



Biological Control solutions and their Benefits

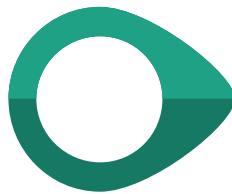
20 October 2022



International Biocontrol Manufacturers Association

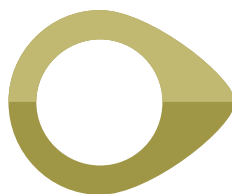


Part of the Federation of Biocontrol industries Bioprotection Global



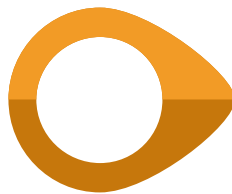
Biocontrol Association

Local associations around Europe – members represent us where no local Association



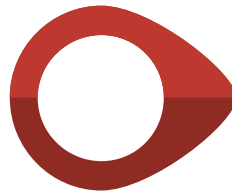
SMEs dominate

In Europe 71 SMEs and 76 micro-SMEs

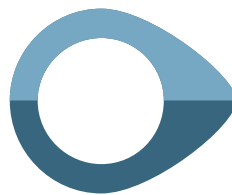


Global with European Focus

150 member companies in Europe
Global members learn how to access Europe.
70 more members worldwide

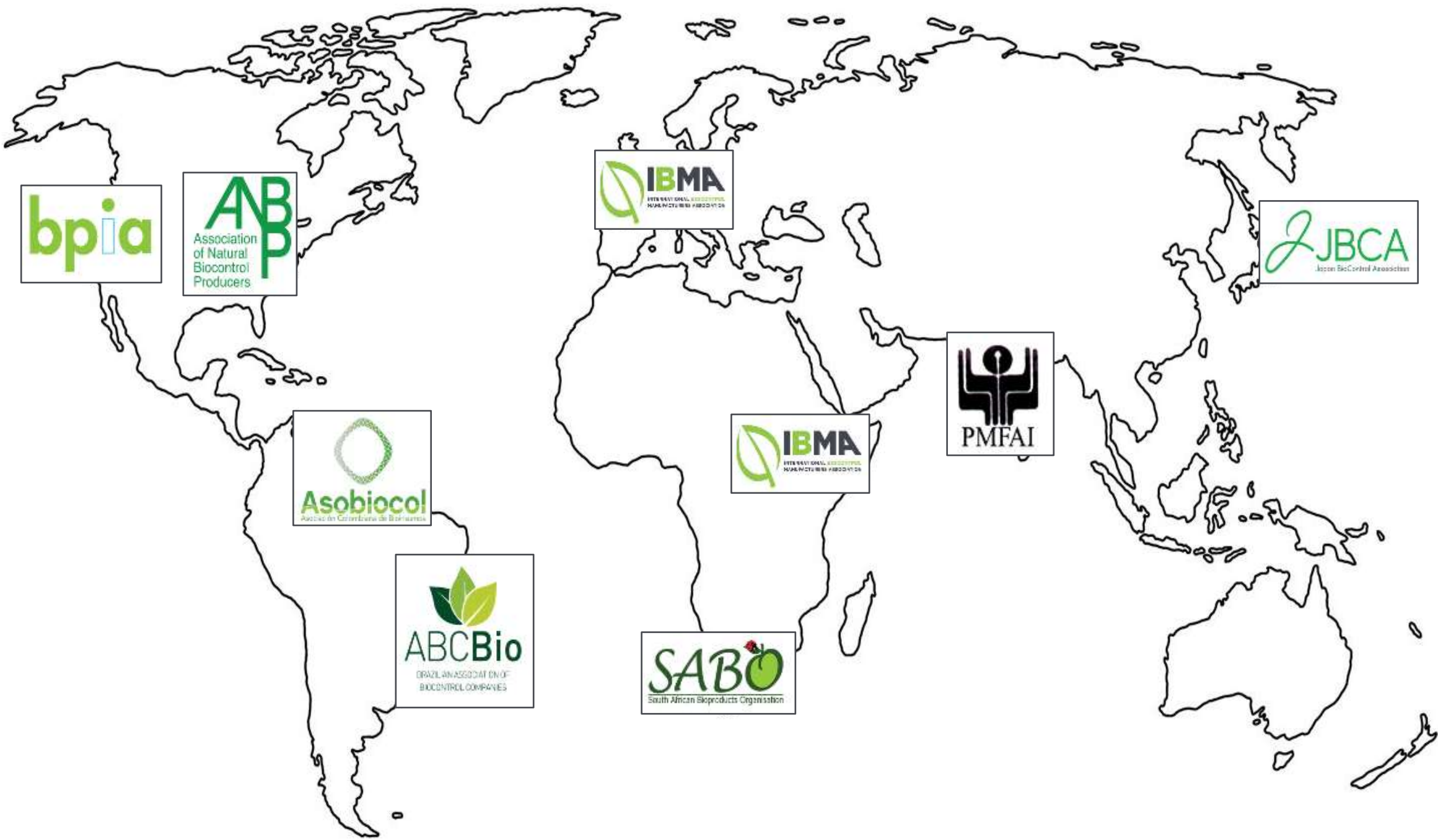


Established in 1995



