Feature Story– Landed and Planted! Artemis Moon Tree Seedling Finds Home with Apollo 14 Moon Tree in Clay County, Florida

Submitted by Elaine Simfukwe, UF/IFAS Extension Agent Clay County Florida

Narrative about article:

This story was to educate Clay County residents about the newest Moon Tree that flew on the Artemis I mission that was planted in Clay County, Florida. Clay County is home to one of the original 100 Apollo 14 Moon Trees that is accounted for by NASA. Clay County 4-H program applied to receive an Artemis Moon Tree Seedling to carry on the tradition and legacy of our county being home to Moon Trees. During the publication of this story, it was learned that one of our local elementary schools was also a recipient of an Artemis Moon Tree seedling.

Objectives:

- Notify Clay County residents about the planting of the Artemis Moon Tree seedling and the history of the Moon Tree program in Clay County.
- Educate Clay County residents about how NASA is utilizing citizen science data from measuring Moon Trees' height and trunk diameter to look at how they are contributing to Earth's carbon budget.
- Educate Clay County youth about the intersection of space science, agriculture, and citizen science
- Provide youth an opportunity to demonstrate life skills such as critical thinking, problem solving, and contributions to group efforts through this STEM initiative.
- Market the Clay County 4-H program and the 4-H Leaftastics Club

Target Audience:

- Residents of Clay County
- Clay County 4-H Program youth, volunteers, families, and community partners

Current Population:

• Clay County is home to approximately 226,000 residents.

Methods used:

- Consulted with Dr. Wayne Hobbs, Environmental Horticulture Extension Agent, and Amy Morie, 4-H Club Leader for Leaftastics to proofread the article for accuracy and content expertise.
- Published the blog post on UF IFAS Blogs and shared the blog post with 4-H families and local stakeholders
- Connected with Brian Campbell, NASA Senior Earth Science Specialist and Subject Matter Expert (SME), on NASA's GLOBE app and research done specifically with Moon Trees.

Impact:

- The blog post received national coverage on National 4-H Council's Facebook, Instagram, and Linkedin Accounts.
- The blog post was featured on Florida 4-H Foundation's Linkedin Account.
- In November 2024, we hosted a 4-H Moon Tree & Citizen Science workshop for youth to learn more about Moon Trees and submit data on the Apollo 14 Moon Tree to NASA's GLOBE Observer App. We had 10 youth and 5 adults participate.
 - 10 youth participants (100%) ndicated they learned something new and increased their content knowledge about the Moon Tree & NASA's role in research about the Moon Trees contribute to Earth's Carbon Budget.
 - Seven youth participants (70%) of youth reported that they developed their critical thinking skills as a result of participating in this workshop.
 - Three youth participants (30%) learned how to measure tree height and circumference.
- *Clay Today* published a follow-up news story about the workshop and the Moon Trees in November 2024 here.
- UF IFAS Blog analytics reported that this article had 157 page views, 233 sessions on the page and 69 engaged sessions (engaged sessions means two or more visits or stayed longer than 10 seconds).

Information on the role the applicant had in the entry:

Author of the feature story.

Publisher's Requirements:

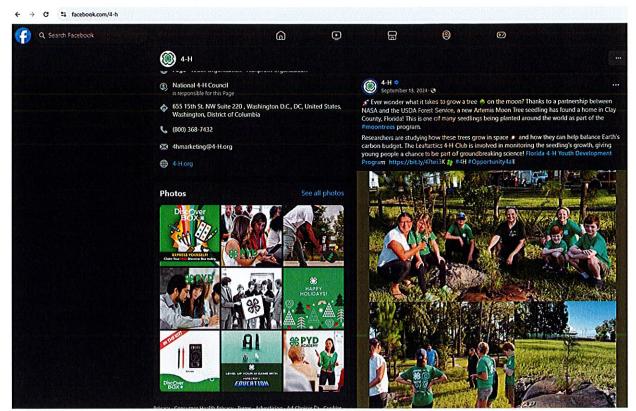
- Follow the community guidelines set by Blogs.IFAS which states posts and other content specifically added by users of a University of Florida platform should reflect the University of Florida's policies and procedures.
- Per UF policy, utilize alternative text and caption for images in the article for accessibility and ADA compliance
- Select a Feature Image that meets the pixel size requirement for UF IFAS Blogs

Production Cost:

No monetary cost associated to create production pieces.

Other information:

- Link to Landed and Planted! UF IFAS Blog Post: https://blogs.ifas.ufl.edu/clayco/2024/09/04/landed-and-planted-artemis-moon-tree-seedling-finds-home-with-apollo-14-moon-tree-in-clay-county-florida/
- Screenshot from National 4-H Council Facebook page.



Blog post featured on National 4-H's Facebook page.



