## Low-Cost Way To Boost Hydraulic Output

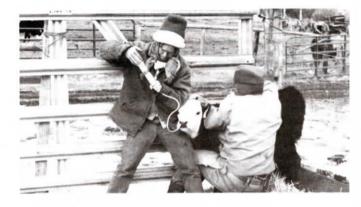
"I needed a third hydraulic valve on my tractor to operate a loader-mounted bale fork but didn't want to spend \$300 or more for an electric-operated valve so I came up with an inexpensive manually-operated alternative," says Leland Kenney, Des Moines, Iowa.

"I bought a lever-operated double selector valve for \$60 and plumbed it into the hydraulic lines beneath the tractor floorboards, extending the control lever with a rod that runs up through the floorboards into the cab. I made a hand lever to fit the rod and also equipped it with a foot pedal so I can switch hydraulics back and forth either by hand or foot. Both hand lever and foot pedal are spring-loaded so the hydraulics return to the original valving when the lever or pedal is released.

"By rearranging hoses on the original outlets at the rear of the tractor, it takes just a couple minutes to return the tractor to its original configuration when the loader is removed.

"I used this hydraulic switch system all last season and it worked fine. It's just as good as an electric-operated valve."

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By Heather Smith Thomas

When a calf gets a severe intestinal infection that creates gas and bloat, or whenever a calf's digestive tract is plugged with dirt or a hairball, we treat the calf with 4 to 6 oz. of castor oil. The best way to get the oil in is with a stomach tube - a long flexible tube that we feed into the calf's nostril and on down to the back of the throat (where he swallows it), and into the stomach.

If you tuck the calf's head in toward his chest it's easier for him to swallow it. If the head and neck are forward, the tube is likely to go down the windpipe and make him cough.

Once the tube is in the stomach (blow on your end to make sure it's in the right place; it will make burbling noises if it's in the stomach, and you'll be able to smell the stomach odors coming back out), then you can administer the oil. Castor oil is thick and doesn't go down the tube well unless you force it with a big syringe. We use a large (140 cc) syringe that fits into the end of the tube.

The oil goes down best if it is warm so I shake it up in a jar with some hot water than

suck the mixture of hot water and oil into the syringe. We give the calf 3 or 4 syringefulls of the hot water and oil mixture.

Some calves will have a sore gut after severe intestinal infections and go off feed for several days. In those cases, we give them fluids and/or milk by tube, and mineral oil once or twice daily to soothe the ulcerated gut lining. The syringe trick is also the easiest way to give mineral oil, which is not as thick as castor oil.

We've saved a lot of calves with our oil trick. Every spring we get a number of cases of "colicky bloat", an intestinal infection that creates a lot of gas, causing the calf intense pain. He'll throw himself on the ground and kick at his belly and, in many cases, can be dead in 12 hrs. or less. If we find him soon enough, we give a dose of castor oil that not only breaks up the bloat but stimulates the gut to move the offending material on through.

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## "Tree Jack" Pulls Trees Out By Roots

"It lets you jerk trees out of the ground by their roots," says Wally Madden, Phoenix, N.Y., about his "tree jack" that he says lets one man easily pull whole trees out of the ground using a small tractor.

"You have to be sure to use a long enough cable to keep the operator out of reach of the falling tree," says Madden, noting that otherwise he feels it's a safe way to clear small to mid-size trees.

His tree jack is an 8-ft. long, 8 by 8-in. post mounted on a 4 by 4-in. stabilizer that's 3 ft. long. The top of the post is V-shaped to fit snugly against the trunk of the tree. To

use, you simply lean the tree jack against the tree and tie the cable around the upper part of the tree with the other end of the cable tied to the tractor drawbar.

"I've pulled 10-in. dia. trees with an 8N Ford so it doesn't take a lot of power," says Madden. He says you shouldn't use too big a tractor because you'll snap the cable. He also suggests you might build a shield behind the operator to offer protection.

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## After 40 Years, He Changed The Way He Puts On Nitrogen

For 40 years William Beckerman, Mt. Carmel, Ill., put nitrogen on fields the same way - using 82% anhydrous ammonia in dry bulk, applied before planting. Last year, all that changed. He now uses 28 percent liquid nitrogen applied at planting. It saves him money, time and has not affected yields.

"I was already using Na-Churs liquid fertilizer applied at planting time through an attachment mounted between the seed furrow openers, putting it 3/4 in. to the side of the seed. The Na-Churs is carried in plastic tanks mounted on the planter frame and applied by a squeeze pump. I decided I could just as well do the whole job - fertilizer and nitrogen - at the same time by switching to liquid N.

"I mounted a 500-gal, poly tank on an old fertilizer buggy chassis to make an in-between cart to pull between tractor and planter. Then I mounted the Deere fertilizer openers mounted on the front bar of the planter - to put the 28 percent liquid nitrogen about 4 in. to the side of row and 3 to 4 in. deep.

"Key to success is the way I made a jack shaft off the Na-Churs squeeze pump to drive a second squeeze pump to apple nitrogen. I can change sprockets on either pump to vary application rates. They're both driven by the same chain.

"I now apply 20 gal. of 28 percent N as a carrier for pre-plant incorporated chemicals before planting and another 20 to 30 gal. when planting for a total of about 120 lbs. of N per acre compared to the 160 lbs. of N I was applying before with dry bulk (I have applied as much as 40 gal. per acre of 28 percent through the planter with no problem). Another advantage is that by putting in bulk tanks, I have been able to purchase 20 percent N for as low as \$91 per ton.

"I've used this system for two years and I'd never go back to the old way. I've run several check plots between dry bulk/82 percent anhydrous and 28 percent liquid and have found no difference in yield. I am considering putting no-till fertilizer openers on the planter and applying all the 28 percent N at the same time."

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