Global reach

Part of Bioprotection Global IBMA Kenya and
35% of members from outside Europe
Annual Biocontrol Industry Meeting
EU COM present



What is Biocontrol?

Invertebrates, Semiochemicals, microbials and natural substances



Invertebrates



Semiochemicals



Microbials



Natural substances

The European Green Deal is Europe's Answer to the UN Sustainable Development Goals



Ursula von der Leyen, the European Commission President when presenting the EU Green Deal Communication

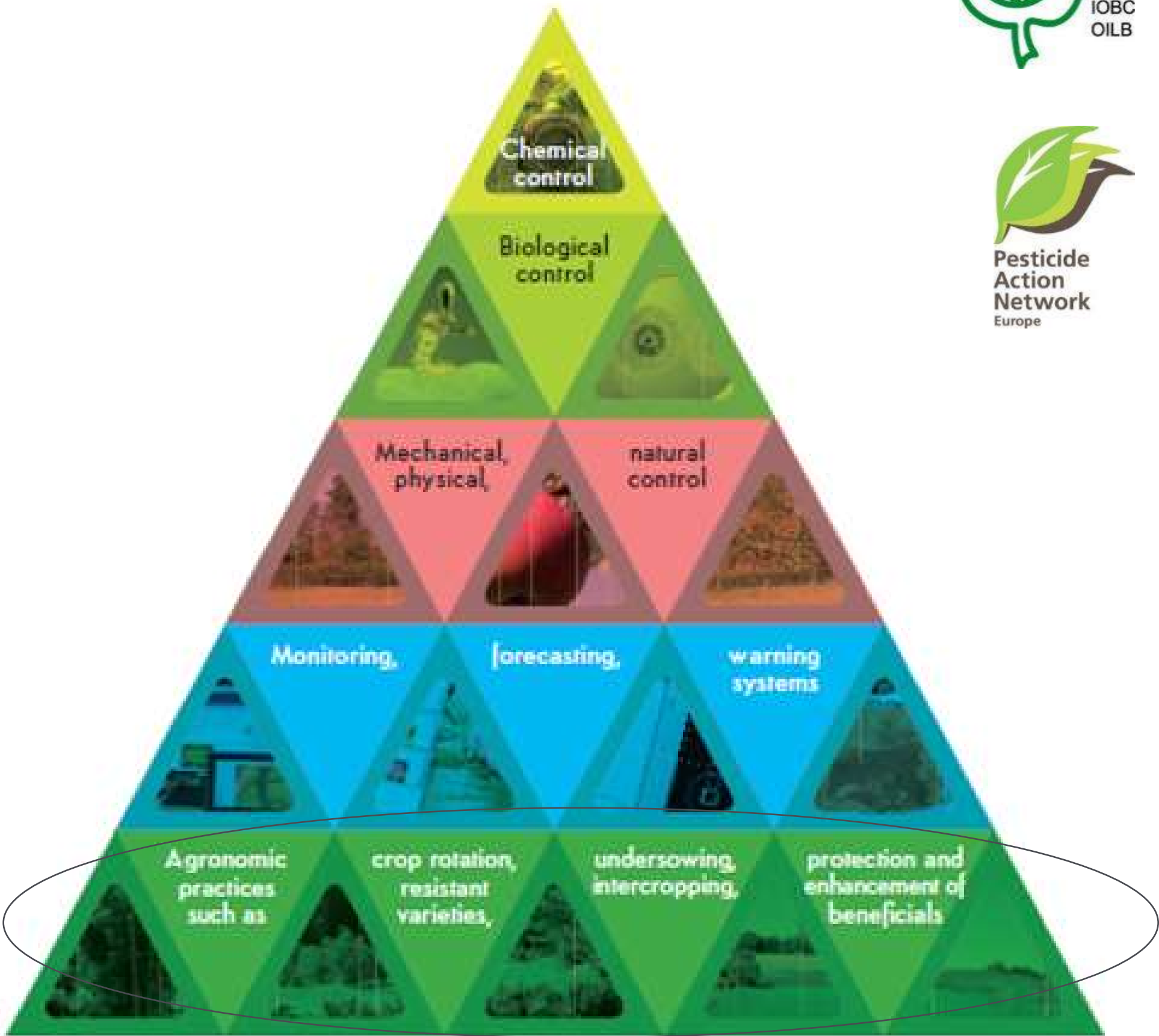
"This is Europe's man on the moon moment... Our goal is to reconcile the economy with our planet, to reconcile the way we produce, the way we consume with our planet and to make it work with our people."



