



I'M DYING OUT!
NOT YOUR PROBLEM?



WHEN I DIE OUT, YOUR FOOD DOESN'T
GET POLLINATED AND YOU DIE!
YOUR PROBLEM NOW?



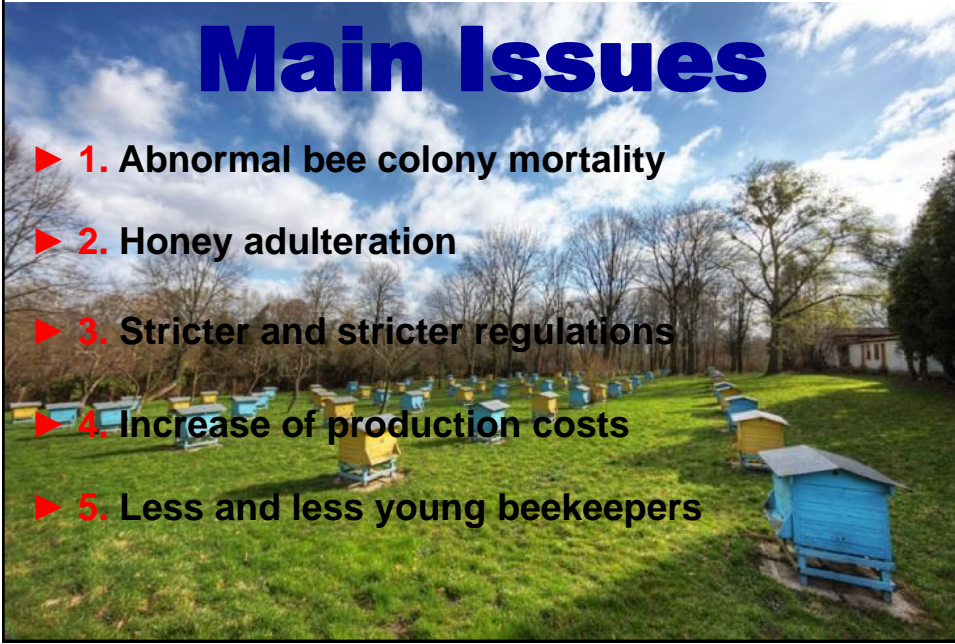
Beekeeping The Global Picture

Philip McCabe
Apimondia President



Main Issues

- ▶ 1. Abnormal bee colony mortality
- ▶ 2. Honey adulteration
- ▶ 3. Stricter and stricter regulations
- ▶ 4. Increase of production costs
- ▶ 5. Less and less young beekeepers



Main problems

- ▶ 1. Abnormal bee colony mortality



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5 - 6 فبراير 2018م

مركز أبوظبي الوطني للمعارض - دولة الإمارات العربية المتحدة



Insecticides & Pesticides

New generations of molecules + their metabolites

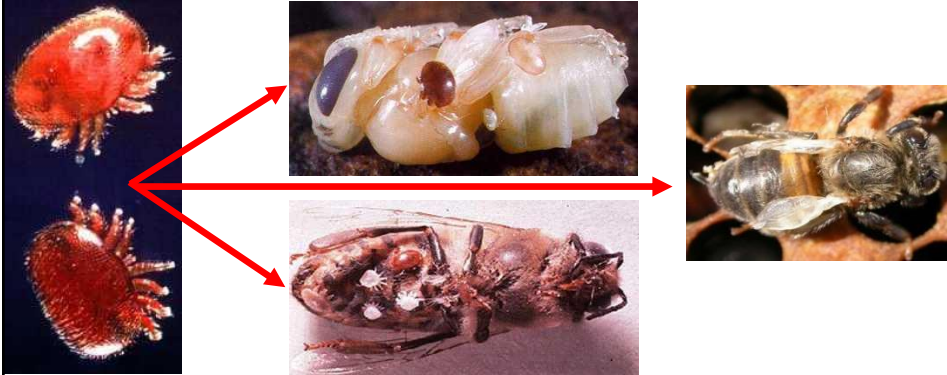


Toxicity / Bees (LD50 ng/bee) - Dr. JM Bonmatin (CNRS) France

pesticide	®	utilisation	DL50 ng/ab	Tox/DDT
DDT	Dinocide	insecticide	27 000,0	
amitraze	Apivar	i/acaricide	12 000,0	
coumaphos	Perizin	i/acaricide	3 000,0	
tau-fluvalinate*	Apistan	i/acaricide	2 000,0	
methiocarb	Mesurool	insecticide	230,0	
carbofuran	Curater	insecticide	160,0	
λ-cyhalothrine	Karate	insecticide	38,0	
deltamethrine	Décis	insecticide	10,0	
thiaméthoxam	Cruiser	insecticide	5,0	
fipronil	Regent	insecticide	4,2	
clothianidine	Poncho	insecticide	4,0	
imidaclopride	Gaucho	insecticide	3,7	

