

Chapter 2—Berries and Wild Fruit

Description of the Product and Its Uses

North America possesses diverse native fruit trees and shrubs, the potential commercial possibilities of which have barely begun to be explored or appreciated. The most well known are probably the wild blueberry (*Vaccinium angustifolium*) and the big huckleberry (*Vaccinium membranaceum*). In the Pacific Northwest, the Himalayan blackberry (*Rubus procerus*) is a nonnative “escape” that is also common. Other popular wild berries are gooseberries, currants, strawberries, blackberries, blackcaps, and raspberries. Lesser known berries include lingonberries, juneberries, elderberries, mulberries, coralberries, salmonberries, and thimbleberries. Native fruits that are wild harvested include mayhaws, pawpaws, persimmons, chokecherries, crabapples, Oregon grape, and several types of wild plum. Staghorn sumac, prickly pear, deerberry, passionflower, and black cherry are also used for their berries and fruits (table 2–1).

Table 2–1. Berries and wild fruit with commercial potential

Blackberry	Currant	Mayhaw	Prickly pear
Blackcap	Deerberry	Mulberry	Raspberry
Black cherry	Elderberry	Oregon grape	Salmonberry
Blueberry	Gooseberry	Passionflower	Serviceberry
Chokeberry	Huckleberry	Pawpaw	Staghorn sumac
Coralberry	Juneberry	Persimmon	Strawberry
Crabapple	Lingonberry	Plum	Thimbleberry

Most types of wild berries and fruits are found only in certain regions of the country. For example, the pawpaw, a smooth, creamy fruit that tastes like a blend of banana, mango, and pineapple, is the northernmost member of the custard apple family and the largest North American fruit. The center of its native distribution is in the Kentucky and Ohio area, but it can be found as far south as northern Florida, as far north as southern Canada, and as far west as Nebraska and Oklahoma. The persimmon, which is used in breads and pies, is primarily found in Indiana and Illinois.

Many berries and wild fruits are used fresh in baking products. The most popular application for wild blueberries, for example, is still blueberry muffins. But other

berries and wild fruits are gaining regional and even national and international markets as part of specialty berry and fruit products. Besides baked goods, these products can include jelly, jam, preserves, marmalade, pudding, butter, juice, salad dressing, syrup, sauce, candy, wine, cider, and even beer. A few, such as the juneberry (also called the serviceberry, Saskatoon, shadblow, and sarvis tree), can be found throughout much of North America. Pemmican, one of the staple foods of most of the Plains Indians, was made by pounding dried juneberries with buffalo meat. Today, serviceberries make delicious pies, jellies, and jams. They have a unique sweet flavor that tastes a little like almonds.

Prickly pear fruit is sold in many grocery stores. It can be eaten raw or made into preserves, marmalade, or syrup. Elderberries are used in elderberry blossom fritters, sauces, wines, and fruit juice or may be combined with other fruit for use in pies and tarts. Deerberries are reported to make delicious pies, jams, jellies, and marmalade. Mayhaw may be used in fruit juices and sherbet. Crabapples make excellent jellies or preserves, and black cherry makes fine pies, cider, and jelly (Payne et al., 1991).

Some native berries have medicinal or therapeutic uses as well. For example, in China, mayhaws are a very important cultivated crop, partly for their medicinal uses as a heart medication. There may be medicinal market opportunities in the United States as well for this and other native fruits and berries. Pawpaws have received attention lately because, in addition to food uses, the vegetative parts of the pawpaw plant contain compounds that exhibit highly effective pesticidal and anticancer properties (Callaway, 1992). They are also an excellent source of vitamin C. In fact, some USDA scientists have predicted the pawpaw may become one of our most valuable fruit trees. The American persimmon is also high in vitamins A and C. The berries of staghorn sumac are used in Appalachia to make a gargle to soothe a sore throat.

Market and Competition Considerations

There is some indication that new markets for specialty native berries and fruits may be opening up. Blueberries, huckleberries, and mayhaws are among the wild berries and fruits that have already been used by rural entrepreneurs and are briefly described.

Blueberries. The wild or lowbush blueberry is of great interest to many forest managers in the north central and eastern United States. The lowbush blueberry is a woody deciduous shrub native to northeastern North America. Lowbush blueberries are harvested commercially from native wild stock in Maine and eastern Canada. It is believed that some of our native lowbush blueberry barrens have been producing for 900 years. Between 1984 and 1988, an average of over 17.5 million kilograms of blueberries were produced in Maine alone, from over 10,000 hectares of land (Yarborough, 1991). Maine has had crops of lowbush blueberries approaching 50 million pounds. Most are flash-frozen, and some are exported as far away as Japan, where their color is prized as well as their taste.

