Walnut Twig Beetle/Thousand Cankers Disease Survey
Farm Bill Survey Work Plan – May 1, 2013 – April 30, 2014

Cooperator:	Kansas Department of Agriculture			
State:	Kansas			
Project:	Walnut Twig Beetle/Thousand Cankers Disease Survey			
Project funding source:	Farmbill Survey ☒			
Project Coordinator:	Laurinda Ramonda			
Agreement Number	13-8420-1578-CA			
Contact Information:	**Address:**	PO Box 19282, Forbes Field, Bldg 282, Topeka, Kansas 66619		
	Phone:	785-862-2180	**Fax:**	785-862-2182
	Email Address:	laurinda.ramonda@kda.ks.gov		

This Work Plan reflects a cooperative relationship between the Kansas Department of Agriculture (KDA) (the Cooperator) and the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ). It outlines the mission-related goals, objectives, and anticipated accomplishments as well as the approach for conducting a Walnut Twig Beetle/Thousand Cankers Disease survey and the related roles and responsibilities of the Kansas Department of Agriculture and the related roles and responsibilities of the parties as negotiated.

I) OBJECTIVES AND NEED FOR ASSISTANCE

The walnut twig beetle, *Pityophthorus juglandis*, (pest of national and state concern) and thousand cankers disease of walnuts has been detected in several states in the western United States, Tennessee, Virginia, Pennsylvania, North Carolina and as close as eastern Colorado, but is not known to occur in Kansas. Early detection and containment of this pest is of great importance since it can cause the demise of walnut trees which are of great economic value.

Quarantines on the movement of walnut are in place in Kansas and other states. Many of these quarantines require survey to take place in the state that the walnut originated. It is unknown where the walnut twig beetle and thousand cankers disease occurs especially now that 4 eastern states have found the walnut twig beetle and 3 out of those 4 have found thousand cankers disease. The need to identify the status of this pest is great. Kansas needs financial assistance in order to carry out a comprehensive survey to protect Kansas' walnut industry.

II) RESULTS OR BENEFITS EXPECTED

The Cooperator seeks to conduct a program which is expected to result in:

A. What results or benefits will be derived from the cooperative effort?

1. Geographic assessment will occur from data gathered on locations of black walnut populations.
2. Identification of pathways so action can be taken to stop further spread of pests.
3. Support domestic and foreign exports of walnut trees and wood from Kansas.
4. Survey and identification of the Walnut Twig Beetle, vector of the *Geosmithia* fungus that causes thousand cankers disease of walnut, if present.

III) APPROACH

What is the plan of action or approach to the work?

Traps will be placed at 45 sites at each site in the southeast part of Kansas at high risk areas using Lindgren funnel traps, walnut twig beetle lure and with wet cup by one seasonal employee. Traps will be placed at areas around saw mills, wood collection points, truck stops, major highway interchanges, event areas, woodworkers and reservoirs with walnut trees beginning in June and July.

Traps will use a solution of propylene glycol antifreeze that does not contain any ethanol or ethyl alcohol in the collection cup. Lure will be attached with light-gauge wire to the plastic strut between the second and third funnel so the bait rests on the inside surface of the third funnel, but not so low that it blocks the funnel holes. The lure will be replaced once a month because the temperature in Kansas is generally above 85° F which causes degradation of the lure. The traps will be checked and collected every 7-10 days throughout the survey season. Traps will be placed on a pole or rope near the walnut tree to keep from drawing beetles to the tree.

The state entomologist will screen targets and then send targets to a qualified identifier. If cankers are found on walnut trees then these samples will be sent to the Great Plains Diagnostic Network (GPDN) at Kansas State University for identification. These samples will be double bagged and brought to the lab.

A. The Cooperator and APHIS Mutually Agree to/that:

- Utilize Cooperator and APHIS program funding, as outlined in the Financial Plan, within the authorized parameters to support survey, detection and objectives.

1. What is the quantitative projection of accomplishments to be achieved?

a. By activity or function, what are the anticipated accomplishments by month, quarter, or other specified intervals?