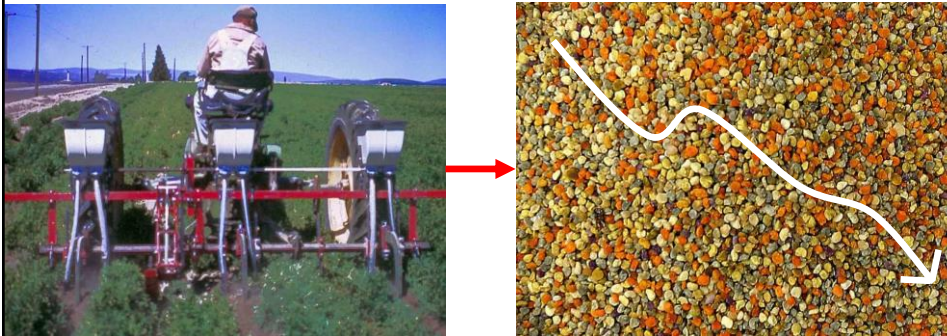


Varroas



Bee diet

Decrease of pollen sources



Monocultures + weedkillers





Colony management

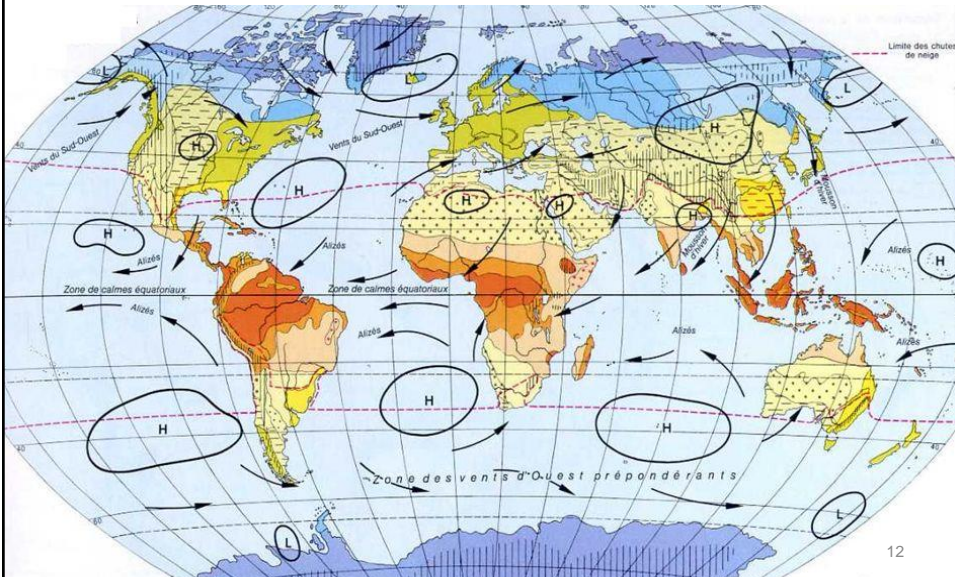
- ▶ Multiplication of migration = stress of the colonies
- ▶ Social concentration = overgrazing + unhealthy environment

Major U. S. Migratory Routes

Thousands of beehives
on the same spot!



Climate changes



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BEEKEEPERS, KEY PARTNERS IN THE FIGHT AGAINST HUNGER, RURAL POVERTY AND LOSS OF BIODIVERSITY

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7. Wax contamination

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+ current problems

► Infant botulism with *Clostridium botulinum*



Future problems

► New generations of pesticides



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► **SO4: Ensure inclusive and efficient agricultural and food systems**