Most of the U.S. wild blueberry crop under cultivation is dedicated to industrial applications. Nearly half of the U.S. commercially produced blueberries are now from wild bushes, and the major increases in volume have come from wild production. Cultivated blueberry production has increased at a rate of approximately 5 percent per year for a number of years, but production of wild blueberries has increased at double that rate. Per capita consumption of wild and cultivated blueberries has doubled in the last 10 years.

Only 2 to 3 percent is sold as fresh produce, almost exclusively in the Northeast in cities close to the growing areas of Maine and eastern Canada. Wild blueberries are especially appropriate for baking because their firm skin helps them maintain their shape throughout processing. They are a good source of nutrition (providing dietary fiber, vitamin C and other vitamins, and minerals including calcium, iron, and zinc) and are low in sodium and calories.

Particularly in northern Minnesota and in Maine, local residents regularly harvest wild blueberries. In especially good berry years or hard economic times, local blueberries appear for sale on roadsides and in supermarkets. In Maine, blueberry picking is one of many money-making activities for rural residents and Native Americans, some of whom have started mail order jam and jelly businesses based on wild blueberries.

Another opportunity from wild blueberry gathering is as a recreation and tourism activity. A survey of northern Minnesota resorts showed that 29 percent of the resort's visitors picked wild berries and felt that this added greatly to tourist experience in that region. Research has shown that it is actually cheaper to buy wild blueberries than it is to pick them (Shubat, 1987). It is apparent that the recreational benefits of wild berry picking (being outdoors in a peaceful setting, finding a natural food) are more important than potential commercial benefits in many cases. These recreational benefits can be creatively expanded, too. For example, the Annual Blueberry/Art Festival in Ely, Minnesota, is one of Minnesota's most

popular art/craft festivals. It features foods that reflect the ethnic mix of the area, and blueberry delicacies include ice cream, muffins, pies, pancakes, pastries, and breads.

Huckleberries. The western huckleberry² is also becoming recognized as an important forest resource. In State or national forests where huckleberries are relatively accessible, wild huckleberry picking can be a significant boon to recreation and tourism. For example, in northern Idaho, many visitors come to certain areas expressly to pick and sell huckleberries. Many are retirees who come in campers, camp in the woods, and pick and sell huckleberries to local buyers and local restaurants to supplement their incomes. Pickers can earn from \$12 to \$18 a gallon for huckleberries, with \$14 a gallon being an average. This equates to \$1 to \$2 per pound. It takes about 1-1/2 hours to pick a gallon of huckleberries, which are more time-consuming to harvest than wild blueberries because they grow individually rather than in clusters.

The local restaurants, in turn, offer special huckleberry products to the tourist trade. Huckleberry "raisins" and huckleberry chocolate candy are examples of unique products of northern Idaho and western Montana that have already found a commercial niche market.

Berry production is surprisingly high in some huckleberry fields. Yields of 100 gallons per acre have been reported, and over 75 gallons per acre are not unusual in a good huckleberry year. Research is being undertaken at the University of Idaho Agricultural Experiment Station to determine which varieties of huckleberries might be capable of farm cultivation.

As with wild blueberries, the market opportunity for a unique recreational experience may be just as great as the market opportunity for a food product. Berry picking has a high recreational value. During huckleberry season, thousands of additional vehicles may pass through a berry-rich ranger district during a single huckleberry-season weekend.

Mayhaws. The mayhaw is a member of the *Crataegus* family and is a variety of Southern hawthorn that yields yellow to bright-red fruits with a taste similar to a tart crabapple. It is one of the last wild U.S. fruit trees that has not yet been commercialized. It can be found in the southeastern United States, usually in wet, swampy areas due primarily to the fact that much of the uplands in the southeastern United States have been burned over at some point in history. Because the mayhaw tree is very heat-sensitive, wet, swampy areas are among the few habitats where they have survived.

² Note: A poor-quality eastern fruit (*Gaylussacia*) is called "huckleberry" in the eastern United States and should not be confused with *Vacciniums*.

Mayhaws are used to make jellies, marmalades, preserves, salad dressings, wines, syrups, sauces, and desserts. There are probably already 10 entrepreneurs who are selling mayhaw products, even though there are probably fewer than 15 commercial acres of mayhaw trees in the United States.

