



Food and Agriculture
Organization of the
United Nations



• Reduction of pesticide use

Project “Lifecycle management of pesticides and disposal of POPs pesticides
in Central Asian Countries and Türkiye”

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FAO REU

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Why do we need to reduce use of pesticides and its associated risks?

Reducing our dependence on chemical pesticides is a key part of the process of building more resilient and sustainable food systems.

Risks associated with pesticides:

- Human health risk
- Environmental impacts
- Biodiversity loss / pollinators number decline
- Food safety risk
- Etc.





Managing pesticides throughout their lifecycle

FAO supports the reduction of pesticide use and risks by:

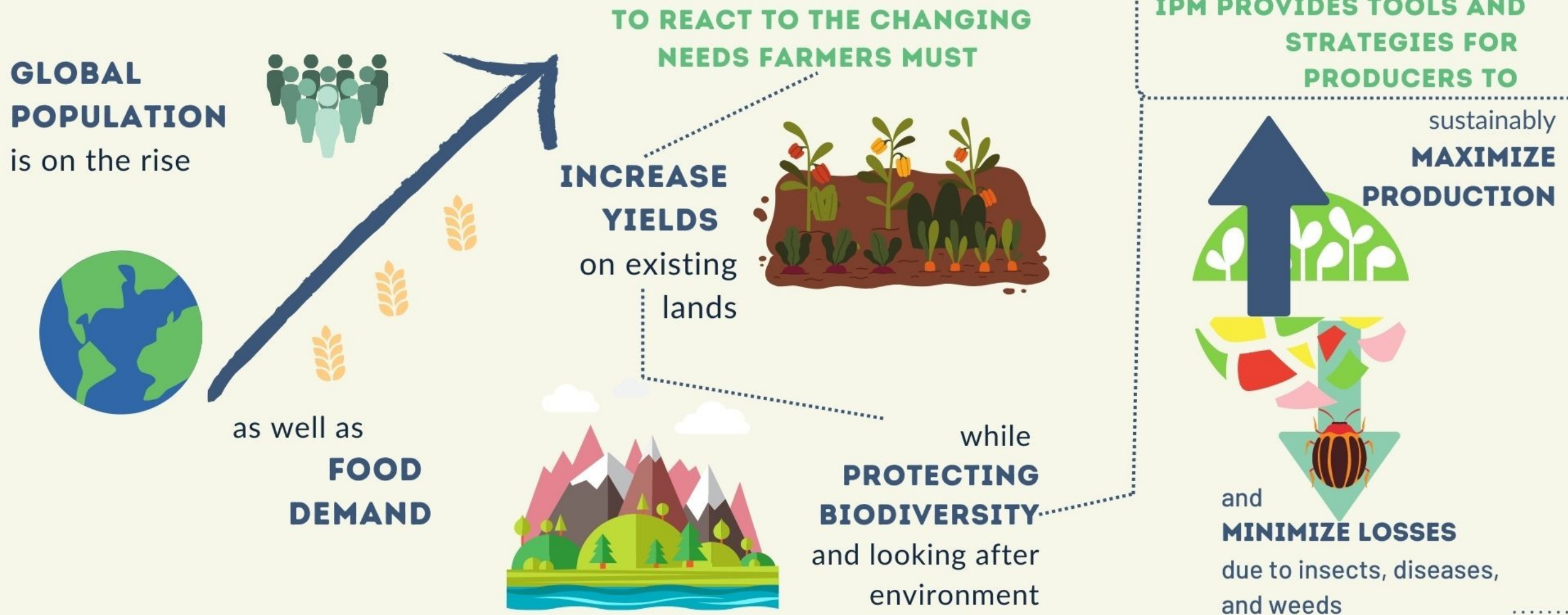
- supporting governments in regulating pesticides
- strengthening inspection and control systems as well as regulatory frameworks to assess, ban or discourage the use of the most toxic pesticides (HHPs)
- building farmers' capacities in more than 100 countries in integrated pest and pesticide management
- improving their food security and livelihoods and raising awareness about risks of chemical pesticides as well as of effective and low risk alternatives.