- Trapping will occur from June through July.
- Fact sheets, webpage, resources, and pest reporting will be continually updated as new information becomes available.
- Data will be entered into the IPHIS database when pest identification is confirmed and/or becomes available.

- GPS coordinates will be included with surveys.
- Geographic assessment will occur from data gathered on locations of black walnut populations.
- Survey and identification of the Walnut Twig Beetle, vector of the *Geosmithia* fungus, if present.
- Survey and identification of the *Geosmithia* fungus, if present.

b. What criteria will be used to evaluate the project? What are the anticipated results and successes?

- Pest detection survey activities completed.
- All data collected from the pest detection survey is entered into the IPHIS database.
- SPHD, SPRO, PSS, SSC meetings to keep updated on issues, if needed.
- Presence or absence of Walnut Twig Beetle.
- Presence or absence of the *Geosmithia* fungus.
- Increase collaboration potential with other agencies or university.
- Better knowledge for the walnut and wood industry.
- Better knowledge of black walnut populations.
- Better knowledge of high risk sites.

c. Methodology used to determine if identified needs are met and results and benefits achieved:

1. Identified needs are met

- Survey completed within specified timeframe.

2. Results and benefits are achieved

- Review of the IPHIS database to ensure that data from the pest detection activities have been entered.
- Review of the accomplishment reports, supporting outreach materials (if applicable), and maps.
- SPHD, SPRO, PSS, SSC meetings to keep updated on issues.

2. What type of data will be collected and how will it be maintained?

a. Address timelines for collection and recording of data.

All survey data from cooperative agreements involving pest surveys will be entered by the State Survey Coordinator or KDA staff into the IPHIS database to include but not limited to observation number, observation date, data source, state/county, site code, pest code, pest status, and survey method.

The data entry requirements are:

- Enter new national, state, and county records into IPHIS database within 48 hours of confirmation of a pest or pathogen identification by a recognized identifier.
- Non-time sensitive records, including negative data, must by entered into IPHIS within 2 weeks of confirmation.
- Negative data will be entered within 2 weeks of decommissioning a trap, obtaining the results from an identifier, or performing a laboratory assay.
- Survey data will be collected with GPS technology for internal pathway analyses. Survey maps will be developed from approved GIS mapping software.

b. How will APHIS be provided access to the data?

- Complete, accurate, and timely pest survey data will be entered into IPHIS using approved protocol and accessible.
- Semi-annual and annual survey accomplishment reports submitted to Region.

B. The Cooperator will:

- Document locations by GPS coordinate.
- Equipment used in this survey will be maintained by cooperator upon completion of project.
- One seasonal staff employee will conduct trapping surveys in black walnut areas in the southeastern part of Kansas from June 2013 July 2013.
- Supply GPS equipment.
- Provide KDA staff when needed.
- Provide rental vehicle and fuel for travel for conducting survey and collecting data.
- Provide lodging when needed.

1. By function, what work is to be accomplished?

- Trapping will occur from June through July.
- If samples are taken from walnut trees, the samples will be doubled bagged and taken to the GPDN lab.
- Survey will be done with one temporary/seasonal staff employee. The seasonal employee will be trained and monitored by the State Survey Entomologist and State Survey Coordinator.
- Screening of suspect insects will be done by the state entomologist.
- Data will be entered into the IPHIS database when pest identification is confirmed and/or becomes available.
- GPS coordinates will be included with surveys.
- Suspect walnut twig beetle specimens in traps will be sent to a qualified identifier.
- Suspect *Geosmithia* fungus specimens will be taken to the GPDN at Kansas State University.
- Fact sheets, webpage, resources, and pest reporting will be continually updated as new information becomes available.

- Geographic assessment will occur from data gathered on locations of black walnut populations.
- Survey and identification of the Walnut Twig Beetle, vector of the *Geosmithia* fungus, if present.
- Survey and identification of the *Geosmithia* fungus, if present.

