

Shared Sense of Heritage



Photo: Loy Elliott



Photo: Biglerville Historical and Preservation Society

Pennsylvania fruit growers are more than an industry—more often than not, they're family. Many orchards are still family managed and have been passed down four or five generations.

A shared sense of heritage and innovation among growers, processors and packers has placed Pennsylvania fruit on the kitchen table across the U.S. and internationally. Our apple's national presence inspired industry leaders to christen Commonwealth fruit: "America's Orchard."



Photo: Loy Elliott



Photo: Biglerville Historical and Preservation Society

Family Orchard Plantings to a Commercial Industry

William Penn is said to have advised our forefathers as they prepared to settle in his Commonwealth to "First plant an orchard, then proceed with building your house." While the seedling trees produced what was referred to as "common fruit," the beginning of grafting, about 1647, allowed for a great diversity of varieties with improved quality and production. It appears that every homestead had an orchard. (Tom Piper, *Down Memory Lane*, Vol. 5)

Many farms like ours were born in the mid-1800s, transitioning from diversified "general" farming operations to concentrating on tree fruits. The tradition of transition and diversification continues now in the 4th to 7th generations of family farming. Current marketing practices are diversified—from processed fruit sales; to packed fruit sales and urban delivery-based wholesale and retail farmers markets in local metropolitan areas. (Dave and Ben Wenk, Three Springs Fruit Farm)



