# Final Japanese Beetle (JB) Science Advisory Panel (SAP) Recommendations

*In Response to Questions the SAP was Asked to Consider*

**DETECTION**:

1. Deploy all detection traps annually by May 15:
   - **A)** If there is an official JB sample submitted/collected and verified before May 15, trapping can start at that time.
2. First inspection date is June 1, or two weeks after initial deployment.
3. Trap removal/final inspection date is mid-September, unless:
   - **A)** The last inspection yields a positive JB sample, in which case limited delimitation and visual survey occur.

**DELIMITATION**:

1. Maintain current delimitation strategy:
   - **A)** 49-25-5-5 delimitation trapping array:
     - **1)** Maintain flexibility to increase trapping density.
2. More intensive visual surveys for adult JB may take place at the discretion of program officials:
   - **A)** No visual larval surveys.

**ERADICATION TRIGGER**:

1. Maintain the current eradication trigger:
   - **A)** Two adult JB detections within three miles of each other and within the same year, or;
   - **B)** One larva, pupa, egg.

**ERADICATION RECOMMENDATIONS**:

1. Ground treatments:
   - **Primary**: Chlorantraniliprole (Acelepryn®)
   - **Secondary**: Imidacloprid (Ex: Merit®)
   - **Tertiary**: Thiamethoxam

   - **A)** One application per year, according to label instructions:
     - **1)** Treat 200 meter radius centered over every confirmed find site.
     - **2)** Treat vegetated areas, according to label.
2. Foliar treatments:
   - **A)** Suspend foliar treatments in residential areas unless an official, confirmed, live, adult JB is collected from anywhere other than a trap:
     - **1)** Foliar treatments – when deemed necessary – may be used in high-risk, non-residential areas, according to the product label(s).
   - **B)** Products – Cyfluthrin, deltamethrin (or chlorantraniliprole when feasible).
   - **C)** When live adult JB detected treatment will occur bracketing JB peak flight according to phenology model and previous trapping history (200 meter radius).
   - **D)** Eliminate host list.

**TRAINING RECOMMENDATIONS**:

1. Training to identify adult JB feeding damage.
2. Identification of appropriate application sites.

# Other Japanese Beetle Science Advisory Panel Recommendations

**OUTREACH RECOMMENDATION**:

1. Notification Recommendation:
    - **A)** 60 day official notification of affected properties:
        - **1)** Provide general treatment area information, product information, treatment preparation guidelines, specific contact information, and links to additional resources, such as the Notice of Treatment (NOT) map.
        - **2)** Public Information Officer to accompany every treatment crew or provide each treatment crew with a card detailing contact information for the CDFA Public Affairs Office.
        - **3)** Information should be posted online and made available through social media platforms.
        - **4)** 72-hour pre-treatment notice - follow system similar to Healthy Schools Act.
        - **5)** Threat and opportunities analysis to provide more information about our treatments.

**TRAINING RECOMMENDATIONS**:

1. Identification of native bee nesting sites.
2. General Pesticide Safety Training:
    - **A)** Aim to reduce drift.
    - **B)** Ensure appropriate equipment is being used so as to maximize efficiency and efficacy.

**RESEARCH RECOMMENDATIONS**:

1. Gut analysis of JB adults to identify host plants they are feeding on.
2. Newly-detected adult JB will be subjected to stable isotope analysis to determine if it is an incipient infestation.
3. Development of genomic tools to determine population origins and movement-related Dynamics.
4. Evaluation of target-specific controls:
    - Mating Disruption
    - Evaluate Oxitec Sterile Insect Technique (SIT)
    - RNAi approaches
    - Evaluation of BTg products
    - Micro-encapsulated insecticides/formulations
5. Soil moisture monitoring to identify habitat suitability.
6. Pre/post evaluate treatment impacts on native pollinators.
7. Use I-R4 data to expand Acelepryn label to include JB adults.
8. Evaluate eDNA methods to detect larval JB in soil:
    - **A)** Environmental DNA methods – can analyze a soil sample to determine all the species of earthworms that have been through that soil.
9. Develop phenology model to better guide detection activities.