Renewed interest in mayhaws is also occurring in Louisiana, Georgia, Alabama, and Mississippi. While mayhaw jelly has been renowned in the South for over a hundred years, entire recipe books have been developed to promote this native fruit in the last several years. Articles have been run in magazines such as *Southern Living* and *Louisiana Life* on the commercialization of the mayhaw as an orchard fruit. Some who are knowledgeable about the mayhaw feel that within 8-10 years, the tree will probably be found in commercial orchards.

Distribution and Packaging

It is worth noting that if the cost of labor, packaging, and shipping were added to the cost of harvesting wild berries, there would not be a general market for them as a fresh product. For example, fresh huckleberries would probably cost over \$5 a pound if shipped fresh to major population centers. Commercial successes with wild fruits and berries have all relied on processed rather than fresh products since there are so many alternative commercially produced fresh fruits and berries (strawberries, raspberries, and cultivated highbush blueberries) that are less expensive.

Also, many of the wild berries, though delicious, have little or no shelf life. Some “die” in less than a day. But dried berries are a potential product with largely untapped possibilities, since drying extends the shelf life significantly.

Equipment Needs, Costs, and Suppliers

Most picking of wild berries and fruits is done by hand. However, some experienced berry pickers use small rakes to speed the process. The disadvantage of this technique is that it collects a lot of leaves and twigs, so the berries must be cleaned as well. Rolling across a wool blanket, picking out the leaves, or floating the leaves and twigs in water are all ways of cleaning. Some pickers beat on the bushes with a hoop-type cradle to catch the berries. A “huckleberry combine” has also been used, which is a wire arrangement to separate the ripe berries from everything else.

Flash freezing is not practical for the small producer. A producer has to be prepared to process hundreds of pounds, perhaps a thousand pounds per day, before flash freezing is economical, and some suppliers of freezing

equipment recommend a thousand pounds per hour. Most people simply use very cold chest freezers and bag the berries frozen.

Resource Conservation Considerations

The major considerations in increased use of public lands for the harvesting of wild fruits and berries relate to potential conflicts with other uses and users, and the best management practices to increase yields.

Potential conflicts. Resource managers in two areas of the Gulf Coast are currently dealing with questions of potential use conflicts over the commercial harvesting of mayhaws. Lessons learned in these cases will no doubt be applicable to resource managers in many other regions of the country dealing with similar questions over wild harvesting for commercial use.

The Eufaula National Wildlife Refuge Area is a 250-acre wildlife refuge near Colquitt, Georgia. This refuge was recently acquired by the U.S. Fish and Wildlife Service and includes many mayhaw trees, the berries of which have historically been harvested by local residents. In the past few years, much of this harvest was sold to a local company called The Mayhaw Tree, Inc., which has created a market for mayhaw jelly and other products (see profile section of this chapter).

Normally, the U.S. Fish and Wildlife Service issues permits to individuals for collecting berries or nuts on refuge lands. In the case of the Eufaula area, which is physically quite removed from the offices of the U.S. Fish and Wildlife Service, the Service has elected instead to issue permits directly to The Mayhaw Tree, Inc. and the local IGA store, which are the two primary commercial outlets for the sale of the berries. There is currently no charge for these permits, even though the harvested berries are sold commercially, but the refuge manager has pointed out that this policy might need to change if the demand for picking were to become so great that there were user conflicts, in which case some charge for mayhaw collecting might be put into place, possibly on a bid basis.

The U.S. Fish and Wildlife Service observed the area closely in April and May of 1992 to determine the level of use and also to ensure that inappropriate uses of the wildlife refuge do not occur. The area includes sand dunes, longleaf pine, and wire grass habitat that is now relatively rare for the region. The refuge is also heavily populated by gopher tortoises and possibly by indigo snakes, which are both threatened species. The primary objectives for the U.S. Fish and Wildlife Service will be to limit public access and disturbance as much as possible. That portion of the tract that is heavily wooded with mayhaw trees is generally away from the tortoise

area and will continue to be open for berry picking but with certain restrictions, such as no vehicles. A workshop between area biologists and the public was held in February 1992 to discuss the issues.

In the State of Louisiana, a potential exists for conflict in the harvesting of mayhaws from several Wildlife Management Areas (WMA's). Louisiana currently has a regulation against the harvesting of hard mast (acorns, pecans, etc.) and various plant species, but has never addressed the soft fruits. In past years, individuals or families came into certain areas to gather mayhaws for their own use. But in 1991, interest in collecting mayhaws increased substantially. In one area, the Saline Wildlife Management Area, fairly large crews of as many as 15 men came into the area to harvest mayhaws.

