Eastern Region Nursery and Greenhouse Program
Danny Lauderdale, Area Specialized Agent

Eastern NC Nursery News
July 2020

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Research Activity Update

Although my activity and movements have changed due to our current health situation and Extension policies, my research and demonstration efforts have not decreased significantly. I have collected a lot of data this spring and summer despite the situation. Unfortunately, I have not had time to deeply delve into the analysis of the data. However, I though I would take this space to share what I have been up to and include some teasers of the data you can expect to see presented here in the future and at future educational events over the next year.

European Pepper Moth:

I have trapped for European Pepper Moth (EPM) adults using pheromone baited delta traps at one nursery weekly from April 2019 through June 2020 in propagation houses, outdoor production, and one overwintering house. The trap data will be plotted in order to help understand the life cycle of this insect in NC container nursery production systems. Secondarily, insecticide treatment data for 2020 will be reviewed to see if a correlation to efficacy can be made from trap counts.

Future work is being considered to determine if any stage of European Pepper Moth is able to overwinter outdoors in NC.

Crape Myrtle Rabbit Tracks Nutritional Trial: RHFB damage on untreated Itea virginica.

A fertility trial including addition of NPK and/or micronutrients into propagation mix and potting mix is underway to see if this symptom can be prevented. At initial data collection symptoms seemed to be reduced using an immediately available micronutrient granular fertilizer in propagation mix only. That initial data collection showed an increase in rabbit tracks in plants with an NPK fertilizer added to propagation mix or potting mix regardless of whether micronutrients were added.

Red Headed Flea Beetle Research Update 2019-2020: (Itea virginica plants used)

A potting trial started in June 2019 comparing liner drenches of thiamethoxam or imidacloprid prior to potting, drenches of either after potting, and incorporated or topdressed granular imidacloprid after potting resulted in minimal damage to treated plants during the 2019 growing season and almost none through mid-June 2020 with no other insecticide treatments. Data will be analyzed and compared at a later date.

A replicated trial evaluating the use of imidacloprid granules (Marathon 1G) topdressed at a low, medium or high rate according to label instructions prior to red headed flea beetle egg hatch and larvae emergence was conducted this spring. Treatments were applied on March 2, 2020 (240 GDD) and evaluated for foliar injury on June 12. No plants had foliar injury at that time. Plants not in the study but nearby had an average of 70% damage on the same date.

Another version of the above trial in larger scale is also underway. Several cultivars and sizes of liners were topdressed with low, medium, or high rates of imidacloprid granular (Marathon1G) after potting on February 28, 2020 (260 GDD). Plants began foliar damage rating evaluations every other week beginning in June. To date no to almost no injury on high rate treated plants and increasing injury with lower rates. Some untreated groups currently have damage to all plants. No other insecticide treatments have been made to these plants.

A replicated trail using Ecotrol Plus (rosemary oil geraniol, and peppermint oil) at low medium and high rates as a drench targeting larvae was treated on April 9, 2020 (555 GDD) and evaluated for foliar injury on June 12. Low levels of injury ranging in average from 5 to 9 percent was noted on all plants whether treated or untreated. This product may be evaluated as a foliar spray in the future.

A replicated trail comparing Steinernema carpocapsae and Steinernema riobrave beneficial nematodes (from BASF) applied as drenches targeting larvae on April 15, 2020 (610 GDD) resulted in plants with a range of foliar injury from zero to 10 percent on individual when rated on June 12. Statistics have not been run but Steinernema riobrave treated plants had no foliar injury at evaluation.

Finally, a demonstration is underway in a large group of plants were some are treated with the high rate of granular imidacloprid (Marathon1G) (just after potting), some are being treated once monthly with treated TriStar 8.5SL (foliar spray) and some ore being treated every other week with Sarisa (foiar spray). These treatments are being made in addition to the nursery's standard insecticide treatment program. These treatments are reducing foliar injury in comparison to those under the standard treatment plan only with Marathon 1G providing the best results followed by Sarisa and then TriStar 8.5SL.

More details on all of these studies is coming in the future as time for data analysis and interpretation is available. In the meantime if you have any questions please reach out.

North Carolina.

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