5. Hodgson, R. W. 1967. Horticultural varieties of citrus. pp. 431-591. *In:* W. Reuther, H. J. Webber, and L. D. Batchelor (Eds.), The Citrus Industry, vol. 1. University of California Press, Berkeley.
6. Scora, R. W. 1975. On the history and origin of *Citrus*. Bull. Torrey Bot. Club 102:369-375.
7. Soost, R. K. and J. W. Cameron. 1975. Citrus. pp. 507-540. *In:* J. Janick and J. W. Moore (Eds.), Advances in Fruit Breeding. Purdue Univ. Press, West Lafayette.
8. Soost, R. K., J. W. Cameron, W. P. Bitters, and R. G. Platt. 1961. Citrus bud variation-old and new. Calif. Citrograph 46:176, 188, 190-193.

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Book Review

G. A. CAHOON AND G. R. NONNECKE

Title: Klon Zuchtung bei Weinreben in Deutchland (Clone Breeding, Selection and Development, of Grapevines in Germany).
Authors: Harald Schoffling and Gunther Stellmach, Landes-Lehr-u. Versuchsanstalt fur Landwirtschaft, Weinbau und Gartenbau, Trier, Germany.
Publisher: Waldkircher Verlag, D-79177 Waldkirch, Germany
Price: DM 180

This book is an authoritative voice describing scientific development and preservation of existing grape cultivars throughout the world. One of the primary objectives of the research was to preserve the true characteristics of the traditional grape cultivars in Germany. Numerous clones were propagated vegetatively and tested intensively and repeatedly, over an extended period, to select unchanged clones (clones unaffected by somatic mutations and/or systematic infections) which can be used profitably by winegrape growers.

The authors maintain that production of "less discriminating" plant material has lead to the unrecognized inclusion of negative somatic mutations as well as systemic infections. With time this has resulted in the multiplication and use of grapevines which vary in their performance or even fail to maintain their original production potential. The book stresses the importance of eradicating these negative factors in clones of high value. The extensive scientific work on which this book is based has been called "systematic preservation-breeding" or a systematic approach to clonal preservation and development of winegrape cultivars. In Germany this practice has been legally established and is based on careful individual plant selection with subsequent biometrically correct tests of the descendants. "Klon Zuchtung" can be literally translated as clone breeding, clone selection or clone development. They believe that this practice is especially important in "old" varieties or cultivars, because the original specimens are unknown and therefore not available for propagation. Consequently, sanitation procedures were applied to well-chosen examples of the respective cultivars to eradicate any pathogens. Then, the cultivars were cloned, in order to produce mother plants, and proceeded to undergo years of genetic evaluations.

The authors, have been working on the theory and practice of "Klon Zuchtung" of *Vitis vinifera* cultivars for decades. In the present work they report the objectives and methodology used for serious and systematic clone development and preservation. They treat the complete subject of cultivar preservation, beginning with classical selection and propagation up to and including the latest modern cultural techniques. They have also attempted

to project such work into the future. The subject matter is interspersed with numerous diagrams and tables that are scientifically substantiated. At the end of each of the 12 chapters there is a summary in German, English and French.

The book has been directed at beginners as well as those with advanced knowledge in the field of "Klon Zuchtung." The information relates to plant material production in all areas of the world. The authors state that the book should intensify an interest in clone development where it already exists. Where it does not exist it could provide the stimulus to get it started. It is also directed at all those in the winegrape industry, such as propagators, grafters and producers who, directly or indirectly, stand to reap the commercial benefits of the clone developers. Finally, "Klon Zuchtung" should continue to improve the economics of winegrape production and make the livelihood of winegrape producers more secure. G. A. Cahoon, G. R. Nonneke.

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Performance of Nectarine Cultivars in Northern Mississippi

FRANK B. MATTA, R. C. SLOAN, JR. AND O. P. VADHWA

Abstract

Twenty-one nectarine cultivars were evaluated for fruit characteristics (flesh color, stone freeness, and skin color), full bloom date, harvest date, and yield. All cultivars tested had yellow flesh color, except 'Redchief' and 'Lafayette,' which had white flesh. 'Harko,' 'Early Sun Grand,' and 'Nectared #4' were semi-freestone and the remaining cultivars were freestone. Skin color ranged from yellow red to bright red. Bloom period for all cultivars occurred in late February through late March, and late spring freezes greatly limited production. Harvest dates ranged from May 22 through July 23. 'Early King' was early maturing, followed by 'Durbin,' 'Stark Crimson Gold,' and 'Stark Early Bird.' Late maturing cultivars were 'Redchief,' 'Garden State,' 'Francesco,' and 'Stark Redgold.' Based on yield, the most promising cultivars for northern Mississippi were 'Harko,' 'Redgold,' 'Stark Sunglo,' 'Hardired,' and 'Mericrest.' Cultivars were not evaluated for susceptibility to disease or insects. However, disease and insect pressure did not seem to limit tree production and performance.

Introduction

Nectarine and peach trees are similar; however, nectarine fruit are usually smaller, have smooth skin, and different flavor (8). Performance of peaches in Mississippi was reported in 1966 (6) and 1986 (4), but reports documenting the performance of nectarine cultivars in Mississippi are nonexistent. Since peaches can be successfully grown in Mississippi, prospects for nectarine production appeared viable. Breeding programs at the University of Florida (7), USDA at Bryon, Georgia, Clemson University (1), and the Horticulture Research Institute of Ontario, Canada (3) are developing new nectarine cultivars for growers. With development of new, more desirable cultivars, interest in nectarine production in Mississippi has prompted growers to seek information on adapted cultivars. Inquiries concerning performance and adaptability of nectarine cultivars prompted establishment of nectarine cultivar evaluations. This research paper presents results of nectarine cultivars evaluated from 1984 through 1992.

Methods and Materials

Twenty-one nectarine cultivars were evaluated from 1984 through 1992 at the MAFES Pontotoc Ridge-Flatwoods Research and Extension Center (34° 08'N and 89°00'W), Pontotoc, MS. Trees