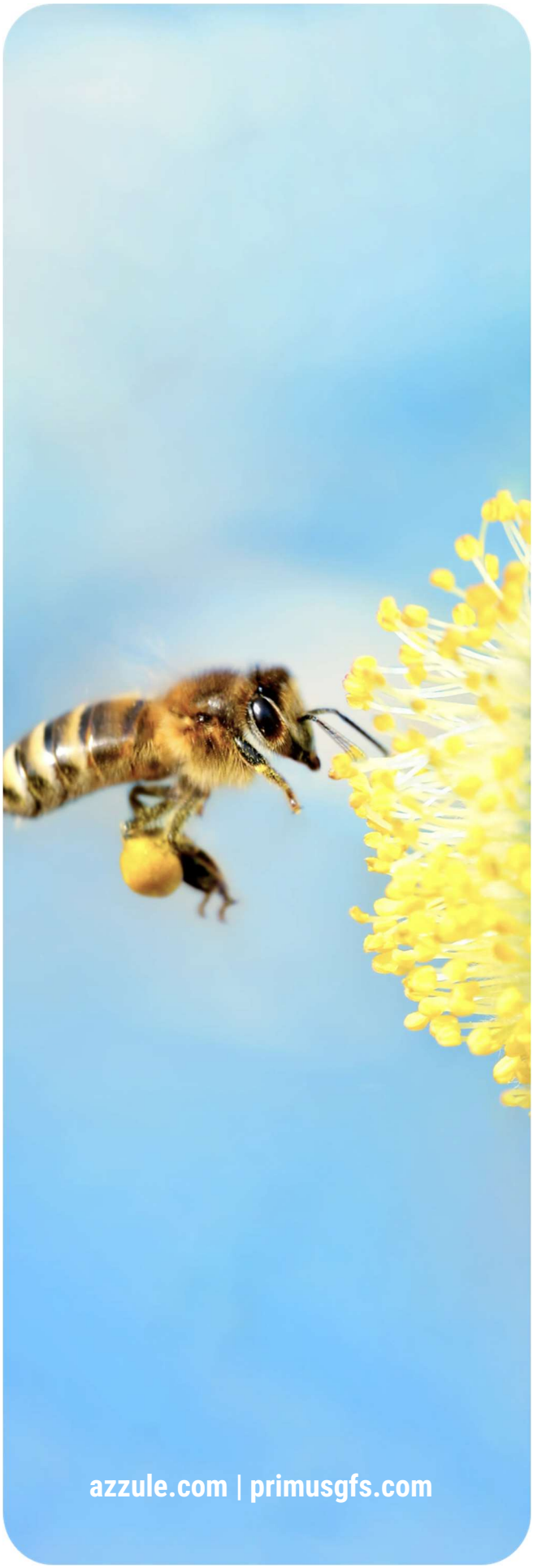
PrimusGFS v3.2

Module 9 - IPM Practices

Interpretation Guidelines

2023

Module 9 - IPM Practices is an optional add-on to the PrimusGFS certification for Farm and Indoor Agriculture operations. It is designed to verify the implementation of Integrated Pest Management (IPM) practices and communicate efforts to any interested customers. The questions in Module 9 are independent from the food safety criteria within PrimusGFS and does not influence the overall audit score; instead, it serves to enhance the comprehensiveness of the audit.



azzule.com | primusgfs.com

PrimusGFS Module 9 – IPM Practices

9.01.01: Does the operation have a documented integrated pest management (IPM) plan?

The operation should have a documented IPM plan in place establishing best practices and processes to identify and manage key pests and pest damage while minimizing risks to the environment. The plan should include a description of the practices used to identify and manage key pests, prevent disease buildup and delay the onset of pesticide resistance; how a qualified person identifies and monitors relevant key pests, diseases and weeds, and uses action thresholds or economic thresholds to avoid the routine application of pesticides, prioritize the use lower risk products, and to justify these decisions to management. The plan should also include science-based, industry-based best management practices to protect pollinators and attract beneficial insects such as managing apiaries, planting/maintaining forage areas around fields, etc.

