

CAPS Infrastructure Accomplishment Report Template

Year:	2018
State:	Connecticut
Cooperative Agreement Name:	Cooperative Agricultural Pest Survey
Cooperative Agreement Number:	18-8209-0327
Project Funding Period:	January 1 – December 31, 2018
Project Report:	CAPS Infrastructure Report
Project Document Date:	3/31/19
Cooperators Project Coordinator:	
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Quarterly Report	<input type="checkbox"/>
Semi-Annual Accomplishment Report	<input checked="" type="checkbox"/>
Annual Accomplishment Report	<input type="checkbox"/>

- A. Compare actual accomplishments to objectives established as indicated in the work plan. When the output can be quantified, a computation of cost per unit is required when useful.*
- Activities:
 - Committee Service:
 - Katherine Dugas, SSC, maintained contact with the CT PPQ office and state CAPS committee.
 - Katherine Dugas, Dr. Victoria Smith, and Dr. Kirby Stafford ran the spring statewide CAPS committee meeting on June 14th. SSC prepared minutes of spring statewide CAPS committee meeting (12 attendees; see appendix).
 - Katherine Dugas and Dr. Kirby Stafford attended the Spotted Lanternfly Outreach and Response meeting held by Dr. Victoria Smith on June 14th.
 - Katherine Dugas developed 2019 CAPS work plans based on feedback from committee discussions.
 - Katherine Dugas, Dr. Victoria Smith, and Dr. Kirby Stafford ran the fall statewide CAPS committee meeting on November 20th. SSC prepared minutes of fall statewide CAPS committee meeting (8 attendees; see appendix).
 - Other Survey Work:
 - Katherine Dugas ordered additional trapping supplies from IPHIS in March after receiving funding for 2018 orchard and solanaceous surveys through Farm Bill.
 - Katherine Dugas submitted suggestions for a Grape Commodity Survey and Forest and Agricultural Pest Outreach for the 2019 Farm Bill.
 - Claire Rutledge submitted a suggestion for a *Cerceris* Biosurveillance Survey for the 2019 Farm Bill.
 - Outreach and Education:
 - Interviews (TV/Radio/Newspaper/Magazines):
 - 14 May 2018: Vicki Smith was interviewed by Patricia del Rio of WFSB News about the threat of Spotted Lantern Fly.
 - Outreach materials (Pamphlets/ brochures/ posters):
 - Katherine Dugas updated the fact sheets for all CAPS 2018 target pests. These fact sheets were distributed in mailings (see appendix) to all survey participant nurseries and landowners, as well as being made available at the CNLA and CTPA meetings.
 - Katherine Dugas updated the CAPS outreach posters to include 2018 survey pests. These posters are on display at all CNLA and CTPA meetings.
 - Publications:
 - “The Gypsy Moth.” Dr. Kirby Stafford III, CAES.
https://www.ct.gov/caes/lib/caes/documents/gypsy_moth/gypsy_moth_fact_sheet_-_update_2018.pdf
 - Public Service Announcements (PSA):

