

Insectary Plantings – How To

How to Choose the Plant Type and Method of Planting

If insectary plants are selected or planted haphazardly, the overall outcome for a crop or farm may not be optimal, or could even be negative.

It is therefore important to plan for the biological and farm management factors outlined in Table 1 when selecting an insectary plant type or method.

For more detailed comparisons of insectary plant types and planting methods, the selection can be fine-tuned to the existing system by assigning a rating and/or relative importance to each one of the factors.

If any of the answers to the questions in the table are not available from the onset, they may have to be obtained with on-farm experimentation if the risk is unknown.

Table 1. Factors to consider when designing insectary plantings.

Timing of flowering	<ol style="list-style-type: none"> 1. Will the floral resources be present when needed? 2. Will the flowers attract beneficials <i>away</i> from desired predatory or pollination activities at certain times?
Characteristics of the beneficials	<ol style="list-style-type: none"> 3. What is the relative preference that key beneficial and pest species have for the flowers? 4. What are the different requirements for nectar, pollen, shelter, and alternate hosts food among these organisms? 5. What are the relative foraging ranges and dispersal abilities of these organisms? (see adjoining poster on 'scale considerations for insectary plantings')
Agronomic considerations	<ol style="list-style-type: none"> 6. How competitive are the plantings with the crop or other weeds? 7. Do the plantings have the potential to be weeds, or harbor weeds in the system? 8. Can the plantings serve as an alternate host for crop disease? 9. Are the plants toxic to any livestock or other local animals?
Economic & Management considerations	<ol style="list-style-type: none"> 10. Can the planting be harvested as an additional crop? 11. What are the costs of seed, establishment, and maintenance? 12. How do these costs compare to other management options? 13. Are plantings compatible with the main pest management plan?

How to Assess the Effectiveness of Insectary Plantings

It is then necessary to assess the effect of these plantings in order to justify their continued use, as well as to fit them within the overall farm plan.

After learning how to identify the main pests and natural enemies, compare potential differences between the number of pests and natural enemies that:

- 1) visit the plantings
- 2) appear in crop areas near the plantings
- 3) appear in crop areas away from, or without plantings
- 4) visit other farm areas that may contain resources or habitat

Other Considerations:

- A) Learn about the biology of the organisms to know:
- when and where to monitor
 - which natural enemies act on which pests
- B) Keep accurate records and a written description of the methods used each time so that comparisons between dates can be made
- C) Keep track of other factors that can affect pests and natural enemies and note these on sampling records.
- D) Visual observation works well, other appropriate sampling methods vary by plant and organism, and you may need to consult a manual or an expert for these.