Transition of Agriculture is key to EU Green Deal



IPM requires a hierarchy of practices – agronomy first with chemistry as a last resort – a biology first mindset



Biocontrol Links Farm to Fork, Biodiversity and Climate Strategies

Biocontrol – Essential to the EU Green Deal



Reduce use and risk of chemical pesticides by 50 %

Pave the way to alternatives

Enhance provisions on integrated pest management

Maintain farmers' incomes

Biocontrol is so much more than just pest and disease control



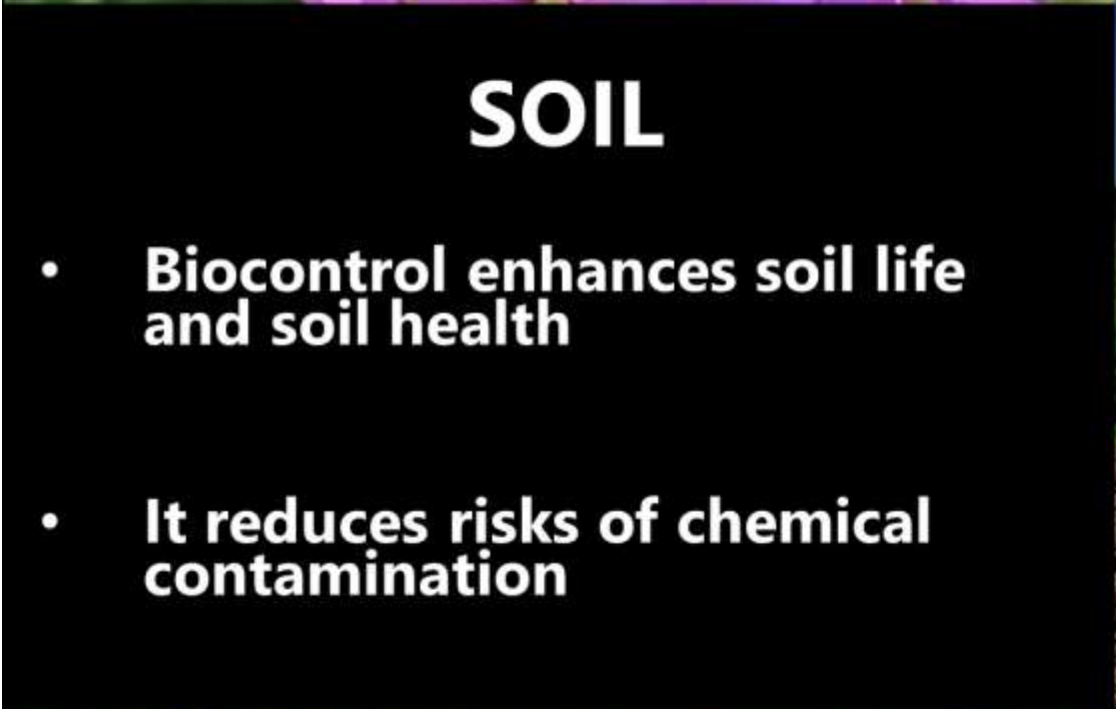
BIODIVERSITY

- **Biocontrol respects non-targeted fauna and flora**
- **Example of organic farming**



