Nuseed employees standing in a field of flowering carinata.

Oil Seed Used As Cover Crop

A new carinata hybrid is showing real potential for growers in the southern tier states as a dual-purpose crop. Fall planted, it provides the soil health benefits of a cover crop and yields a valuable oil seed.

"We were able to launch Nujet 400, our first ever carinata hybrid, this past year," says Roger Rotariu, Nuseed. "It's an overwintering cover crop with the bonus of being taken to yield for its oil seed. The initial market is as aviation fuel."

Developed from a brassica commonly called Ethiopian mustard, Nuseed's carinata is producing yield averages of 30 bu. (1,500 lbs.) per acre from Texas east to northern Florida and into North Carolina.

Rotariu reports that 100 percent of Nujet seed has been planted under contract to Nuseed. A market for all the feedstock produced over several years to come has been guaranteed by BP, the British oil and gas company.

"Having a guaranteed outlet for supply means we can stand behind our growers," says Rotariu. "This first year, we have delivery points in Texas and Georgia and will ensure additional delivery points as we contract with farmers throughout the growing area."

Nujet reaches a plant height of 45 to 55 in., flowering in 4 to 5 weeks and maturing 170 to 180 days after planting. It's reported to have good pod shatter tolerance.

"It has a great fit in a corn/soybean rotation, but can easily be worked into a cotton or peanut rotation as well, as these crops give the best chance to go in by mid-October to the end of November," says Rotariu. "A following crop shouldn't need to go in before the middle of March."

"Nujet needs less than 80 units of N per acre, with starter in the fall and top dressing with foliar through the season as needed," says Rotariu. "As a cover crop, it's great at foraging for nutrients and moisture alike."

Nuseed will be working with different crushers to cold crush the carinata seed. Once the oil has been removed, the crush can be utilized for livestock, similar to soybean meal.

"Our main goals this first season are to establish the commercial opportunity and establish carinata's value as a cover crop with soil health and soil protection benefits," says Rotariu. "We'll continue to ramp up acres and are looking for growers interested in contracting for the 2023 fall season."

Contact: FARM SHOW Followup, Nuseed, 5101, 333 96th Ave. NE, Calgary, Alta., Canada T3K 0S3 (ph 403-219-2098; toll-free 888-786-7333; www.nuseed.com); or Parker Bontrager, Field Sales Manager-Texas (ph 260-336-2261; parker.bontrager@nuseed.com); or Derek Barber, Field Sales Manager-Southeast U.S. (ph 904-776-3547; derek.barber@nuseed.com).

Made-It-Myself Seed Spreader

Dennis Sonsel of Gonzales, Texas, had a seed spreader break down one day. He got creative to solve the problem.

"I took apart a garden tractor and made a trailer out of it," he says.

He locked the tractor's rear end and attached a shaft that spins as the rear wheels turn, driving the spreader.

"I used all the parts from that pull-behind spreader, including braces that attach to the top of the unit," he says. "It slings the seed out of the back," Sonsel says. "You can also use it for fertilizer."

Taking apart his old riding mower and making a trailer out of it wasn't a difficult process. He removed the motor, then the hood and the frame.

"I took the front end completely apart to turn it into an axle and welded a tongue to the front," he says.

He called the process simple, noting that the hardest part was taking apart the rear end and locking it.

Sonsel says it didn't cost any money as he made it out of used items he had on hand.

"I've got about 8 1/2 acres out here, and it's not quite big enough to run a large tractor through with a spreader," Sonsel says. "But it would take too long with a walk-behind spreader.

Sonsel's spreader is made from an old garden tractor and a pull-behind spreader.

"This is a little more heavy-duty than some of those wagons you buy at the local lawn and garden store," he says.

While it's not a money-making idea for him, he's more than happy to talk someone through the process if they'd like to build their own seed spreader.

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JCB chairman Lord Bamford with the company's new hydrogen engine.

Photo Courtesy of JCB

JCB Introduces Hydrogen-Powered Engine

JCB is introducing its first zero-carbon emissions hydrogen engine at the March Conexpo 2023 show in Las Vegas, Nev. The company believes hydrogen is a practical solution for powering a good share of the company's construction and ag equipment in the decades to come.

JCB's hydrogen engine isn't much different from any other four-cycle internal combustion engine because it has many common parts. With essentially the same horsepower and torque as its gasoline and diesel counterparts, the new hydrogen model can be used in smaller construction and farm equipment. The hydrogen engine's air/fuel mixture requires twice the volume of air, so turbocharging is essential. Spark timing is critical, and the fuel tank is robust.

The JCB hydrogen engine is designed for longevity like a diesel and should cost about the same to manufacture and operate. One gallon of diesel has about the same energy as one kg of hydrogen, and it takes three gallons of water and 55 kW of electricity to make the hydrogen. At 8 to 10 cents a kWh, fuel costs would be comparable to diesel. Savings would come from using renewable sources of electricity.

Researchers at Washington State University (WSU) see a future where the electricity from solar or wind generators would make hydrogen from water which, in turn, could power industrial equipment, combines and tractors, dry grain, and even make fertilizer.

WSU's economic modeling uses a 2,800-acre dry crop farm as an example. The farm would require about 8,000 to 12,000 kg of H2 to run equipment and about 14,000 kg to make nitrogen fertilizer. A solar array covering an acre could make enough electricity to meet or exceed that need.

Without shareholders and their expectation for rapid returns, family-owned JCB can take a longer view of how alternative energy sources are developed. JCB has invested $125 million along with 100 engineers working for more than a year to develop the hydrogen engine, which has been successfully field tested in a backhoe loader and a telescopic handler. The company has also developed a mobile hydrogen refueling unit that transports hydrogen to fields and construction sites.

Contact: FARM SHOW Followup, JCB Corporation (www.jcb.com/en-us/campaigns/hydrogen).

Rustic Homesite Features Repurposed Farm Materials

In their leisure time, Colette Finne and Lance Seltun enjoy scavenging old farm sites for materials they can use around their Minnesota homesite. They've made two gazebos from a metal crib and metal grain bin, built a backyard cooking facility from parts of old farm buildings, and made several improvements to their house and yard with old barn materials and rustic equipment.

After Finne and Seltun tore down her boss's old barn, they used the rough-cut 8-in. beams from the barn frame and several large planks to support a new porch overhang on two sides of their house. The entire floor is made from 2-in. thick planks that'd been nailed together to form a large support beam for an old nearby barn.

"It was tough work prying the planks apart and pulling the nails, but the wood was in excellent shape when we got done and it makes a very sturdy floor," Seltun says. "We used old corrugated metal roofing from another farm building to make a rustic ceiling for the entire overhang. Recessed lighting gives the addition a really nice look." Inside their house, old barnwood is used for decorative beams, a sliding door that covers a bedroom window, and several types of shelving.

Their backyard is a comfortable and well-landscaped retreat featuring the rustic cooking shack, "Rusty" the grain bin party room, a rebuilt horse-drawn steel-wheeled wooden wagon, and numerous decorative antiques.

Lance Seltun and Collette Finne used wood beams, planks, and corrugated sheathing from an old barn to make a comfortable overhanging porch on their house.

"We're always adding to it with natural, native, and old materials. We're never finished because we've always got our eyes out for things that will fit into our design," Finne says.

Contact: FARM SHOW Followup, Lance Seltun and Colette Finne, Rochester, Minn. 55904.