

People & Places

Firm markets WSU grain varieties

Marci Miller also helps farmers, others understand ag options

By MATTHEW WEAVER
Capital Press

RITZVILLE, Wash. — Marci Miller remembers a plaque on the wall in her grandmother's farm house in Ralston, Wash.

The lettering said, "He who plants the seed beneath the sod and waits to see believes in God," and it depicted a farmer and his wife looking across their land.

"I always remember looking at that and thinking to myself, 'I love that thought, that theory,'" Miller said. "It takes faith to farm."

But, she said, "it also takes hard work, a lot of knowledge and education."

That's what Washington Genetics LLC, the company Miller owns with her husband, Mike, helps to provide farmers and others.

The Ritzville, Wash., company markets Washington State University's grain varieties, including answering questions about the varieties and licensing seed dealers.

"When I think of the word 'genetics,' I don't necessarily think of the chemical makeup of something," Miller said. "To us, it's more technology advancement and research."

The information highway is two-way. Washington Genetics also provides information from customers to WSU, helping breeders select the



Matthew Weaver/Capital Press

Marci Miller stands outside the office of her company, Washington Genetics LLC, in downtown Ritzville, Wash., on Aug. 11.

right lines for release and develop a strategy for increase to get new varieties to growers more quickly, said Jim Moyer, director of WSU's Agricultural Research Center.

The company also works with the Washington State Crop Improvement Association to manage royalties so everyone understands and meets contract conditions.

"We are exceeding our expectations in terms of market penetration for our new varieties, and this in turn adds to our bottom line for royalty collection," Moyer said, crediting Washington Genetics' marketing efforts. "It has almost immediately raised the stature of our breeding program with the private breeders based on the relationships we are developing with the companies."

Making sure growers are aware of and can access the best WSU varieties increases the industry's investment in the university, Moyer said.

"Every university approaches commercialization of their varieties differently," he said. "We are in a definite minority as far as this approach goes, but a lot of our peers are watching us very closely."

The company goes beyond marketing. It also serves as a resource to help clients ranging from growers to cities and other government entities working with agriculture.

"At some point, everything has some type of agricultural perspective to it," Miller said. "Every city, big or small, has agriculture on the outlines of it. That does affect anything

that goes on in the cities."

Farmers might be looking to explore new crops or develop a new product. A school might be leasing some farm ground but need help understanding what the farmer is doing or sorting through USDA paperwork.

"There's a definite gap between who understands who and how they can work together," Miller said. "Even growing up, I would recognize the struggles my dad would have trying to connect with 'big ag' industry-type things and how he could get that to apply to his farm."

Miller applies the same theory to her current work.

"Tell me what you need, and I will tell you what we can do, or I can point you in the direction of someone who



Western Innovator

Marci Miller

Age: 38

Occupation: Co-owner, Washington Genetics LLC

Hometown: Ritzville, Wash.

Education: Associate degree in applied science, agricultural chemical science and agricultural business science, Spokane Community College

Family: Husband, Mike, is also an owner of Washington Genetics, a member of the Washington Grain Commission and an officer of U.S. Wheat Associates. Three children.

Website: <http://www.washingtongenetics.com/>

can," she said.

Besides Washington, the firm serves clients in Idaho, Oregon and Montana and is starting to branch out to Northern California.

Miller believes the company is at a "growing pain" stage: There's a lot of need, but she's trying to balance the business, family life with three children and two farms — the irrigated farm she grew up on and Mike's family farm.

"The opportunities to be able to help the ag industry are endless," she said. "I'm excited about that."

Drones help California farmers save every drop of water

By SCOTT SMITH
Associated Press

LOS BANOS, Calif. — A drone whirred to life in a cloud of dust, then shot hundreds of feet skyward for a bird's-eye view of a vast tomato field in California's Central Valley, the nation's most productive farming region.

Equipped with a state-of-the-art thermal camera, the drone crisscrossed the field, scanning it for cool, soggy patches where a gopher may have chewed through the buried drip irrigation line and caused a leak.

In the drought-prone West, where every drop of water counts, California farmers are in a constant search for ways to efficiently use the increasingly scarce resource. Cannon Michael is putting drone technology to work on his fields at Bowles Farming Co. near Los Banos, 120 miles southeast of San Francisco.

About 2,100 companies and individuals have federal permission to fly drones for farming, according to the drone industry's Association for Unmanned Vehicle Systems International.

Federal regulators relaxed the rules Monday on commercial drones, a move that could spur even greater use of such aircraft on farms.

Michael is descended from Henry Miller, a renowned cattle rancher, farmer and West-



Scott Smith/Associated Press

Danny Royer, vice president of technology at Bowles Farming Co., prepares to pilot a drone over a tomato field near Los Banos, Calif. The farm hired Royer this year to oversee drones equipped with a state-of-the-art thermal camera.

ern landowner who helped transform semi-arid central California into fertile farmland 150 years ago by building irrigation canals, some still flowing today.