Photo: Knouse Fruitlands

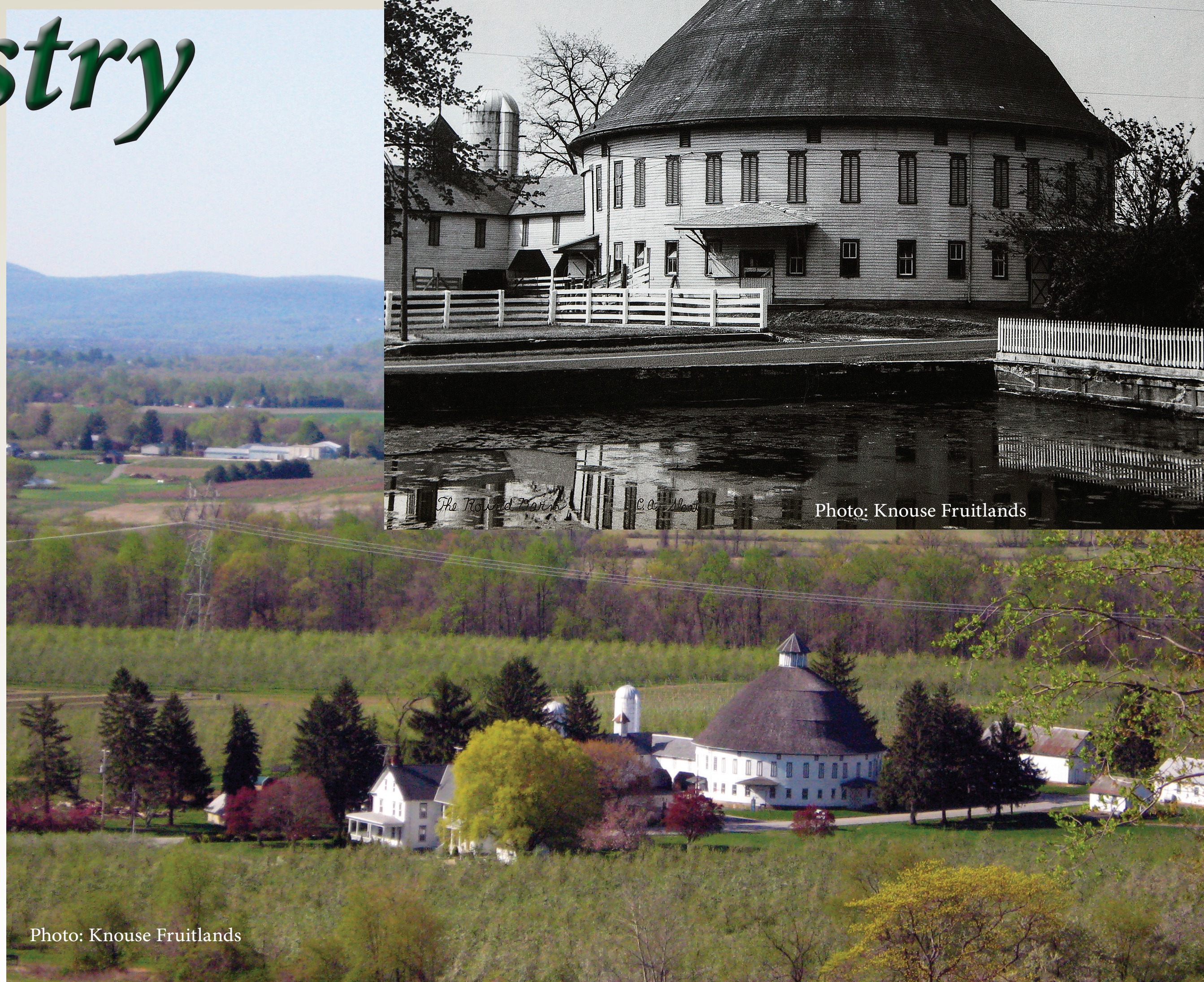


Photo: Knouse Fruitlands



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The Fresh Packing Industry

The commercial history of the fruit industry began with the arrival of the railroad, and the resulting ability of local fruit growers to send their crops to buyers around the world. Fruit were initially delivered to packinghouses in bushel crates and later in large wooden bins that could hold 1,000 pounds of apples. Bins could be stacked 10 high in cold storage rooms where the apples were kept at 32 degrees and could be held for 4 or 5 months and still stay crisp and juicy. Packinghouses today store fruit in airtight controlled atmosphere rooms and apples have become a true 12 month business.

Today Pennsylvania packers use the most modern technology available in the world. The machinery is capable of color-grading and sizing and inspecting the apples for defects, both outside and inside the fruit, using infrared sensors. Product quality commands hundreds of letters from consumers who say that it is some of the tastiest fruit they have ever eaten. New and tastier varieties like Honeycrisp, Gala and Fuji are giving new life and interest to the fresh apple category. (John Rice, Rice Fruit Company)



