

FARM TO FOOD BANK

It takes an alliance to relieve hunger and educate a community

Amanda McQuade harvests apples in an orchard at CSU's Western Colorado Research Center near Grand Junction. She started a community program that uses fruits and vegetables grown at the center as the basis for public education about nutrition. The produce harvested goes to local hunger-relief programs to help people in need.

By Nancy Lofholm | Photography by Alec Jacobson

The sun was starting to crank from bake to broil on a Sunday morning in August, as a gang of wagon-pulling volunteers headed into a vegetable plot at Colorado State University's Western Campus near Grand Junction.

Over the next two hours, these teachers, nurses, retirees, and students would rifle through vines searching out prime cucumbers and watermelons. They would cheerfully form bucket brigades to load the harvest onto trucks. Then, this fresh produce – along with more fruits and vegetables picked by other volunteer crews – would be delivered to local food banks, soup kitchens, and schools to help people struggling with poverty and hunger. Some of the produce would go by semi-trucks to Food Bank of the Rockies in Denver for distribution across 14 other counties.

During the course of the harvest season, from July to October, volunteers would spend 820 hours in university plots and orchards near the foot of Grand Mesa. They would harvest and deliver more than 97,000 pounds of fresh produce – apples, peaches, melons, peppers, squash, tomatoes, and more – to people in need on Colorado's Western Slope. At the same time, 800 local schoolchildren would visit the fields to learn about food and nutrition, often fixing meals in a CSU teaching kitchen with fruits and veggies they had picked. Paid college interns would meantime log nearly 1,600 hours of work-based learning about dietetics, food insecurity, and community engagement.

The buzzing activity was all part of the Community Alliance for Education and Hunger Relief, a program established two years ago on CSU's Western Campus. It has quickly gained notice as a model for connecting the university's agricultural resources to community education and problem-solving in the spheres of food, science, and hunger relief. Indeed, Colorado State recognized the alliance as its 2018–2019 best emerging program for community-engaged scholarship. The Colorado Department of Education recently commended the Community Alliance for exemplifying valuable partnerships with local schools.



The Community Alliance for Education for Education and Hunger Relief started in 2017. In three growing seasons, volunteers have harvested nearly 271,000 pounds of fresh fruits and vegetables from CSU orchards and garden plots. That's almost 126 tons of produce to help people coping with poverty and hunger.

This farm-to-food bank program – with its notable facets in education – is a significant first for the Colorado Agricultural Experiment Station and its Western Colorado Research Center. The station, like those tied to land-grant universities nationwide, has been a core part of Colorado State University since the late 1800s. Its statewide research centers quite literally sow science: They raise crops and livestock using emerging knowledge and technologies, then offer test findings to benefit Colorado farmers and ranchers. The process helps yield economic success and environmental sustainability tailored to the state's agricultural industry and its soil, water, and climactic conditions.

Hunger relief represents a new chapter – linking production research to community education and acute food needs. The project is especially meaningful in its home base of Mesa County, where one in four families with young children lives in poverty, according to the 2017 American Community Survey.

The program began after an idea whirlwind in steel-toed work boots arrived on the Western Campus with a proposal. Amanda McQuade, with a Ph.D. in cellular and molecular biology, had been running a small food collection and distribution program from her home in Grand Junction. She saw the potential to do much more with the help of CSU's Western Colorado Research Center.

The research center – in a region well-known for peaches and wine grapes – began in 1922 to test tree fruit varieties and methods in water and orchard management; its faculty-led research later expanded to wine grapes. With limited manpower, getting the center's output to consumers was a secondary concern; efforts to harvest and deliver food had been spotty, costly, and often resulted in produce decomposing back into the soil in research fields.



McQuade had an idea: She considered all the fresh food and expertise at the university research center and imagined these resources as a catalyst for easing hunger and engaging with communities in new ways. She devised a wide-ranging plan that would tap volunteers and partners to get fresh produce from university fields and orchards to needy consumers, while also educating people – starting with schoolchildren – about nutrition and healthy eating. The program would relieve hunger and create a new appreciation for where food comes from.

