Influence of Spotted-wing Drosophila on Insecticide Use in NJ Blueberries

Dean Polk
New Jersey Agricultural Experiment Station

Insecticide use programs for NJ blueberries have been historically based on the control of blueberry maggot and other key pests. Early-season pests have consisted of cranberry fruitworm, prebloom, and then plum curculio immediately after the bees are removed. This was usually followed by a single treatment for cranberry fruitworm, and 1-2 treatments for aphids. Blueberry maggot (BBM) usually emerges in early June, which triggered BBM management for the remainder of the growing season. Since BBM was often not found in every field, insecticides could be targeted to only those areas that required BBM treatments. In recent years, up through 2010-11, this meant that most spray schedules were based on targeted applications of reduced risk insecticides, including neonicotinoid and spinosyn products.

With the arrival of the spotted-wing drosophila (SWD) in 2011-12, these practices changed. SWD cannot be controlled with neonicotinoid materials. The insect has a very short life cycle, and numbers rapidly increase during the middle of the summer. The fact that there is no tolerance for larvae in the fruit has led to the repeated use of broad-spectrum insecticides. We collected grower insecticide use records for 8 farms between 2010 through 2013. A spray record analysis showed drastic changes in pest management practices resulting in increased number of applications, increased use of OP and carbamate materials, increased use of pyrethroids and spinosyns, and a decreased use of neonicotinoid materials. The number of applications increased by about 60%, and the amount of active ingredient more than doubled because of SWD presence. See Figures 1 and 2.

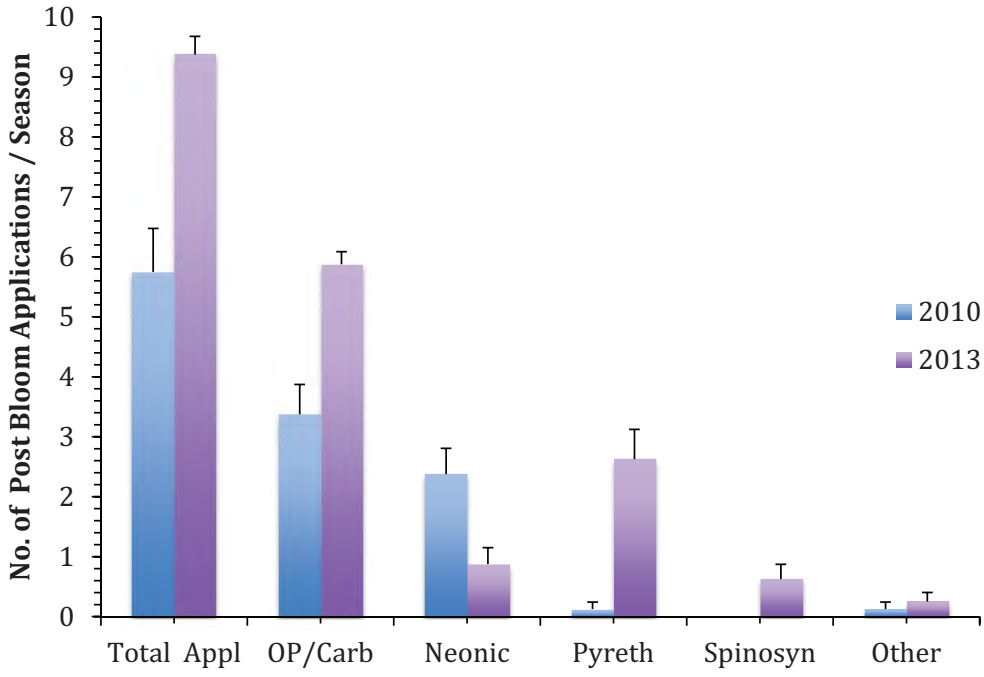

Figure 1. Change in the number of insecticide applications between 2010 and 2013.

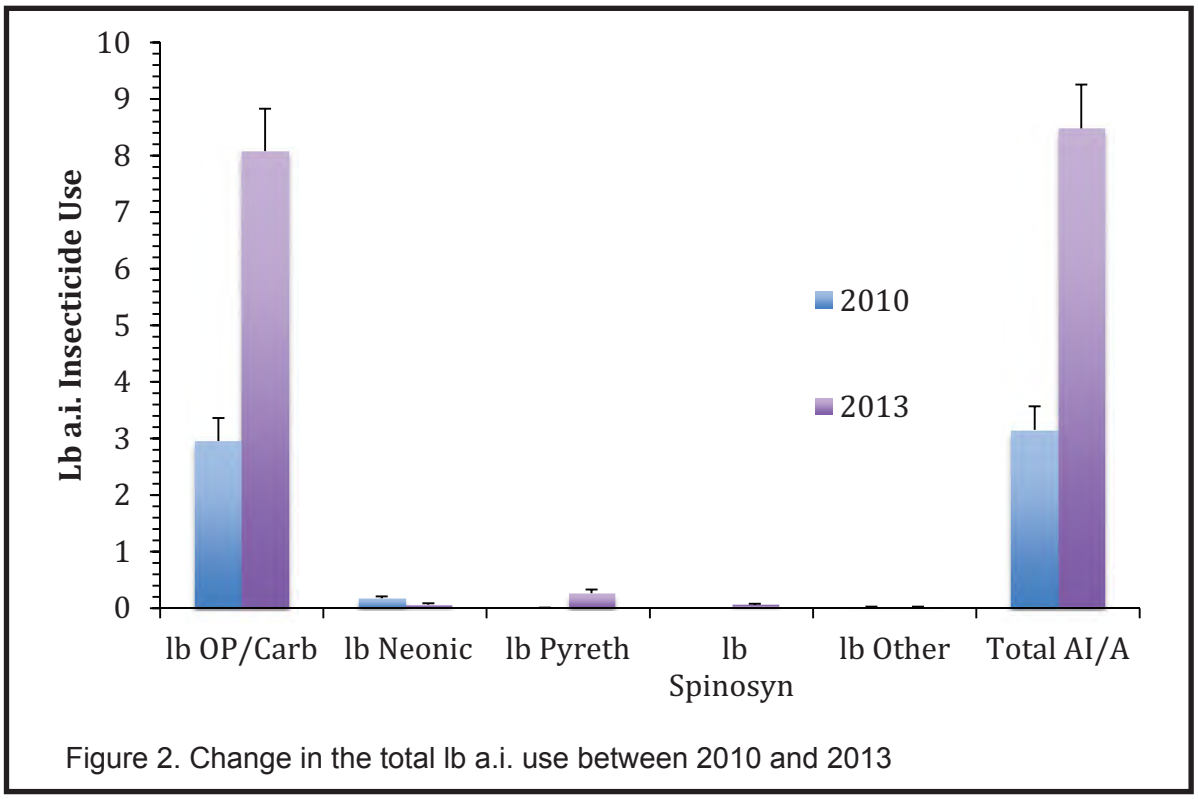

Figure 2. Change in the total lb a.i. use between 2010 and 2013

Call 800-435-8733 today for best selection.

Stark Bro's Nurseries & Orchards Co.

PO Box 398 • Louisiana, MO 63353 • 573-754-5111 • Fax 573-754-3701

StarkBrosWholesale.com