

Machine Uses Air Blast To Peel Garlic Fast

Gary Price blows away garlic peels with air pressure using round-bottom cups. His homemade machine helps him process 20,000 lbs. of garlic a year.

"We were growing 2 acres of garlic every year, pickling them, flavoring vinegar, and using it in a jalapeno jelly," recalls Price. "We shipped them all over the U.S. and as far away as Europe and Australia."

Price needed a way to peel them, and nobody had a commercial peeler for sale. He couldn't even find a large commercial processor who would let him see one. When he finally did, the machine was impressive. It was a 20-row machine with air supplied by a compressor on a 454 Chevy engine. However, the concept was simple.

"You can put a few cloves in a container, squirt them with 120 lbs. of air pressure, and the peels will blow right off," says Price. "You can even do it by putting a clove in your palm, close the fingers over it and put the air nozzle tip between your thumb and forefinger."

Once he knew what worked, Price went to work on a small 1-row peeler. Instead of a Chevy engine, he had a double lung, 10 hp. air compressor.

"My uncle in California had these plastic cups rounded on the bottom with a threaded female lead for 7/8-in. bolts," he says. "I welded the bolts to a length of roller chain and ran it across and under a sheet of plywood mounted to a framework made with 1 by 3-in. steel tubing."

Price mounted sprockets for the chain on either end with a crank to turn it by hand to his right. He originally welded the bolts to the chain in a pattern that would have the cups side by side. After some experimenting, he opted for a cup on every other bolt. Three cups at a time pass under a raised platform on the table with holes and air nozzles to match the three cups. He ran a 1-in. air hose to a foot pedal where it split 3 ways.

As the chain revolves, 4 or 5 cloves are dropped in each cup. When a group of 3 cups arrives under the air jets, Price steps on the foot pedal, and the peels are blown away. Peels are sucked away by a dust collector type hood underneath the raised platform. When Price cranks the chain around to bring three more cups into place, the freshly peeled cloves drop into a bin at the end of the table.

"It was all the little compressor could do to handle the 3 cups of garlic," says Price.

"I could have used a larger compressor, but then I would have needed to add more lines of cups to justify it. With this one, I can do about a pound of garlic per minute, and I only have about \$100 to \$150 in it."

Price credits his daughter's marketing skills with driving the processed garlic business. At the time he was also operating a custom cabinetmaking business and doing business nationwide.

"We would return through Chicago after delivering cabinets and pick up 50-gal. drums of vinegar," recalls Price. "UPS would drop off a semi each week from October through November as we shipped out product."

Price shut down the business when his daughter decided to spend more time with her kids. The peeler now stands largely unused, as Price only raises garlic for the family and to maintain his seed stock. For Price that means growing 200 lbs. of garlic and planting back about half that. Now he wants to share what he learned.

"I don't want to sell my peeler or make them," he says. "However if anyone wants to make one, they are welcome to come and take all the pictures of it they like."

Price also is willing to help should any



Homemade machine is operated by a foot pedal and uses air pressure and round-bottom cups to blow away garlic peels.

FARM SHOW readers care to learn more about the garlic processing business.

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FSA Youth Loan Gave Sisters Their Start In Swine

By Dee George, Contributing Editor

With the help of a USDA-FSA (Farm Service Agency) youth grant, and encouragement from their dad, Alexis Nice, 20, and Elizabeth Nice, 16, already have five years of experience raising swine.

In 2016, they brought their first batch of 25 45-lb. pigs to the family's Ardoch, N.D., farm. They are currently raising 70 hogs. Their business, Little Farm on the Prairie, has managed to make its loan payments, cover costs, and pay the sisters who have learned a lot about both pig farming and direct marketing.

It started with their dad, Craig Nice. When he learned about FSA's low-interest youth loans, for 10 to 20-year-olds that don't require a co-signer, he presented the idea to his two oldest daughters.

Alexis was onboard with the idea right away, and Elizabeth agreed to be her partner. They created a business plan, connected with the local extension office to serve as their sponsor, and figured out what they would need to get started. They each received a \$5,000 loan to cover startup costs.

"We built a lean-to barn, and bought fencing, fence posts, a grinder for feed, and feeders and a trailer," Alexis says.

When the pigs arrived in May, so did the work. The sisters learned quickly how adept pigs are at digging under a fence.

"We've done our fair share of chasing pigs that got out in the yard," Alexis says. After a few years they learned to put electric wire near the ground. Though it adds a daily chore of digging away mud from the fence to ensure the wire doesn't get wet and short out, the work saves a lot of pig chasing.

Besides daily chores, the girls learned to keep records with the help of their mom. Their dad helps with chores when they need him and he hauls loads of corn from the elevator for them to grind and mix with soybean meal and vitamins for the feed ration, based on North Dakota State University recommendations.

For the last couple of years, they switched to Blue Butt pigs purchased from NDSU's swine program. They pay more for the Yorkshire/Hampshire cross, but have learned that better breeding makes a dif-

ference in how fast the hogs are ready for market.

With experience, the Nice sisters increased their herd size from 25 to 50. They unexpectedly got 70 pigs this spring, and due to Covid-19 it's become a marketing challenge for them.

"We were set up to butcher 50 hogs in Casselton, N.D., in October and December," Alexis says, noting they line up buyers for all the hogs beforehand. That left 20 hogs to market and find someone to butcher them. With Covid-19, small processors have been inundated with work and many don't have openings until 2021.

The sisters found a slot for 5 hogs to be butchered in Karlstad, Minn., but still had 15 hogs left. They marketed some to individuals for pig roasts, and were still looking for customers/butchers for about 8 hogs in mid-August. Between using social media (Facebook), a proud grandfather who likes to put up flyers about the hogs for sale, and customers spreading the word about the good meat, Craig says his daughters have marketed well.

"My grandpa buys one for himself, and his hobby is making bacon, sausage and pulled pork, and he shares the meat with us. It is really good," Alexis says.

Despite having to get up early to do chores and all the work involved - including cleaning out the pen and continuous fence work, the sisters agree raising hogs has been a valuable experience.

"It's teaching us responsibility, money management and things other kids our age might not learn," Elizabeth says.

It also helps pay some University of North Dakota expenses for Alexis, who commutes to college from home.

The sisters plan to keep raising swine, and their younger sisters, Emma, 12, and Josephine, 6, are waiting their turn to take over Little Farm on the Prairie.

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Photo Courtesy of Grand Forks Herald

Alexis and Elizabeth Nice got started in the hog business when Alexis was 15 and Elizabeth just 11.



The girls wrote a business plan and talked to their local extension office before applying for their first \$5,000 loans.