

# Resources for the Commercial Production of Specialty Fruit Crops in the Northeast

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**F**ew of the many fruit-producing plant species that exist in the world have ever been cultivated or genetically improved for commercial production. Apples, grapes, and strawberries are widely and intensively grown, and much information is available for commercial producers of these crops. However, many other fruit crops are produced on a more-limited scale, and fewer resources are available for growers of these crops. Raspberries, blackberries, blueberries, and cranberries are grown throughout North America, but mainly in regions with specific soil and climatic characteristics. Other fruit crops, such as currants and gooseberries, are grown commercially in Europe and Asia, but have not gained wide acceptance in North America. In addition, many potential species with edible fruits have not been developed commercially. These berry crops, along with relatively undeveloped species producing edible fruit, comprise the "minor" or "specialty" fruit crops.

Potential markets exist for specialty fruit crops in North America. A number of Americans are familiar with non-traditional fruits that are used in other countries, and many are interested in novel fruits. The rapid acceptance of kiwifruit and starfruit suggests that Americans would be willing to incorporate more specialty crops into their diets.

Our challenge as educators is to provide information to clients who seek information on the commercial production of specialty crops. Unfortunately, information is lacking for many of these, and information that does exist is scattered among many different sources.

Because the specialty fruit crop clientele are few in number, widely dispersed, and their information needs involve entire production systems, many of the traditional information delivery methods (e.g., local meetings, large demonstration plantings, visits by extension field staff, narrowly focused fact sheets) are inappropriate. What is required are comprehensive, grower-friendly

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guides that contain all the information necessary to produce a specialty fruit crop. These guides could be distributed to growers, who then would be able to "go it alone."

**Written information.** At Cornell Univ., much effort has been directed towards gathering information on particular specialty fruit crops for subsequent dissemination to a broadly dispersed audience. Because expertise necessarily resides at many different institutions, cooperation of individuals across broad geographic regions is essential. Our procedure has been to: 1) identify minor crops for which information demand is high; 2) determine the scope of the needed guide, including topics that might involve engineering, economic, and pest management principles; 3) identify individuals with expertise in the appropriate subject matter areas; 4) solicit contributions from these individuals 5) compile and edit this material; 6) circulate the draft to as many interested individuals as possible for their input; 7) incorporate suggestions; and 8) have the material edited and published professionally. In two cases, such guides were published by the Northeast Regional Agricultural Engineering Service. This organization is supported by all of the land-grant universities in the northeastern United States. Therefore, a contributor's institutional credit is not diminished, because the publication does not fall under the banner of a single university.

Our minor crop resources are well-illustrated and contain many color photographs to enhance the text, to aid in problem diagnosis, and to assist with pest identification. Although more expensive than the usual extension publications, little resistance to price has been encountered.

The *Bramble Production Guide* (Pritts and Handley, 1989) was the first of these comprehensive production manuals to be published. It consisted of contributions from 16 authors and was reviewed by another 19 individuals. Twenty-nine authors from 15 states contributed to the *Highbush Blueberry Production Guide* (Pritts and Hancock, 1992) and 20 others provided reviews, photographs, and other input. Each contains about 200 pages has more than 100 color photographs.

Although smaller in scope, the *Dayneutral Strawberry Production Guide* (Pritts and Dale, 1989) was written by specialists at Cornell Univ. and the Horticultural Research Institute of Ontario, with contributions from Iowa and Minnesota. In this case, the information was published by both Cornell and the Ontario Ministry of Agriculture and Food (Dale and Pritts, 1989).

In addition to raspberries, blueberries, and summer strawberries, many other crops exist for which little information is known. The list includes elderberry (*Sambucus*), Juneberry (*Amelanchier*), mulberry (*Morus*), buffaloberry (*Shepherdia*), highbush cranberry (*Viburnum*), kiwifruit (*Actinidia arguta*), medlar (*Mespius*), Nanking cherry (*Prunus tomentosa*), beach plum (*Prunus maritima*), Cornelian cherry (*Corus mas*) Russian and Autumn

olives (*Elaeagnus*), quince (*Cydonia*), persimmon (*Diospyros*), pawpaw (*Asimina*), and currants and gooseberries (*Ribes*). Many species of *Vaccinium* and *Gaylussacia* produce edible fruit as well.

Until recently, an out-of-print extension bulletin entitled *Minor Fruits of New York State* was all Cornell Univ. had to offer clients interested in these native fruits. A newer departmental bulletin, entitled *Growing Hardy Minor Fruits in the Home Garden*, is now available, but it contains little additional information on culture. Few textbooks on minor fruit crop production exist; the best is *Uncommon Fruits Worthy of Attention* (Reich, 1991).

**Field days.** Pomologists at Cornell Univ. provide tours to groups interested in viewing minor fruit plantings. For example, the North American Fruit Explorers (NAFEX) visited the Ithaca and Geneva orchards in Sept. 1991. NAFEX also publishes the journal *Pomona*, in which members share information about specialty crops. The International Ribes Assn. and the Actinidia Enthusiasts Society also publish newsletters about their respective crops.

For several years, Cornell Univ. has hosted a field day for both specialty vegetable crop producers and produce buyers. While visiting fields together, buyers saw what crops could be produced in New York State, and they usually found a willing producer among the group. Such a model could be used for minor fruit crops as well.

#### **College-wide specialty crop program.**

A few years ago, Cornell Univ. attempted to develop a program on minor agronomic and horticultural crops. Our initial objective was to develop a data base that could be used as a national resource for specialty crop producers. We soon encountered five major problems that prevented the program from achieving this objective:

- It was evident that a large void existed in our knowledge of specialty crop production, and comprehensive production information could not be assembled for more than just a few minor crops.

- Research funds did not exist to support work to generate basic production information for minor crops. Crop production specialists were unwilling to reallocate limited funds from other sources to support this type of research.

- Few individuals have attempted to produce specialty crops and economic data are lacking from which to develop business management plans or enterprise budgets. Without knowing how much it will cost to produce a particular minor fruit crop, a grower cannot determine if an investment will be profitable or what price would be required to generate a profit. Specialists did not want to encourage growers to produce a crop that might ultimately be unprofitable.

Work must be done to develop markets and create awareness and demand. Without organized industry support or government involvement, market identification and exploitation would rest solely with the individual producer. Marketing fruit crops is challenging even when awareness and

demand already have been established.

- Few pesticides are labeled for minor fruit crops; no labeled uses exist for most. Specialists did not want to develop production information and encourage growers to plant a specialty crop, but then not be able to provide solutions to pest problems that undoubtedly would arise.

Although a Farming Alternatives Program eventually developed at Cornell Univ., its emphasis was on non-traditional production of conventional crops (e.g., organic), diversification, and non-traditional uses of farms (e.g., bed and breakfasts). Recent budget cuts have eliminated this program.

**Summary.** Although the challenges to conducting an educational program on minor fruit crops are many, the potential impacts are great. One hundred years ago, the blueberry was being considered as a possible cultivated crop. With some effort on the part of plant breeders and cooperation among producers and the extension service, several hundred million dollars of blueberries are now sold in the United States each year. Many minor crops have the same status today as blueberries did a century ago. With support from government agencies and cooperation among producers, the development of commercial industries for other fruit crops is very possible.

#### **Literature Cited**

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