- April 27, 2018--Southern pine beetle sightings down in Connecticut <https://www.newstimes.com/local/article/Southern-pine-beetle-sightings-down-in-Connecticut-12870166.php>
 - May 14, 2018--New type of invasive insect getting close to CT <http://www.wfsb.com/story/38186943/new-type-of-invasive-insect-getting-close-to-ct>
 - June 16, 2018--Robert Miller: Beware the spotted lanternfly heading our way <https://www.newstimes.com/news/article/Robert-Miller-Beware-the-spotted-lanternfly-12998640.php>
 - July 15, 2018--Citizen scientists use wasps to track invasive emerald ash borer <https://www.newstimes.com/local/article/Citizen-scientists-use-wasps-to-track-invasive-13074250.php#photo-15864607>
 - August 22, 2018--Officials warn of increasing danger of dead trees in Connecticut <https://fox61.com/2018/08/22/officials-warn-of-increasing-danger-of-dead-trees-in-connecticut/>
 - October 20, 2018--Towns struggle with removing ash trees killed by invasive pest <https://www.ctpost.com/local/article/Towns-struggle-with-removing-ash-trees-killed-by-13321827.php>
- Meetings:
 - Conference calls:
 - Katherine Dugas, SSC, participated in CAPS conference calls on the following dates: February 15th, June 21st, August 9th, and November 1st.
 - Conferences:
 - 18 January 2018: Katherine Dugas participated in the CT Tree Protective Association Winter Meeting, held at the Aqua Turf Club in Southington. Katherine helped staff an information booth that showcased CAPS survey targets for 2018.
 - 24th and 25th January 2018: Dr. Victoria Smith and Katherine Dugas participated in the CT Nursery and Landscape Association Winter Symposium, held at the Aqua Turf Club in Southington. Katherine staffed an information booth that showcased CAPS survey targets for 2018.
 - 9-12 April 2018: with Tia Blevins, Katherine Dugas, Jeff Fengler, and Zachary Brown, organized and moderated the 93rd annual meeting of the Eastern Plant Board (EPB), the Horticultural Inspection Society (HIS), and the Cooperative Agricultural Pest Survey (CAPS), held at the Mystic Hilton. Ninety participants, representing the EPB, HIS, CAPS, USDA-Plant Protection and Quarantine, US Forest Service, and US Customs and Border Protection, attended meetings, presentations, and panel discussions on a wide range of topics. HIS members went on a field trip to Prides Corner Farms in Lebanon CT. Everyone enjoyed a New England lobster bake at the Mystic Aquarium.

- 19 July 2018: Katherine Dugas participated in the CT Tree Protective Association Summer Meeting, held at the Farmington Club. Katherine staffed an information booth that showcased CAPS survey targets for 2018 and SLF.
 - 25 July 2018: Katherine Dugas participated in the CT Nursery and Landscape Association Summer Meeting held at Lockwood Farm in Hamden. Katherine staffed an information booth that showcased CAPS survey targets for 2018 and SLF.
 - 12-16 August 2018: Dr. Victoria Smith participated in the National Meeting of the National Plant Board, held at the Hilton by the Lake in Cleveland OH; 150 participants.
 - 10 October 2018: Katherine Dugas attended a meeting in Windsor CT with Nichole Carrier and RI and MA SSC's regarding the status of the three states' CAPS programs.
- Webinars
 - Training:
 - 7 November 2018: Katherine Dugas attended a training conducted by Nichole Carrier at the PPQ Office in Wallingford CT on the EZFedGrants system.
 - 4 December 2018: Katherine Dugas conducted a training at RI DEM in Providence on the use of the NAPIS database for the new SSC's in RI and MA.
 - Other:

B. If appropriate, explain why objectives were not met.*(
All objectives are currently being met.

C. Where appropriate, explain any cost overruns or unobligated funds in excess of \$1,000. *
No cost overruns have occurred.

D. Supporting Documents **See Appendix**

**indicates information is required per 7 CFR 3016.40 and 7 CFR 3019.51*

Approved and signed by:

Cooperator

Date: _____

ADODR

Date: _____

**USDA APHIS COOPERATIVE AGRICULTURAL PEST SURVEY (CAPS) PROGRAM
STATE CAPS COMMITTEE MEETING**

New Haven, CT

Thursday, June 14th, 2017; 10:00 a.m. – 11:00 a.m.

AGENDA

1. Welcome and Introductions

In attendance: Rose Hiskes, CAES; Claire Rutledge, CAES; Donna Ellis, UConn; Jennifer Dacey, UConn; Joan Allen, UConn; Chris Donnelly, DEEP Forestry; Kirby Stafford, CAES; Chuck Baker, USDA; Kate Aitkenhead, USDA; Nichole Carrier, USDA; Vicki Smith, CAES; Katherine Dugas, CAES.

