Controlling weeds in any field is especially tough for organic farmers. Colin Tanner may have the answer. Last year he used a Swedish-built, selective, mechanical weeder called CombCut. It combs through flexible stems of wheat and other small grains and cuts away broadleaf and other thick-stemmed weeds.

“We wanted to increase our control of Canada thistle in some of our fields,” says Tanner who, along with his family, farms 800 acres organically near Regina, Sask. “With our improved fertility and moisture conservation, we really needed to improve weed control.”

When Tanner first saw the CombCut, he was impressed enough to become a dealer for Just Common Sense, the Swedish company that developed and manufactures the machine. Tanner imported a dozen units and has sold most of them.

“We are currently selling machines in western Canada, but can provide them to interested growers in the U.S. as well,” says Tanner. “I thought we would move into this slowly, but interest is building faster than expected.”

The CombCut is a folding toolbar that can be mounted ahead of or behind the tractor. Promoting teeth have blades mounted to one side and are opposed by small metal bars that leave an opening to the rear. The blade cuts the thicker, stiffer weed stems, while the flexible grain stalks bend around the bar. The angle of the cutting blades on the folding toolbar can be adjusted easily with a small turnbuckle on each section of knives.

The most visible component of the CombCut is the reel with its 3 sets of bright orange, 5-in. long poly brushes. They sweep the crop and the weeds into the knives. The reels are powered by a small orbital motor and can be set at a constant speed of up to 300 rpm’s.

“The results with the CombCut last spring were terrific,” says Tanner. “Although it didn’t do well on the thistles,” he says, “We clipped wild oats as the seeds were before they go to seed. When used as a clipper, the gaps between cutting blade and bar are eliminated.

“We clipped wild oats as the seeds were developing and thistles at bud stage,” he says. “We decided to make harvest pass, but feed it also weakened the thistle as root reserves had been expended.”

In cereals, Tanner reports little to no visible damage. However, available widths are limiting interest.

“The company is developing larger units better suited to large conventional fields,” says Tanner. “Next year they will be introducing a 20-ft. wide CombCut.”

At this time, the 21-ft. model is priced at $36,000 (Canadian). The 27-ft. model is priced at $44,000. Both models fold down to a 10-ft. width for transport. The company is looking for dealers for both the U.S. and Canada.

Check out the CombCut video at www.farmshow.com.

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Researchers Studies Abrasive Weeding

FARM SHOW editors first heard about “blasting weeds” with corn grit when we published a story about the idea 2 years ago (Vol. 38, No. 5). Now we’ve learned about research being done at the University of Illinois by agroecologist Samuel Wortman using a variety of products for abrasive weeding.

In Wortman’s U of Ill. study, grit made from walnut shells, granulated corn cobs, green sand and soybean meal was blasted onto nuisance weeds in growing vegetables. Wortman says the grit was applied through a handheld, siphon-fed sandblaster attached to a gas powered air compressor. The compressor was on a cart pulled by a trained operator with 3 walkers over 3 steps.

Wortman says grit blows out the nozzle at supersonic speeds and is directed at growing weeds to completely shred their leaves. He found that particle size or type didn’t have a bearing on how well the blasting worked because the force of the material always did extensive damage to weed leaves. He did advise that the process works best on transplanted crops where the good plant is larger and more mature than the small weeds around it. His test results showed that yields on the “blasted” crops were about 33 to 44 percent better than those in the non-weeded control plots. The weed control in the abrasive plots ranged from 69 to 97 percent effective.

Wortman says one benefit of pressurized weeding is that granulated fertilizers could be used as the abrasive, which would supply added nutrients to the growing crop. He says growers also like the idea of fertilizing and killing weeds in one pass, saving time and money. His research suggests that using poly mulch or a biodegradeable plastic mulch greatly improves the effectiveness of abrasive blasting when compared to straw mulch and bare soil. Additional tests will be done on other crops including kale and broccoli.

Wortman adds that growers can try abrasive weeding without a lot of up front costs. If they don’t own a portable air compressor, renting one along with a sandblasting pump is one route to go. The unit could be pulled through a garden with a small tractor and wagon. Eye protection should always be used with abrasive blasting because small particles easily ricochet.

Contact: FARM SHOW Followup, Samuel Wortman, Assistant Professor, University of Illinois, 1011 Plant Sciences Laboratory, 1201 S. Dorner Drive, Urbana, IL 61801 (swortman@illinois.edu).

Machine combs through flexible stems of wheat and other small grains, cutting away broadleaf and other thick-stemmed weeds.

Researcher Studies Abrasive Weeding

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