PICK FROM THE GROUND

Dwarf Apple Trees Produce Big Profits

Bill Cahill checks blossoms in his "pedestrian orchard" which is made up of more than 4,000 dwarf trees.

You don't need acres and acres of land to make a good income growing dwarf apple trees, says Bill Cahill, Northport, N.Y.

Cahill and his wife Ursula operate a 4 1/2-acre dwarf apple tree orchard with more than 4,000 tiny, highly productive trees of 69 different varieties that ripen from August to November.

"You don't need a ladder to pick the fruit. Dwarf trees have been around in Europe for 30 years and are fast becoming the 'orchard of the future' in North America," says Cahill,. "We've found one acre will produce a minimum of 500 bu. of fruit after only five years. The apples easily bring $40 per bu. marketed directly at a roadside stand."

Key to success is that dwarf trees, which are permitted to grow no more than 7 ft. tall, provide maximum exposure to sunlight, Cahill says. This produces a higher quality fruit than traditional apple trees which grow as high as 25 ft. tall and have fruit on only the outside 30 percent of the tree, he notes.

When the Cahills started with dwarf trees in 1974, they planted 1,356 trees per acre, 4-ft. apart with 8-ft. wide rows. They've fine-tuned their program over the years, settling on 907 trees per acre planted 4-ft. apart in 12-ft. rows.

The Cahills' dwarf trees are produced by grafting a piece of bud wood from a desired apple variety onto the rootstock of a dwarf variety.

Once replanted, the trees require different management than traditional apple trees, notes Bruce H. Barritt, education director of the International Dwarf Fruit Tree Association (IDFTA).

"For example, there's a lot less pruning than with traditional apple trees, but there's also much more training such as securely staking each and every tree," Barritt says.

Likewise, diseases need to be carefully monitored and controlled, he and Cahill agree. "You have to be very selective with chemical sprays," notes Cahill. "We use only cutting edge spraying techniques and materials."

Good dwarf trees can cost $10 to $20 per tree.

Contact: FARM SHOW Followup, International Dwarf Fruit Tree Association, 14 South Main St., Middleburg, Pa. 17842 (ph 717 837-1551; fax 0090).

20-FT. LONG RIG CARRIES 25 TONS

Giant Manure Spreader

The Kudrnas' spreader is built out of a 40-ft. semi trailer frame and tandem axles.

"It has a capacity of about 25 tons," says Randy Kudrna, Manning, N. Dak., about the giant manure spreader he built with help from his father Edward and brothers Russell and Gary. "We can spend more time loading and spreading and less time driving back and forth. We use it to haul manure and straw up to a mile away and spread it on some highly erodible land that requires winter cover.

"We built it because the commercial spreaders we were renting were constantly breaking down and didn't have enough capacity. We spent only about $3,000 to build it. We feel it paid for itself in less than two years."

The Kudrnas use a Versatile 875 4-WD tractor to pull the spreader. The tractor isn't equipped with a pto so they mounted a 4-cyl. gas engine on the hitch that's used to shaft-drive the beaters. An orbit motor is used to operate a 4-speed transmission coupled to a truck rear end that's used to chain-drive the floor chain. All controls are in the tractor cab.

They started with the frame of a 40-ft. semi trailer with tandem axles which they bought from a local farmer. They cut 20 ft. off the front and built new steel sides, then welded steel I-beams (salvaged from an old bridge) onto the frame to reinforce it. More I-beams were used to build the hitch.

The orbit motor that drives the floor chain operates off tractor hydraulics. The 4-speed transmission mounts under the floor and is direct-coupled to the 2-ton truck rear end. A shaft coming out each side of the rear end is used to chain-drive the floor chain. Chain speed and direction are controlled by the transmission, and its speed is controlled by a flow control valve in the tractor cab. A lever on the transmission is used to change gears.

The engine (salvaged from an old swather) belt-drives a right angle gearbox on front of the spreader. A steel shaft leads from the gearbox to another gearbox at the back which shaft-drives the bottom beater. The top beater is chain-driven off the bottom beater.

"One nice feature is that if a big pile of wet, heavy manure falls down on the beaters and kills the engine, we can reverse the floor and pull the load away from the beaters until they can work the manure out," says Kudrna. "The only time we change gears on the transmission is when we're hauling dry straw and want to unload it fast. We use a 6-volt battery to electronically start the engine right from the cab. We can also operate the throttle and choke from the cab. A hydraulic cylinder mounted next to the engine is used to engage the belt. Gauges connected to a pressure relief valve show how much pressure is applied to the belt which lets us keep it at just the right tension.

"We built the beaters from scratch using steel pipe for the shafts and sucker rod for the teeth on the top beater. We used sheet metal to make the flighting on the bottom beater. The beaters are part of a one-piece steel frame that can be removed with two bolts, allowing us to dump manure into low spots without spreading it."

A door at the front of the spreader provides access to the back side of the engine. A wooden pole is bolted onto the top at each side of the spreader. "If the poles get damaged by the loader bucket they can easily be replaced," notes Kudrna.

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Kurtz hooks five of the feed bunks, which are built from trailer house frames, together to form a train that's 140 ft. long.

140-FT. FEED "TRAIN" TOWS EASILY BEHIND TRACTOR

"Wagon Train" Feed Bunks

Bill Kurtz, St. Croix Falls, Wis., used trailer house frames to make "wagon train" feed bunks that he hooks together and pulls out to his fields to feed cows.

"I usually hook five bunks together at a time which forms a 'train' that's about 140 ft. long," says Kurtz. "I use a front-end loader to load them with silage out of my bunker silo, then I pull them out into a harvested corn field where my cows graze. It's amazing how well the wagons follow each other in the field. I can drive in a circle and make only one set of tracks."

The rolling bunks range in length from 10 to 40 ft. long. Three of them have steerable front axles that he made by salvaging axles from manure spreaders, trucks, and pickups.

He removed the springs from the trailer frames and narrowed them up to about 4 ft. wide. He welded angle iron across the bottom of the frames and also welded lengths of 16-ga. steel lengthwise between them. To make the sides, he welded 2-ft. long, 1 1/4 in. dia. steel upright pipes spaced about 5 ft. apart. He also welded lengths of steel rod along the top of the pipes.

He used 3-in. steel tubing to make the hitches.

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