

SARE: Advancing the Frontier of Sustainable Agriculture in...

Tennessee

Project Highlight: *Cover Crops Help Manage Appletree Borer*

The flatheaded appletree borer (FAB) is a significant economic pest in orchards, nurseries and urban landscapes, and in Tennessee's production nurseries, red maples are one of the most problematic trees for FAB attacks. Determined to find a solution to this problem, Tennessee State University researcher Karla Adesso and her project team used a SARE grant to evaluate the efficacy of applying a winter cover crop to field-grown nursery red maple trees to act as a barrier to FAB oviposition, an aid to preventing leaching of imidacloprid (a commonly used insecticide) from the root zone of the trees, and as a natural weed suppression technique.

After trying a few mixes, the team determined that a ryegrass/crimson clover mix was extremely effective at

camouflaging the tree trunks from the pest, making it less likely to lay eggs. The cover crops reduced pest attacks by 95 percent. In addition to acting as a barrier, the cover crop mix also reduced the temperatures of the tree trunks, making the trees a less preferable egg-laying site.

Based on their highly promising results, the team proposes a systems approach to in-field nursery tree production by incorporating a winter cover crop combined with optimized pesticide use to simultaneously maximize FAB control and plant growth while minimizing crop damage, weed competition and insecticide runoff.

For more information on this project, see www.sare.org/projects, and search for project number OS14-084.

SARE in Tennessee

www.southernsare.org/tennessee

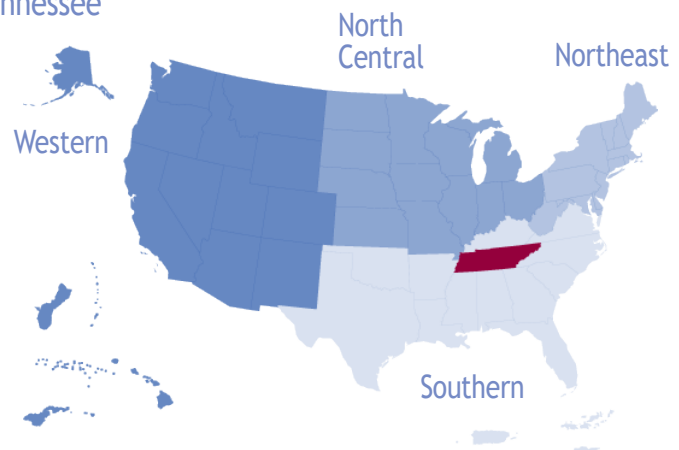
\$2.3 million in total funding

64 grant projects

(since 1988)

For a complete list of grant projects state by state, go to

www.sare.org/state-summaries



SARE's four regional programs and outreach office work to advance sustainable innovations to the whole of American agriculture.

What is SARE?

Since 1988, the Sustainable Agriculture Research & Education (SARE) program has been the go-to USDA grants and outreach program for farmers, ranchers, researchers and educators who want to develop innovations that improve farm profitability, protect water and land, and revitalize communities. To date, SARE has awarded over \$273 million to more than 6,800 initiatives.

SARE is grassroots with far-reaching impact

Four regional councils of expert practitioners set priorities and make grants in every state and island protectorate.

SARE communicates results

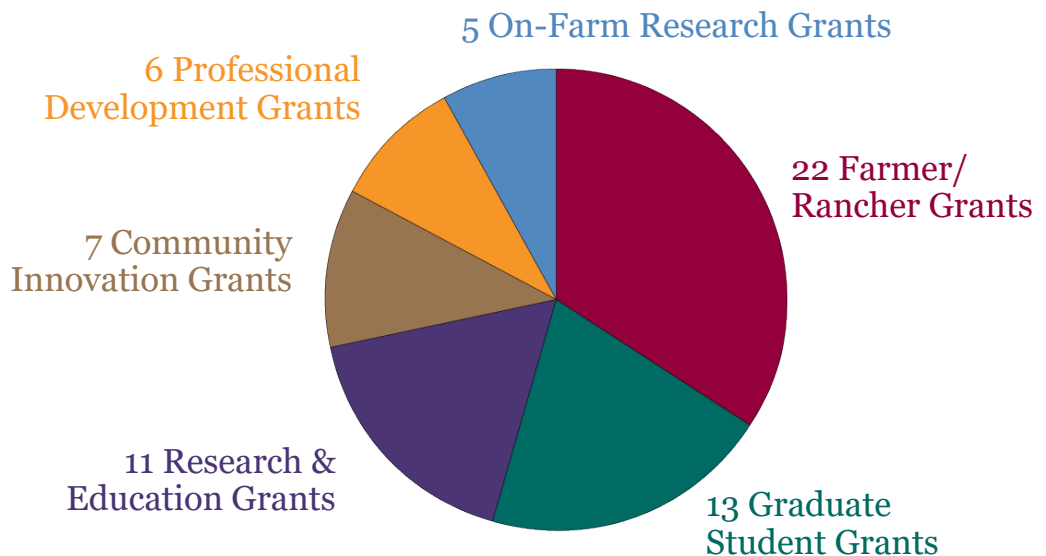
SARE shares project results by requiring grantees to conduct outreach and grower engagement; and by maintaining the SARE Learning Center—a library of practical publications, grantee-produced information products and other educational materials.



www.sare.org

SARE Grants in Tennessee

SARE has awarded a total of **64 grants** in Tennessee since 1988



SARE's Impact



53 percent of producers report using a new production technique after reading a SARE publication.

79 percent of producers said they improved soil quality through their SARE project.

64 percent of producers said their SARE project helped them achieve higher sales.

Contact Your SARE State Coordinator

SARE sustainable ag coordinators run state-level educational programs for Extension and other ag professionals, and many help grant applicants and recipients with planning and outreach. Visit www.southernsare.org/tennessee to learn more.

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For detailed information on SARE projects, go to

www.SARE.org