New Life for Old 'Spy' Trees

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The 'Northern Spy' apple tree, often referred to simply as 'Spy', is a large tree when on its own or seedling roots, and has an upright, free growing habit. Its characteristic vigour makes it somewhat difficult to control even on 'M.9' or 'M.26' roots. Although in the past 'Spy' seedlings have themselves been used as rootstocks on this continent because of their vigorous, strong roots, they have been shown to have certain dwarfing properties in other areas. Hence, the root-aphid resistant 'Northern Spy' is one parent in the 'Malling Merton' series of rootstocks.

'Spy' tends to be slow in coming into bearing, but it is long lived and may continue vigorous and productive for more than half a century. Unfortunately, long before this, the 'Spy' tree may have been neglected until its long, straggly branches produce fruit only on the periphery of a huge ungainly head.

The history of the 'Northern Spy' goes back to about 1800 in a seedling orchard in East Bloomfield, New York, from seeds brought from Salisbury, Connecticut (1). More than 50 years later, in 1852, the cultivar was recognized by the American Pomological Society as "a new variety of promise". In 1896 Beach and Close, in a status evaluation of apple cultivars in New York State, rated 'Baldwin', 'R.I. Greening' and 'Northern Spy' as the top three, in that order. The Fruit Branch of Ontario in 1914 gave its quality as, "dessert and cooking, best" (3). Hedrick (1922) described it as "delectable quality, great beauty of color and form" (4). In 1973 some 123 years after its origin, 'Spy' is still listed in fruit catalogues and cultivar recommendation lists throughout the northeastern apple growing section of the North American continent.

The excellent quality and appearance of its fruit when well grown, coupled with its outstanding storage properties, make 'Spy' a perennial favorite through the years in spite of its sometimes temperamental behavior in the orchard. As would be expected, the characteristics of 'Spy' have attracted generations of fruit breeders; but none of its many progeny have equalled, let alone surpassed, the famous parent. Teskey (7) lists some of the better known offspring as 'Pewaukee' ('Spy' x 'Duchess Seedling') Wisconsin, about 1850; 'Ontario' ('Spy' x 'Wagener') Paris, Ontario, 1880; and more recently 'Sandow' (open-pollinated 'Spy' seedling), 'Wayne' ('Northwestern Greening' x [red] 'Spy') and 'Spigold' ([red] 'Spy' x 'Golden Delicious').

Many of the 'Spy' orchards in Ontario, where the cultivar can often be grown to perfection, are old and pose a real management problem. Yet, often the grower is not financially prepared to remove these still vigorous and productive trees. How does one cope economically today with a big tree that is too high, often too wide, too thick in the top and bears little or no top quality fruit in the center of the tree? One possible solution is to give the big tree a sort of "MacLean pillar" pruning treatment (6).

First, remove entirely a few of the most objectionable of the main limbs, that is, those that are growing directly above or below another limb. Then cut back the remaining limbs severely

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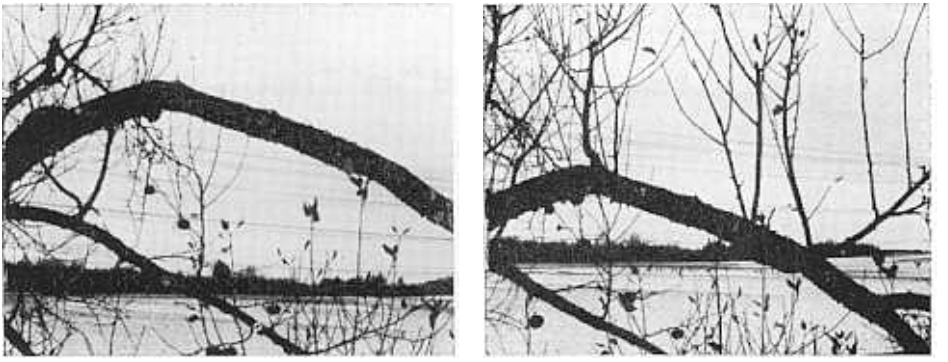

Figure 1. Limb of old 'Spy' tree. Left, immediately after severe pruning and right, two years later.

so that the tree is now of more acceptable size, (Fig. 1). There may be very few side branches remaining. Do this operation in early spring or late winter when the "invigorating" response to pruning is greatest. The result should be the forcing of a large number of shoots back along the previously bare or nearly bare limbs.

The new shoots, if too numerous, can be thinned out easily by hand in July. At the same time the length of the shoots can be controlled by cutting them back one-third or even one-half. This, at the same time tends to force branching of the shoots (Fig. 2). The summer pruning, while not stimulating new shoot growth, does give a pronounced dwarfing effect, a generally desirable effect for 'Northern Spy'. Some form of "shearing" might be profitably employed for the summer pruning.

Growth inhibitors might also be used. Alar has been shown by Looney et al (5) and Forshey (2) to reduce shoot growth of several apple cultivars. At Guelph, Alar has shown definite promise in reducing the shoot growth of 'Northern Spy' (Table 1).

To date Alar has had no significant effect on the time of shoots coming into bearing. However, indications are that time may prove that the growth inhibiting spray treatments may also favorably influence flowering. A few fruits appeared on the shoots of all the 'Spy' trees in the third year after receiving the pruning treatment.

Table 1. Effect of Alar applied June 12 on shoots of 'Northern Spy'.

Treatment	Shoot Growth (cm.) 1970	1971	1972
		36.93	
		35.62	
		30.13	

The trees thus pruned were reduced considerably in size and were therefore more easily pruned, sprayed and harvested. The fruit was of good quality, being produced on young wood with good light exposure. Spraying could be more easily and cheaply accomplished. The summer removal

Figure 2. Old 'Spy' tree two years after severe pruning.

and cutting back of shoots aided in the control of aphids. Color should improve as the trees settle into heavier cropping.

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USDA Releases New Everbearing Strawberry, 'Fort Laramie'

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'Fort Laramie' is a new everbearing strawberry released by the U. S. Department of Agriculture, recommended for home gardens and possibly for commercial production in the High Plains and North Central States. It is being released only to plant propagators in 1973. Nurserymen will produce plants for public sale in succeeding years.

Residents of the High Plains States are limited in the supply of fresh strawberries available for home use. In these states strawberries from commercial sources are expensive, in short-season supply, and often lacking in quality. Present everbearing varieties, developed mostly for other areas, are only partly satisfactory in the region. They lack sufficient winterhardiness or fail to produce adequate fruit. An improved variety should stimulate interest in home garden strawberry production, particularly among young people.

'Fort Laramie' was developed at the Cheyenne Horticultural Field Station, Cheyenne, Wyoming. Sixteen years of breeding work and the field evaluation of more than one hundred thousand seedlings resulted in the new variety.

The new variety is described as an all-season, everbearing strawberry with excellent vigor, abundant runner production, and extreme winterhardiness. The fruit is large in size, bright scarlet-red in color, and firm fleshed in areas with cool nights. Fruit may become somewhat soft in areas with warm nights or if overripe. Yield is high. Berries are attractive and round-conic in shape. Interior color is pink to scarlet. Flavor is characteristically strawberry aromatic, sweet, and pleasant. Size of the later berries in a truss holds up very well. Plants recover well after the severe hailstorms so common in the High Plains states. Foliar diseases were not reported from cooperators in the recommended areas of adaptability.

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