Photo: Bear Mountain Orchard



Photo: Tara Baugher

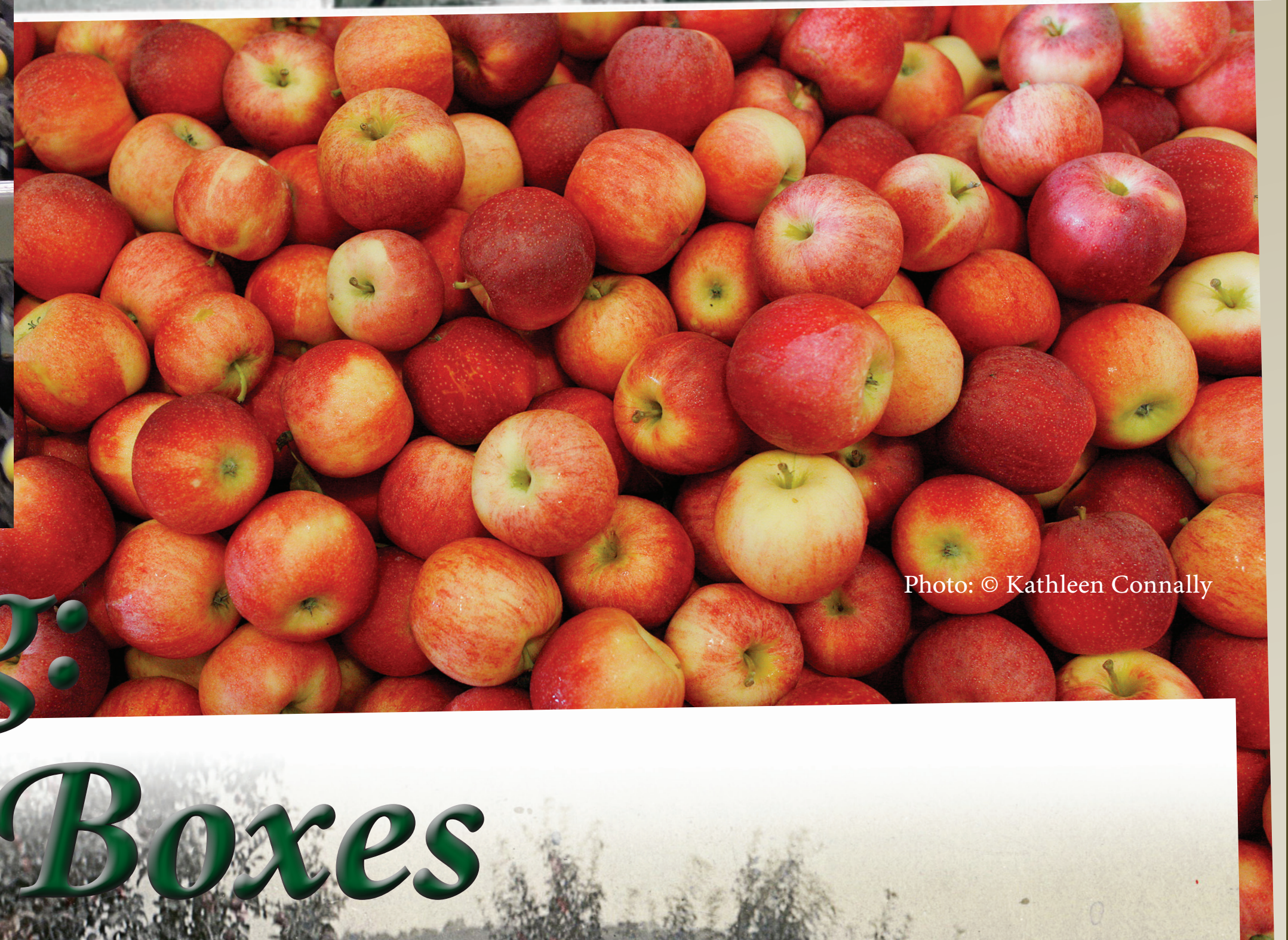


Photo: © Kathleen Connally

Fresh Fruit Packaging: Barrels to Corrugated Boxes



Photo: Tara Baugher



Photo: Biglerville Historical and Preservation Society

PACKING APPLES GEORGE MYERS ORCHARD OCT 15 10

The first commercially grown apples were packed into barrels and shipped off to New York and other city markets. By the 1920s apples were packed into containers that were a little easier to fill and stack - one bushel baskets that were mostly made of wood veneer.

This way of packing apples lasted almost until World War II, when the industry needed a cheaper and more versatile method to pack and ship goods. The corrugated carton was born, and this is still the primary way that apples are shipped around the world today. (John Rice, Rice Fruit Company)



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America's Orchard and the Processing Industry

The year was 1949. In the Appalachian region of Pennsylvania, Maryland, Virginia and West Virginia, a prominent group of neighboring independent fruit growers recognized the enormous potential at their fingertips. Given their shared commitment to raising quality fruit, they formed an alliance and began working together as a grower cooperative.

With the key ingredients of pride and care added to quality fruits to produce delicious apple sauce, apple butter, premium apple juice and pie fillings, Musselman's and Lucky Leaf products are enjoyed by consumers throughout the country placing them among the leading retail brands in America. Knouse Foods' President and CEO, Ken Guise shares, "The success our Cooperative enjoys today stems from the 'Growing through Quality' mindset established by our founding grower members. (Scott Briggs, Knouse Foods Inc.)