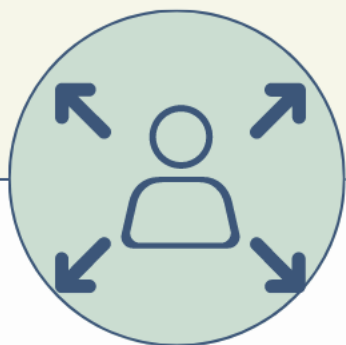


INTEGRATED PEST MANAGEMENT

IPM is a holistic approach to sustainable agriculture that focuses on managing insects, weeds, and diseases through a combination of cultural, biological, and chemical measures that are cost-effective, environmentally sound, and socially acceptable. This includes the responsible use of crop protection and plant biotech products.



FAO'S ROLE IN THE PROMOTION OF IPM IN THE REGION



Capacity development

Collaboration with governments and NGOs
Farmer Field School (FFS)
Trainings
Knowledge materials



Promotion

Ecological approach
Environmental protection,
Health, and safety of farm households
Sustainable use of natural resources



Evidence generation

Establish scientific networks
Develop trials and demo plots
Collect and analyze local
Information on different tools and approaches



Policy support

Review of the legal framework
Development of recommendations
Support of development of regulations and policies

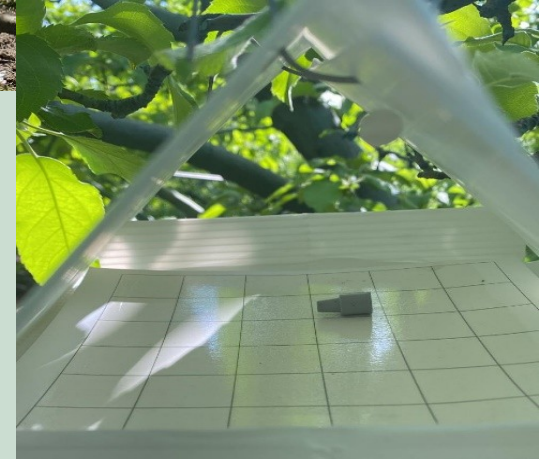
Case study in Türkiye 2020-2022 on pesticides reduction through IPM practices in apple orchards

Comparison trials in research apple orchard in 2020

- Conventional production – IPM – Organic Farming

On farm trials in 2021-2022

- In total 46 producers involved in Isparta region
- 90 ha under IPM production
- Advisory services on weekly basis
- 160 farmers trained on IPM
- Main target apple codling moth and apple scab
- Pheromone traps
- Pheromone dispensers



Case study results

- Average number of spraying in apple against codling moth 12-13 applications per vegetation period
- With trials decreased to on average 4-5 applications per vegetation period
- Pesticide use reduced by 70 % on average, with some farmers not using pesticides anymore
 - advisory services
 - forecasting
 - biological protection



On farm trial results						
	number of pesticide applications/ vegetation period	No pesticides applied	3 pesticides application	4 pesticides application	5 pesticides application	13 pesticides application
Fruit type	Table fruits total	55000 kg/ha	60000 kg/ha	70000 kg/ha	70000 kg/ha	68000 kg/ha
	Juice fruits total	5000 kg/ha	4160 kg/ha	5000 kg/ha	10000 kg/ha	7000 kg/ha
	Yield per hectar	60000 kg/ha	64160 kg/ha	70000 kg/ha	80000 kg/ha	75000 kg/ha
	Total expenses/ ha	3650 TL/ha	6020 TL/ha	6810 TL/ha	7600 TL/ha	10270 TL/ha
	net profit/ ha	165 100 TL/ha	177 100 TL/ha	206 940 TL/ha	209 900 TL/ha	199 730 TL/ha



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Thank you for your attention!

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<https://www.fao.org/in-action/pesticides-central-asia/en>



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SUE'S APPLE ORCHARD



GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET