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AgrAbility for Pennsylvanians is a statewide partnership between Penn State Extension and UCP Central PA. *Field Notes* is mailed twice a year by UCP in partnership with Penn State Extension.

PennState Extension



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CULTIVATING ACCESSIBLE AGRICULTURE
one farm family at a time

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FROM 1840 TO PRESENT: A TRADITION OF FAMILY DAIRY FARMING

The year was 1840: Martin Van Buren was president of the United States, Antarctica was discovered as a continent, and Philip Dean's great-great-grandparents started a dairy farm in Lawrence County, Pennsylvania.

Philip thinks back to that year with a sense of pride and of strong family tradition. "Farming is just a way of life for the Deans. We've been farming the same land for all of these years, it'd be a shame to see that change," he explains.



Philip began farming the 200-acre land with his father in 1982. He was in his 20s – and his dad was having heart problems and needed more help. Seven years later, Philip and his wife Cindy purchased the farm and have been living and working as full-time dairy farmers since. In addition to helping around the barn, Cindy handles the bookkeeping for Dean Farms.

"The Dean family farm is unique in many ways – they take pride in still delivering the milk to their customers," said Abbie. "During the farm evaluation, we talked about different types of assistive technology that could help Philip keep farming. We identified the milking routine as one of the most important tasks to modify."

But working in a dairy barn for more than 35 years has a way of taking a toll on one's body. A few years ago, Philip began to struggle with severe arthritis, shoulder pain, foot problems including hammer toe, and nodules in his lungs that caused pain in extreme temperature changes. He also had two knee surgeries over the years.

Recommendations in his milking parlor included covering the gutters with grates and installing automatic takeoffs for milking. Automatic takeoffs release the milking unit from the udder of the cow when milking is complete. The unit is pulled up and away from the cow, greatly reducing repetitive motions. Thanks to funding from OVR, these pieces are now in place. Philip can milk 10 cows at once – saving him time, as well as wear and tear on his body.

While talking with a friend at church one Sunday in 2015, she recommended that Philip contact AgrAbility PA. The woman was familiar with AgrAbility's services, as she had worked for the PA Office of Vocational Rehabilitation (OVR), which is part of the PA Department of Labor and Industry. Both AgrAbility PA and OVR work collaboratively throughout the state to help farmers with a disability or health condition continue working in production agriculture.

Not long after that conversation, AgrAbility PA Project Assistant Abbie Spackman met Philip at his farm to conduct a farm evaluation and assessment. An occupational therapist and a farm coordinator from OVR also met with Philip. The team explored and discussed what types of assistive technology equipment and modifications could be made to his milking process. *The consultation and development of formal recommendations are a free service to farmers in the state.*



Other recommendations funded by OVR included a skid steer access platform and a utility vehicle. Philip uses the platform to enter and exit his skid steer safely without the need to climb and step on the front of the machine. It also has served as low scaffolding for doing jobs that require a lift around the farm.

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Fourth generation dairy farmer Philip Dean is shown here alongside automatic takeoffs.

Resources for Dairy Farmers

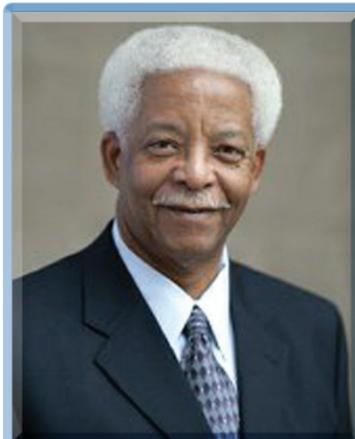
EDUCATIONAL

- Penn State Extension Dairy Team** extension.psu.edu
- Articles, courses, videos; connect with local dairy educators
- Center for Dairy Excellence** centerfordairyexcellence.org
- Business tools, farm profitability, and info on statewide programs and youth in dairy
- American Dairy Association North East** dairyspot.com
- Dairy promotion, marketing, industry trends, and dairy check-off dollars tool