2. What resources are required to perform the work?

- State entomologist - screen for suspect walnut twig beetles.
- Qualified identifier - confirmation of walnut twig beetle suspects.
- GPDN lab - tree samples sent for fungus identification.
- One temporary/seasonal employee - employed through Walnut Twig Beetle/Thousand Cankers Disease survey to conduct the trapping survey.
- KDA permanent staff - help with collection and training.
- GPS unit and map for locations.
- Rental vehicle and fuel.
- Provided by Cooperator - office space with associated services and utilities, computers and other office equipment for the use of Cooperator personnel. These include digital camera and computer with internet service. Computers will be used for entering survey data into the state survey database and IPHIS database.

3. What numbers and types of personnel will be needed and what will they be doing?

- One temporary/seasonal employee will conduct the trapping survey.
- Data acquired will be entered into IPHIS by State Survey Coordinator or KDA staff.
- KDA staff will help for collection and training.
- Qualified identifier for suspect walnut twig beetle confirmation.
- GPDN lab for tree samples sent for fungus identification.

4. What equipment will be needed to perform the work? Include major items of equipment with a value of $5,000 or more.

a. What equipment will be provided by the cooperator? N/A

b. What equipment will be provided by APHIS? N/A

c. What equipment will be purchased in whole or in part with APHIS funds? N/A

d. How will the equipment be used? N/A

e. What is the proposed method of disposition of the equipment upon termination of the agreement/project? N/A

5. **Identify information technology equipment, e.g., computers, and their ancillary components.**

    - GPS units to document locations
    - KDA computers with internet to enter data

6. **What supplies will be needed to perform the work?**

    - GPS units
    - Computers
    - Alcohol
    - Plastic bags
    - Jars
    - Coffee filters
    - Antifreeze
    - Tubing
    - Lindgren funnel traps
    - Walnut twig beetle lure
    - Poles for hanging traps
    - Rope for hanging traps
    - Rental vehicle
    - Fuel for rental vehicle

    a. **What supplies will be provided by the Cooperator?**

    - GPS units
    - Computers
    - Plastic bags
    - Poles
    - Lindgren funnel traps

    b. **What supplies will be provided by APHIS?**

    - None

    c. **What supplies will be purchased in whole or in part with APHIS funds?**

    - Rental vehicle
    - Fuel for rental vehicle
    - Jars
    - Antifreeze
    - Alcohol
    - Coffee filters
    - Rope
    - Walnut twig beetle lure

d. How will the supplies be used?

- For travel to sites.
- For trapping and specimen collection.

e. What is the proposed method of disposition of the supplies with a cumulative value over $5,000 upon termination of the agreement/project?

- There should not be any.

7. What procurements will be made in support of the funded project and what is the method of procurement (e.g., lease, purchase)?

- Rental vehicle
- Fuel for rental vehicle
- Alcohol
- Plastic bags
- Jars
- Coffee filters
- Antifreeze
- Rope
- Walnut twig beetle lure
- The Fiscal Department at the Kansas Department of Agriculture will provide most contracts.
- One seasonal employee will be employed by a temporary employment service that has a contract with the state.
- Most procurements will be made by purchase order.
- Some procurements will be made by reimbursable personal expense.

8. What are the travel needs for the project?

a. Is there any local travel to daily work sites? Who is the approving official? What are the methods of payment? Indicate rates and total costs in the Financial Plan.

- Travel will occur to trap near walnut trees.
- Procurements will be made by purchase order.
- Some procurements will be made by reimbursable personal expense.
- Provided through the KDA fiscal department.
- The KDA Plant Protection and Weed Control Plant Program Manager is the approving official.
- Costs are included in the financial plan.

b. What extended or overnight travel will be performed (number of trips, their purpose, and approximate dates). Who is the approving official? What is the method of payment? Indicate rates and total cost in the Financial Plan.

- There should not be any.

c. What is the method of payment? Indicate rates and total cost in the Financial Plan.

- Method of payment is by purchase order.
- Some payments will be made by reimbursable personal expense.
- Costs are included in the financial plan.

