

PRESERVING HEIRLOOM APPLE VARIETIES THROUGH HYBRID LEARNING



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SITUATION

The apple (*Malus x domestica*) is one of the top three fruit crops in terms of production and value in the United States. There are an estimated 7,500 named varieties with approximately 1,600 varieties either originating or at one time being grown in the South. Sadly, over the last century most of these varieties have been lost. By 2008 ninety percent of apple production was limited to just 15 varieties, with 'Red Delicious' accounting for 24%.

In 2019 Extension agents began collaborating with University of Georgia Franklin College of Arts and the Georgia Mountain Research Education Center(GMREC) to establish The Georgia Heritage Apple Orchard. The two-acre orchard, was planted in 2021 with 101 rare varieties once common on Georgia farms and homesteads. The Orchard will serve as a vital preservation site and allow for dissemination of genetic material as the only way to reproduce a variety is through asexual propagation-grafting.

Grafting workshops are a great way to share this increasingly rare "heirloom" genetic material. These trainings, which are traditionally in-person, have become a popular Extension program over the years. The COVID-19 pandemic made planning a traditional event challenging and irresponsible given the community spread experienced across the state in early 2021. Thus, a team of six Extension agents collaborated with suppliers, farmers, and university faculty to develop an innovative training that included the personal interaction and physical materials that make a traditional class so popular.

METHODS

\$35

Course Materials Fee Included the following

- 5 Semi-dwarf rootstocks
- 5 Tree Tags for labeling
- Parafilm to secure the graft

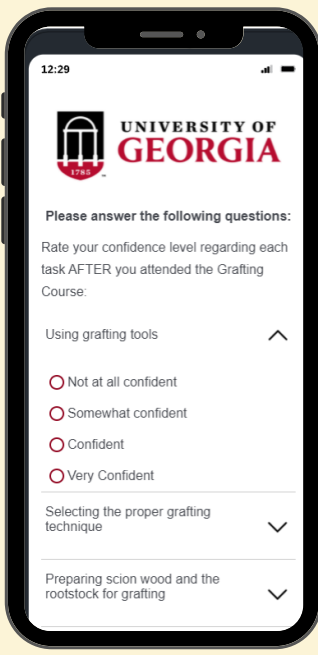
- 9 labeled scions of Heirloom Varieties
 - "Arkansas Black"
 - "Golden Delicious"
 - "Rambo"
 - "Southern Detroit"
 - "Tarbutton"
 - "Winter Terry"
 - "Woodstock"
 - "Winter Terry"
 - "Yates"

Upon registration through Eventbrite participants selected one of six pickup points (Canton, Blue Ridge, Atlanta, Newnan, Lafayette, Athens) for their materials. Four live zoom classroom options were provided at registration to reinforce the pre-recorded video content.

Prior to pick up dates participants were provided with links to the pre-recorded content available on YouTube as well as a link to a Qualtrics pre-course survey.