2. Updates of 2018 CAPS and PPQ surveys and outreach programs

Surveys conducted by The Connecticut Agricultural Experiment Station (CAES):

- CAPS Nursery Survey – 25 sites – *Trypodendron domesticum*, EHAB; Scolytidae; *Tortrix viridana*, GOTM; *Thaumetopoea processionea*, OPM. 1 site did not survey for EHAB due to delay in trap deployment.
- CAPS Xmas Tree Survey – 30 sites – *Monochamus urussovii*/M. *alternatus*/*Hylobius abietis*, BFS/JPS/LPW; *Tetropium castaneum*/T. *fuscum*, BSB/BSLB; *Thaumetopoea pityocampa*, PPM. The trap for the two *Dendrolimus* moths were removed prematurely due to a change in the survey method. A funnel now required for the trap was unavailable.
- 2017 Farm Bill Surveys:
 - a. Orchard– 20 sites – Traps are being deployed.
 - b. Solanaceous– 20 sites – Traps are being deployed.
 - c. *Cerceris* – 50 sites (part of Forest Pest 2017/2018) - *Agrilus biguttatus* (OSB), *A. sulcicolis*(Jewel Beetle), *A. auroguttatus*(GOB), *A. planipennis*(EAB)

Surveys conducted by USDA APHIS PPQ:

- Exotic Bark Beetle Survey – 20 sites - *Trypodendron domesticum*, *Platypus quercivorus*, Scolytidae
- Forest Pest Survey - 20 sites – *Tetropium fuscum*, T. *castaneum*, *Thaumetopoea pityocampa*
- *Cerceris* Biosurveillance – 10 sites – *Agrilus biguttatus*, *A. sulcicolis*, *A. auroguttatus*, *A. planipennis*

Mile-a-Minute biological control (UConn + CAES) – Donna Ellis – with Carole Cheah of CAES, 10 years of biocontrol – MaM found in Chester and East Lyme, 1 vine in a garden, up to 52 towns statewide. 4000 weevils for release, releases in Washington on 6/15 and Westport on 6/18. Weevils are found with new MaM vines.

Lily leaf beetle biological control (UConn) – Donna Ellis – 7th year of biocontrol. Works with Lisa Tewksbury at URI, will receive a shipment next week. Gail Reynolds is MG coordinator and also works on project. Wasps are overwintering, Waterbury had 2 recoveries. Supplemental releases.

Forest Pest Outreach

2018 Forest and Agricultural Pest Outreach – Discussion about new focus for outreach – Spotted Lanternfly (meeting specifically about SLF response and outreach took place after this meeting). Also suggested were new avenues for invasive outreach, such as social media (Instagram, Snapchat, Twitter, etc).

3. 2019 CAPS Guidelines

- Program Changes Lack of updates/changes due to Science Personnel Gap
- Priority Survey
- Pest and Survey Lists

4. Proposed 2019 Surveys – See attached graph for discussed surveys. Focus in 2019 will be on pests and diseases with pine hosts in nurseries.

5. Other old or new business

- Next State CAPS Committee meeting will be in fall 2018
- SLF response meeting took place after this meeting concluded.

Funding	Survey	Pest	Survey Method	Pest Type	Target Host	Survey Period	# sites
CAPS	Nursery Pest Survey	<i>Platypus quercivorus</i> - oak ambrosia beetle	Lindgren, 8 funnel, wet trap with Quercivoral	insect	hardwood	Jul - Se	25
		<i>Trypodendron domesticum</i> - European hardwood ambrosia beetle	Lindgren, 8 funnel, wet trap with Lineatin	insect	hardwood	Ap - Jun	25
		Scolytidae - ambrosia/bark beetle (hardwood)	Lindgren, 8 funnel, wet trap with UHR Ethanol	insect	hardwood	Ap - Se	25
		<i>Thaumetopoea proceionea</i> - oak processionary moth	Wing trap with pheromone lure	insect	hardwood	May - Sep	25
		<i>Dendrolimus pini</i> - Siberian silk moth	Milk carton trap with pheromone lure	insect	conifer	May - Sep	25
		<i>Dendrolimus sibiricus</i> - pine tree lappet		insect			
		<i>Dendrolimus punctatus</i> - mason pine moth	Wing trap with pheromone lure	insect	conifer	May - Sep	25
		<i>Thaumetopoea pityocampa</i> - pine processionary moth	Wing trap with pheromone lure	insect	conifer	May - Sep	25
		<i>Raffaella quercivora</i> - Japanese oak wilt (vectored by <i>P. quercivorus</i>)	Visual - inspect host material	disease	hardwood	Ap - Sep	25
		<i>Lymantria mathura</i> - rosy moth	Wing trap with pheromone lure	insect	hardwood	May - Sep	25
		<i>Lymantria monacha</i> - nun moth	Paper delta trap with pheromone lure	insect	conifer	May - Sep	25
		<i>Ips sexdentatus</i> - sixtoothed bark beetle	Lindgren, 8 funnel, wet trap, with 3 IPS Lure	insect	conifer	May - Sep	25
		<i>Ips typographus</i> - European spruce bark beetle		insect			
		<i>Cronartium flaccidum</i> - Scots pine blister rust	Visual - inspect host material	disease	conifer	May - Sep	25
		Scolytidae - ambrosia/bark beetle (conifer)	Lindgren, 8 funnel, wet trap with UHR Ethanol & alpha pinene	insect	conifer	May - Sep	25

