



Lightweight "stick rake" is used after pecan trees have been shaken. Tines are raised and lowered by an electric screw cylinder.

Home-Built Machines Work Pecan Orchard

"I thought I'd pass on to you a few of the inventions we came up with for our pecan orchard," says David Bynum, Lampasas, Texas, who's serving in the Navy and has been stationed in Afghanistan. He credits his dad Otto and brother Stephen for helping with the ideas.

Stick Rake Pulled Behind ATV

He used the bar and tines from an old horse-drawn rake to build a lightweight "stick rake" for use after shaking the pecan trees, but before operating the picker. He pulls the rake behind his 4-wheeler.

The rake is equipped with a series of C-shaped steel tines that are raised and lowered by an electric screw cylinder. The cylinder is operated by a 12-volt battery that mounts on the rake's tongue and is controlled by using a toggle switch on the 4-wheeler's handlebars. The tines roll down and forward

until they face forward, cradling the sticks until dumping them.

Horizontal, backward-facing metal bars pull out any sticks that get stuck between the tines. "A large return spring from an old garage door assists in lifting when dumping the sticks," says Bynum. "The rake's wheel hubs are from an old plow and the hitch is off a peanut harvester. The 4-wheeler is light enough that it doesn't crush the pecans or make deep ruts in the sand," he adds.



Pecan dump trailer was built using the wheels, axle and dump basket from a peanut harvester.

have to back up to unload. The basket has twice as much capacity as the cleaner bin," says Bynum.

Pecan Dump Trailer

"We were dumping pecans directly from the picker into the cleaner. We needed a trailer to increase the holding capacity and to keep varieties of pecans separated, without having to wait for the cleaner bin to empty," says Bynum. "So we built this trailer using the wheels, axle and dump basket from a peanut harvester."

He unbolted the dump basket from the top of the harvester and mounted the frame and cylinders on a simple trailer frame. He also added a chute on the dumping side of the trailer to funnel pecans into the cleaner bin. "The trailer dumps to the side so we don't

Big Tank Roller Weighs 9,000 Lbs.

Farming pecans in deep sand requires leveling and packing soil before harvest. "We needed a large, heavy roller to do the job, but commercial rollers are expensive. So we used part of old cofferdam that we got from a scrap metal dealer to build our own roller, saving thousands of dollars," says Bynum.

The roller measures 12 ft. long by 48 in. in dia. and is made from 1 1/8-in. thick steel. A local welding company cut both ends of the cofferdam to make sure the holes at each end were exactly in the center. Then Bynum ran a 2 1/2-in. dia. shaft through the middle and mounted it on two 2 1/2-in., 4-hole flange bearings.

The roller's frame is made from 4-in. sq.,



Bynum's 12-pt. long roller levels and packs soil before harvest.

5/16-in. thick steel tubing. Total weight is 9,000 lbs., empty. "The roller has bungholes to add water, but we've never needed to add any weight," says Bynum.

Tree Limb Dump Trailer

"We needed a lightweight dump trailer for hauling tree limbs out of the orchard. So we built one out of an old cotton trailer that we bought for \$200," says Bynum.

The 2-wheeled dump trailer is built on an old truck frame and rides on the rear axle and wheels off a cotton trailer. Extra steel was used to make the tongue. A 1 1/2-in. dia. shaft serves as the pivot point for dumping, and a 36 by 5-in. hydraulic cylinder provides the lift.

"We beefed up a cross member on the cotton trailer's frame where the cylinder attaches, and we added a piece of heavy angle iron on front to cradle the bed in the lowered position. It's a great labor saver, and kids like to ride in it," notes Bynum.

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Bobby Milam's winch-operated boom is shown here lifting a power generator that weighs about 80 lbs.

Deere Garden Tractor Fitted With Lift Boom

"I built it because I needed an easier way to move stuff around my small acreage," says Bobby Milam, Altoona, Ala., about his winch-operated boom. It mounts behind his Deere GT 245 garden tractor.

He used 2-in. sq. tubing to weld together a receiver hitch-type assembly that bolts into existing holes on back of the tractor. A home-built boom fits into a pair of square metal tubes welded onto the assembly. The boom is equipped with a 1-ton electric winch that operates off the tractor's battery. A metal arm supporting a 2-button remote control runs forward alongside the driver's seat. The entire unit is painted Deere green and yellow.

"It's really handy. I tell people it's the smallest tow truck Deere makes," says Milam. "I've used it to lift a welding machine that weighs about 125 lbs., which I think is about the most it can lift. The tubing I used to build the boom was partially rusted out, so to make sure it wouldn't bend I welded a length of rebar onto it. It's easy to take on

and off. By pulling three bolts I can remove the entire boom, and by removing two more bolts I can remove the arm that supports the remote control."

Milam also made a small scraper blade for the unit that he uses to push dirt and leaves, etc. And he made a rake for use when planting grass seed in his yard. The same winch is used to raise and lower the blade as well as the rake.

He also added a golf cart top on the tractor that U-clamps onto the top part of the receiver hitch assembly.

"The golf cart top provides shade from the hot Alabama sun and came from a golf cart that someone was parting out. I paid \$50 for it. I welded brackets onto the sides of the top where I can attach curtains in case they're ever needed," notes Milam.

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He Trained His Dog To Hunt Antlers

Jeff Palmer has a shed antler hunting dog. He started training the golden retriever as a puppy to seek out antlers. Now at 5 years old, the dog is an accomplished antler hunter, and Palmer has ended up with some award worthy antlers.

"I wanted a dog I could take to the woods with me when I looked for shed antlers," explains Palmer. "This past shed season, which starts in March and can run to May, she found a 5-point side that scored in the mid 50's on the Boone and Crocket Club scale. The same day she found another that I expect would have scored in the 70's, based on others I have found."

Palmer credits a friend who trains cadaver hounds for the Madison, Wis., police for teaching him training tricks. As an avid antler hunter, he had plenty of antlers around the house. When the dog found one he had set out, he would give her a treat.

When he and his daughter Alexia took the pup on walks, they would set out antlers to be found. Over the course of several years, finding hidden antlers evolved to finding shed antlers.

"My trainer friend told us that a dog's nose isn't fully mature until about 2 1/2 years and can mature in other ways even later," says Palmer. "Until this past year, Trixie would get distracted and had to be reminded to look for antlers. This past shed season, she was finding them all on her own."



Jeff Palmer's golden retriever has found about 40 antlers on her own.

Palmer says where he once had to position the dog, she now searches the wind for antler scent and seeks them out. Since starting the training program, Palmer estimates Trixie has found approximately 40 antlers on her own. Palmer uses them for crafts, as decorations and as gifts. He is more than satisfied with Trixie's finds.

"Each year her focus has been getting better," says Palmer. "She ventures out, up to 50 yards from me. She'll go into heavy brush or marshes where I would rather not go. It's a real pleasure to have her with us."

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