FARM ECONOMICS

- **Proven efficacy of biocontrol**
- **Response to chemical pesticide ban/restrictions**
- **High benefit/cost ratio**



SOIL

- **Biocontrol enhances soil life and soil health**
- **It reduces risks of chemical contamination**



CLIMATE

- **Potentially less emissions**
- **Enabler for sustainable farming**



HUMAN HEALTH

- **Less exposure to pesticides for farm workers**
- **No chemical residues in food**



Governance

GOVERNANCE

- **Biocontrol goes together with ecosystem knowledge and holistic approach**



Biodiversity In Albufera



Project Background



Location: Albufera de Valencia

15,3000 ha of rice surrounding 3,000 ha of freshwater lagoon



Problem

Use of organophosphates by aerial application to control rice stem borer

Detrimental effect on birds, fish, insects and aquatic ecosystems



Site of international importance for birds

Migratory bird special site

Natural Park since 1986, Ramsar since 1989, SPA for Birds and Nature 2000 since 1990 and SCI since 2006.



Solution

Pest control by sex pheromone for rice stem borer integrated into farming practice



What has been the impact so far?

TECHNICAL RESULT

Since 2006 the pest is fully controlled by mating disruption in the whole area (approx. 16,000 ha) avoiding of the use of approx. 50,000 L of synthetic insecticides each year.

