

ENTOMOLOGICAL NEWS



KANSAS DEPARTMENT OF AGRICULTURE—PLANT PROTECTION AND WEED CONTROL

WALNUT TWIG BEETLE/THOUSANDS CANKERS DISEASE SURVEY

A detection survey was conducted to survey for walnut twig beetle in northeastern Kansas. For 2017, thirty three sites in 12 counties were surveyed. The 12 counties surveyed were Atchison, Brown, Doniphan, Douglas, Jackson, Jefferson, Johnson, Leavenworth, Nemaha, Shawnee, Osage and Wyandotte. The survey entailed trapping 33 sites with 1 trap at each site in the 12 northeastern counties. The samples were collected weekly, which, made the samples cleaner and processing faster. No suspects were detected.

After several years of using the same trapping method, we are working to make changes to our trapping methods in 2018.

Currently we utilize a four tier Lindgren funnel trap with a wet cup containing a small amount of food grade propylene glycol for killing and preserving the specimens. Our current trapping methods has both pros and cons.

The propylene allows longer periods of time between trap checks and samples can be stored easily until processed. The downside is that rain can dilute the propylene glycol between trap checks and the sample degrades quickly. This is not good when looking for a beetle smaller than a rice grain. Conversely in extreme heat the propylene glycol evaporates and leaves no specimens in the cup. The propylene glycol makes for longer processing times for the samples. Also large wet insects need to have their wings spread to look for beetles trapped between wings. Wet leaves have to be checked thoroughly too. If we switch to a dry cup with a kill strip on the 4 tier Lindgren funnel trap we may achieve better collecting of specimens. Again there are pros and cons: Removing the propylene glycol speeds up placement and servicing the traps and samples do not mold or rot. Also samples

do not flood out of collection cup. We can then avoid misconceptions about propylene glycol. Samples are cleaner for PCR used to detect the fungus *Geosmithia morbida*. There are however downsides to using this method: Traps need to be serviced every 3-4 weeks to avoid spider predation. The samples are dry and prone to blowing in the wind so the collection cup needs to be emptied quickly into a plastic bag on the ground. There will be more insects to sort through but dry samples are easier to handle.

In addition to the dry cup method: We will use walnut bolts (supplied by Kansas Forest Service). When the trapping season is over the bolts would then be bought indoors to rear out beetles. Both the dry cup trapping and bolts with lures methods fit within the Thousand Cankers Disease Survey Guidelines.