

## **Beetle Bank SARE grant**

*Questions and answers for pre and post survey to gauge knowledge of organic pest management and beneficial insects in small scale organic vegetable production, before and after education and maintenance of beetle banks. Conducted in spring and fall 2020, with 3 participants.*

### **Questions:**

- 1: What does IPM stand for, in the context of agriculture?
- 2: What does the term “pest” mean, in the context of agriculture?
- 3: What does the term “beneficial insect” mean, in the context of agriculture?
- 4: What percentage of insects in a typical organic farming operation are considered “pests”?
- 5: Name a pest(s)? And a beneficial insect(s)?
- 6: Name a farming practice(s) that can be followed to promote beneficial insects?
- 7: Name a farming practice(s) that can harm beneficial insects?

### **Initial responses:**

- 1: a) important practices and materials  
b) \_\_\_ pest management  
c) irrigation, plants, and \_\_\_\_
- 2: a) a bug that eats vegetables  
b) something that damages crops  
c) bad bugs
- 3: a) -  
b) a good bug that eats bad bugs  
c) pollinators
- 4: a) 95%  
b) 50%  
c) 75%
- 5: a) wasps / bees  
b) \_\_\_ / bees & butterflies  
c) \_\_\_ / honeybees
- 6: a) -  
b) not using pesticides

c) growing organically

7: a) -

b) using pesticides

c) not growing organically

**Secondary responses:**

1: a) integrated pest management

b) integrated pest management

c) integrated pest management

2: a) a crop damaging insect or animal

b) a bug or animal in a growing system that causes harm to a crop and must be managed

c) bug or animal that causes crop and economic damage

3: a) predators & pollinators that don't damage vegetables

b) an insect that helps to control pests in a growing system

c) a "good" bug that helps control "bad" bugs

4: a) conservative estimate less than 3%

b) thought to be less than 3%, a tiny amount, vast majority are beneficial

c) 3% or less, some estimates 1% or less

5: a) potato beetles, cabbage loopers / parasitic wasps, pollinators, native beetles

b) aphids, Japanese beetles, tomato hornworms / ladybugs, lacewings, praying mantis

c) Japanese and potato beetles, aphids, hornworms / native bees and beetles, spiders, wasps

6: a) not spraying, planting native flowers and grasses, planting beetle banks

b) not using pesticides, not tilling, planting flowers that attract them

c) using regenerative practices for soil health, planting flowers and habitat, leaving things "wild"

7: a) using pesticides and herbicides

b) using sprays, tilling, not having biodiversity

c) spraying pesticides, monocropping and no diversity, clearing overwintering habitat in the fall