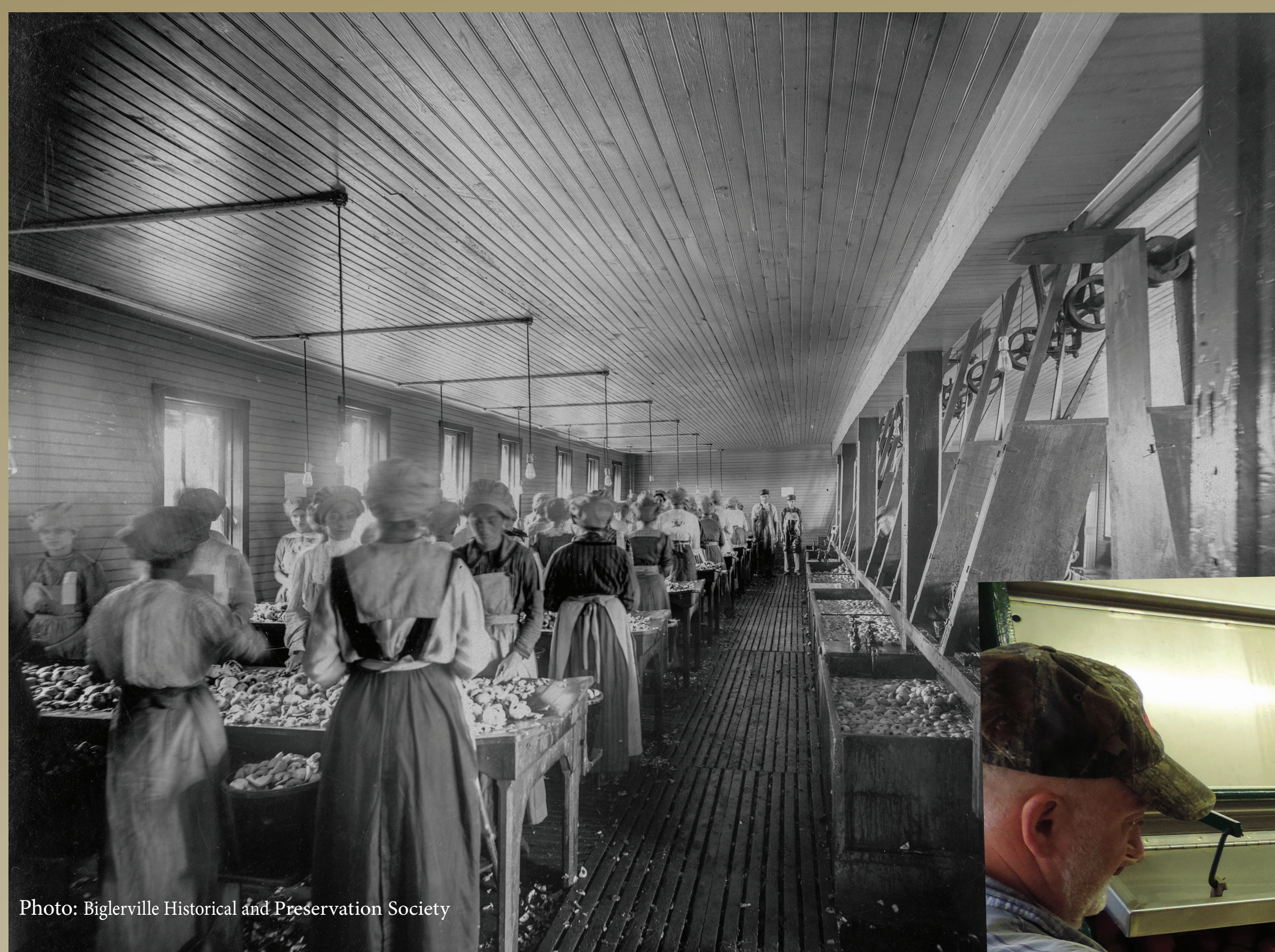


Photo: Biglerville Historical and Preservation Society



Photo: Tara Baugher

Fruit stands and retail markets are supported by innovative value-added processors such as this cider mill.

PA Preferred: Roadmap to Quality Produce

Over the years there have been a number of programs developed at the state and county levels to brand and market local produce. A large brand for many small local growers is beneficial, as it creates a memorable image that the consumer will see in multiple locations and on multiple products. There are many definitions for "local" and it can be a bit puzzling to consumers to identify local produce. The "PA Preferred" logo is a great example of a program helping to identify locally grown produce and farm products.