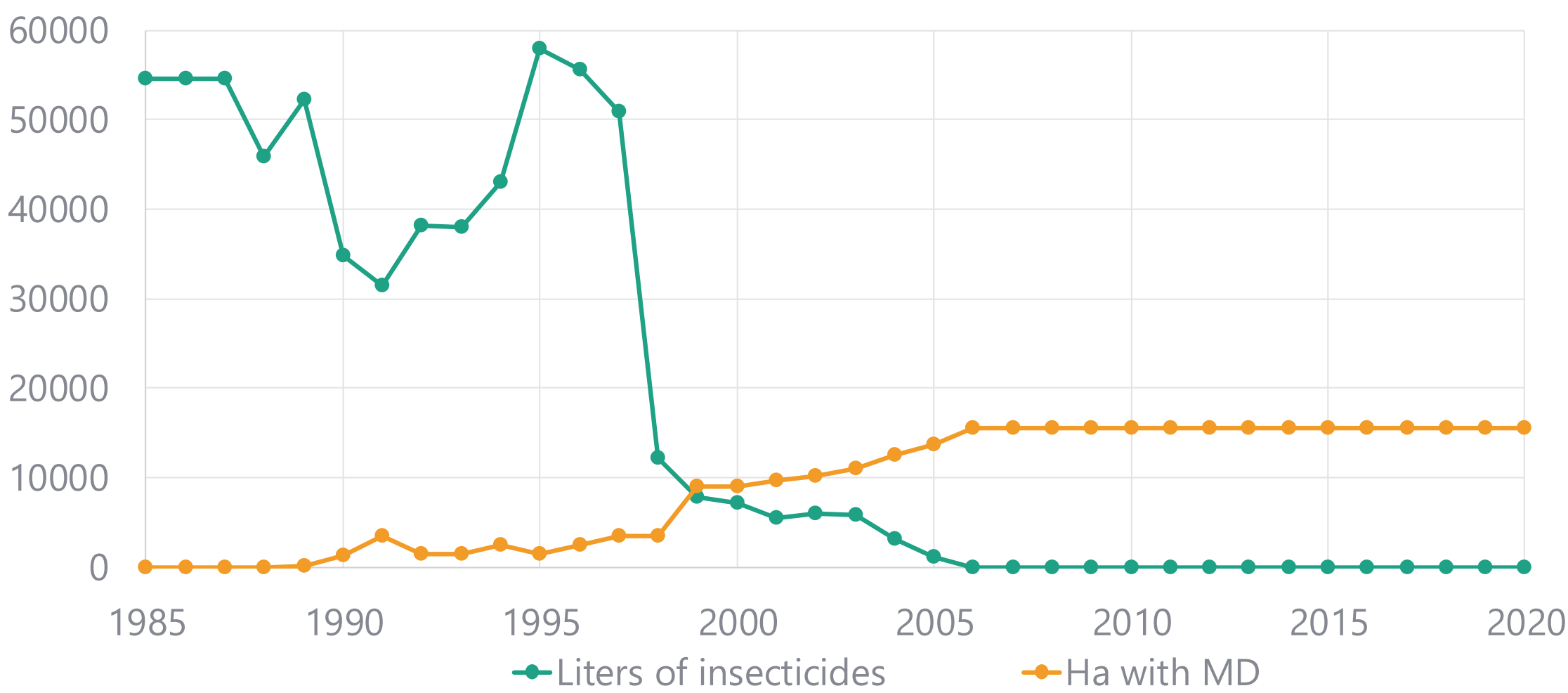
ECONOMIC RESULT

The use of mating disruptions allows the coexistence of an important economic activity (such as the rice cultivation) in an area which as been declared a natural reserve and that is, additionally, a touristic site in the region.

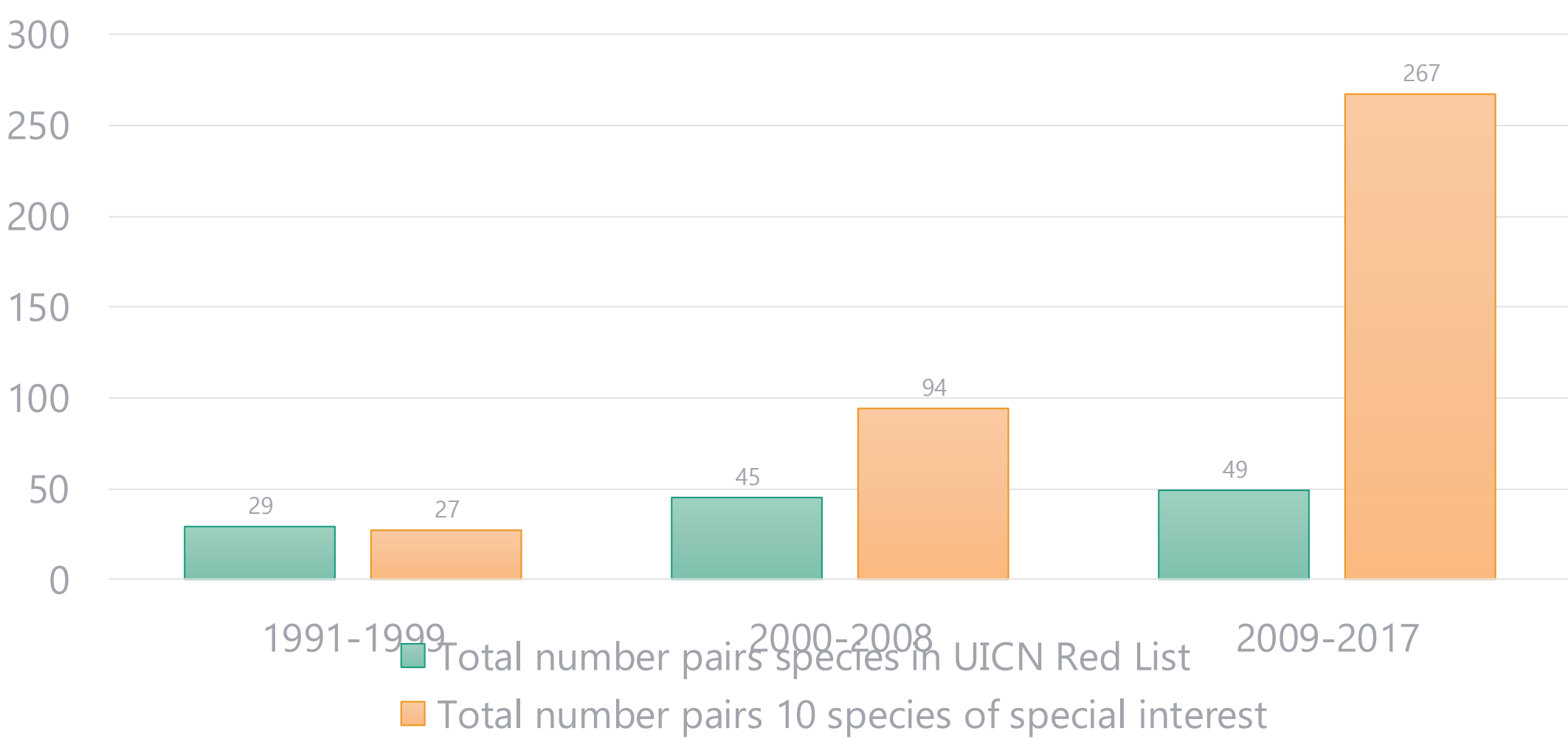
ENVIRONMENTAL RESULT

The switch to biocontrol allowed to significantly decrease pollution and reliance on chemical pesticides, increasing biodiversity enabling resilient rice cropping systems.

