



Pfaltzgraff drills up to 19 different crops using a no-till drill.

## He Drills All Of His Crops

Colorado farmer Roy Pfaltzgraff plants every crop on the farm with a no-till drill. That may be as many as 18 or 19 per year, including traditional wide-row crops like corn. That's a big change for a farm that was a fairly conventional dryland operation until 2017. While his dad once raised as many as eight crops, including 30-in. row crops like corn and sunflowers, he was down to wheat, some corn, millet, or sunflowers with half the acres left fallow.

"When I came back to the farm in 2017, the goal had been to break even with one good year out of every four or five," recalls Pfaltzgraff. "I told my dad things have to change. We went to a no-till conference and heard about the importance of diverse crop rotations, eliminating fallow, and how diversity and no-till impacted fertility."

Pfaltzgraff also learned about the benefits of planting buckwheat and regenerating the soil. The problem was a lack of a local market. Farming in the high desert of northeast Colorado with annual moisture of only 14 to 16 in. and a temperature spread of 25 below to 105 to 107 above, these were the only crops considered safe to grow. Pfaltzgraff set out to challenge that assumption, initially with buckwheat.

"I started digging and making connections," says Pfaltzgraff. "A neighbor gave me the name of a potential buyer."

Soon he was adding other crops and finding buyers for them. He also started drilling row crops like sunflowers. It worked, but there was a learning curve.

"We drilled them on 12-in. centers with our Bourgault 5720 air seeder and 6550ST air cart," says Pfaltzgraff. "It's accurate to 1/2 lb. per acre. The first year we planted our normal rate of 14,000 seeds per acre, and instead of 9-in. dia. flower heads, we had heads 2 ft. in diameter. They were too big."

With narrow rows and the same population, seed gets farther apart in the row. The next year Pfaltzgraff tried 18,000, 26,000 and accidentally 40,000 seeds per acre.

"We screwed up with the drill's seed monitor," recalls Pfaltzgraff. "The 40,000 seeds per acre produced a beautiful stand with the highest yield. The yield monitor hit 100 bushels of sunflower per acre in spots on a poor field in a year that was a little dry. At that point, we realized narrow rows were a no-brainer."

Pfaltzgraff and his dad were already drilling their milo in narrow rows and found it didn't lodge as it did in wider rows. He continued to experiment.

"Three years ago, we tried drilling corn," says Pfaltzgraff.

He used Stine's 84-day, non-GMO seed, the cheapest the company sold. Drilled on 12-in. centers, the dense stand had few weed problems and received minimal fertilizer. Pfaltzgraff harvested it with a wheat head.



Sunflowers are just one of many crops on the Colorado farm.

"It didn't get waist high and looked terrible," he says. "A neighbor planted some conventionally. We harvested 50 bushels with only 30 units of N per acre and he harvested 25 bushels."

Once again Pfaltzgraff tested population rates. "We usually planted our dryland corn in 30-in. rows at 12,000 seeds per acre," he says. "We tested 20,000, 25,000 and 30,000 seeds per acre. The 25,000-seed plot was the winner with the 30,000 rate close behind. So now we shoot for 27,500."

Corn, sunflowers, and buckwheat aren't the only crops Pfaltzgraff added to his all-drilled, 12-in. on-center program. Crops include camelina for diesel and aviation fuel, oats, pinto beans, and chickpeas interseeded with flax, also black-eyed peas, field peas and more. Corn has included open-pollinated Bloody Butcher, and milo includes red and white.

"There's a lot of demand for food-grade white milo," says Pfaltzgraff.

Expanding the number of crops has required expanding storage for carefully segregated harvests. Pfaltzgraff added a grain cleaning system to ensure high-quality products for buyers.

This year he planted 12 crops on the farm's 2,000 acres. He's even trying dryland rice on 5 acres. About the only crop he could grow that he isn't growing is wheat. One reason is a problem with the sawfly, an insect pest that lays eggs on wheat stalks. A bigger reason is the fast-growing market for gluten-free products.

"Five years ago, we went to a conference where we learned about the market for gluten-free products," says Pfaltzgraff. "I came back from it joking that someday we won't raise wheat. Here we are."

Contact: FARM SHOW Followup, Pfaltzgraff Farms, 12189 County Road 7, Haxtun, Colo. 80731 (ph 970-466-1887; roy@pfzfarms.com; www.pfzfarms.com).