At this point, the Louisiana Department of Wildlife and Fisheries saw a potential for conflict with other recreational users and abuse of a resource. There was also concern for damage to the trees and nesting songbirds. There are no regulations on harvest methods, and one method used is to pound the base of the trees with a sledgehammer or other heavy object to make the berries fall off, a practice which can split the wood of the tree and disturb any nesting wildlife.

In response to the concern voiced by the wildlife managers, legislation was passed by the State of Louisiana to keep the Department of Wildlife and Fisheries from limiting the volume of mayhaws for commercial use. The resulting regulations limit the recreational user to 5 gallons of mayhaws per person per day. This seems more than adequate for the home user. Individual members of a family are eligible for 5 gallons each. Commercial operators will be required only to obtain a permit from the district office or a field person, and the commercial harvest is unlimited. Hopefully, the permit will allow the department to track the actual amount of berries harvested. Damage to or removal of trees, shrubs, hard mast, and wild plants is now expressly prohibited without prior approval.

The berries are generally not considered to have important wildlife food value, although relatively little is known about which species depend on the berries. They are probably eaten by various passerine birds, turkeys, and deer, but, because they ripen in the spring when food is not generally a limiting factor for these populations, the mayhaws are probably not critical. Often they ripen when the land is inundated.

Resource management of blueberries and huckleberries. Resource management of the wild or lowbush blueberry in the wild is a subject of great interest to many forest managers in the north central and eastern United States. Berries do best in open, acidic sites, although they can also do well in fairly open wooded sites. The lowbush blueberry grows from seed and from under-

ground rhizomes. New parent plants are started from seed, usually by birds and other mammals. After 3 to 6 years, the plants become branchy and stop producing as many berries. Any disturbance which prunes the branches encourages the spread of underground rhizomes, which in turn develop roots and new stems, which produce larger and more numerous berries than the parent plant. To maintain the open sites and to prune the branches, it has been felt that it was necessary to burn over lowbush blueberry areas. It is believed that some of our native lowbush blueberry barrens have been managed by burning for an estimated 900 years.

A few national forests, such as the Chippewa National Forest in Minnesota, develop and manage sites as blueberry picking areas. Periodically, a few hundred acres of blueberry area are burned in the Chippewa to encourage new and more productive growth of the native blueberries. Sites are selected for management based on the availability of existing plants, the accessibility of the site, and historical picking use. Late fall burning is preferred. However, burning has drawbacks. If the surface gets too hot, burning can destroy the organic layer of the soil, thereby exposing rhizomes to heat, drought, and extreme cold.

On good sites, up to 4,000 pounds of berries can be produced per acre. However, information regarding the location and ripening of berry sites has always been informal, low key, and by "word of mouth" in the Chippewa National Forest.

While many people think the huckleberry is a wild blueberry, the morphology and physiology of the big huckleberry (native to the Pacific Northwest) are very different and the plants have different management requirements. Huckleberry fields occupied an estimated 100,000 acres of Oregon and Washington forests about 20 years ago, and these fields owed their existence to wildfires that created conditions favorable to the growth of huckleberry plants. As fire prevention has succeeded, trees have invaded many of these high-quality huckleberry fields. The trees eventually form dense subalpine forests that crowd and shade the shrubs, eventually eliminating huckleberry production. However, unlike blueberries, huckleberry management does not recommend burning. Control of overstory trees is best done by killing individual trees.

Profiles

Litehouse Dressings. Litehouse Dressings of Sandpoint, Idaho, sells several huckleberry products to specialty stores in the Northwest.

The company purchases berries from local pickers for about \$2 a pound during a 4-week summer season. They are processed and bottled by a specialty kitchen and

marketed by Litehouse Dressings. Jams, syrups, and chocolate-covered huckleberry candies have been sold. Fresh frozen berries are also sold in bulk in 20-pound bags to a few local Safeway stores, but the company does this more as a service since the berries are more valuable to them as part of value-added products.

The company has discovered that it can sell all the huckleberry products it can produce. The market is growing, and it is particularly strong among people who have lived in the region or who have traveled through the area and become familiar with the huckleberry. According to the company, quite a number of pickers gather berries as a major source of their annual income.

Beginning in 1991, the company started to put more emphasis into developing and marketing huckleberry products. Before that, their wild berry products were generally “peripheral” to the rest of the company’s line of products. Litehouse Dressings set a target of 65,000 pounds of huckleberries, researched new products, redesigned labels and packaging, glassware, etc., and prepared to market the huckleberry products through specialty food distributors. (The company sells directly to a grocery wholesaler and sells direct as well.)