Farm Bill	Grape Commodity Survey	<i>Candidatus Phytoplasma australiense</i> - Australian grapevine yellows	Visual survey - inspect host material	disease	grape	Jun - Sep	20
		<i>Candidatus Phytoplasma solani</i> - Stolbur disease	Visual survey - inspect host material	disease	grape	Jun - Sep	20
		<i>Candidatus Phytoplasma vitis</i> - Flavescence doree	Visual survey - inspect host material	disease	grape	Jun - Sep	20
		<i>Pseudopezicula tracheiphila</i> - rotbrenner	Visual survey - inspect host material	disease	grape	Jun - Sep	20
		<i>Eupoecilia ambiguella</i> - grape berry moth	Wing trap with pheromone lure	insect	grape	Jun - Sep	20
		<i>Lobesia botrana</i> - European grapevine moth	Wing trap with pheromone lure	insect	grape	Jun - Sep	20
		<i>Cryptoblabes gnidiella</i> - Christmas berry webworm	Wing trap with pheromone lure	insect	grape	Jun - Sep	20
		<i>Lycorma delicatula</i> - spotted lanternfly	Visual survey	insect	grape	Jun - Sep	20
		<i>Diabrotica speciosa</i> - cucumber beetle	Visual survey	insect	grape	Jun - Sep	20
		<i>Heteronychus arator</i> - black maize beetle	Visual survey	insect	grape	Jun - Sep	20
	Cerceris Biosurveillance	<i>Agrilus biguttatus</i> - oak splendor beetle	Cerceris biosurveillance	insect	hardwood	Jun - Aug	20
		<i>Agrilus sulcicollis</i> - jewel beetle	Cerceris biosurveillance	insect	hardwood	Jun - Aug	20
		<i>Agrilus auroguttatus</i> - goldspotted oak borer	Cerceris biosurveillance	insect	hardwood	Jun - Aug	20
		<i>Agrilus planipennis</i> - emerald ash borer	Cerceris biosurveillance	insect	hardwood	Jun - Aug	20

**USDA APHIS COOPERATIVE AGRICULTURAL PEST SURVEY (CAPS) PROGRAM
STATE CAPS COMMITTEE MEETING**

New Haven, CT

Tuesday, November 20th, 2018; 10:00 a.m. – 12:00 p.m.

AGENDA

6. Welcome and Introductions Attending: Nichole Carrier, USDA APHIS PPQ; Kate Aikenhead, USDA APHIS PPQ; Katherine Dugas, CAES; Rose Hiskes, CAES; Chris Maier, CAES; Kirby Stafford, CAES; Vicki Smith, CAES; Claire Rutledge, CAES.

7. Updates/Results of 2018 CAPS and PPQ surveys and outreach programs

Surveys conducted by The Connecticut Agricultural Experiment Station (CAES):