Your produce choices
without bees



Main problems

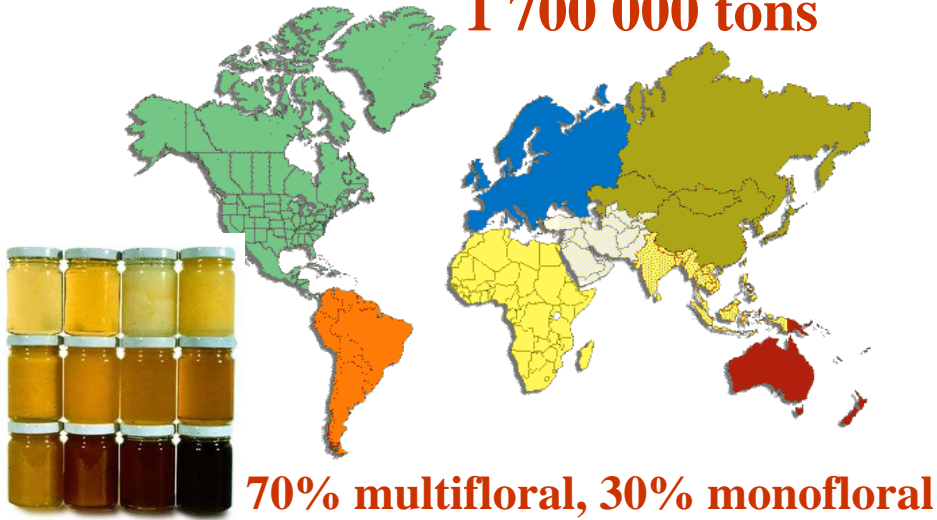
- **1. Abnormal bee colony mortality**
- **2. Honey adulteration**





International Honey Production

1 700 000 tons



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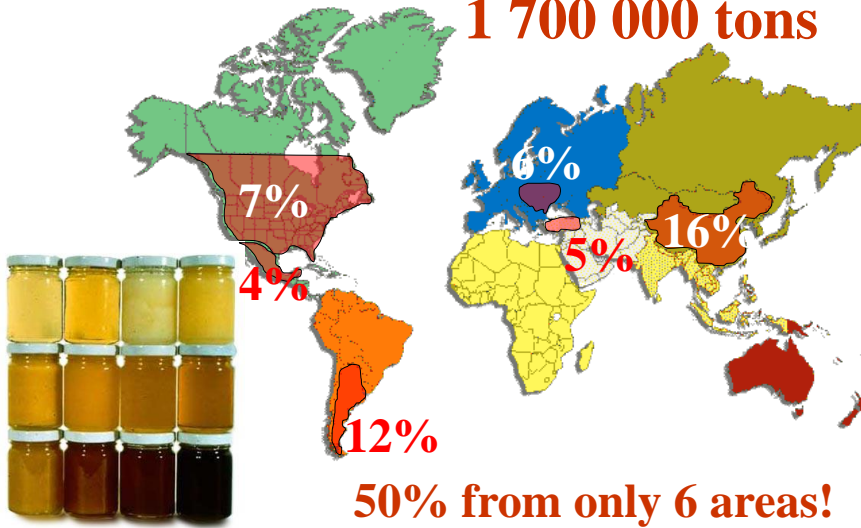
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International Honey Production

1 700 000 tons



Total amount of honey exported



20 % of the world production
= 340 000 tons

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Real honey and...

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...adulterated honey!

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Honey market - Main criteria

- ▶ **Before:** colour, taste, water, Fructose/Glucose ratio & type of crystallization, diastases and price!
- ▶ **Now:** residues (veterinary drugs, agricultural pesticides, environmental pollution, etc.)
- ▶ **Other contaminations:** wood, paint, zinc, hair, wax, bees, etc.
- ▶ **Falsification:** during or after nectar foraging

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Main problems

- ▶ **1. Abnormal bee colony mortality**
- ▶ **2. Honey adulteration**
- ▶ **3. Stricter and stricter regulations**



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To promote
management
under
Organic
Standards

To eliminate
a large part
of bee losses
factors

Belgium (private)	Denmark (state)	Germany (state)
Netherlands (state)	Norway (private)	Austria (state)
Switzerland (private)	Finland (state)	France (state)
Spain (state)	Czech Republic (state)	Sweden (private)



Main problems

- ▶ 1. Abnormal bee colony mortality
- ▶ 2. Honey adulteration
- ▶ 3. Stricter and stricter regulations
- ▶ 4. Increase of production costs



