

Krome Section

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GROWER EVALUATION OF ADVANCED SELECTIONS FROM THE UF/IFAS STRAWBERRY BREEDING PROGRAM

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Abstract. A new procedure has been implemented to obtain greater grower input on the performance of advanced selections from the University of Florida strawberry (*Fragaria* × *ananassa* Duch.) breeding program, and to maintain better control of proprietary clonal material during the evaluation period. Seven commercial strawberry growers, representing a range of soil and climatic conditions in Florida, were asked to evaluate about five advanced selections per season for a period of three to five years, starting with the 1996-97 season. The growers signed a nonpropagation agreement, and agreed to fill out a data form on each selection monthly during the fruiting season.

The purpose of this paper is to describe the procedure now being used for grower trials of advanced selections from the UF/IFAS strawberry breeding program. Grower trials are an important part of the overall cultivar development program because they provide valuable information on the commercial acceptability of potential cultivars. These trials need to be structured in a way, however, that will make it relatively easy for growers to provide the program with usable information. Also, the trials need to include enough growers to adequately represent the growing conditions of the industry.

Prior to the 1996-97 season, seven commercial strawberry growers were asked to participate in the trials. Five of the growers are in Hillsborough County (the area with the highest concentration of strawberry acreage in Florida), one grower is in Citrus County, and one grower is in Alachua County. We anticipate that these seven growers will continue to participate in the trials for at least three seasons.

In mid October, the growers were provided with several hundred plants of each of five advanced selections. All of the plants came from a field nursery at GCREC-Dover. Plants for future trials will come from a commercial nursery under contract with UF/IFAS. Selections that perform well in initial grower trials will be propagated so that each grower will receive enough plants in subsequent seasons to plant up to one acre of the selection. A one acre block of plants allows the grower to obtain accurate yield data and feedback from buy-

ers. Selections that perform well in the larger blocks will be considered for release by the UF/IFAS cultivar release committee. Once the selection has been approved for release, and has received a patent pending status, growers participating in the trials will be given the first opportunity to purchase plants of the new cultivar from licensed nurseries. Available plants will be divided equally among the participating growers. If the available plant supply exceeds what is needed to provide each participating grower with 100,000 plants (i.e., enough to plant five acres), then the additional plants will be made available to other Florida strawberry growers. By giving participating growers the first opportunity to purchase plants of a new cultivar, we are providing some remuneration for their service to the UF/IFAS strawberry breeding program.

Reproductions of the nonpropagation agreement and the data form used by participating growers are shown below.

University of Florida

Memorandum of Agreement for the Evaluation of Strawberry Selections

The purpose of this agreement is to provide for cooperative testing of the commercial potential of advanced strawberry selections developed by the University of Florida, (hereafter referred to as UF).

UF desires to have _____ (Hereafter referred to as Cooperator) assist in the strawberry improvement program by evaluating the following strawberry selections:

The Cooperator certifies that he/she is interested in evaluating the above selections, and has fields under his/her direct control at: (List all locations at which material might be grown.)

To this end, UF and the Cooperator agree that

1. The plants supplied under this agreement will be used solely for evaluation purposes. All vegetative material supplied or produced under this agreement will not be used for any purpose other than that stated in this agreement without the express written permission of the Director of Advanced Testing.
2. Fruit produced by plants of the selections listed above may be sold by the Cooperator.
3. This memorandum shall become effective upon approval by the Cooperator and the appropriate representatives of UF, and is considered a legally binding contract.
4. The Cooperator will strive to protect the selections listed above from secondary distribution, unauthorized propagation, or sale.
5. UF will strive to provide the Cooperator with plants that are free of known diseases and pests, but UF is not responsible for losses or problems that occur as a result of the Cooperator growing these plants in his fruiting field or nursery.

Approval for the Cooperator:

Name

Signature

Company

Approvals for UF:

Strawberry Breeder

Signature

Date

Address _____ Director of Advanced Testing _____
 City _____ Signature _____
 Date _____ Date _____

COOPERATOR DATA FORM
UF/IFAS Strawberry Breeding Program
December 1996

Cooperator: _____
 Selection number: _____
 Plant source: _____
 Location of plot: _____
 Planting date: _____
 Spacing: _____
 Spray schedule: _____

 Fertilization and watering regime: _____

 Number of runners: few moderate many
 (Circle the most appropriate word.)

Plant vigor: low medium high
 Date of 1st harvest: _____
 Severe pest or disease problems: _____

 Misshapen fruit:
 none few moderate many
 Color uniformity: (e.g. many green tips, green shoulders, or dark streaks)

 Albinism:
 none slight moderate abundant
 Fruit size uniformity:
 uniform variable highly variable
 Water damage:
 none slight moderate abundant
 Productivity:
 low medium high
 Severe weather conditions: (e.g., hail, flooding, freezes) _____

 Additional comments: _____

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DEMONSTRATION PLOTS OF ALTERNATE FRUIT AND NUT CROPS FOR CENTRAL FLORIDA

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Abstract. Central Florida fruit producers have observed many crops searching for one that can be produced and sold locally for a profit. A demonstration/research plot was established at Conserv II near Winter Garden in Orange County to evaluate cultivars of peaches, chestnuts, pecans, persimmons, figs, and grapes as possible alternative crops for that area. Each of these will be discussed as a potential crop for central Florida.

Florida farmers are currently exploring alternative crops that can be grown profitably in central and north-central Florida. In February, 1991, a demonstration planting was estab-

lished in central Florida to evaluate the potential for commercial production of several perennial fruit and nut crops. The planting is located at Conserv II in Orange County near Winter Garden, Fla. Crops included for testing were chestnuts, muscadine grapes, persimmons, figs, pecans, and peaches.

Fruit and Nut Crops Evaluated

Chestnuts. Chestnuts were chosen because they are adapted to Florida's climate and there is a good possibility for export of Florida-grown chestnuts to northern markets (Wallace, 1995). Possible concerns regarding chestnut production in Florida are: (1) which cultivars are best adapted to Central Florida; (2) what is the best harvest method, and can chestnuts be mechanically harvested? (3) post-harvest care of nuts; (4) proper tree training and establishment; and (5) development of markets. The chestnut cultivars included in this trial were chosen for their resistance to chestnut blight and for their large nut size. They are 'Revival', 'Alachua', 'Carpenter', and 'Willamette' (American-Chinese hybrids) as well as 'AU Leader' and 'AU Cropper' (Chinese chestnut cultivars released from Auburn University). Grafted trees were purchased from local nurseries and planted in spring, 1991, at a

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