

When planting paw paws it must be born in mind that they require a deep rich loam, but that they will grow well on lighter soil if it is built up properly. The transplanted trees must have a high percentage of roots, and the roots should never be allowed to become dry. The tops should be severely pruned back and watered liberally the first season.

If you make inquiries about outstanding paw paws, you may hear of fruit six inches or more in length. A paw paw this large is very rare. The writer has never encountered one of these giants. The largest one on record weighed sixteen ounces, and was found by Elizabeth Ann Bartholomew of West Virginia University. They are more apt to weigh in the neighborhood of three to four ounces. They are born in clusters of one to six.

When ripe the fruit is greenish yellow, turning nearly black. It bruises very easily, and should be gathered just as it begins to soften and allowed to ripen fully in a cool dry place. They do not have to be frosted. The pulp freezes well, and is not altered in flavor in the process. The paw paw has large seeds and is well endowed with them.

We must remember it is a fruit that has had very little attention from the plant breeders. The fruits we are familiar with weren't very attractive to man in their wild state. Nature is stingy with outstanding qualities in her fruits and nuts. The privilege of improving on nature is man's place in the great scheme of things. Davis is the only variety that, to my knowledge, is available commercially.

Winter Hardiness of Apple Varieties

K. LAPINS*

Tree fruit growing area of British Columbia experienced a severe test during the winter of 1964-65 when in mid-December the temperature suddenly dropped from above freezing to -16°F ., as recorded at Summerland. The low temperatures were accompanied by very high winds, their combined effect resulting in tree damage, particularly to twigs, fruit spurs, and trunk on the north side.

In well-matured apple trees the damage to fruit spurs generally was extensive. Spur killing or injury varied considerably with varieties, and in most cases was in line with the known overall tree hardiness. The extent of spur killing and damage was evaluated in the spring and data on some varieties are given below. The varieties are classified into five hardiness groups, from very hardy to tender;

the damage to fruit spurs varied in these groups from none to very severe, with most or all spurs killed in the tender group. It should be kept in mind that each test winter is different and that relative hardiness of varieties may vary somewhat in each test. However, our knowledge of varietal hardiness is the accumulation of data from different areas in different test winters.

The spur-type mutants and tetraploids of certain varieties that were available for observation suffered more than their parent varieties. The spur damage of various spur types of Delicious was slightly but consistently higher than that of the standard Delicious. The tetraploids of Delicious, Golden Delicious, McIntosh, Melba, Spartan, Winesap, and Yellow Transparent were considerably more tender than the corresponding diploids.

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TABLE 1. Relative hardiness of fruit spurs, evaluated following the winter of 1964-65 at Summerland, B. C., Canada.

Very hardy		Hardy	Moder. hardy	Moder. tender	Tender
Bancroft	Minjon	Cortland	Grimes Golden	Gallia Beauty	Delicious
Beautiful Arcade	0-271*	Democrat	Jonathan	Hume	Golden Delicious Gravenstein
Canada Baldwin	0-292*	Jonadel	Linda	Melrose	
Carroll	Patricia	Scotia	Niagara	Monroe	Idared
Crimson Beauty	Puritan	Secor	Spartan	Orei	Newfane
Davey	Quinte	10C-34-3**	Stayman	Rome Beauty	Newtown
Early McIntosh	Starks Earliest		S-4-8**	Winesap	Quebec Belle
Fireside	Summerred		Tydemans Early	Winter Banana	Winston 10C-1-21**
Julyred	Wealthy		10C-31-16**	Yarlington	10C-6-25**
Lobo	Yellow Transparent			9E-13-47**	10C-24-26**
Macoun	York				
McIntosh	10C-19-24**				
Melba					

*Selections from Central Experimental Farm, Ottawa.

**Selections from Research Station, Summerland.

Theodore S. Weir Retires

Theodore S. Weir, Associate Professor of Horticultural Science, and Assistant Superintendent of the Fruit Breeding Farm at Excelsior, retired July 1, 1967, after 38 years with the University.

Professor Weir is originally from Canada. After receiving his B. S. degree from the Manitoba Agricultural College, he worked for a short time as horticulturist at the Dominion Experiment Station, Swift Current, Saskatchewan. He then came to the University of Minnesota to get his M. S. degree. In 1936, he joined the staff at Minnesota, and taught horticulture at the University's North Central School and Experiment Station in Grand Rapids. And in 1946 he was appointed

Assistant Superintendent of the Fruit Breeding Farm, and Associate Professor of Horticultural Science. At the Breeding Farm he participated for many years in the development of new fruit varieties adapted to Minnesota conditions. Among the more recent introductions he helped to develop are the Regent apple, Deep Purple cherry-plum, and Ithasca raspberry.

Professor Weir wrote two very popular Minnesota Extension bulletins, one entitled "Grafting Fruit Trees," and the other, of which he is coauthor, "Pruning the Apple Tree." He is also coauthor of several more recent Minnesota publications: "The Regent Apple;" "Two New Fruits for 1966"; and "Prunus Hybrids, Selections and Varieties."