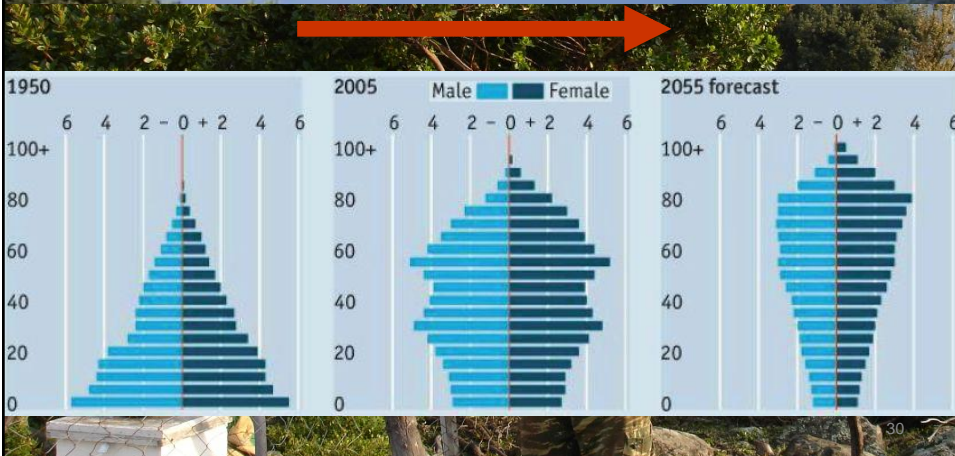


► 4. Increase of production costs



Main problems

► Less and less young beekeepers





ICYB – International Centre for Young Beekeepers

- RNDr. Jiří Píza [piza@apislab.cz] from the Czech Republic has commenced a programme of competitions for young beekeepers in Europe
- It is hoped to extend this programme to the rest of the world



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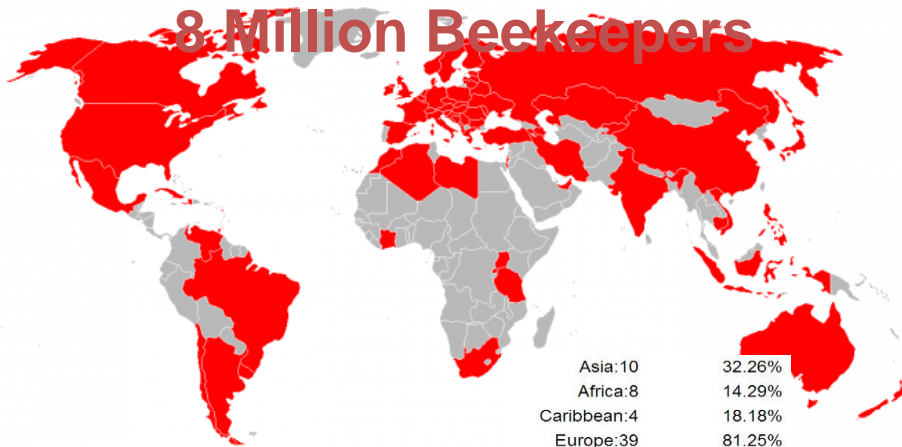
BEEKEEPERS, KEY PARTNERS IN THE FIGHT AGAINST
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113 members in 2015!
8 Million Beekeepers



from `103 countries



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AWGs - Apimondia Working Groups

- EU Organic beekeeping legislation revision (Andreas Thrasyvoulou)
- Bees declared as an endangered species (Peter Kozmus)
- Harmonisation of regulations for international honey contests (Yurij Riphyak)
- Good beekeeping practice for medical grade bee products (Etienne Bruneau)
- Ethical charter for the international honey trade (Norberto Garcia)
- Queen rearing and impact on the genetic variability of productive bee colonies (Maria Bouga)
- Bees and pesticides (Fani Hatjina)
- GMOs and impact on the beekeeping sector (Walter Haefeker)
- Definitions and standardization for the queen and package bee market (Nikola Kezic)

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► SO1: Help eliminate hunger, food insecurity and malnutrition



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► SO3: Reduce rural poverty

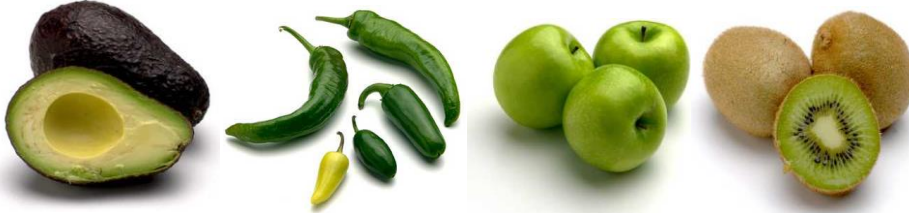


► SO3: Reduce rural poverty





► Bees (*Apis*, *Melipona*, *Trigona*, *Bombus*, etc.) are contributing for the production of **35%** of human food



In the meantime

► The bees are increasingly recognized as an essential agents for the sustainability of biodiversity





How can we produce more bees?

