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Cold Hardy Citrus Extension Program

In North Florida, there has been a growth in citrus production due to the relatively mild winters, advances in freeze protection, and cold hardy citrus varieties. In addition to this, there is a relatively low incidence of the citrus greening pathogen and its vector, the Asian citrus psyllid. Due to these factors, many growers have chosen to grow citrus to diversify their agricultural operation. Despite the growth in citrus production, there is a lack of knowledge for growers regarding citrus production practices. Many growers are completely new to the industry and have turned to citrus production to diversify their current operation, offering a major opportunity for citrus related educational programming. The goal of this regional program is for citrus growers in the region to expand their current level of production knowledge and implement best management practices on their operations. Educational activities include two annual production field days, and a quarterly newsletter targeted towards citrus growers in the region. Since 2022, program evaluations have indicated a 263/267 (98%) increase in knowledge of participants. Of those participants surveyed, 177/236 (75%) indicated that they planned to make a change to their operation as a result of the information presented and 74/138 (53%) indicated that they have already made a change. Educational field days paired with a quarterly newsletter have been successful methods of delivering educational content for cold hardy citrus growers.

Educational Objectives:

The objectives of this Extension program are accomplished under the advisement of and working in collaboration with the target audience (citrus growers, citrus packers, citrus industry professionals). A needs assessment and survey data utilizing clientele feedback has helped develop this program since the beginning of inception. Issues identified by the group have included the need for information on citrus production practices for growers in the region. Through this, the *Citrus Health Forum* and the *Cold Hardy Citrus Field Day*, yearly production meetings and the [*Cold Hardy Citrus Connection*](#), a quarterly newsletter, were developed.

The specific objectives of this program include: 1) knowledge gain, 2) anticipated practice change, 3) actual practice change and 4) cost reductions.

Program Activities and Teaching Methods:

Annually, Extension and industry personnel provide research-based presentations to help citrus growers increase their knowledge and improve efficiency on their operations. In addition to the educational presentations, there is a field demonstration and a trade show of organizations and businesses that provide products and services to growers in the

region. The planning committee for this production meeting (the *Citrus Health Forum* and the *Cold Hardy Citrus Field Day*) consists of Extension agents, Extension specialists, and members of the Cold Hardy Citrus Association. I serve as the chair of the planning committee, seek sponsorships, coordinate marketing efforts, serve as moderator of the program, and present an educational booth at the program.

Other educational activities to support cold hardy citrus programming include development and distribution of a quarterly educational newsletter. The newsletter is a collaborative effort between UF/IFAS, University of Georgia and Fort Valley State University Extension Agents to provide producers in North Florida and South Georgia with an educational resource addressing regional and timely production issues, pest and disease updates, and information on upcoming events. I design, edit, write articles, and distribute the newsletter.

Evaluation: An exit survey was developed to capture data following the educational programs. The survey was distributed to *Citrus Health Forum* and *Cold Hardy Citrus Field Day* attendees following the programs. An additional survey was developed and distributed to the *Cold Hardy Citrus Connection* newsletter readership.

Citrus Health Forum and Cold Hardy Citrus Field Day Survey Results, 2022-2024

Year	Attendance	Survey Responses	Obj. 1 Knowledge gain	Obj. 2 Anticipated change	Obj. 3 Actual change	Obj. 4 Anticipated Cost reductions	Obj. 4 Actual Cost reductions
2024	167	119	118/119 (99%)	79/89 (88%)	28/50 (56%)	22/49 (44%)	12/37 (32%)
2023	97	73	72/73 (99%)	54/72 (75%)	21/45 (47%)	20/73 (26%)	Not asked
2022	109	75	73/75 (97%)	44/75 (59%)	25/43 (58%)	10/75 (13%)	Not asked

Impact Statement: Over the past three years, 373 growers have attended cold hardy citrus programming with 267 (72%) being survey respondents. Of these survey respondents, 263/267 (98%) have reported a knowledge gain in citrus production practices and 74/138 (53%) of growers have made a practice change. 52/197 (13%) of growers anticipate cost reductions and 12/37 (32%) have indicated actual cost reductions as a result of information presented through cold hardy citrus programming.

The *Cold Hardy Citrus Connection* newsletter began in 2020 with 190 readers and now is distributed to 340 readers. I have written 6 articles on citrus production practices for this newsletter and edited 18 editions. A very recent follow up survey for newsletter readership

has indicated that 9/9 (100%) of survey respondents learned something new by reading the newsletter and 9/9 (100%) made a practice change based on the information. The long-term impacts of citrus programming in North Florida are still being evaluated and economic components are still being incorporated into evaluation surveys.