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Notice to Fruit Growers and Nurserymen Relative to the Naming and Release of the Apple, 'Hardy Cumberland'[1]

The Agricultural Research Service, United States Department of Agriculture and the University of Tennessee, Institute of Agriculture jointly announce the naming and release for propagation of the apple cultivar 'Hardy Cumberland,' formerly tested as BL 6124-51. 'Hardy Cumberland' resulted from the cross, Lyons x Detroit Red, made at Blacksburg, Virginia in 1961 by Jerry B. Hardigree. Both parents are locally adapted for growth and productivity in the southern Appalachian Mountains. BL 6124-51 was planted in 1963 at the Georgia Mountain Branch Experiment Station at Blairsville, Georgia; selected for testing in 1969 by James M. Thompson; and subsequently tested at Blairsville and at the Plateau Experiment Station at Crossville, Tennessee.

Fruit of 'Hardy Cumberland' has ripened with or slightly later than 'Rome Beauty' or about 158 days after full bloom. It would qualify as a late fall or early winter variety, depending on the orchard location. The copious pollen shed peaks three days after 'Red Delicious' and two days before 'Rome Beauty.' Thus, 'Hardy Cumberland' could be successfully grown in combination with other apple cultivars commonly grown in the Appalachian area.

Fruits slightly larger than three inches in diameter are readily obtained from 'Hardy Cumberland' if moderate thinning is practiced each season. Fruit shape is lightly ribbed, round oblate with the depth consistently 80 percent of the diameter. Overall appearance is rated excellent and is quite interesting. Finish is excellent with a moderate bloom interspersed with lenticel dots and striking stem-end russet patterns. The fruit color is 80 percent washed and striped carmine, 15 percent pale greenish-yellow ground, and 5 percent buff lenticels and russet. Eating quality is rated as excellent. The flesh is cream colored, slightly coarse, juicy, and breaks sharply. Flavor components are well balanced with sweetness being more prominent than aroma or acidity. Fruit storage characteristics have been excellent. Fruits picked in a timely manner and immediately cooled have been stored successfully for 4-6 months. Fruit has shown no watercore or bitter pit problems.

Trees of 'Hardy Cumberland' exhibit satisfactory vigor and have had approximately 90 percent of the growth of standard 'Golden Delicious' trees. Trees have had a well-spread easily trained framework. Fruit are borne primarily on terminals and laterals. Spur formation is greatly repressed. No overwhelming disease problems have been observed in trials with 'Hardy Cumberland' although scab and bitter rot were major disease problems for several cultivars in the Tennessee and Georgia apple trials. Both parent cultivars, Lyons and Detroit Red, are known to have wide ranging levels of field resistance to native diseases. 'Hardy Cumberland' fruit have been easily produced under Tennessee spray schedules and should be satisfactory for integrated pest management practices. Trees survived minus 25 degrees F without injury in

[1]United States Department of Agriculture, Agricultural Research Service, Washington, DC 20250 and University of Tennessee, Institute of Agriculture, Knoxville, TN 37901.

January, 1985 and survived as well as any other cultivar through a devastating hailstorm featuring 3 inch stones in August, 1990. The low temperature in 1985 injured trees of most standard cultivars in the orchard.

'Hardy Cumberland' is being introduced to fill the need for a cultivar which is hardy and productive under disease pressure, fluctuating winter temperatures, and spring frosts encountered in the southern Appalachian highlands. The terminal and lateral bearing habit is more forgiving of training and pruning errors than spur bearing varieties and may be partly responsible for the winter hardiness. It is not known if cold hardiness to fluctuating temperatures of the Cumberland Plateau of Tennessee will persist in northern areas of relatively continuous cold. 'Hardy Cumberland' could be considered for testing in any production area that requires enhanced cold hardiness and associated characteristics.

Neither the Agricultural Research Service nor the University of Tennessee has trees of 'Hardy Cumberland' for distribution. Individuals interested in budwood should write to Charles A. Mullins, University of Tennessee, Plateau Experiment Station, Route 9, Box 363, Crossville, TN 38555.

Book Review
Pecan Cultivars — The Orchard Foundation

Pecan Cultivars — The Orchard Foundation, by Dr. Darrell Sparks, begins with an introduction, and an excellent historical account of pecan cultivar development from the 1870's to the present. This book may be considered the "Encyclopedia of Pecan Cultivar Characteristics" where both descriptions and quantitative data are offered on characteristics such as budbreak, leaf date, ripening date, season duration, heat units, flower dichogamy, catkin size and shape, stigma size color and shape, efficiency of pollinizers, leaf shape and color, leaf retention, foliage density, tree structure and shape, tree size and strength, yield and yield efficiency, alternate bearing, precocity and prolificness, flower cluster size, shoot length and density, flower and fruit abortion, nut maturity, shuck thickness and shape, shell markings, nut size, nut shape, shell thickness, % kernel, % oil, kernel stability, % intact halves, kernel color, suitability for mechanical harvesting, cracking and shelling, storage ability, and kernel stability and resistance to insects, diseases and winter injury.

Next, 150 pages are devoted to a detailed description of standard, old profitable, old submarginal, USDA, and northern cultivars, and cultivars with special significance. The book is not completely descriptive. Over 50 pages are devoted to the "Pursuit of a Better Cultivar" with an insightful discussion of the reasons for the failure of cultivars.

The book is well-referenced and is written in a clear and concise manner. High quality black and white photographs of all cultivars are presented. It is also supplemented by identification keys, several useful appendices and a glossary.

In summary, this book is an invaluable source of information for pecan growers, shellers, researchers and serious hobbyists.

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