- CAPS Nursery Survey – 25 sites
Site installation began week of 4/15. Only 24 sites trapped for EHAB; 1 site was delayed + then cancelled due to hunting season. A permit with DEEP was required for 1 site in Groton due to it now being a Wildlife Management Area. Neither site will be an issue next year as the focus is moving away from forest sites. 12 sites handled by UConn. A total of 4991 scolytids were collected from the Lindgren traps and screened. No target suspects – native *Trypodendron* were recovered. 150 GOTM and 154 OPM (304 total) wing traps were recovered and screened – no target suspects.
- CAPS Xmas Tree Survey – 30 sites
Site installation began week of 4/29. 15 sites handled by UConn. *Dendrolimus* survey was discontinued halfway through season due to change in survey guidance. A funnel is now required to be used in the milk carton trap (without the funnel the moths can escape), and was not available in time for survey completion. 659 beetles were recovered from *Monochamus* cross-vane traps. 378 of them were *M. scutellatus*. 131 weevils were recovered (mostly from *Monochamus* traps, but a few were found in *Tetropium* traps and kept); mostly *H. pales* (pales weevil) and a few *Pissodes* (white pine weevil). 227 beetles were recovered from *Tetropium* traps; mostly *Aseum*, *Monochamus* and native non-targets. Quite a few elaterids – told screeners to keep anything they weren't sure about. 183 PPM wing traps were recovered and screened – no target suspects.
- 2017 Farm Bill Surveys:
 - a. Orchard– 20 sites
Sites installation began week of 6/10. Five sites with UConn. A total of 433 trap collections yielded no suspect targets. Native *Sparaganothis* found in LBAM traps as usual. *Episimus*, a CBTM lookalike found in CBTM traps. SLF visual

survey was negative. SLF materials will be sent with contact + results letters.

b. Solanaceous– 20 sites

Site installation began week of 6/10. Nine sites handled by UConn. Some sites were both orchard and solanaceous. 442 trap collections. Bucket traps had some water issues due to heavy rain + deployment in open fields. Bees were frequent bycatch. 1085 were recovered from traps. 13 SYM collections and 23 OWB collections resulted in a total of 170 total moths that have been sent to Cornell for dissection and full identification.

c. *Cerceris* – 50 sites (part of Forest Pest) Claire – 11 new EAB towns. Lots of 2-lined chestnut borers in collections. Ash blight in Europe.

Surveys conducted by USDA APHIS PPQ: Nichole

- Exotic Bark Beetle Survey – 20 sites– 20 sites for EWBB: *T. domesticum*, *P. quercivorus*, plus ethanol. All collections sent to Carnegie. *Anisandrus maiche* found in 3 Fairfield county sites. Was first found in Michigan. 1 *Halymorpha halys* in Hartford county.
- Forest Pest Survey - 20 sites *Tetropium* and *Thaumetopoea* traps set at 20 sites, awaiting final results.
- *Cerceris* Biosurveillance – 10 sites 5 *Cerceris* biosurveillance sites, 138 beetles collected. One site with EAB. EAB was found in Westerly RI which was a new state record. Survey personnel resources were limited, so not as much survey completed as planned.
EAB Biocontrol: Aspetuck Land Trust, Rock Cobble Farm in Kent, working directly with Michigan. Trying to figure out establishment of parasitoids. *Tetropium* found in Cromwell, still looking for *Oobius*. *Spathius* also established. Question of ash re-establishment in parasitoid-established areas, something to look for in future. Sleeping Giant tornado did not drop as many ash trees as expected. Will be trapping in tornado area next year, expecting large beetle numbers.
- EAB Deregulation: Moving focus to biocontrol?

Mile-a-Minute biological control (UConn + CAES) Mile-a-minute Weed Biological Control:

I continued to work with Carole Cheah, who took the lead coordinating 2018 biological control activities for mile-a-minute (MAM) weed. A total of 4,000 *Rhinoncomimus latipes* weevils were received from the Philip Alampi Beneficial Insects Laboratory (NJDA) at the CAES Valley Laboratory on June 13, 2018. In June and July, 2,500 weevils were released at a new site in Washington, CT; an additional release of 1,000 weevils occurred in Westport, CT near other known MAM occurrences and releases; and a supplemental release of 500 weevils occurred on Sheffield Island in Norwalk. There were 29 site visits during 2018 to monitor establishment of the biological control agents, with Carole conducting the majority of site monitoring. Carole updated the MAM poster, and the distribution

map shows the 5 new towns where MAM was confirmed during 2018 (Chester, Durham, East Lyme, and Trumbull; Old Lyme to be added), for a total of 52 confirmed CT towns with MAM. Total weevils released to date in 25 towns: 56,124. With prolific rain and very hot temperatures occurring during the growing season, MAM vines grew rapidly this year at many locations, and weevil activity and damage were negatively impacted. Talk of collecting beetles from sites and moving them rather than just rearing and releasing.