FINANCIAL

- PA Office of Vocational Rehabilitation** dli.pa.gov/individuals/disability-services/ovr
- Financial support to individuals with disabilities to obtain or maintain employment, including farmers
- Pennsylvania Assistive Technology Foundation** patf.us
- Financial education and financing for individuals with disabilities including assistive technology for jobs, hobbies, and quality of life
- Farm Service Agency** fsa.usda.gov
- Loans: purchase or operate farm, beginning farmer, emergency, and microloans
- PA Department of Environmental Protection** dep.pa.gov
- Small Business Advantage Grant to assist with increasing energy efficiency, preventing pollution, or eliminating waste
- Natural Resources Conservation Services** nrcs.usda.gov
- Financial and technical assistance to farmers to manage natural resources
- AgChoice Farm Credit** agchoice.com
- Financial education, business consulting, crop insurance, loans for land, equipment, and farms

FROM THE DIRECTOR



In Snow, Rain, or Heat of Day: Dairy Farmers Persevere!

The words – neither snow nor rain nor heat nor gloom of night – have long been associated with the U.S. postal service. But we can also apply such words to Pennsylvania dairy farmers!

Dairy farmers do not slow down with the changing of the weather or seasons. They have chores and tasks to accomplish every day of the year to be successful.

- Cows must be fed!
- Cows must be milked!
- And manure must be managed.

Consequently, dairy farmers experience a lot of wear and tear on their body. By the time a dairy farmer reaches age 45, they often experience severe pain in their knees, hips, back, shoulders, elbows, and hands. This is the time that dairy farmers start needing AgrAbility support!

Our cover story on Philip Dean is a perfect example. When we met Philip, he was struggling with severe arthritis, shoulder pain, foot problems, and nodules in his lungs. He also had two knee surgeries over the years.

AgrAbility PA gathered a team to conduct a farm assessment and evaluation to better equip Philip with assistive technology and techniques to enable him to continue his work on the farm.

AgrAbility PA is here to support ALL farmers and agricultural workers throughout the state. It is our mission to keep farmers with a disability working in or returning to the agriculture industry. We assist farmers by linking them to potential resources and by providing support to those with a disability or long-term health condition.

AgrAbility PA has been extremely successful over the last 20 years with support from many state and federal agencies, as well as other non-profits and like-minded organizations. We are always looking to meet new farmers and to develop new partnerships to benefit farmers in our state.

Feel free to contact us at (814) 867-5288 or AgrAbility@psu.edu. You can also learn more at www.AgrAbilityPA.org or on social media: [@AgrAbilityPA](https://www.instagram.com/AgrAbilityPA).

We look forward to hearing from you!

Dr. Connie Baggett
~ Project Director, AgrAbility PA
~ Associate Professor of Agricultural and Extension Education, Penn State University

Dean Family Farm (continued)

The utility vehicle enables Philip to keep up with the logistics of moving cows from paddock to paddock, and also to pasture. They use intensive rotational grazing – allowing the cows to graze on the farm grasses. Philip has noticed a significant improvement in the grasses in the last 20 years. “And the cows seem happier, too,” he added. They also take cows outside in the pasture during summertime to calve.

Philip is fortunate to have his grown son, Adam – a fifth generation Dean – involved on the farm and in its ownership. The joke among the family is that when Adam began working on the farm following high school, Cindy said, “I’m retiring!” Retirement isn’t in Philip’s vocabulary yet, but the couple recently took a long overdue trip to Kentucky for a few days – to celebrate their anniversary. It was the first time in 30 years that they had left the farm for more than two nights.

Philip is beyond grateful for the equipment and modifications that have allowed him to continue milking and working day in and day out around the farm. He describes Abbie as the “push to make a lot of this a reality.”

He cannot overstate his appreciation of OVR staff for all they have done to support and fund the recommendations.