9. Reports:

a. Submit all reports to the APHIS Authorized Department Officer's Designated Representative (ADODR). Reports include:

1. Narrative accomplishment reports in the frequency and time frame specified in the Notice of Award, Article 4.
2. Federal Financial Reports, SF-425 (replaces SF-269 October 1, 2009) in the frequency and time frame specified in the Notice of Award, Article 4.

10. Are there any other contributing parties who will be working on the project?

a. List Participating Agency/Institution:

- KDA
- USDA/APHIS/ PPQ
- Kansas Forest Service
- GPDN

b. List all who will work on the project:

- KDA
- USDA/APHIS/ PPQ
- Kansas Forest Service
- GPDN

c. Describe the nature of their effort:

- KDA - tree sampling, site selection, outreach and visual surveys
- Kansas Forest Service - site selection, outreach
- GPDN – specimen identification
- USDA/APHIS/PPQ – funding, taxonomic support and traps and lures

d. Contribution:

- Funding
- Site selection
- Outreach

- Fungus identification

C. APHIS Will:

1. Outline the Agency's (USDA APHIS PPQ) substantial involvement.

a. Include any significant Agency collaboration and participation

- Provide any new information that becomes available on the walnut twig beetle and the *Geosmithia* fungus.
- Review data.
- Provide funds to the Cooperator to cover costs outlined in the Financial Plan.
- Help to make arrangements for Taxonomic support in identification.
- Provide input and oversight in the development and execution of the survey to ensure it meets national program goals and APHIS mission needs within the state.

b. Project oversight and performance management

- Review of data results submitted to IPHIS database.
- Review of accomplishment reports.

2. What equipment will be needed to perform the work? Include major items of equipment with a value of $5,000 or more.

- Vehicle
- GPS units
- Computers

a. Will Equipment be loaned or provided by APHIS? ☐Yes ☒No
If Yes, please list:

b. How will the equipment be used?

- Trapping for the walnut twig beetle.

IV) GEOGRAPHIC LOCATION OF PROJECT

A. Is the project statewide or in specific counties, townships, and/or national or state parks?
Possible counties for trapping: Allen, Bourbon, Butler, Chautauqua, Cherokee, Cowley, Crawford, Elk, Greenwood, Harvey, Labette, McPherson, Montgomery, Neosho, Sedgwick, Sumner, Wilson and Woodson.

B. What type of terrain (e.g., cropland, rangeland, woodland) will be involved in the project?
Many types of terrain will be involved.

C. Are there any unusual features which may have an impact on the project or activity such as rivers, lakes, wild life sanctuaries, commercial beekeepers etc? (list all that apply)

Areas might have disruption through human contact.

D. Identify the kind of data to be collected:

The kinds of data to be collected will include, but not limited to, observation number, observation date, data source, state/county, site code, pest code, pest status, GPS location and survey method.

E. Establish criteria to evaluate the results and successes of the project:

1. Results:

- Pest detection survey activities for the project completed.
- All data collected from the pest detection survey is entered into the IPHIS database.
- Maps of the pest detection survey activities are produced to aid in planning of future pest detection surveys, pathway risk analysis, and outreach activities.
- State CAPS and KDA meetings to keep updated on issues.

2. Successes:

- Presence or absence of walnut twig beetle.
- Identification of high risk areas.
- Increased knowledge of resource locations.

F. Methodology used to determine if the results and benefits are achieved:

1. Identified needs are met:

- Survey completed in specified timeframe.

2. Results and benefits are achieved:

- Review of the IPHIS database to ensure that data from the pest detection activities have been entered.
- Review the accomplishment reports, supporting outreach materials (if applicable), and maps.
- State CAPS and KDA meetings to keep updated on issues.

V) DATA COLLECTION AND MAINTENANCE

1. All survey data from cooperative agreements involving pest surveys will be entered by the State Survey Coordinator or KDA staff into the IPHIS database using approved protocol.

Data entry guidance appears below.