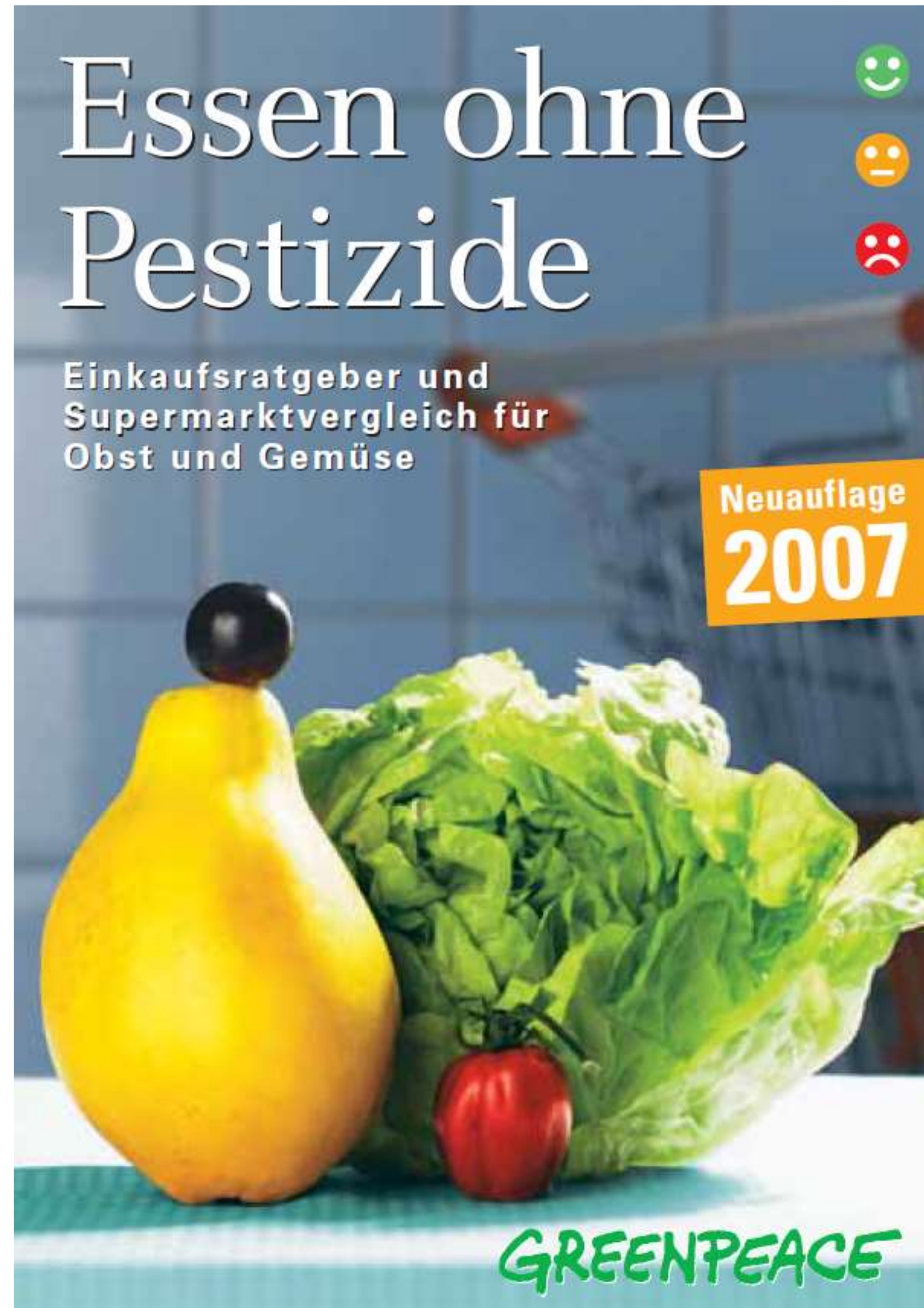
Evolution of insecticide use



Evolution of nesting aquatic birds



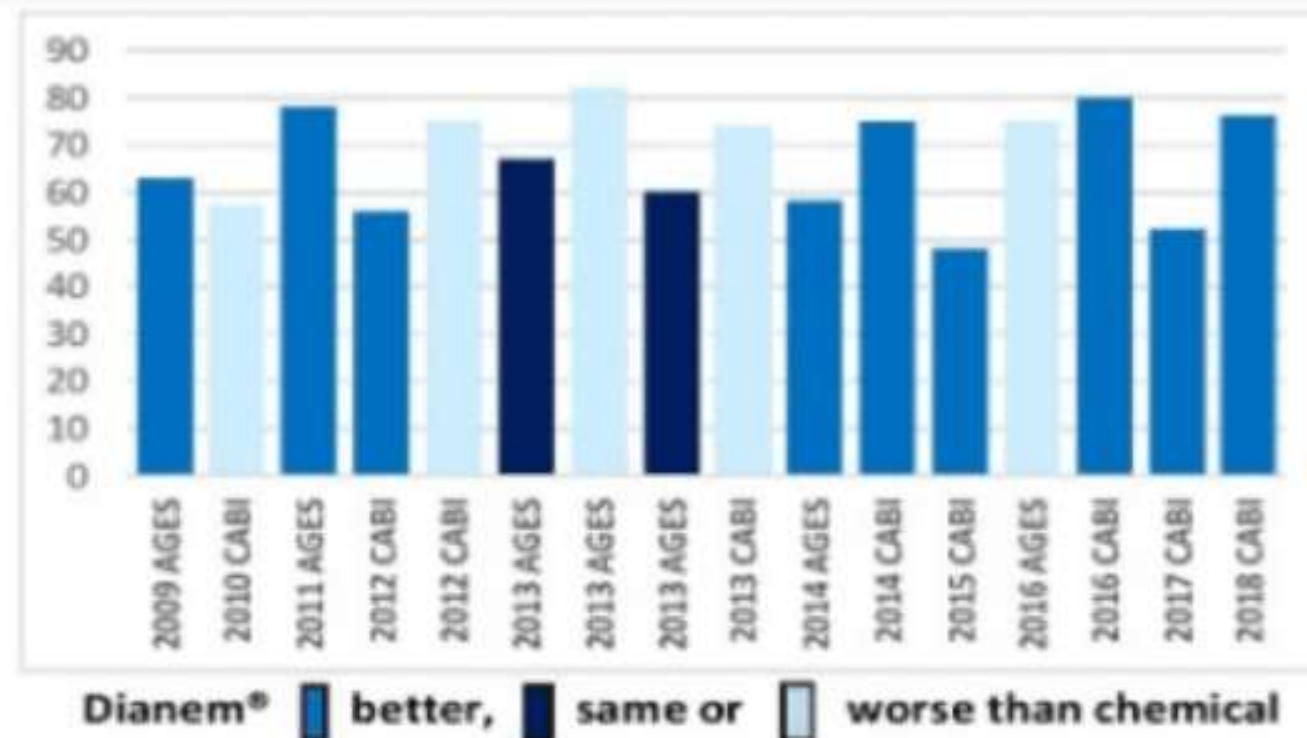
Human Health – Farmers and Consumers



Replacing old chemistry with biological control

Beneficial nematodes (EPN) control western corn rootworm

- Corn (*Zea mays*) / international/beneficial nematodes (*Heterorhabditis bacteriophora* / Western Corn Rootworm (WCR) (*Diabrotica virgifera virgifera*)
- Most effective control of the invasive pest larvae of the Western Corn Rootworm, causing severe root damage and lodging, thereby offering an ecological control method with equal or higher efficacy than neonicotinoids (banned by EU)



Together we will upscale biocontrol for our future and our children's future



**“Biological Life is a force and once unleashed
it will continue to grow and generate new life.”**

Gabe Brown (2018) – Author of from “Dirt to Soil” and North Dakota farmer

Thank you

IBMA

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