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Landed and Planted! Artemis Moon Tree Seedling Finds Home with Apollo 14 Moon Tree in Clay County, Florida





Leaftastics 4-H Club helped plant the Artemis Moon Tree Seedling

Landed and Planted

– a loblolly pine tree
seedling that took a
trip around the
moon on the
Artemis I mission
found its new home
at the UF IFAS Clay
County Extension
Office in Green Cove
Springs, Florida. The
Clay County 4-H

program, the Leaftastics 4-H club, and UF/IFAS Extension Clay County team planted an Artemis Moon Tree Seedling that flew more than 270,000 miles from Earth around the Moon. The Artemis Moon Tree Seedling joins the <u>Apollo 14 Moon Tree</u> planted just 30 minutes south in Keystone Heights, Florida, to become one of a handful of Florida counties to have two Moon Trees in their backyard.

4-H youth, a part of Leaftastics club, spent the morning of August 22 helping to plant the seedling. Dr. Wayne Hobbs, Environmental Horticulture agent, and Amy Morie, the Leaftastics Club Leader & Landscape Architect, talked to the youth about various topics. Planting techniques, the importance of a seedling's root system, the use of water bags, and measuring the seedling's trunk diameter and tree height were all part of the lesson.

When asked about what the youths' favorite parts about the planting experience was, Autumn, one of the Leaftastics 4-H members, shared "I liked being able to touch the tree!"

It's excitement like Autumn's and her fellow Leaftastics 4-H members that inspired Elaine Giles Simfukwe's, Clay County 4-H STEM agent, to pursue an application with NASA's Office of STEM Engagement and NASA's Artifact Module to receive an Artemis Moon Tree Seedling. The #moontrees program partnership is between NASA, the USDA Forest Service, and NASA's Office of STEM Engagement.

"I had heard about an opportunity to apply for a moon tree seedling from a workshop at the National Science

Leaftastics 4-H members listen to Dr. Wayne Hobbs & Amy Morie about planting techniques and care for the Artemis Moon Tree Seedling.

Teaching

Association in 2023." Simfukwe shared. "I thought – we have an Apollo 14 Moon Tree already; it would be cool to educate our youth and our local community about both moon trees and how they are helping to inform our future with space travel?"

The Apollo 14 Moon Tree in Keystone Heights served as another inspiration to pursue an application for an Artemis Moon Tree Seedling. The tree is an American Sycamore that was aboard the Apollo 14 mission on January 31, 1971. Local nursery owner Bob Byrnes acquired the seed/tree from the University of Florida and had it dedicated in its current location adjacent of the Keystone Heights Library in 1984. The Apollo 14 Moon Tree in Keystone Heights is one of about 100 accounted for in the United States.

After the publication of the initial story, Simfukwe learned about a third Moon Tree that was planted in Clay County. Orange Park Elementary School was also awarded an Artemis Moon Tree Seedling that was planted at the school in June. Now with three Moon Trees in Clay County, Simfukwe and Orange Park Elementary School have been discussing opportunities to expand Moon Tree education for all three Moon Trees in Clay County. One of the immediate goals is to host a citizen science workshop about the moon trees that will have youth record tree height and trunk diameter. Youth will submit their findings to the GLOBE observer app. Citizen data input into this app help researchers with important current projects. With Moon Trees specifically, researchers are looking at how these trees are helping to balance Earth's carbon budget. To be entered into the GLOBE Observer App, a tree should be a minimum of 5 meters, or a little over 16 feet ,high. Right now, the Artemis Moon Tree seedling at the UF IFAS Extension Clay County Extension Office stands at a proud 30 inches.

Artemis Moon Tree Seedling

The Leaftastics 4-H Club will monitor the tree as part of their clubs' project and measuring its heights

regularly. Youth who are interested in learning more about planting, gardening, and horticulture are invited to join the Leaftastics 4-H Club. 4-H Online Club Enrollment opens on September 3 at noon.

With NASA's emphasis on inspiring the next generation about space exploration, Simfukwe hopes that science programs like these encourage youth to critically think about their roles as citizens and how they can be a part of solving agricultural and human challenges when it comes to living on the Moon and beyond. Clay County 4-H and the University of Florida IFAS have already engaged in similar initiatives such as having a Clay County 4-H youth sending the <u>first 4-H science</u> experiment up to space abroad SpaceXCRS-27, <u>UF Space</u> Plants Lab, and so much more.

Author's note: This story has been updated on September 10, 2024, with new information about the third Moon Tree in Clay County that is planted at Orange Park Elementary School.

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by Elaine Simfukwe

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Category: , Clubs & Volunteers, UF/IFAS Extension

Tags: 4-H, Clay County, Clay County 4-H, Moon Tree, STEM,

<u>Youth</u>

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