Interpretation: Integrated Pest Management (IPM) is a science-based approach to managing key pests through a combination of biological, cultural, physical, and chemical methods to reduce pest damage while minimizing risks to human health, beneficial and non-target organisms (e.g. pollinators), and the environment. A documented IPM plan will be reviewed, including best practices that have been identified to manage key pests and pest damage while minimizing risks to the environment. Description of practices may include: crop rotation (not planting the same crop family back to back), wind breaks/untreated buffers that include natural habitat for beneficial insects, documenting scouting reports, documenting target pests and disease for justification of spray, documenting start time and end time on applications to show they were made when pollinators are not at their most active, documenting weather data to show that applications were made during calm winds to eliminate drift risk and evidence that shows pesticides used are low risk to pollinators where possible. Buffer zones should be maintained with an understanding that pollinators should be close to the field in order to increase their beneficial impact.
It is important to note that the examples of practices that can be included in the IPM plan provided above are not an exhaustive list. The plan should be tailored to the specific operation, taking into account the region-specific pest pressures, crop types, and environmental considerations.

https://pesticidestewardship.org/wp-content/uploads/sites/4/2016/07/NAPPC.pesticide.broch_.Applicators17.pdf
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8933324/
https://ipm.ucanr.edu/what-is-ipm/
https://www.epa.gov/safepestcontrol/integrated-pest-management-ipm-principles

Exceeds Compliance:

- The operation has a documented integrated pest management (IPM) plan in place. The plan establishes best practices and processes to effectively manage key pests and minimize risks to the environment and pollinators. It demonstrates a thorough understanding of identifying and monitoring key pests, diseases, and weeds, and includes well-defined action thresholds or economic thresholds to reduce routine pesticide applications. The plan incorporates three or more practices used to prevent key pests from damaging the crop. The plan also includes strategies to delay the onset of pesticide resistance, ensuring the long-term effectiveness of pest management measures.

Total Compliance:

- The operation has a documented integrated pest management (IPM) plan in place. The plan establishes best practices and processes to effectively manage pests and minimize risks to the environment and pollinators. It demonstrates a thorough understanding of identifying and monitoring relevant pests, diseases, and weeds and includes well-defined action thresholds or economic thresholds to reduce routine pesticide applications. The plan incorporates two practices used to prevent key pests from damaging the crop. The plan also includes strategies to delay the onset of pesticide resistance, ensuring the long-term effectiveness of pest management measures.

Non-Compliant:

- The operation does not have a documented integrated pest management (IPM) plan in place, or the plan does not meet the necessary requirements. There is no clear framework for managing key target pests and minimizing environmental risks; the operation may rely heavily on routine pesticide applications without adequate monitoring or use of action thresholds or economic thresholds. There are less than two practices documented to prevent key target pests from damaging the crop, compromising the ability to effectively manage pests and reduce reliance on pesticides. Additionally, there is a lack of attention to pesticide resistance, posing risks to the long-term viability of pest management practices.

9.01.02: Does the operation have evidence of implementation of IPM practices?

The operation should have evidence that a proactively managed IPM plan is in place. There should be records of regular crop inspections by a qualified person who understands the identification, biology, and monitoring methods for relevant pests, diseases and weeds. Monitoring results are used in conjunction with economic or action thresholds to inform management decisions and avoid the routine application of pesticides. There should be documented evidence of non-chemical pest prevention and control methods used (cultural, mechanical, physical or biological) e.g., crop rotation, the use of pest-resistant varieties, physical removal, physical barriers, mechanical devices, etc. (e.g., sticky traps, pheromone

traps, rodent traps, nets, screens, etc.). as the operation should implement and have evidence of practices to delay the development of pest resistance to pesticides (untreated buffers/refuges, alternating pesticides with different modes of action [MOA], crop rotations, etc.). Current licenses/certifications for in-house or contracted pest control advisers (PCAs), certified crop advisers (CCAs), certified professional agronomists (CPAgs) or other individuals involved in the implementation of the IPM plan can be reviewed as a method of qualification review. Evidence regarding the qualifications of staff involved in pest scouting and/or pesticide applications may also be addressed in question 2.10.08 or 3.11.08.

Interpretation: The intent of this question is confirm the implementation of IPM practices outlined in the operation's IPM plan through associated records/documentation. Evidence of compliance can include crop rotation documentation, ongoing (throughout the season) scouting reports from a qualified individual, evidence of sticky traps, pheromone traps, etc. and their inspections / how many bugs were captured. Documentation supporting pollinator protection practices may include communications with beekeepers prior to pesticide applications to move/protect colonies, decisions to avoid applications between 8:00am and 5:00pm when pollinators are most active, use of pesticides that are low-risk to pollinators, etc. It is important to note that the examples of practices that can be included in the IPM plan provided above are not an exhaustive list. The plan should be tailored to the specific operation, taking into account the region-specific pest pressures, crop types, and environmental considerations.

https://pesticidestewardship.org/pollinator-protection/
https://ipm.ucanr.edu/agriculture/
https://www.epa.gov/pesticide-registration/slowing-and-combating-pest-resistance-pesticides
https://pesticidestewardship.org/resistance/insecticide-resistance/take-steps-to-avoid-insecticide-resistance/
https://ipmdata.ipmcenters.org/

Exceeds Compliance:

- The operation demonstrates implementation of IPM practices by providing documented evidence of a proactively managed IPM plan. There should be records of regular crop inspections conducted by a qualified person, who identifies and monitors relevant pests, diseases, and weeds. The operation showcases a strong commitment to sustainable pest management and pollinator protection through a reduced reliance on chemical interventions. Implementation evidence to address the following is available for review:
    - Use of action thresholds to avoid routine pesticide application
    - Documentation of two or more non-chemical control methods
    - Two or more practices used to prevent key pests from damaging the crop
    - More than one strategy to delay pesticide resistance.

