

Collector Turns Cobs Into Cash

By Jim Ruen, Contributing Editor

Ty and Jay Stukenholtz have been making cash from cobs with cob catchers for nearly 10 years. Now they're getting ready to cash in on their cob collector, too.

When they built their first cob collector, it was to supply a local plant with cobs in southeast Nebraska. The plant closed in 1998, but they continued to work on the collector as they searched for markets for cobs. Now they can't get enough cobs to supply the demand for feed and even fuel.

"We collect cobs and husks and grind and sell them to cattle feeders," explains Jay Stukenholtz. "We have also supplied cobs to the University of Missouri for a study on displacing coal in generators. Others are looking at them for gasification, anaerobic digestion, and a long list of uses that will change the dynamics of the cob industry."

Then, of course, there is the big push for developing ethanol from cellulose. Cobs and husks could play a major role in that, points out Jay. He notes that while the value of corn stover to future crops is beginning to be recognized, cobs and husks have little nutrient value. In fact, cobs tie up nitrogen in corn on corn. Removing them may be the best practice, and the Stukenholtz brothers have the machine to do it. Jay estimates they can harvest 3/4 ton of cobs per acre with their collector when corn is yielding 200 bu./a.

Their current cob collector bolts to the rear and top of a Case IH combine without modification to the combine itself. A combination of sieves and air pressure separates stalk and leaf parts from cobs as they exit the combine. Sieves can be adjusted to collect only cobs. Selected material is blown up and over the combine to a 320 cu. ft. storage basket that sits above the grain hopper on the combine. Basket extensions fold

down when the combine is in transit.

The system is designed so the cob basket can be emptied at the same time as the grain tank. The cob basket can be installed for emptying to either or both sides. When the receiving cart is alongside, the basket slides to the edge of the combine, a door opens and an apron chain moves the cobs out and drops them into the cart.

"This year we will be using a 1,250 bu. Balzer grain cart with a divider so we can haul both cobs and grain from the field with the same cart," explains Jay. "We sized the cob basket so it would fill at about the same rate as the grain tank. However, the operator can stop or start collecting cobs on the fly, so if the cob tank is full, but the grain tank isn't, he can keep going."

Now on their 12th generation machine, the Stukenholtzs feel they have the design just about ready for production. Each machine has had to pay for itself through custom harvesting and cob collection on their farm. The brothers charge \$35 per acre to harvest cobs and corn. If allowed to keep the cobs, they may charge as little as \$10 or even less depending on cob value.

"With the collector, we can double what the combine normally does, and it only uses about 25 hp," says Jay. "This fall we'll be using it on soybean residue, and next summer will test it on wheat chaff."

The Stukenholtzs have patented and trademarked the system. They and business partner Beth Pihlblad have formed Ceres Agriculture Consultants to market the cob collector.

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The Stukenholtz cob collector bolts to the rear and top of Case IH combines.



Material is blown up and over combine to a 320 cu. ft. storage basket that sits above combine's grain hopper.

Demand Grows For Pumpkin Seed Oil

Adventurous cooks and natural food enthusiasts have a new option for healthy cooking oil. It's made from pumpkin seeds by Ken Seguine and his partner, Jay Gilbertson.

After their Wisconsin pumpkin field has been harvested, it looks like vandals have hit it. Harvesters whack the pumpkins open with machetes, while other workers follow wearing rubber gloves and scooping the seeds into buckets, then pouring them into tubs. The membrane is washed from the seeds in a special seed washer. Then the seeds are dried on drying racks by fans and low heat in the greenhouse where the whole process started the spring before when the pumpkin plants were started.

"The seeds must be completely dry in order to extract the oil," Seguine says. "The seeds are lightly roasted to enhance flavor and get more oil out of them."

A company, Botanic Oil, in Spooner, Wisconsin, uses a German-made cold press to extract the oil, then lets the fines settle out and bottles the oil.

The oil looks khaki brown or slightly green. Seguine describes the oil's flavor as rich and slightly nutty - similar to the taste of roasted pumpkin seeds.

After five years of trial and error, and learning the stresses and challenges of farming, Seguine, a natural food supplement marketer, remains enthusiastic about pumpkin seed oil. He and Gilbertson moved from Minneapolis to their Wisconsin farm in 2001 with the goal of develop-

ing a niche market. Seguine had tasted pumpkin seed oil from Austria, where it's widely used.

"I'm on a mission," Seguine says. "People love it once they taste it." Besides tasting good, the oil is rich in Omega 3 fatty acids and Zeaxanthin, a beta-carotene that researchers believe is important for eye health, specifically the macula.

The pumpkins are a naked seed variety, which means the seeds don't have a hard shell.

About 13,000 pumpkin plants were started in black plastic mulch to prevent weeds. Three strands of electric wire surrounded the patch to keep deer out since they'll break the pumpkins open with their hooves to get at the seeds.

The oil content in the seeds can run as high as 50 percent. It takes between 7 and 15 pumpkins to yield an 8.5-oz. bottle of oil, which sells for \$18.95. Seguine says he has no problem finding buyers.

The Wisconsin farm is in the process of being certified organic, and Seguine says he plans to grow cover crops and use other techniques to eventually replace the plastic mulch. Harvest, at the end of September, is labor intensive, Seguine adds, and he hires about 20 local people to gather the seeds over a period of a week or so.

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Pumpkin plants are started in black plastic mulch used to control weeds.



Ken Seguine and his partner, Jay Gilbertson, in their greenhouse where pumpkin plants are started (left). It can take up to 15 pumpkins to yield an 8 1/2-oz. bottle of oil.