## "Dirt Farmer" Sells Organic "Super-Soil"

By Dee Goerge, Contributing Editor

"I'm selling my farm a yard of dirt at a time," says Dick Grefe, Ottertail, Minn. Underneath what he and his farming ancestors thought was worthless low meadow ground, he discovered rich, organic peat soil.

University of Minnesota testing indicates it has 77.3 percent organic matter at 6.9 pH with iron, magnesium, nitrate, potassium, phosphorus and other minerals equivalent to 5-20-20 fertilizer. The texture and food value make "Dick's Super-Soil" ideal for homeowners and businesses that work with gardens, lawns, landscaping, golf courses and sporting fields.

In Minnesota, Grefe can mine up to a 40acre parcel without any special permits. After removing the top layer of sod and roots, he digs out the peat soil with a Deere excavator, and loads it into a floater truck modified with a 25-yard grain box with a plastic liner for easy dumping. He piles and dries the peat soil for 12 to 18 months before running it through a conveyor and screening equipment with a Deere 4240

t a tractor with an 8-ft. bucket.

After being screened, the peat soil is a consistent, fine texture, ready to be spread and planted with seeds, plants or trees. Grefe recommends adding at least 1 in. to provide nutrients and help hold moisture. "It also serves as a weed-preventing mulch," he adds. "In time, rain and worm activity will carry the compost down into the plants' root zone."

He sells soil for \$25/cubic yard, picked up from his site. Or he delivers for a transportation fee. He spreads about 1/2 in. on his own lawn every year to feed it and keep it lush and healthy.

Gardeners have reported huge vegetables and prolific plants. So far, Dick's Super-Soil has helped everything it's been used on, from houseplants, evergreens and lawns, to flower and vegetable gardens. Most customers start new beds by mixing the soil in with their soil or topsoil, then add a little every year - just as fertilizer would be added, without the worries that come with chemical fertilizers. That makes it perfect for using on lakeshore



Dick Grefe digs out the peat soil on his farm with a Deere excavator and sells it as organic "super-soil". He sells the soil for \$25/cubic yard, picked up from his site.

lawns where chemical runoff is a concern.

In 2007, Grefe purchased a bagger to sell the peat soil in 20-lb. bags to sell retail and wholesale. He filled the bags during the slow time in the winter.

The timing is perfect for his business, Grefe says, as people are more aware of the benefits of healthy organic soil. Based on aerial soil survey maps, Grefe believes he has about 500,000 cubic yards of the peat soil on about 20 acres. "I don't plan on retiring," Grefe says.

"I'm having too much fun." Contact: FARM SHOW Followup, Dick Grefe, Dick's Super-Soil, LLC, 32713 490<sup>th</sup> Ave., Ottertail, Minn. 56571 (ph 218 850-9586; www.super-soil.com).

## **Do-It-Yourself Walk-In Cooler**

Why spend \$2,500 or more on an 8 by 8ft. walk-in cooler when a room air conditioner will do? Until market gardener Ron Khosla developed what he calls the CoolBot, people often used an air conditioner to keep produce fresh, but the units were hard to control.

"A room air conditioner can produce enough btu's to cool a room down, but the fins will start to freeze up when you get below 65 degrees," explains Khosla. "A room air conditioner doesn't have the fans and surface area needed, but if you modify it, you void the warranty."

With more than 200 customers to supply weekly, plus sales to restaurants, Khosla and his wife Kathryn needed reliability and ease of control. The problem was, as a small farmer, he also needed a low cost system. Commercial grade walkin coolers were expensive to start with and

- notoriously expensive to repair.

Khosla found out he could make an A/C cooling system work if he constantly monitored it to prevent freeze up. His challenge was to find an automatic way to do so. The solution was the CoolBot, a micro-controller that constantly monitors the walk-in cooler temperature as well as the A/C unit. It checks for frost or freeze up and adjusts the A/C fan and compressor as needed.

"We tried doing it with analog components, but they weren't much cheaper, and they only worked 90 percent of the time," says Khosla. "Of course the one time it would go bad would be when the coolers were full, and we would suffer huge losses. Our micro controller is able to make decisions at a more complex level, and we haven't had any problems since we got it set right for different air conditioners."

Installation is easy. Simply plug in the CoolBot to a wall outlet. It takes about as

much energy as a cell phone charger. Let the wire labeled room temperature sensor hang freely. Stick the wire labeled frost sensor into the cooling vents of the A/C unit. Attach the third wire to the temperature sensor on the A/C unit with a piece of aluminum foil for thermal connection.

Khosla says the \$299 CoolBot will cut cooling costs by close to 50 percent compared to a commercial walk-in cooler. He points out that a single visit from a commercial repairman can cost as much as a CoolBot.

Khosla keeps costs down by assembling units on his farm. This also gives him complete quality control. "We put the boards together, solder the contacts and assemble the finished product," he says.

The CoolBot works with any size, brand and age A/C unit going back to the 1970's. Khosla recommends properly insulating a walk-in cooler with at least 4 in. of



CoolBot lets you use an air conditioner to keep produce fresh. A micro-controller constantly monitors the walk-in cooler temperature.

Styrofoam in walls, ceiling and floor. A/C units also need to be sized to the room for efficient cooling.

Contact: FARM SHOW Followup, Ron and Kathryn Khosla, 205 Huguenot Street, New Paltz, N.Y. 12561 (ph 845 810-0033 or toll free 888 871-5723; farm@flyingbeet.com; www.storeitcold.com).

## **Rack Makes Toting Trees Fun**

"I'm getting old, and it was hard for me to carry trees," says Charles Hudson, explaining why he built a tree tote rack for his garden tractor.

The Piney View, West Virginia man planted a field of Christmas trees when he retired 12 years ago. He enjoys helping people select Christmas trees, and his rack makes delivering them to their vehicles much easier.

He built the 2 by 2-ft. rack with a wooden tongue to pin to the crossbar of the tractor's 3-pt. hitch. The rack has a 5-in. hole in it to hold the tree trunk. The top of the tree is tied to two vertical 1 by 3-in. boards supported by an angle brace that slips on the tractor's frame behind the seat. It's very stable, Hudson says, and he has hauled trees up to 8 ft. tall.

"My tractor is small so I can easily drive between the rows of trees," Hudson says.

Built of scraps, the rack didn't cost him anything and it has made selling Christmas trees as pleasant for him as it is for customers.

Contact: FARM SHOW Followup, Charles Hudson, PO. Box 108, Piney View, West Virginia 25906 (ph 304 253-6842).

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In order to make it easier to deliver trees to customers' vehicles, Charles Hudson built this Christmas tree tote rack for his garden tractor. Rack has a 5-in. hole in it to hold the tree trunk.