Regardless of the brand, logo or name on a farm product or produce, the consumer will never forget a perfectly ripe, fresh from the tree apple or peach from Pennsylvania. (Katy Lesser Clowney, Kuhn Orchards)



Photo: Bucks County Extension



Photo: © Kathleen Connally



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Research and Extension Support for Industry Innovations

The Penn State Extension fruit team has been at the forefront of research on pest monitoring and biological control strategies, addressing disease challenges such as plum pox virus and developing labor-saving and precision management technologies. Pennsylvania growers collaborate in field research trials and open up their farms for educational tours and workshops. (Tara Baugher, Penn State Extension)



Photo: Delaware County Extension

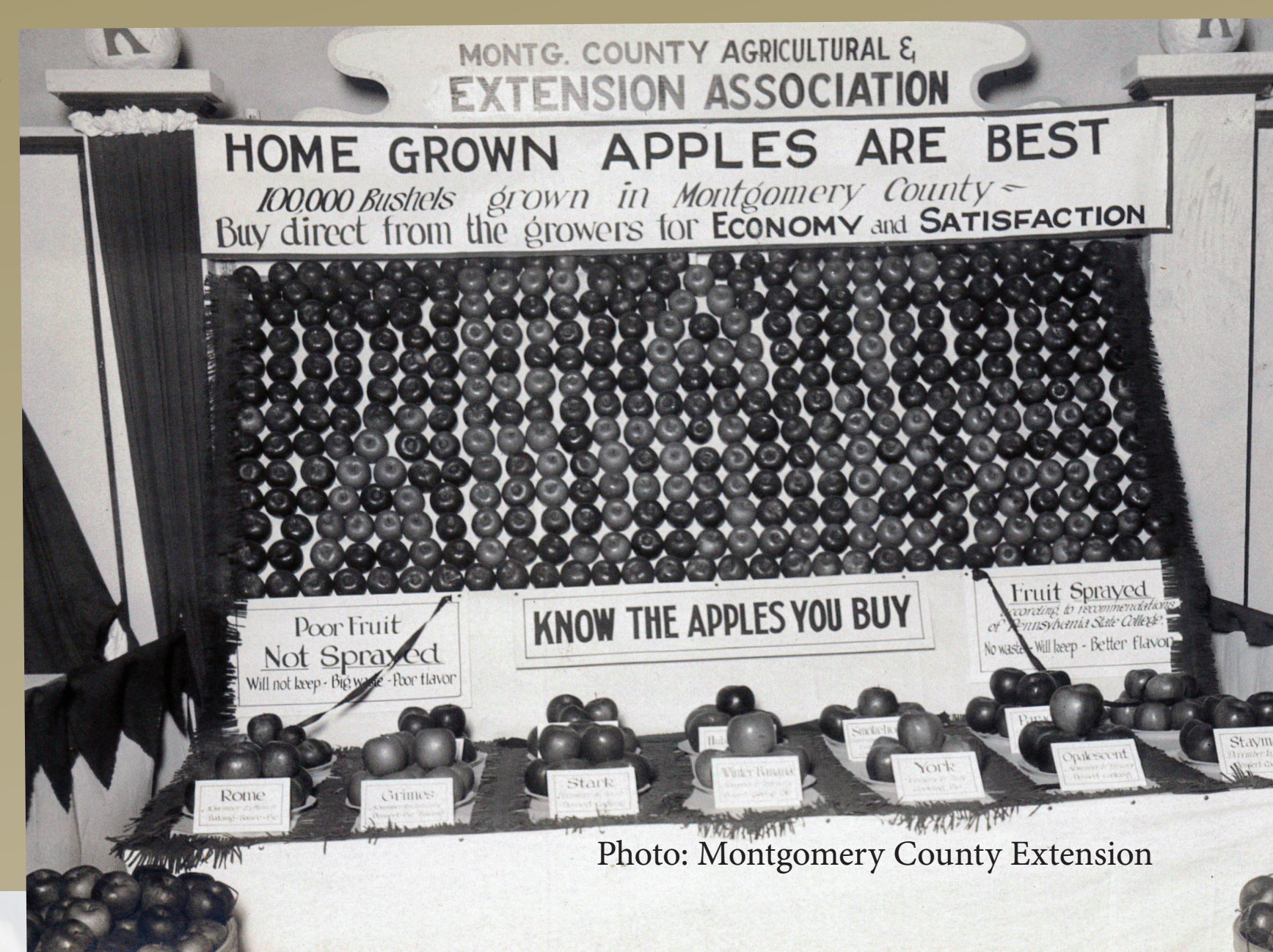


Photo: Montgomery County Extension



Photo: Loy Elliott

Changing Orchard Designs

In colonial times, most orchards consisted of seedling trees. These large trees of unknown parentage grew through many years of juvenility before bearing fruit. By the time of the Civil War, farmers began planting grafted trees of named varieties with known characteristics such as ripening dates, fruit quality, uses and storage life. These orchards still consisted of relatively untrained trees that attained a dense, spherical canopy of large stature.