- Many beekeepers are now producing bees rather than honey
- Beekeepers are now supplying bees to the market
- Honey is now regarded as a nuisance by some
- Package bees have been around for a long time.
- But not on this scale??

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Package bees

- From September 1st until October 30th a cargo plane load of bees arrives in Dubai and Jeddah every day.
- An average of 5,000 packages of bees
- The ground handling staff are supplied with bee suits
- A whole new industry has arrived

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الجمعية العربية لتربية النحل
Arab Beekeeping Association



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Going Forward

- Beekeepers Register
- Bar Coding of Beehives
- Honey Analysis
- Honey Traceability
- Honey Market



Can Science Save Our Bees?

- Yes, but
- Beekeepers, Farmers, Scientists and especially GOVERNMENTS must work together as a team if we are to save not only our bees but also mankind.

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Thank you for your attention

Philip McCabe

President

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www.apimondia.com

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Tetanospasmin

- **Tetanus toxin** is an extremely potent neurotoxin produced by the vegetative cell of *Clostridium tetani* in *anaerobic* conditions, causing *tetanus*.
- It is also called **spasmogenic toxin**, or **TeNT**. The LD50 of this toxin has been measured to be approximately 1 ng/kg, making it second only to *Botulinum toxin* as the deadliest toxin in the world.

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Working groups

Activities - Working Groups

AWGs - Apimondia Working Groups

- **AWG - IHC - International Honey Commission**
Coordinator: Gudrun Beckh - beckh@ipi-q3.de +49 (0)421 59 77 517
- **AWG - EU Organic beekeeping legislation revision**
Coordinator: Andreas Thrasivoulou - thrasia@agro.auth.gr +30 69 45 29 74 49
More info...
- **AWG - Bees declared as an endangered species**
Coordinator: Peter Kouzmas - peter.kouzmas@kks.si +386 (01) 280 52 30
More info...
- **AWG - Harmonisation of regulations for international honey contests**
Coordinator: Yurij Rypchak - yura@ztp-uk.com +38 (06) 79 07 217
More info...
- **AWG - Good beekeeping practice for medical grade bee products**
Coordinators: Etienne Bruneau - bruneau@cart.be +32 (0) 10 47 34 16
+ Dimitris Sellanakis - dsellanakis@apipharm.gr +30 69 51 08 88 05
More info...
- **AWG - Ethical charter for the international honey trade**
Coordinator: Norberto Garcia - norpargil@yahoo.com.ar +54 (011) 43 25 02 15
More info...

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► Participation of Apimondia, as referent, at meetings and actions where the beekeeping value chain is involved



www.apimondia.com/en/activities/future-events/cat/listevents/2013/11/02/

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International Federation of Beekeepers' Associations

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Congresses & Symposia

Please select a category

Date	Event
03 March 2014	Monday, 03 March 2014 - Friday, 07 March 2014 3rd ApiBio - ApiOrganica Apimondia Symposium 2014 - Italy
01 September 2014	Monday, 01 September 2014 - Friday, 05 September 2014 5th ApiMedica & 4th ApiQuality Apimondia Symposia 2014 - Turkey
16 October 2014	Thursday, 16 October 2014 - Sunday, 19 October 2014 2nd ApiEcoFlora Apimondia Symposium 2014 - San Marino
11 November 2014	Tuesday, 11 November 2014 - Sunday, 16 November 2014 1st Apimondia Symposium on African Bees and Beekeeping 2014 - Tanzania
15 September 2015	Tuesday, 15 September 2015 - Sunday, 20 September 2015 44th Apimondia International Apicultural Congress 2015 - South Korea
19th, 20 September 2017 - Wednesday, 04 October 2017	45th Apimondia International Apicultural Congress 2017 - Turkey

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Identification

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Poll

Honey harvest 2013?

Excellent Medium Small Nothing

Vote Results

Who's online?

We have 439 guests online

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UNEP Report (2010)

UNEP Emerging Issues: Global Honey Bee Colony Disorder and Other Threats to Insect Pollinators

The Food and Agriculture Organisation of the United Nations (FAO) estimates that out of some **100 crop species** which provide **90% of food** worldwide, **71 of these are bee-pollinated**. In Europe alone, 84% of the 264 crop species are animal-pollinated and 4,000 vegetable varieties exist thanks to pollination by bees. The production value of one ton of pollinator-dependent crop is approximately five times higher than one of those crop categories that do not depend on insects.

http://www.unep.org/dewa/Portals/67/pdf/Global_Bee_Colony_Disorder_and_Threats_insect_pollinators.pdf⁶¹