RESULTS

91 Individuals Registered from
28 Georgia Counties

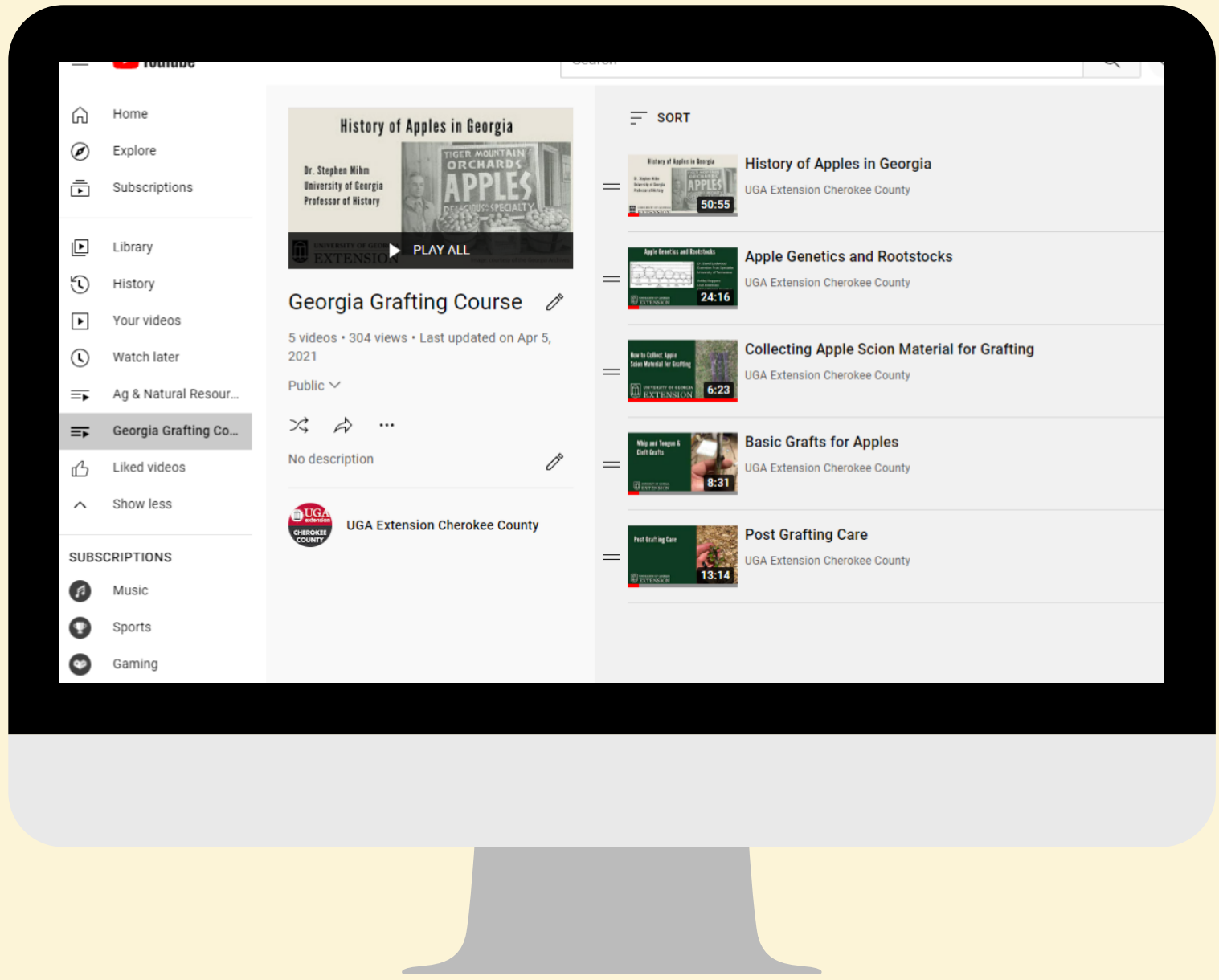


78% Pre Survey Response Rate
49.5% Post Survey Response Rate

Post Course Survey included additional questions to measure satisfaction (Not at all Satisfied, Somewhat Satisfied, Satisfied, Very Satisfied) with the logistics and novel approach to the course. Survey responses showed the following:

Material Pick up: 100% Satisfaction (80% Very Satisfied)
Virtual Content: 93% Satisfaction (71% Very Satisfied)
Zoom Classroom: 97% Satisfaction (56% Very Satisfied)

Creation of stand alone program that other agents can utilize



Georgia Grafting Course video content as seen on Youtube. Videos include: History of Apples in Georgia, Apple Genetics and Rootstocks, Collecting Scion Material, Basic Grafts for Apples, and Post Grafting Care

682

Total views of video content



Course instructor, Ashley Hoppers, demonstrates grafting technique during one of the four live zoom sessions.

+ 57 % Confidence level increase "How to collect and store scions"

+52.5% Confidence level increase with Grafting Technique

"Thought the virtual class was very good and I'm definitely hooked on grafting."
Cathy Carver

"Josh Fuder and Ashley Hoppers did a really great job in presenting a topic we are very interested in. My 9 year old was able to graft his trees (cleft grafts) and my wife and I did ours with a combination of the techniques. We have been wanting to learn this for years and we hope to do more grafting in the future."

Response from individual who had previously attended in-person course

"I actually found it more helpful. In a large classroom, it's harder to see the instructors hand as well and I needed to wait until the instructor or assistant came closer so I could observe their technique. With the online class, I could see up close and more clearly. Instructors will have to practice making cuts within the camera's field of vision, but both instructors did this very well."



Scan to Access
Georgia Grafting Course Content

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