Her plan would require lots of help. So McQuade enlisted dozens of volunteers and support from the Mesa County school district, regional philanthropic groups, such as the Western Colorado Community Foundation, and other individuals and agencies. She raised \$100,000 from donors to establish new vegetable plots alongside research orchards. With this network, McQuade formed the Community Alliance for Education and Hunger Relief. Since 2017, the alliance has been part of CSU's Western Colorado Research Center at Orchard Mesa, on the recently expanded Western Campus that includes newly added offices, classrooms, and a teaching kitchen.

"It was easy to give Amanda the go-ahead for this. Her plan had all the elements to be an effective way for CSU to get more involved with the community and to present agriculture in a positive way," said Greg Litus, manager of the research center, who hired McQuade to lead the alliance.

During the three growing seasons since it began, the farm-to-food bank program has harvested and donated nearly 271,000 pounds of fresh produce for people in need. That's nearly 136 tons of fruits and vegetables for hunger relief. The food goes to shopping bins at food banks, to salad bars at schools, and into cooking pots at centers that feed the hungry.



Above: Food pantries nationwide often urgently need high quality, nutritious produce, as these shelves attest. The Community Food Bank of Grand Junction, shown here, is an important outlet for fruit and vegetables grown at CSU's Western Colorado Research Center at Orchard Mesa. The program "has transformed our clients' accessibility to fresh produce," the food bank's director said. One-third of the produce dispensed here goes to children.

But that's not the program's only undertaking. The Community Alliance for Education and Hunger Relief has three layers, each with multiple programs and partnerships; all are rooted in university fields and orchards. The alliance works to feed community members facing food insecurity, those who might not know where their next meals are coming from and often are unable to afford nutritious meals. It also provides public education about food, nutrition, and hunger. The alliance additionally provides college internships focused on agriculture, food insecurity, STEM education, and community-based nutrition.

McQuade and her collaborators have built these services bit by bit, involving multiple schools, health care professionals, employment services, churches, nutrition experts, social-service organizations, and even community corrections facilities. Hundreds of volunteers respond to her emails and Facebook posts seeking help with harvesting.

The effort to feed the needy is taking off in an area that can really use it. The Grand Valley is a dichotomy: It's a fertile place along the Colorado River, where so much food is grown; yet many people don't have access to fresh fruits and vegetables. The median household income

in Mesa County is \$52,000, according to the 2017 American Community Survey. That compares to \$65,000 in Colorado as a whole, a 25 percent gap. Nearly half of all schoolchildren in Mesa County qualify for free and reduced-cost lunches. In one school, 92 percent of students qualify, a distressing barometer of local poverty and hunger.

The need was evident last summer at the Community Food Bank of Grand Junction, the seat of Mesa County. The food bank was a hive of activity on a weekday morning, as clients filled carts and donors dropped off loads of out-of-date food from grocery stores. The agency provides nearly 300,000 pounds of food annually – a third of it going to children.



“This has transformed our clients’ accessibility to fresh produce. We can offer them a shopping experience that mirrors what they might get at the grocery store,” said Marsha Kosteva, executive director of the food bank, after receiving a load of top-quality cucumbers, peppers, and

tomatoes grown at the Western Colorado Research Center. In fact, food banks nationwide report that fresh produce is always in high demand but short supply.

Quality is a key part of McQuade's vision. The Community Alliance does not donate throwaway produce. "I want the quality to reflect CSU, and I want to treat the recipients with dignity," she explained. At another drop-off point, Grand Valley Catholic Outreach, workers waved a vegetable-laden pickup ahead of other vehicles dropping off items from grocery stores and bakeries. "You've got the good stuff," an excited outreach worker said, as he directed the CSU truck to the door.

Catholic Outreach coordinator Angela Walsh said her cooks look forward to weekly harvest-season deliveries from the CSU gardens and orchards. The outreach kitchen uses the donated fruits and vegetables to make midday meals for people in need. In late August, the kitchen received brightly colored watermelons and cucumbers, fresh-picked by volunteers with the Community Alliance for Education and Hunger Relief. "This is beautiful stuff," Walsh said. "We are so used to getting stuff that's compromised. It is really a treat to get something so fresh and delicious."