The late 19th to early 20th century was a period of accelerated change in fruit production. Pruning became an annual practice, with the goals of maintaining even light distribution throughout the tree canopy and facilitating movement of air and crop protectant sprays. During the last 15 years, a shift to tall, narrow cone-shaped canopies at close spacing occurred (518 to 1320 trees per acre). The goals of improving light interception and distribution within a tree canopy are compatible with new technologies to aid in partial mechanization of orchard practices.

(Tom Kon and Jim Schupp, Penn State Fruit Research and Extension Center)



Photo: Tara Baugher



Photo: Tara Baugher



Photo: Penn State Extension Archives



Photo: Tara Baugher



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How Monitoring for Disease Has Changed

Early in its history, the Fruit Research Laboratory at Arendtsville had the most complete weather station in Adams County, and manual observations were taken at least once daily. Weather stations today are compact and affordable, allowing growers to own a personal weather station on their orchard. Conditions are monitored locally for potential disease development with weather data collected digitally at least once an hour. These individual stations are interfaced with personal computers where the data can be displayed and stored. Using published tables that correlate temperature and wetting periods, growers have the ability to determine potential infection events. (Kari Peter, Penn State Fruit Research and Extension Center)



Photo: Tom Piper



Photo: Tom Piper



Photo: Tara Baugher

Advances in Integrated Pest Management

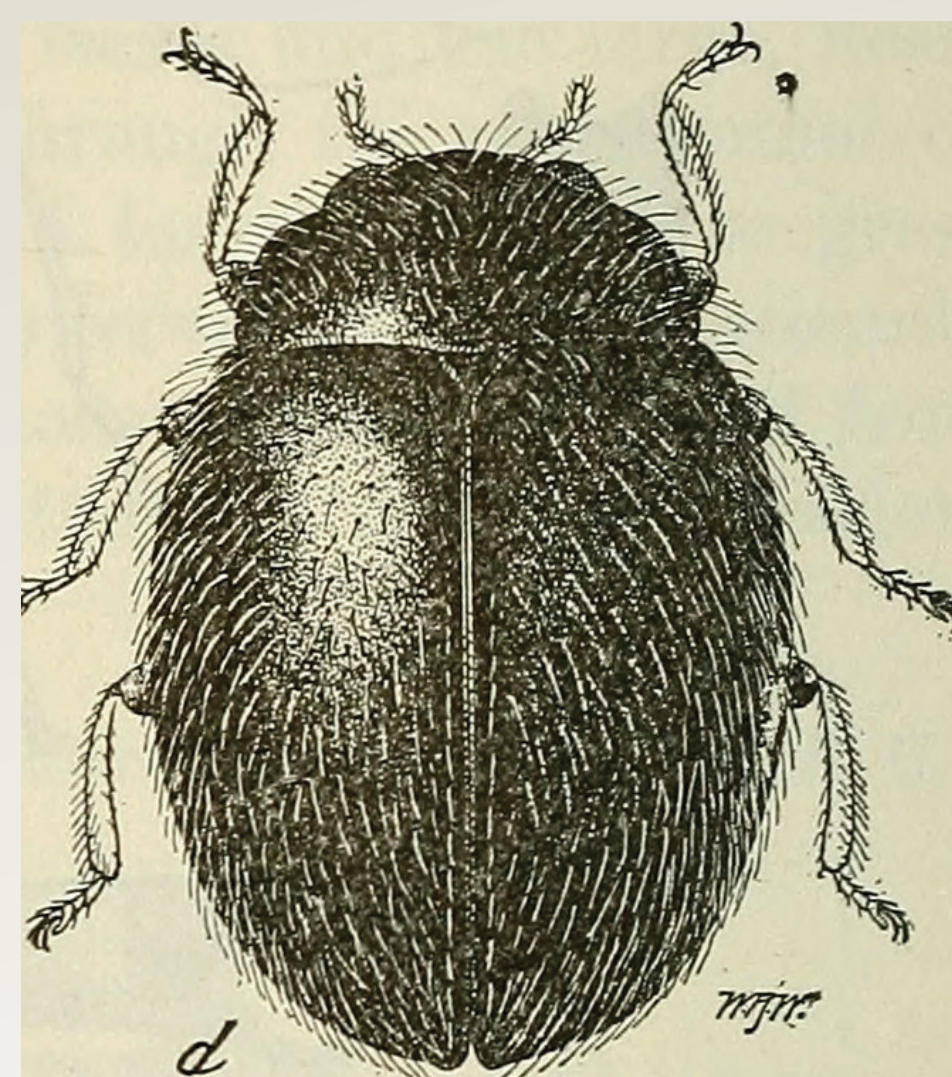
Fruit growers throughout Pennsylvania started adopting “IPM” or “integrated pest management” in the late 1960s. IPM is the use of two or more management tactics (e.g., natural enemies, chemicals, sampling) in the most compatible and environmentally friendly manner to maintain pests below those levels causing economic injury. IPM initially involved the use of the native predator, *Stethorus punctum*, a small black lady beetle. This program is still in existence today in Adams County, but a number of other natural enemies have joined this complex in the orchard, saving growers millions of dollars in spray costs while putting less chemicals into the environment.



