



# BEAN PESTS

Created by All Farmers, CT River Valley, MA

## Summary

Shell beans are an important crop to farmers, but (and because of how much they are grown) they face significant pest pressure on the farm. We worked with our local extension agent to put together accurate, useful, and accessible organic management options for the two most important pests on our farm: Mexican bean beetle and leaf hopper.

## Who made this guide?

This teaching resource was developed by All Farmers, and enhanced in collaboration with the Institute for Social and Economic Development (ISED). From 2015-2017, ISED partnered with refugee farmer training programs throughout the country to support the design of new and shareable teaching resources for culturally and linguistically diverse farmers. To access the whole list of newly developed teaching resources for refugee farmer training program, follow this link to New Entry's ['New American Resource Library'](#). For more in-depth explanations of the teaching approaches and activities used in these materials, you can refer to this [Refugee Farmer Teaching Handbook](#).

Audience (TA or Tot)	TA (Technical Assistance for farmers) and indirect ToT
Language and Literacy Level	Best suited for mid-high literacy levels
Farmer Experience	Some experience
Pre-Requisites	Better if they have first-hand experience with these pests already. Farmers choosing to use pyganic will need additional training.
Region or Climate	Massachusetts (pest life cycle dates can be modified to fit other climates). In some climates, the pests do overwinter and mosquito netting won't help.
Program Structure	Any
Season	Early spring
Time	<ul style="list-style-type: none"> <li>• Pre-coordination with extension agent (if you're working with one)</li> <li>• ½ hour intro workshop</li> <li>• 45 min follow-up TA</li> </ul>
Staff and Interpreters	Teaching staff and/or outside extension agent, Interpreters
Additional Supplies Needed	<ul style="list-style-type: none"> <li>• Printed pest guides</li> <li>• Demo supplies (optional): insect netting &amp; hoops, backpack sprayer</li> </ul>
Background Material	Most extension office materials are wordy, use difficult language, and may be difficult to follow sequence of steps. We used these pest guides first to train extension agents how to communicate better with ELL/low-literacy farmers, and then to teach farmers.

## TEACHING MATERIALS INCLUDED

1. Bean pests sheet 1: Mexican bean beetle on shell beans
2. Bean pests sheet 2: Leaf hopper on shell beans



## CORE SKILLS IN THIS LESSON

- Pest identification
- Pest management

## SUGGESTED TEACHING METHODS

### *Sequencing and matching*

- You can have farmers match the pest in various life stages to the control method they should use at each stage. This can be done with pictures, discussion or written words depending on farmers' language and literacy levels.

### *Realia*

- This strategy simply suggests that if you are in season, the best way to teach about this pest problem is to show live specimens (at any stage of the life cycle) and to show application of control methods in the actual field. If you have bean plants that are currently infested you can bring farmers to the plant or bring the plants to them, or pick off live specimens to use in your lesson.

### *Reflection questions*

- Questions you can ask farmers to start the conversations: "Have you seen these pests in the field?" "What methods have you used?" "Have you used organic pest sprays before? Which ones?" "What seemed to work in the past?" At the end, the important reflection question will be "What is your plan, what organic pesticides will you use?"

### *Oral drills*

- This is essentially a vocabulary activity you could add to make sure farmers are able to communicate with staff about the pests in their fields. You could point to the pictures in the guides and ask farmers to name the pest. Make sure each farmer is able. Name the different methods you can use (prevent: plant early, wasps, spray).
  - Vocabulary: Mexican Bean Beetle (or just bean beetle), release wasps (or just wasps) Surround, pyganic, leafhopper, row cover

## TEACHING TIPS

These guides were originally used as part of a presentation and TA session with a local extension educator. The extension agent came to teach the farmers and used these guides as the framework for her talk. We asked farmers to decide on a collective action plan that would work for them, based on the information they had just learned. The extension agent is going to return when the pests are active to give hands-on training to the farmers on how to scout for pests, check their management methods, and troubleshoot any problems.

Some variations could be:

1. Turn the guides into a ppt, or into different pictures or cards to represent the different management strategies. Lower literacy farmers can use these cards to describe their own management plan going forward.
2. Add in or remind farmers of the Prevent-Look-Act approach to pest management.
3. Allow time to help farmers make their own plan! Farmers can name their plan, write it down, or point to different management pictures to demonstrate what they plan to do, depending on their language and literacy level.