep.)

# COLOSS expertise



1. Networking and capacity building
2. Coordinated monitoring and large-scale experiments
3. Updated standards for research and monitoring

**COLOSS  
BEEBOOK**  
Volume I:  
Standard Methods  
for *Apis mellifera*  
Research  
Edited by Vincent Dietemann, James D. Ellis, Peter Neumann

**COLOSS  
BEEBOOK**  
Volume II:  
Standard Methods for  
*Apis mellifera* Pest  
and Pathogen Research  
Edited by Vincent Dietemann, James D. Ellis, Peter Neumann

**COLOSS  
BEEBOOK**  
Volume III:  
Standard Methods  
for *Apis mellifera*  
Hive Product Research  
Edited by Vincent Dietemann, James D. Ellis, Peter Neumann

1<sup>st</sup> international standards and practical guidelines in honey bee research and monitoring (37 chapters, 234 authors, >1700 protocols). All open access at [www.coloss.org](http://www.coloss.org)  
financed by



# COLOSS expertise

1. Networking and capacity building
2. Coordinated monitoring and large-scale experiments
3. Updated standards for research and monitoring
4. Dissemination of results to various stakeholders for bee health

The collage illustrates the COLOSS expertise through various channels:

- COLOSS Website:** A screenshot of the COLOSS honey bee research association website, showing the 'Members' section with a search bar and a list of members.
- Academies review insecticide harm:** A newspaper article snippet featuring Peter Neumann from the Institute of Bee Health, University of Bern, Switzerland, discussing the impact of insecticides on bee health.
- COLOSS update:** A newsletter snippet titled 'Spotlight Short-term Scientific Mission by Early Stage Researcher Claudia Dussaubat', detailing her research on the parasite *Nosema ceranae* in honey bees.
- Procena tolerancije na varou:** A poster titled 'Procena tolerancije na varou' (Evaluation of Varroa mite tolerance) by Ingemar Fris, discussing the genetic variability of honey bees in response to the Varroa mite.



# COLOSS expectations



1. Full stakeholder/partner/advisor, whenever honeybee issues are discussed (e.g. monitoring, pests, pesticides)

2. Integration of ongoing standardized COLOSS monitoring into EU efforts  
(10 years of experience, ~30 countries, ~20'000 beekeepers)

3. Integration of COLOSS research into EU efforts, e.g. development of standard methods and protocols for monitoring pest and diseases

4. Avoidance of redundancies and instead foster mutual enrichment



# Acknowledgements



**Prof. Peter Neumann, Institut für Bienengesundheit, Universität Bern**  
**[www.bees.unibe.ch](http://www.bees.unibe.ch); [peter.neumann@vetsuisse.unibe.ch](mailto:peter.neumann@vetsuisse.unibe.ch)**