Pest Management Decision-Making Prompts

Six Key Components of IPM

1. Prevention
2. Monitoring/Sampling
3. Identification
4. Thresholds/Tolerance
5. Management/Treatment
6. Evaluation/Follow-up

Pest Questions:

- *To ask yourself following pest identification*

- How does the pest affect the crop?
- How does the pest grow / What conditions does it prefer?
- How does the pest move around/spread?
- Where is the pest in the field?
- When is the pest active?
- What is the lifecycle?

Management Questions:

- *To ask yourself before looking at your management toolbox options*

- Which stage of the lifecycle are we most concerned about?
- Which stage of the lifecycle can be most easily targeted?
- How much of this pest is too much? How quickly does it reproduce/does it spread?
- When should management occur to be most effective?
- What challenges do you foresee in managing this pest in your growing situation?

Management Toolbox

Note: Don't get too stuck on the categories. Toolbox categories are meant to help you consider your options, some management tools can fall under multiple categories.

- Cultural - How can you design your growing system or plan your general operations to help decrease pest pressure?
- Physical - How can you physically exclude or remove the pest?
- Biological - How can you promote/enhance beneficial organisms?
- Chemical - Which products could you apply to control this pest?

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Management Ideas

- *A (non-exhaustive!) list of potential management options to draw from*

Cultural	☐ Rotation of crops from different plant families and/or strategic selection of crop type that enables breaking up the pest life cycle ☐ Transplanting (rather than direct seed) to advance/delay timing of plants entering field to avoid pest presence ☐ Transplanting to increase plant vigour upon field entry and increase tolerance to pest pressure ☐ Choose resistant or tolerant crop cultivars for the pest of concern ☐ Prevent spread of pests and disease by cleaning tools and field implements before moving on from a field of concern ☐ Work from the "cleanest" to "dirtiest" fields ☐ Promote plant vigour with good fertility and drainage management ☐ Purchase seeds and transplants from certified disease-free or reliable sources ☐ Plant headlands to buffer edge effects of pests entering fields ☐ Cover cropping to reduce bare ground ☐ Companion cropping with allelopathic plants to repel pests ☐ Companion cropping with crops that will outcompete weeds
Physical	☐ Hand removal of pests ☐ Removal of weeds that may serve as alternate pest hosts ☐ Removal of organic debris that is infected and/or may harbour pests ☐ Cultivation to bury or expose the pest ☐ Limited cultivation to prevent disturbance of buried pests ☐ Specifically-timed harvesting to keep exposure to pest low ☐ Remay/cloth as barriers over plants ☐ Mulching (living or fabricated) to smother ☐ Plastic cover to kill pests via solarization ☐ Insect fences for insects with specific flight behaviour ☐ Spreading diatomaceous earth as a barrier ☐ Irrigation and/or high water pressure to knock pests off plants or slow down the pest life cycle ☐ Mass trapping (pheromone, sticky cards, food sources) and removal of trapped pests ☐ Trap cropping with a "lure crop" to draw pests to a particular area: for more targeted control, where they won't reproduce as successfully, or simply to draw away from higher valued crop
Biological	☐ Companion cropping and/or pollinator strips with plants that will attract beneficial organisms ☐ Provision of a variety of nectar and pollen rich species (flowers available throughout the season) ☐ Green manures as fumigants in the soil ☐ Provision of available water sources during hot months for beneficial organisms ☐ "Natural" undisturbed borders to provide habitat to beneficial organisms ☐ Release of reared beneficials