Fall Russet*

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No one definitely knows what the origin of this exceedingly high flavored little apple I am calling Fall Russet really is. It was located in the old family orchard of Russell Pickering of Franklin, Michigan. Pickering's father had planted the trees north of the farmhouse the year he was married, estimated to be approximately the year 1875. The trees were purchased from a nursery; but which one, no one knows.

In the fall of 1956 I sent samples of the Fall Russet apple to Dr. Magness of the U. S. Department of Agriculture and to Dr. H. B. Tukey at Michigan State University. Both regarded it as an apple of superior quality. Dr. Tukey thought it resembled the long lost Pomme Gris** which he had eaten in earlier years. With this verification of my own and my family's high rating of the apple, I recommended it to friends. In the winter of 1956, on a trip to cut some additional scions for friends, I found it no longer existed. The owner had pushed the tree out with a bulldozer. Its small drab-looking fruits were unsalable, and didn't seem worthwhile to him.

During the summer of 1957, the graft on my tree fruited for the first time. The limb was heavily laden with the fruit which grew thickly in clusters. The apples were small, long-stemmed, sometimes ribbed, with a closed calyx. The skin was a yellowish green russet, irregularly webbed and streaked with grey and dark green. When first picked, about the second week of September, the fruit is very crisp and juicy and of an exceedingly high flavor. It is a bit too tart for most tastes, but its tartness is combined with an unusually high degree of sweetness. The juice is almost sirupy with sugar. As it mellows, from September 20 on into October and November, it loses some of its crispness, and instead, develops a fine rich pear-like flavor, without much of the earlier tartness.

Samples sent to Mr. J. M. S. Potter, Director of the National Fruit Trials in England (where a collection of over 2500 apple varieties is maintained by the Ministry of Agriculture), were thought to resemble St. Edmunds Pippin. This was certainly a high compliment, as this variety is regarded in England as the finest quality early russet. However, I *knew* it was not this variety, since St. Edmunds Pippin, growing as a graft on the same tree just next to the limb of my Fall Russet, has ripened fruit a week earlier which was larger, of a much finer, smooth olive-gold russet color, and of different and, I think, not quite as high a flavor as Fall Russet.

Pickering gathered Fall Russet usually about September 20. Could this be Autumn Pomme Gris, described in Appendix I to the 1896 edition of Downing's *Fruits and Fruit Trees of America* as a russet originating in Markham, Ontario, in the orchard of one William Reynolds? The description seems to fit, except for the season, which Downing described as October–

*First of a series of articles by Mr. Nitschke on some of our fine old apple varieties, which he feels are worth growing in our American gardens.

**I now have grafts of this famed Canadian variety, which are thought to be authentic, from the Nova Scotia Experiment Station at Kentville.

November. But in Ontario it might well be a later apple. The variety is now being grown at the National Fruit Trials in England, and, when fruited there, may possibly be identifiable with some variety growing in that incomparable collection.

Recent Developments in Strawberry Red Stele Race Distribution Studies

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In low-lying, heavy-textured, or poorly drained fields, strawberries frequently are attacked by *Phytophthora fragariae* Hickman, red stele, a root-rotting fungus which causes the vascular strands, or steles, of the roots to become red and rot. Plants infected with this fungus bear poorly, are very drought-susceptible, and usually die. Red stele is one of the most serious and most insidious diseases of strawberries. Since no adequate chemical control is yet available, growers must use resistant varieties wherever the disease occurs.

A source of immunity from all races of *P. fragariae* is not known in the genus *Fragaria,* to which the strawberry belongs. As more sources of the fungus are examined, the number of races able to attack hitherto-resistant varieties has increased. In the United States, five physiologic races are now recognized. These races are identified by the reactions of five differential strawberry varieties and selections (Table I). Limited studies of the occurrence and distribution of these races indicate that race A–1 definitely occurs in Arkansas, Connecticut, Delaware, Illinois, Maryland, Massachusetts, Ohio, and Tennessee. A–1 is probably present also in all the other states where red stele is known, as it appears to be the most common race. Race A–2 occurs in Maryland and Massachusetts.

All United States varieties with red stele resistance are resistant to races A–1 and A–2. Race A–3 has been identified in plants from Delaware, Illinois, Maryland, New Jersey, and Ore-

TABLE I. Key to races of *Phytophthora fragariae* recognized in the United States.

Race	Reactions[1] of the strawberry variety or selection				
	Blakemore	Md–683	Aberdeen	del Norte	Stelemaster
A–1	S	R	R	R	R
A–2	S	S	R	S	R
A–3	S	R	S	R	R
A–4	S	R	R	S	R
A–5	S	S	S	R	S

[1]S = susceptible; R = resistant.

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