Lily leaf beetle biological control (UConn) Lily Leaf Beetle Biological Control: Release permits for 3 lily leaf beetle parasitoids were renewed during 2018. UConn Master Gardener Coordinator Gail Reynolds continued to work on the project this year. A total of 120 lily leaf beetle parasitoids (3 species) were released in 9 gardens in 6 CT counties during June and July 2018. Eight of the releases were supplemental releases, and one was a new release. The focus this year was to augment parasitoid populations with different wasp species at established sites. Gail visited 34 new and established gardens to monitor lily leaf beetle populations and collect beetle larvae to ship to the University of Rhode Island to be inspected for levels of parasitization. There were 12 parasitized lily leaf beetle larvae confirmed of the 60 larvae collected, a significant increase over previous years. Positive towns included Waterbury (where previous parasitism had been confirmed), Portland, Stafford, and Thompson. Two of the three parasitoids, *Tetrastichus setifer* and *Lemophagus errabundus*, were confirmed in the lily leaf beetle larvae.

2018 Forest and Agricultural Pest Outreach – Spotted lanternfly

SLF is upon us! – single specimen found in October resulted in CAES press release. Not much media response to this – it may have been lost in the election coverage. Subsequent visual survey in Farmington was negative. Have been receiving reports of Ailanthus stands in CT that will be investigated as part of the SLF visual survey – looking for egg masses in winter/spring, nymphs in spring/summer, adults in fall (if 2019 is approved). SLF reporting email now live – use ReportSLF@ct.gov for any SLF-related inquiries. Fact sheet has been updated. There is now also a tree of heaven ID fact sheet. Both should be online shortly. SLF Poster is available digitally, ask me for a copy. Fact sheets were distributed at the CACIWC (Connecticut Association of Conservation and Inland Wetlands Commissions) meeting last week. Got some anecdotal feedback – groups using Facebook + social media and posting about SLF. A CT SLF scraper card is also in the works. K. Dugas has a very small number of adult and nymph specimens in case any more displays are needed. February 7, 2019, there will be a SLF Preparedness Class/Meeting, 1 day event for \$70.

Talked about SLF's status as nuisance vs. agricultural pest. Host range may be smaller than reported. SLF summit in July in PA.

Talked about UConn's continued involvement with survey and outreach next year due to Donna's retirement. Still unclear who will be taking on some of Donna's duties, so may not plan on subcontracts in 2019 due to this uncertainty.

8. 2019 Survey Plans:

- CAES Surveys:
 - CAPS Nursery Survey – 50 sites: Focus on nurseries growing conifers. Hardwood surveys for growing yard peripheries with significant hardwoods. Two Lindgren traps, looking for conifer-feeding bark beetles and Hylobius.
 - *Tortrix viridana* (GOTM) Hardwood
 - *Ips sexdentatus* and *typographus* Conifer
 - *Hylobius abeitus* and *Tomicus destruens* Conifer
 - *Thaumetopoea pityocampa* (PPM) Conifer
 - *Thaumetopoea processionea* (OPM) Hardwood
 - *Dendrolimus pini* and *sibiricus* Conifer – hoping that the funnels are available this year!
 - *Dendrolimus punctatus* Conifer
 - Farm Bill Survey Suggestions: Vineyard, *Cerceris* 20 vineyard sites, includes SLF visual survey.
- USDA APHIS PPQ Surveys Nichole – 20 CT sites, industrial areas April-September. 2 Lindgrens, EHAB/OAB and ethanol, *T. campestris* intercept panel.v Focus on SLF in 2019, visual survey at 50+ sites. Tree-of-heaven stands, industrial areas, major corridors, distribution centers, stone/tile, previous sites, roadside *Ailanthus* stands. SLF appears to move similarly to GM.
- Rose spoke about Brazilian skipper.
- Chris spoke about velvet longhorn beetle.
- Next State CAPS Committee meeting will be in spring 2019