The company now offers huckleberry gift packs featuring jam, syrup, and wild berry-filled chocolates. They advertise in the summer through local and regional newspapers in northeast Washington, Canada, western Montana, and northern Idaho to buy as many huckleberries as pickers can obtain from surrounding national forests.

Flavor Fest Mayhaw Jelly. Mr. Glynn Carver and his brother, Randall, of Many, Louisiana, believe that there is a very good market for mayhaw jelly.

In 1991, the Carvers “spread the word” that they would purchase 100,000 pounds of mayhaw berries. Two buying stations were set up in the county, and the response from residents in this area of high unemployment was tremendous. Even though harvesting mayhaws is tough work, usually done by boat and most often in areas thick with brush, a procession of pickup trucks began arriving at the collection points. On a weekday, about 100 came through the busiest paying station, where the Carvers paid 85 cents a pound for cleaned mayhaws, slightly less if they had to do the cleaning. Most people brought in 5 to 10 gallons, about 30 to 60 pounds of berries. But some people brought in several hundred pounds, and two people each brought in 1,200 pounds at a time.

Most of the berries were picked from one 50-mile stretch of river bottom area along Louisiana’s Little River. The procedure is generally to first clear the area around the trees of old berries and then shake the tree. The mayhaws fall into the water and are then scooped up with nets. To clean the berries, pickers roll the berries down a wet,

tipped board. The leaves and grass stick to the wet wood and the berries roll down into a wire mesh net.

The first year, the juice was processed locally but sent to a commercial jelly production company for a market test. About 23,000 cases of mayhaw jelly were produced the first year and packaged under the label Flavor Fest Foods. The jelly is being sold through a mail order company and also through local grocery stores, where an 18-ounce jar sells for about \$2.49.

The Carvers hope to purchase up to 500,000 pounds of wild harvested mayhaws in the future and to build a local processing plant somewhere in Grant Parish. In addition, the Carvers have been working with a local horticulturist to encourage commercial and backyard orchard growers. They have made over 100 selections of wild stock and the company is now selling grafted mayhaw trees. It is estimated that there are 200 varieties of mayhaw, many native to Louisiana and others of Chinese ancestry, where the mayhaw has been cultivated for 1,000 years. The Carvers are working closely with the Louisiana Agricultural Extension Service and the Louisiana Department of Agriculture and Forestry to encourage the planting of mayhaw orchards in Louisiana.

The Mayhaw Tree. The Mayhaw Tree, Inc. started in 1983 with “an idea, a pot, and a spoon,” according to Ms. Dot Wainwright, one of the current owners.

That year, eight women in Colquitt, Georgia, got together to do something themselves about the economic stagnation of their small town and rural county. They investigated several alternative small business ideas, but found that they continued to come back to the idea of a mayhaw jelly business. The mayhaw thrives in the wild among the swampy bays, limestone sinks, and riverine wetlands of the Gulf coastal plain, and for as long as anyone could remember, local people had been gathering the tart, cranberry-sized fruits to make a remarkably tasty jelly.

This same group of women had already convinced the local Merchants’ Association to sponsor an annual Mayhaw Festival in Colquitt, and the first one was scheduled for the next spring. The Mayhaw Tree, Inc. was incorporated in 1983, and the next crop of mayhaws was made into jelly under contract with deli workers in a supermarket and marketed directly to gift and specialty stores with the Mayhaw Tree label. In 1985, the company began producing its own jellies independently and also diversified its product line to include mayhaw syrup, green pepper jelly, cucumber jelly, salad dressing, and plantation ham sauce. Since that time, they have also added low-sugar mayhaw jelly, Vidalia onion jelly, pecans, and specialty cookies.

Today the company employs 8 people full-time and about 20 people part-time when the mayhaws come in for processing. The company relies on several dozen individuals and families to gather the mayhaws each

spring. Pickers are paid \$5 a gallon for the berries. In 1985, the company spent \$5,700 to purchase the berries. In 1991, the company spent about \$12,500 to purchase about 2,500 gallons of mayhaws, a year when the crop was smaller than average.

To demonstrate to the community the economic impact of what some were condescendingly calling a cottage industry, the partners paid their pickers in \$2 bills beginning in 1986. When these \$2 bills began showing up in grocery stores, gas stations, and dentist offices, people began to understand the importance of “mayhaw money.”

