

# Stewardship measures to protect pollinators on farms



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*Insect pollinators, such as honeybees, wild bees, wasps, butterflies, flies and others, globally offer a high value pollination service estimated to € 150 bn annually.*

**Over 75% of food crop types depend, to some extent, on insects and other animals for pollination, which leads to higher yields and/or quality.**

*Plant Protection Products (PPP) play a crucial role in controlling pests, weeds and diseases on farms, ensuring high productivity. Treated areas can have flowers in bloom attracting pollinators.*

*The number and attractiveness of flowers available as well as the seasonal occurrence of insect pollinators impact on the time and frequency of their visitation. Honeybees usually look for flowers to forage far from their hives. Wild bees and other pollinators tend to remain closer to the relevant nesting area.*

*Most PPP can be used safely around pollinators, provided that the following principles are followed by farmers, contractors and good communication exists with beekeepers.*

## Stewardship Measures Checklist



**1** Carefully read and follow the label for precautions



**2** Timely cooperate and communicate with stakeholders



**3** Implement Integrated Pest Management (IPM)



**4** Implement PPP stewardship

# 1 Carefully read and follow the label for precautions

- If a PPP is potentially harmful to honeybees, the product label will report precautions to be implemented during application. For example, application may be forbidden when crops or weeds are in flower to protect bees that are foraging in the area.
- Indications on bees and other pollinators or a bee hazard icon can be found in the following label sections: Environmental Hazards, Directions for Use and the Protection of Pollinators box.



# 2 Timely cooperate and communicate with stakeholders

## Farmer/Contractor-PPP Applicator

- Share your PPP application program with beekeepers.
- Advise beekeepers on the best hive locations in the area.
- Notify beekeepers 48 hours before PPP applications.
- Before insecticide applications, remove any flowering weeds.
- Provide forage in non-crop areas (e.g. fallow land, flower field margins) and use cover crops to support bees and other pollinators.
- Contractors should always check for locations of forage and water bodies that may attract pollinators and notify beekeepers in collaboration with their customer before applications.

## Beekeeper

- Collaborate with landowners to select the best locations for hives where they can be easily seen.
- Exchange contact information with landowners.
- Cooperate when notified of upcoming applications.
- Comply with local beekeeping regulations.



# 3 Implement Integrated Pest Management (IPM)

- Effective IPM programs include practices aimed at pest control while minimizing risks to pollinators and other beneficial insects.
- PPP applicators must use the recommended labeled rates, the proper timing and method of application.
- Decision making for PPP application using monitoring/ economic thresholds and precision application techniques can optimize spraying programs and minimize risks for pollinators and beneficial insects.



# 4 Implement PPP stewardship

## General practices

- Select products that are effective against pests and safe for pollinators, in consideration of the relevant mode of action, formulation and application method (i.e. foliar vs. soil vs. seed treatment).
- Fine-tune method and application timing to maximize effectiveness and minimize risk to pollinators. For instance, applications in the evening or at nighttime would minimize exposure for pollinators that are generally active during the day.
- Place treated seeds into soil at proper depth to mitigate potential exposure to pollinators, birds and mammals.



## Minimize spray drift

- Establish no-spray zones (buffers) between treated areas and pollinator habitats or hives.
- Before applications, check weather forecasts and comply with PPP label requirements regarding application conditions, like temperature, relative humidity, wind speed and direction.
- Keep the sprayer calibrated with the right nozzle output and pattern.
- Stop spraying when making turns at the end of fields or at gaps in the crop.
- Minimize speed (<10 kmph) and adjust boom height ( $\leq 50$  cm) to maximize spray deposition.
- Use low-pressure or low-drift nozzles and consider using drift-retardant agents to mitigate drift.
- Shut off sprayer when getting near to water resources (e.g. ponds, irrigation ditches) as they may be used by insect pollinators. PPP labels often indicate mandatory no-spray zones to protect water bodies.
- Consider precision application technologies to mitigate the risk of drift.

## Minimize dust of seed treatment material

- Remove plants in flower in and around the field before sowing.
- Use seed-flow lubricants to significantly reduce dust.
- Only use quality treated seed free from excessive dust.
- Do not release dust from seed treatments into the air when opening and filling seed containers, emptying or cleaning the sowing equipment.
- Always check wind speed and direction to avoid off-site movement of dust during sowing.
- Consider deflector technologies to reduce dust.





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