iPiPE Northeast Apple Crop-Pest Program (CPP)

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iPiPE is a USDA-AFRI sponsored Cooperative Agricultural Project to "change the culture in American agriculture to one of sharing agronomic pest observations and derivative information for the benefit of all stakeholders." The basis of iPiPE suggests "there is a critical need to develop a national infrastructure of professionals who routinely monitor crop health and pest incidence then share this knowledge enabling dissemination of mitigation measures to limit food security impairment." The iPiPE portal-website can be found at http://ipipe.org (Figure 1).

Figure 1. iPiPE website portal found at http://ipipe.org.

For 2017-18, we were funded to develop a Northeast Apple Crop-Pest Program (CPP) within iPiPE. Our mandate was to hire and mentor (about pest biology, scouting, and agriculture in general) undergraduate intern students (Figure 2) to work with the interns to enter Northeast apple crop pest and disease observations in the iPiPE database, and to perform outreach to educate our Extension colleagues, industry, government representatives, and growers about iPiPE.

Figure 2. UMass student intern Nicole Foley.

To that end, a pheromone trap network was set up in 13 apple orchards throughout Massachusetts that the interns checked on a weekly basis. Insect pests trapped included Oriental fruit moth, codling moth, obliquebanded leafroller, spotted tentiform leafminer, dogwood borer, apple maggot fly, and brown marmorated stink bug. Trap catch data were entered into either the iPiPE observation database or by using the IPiPE app on a smartphone (Figure 3). Interns also contributed to a weekly Intern Blog on iPiPE, and did other miscellaneous activities as required. For example, entering trap-catch data into a Google spreadsheet, and hand thinning

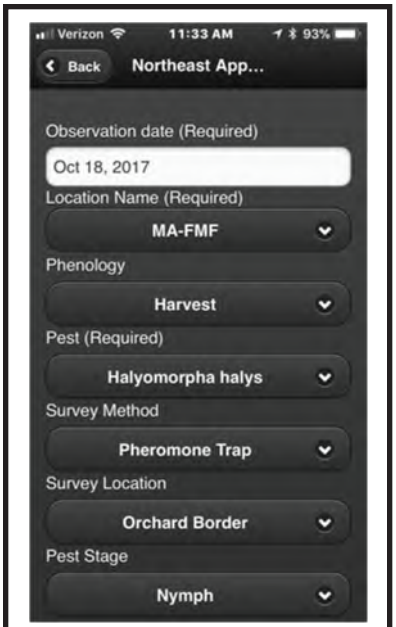

Figure 3. iPiPE smartphone app for entering field data.

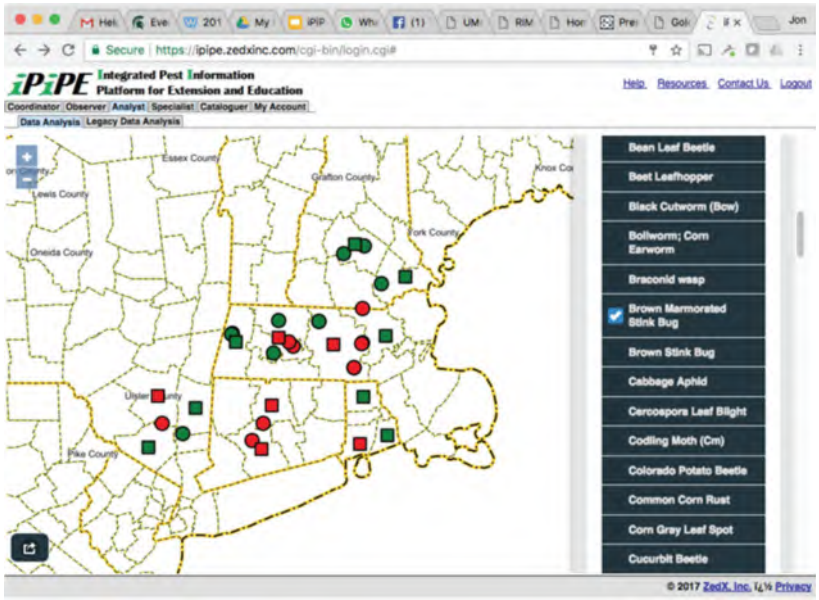

Figure 4. Brown marmorated stink bug (BMSB) regional trap catch data as depicted on iPiPE.

of peaches and apples. (Which was not their favorite activity!)

Although some effort was made at the end of the season to solicit brown marmorated stink bug trap-catch data from colleagues in New York, New Hampshire, Connecticut, and Rhode Island (Figure 4), otherwise little progress was made in soliciting cooperators outside of the iPiPE work we were doing in Massachusetts. One stumbling block, we feel, to getting more participation is the somewhat cumbersome user-interface presented by iPiPE, the time it takes to learn iPiPE, and that it is largely a duplication of already ongoing efforts. Also, disseminating trap-catch data and observations to the iPiPE Extension "public" Website was not fully explored. We will try to address some of these shortcomings in 2018, the second year of our Northeast Apple CPP funding, and recruit more participants and do a better job educating and relaying results. In the meantime, anyone can get an iPiPE account and record their own pest observations by visiting the iPiPE Portal at ipipe.org and clicking on Participant Website.

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