2022 LFICD Mosquito Season ~

Fall Newsletter

What a difference a year makes. As we compare the last six years of mosquito data, each year is very different. There is no way to predict what one mosquito season to the next will hold. Diligent mosquito larval surveillance followed up by weekly CDC Light Trap analysis tells us where to focus our energies for potential larvicide treatment.

Larval activity was low to moderate in early to late Spring. Light Traps yielded moderate numbers of adult mosquitoes from June to the middle of July and a sharp decline in August to September. Rain events promulgate hatches. But the rain accumulation must provide enough water to puddle and remain a puddle at least for 4-7 days for mosquito eggs to hatch and larvae to develop and eventually emerge as adults. If the puddles and/or floodplain dry up before the larvae can emerge, the larvae will die in the mud, grasses, or leaves. Mother Nature worked with us this year to prevent the need for larviciding. There was an average of 0.63" of precipitation per rain event over 14 recorded events from June to September with 1.7" being the largest amount recorded. These infrequent rain events significantly reduced upland and floodplain mosquitoes.

The LFICD purchased a new Maruyama Backpack Sprayer this year which can spray the same *Bti* granules we use for aerial treatment and cover 6-14 acres of treatable habitat at a time. The sprayer was put to the test in June in a section of the Cornwall Swamp. With the assistance of Judd Markowski, a little over 6 acres were treated with 98% effectiveness. While there are acreage limitations to the backpack sprayer, it will enable us to "stamp out fires" of concentrated larval activity throughout a season.

This year's field interns were graduates of UVM. Nicholas Steinthal and Arianna Morton contributed significantly to daily field operations and lab duties. Both Nick and Arianna helped fulfill the "Pesticide Resistance Monitoring" project as required by the State. They participated in outreach and education through our Annual LFICD Open House in July and served as representatives at the Addison County Fair & Field Days at a table provided to us through the Home and Garden Center in August. One hundred eighty visitors stopped by our Field Days table to talk about mosquito control. Unfortunately, we didn't get as many residents from our three towns as we would have liked.

Both interns gave power point presentations at the Vermont Agricultural & Environmental Lab which included 6 years of mosquito statistics. These statistics are presented using pie charts, graphs, etc. and are available at www.lficd.org. In addition, Middlebury College's Bill Hegman (Teaching Fellow) provided a GIS-Lidar Mapping Intern for the second year in a row. This was Phase II of the Lemon Fair River watershed mapping project which helped us identify areas of importance for larval surveillance and potential treatment. Yude "Alex" Xu was the Middlebury intern for this project and presented his data and maps at our LFICD Open House.

We continue to learn by focusing attention on potential treatment areas. This focus helps us treat smaller target areas with the Backpack Sprayer. Rarely do we get enough treatment acreage (i.e. 1,000+ acres) to bring in a helicopter service. Long term, we feel a treatment drone could be an effective tool for acreage greater than we can treat by hand, but less than helicopter minimums.

We are always open to visiting private properties and helping property owners assess potential mosquito breeding habitat and making recommendations on what can be done to reduce the impact of mosquitoes around their homes.

Lemon Fair Insect Control District