Natalia Semeraro completed an internship at the CSU research center last summer, after earning a degree in nutrition science at the University of California at Berkeley. As part of her internship, she delivered fresh produce, a task she loved because it allowed her to see the excitement over food she helped grow and harvest – and she knew it would contribute to people's health. "It's a major privilege to be able to eat a balanced meal, and this helps. Fresh food is the most challenging thing for many people," Semeraro said, as she pulled to her next delivery at Child & Migrant Services in Palisade, east of Grand Junction. There, the kitchen staff smiled broadly as they welcomed a load of colorful peppers and watermelons, which would be used in meals for migrant workers and their families.



Back at CSU's Western Campus, preschoolers lined up to wash their hands before trooping to the research center's five acres of apple trees. They swung plastic buckets, looking from apples to parents and teachers for guidance. "Is this a good one?" Stella Wilson asked. She studied a single hanging apple in a constellation of red fruit before deciding it could go into her bucket. "It makes a whole world of difference to see this start to finish. They love apples now," said Lyn Hazelhurst, who came with her grandchildren. She pointed to 4-year-old Carter Garcia, proudly lugging a bucket of apples. "He knows what harvest means now," Hazelhurst said.

Joy Davis, a teacher at New Emerson School, a nearby magnet school focused on science, technology, engineering, and math, said the orchard field trip was just part of the learning experience for her elementary students. The previous week, they had learned about the history, parts, and nutritional benefits of apples. When they headed back to school from the orchard, the students would make applesauce and dry their apples. "It is just really neat for us to see all this come to fruition," Davis said.

On a harvest-season evening, another group of youngsters took to the vegetable plot and orchard to pick foods they would help prepare for a meal in the campus kitchen. Their pediatricians and other health care workers were with the kids as part of a healthy lifestyle program for youngsters who are overweight or have diabetes or prediabetes. The monthly dinner also served as a nutrition lesson – and it was a special occasion for the kids, who got to harvest their food before preparing it. "If you pick it, you will want to eat it," Anabel Yu observed, as she studied a bounty of hanging peaches.



Later, inside a kitchen permeated with the scent of fresh produce and ringing with the chatter of junior cooks, Katy Brown, a registered nurse with the pediatric program, directed teams as she explained simple salsa recipes made with watermelon, tomatoes, peaches, and peppers. These were new taste combinations for most of the kids. And their role chopping fruits and vegetables was a novel experience.

As the kids jostled for squash, bean, and eggplant tacos, Brown and Dr. Cassana Littler, a local pediatrician, were all smiles. "They get really excited to try new things because they planted and picked them," Littler said of the youngsters in the kitchen. Some kids dug in and cleaned their plates; others were holdouts, skeptical of this new take on tacos. All went home toting bags and boxes of fresh fruits and veggies, along with printed recipes.

During a field trip the next day, Ann Duncan, a registered dietician with CSU Extension, led local fourth-graders in tasting apples and tomatoes while discussing the importance of access to fresh fruits and veggies. "I help teach them to respect their food," Duncan said. "A lot of them don't have agricultural roots or much knowledge about where food comes from." The kids took handpicked tomatoes back to school to share through the salad bar.

In the flurry of activities that keeps McQuade hustling, she has found time to spread her concept through presentations for other land-grant universities. "She is helping other stations with how to do this," Litus said. "It will be interesting to see if this can grow nationally. Amanda is a real catalyst." Leaders of the Colorado Agricultural Experiment Station likewise are considering how the hunger-relief and education model

developed on the Western Slope might be applied elsewhere in the state. They're also looking for ways the program can be incorporated into CSU student and faculty research and scholarly projects.

Meantime, McQuade coordinates the alliance while also working at the ground level – often in the dirt with Mesa County schoolkids. She has an 11-year-old and 8-year-old twins of her own, and she knows that getting on a child's level is important, especially when challenging them to eat something they've never tried.

“Have you ever tasted one of these?” she asked Landry Borgman, a fourth-grader who looked askance at cherry tomatoes collected in a vegetable plot.

Landry shook her head.

“Would you like to?” McQuade asked the girl.

Another shake.

“Do you want to try one together?” McQuade asked again. “If you don't like it, you can spit it out. Let's do it together. One, two, three!”

Then, Landry popped a sweet cherry tomato into her mouth and chewed thoughtfully. From that point on, she gobbled one little tomato for every few plopped into her bucket.

And the Community Alliance had another convert.

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