In general, there has been no difficulty getting enough berries. Each year the company tries to buy enough for that year’s sales and one in addition. Those doing the harvesting include families, young couples, and older people who just want to make extra money. One person can gather 10 gallons a day if he/she is in a good area. One extended family can gather \$700 to \$800 worth of berries. This work has meant a lot to many people who use the money as supplemental income. Some harvesters gather on other people’s land, then share the proceeds with the landowners.

The company works closely with the Georgia Department of Agriculture and helped organize the Georgia Specialty Food and Wine Association. The mayhaw products are marketed mostly through gift shows and food shows. For example, in one year the company will attend the Atlanta, Washington, D.C., Tampa, Dallas, Chicago, New York, and San Francisco gift shows. The company also has a retail mail order business, with most of their business occurring during the holiday season. In 1991, the company had almost \$500,000 in sales, with shipments all over the country and international as well.

Considerations for a Rural Development Strategy

Native fruits played an important role in North America’s human history, beginning with the American Indians and early European settlers who used fresh and dried fruits as well as extracts for medicinal and social purposes. Yet most of today’s commercial orchards have fruit trees which are based on species that were introduced into North America. It is ironic the extent to which we have neglected the native fruits and berries of our forests and woodlands.

Where forest lands can be managed for the production of wild berries and/or fruit trees, one strategy would be to enhance the recreational and tourism value of wild harvesting. This could be done in conjunction with innovative interpretive programs to impart to visitors some of the historical significance of native fruits and

berries and their uses by native Americans, early settlers, and current rural residents.

Of course, it would be important to have harvesting areas remain in as natural and uncommercial a setting as possible if the primary users are tourists and recreationists seeking a “wild and woody” experience. Also, a mix of sites may provide a better assurance of annual berry crops—in years when plants are subjected to either frost or drought, wooded areas protect plants better than open areas. Sites should be located less than 30 miles from a town or resort area, and should be able to be reached with a half-mile walk (Chaney, 1990). Any berry picking area should be herbicide-free as well.

One aspect of this strategy would be to focus on promoting local festivals and celebrations, native recipes and cooking traditions, and local history. It can be argued that the success of small businesses like The Mayhaw Tree, Inc. lies not from packaging mayhaw jelly but from packaging a distinctive cultural expression in a dignified and respectful way. People will pay a premium price for specialty products because these products allow them to participate in (literally, to get a taste of) a distinctive culture very remote from their own. And these same purchasers will reorder a product not because of its novelty (which wears off after the first purchase) but because of the quality which only small batch preparation and careful handling can confer—a quality absent from mass-produced foods (Hils, undated).

Another aspect of this strategy is to sell cultivars of native trees. For example, there is currently a rising market for the better varieties of pawpaw trees. But only a handful of nurseries in the country sell pawpaw cultivars, and many of these have up to a 2-year waiting list. There is also interest in North America’s native fruit trees from many other countries. A few countries such as Italy and Japan, already have commercial plantings of pawpaws.

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Resources

- Guy Ames, Technical Specialist, ATTRA, P.O. Box 3657, Fayetteville, AR 7270. 501-442-9824; 800-346-9140.
- North American Blueberry Council, c/o Myrtle L. Ruch, P.O. Box 166, Marmora, NJ 08223, 609-399-1559. Myrtle L. Ruch, Secretary and Manager. Publications—*Catalog*, annual. Conventions/Meetings—annual, always third Thursday in September, Geneva, New York.
- North American Fruit Explorers, Route 1, Chapin, IL 62618, 217-245-7589. Tom Vorbeck, Treasurer. Publications—*Pomona*, quarterly. Conventions/Meetings—annual.
- Dr. Jerry Payne, U.S. Department of Agriculture, Agricultural Research Service, Southeastern Fruit and Tree Nut Laboratory, P.O. Box 87, Byron, GA 31008. 912-956-5656.
- Supermarket Business Magazine*, FM Business Publications, 342 Madison Avenue, New York, NY 10173. 212-867-2350.
- Supermarket News*, Fairchild Fashion & Merchandising Grove, 7 West 34th Street, New York, NY 10001. 800-247-2160 (new subscriptions).
- Wild Blueberry Association of North America (WBANA), 18 Floral Avenue, Fredericton, New Brunswick, CANADA E3A 1K7, 506-472-2517. A *Wild Blueberry Processor Directory* is available from WBANA that provides contacts for wild blueberry products and services of various companies and the states in which they have distribution. Maine blueberry processors and shippers are also identified.