- First record for the State and/or County will be entered within 48 hours of confirmation of identification by a qualified identifier.
- All records will be entered into the IPHIS database by December 31 of the year of survey so these data can be included in the yearly Plant Board Report.
- Survey data will be collected with GPS technology (WGS84 datum is the standard)

VI) TAXONOMIC SUPPORT

A. Person or Institution that will screen targets (Name & Contact Information)

State Entomologist
Kansas Department of Agriculture
PO Box 19282, Forbes Field, Bldg. 282, Street I
Topeka, Kansas 66619

*All insect specimens will be screened by the state entomologist.
*Walnut tree samples, if needed will be taken to the Great Plains Diagnostic Network at Kansas State University.

OR

B. ☒ **Request for taxonomic support.**

Region 2 (CO, KS, NE, SD, WY)

Thousand Cankers Disease
Ned Tisserat
C137 Plant Sciences
1177 Campus Delivery
Fort Collins, CO 80523
(970) 491-6527

Walnut Twig Beetle
Whitney Cranshaw
C201 Plant Sciences
1177 Campus Delivery
Fort Collins, CO 80523
(970) 491-6781

VII) SIGNATURES

ROAR	**Date**	**ADODR**	**Date**

Detailed Farmbill Financial Plan

PROJECT: Walnut Twig Beetle/Thousand Cankers Disease Survey
COOPERATOR NAME: Kansas Department of Agriculture
AGREEMENT NUMBER: 13-8420-1578-CA
TIME PERIOD: May 1, 2013 - April 30, 2014

Financial Plan must match the SF-424A, Section B, Budget Categories

ITEM			APHIS FUNDS	COOPERATOR FUNDS (Show even if zero)	TOTAL
PERSONNEL:	**Hours**	**Salary**			
Paid by APHIS funds			$0		$0
State Specialist 20 hours @ $25/hr - Paid by Cooperator Funds	20	$25		$500	$500
Subtotal			**$0**	**$500**	**$500**
FRINGE BENEFITS:	**Percent** (enter as decimal not %)				
Paid by APHIS funds			$0		$0
22% of salary for permanent employees - Paid by Cooperator Funds	0.22			$110	$110
Subtotal			**$0**	**$110**	**$110**
TRAVEL:	**Cost**	**Length of time**			
SUV rental for seasonal staff (2 months @ $979/month)**	$979	2	$1,958		$1,958
Subtotal			**$1,958**	**$0**	**$1,958**
EQUIPMENT:	**Cost**				
			$0		$0
Subtotal			**$0**	**$0**	**$0**
SUPPLIES:	**Cost**	**Length of time or amount**			
Antifreeze, jars, rope, etc.	$258		$258		$258
Lure	$2.45	100	$245		$245
Lure shipping	$30		$30		$30
Fuel - Seasonal staff ($832/month x 2 months)**	$832	2	$1,664		$1,664

Subtotal			**$2,197**	**$0**	**$2,197**
CONTRACTUAL:	**Cost**	**Length of time**			
Key Staffing (seasonal staff) $19.00 x 305 hours)	$19.00	305	$5,795		$5,795
Subtotal			**$5,795**	**$0**	**$5,795**
OTHER:	**Cost**				
Postage & shipping	$50		$50		$50
Subtotal			**$50**	**$0**	**$50**
TOTAL DIRECT COSTS			**$10,000**	**$610**	**$10,610**
INDIRECT COSTS (% on Total Direct Personnel Cost of salary and fringe benefits)*	**Percent** (enter as decimal not %)				
Indirect rate January 1-June 30, 2013 – 23.2%	0.232		**$0**	**$71**	**$60**
Indirect rate July 1- December 31, 2013- 19.7%	0.197		**$0**	**$60**	**$71**
TOTAL			**$10,000**	**$741**	**$10,741**
COST SHARE INFORMATION (Percent)			**93%**	**7%**	

*Kansas' Negotiated Cost Rate (Salary + Fringe Benefits x %=Indirect Cost)

** There is a shortage of state vehicles. We give the option of renting a vehicle or using personally owned vehicles. If renting we pay for the fuel and if a personal vehicle is used we pay mileage