Pfaltzgraff Farms' products are sold at local markets and online.

## Specialty Crops Require Special Marketing

When northeast Colorado dryland farmer Roy Pfaltzgraff decided to go no-till, diversify crop rotations, and forego following fields for continuous cropping, he faced multiple challenges. In addition to crop and soil-related questions, there was a need for markets.

"When I came back to the farm in 2017, and we decided to diversify, my dad had one rule," says Pfaltzgraff. "He told me to plant what I wanted as long as it had a decent chance of profit, and I had a market lined up before it went in the ground." When Pfaltzgraff added buckwheat to the rotation that year, he found a potential buyer first. This year he planted 12 different crops on the farm's 2,000 acres. That's down from as many as 18 in recent years, and Pfaltzgraff had markets for each one.

When he started adding non-commodity crops, marketing directly to a food company or consumers wasn't easy. There were no local buyers for buckwheat, much less the multiple other non-commodity crops he added in the following years.

"I cold-called businesses and told them I was working on more diversity and raising such and such crops," recalls Pfaltzgraff. "I asked them what quantities they bought and what quality they required. A couple of companies decided to take a risk with us, and it's gone well."

Pfaltzgraff no longer has to cold call for markets. As the farm's reputation for non-commodity crops has grown, companies are now coming to him. His regenerative practices are one reason, noting that food companies want to work with farmers who are regenerating their soils. Another is quality control.

"We bought our own seed cleaner to ensure the beans and grains we sell are high quality," says Pfaltzgraff. "If they don't meet our quality standards, we won't sell them to food companies."

Pfaltzgraff says there's room for others to do what he has done. "We've had farmers and food companies out of Canada looking for 300 metric tons of buckwheat," he says. "I don't grow that much in 3 years."

He describes the transition the farm has gone through as mindboggling in terms of revenue. "We used to be break-even farmers," he says. "We've turned what once was gross revenue into net revenue. Last year, the harvest was a bust due to drought. We still broke even, thanks to carryover production from the previous year."

Regenerating the soil has paid multiple dividends. Not only does it help with marketing, but it has also reduced the need for fertilizer and other inputs.

"We've cut our expenses 75 percent from 2016, just in fertilizer and herbicides alone," says Pfaltzgraff. "Our farm has changed so drastically since then. We've added new storage bins and replaced or upgraded equipment. It's a completely different operation."

Grains, beans and other products go to contract buyers. He and his wife, Barb Sanborn, market the farm's products (honey from their bee colony, meat and eggs from their chicken flock, and baking mixes) at local markets and online. Packaged goods sold both online and at markets include biscuit, cookie, cornbread and pancake mixes, as well as pinto beans, black-eyed peas and more. All of it is gluten-free, designed to fit that fast-growing market.

Pfaltzgraff started looking for ways to share what he has learned. He works with a commodity group that helps farmers produce and market to food companies interested in soil health. He also gives presentations to groups of farmers on growing and marketing non-commodity crops.

Sanborn previously worked in the marketing communications business. She suggested another way to spread the story. What she envisioned was a workbook on marketing and soil health practices. The idea was something that could be shared as a leave-behind when Pfaltzgraff spoke to groups.

"We want to give others a way to think about the process, develop a plan and a story that will give them the success we've had," says Pfaltzgraff.

"What Do We Do Now, a Direct Marketing Workbook for Agricultural Entrepreneurs," will be finished this summer, hopefully in time for a presentation Pfaltzgraff has scheduled. It includes sections on mission statements, defining products, developing a story, a brand and more, among them the challenges a direct marketing farmer faces.

"Moving down the path to a different approach to farming and marketing can be a little uncomfortable," he says. "I know for a fact that our neighbors laugh at us. And yet, I go to soil health meetings, and everyone is eager to share and help."

Pfaltzgraff advises using social media to reach out to other farmers making the changes. "We have a section in the workbook on mental health and who you can talk to for support," he says. "Social media is a great lifeline to realize you're not alone."

Contact: FARM SHOW Followup, Pfaltzgraff Farms, 12189 County Road 7, Haxtun, Colo. 80731 (ph 970-466-1887; roy@pfzfarms.com; www.pfzfarms.com).