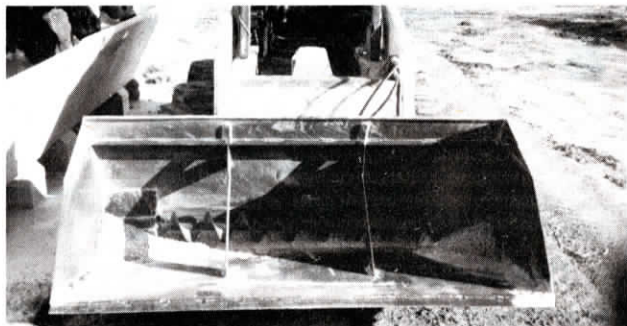


## Made It Myself

(Continued from previous page)



### "Auger Bucket" For Front-End Loaders

A home-built 27-bu. "auger bucket" mounted on Mark Herickhoff's skid steer loader turns it into a feed mixer that cuts his normal feeding time in less than half.

The 8-ft. wide bucket is equipped with an 8-in. dia. hydraulic-driven auger that mixes feed and discharges it from the bottom of the bucket. Herickhoff raises the bucket and tilts it backward, then drives alongside the bunk and pulls a hydraulic lever to unload.

Herickhoff uses the bucket to feed high energy grain rations, including dry shelled corn and wet corn, to 300 Holsteins. "I scoop up feed at the silo, then add four or five shovels of protein pellets on top. Feed is mixed as it flows down to the auger. I also use the bucket to mix low quality feed with good feed.

"I had been using a front-end loader and bucket to dump feed into bunks, but protein pellets never got mixed and the job took 35 minutes. With my auger bucket it takes only 15 minutes. I can vary the feeding rate by varying the speed of the skid steer loader. I haven't used it for silage yet, but I think it would work if grain was added. It works better than an automatic silo conveyor because there's



much less maintenance, and I can have feedlots in several different locations. It also makes a beautiful snow bucket."

The bucket, custom built by Peltz Mfg., St. Martin, Minn., quick-taches to the skid steer loader's mounting brackets. The brackets on the bucket are located slightly to the right of center so the operator can drive closer to the bunk. The auger is chain-driven by an orbit motor that's powered by the skidsteer loader's auxiliary hydraulic outlets.

Herickhoff spent about \$1,000 for the bucket.

Contact: FARM SHOW Followup, Mark Herickhoff, 26804 U.S. Hwy. 71, Belgrade, Minn. 56312 (ph 612 254-3636).

### Operator Lift For Tractors, Combines

If you or someone in your family has trouble climbing up into tractor or combine cabs, you'll be interested in this simple 12-volt winch operator lift designed and built by Hazel, S. Dak., farmer Marvin Singrey.

"I have bad knees and have been advised not to climb. So I built this lift, which can be adapted to any tractor or combine," says Singrey.

Powered by a standard electric winch, it consists of a length of 2-in. I-beam mounted alongside the tractor steps or combine ladder. The winch mounts at the top of the beam. The operator stands on a 12-in. sq. platform made out of expanded metal which attaches to a 2-ft. length of channel iron that slips over the I-beam. "Eight roller bearings inside the channel iron make for easy, smooth rolling up and down the beam," says Singrey.

The winch cable is fitted with a hook that simply attaches to a bracket on the platform. The winch is operated with a simple up and down control switch which is positioned next to the hand hold. It raises and lowers the platform at the same



controlled speed. "The tractor or combine doesn't need to be running since the lift runs off the battery," notes Singrey.

Contact: FARM SHOW Followup, Marvin Singrey, Rt. 1, Box 10-A, Hazel, S. Dak. 57242 (ph 605 628-2098).



### 165-Ft. Wide "Hillside Sprayer" Stays Level Even On 45 Degree Slopes

"Nearly everyone who sees it stops to take a closer look," says Frank Lange, Garfield, Wash., about his one-of-a-kind self-propelled "hillside sprayer" equipped with Caterpillar steel tracks and a 165-ft. long boom.

The sprayer is designed so that the engine, spray tanks, and operator platform always stay level even when traveling across hills with slopes up to 45 degrees.

Key to the self-leveling feature is a framework that acts like a parallelogram and ties the two tracks together. A pair of tie rods connect each end of the frame with each end of the tracks. The tie rods are pushed and pulled by four hydraulic cylinders, one for each rod, at the center of the frame. As soon as one side of the frame is raised the cylinders compensate by "rotating" the angle of the tracks along the frame's central pivot point, keeping an equal amount of weight on each track.

"It uses somewhat the same principle found on commercial hillside combines," says Lange, who built the machine with the help of Guy Swanson, a local fabricator who was also manufacturer of the giant "Yielder" drill. "The tracks can't slip downhill so the operator can always maintain a straight line while spraying. He can also sit level in the cab."

The sprayer is powered by a 275 hp Detroit diesel 8V-71 engine that's mounted up front. It powers a Caterpillar D6 drive train. The transmission, steer-

ing clutch and truck air brakes, as well as the air conditioned enclosed cab, are at the rear of the machine. Air cylinders are used to shift the transmission, operate the steering and transmission clutches, and to engage the sprayer pump.

The sprayer is equipped with a 2,000-gal. stainless steel tank and a 200-gal. mixing tank. A hydraulically-operated lift arm in front of the machine lets Lange lift herbicide drums from his pickup to the sprayer deck. The 165-ft. boom has 100 spray nozzles mounted on 20-in. spacings. Lloyd's Loops spray boom attachments make the nozzles virtually plug-proof and allow low gallonage application of Roundup herbicide. The boom is built in six sections and is supported by four wheels. The two 10-ft. outside sections can be raised independently to clear obstructions. The outside sections are folded into the main boom by a chain-driven hydraulic motor. The rest of the boom then folds forward.

The 30-ft. long steel tracks are divided into three sections that work independently when turning at the end of the field. The center section hydraulically lowers to the ground and the other two sections raise up 1 ft. off the ground. "Using 10 ft. of track instead of 30 ft. lets me turn shorter," says Lange, who hauls the sprayer on a specially-built lowboy trailer.

Contact: FARM SHOW Followup, Frank Lange, Rt. 1, Box 110, Garfield, Wash. 99130 (ph 509 635-1234).

### Power Steering, Loader Added To Old Case Tractor

When Washington farmer Edwin Ruff mounted a home-built front-end loader on his 1942 Case tractor he found that it steered hard so he added his own power steering system.

"The added weight of the loader bucket made the tractor almost impossible to steer," says Ruff. "I already had modified the hydraulic system to operate the loader so I remodified it to add power steering."

Ruff cut the steering drag link in two along the side of the tractor and mounted a two-way hydraulic valve between the two sections. He mounted a hydraulic pump in front of the tractor and a hydraulic cylinder alongside the tractor frame.

The cylinder is connected to a bar that leads to the tie rod between the two front wheels. When Ruff turns the steering wheel the drag link pushes on the hydraulic valve's piston which in turn extends or retracts the hydraulic cylinder to turn the wheels. The hydraulic pump sends oil to the hydraulic valve first to operate the power steering system. Surplus oil is then used to operate the bucket. "The power steering system uses so little oil that I can use the bucket and the power steering system at the same time," notes Ruff.

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