

Preamble to the IPM Criteria Document 12/09/14

For IR-4, an integrated pest management assessment tool can help evaluate the relative merits of projects, showing how each fits into an IPM approach.

The Western Integrated Pest Management Center and the Western Region IR-4 program worked together to address the need for IR-4 to formalize consideration of IPM as a factor in its selection of projects. The Western IPM Center spearheaded the development of the IPM Criteria Document, which outlines various IPM attributes – efficacy, economics, non-target effects, resistance concerns, environmental fate, and other IPM factors – along with affirmative, intermediate and negative criteria. This assessment tool has its origins in an EPA document titled “Pesticide Usefulness in IPM Programs: Inclusionary and Exclusionary Criteria,” which was shared through IR-4 Headquarters at Rutgers University as a possible basis for such a tool.

Not all projects will have information available to assess each attribute listed, but the criteria provide broad guidelines to assess possible pest management tools from a variety of perspectives and contexts. This document, although developed as a collaborative exercise between the Western IPM Center and Western Region IR-4, can apply to IPM decisions in general and we hope has value beyond this collaborative exercise.

We have provided two examples for purposes of showing how this IPM evaluation tool can be used to analyze candidate pesticides for IR-4 consideration. It would not be customary or expected that information would be supplied for each cell in the matrix. Green cells indicate good IPM compatibility; Yellow cells indicate intermediate compatibility; Red cells suggest a poor fit. The Situation: Safflower production in California is valuable to its producers but is keystone regionally to lygus seasonal dynamics, resulting in large influxes of lygus from safflower to cotton. Safflower is generally insensitive to lygus damage; however, a well-timed effective insecticide spray could limit or eliminate the role that safflower serves as a source of damaging lygus to cotton and other summer crops. In effect, this could change safflower from a source crop to a trap crop or effective regional sink for lygus. No good lygus insecticides are available for safflower. This is a cropping system problem not a crop centric problem; and as such an uncommon IR4 request. This is a request to address areawide dynamics of lygus, not protection of safflower per se. But safflower is a critical rotational crop for the area, mitigating compaction (biotillage effects), short enough season to allow field operations before next crop, drought tolerant, enhances soil condition / structure and salinity management, reduces soil borne pathogen load for cotton and tomatoes. We provide the analysis and comparison of two insecticides, sulfoxaflor and novaluron and their potential place in this safflower/cotton cropping system.