



To keep from damaging his soybeans while harvesting the camelina cover crop, Joe Breker installed pieces of drain tile on his combine header to push soybean rows below cutterbar.

Camelina Cover Crop Contender

University of Minnesota professor Don Wyse has been working for years on the commercialization of camelina.

For the past 5 years, North Dakota farmer Joe Breker has been using camelina as a cover crop on his fields in the southeastern part of the state.

The two men share an interest in finding a crop that will protect the soil while producing extra income for farmers. Camelina is getting close.

"We've been working with 15 cover crops and perennial crops to add more economic opportunity for producers," says Wyse, describing his Forever Green initiative. "Two are oilseeds - pennycress and camelina. The first one to commercialization will be camelina."

Camelina has been investigated in the past as an alternative oil source (Vol. 31, No. 4 and Vol. 37, No. 4). Wyse sees it as an income producing crop following spring peas and other crops. It can absorb and store up to 70 lbs. of nitrogen per acre left behind by previous crops. It over winters well and can be harvested in mid to late June, 2 weeks or so after planting soybeans into it. The only problem is that competition between the maturing camelina and the emerging soybeans reduces yields some on both crops.

"We have late maturity camelina that reduces soybean yield about 5 percent. The camelina still yields from 1,500 to 2,000 lbs. per acre," says Wyse. "Right now that is a wash when you consider inputs and cultural costs. We are working to reduce soybean yield loss to zero and increase camelina yields through breeding early maturing varieties."

Some growers may not have to wait for those goals to be met. Thanks to a grant from the Walton Foundation, work on a supply chain is spurring commercialization. Several large agricultural corporations are investing in camelina as part of their commitments to carbon reduction and regenerative agriculture.

"They are stepping up and helping us develop the supply chain to get camelina into food products," says Wyse. "Forever Green is not just about developing crops, but also the industry to support and use them."

Joe Breker isn't waiting. Along with fellow no-till and cover crop producer Doug Toussaint, he is producing camelina seed for cover crop use. A conversation the two had with North Dakota researchers identified the need for a winter hardy cover crop.

"They had 500 lbs. of camelina seed



Researchers and growers say "Camelina", a popular oilseed crop, also has potential as an income producing cover crop.

and asked us to try to raise it, evaluate it and produce seed," says Breker. "Doug drilled some into barley stubble, and I had mine flown on mixed with rye on some soybean and fava bean stubble."

Both ended up with similar yields and replanted in the fall of 2018. Breker planted it in soybean stubble in twin-row, 30-in. rows in October, too late for it to emerge that fall. However, it came up well in the spring. Around the 20th of May, he planted twin rows of soybeans as a relay crop in between the rows of camelina.

"We harvested the camelina in mid-July," says Breker. "The soybeans were about a foot high, but the header had to be at about 8 in. to catch the camelina."

To keep from damaging the beans, Breker put pieces of drain tile over the header bar to push the soybeans below the cutterbar.

"We added pickup fingers to the header to help straighten up the camelina," says Breker. "The combination worked quite well."

He estimates the camelina yielded about a third less than if it hadn't been relay cropped and the soybeans about 25 percent less.

Breker has also tried interseeding camelina in maturing soybeans and corn, but it hasn't survived the heavy canopies. Once the soybeans have started turning yellow, broadcasting camelina is an option.

He plans to continue trying options with the camelina in hopes of a market like Wyse envisions. "We need a viable option for raising 2 crops and harvesting the second as a relay crop," says Breker.

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Tarped hay slated for export can be worth \$30 a ton more than untarped hay, which is why tarp companies sometimes wrap the stack up completely.

They've Got Hay Business Covered

Hay tarping is big business, with crews working across commercial hay-growing areas. Two companies have captured the bulk of the business - Tarp-it and Inland Tarp & Cover Services. Tarped hay slated for export can be worth \$30 a ton more than untarped hay.

"As the export business has grown, farms have gotten bigger, but with crop rotations you can't have hay barns everywhere," says Tim Ravet, Tarp-it. "A lot of our customers have expanded as the industry did, and we have grown with them. Some produce hay here in Washington State and as far away as New Mexico."

While it is big business, it's not an easy one to get into, explains Ravet. How a stack gets covered varies also, depending on the customer. Prices charged can range from \$2 to \$3 per ton up to \$10 per ton, depending on whether the hay is for the grower's use, for sale to a dairy or feedlot, or for export.

"Sometimes we cover just the top and

other times we cover the entire stack," says Ravet. "We often lay bottoms out for them to stack on, and then we wrap the stack up completely."

Ravet likens it to a diaper, but one to hold the moisture out, rather than hold it in.

Wind is a challenge in many areas. Covering a stack in a strong wind is not easy. So having experienced crews is very important to tarping companies.

For an introduction to hay stack tarping, ITC Services offers a dozen how-to videos. They cover everything from stacking suggestions to installation and tie-down, removal, folding, and storage.

Contact: FARM SHOW Followup, Tarp-it Inc., 3000 Wilson Creek Rd., Ellensburg, Wash. 98926 (ph 509 962-4664; www.tarp-it.org); or ITC Services, Inc., 4172 N. Frontage Road E., Moses Lake, Wash. 98837 (ph 509 766-7024; www.inlandtarpandcover.com).



Dan Robards's restores family Bibles back into usable condition, often installing new bindings and embossed leather covers with hot foil stamping.

He'll Restore Your Family Bible

Old family Bibles are the most common books that Dan Robards restores at his used bookstore, Viking Books, in Alexandria, Minn.

"I often get Bibles from the late 1800's, and they need a lot of work. On most of them the front and back covers are detached," Robards says, adding that he also repairs a lot of old family cookbooks.

Besides basic repairs that start at around \$40, he offers more intensive repairs that include new bindings, new leather covers, and embossed leather with hot foil stamping.

He learned book restoration by visiting other book repairmen and taking classes. Robards worked in commercial printing for 25 years before "retiring" and opening his used book store and Robards Book Binding & Repair. He located older equipment that he needs for restoration and has collected dozens of fonts and decorations used for embossing.

That has come in handy for one steady customer who wants all his books recovered with leather covers.

A more challenging job from another client is fixing atlases, some from the 19th Century.

"Atlases are challenging. The bigger the book, the more worn they are because they are too big to fit right on a shelf," Robards

says.

Sometimes the best he can do for books falling apart that customers want to keep original, is to build a clam shell storage box, which is hinged on one side to open like a book.

"I've worked on books as old as the early 1800's, back when covers were wood and tied with twine cords. I can use the original boards but the twine is rotten so I convert it to a modern binding," he says.

Robards talks to customers to find out how much work they want done before he begins - from simple repairs to choosing exotic leathers for the cover. When they send the book to him he can determine what he can do. There's not much he can do for old Bibles with tissue-thin paper that have been "fixed" with tape or rubber cement. There have been a few books he's had to send back without any repairs. But that doesn't happen often.

"My favorite part is giving the book back and having them say 'wow'," he says.

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