

Vegetables and Fruits: A Guide to Heirloom Varieties and Community-Based Stewardship

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Editor's Note - This free USDA publication, compiled by NOFA-NY member Suzanne DeMuth, offers an extensive annotated bibliography, list of resource organizations, and historical material. I found it to be a fantastic resource in putting together this issue. Excerpts from the introduction, below, provide background information and an overview of some of the issues involved.

Like any heirlooms passed from generation to generation, the vintage varieties of garden plants that we still grow today have lasting value. Some old types of vegetables have been kept alive within families or communities by succeeding generations of seed savers. Others with a long history in the seed trade can be traced back to the 19th C., when commerce in seeds expanded, or even to the Colonial period. Some consider true heirlooms to be those belonging to the first group above, the "folk varieties" that have existed for long periods outside of commercial and professional plant breeding circles. Most, however, favor more inclusive usage, viewing all traditional varieties, regardless of their lineage or means of distribution, as bona fide heirlooms. . . .

With respect to heirlooms, how old is "old"? Most people agree that heirloom vegetables and fruits are those types known through historical documentation or folk history for at least 50 years. Dating to the early 20th C. and before, many originated during a very different agricultural age--when localized and subsistence-based food economies flourished, when waves of immigrant farmers and gardeners brought cherished seeds and plants to this country, and before seed saving had dwindled to a "lost art" among most North American farmers and gardeners. For old Southern apple varieties, for instance, antique apple grower and historian Lee Calhoun uses 1938 as the cut-off date to delineate the heirloom apples once grown in the U.S. South, since by this time subsistence farming in the region had nearly disappeared and commercial apple breeding was severely diminished. (According to his research, only 300 of the 1600 apple varieties that originated or were once grown in the South still exist.) In addition to their long history of use, the heirloom vegetables that are routinely grown from seed are open-pollinated, meaning that they set seed "naturally," often aided by wind, rain, or pollinating insects, and can thus be renewed by sowing the seeds harvested from each generation of plants. Known also as standard or nonhybrid, open-pollinated varieties tend to be stable and true-breeding. They differ from F1 hybrids, which in usual practice result from deliberate crossing of two distinct, highly inbred parent lines. (The term "F1" to describe the hybrid offspring indicates the "first filial" generation, with respect to the parent lines.)

Since their genetic makeup has always been manipulated--and simplified--in this way, F1 hybrids tend to be highly uniform, and may display "hybrid vigor," as shown by improved yields or more robust garden or field performance. . . Although seed collected from F1 hybrids may be viable, the resulting plants tend to be highly variable, hence

undesirable for many growers and especially un-economical for commercial growers. Thus, gardeners and farmers who grow hybrids must return to the seed company each year to obtain the same varietal "package." . . .

Some of these sought-after heirlooms--a drought-tolerant bean, an insect-resistant or high-protein corn; a cold-hardy tomato; or an apple variety that bears early, or stores well, or is exceptional for baking, cider-making, or fresh-eating--have fallen from favor because they are not widely adapted, or they fail to serve commercial production standards or to satisfy mainstream tastes. These factors limit the ability of the old varieties to compete against newer introductions whose general or specific attributes (or in some cases, their novelty) have broader appeal, making them less profitable to seed and plant merchants. . . .

Most notably within the agricultural sector, there is growing awareness that crop surpluses, supermarket abundance, and product and brand-name proliferation (although typically, a situation more common to the developed nations), mask a general decline in agricultural diversity, which spans agricultural production from farmers' fields to food processing and distribution. Of particular concern to garden stewards is the serious decline in our food plants' genetic base, evidenced by significant reduction, especially within this century, in the range of vegetable and fruit varieties grown on farms and in gardens. According to the United Nations Food and Agriculture Organization, crop genetic resources are being lost, on a global scale, at the rate of 1-2% per year. Many who support the preservation of heirlooms and other "public domain" varieties are working to safeguard a portion of this diminishing legacy, and also to address the factors that have contributed to its decline, and threaten to further undermine broad public participation in food production. . . .

Especially prominent among the "enemies" of genetic diversity are the economic and social pressures that have influenced breeding practices that promote uniformity, and have encouraged extensive cultivation (within crop monocultures) of preferred varieties with low variability. In addition, these forces have stimulated decline in seed companies serving local and regional markets, and heightened losses in seed-saving traditions among farmers (themselves a disappearing breed) and gardeners. . . .

Concerns over "genetic erosion" (the continuing, absolute losses in crop species and varieties) are intensified by questions surrounding ownership and equitable access to plant genetic materials. Various stakeholders--North American seed savers and Third World farmers prominent among them--are apprehensive over potentially wide-spread use of bio-engineered varieties, including the specter of "terminator" seeds that fail to reproduce [and] expanded uses of legal mechanisms. . . that remove plant germplasm from public use. Alongside the many opportunities and challenges offered to the agricultural sector and society-at-large, at the farm and garden gates, these developments may work to further limit growers' access to seeds--the fundamental materials of plant breeding and propagation--and potentially to risk further declines in plant genetic diversity. . . .

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In the end, the question of whether old or new varieties are "better" remains elusive, since the answer implies values and priorities: Better for whom, and for what purposes. As seed activists Cary Fowler and Pat Mooney have written, "Someone else's seeds imply someone else's needs." Growing old varieties allows people to express their individual tastes and preferences, and their personal or commonly-held beliefs about what is worth sustaining. As Carolyn Jabs has put it: "In a world. . . changing so rapidly, one of the most meaningful things we can preserve. . . is a full-range of possibilities."

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