“It is great to have them come to the farm and see what we do,” said Philip. “I only hope they know how much their support and generosity has meant to me and my family. It has meant everything.”



Assistive Technology In and Around the Dairy Barn

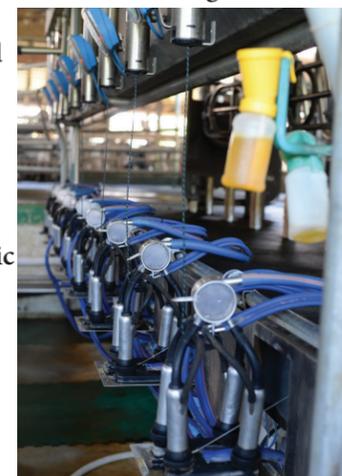


Each year, AgrAbility PA works with dairy farmers throughout the state to make recommendations on assistive technology devices and options that are available to help in and around the dairy barn. Some of these options include:

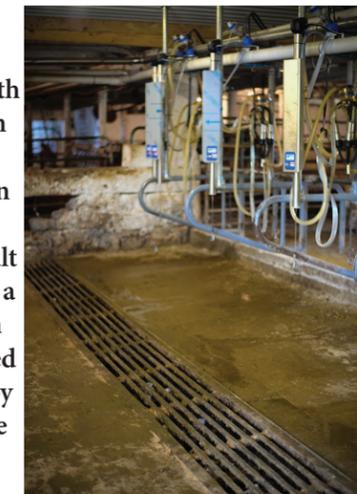
Rail System: This system acts as a carrier for the milking units in a tie stall barn and allows for the use of automatic takeoffs. With this system the farmer does not have to carry or lift the milking units. Rather, they run on an overhead track from the milk house to the stalls where the cows are milked. The units can be easily attached to the milk pipeline and to the cow while the weight is still held by the rail. This reduces the wear and tear on a farmer’s back and shoulders.



Automatic Takeoffs: With a rail system, automatic takeoffs can be installed to release the milking unit from the udder of the cow when she is done milking. The unit is pulled up and away from the cow, ready to be moved along the rail to the next cow, greatly reducing the amount of squatting and bending that is required to check the cow and remove the milking unit. Automatic takeoffs can eliminate at least 100 instances of squatting or bending per day and can help conserve joints. Even in a parlor setting, there are many reasons to install automatic takeoffs.



Gutter Grates: Installing gutter grates may seem like a simple idea, but for farmers with mobility impairments, they can make a huge difference. Gutter grates cover the gutters that run behind the cows in a tie stall barn. The gutters can be difficult to step across; as such, they are a safety concern. The installation of gutter grates reduces the need to step across the gutter, thereby preventing trips and falls, while still allowing manure to be captured in the gutter.



Milk Taxi: A piece of assistive technology to help feed calves is a milk taxi, calf mobile, or milk shuttle. Options for these devices range from small and simple to large and complex. Although there are



many makes and models, the general concept includes an insulated or heated milk storage tank on wheels with an easy dispensing system. This tool can easily transport milk from the milk house to the calves. It eliminates lifting or carrying heavy buckets and saves time by reducing the number of trips back and forth. Devices with a heating option can keep milk warm for longer periods, allowing a farmer to work at a slower pace if needed. Most of these tools are also designed with self-cleaning or easy-to-clean setups.

Other dairy related assistive technology includes crowd gates, air operated entry and exit gates in a parlor, motorized feed carts, cushioned mats on the parlor floor and, yes, cow monitoring systems.

Farmers often hesitate at the thought of changing the way they have milked their whole life and the logistics and finances can also cause some stress. However, many AgrAbility PA clients who modify their milking routine share that they wish they would not have waited so long before making the change! These modifications truly make a significant difference in a farmer’s day-to-day routine around the barn.

If you or a farmer you know would like more information, contact AgrAbility PA to schedule an in-person farm evaluation.