Photo: Chazzbo Media



Photo: Chazzbo Media



Stethorus punctum image from page 735 of “Bulletin of the U.S. Department of Agriculture” (1913-1923.)



Photo: Chazzbo Media

Many local fruit growers during the early 21st century adopted a new form of pest control called sex pheromone-mating disruption. Pheromone components are impregnated into various dispensing systems and are then placed at varying densities into an orchard to disrupt the natural communication between female and male moths. Since there is less mating, there are fewer eggs and less hatching larvae available to enter and cause injury to the fruit, and ultimately less need for using insecticides for a specific pest. Fruit growers have an array of monitoring tools and techniques available to them. One specific monitoring tool is the pheromone trap which utilizes the same principles as the pheromone mating disruption technology. (Larry Hull, Penn State Fruit Research and Extension Center)



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The Fruit Growing Team

One of the toughest and most necessary aspects of fruit growing is having enough help to prune, harvest and work the many fields of one's orchard. When fruit growing first began in the region, help was made up of a large family and friendly neighbors.



Photo: Tara Baugher



Photo: Families, friends, neighbors, town folk and school kids helping to get in the fruit harvest, Fall, 1941. (Biglerville Historical and Preservation Society)



Photo: Tara Baugher

Today the industry has evolved and with long hours and unique skill requirements, growers are fortunate to find and keep staff who are dedicated. José Beltran, an employee at Three Springs Fruit Farm, values the same in his boss and says, “You don’t stay in a job for long if you don’t have good employers.” As our orchard practices evolve and we look at ways to encourage a next generation of growers, today’s fruit growing team member may be tomorrow’s farm owner. (Sladjana Prozo, Penn State Extension)

Cultivating the Next Generation of Leaders



In the early 2000s, several community members observed a burgeoning interest in the fruit industry by young adults in their 20s and 30s. With a mission “to encourage, develop, support and equip the next generation of specialty crop growers,” the Young Grower Alliance (YGA) was formed.



Photo: Steve Miller

The change and renewed energy in the industry in recent years has been breathtaking to witness—with young growers stepping into industry leadership roles, positive investments being made in new technologies, innovative production methods and marketing strategies, growers building coalitions and sharing ideas and, most importantly, successful farm transitions to the next generation of grower owners. With the leadership and the coalitions formed by this next generation, the future of the Pennsylvania fruit industry looks very bright indeed. (Sidney Kuhn, Kuhn Orchards; original Chairperson of YGA)



Photo: Aaron Babas



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