Total Compliance:

- The operation provides evidence of implementing an IPM plan through regular crop inspections conducted by a qualified person, who identifies and monitors relevant pests, diseases, and weeds. The operation demonstrates a commitment to sustainable pest management practices including practices that support pollinator protection. Implementation evidence to address the following is available for review:
  - Use of action thresholds to avoid routine pesticide application
  - Documentation of at least one non-chemical control method
  - Documentation of two practices used to prevent key pests from damaging the crop
  - At least one strategy to delay pesticide resistance.

Non-compliant:

- The operation lacks sufficient evidence of implementing an IPM plan. There may be a lack of records for regular crop inspections conducted by a qualified person or lack of implementation evidence for the following:
  - Use of action thresholds
  - Non-chemical control methods
  - Pest prevention practices
  - Strategies to delay pesticide resistance

9.01.02a: Does the operation monitor the effectiveness of non-chemical control methods used?

The operation should monitor the effectiveness of implemented non-chemical control methods and there should be information for how the implemented non-chemical control methods manage pests.

Interpretation: Descriptions of implemented non-chemical control methods should be available with supporting evidence (e.g. planting records of pest-resistant varieties, crop rotation records, debris removal to prevent pest harborage, modification of the crop environment to make conditions unfavorable to pests and diseases, use of predatory/beneficial insect species, etc.). Pesticide applications can be reduced through the effective implementation of non-chemical controls, but can be used when pest activity is high and exceeds action thresholds.

Exceeds Compliance:

- The operation maintains a system to monitor the effectiveness of all implemented non-chemical control methods, with a goal to reduce pesticide use while maximizing pest management effectiveness.

Total Compliance:

- The operation has some measures in place to monitor the effectiveness of non-chemical control methods.

Non-compliant:

- The operation lacks evidence for the effectiveness of non-chemical control methods.

9.01.03 Does the operation assess pesticide risk?

The operation should assess pesticide risk to humans, pollinators, and other non-target species. Decisions should be made to prioritize the use of lower risk products when possible or decisions in general leading to a reduced reliance on pesticides.

Interpretation: The operation should be able to provide details regarding pesticide risk for any products applied (e.g. US EPA tiers for pesticide risk).

Exceeds Compliance:

- The operation demonstrates a comprehensive approach to pest management with clear documentation showing the assessment of pesticide risk, including the evaluation of potential hazards, and the adoption of lower risk products and/or alternative strategies.

Total Compliance:

- The operation demonstrates an approach to pest management with documentation showing the assessment of pesticide risk and consideration of lower risk products and/or alternative strategies.

Non-compliant:

- The operation lacks evidence for the assessment of pesticide risk.

https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks
https://pesticidestewardship.org/wp-content/uploads/sites/4/2016/07/AA14500.pdf
https://pesticidestewardship.org/pollinator-protection/pesticide-toxicity-to-bees/
https://www.epa.gov/pollinator-protection/pollinator-risk-assessment-guidance

9.01.03a: Are pesticide applications tied to a documented justification?

The operation should have documented justification for any pesticide application. Justifications may include information related to pest populations exceeding action thresholds, favorable conditions to disease, etc.

Interpretation: Sticky traps to identify the presence of target pests, scouting reports with pest activity levels, or documented evidence of significant crop damage due to pests are some examples of justification to support the decision of pesticide applications to bring populations to manageable levels. Decisions should be linked to action threshold limits outlined in the operation's IPM plan.

Exceeds Compliance:

- The operation can provide well-documented justification for all pesticide applications. The documented justifications demonstrate a thorough understanding of pest populations, action thresholds, and favorable conditions for disease or pest outbreaks. The operation ensures that pesticide applications are only made when necessary, minimizing environmental impacts and promoting sustainable pest management.

Total Compliance:

- The operation maintains a practice of tying documented justifications for most pesticide applications. The justifications include information related to pest populations, action thresholds, favorable conditions for disease or pest outbreaks. Unnecessary pesticide use is avoided when possible.

Non-compliant:

- The operation lacks evidence of tying pesticide applications to documented justifications. Action thresholds for pests have not been considered.