

# Department of Agriculture, Trade and Consumer Protection

Division of Agricultural Development  
Agricultural Development & Diversification Program (ADD)  
Grant Project Final Report  
Contract Number: 17053

Grant Project Title: On-Farm Trials for Overlooked Fruit Crops  
Project Beginning Date: July 1, 2002                      Project End Date: June 30, 2003  
Amount of Funding Awarded: \$9,000  
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## GOALS AND ACCOMPLISHMENTS

The purpose of this ADD Grant project was to initiate the planning, preparation and establishment phase of a multi-year on-farm trial to evaluate new agricultural opportunities for fruit production in Wisconsin. The project was undertaken to determine which unknown, little known and overlooked fruit crops could be grown and marketed successfully in Wisconsin to fulfill the evolving demand for uniquely flavored fruit products with nutraceutical value.

The ultimate goal of the continuing project is to create new employment opportunities through agricultural diversity that will stimulate agricultural related industry and services and new sources of farm income. The goal of establishing over 72 cultivars of 30 fruit types and 72 cultivars within a two-acre test plot has been successfully accomplished with the assistance of the ADD Grant.

## STEPS TO REACH THE GOALS

Success of the planning goal was based on consultation with University experts and extension personnel, extensive research on plant materials and discussion with potential processors and consumers.

Site selection and preparation was accomplished with the assistance of Dr. Brian Smith, professor and State Extension Fruit Specialist at UW-River Falls, and Dr. Leslie Cooperband, UW-Madison Department of Soil Science, who provided consultation services. Engineering skills of the project coordinator were used for site map preparation including a planting grid with one-foot contour intervals.

The establishment phase was successfully accomplished with available labor and equipment resources from Carandale Farm, a diverse fruit farming operation. The project coordinator, who has over 30 years of fruit growing experience, provided management and horticultural skills.

Some modifications were made to the proposed plan of work as the project evolved, but for the most part the project progressed as planned. Perhaps the most notable change was Dr. Smith's suggestion that a plow down cover crop to add organic material was not needed based on the cropping history of the site (18 tons per acre of straw mulch had been incorporated over the last three years while the site had been in strawberry production.) This allowed the establishment of a permanent grass cover in the fall through which planting strips were made with a spading machine in the spring.

Basically, things worked as planned. In retrospect, there was nothing that the project coordinator would have done differently.

## **CHALLENGES**

Size and quality of planting materials was a challenge. Four suppliers were used. Most material came from Washington and Oregon and had to endure 3 or 4 days of un-refrigerated transport by UPS. Plants were well packed and for the most part, arrived in good condition. The project coordinator used all of his accumulated knowledge and experience to minimize transplant shock, including pre-soaking and the use of Aqua-gel solution to keep roots moist after transplant. Bare root dormant plants transplanted well, but some plants came as foliated plants de-potted for shipment and arrived highly stressed. Despite the planting challenge, only three plants out of total of 325 did not survive transplant.

Another issue was plant quality. Leaf spotting (probably dogwood anthracnose) was evident on Cornelian Cherry, which were received as de-potted, foliated plants. These plants have remained stressed, a couple have died, and the rest may be challenged to survive the winter.

Weather was also a challenge. Planting of 52 late arriving plants was further delayed by an extended wet period in early May. Later season drought conditions have necessitated extensive irrigation.

## **FUTURE ACTIVITIES**

Future activities associated with this project are outlined in the "plan of work" submitted with the grant proposal. As specified therein, the results of this Grant cycle (the establishment of a two-acre test plot) will become the input for the next project phase which is the horticultural screening and evaluation for growth response, winter hardiness, pest problems, fruiting characteristics, sustainability and environmental considerations.

Those fruit types that appear adaptable and suitable for our environment and exhibit acceptable fruiting characteristics will become input for the third and final project phase consisting of marketing trials and new product development. This will invariably result in opportunities for agricultural diversity that will provide new sources of on-farm income, create new jobs in agricultural related industry and services and provide the consuming public with uniquely flavored fruit products with high nutraceutical value.

## **BENEFITS TO THE AGRICULTURAL INDUSTRY AND THE STATE OF WISCONSIN**

Results obtained with this grant are pre-requisite to the later phases of a multi-year project, which could have a significant and far reaching impact.

Results of the completed project could be used by the agricultural industry and the State of Wisconsin to enhance quality of life, by introducing new food choices, providing a way to maintain open space and environmental corridors in an urbanizing setting and by introducing food with high nutritional and nutraceutical value. It may enhance the environment by providing a diverse habitat for beneficial insects and other wildlife.

The economic impact of production, processing, marketing and distribution of new agricultural products could be substantial. Investment in production and processing facilities could create new job opportunities ranging from unskilled to high tech.