"Peach and Nectarine Varieties"-A Hypertext Index

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Abstract. "Peach and Nectarine Varieties" is a self-contained computer program describing more than 600 varieties and their performance in the southeastern United States. The information can be accessed in various ways, including searching for any word or name. A Master Index of names and synonyms lists more than 6000 names used in the United States, plus many foreign names. This index includes pedigree, origin, and a coded description. General information is included regarding peaches and nectarines. All North American breeding programs are chronicled. The program is available for MS-DOS computers with an EGA or VGA monitor, and may be freely distributed.

Hypertext is a concept that implies nonlinear reading of a document. Personal computers and hypertext-authoring programs allow this concept to be put into practice. This paper describes a hypertext version of a bulletin covering peach and nectarine [*Prunus persica* (L.) Batsch] varieties.

The most comprehensive bulletin on peach

varieties was produced by U.P. Hedrick ≈75 years ago (Hedrick, 1917). He described 2181 peach varieties known in the United States at that time. In 1920, the American Pomological Society began publishing short variety descriptions of peaches and other fruits in the proceedings of their annual meetings. Similar lists were published by R.M. Brooks and H.P. Olmo, beginning with the *Proceedings of the American Society for Horticultural Science* in 1944, and continuing through the present in *HortScience*. A summary book was published in 1972 (Brooks and Olmo, 1972). None of these lists, however, are complete, up-to-date, or easily accessible now because most are out of print. More-modest publications solely about

peaches, such as that of Savage and Prince (1972), and European bulletins (Bellini and Scaramuzzi, 1976; Della Strada et al., 1984; Hugard and Saunier, 1965), also have been produced.

The bulletin of Savage and Prince (1972) has been updated recently and expanded to cover important modern peach and nectarine varieties, including all varieties released by public breeders in North America. A hypertext version (Peach and Nectarine Varieties), described here, is being made available, in addition to a more-conventional format as a U.S. Dept. of Agriculture (USDA) agricultural handbook (Okie, 1994).

Description

"Peach and Nectarine Varieties" contains general information about peaches and their characteristics. Fruit, flower, and tree characteristics are described. The discussion of chilling requirement includes an equation for estimating chilling based on monthly temperatures and a map showing average annual chilling accumulations in the United States. Leaf gland and flower types, and fruit shapes are shown in graphic images. A complete listing of North American peach breeding programs includes names and tenures of the breeders and the varieties released. These listings also can be accessed via a color-coded U.S. map. Major private breeders are listed as well. Acreages of major varieties are given for 13 states and provinces.

More than 600 varieties are described in some detail (Fig. 1) in Part 1. Complete pedigrees are shown where they are known, as are

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Redhaven	
SYNONYM:	none
FLESH:	yellow semi-clingstone peach
BLOOM:	non-showy ; 950 hours
GLAND:	reniform
BAC-SPOT:	moderately resistant
FIRMNESS:	high
LOOKS:	good; attractive; shape round with suture
QUALITY:	good
YIELD:	high
REMARKS:	A commercial variety. One of the most widely grown peaches of all time. Widely adapted. Productive variety. Fruit often shows a pronounced suture and a soft tip in the deep south. The standard for hardiness with good fruit.
ORIGIN:	1940 - Michigan Agricultural Experiment Station, East Lansing, Michigan
PEDIGREE:	Halehaven x Kalhaven
CITATION:	S&P; FVJ 41(2):50-52 (1987); Mich. Quart. Bull. 23:93-95

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Fig. 1. Sample peach variety description found in Part 1 of "Peach and Nectarine Varieties."

Q1...RJ					
Code	Ref.	Origin	Name	Help	Search
nyfmrs. 0	FWA	1962	Redgold(=Sun Grand op)		
			syn = Anderson 13H1138		
			syn = Andosa		
			syn = Plant Patent 1947		
			syn = Stark Redgold		
pyslrm. 0	MSU	1940	Redhaven(=Halehaven x Kalhaven)		
pysmm... D	ITA	1988	Redhaven Bianca(=Redhaven mut)		
pyfmrs. 0	MI	1976	Redkist(=Redskin mutation)		
			syn = AW-203		
			syn = Plant Patent 4055		
pyfmrs. 0	NJR	1964	Redqueen(=NJ123 (=J.H. Hale x Eclipse) x Blake)		
			syn = NJ212		
pyf...l... 2	CA	1964	RedRan(=Rancho Redleaf F3 op)		
			syn = Plant Patent 2588		
pyfmrs. 0	NJR	1940	Redrose(=J.H. Hale x Delicious)		
			syn = NJ98		
pyfmrs. 0	UMD	1944	Redskin(=J.H. Hale x Elberta)		
			syn = Md. 1-15		
			Redskin —[see Redskin Elberta]		

AaBaCaDFGoIJLMePaPoRoSkUVXYZUP

AnBlClEGaHKMaNOPtQReSaTWDN

Fig. 2. Sample listing from the master index found in Part 2 of "Peach and Nectarine Varieties."

references to where the variety is described. Variety performance in the southeastern United States is discussed for those tested there. Several indices are provided to facilitate access to the descriptions in Part 1. An alphabetical index presents the names in a single list. An index of breeding programs allows the user to access a description from a list of releases from a program. A similar index allows access via tables of production figures for key states. A graphical tree arranged by type (peach or nec-

tarine), flesh color, and chilling requirement allows the user to call up a list of varieties in each category. Each list is presented in order of ripening, so that the user can see varieties that fit a certain production window. The list also indicates degree of pit adhesion, leaf gland type, and bloom type to allow it to be used to help identify an unknown variety.

Part 2 of the bulletin consists of a cross-referenced listing of all known names used in North America for peach and nectarine variet-

ies. For each variety, brief codes (see left column of Fig. 2) give pertinent characteristics (type, flesh color, freeness, bloom time, time when ripe, gland, bloom type, other), date and state or country of origin, and pedigree, where this information is known. Synonyms and selection numbers are listed under the primary name as well as alphabetically elsewhere (Fig. 2). More than 6000 names and 5000 synonyms are included.

Use

The hypertext structure allows the user to jump from any occurrence of a variety name, such as in a table, index, or pedigree, to the description of that variety in Part 1 (for those varieties listed in Part 1). The user can easily backtrack his/her steps at any time, or view a list of the topics that have been visited. A Boolean search capability allows the user to find all occurrences of any term or terms and view them sequentially. For example, any use of 'Elberta' can be viewed, allowing the user to see all varieties with 'Elberta' anywhere in the pedigree or in comments.

The variety document was composed using HyperWriter (Ntergaid, Fairfield, Conn.). A royalty-free reader program (HyperReader) is distributed with the document. The program runs on a DOS computer with a hard drive. The current version requires a VGA (preferably) or EGA graphics adapter for the graphics. The program may be usable, but less readable, on other video types. Copies of this program are available on diskette at a modest cost from the American Pomological Society, 102 Tyson Bldg., Dept. of Horticulture, The Pennsylvania State Univ., University Park, PA 16802.

Program navigation is enhanced by the use of a mouse. When the files are expanded for use, they occupy about 2.5 MB of disk space. The document and reader may be freely copied. Although efforts have been made to verify the information in this index, neither the USDA nor I guarantee its accuracy.

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