

Table 1. Analysis of Applesauce Samples

	Golden Delicious	9E-13-47	8C-29-24	Mutsu	10C-6-25
Soluble Solids*	23.2%	22.4%	24.3%	20.7%	22.5%
pH	3.60	3.50	3.30	3.48	3.20
Total Acid (malic)	.38%	.37%	.59%	.33%	.53%
Mean Quality Score	11.95	11.86	10.34	9.93	9.48

\*By refractometer.

those made from regular Golden Delicious. Its applesauce was only fair, being particularly coarse or grainy in texture. However, this variety was scored down chiefly on its peculiar aromatic or "pineapple" flavor. This flavor was most pronounced in the applesauce. Modification of processing techniques might overcome the unsatisfactory sauce texture; but the flavor, objectionable to many, could remain a problem.

The processed products made from 8C-29-24 and 10C-6-25 were pale yellow or white in color. This lack of color was most pronounced in canned solid pack slices and applesauce. For these two selections, being judged as "Golden Delicious," was perhaps un-

fortunate, because the absence of a deep yellow color downgraded their overall quality scores. They rated well for all other characteristics, and many taste panel members considered their flavor preferable to that of standard Golden Delicious. Judged on their own merits these selections could be considered highly acceptable.

Analysis of a limited number of canned applesauce samples together with their overall quality scores (maximum possible 15) are presented in Table 1. Both 8C-29-24 and 10C-6-25 were higher in total acid than standard Golden Delicious, Mutsu and 9E-13-47. This higher acidity is an asset and probably contributes to their good flavor rating.

## The Recorded Origin of the Tolman Sweet Apple Questioned

By FRED L. ASHWORTH\*

Tolman Sweet has been a standard apple here in St. Lawrence county for over a century, being a contemporary of the Fameuse, St. Lawrence, Stone and Golden Russet. It is not quite as hardy to cold as the Fameuse or Golden Russet, and not nearly as hardy as the St. Lawrence or Stone. Over half of the native pasture seedling apples, of better than average quality, are obviously Tolman Sweet seedlings; and it takes from 50 to 75 years for a pasture seedling to become a large enough bearing tree to attract attention. Between being browsed by cattle continually, and girdled by ro-

dents, its only recourse is to start anew from the roots, and come up through the dead brush of its earlier attempts. McIntosh is still too new a variety to exhibit many pasture seedlings.

If it had been a Dorchester, Mass. seedling, as Manning supposed in 1891, it should have become just as common in northern New England as it is here; but, until the early 1900's, it was practically unknown in Vermont. This section was largely settled by Vermonters, who brought in the Stone apple and other Blue Pearmain seedlings.

Henderson Lewelling was an inde-

\*Member of APS Fruit Gardens Committee, of Hauvelton, N.Y.

fatigable collector of apple varieties, and he certainly would have included it, along with other New England apples, in the load of 1000 trees he carted from Salem, Iowa, to Milwaukee, Oregon, during the spring, summer and fall of 1847, if it had been known to him. But it was not in the load, so was not included in the early apple orchards on the Pacific coast. Since his time it became a standard fruit throughout Iowa, and much of the middle west.

My personal reason for this difference of opinion is based on a conversation my father had with a neighbor when he was a small boy. In the summer of 1883, the lady who lived where we do now, was visited by her brother from across the river. On learning that his name was Tallman, Dad asked him if the Tolman Sweet apple was named for him. He replied, "No, it was named after my grandfather." Then he went on to relate how, before there were grafted trees of this kind, a wealthy neighbor had exchanged a team of oxen for ten bushels of the apples. The original tree was growing on the farm of Ephriam Tallman, near the town of Kilmarnock, between Smith Falls and Merrickville, Ontario.

Tolman Sweet appears to belong to the same apple family as Grimes Golden, Golden Delicious, Porter, Yellow Newton, Stuart Golden, possibly Cox Orange, and the extinct Sweet Greening of the old Plymouth colony.

I would estimate that it would have taken 50 years to grow a seedling large enough to bear ten bushels of apples without commercial fertilizer; and it would have taken another half century to get the grafted trees scattered around this north country so it could be well known. This takes it back to 1783, or shortly after the Revolutionary war. Most of the well-to-do New Englanders were Tories. Indeed, it is a historical fact that a majority of

the families of the Harvard graduates of that time pulled up stakes and moved to various parts of Canada—Nova Scotia being a favorite settlement. But others went farther inland, and the Tallman family may have been one of these more venturesome emigrants. My theory is that when they moved, they went by boat, so weight would not have been a pressing consideration, and some Sweet Greening apples might have been taken along. The first Tolman Sweet tree could, therefore, have been grown from some of the seed of these apples, deliberately planted and cared for, to replace the original variety.

The Sweet Greening was a fruit of the Rhode Island Greening type, fairly hardy, as English apples go, and "ripened in autumn but possessed the valuable property of retaining its soundness and flavor until the middle of June." The cavity around the stem was russeted with some outstanding rays of russet as in many Tolman seedlings (which often have as many as five suture stripes.) The flesh of Sweet Greening was whitish with a yellow tinge; moderately juicy to rather dry, especially when overripe; very sweet and rated good to very good in flavor—nearly all qualities possessed by Tolman Sweet. There are not enough good detailed descriptions of these very old apples to identify the other parent, but it was evidently a hardier apple than Sweet Greening, and may have been one of the Russets. I have not found any Tolman Sweet seedlings completely russeted, but some are half covered.

Tolman Sweet has not been used much in experimental apple breeding as the qualities of its chance seedlings would seem to justify. Among its probable progeny are Winter Banana, Fallawater, Nelson Sweet, Maitoba, my selections, Dodd Banana, Truax Greening, May Sweet and possibly Forest and Salome.