

Rufus Isaacs and John Wise

MSU Entomology and Trevor Nichols Research Complex

It is no secret that the availability of some insecticides for use in grapes has changed in recent years. The loss of Penncap-M and soon Guthion means the industry must take a two-pronged approach to keep a full "toolbox" of insecticide tools: we must defend the current registrations of effective products while also helping to develop new products. One component of the Grape Entomology Program at MSU is to support this industry by testing insecticides that are years away from registration, those that are soon to be registered, and those that have been registered for some time. The strategic insecticide screening program generates information to inform growers of the effectiveness of different products, and it provides very important data to support new registrations for grape.

With funding from National Grape Cooperative, the Wine and Grape Industry Council, and agrochemical companies, we have an ongoing research program based at the Trevor Nichols Research Complex to identify insecticides with potential activity against grape insect pests. Each year we test 10-20 different treatments against grape berry moth, Japanese beetle, etc. These results often stimulate chemical companies to register their products for use against grape insect pests in Michigan. However, the economic return from sales may not justify the huge expense of conducting residue studies for grape, and that's where the IR-4 program comes in.

IR-4 is a national organization set up to help minor crop growers get the pesticide tools they need to tackle their pest problems. Each year, we travel to the annual meeting where priorities are set for next years' residue trials that IR-4 will conduct. This meeting has hundreds of people from across the country all representing the interests of growers of crops from apples to zucchini. To get an A-priority at this meeting (guaranteeing that the residue trial will be done by IR-4) all the pieces of a puzzle must come together: we need to demonstrate the need, have evidence of effectiveness, have support from multiple regions where grapes are grown, and the manufacturer must support the registration. Without evidence of effectiveness, there is little chance of success. That is why grower support for this type of research is so important; without it we wouldn't be able to do the field trials to generate the results needed to argue for residue trials in grape.

In recent years, support from the grape industry has allowed us to generate results that we have used to argue successfully for IR-4 residue trials on Assail, Esteem, and SpinTor. These trials lead to setting of tolerances by EPA, decisions on the pre-harvest intervals, and finally registration of these products for use in grape. Still in the pipeline are Avaunt for berry moth and leafhopper control, and a higher rate of Assail for grape berry moth control in addition to its activity on leafhopper and beetles.

Without the IR-4 program and our strategic screening program feeding into it, many of the new insecticides would not be registered for use in vineyards. These new products tend to be more expensive and more selective than the conventional insecticides, but they are effective, tested in Michigan, and becoming registered for grape growers to use in their spray programs. With this program generating new registrations, and continued efforts by grower organizations to defend the use of products already registered, the grape industry will maintain a diverse toolbox of insect control options into the future.