Six generations later, Michael farms a 17-square-mile portion of that same land, growing melons, carrots, onions, cotton and almonds, while carrying on in the same pioneering spirit as Miller.

"I've always been a big fan of technology," said Michael, 44, mindful of how climate change is making water more precious. "I think it's really the only way we're going to stay in business."

On his 2,400-acre tomato crop alone, Michael estimates that this year his leak-detecting drones could save enough

water to sustain more than 550 families of four for a year.

California endured the driest four-year period on record before a relatively wet and snowy winter this year overflowed some reservoirs in the northern part of the state. Southern California, however, remains dry, and the statewide drought has not ended.

Beyond California, drones are becoming fixtures on farms in places such as Canada, Australia, South Africa and Latin America as they become more affordable and easier to use, said Ian Smith of DroneDeploy, a San Francisco-based industry leader in drone software development.

A farmer can order a commercial-grade drone online for \$2,000 and receive it in

the mail days later, he said. Its video camera is then paired up with a smartphone or computer tablet that is used to control the drone.

"Hook it up to a smartphone. Boom. Take off and you're in business," Smith said.

Many farmers, however, have yet to grasp the full potential beyond capturing video images of crops or using infrared cameras to spot color variations in the plants that can signal a problem.

Few have used technology and invested in it to the degree Michael has.

This year he began using the thermal camera, which can cost up to \$10,000 and can show moisture variations in soil. He also created a new management position at his company dedicated to overseeing drones.

Recently, Danny Royer, the new vice president of technology at Bowles, stood at the tailgate of his pickup studying live images transmitted to the screen of his tablet as a drone buzzed 300 feet overhead.

Rows of mature tomato plants appeared on the screen in glowing burnt orange, indicating warmer, drier areas, while dark patches of purple showed the cool moist soil hidden below the plants.

After taking the images back to his office to analyze them, he decided there were no leaks to repair, but the

soil needed to be enriched in places to help the field grow evenly.

The Federal Aviation Administration's new rules say operators of commercial drones that weigh less than 55 pounds will no longer need to go through the long, expensive process of earning an airplane pilot's license.

Instead, they will have to take a written test — but not an actual flying test at the controls of a plane — and will be issued a drone license for \$150.

The rule change and emerging technology could make drones more attractive tools for farmers, said Brandon Stark, director of the University of California's Center of Excellence for Unmanned Aircraft Systems Safety, based at the Merced campus.

However, he said that until federal regulators clarify parts of the new rules, commercial drones must continue to fly below 400 feet, limiting their use on very large fields.

Stark is seeking what he calls the Holy Grail of drone use in agriculture — enabling them to directly diagnose what ails a tree, whether it's deficiencies in water or nutrients, or a pest — without having to send a person into the field.

"We're just getting started," Stark said. "The research is really still in its infancy."

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Tuesday, Sept. 6
Practical Application of Soil Management Principles: Down and Dirty, 5:30-8:30 p.m. SOREC Extension Building Auditorium, 569 Hanley Road, Central Point, Ore. Wear your work clothes and bring gloves for this two-session class. Move beyond theory and learn about the Rogue Valley soils. Our instructors will guide you through discussions and demonstrations of how different management practices and equipment affect soil quality,

the relationship between soil and plants, hand versus mechanical tillage, soil structure and texture, the cast of characters in the soil and how to improve soil. <https://secure.oregonstate.edu/osuext/register/1064>

Eastern Idaho State Fair, 97 Park St., Blackfoot. 208-785-2480, <https://funatthefair.com/>

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Upgrade Your Dairy Decisions Workshop and Lunch, noon-2 p.m. Darigold headquarters, 1130 Rainier Ave. S, Seattle. Learn how a growing number of dairy farms are using Vault Technologies to save time and make financial decisions with greater confidence. One type of financial management on a dairy farm is hedging. Rice Dairy LLC will be there to share ideas and experiences on how dairies are using technology to become better hedgers. 312-

492-4200 or bgr@ricedairy.com

Eastern Idaho State Fair, 97 Park St., Blackfoot. 208-785-2480, <https://funatthefair.com/>

Workshop, 4:30-6:30 p.m. Snipes Mountain Brewery, 905 Yakima Valley Highway, Sunnyside, Wash. Learn how a growing number of dairy farms are using Vault Technologies to save time and make financial decisions with greater confidence. One type of financial management on a dairy farm is hedging. Rice Dairy LLC will be there to share ideas and experiences on how dairies are using technology to become better hedgers.

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Index
Dairy 10
Markets 13
Opinion 6
Farm & Ranch Safety 14-15

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