



To build "The Rainy Day Roller," Paul Rivers cut the ends out of metal drums and slipped them over the wheels on his ATV.



"My ATV roller allows me to get on the land right a way without even having to wait for the rain to stop," says inventor Paul Rivers.

By Janis Schole, Contributing Editor

Wet Conditions Won't Stop ATV Roller

What do you get when you combine three 44-gal. drums and an ATV?

For Paul Rivers of Taranaki, New Zealand, the answer is a go-anywhere ATV land roller.

The innovative dairy farmer patented his invention and nicknamed it "The Rainy Day Roller" because it allows him to work in wet conditions when no one else can.

"Here in New Zealand, we do a lot of intensive grazing in the winter, which is a very wet season. The cows do a lot of damage to the ground with their feet," Rivers explains. "You can often wait days for the right ground conditions to roll, only to have the next heavy shower fill up the hoof holes and re-form the puddles before you get started."

Because it's wet so much of the time in winter it's normally very difficult to get on the land to repair the damage, he says. A conventional tractor gets stuck easily on the soft ground and a pull-type roller can drag loose soil in front of it, clogging, "and it's really frustrating."

"My ATV roller allows me to get on the land right away without even having to wait

for the rain to stop. It's actually quite therapeutic to operate because it's so rewarding and enjoyable to know you are winning the battle," he says. "When the cows make a mess at night I go out in the morning and roll it flat like a bowling green after moving them on to the next paddock. After two years of use, our pastures have never looked better or been more productive."

The Rainy Day Roller is 8-ft. wide. To build it, he cut out the ends of two of the drums and welded 1-in. cleats onto two steel bands that he wrapped around each of the drums for traction.

He deflates the rear ATV tires and slips the drums over them, re-inflating them to about 18 psi air pressure so that they grip the drums from the inside. The air valves are accessible through a small hatch in the drums between two cleats.

The third drum is pulled behind in the middle by a drawbar with an axle through the drum, just like a conventional land roller.

"The low psi in the tires allows the rollers to be flexible so they adjust to the ground

contour and give you a nice even roll," Rivers explains. "There's very little stress on the differential and wheel bearings. "This thing works like magic. It will go on soggy ground where my own physical footprint would leave a depression in the ground, but you can float across with the ATV and leave it smooth."

To increase the roller's weight and effectiveness when working during summer on harder ground, Rivers fills two round 35-liter plastic jars with either water or sand, and slides them inside the 44-gal. wheel drums. He welded some bracing to support them inside, and a catch to stop them from falling out.

"For the rear, center drum, I normally put 35 liters of water directly in it, using the existing plug. It's not as heavy because it doesn't have any weight from the ATV, so if you want more weight, you just add more water," he explains. Rivers is working to develop a modified system that would be a "one-size fits all ATVs" unit.

"My current design limits it to certain tire sizes and I'm planning to make it more uni-



To increase weight, Rivers fills round 35-liter plastic jars with water or sand and slides them into the wheel drums.

versal before I put it on the market."

He plans to pursue the international marketplace and welcomes inquiries from interested parties.

"It may look simple, what I've done, but it didn't just happen overnight – it's not something you can just knock up in the back shed in five minutes," he says.

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Amazing Collection Of Pedal Tractor Machines

Tom Brunner loves to challenge himself, so his hobby of making high quality 1/5-scale pedal tractor implements suits him perfectly.

Since 1989 he's made more than 50 one-of-a-kind, precision-made models of major brand equipment as well as 40 1/5 scale horse-drawn implements.

Before 1989, he just collected pedal tractors. His collection totals some 150 of them.

Everything Brunner builds looks and runs as much as possible like the original.

He uses welders, a bandsaw, drills, mills, lathes, shears, a bender, and a paint booth to build the detailed models.

He says each of his scale model projects is a learning experience, and he's driven to make the next one more detailed and precise than the one before.

Thanks to his impressive machinist skills, he is able to make 99 percent of what he needs in the machine, including gearboxes and pulleys.

The first major implement Brunner completed was an Allis-Chalmers Model 60 combine - a sentimental choice, since his family had one when he was growing up.

After much experimentation with what to use as a power source, Brunner eventually settled on a cordless drill, and after more experimentation with how to mount it for best results, he found a method that satisfied his high standards. He ended up opening the body of the pedal tractor that would "pull" the combine, and installed the drill so that it

would be the power source to a mini pto shaft while at the same time be conveniently positioned for recharging.

"That assembly worked well and looked professional," Brunner says proudly. "My next project was an Allis-Chalmers Roto Baler. It was a bit more challenging, but it runs very much like the original."

Another remarkable project, and the one that Brunner is most proud of, is his JD Model 227 mounted corn picker which is mounted on his customized JD Model 620 pedal tractor. All components including the gathering chains, snapping rolls and elevator are fully operational.

Another project he completed was a Massey-Harris Clipper combine hitched to a MH Model 44 pedal tractor.

As of late, Brunner has made a number of Ford implements, including a combine and a number of 3-pt. hitch implements including a steel cultivator, regular cultivator, disc, plow, scraper, crane boom, buzz saw and subsoiler. All of these fit on his modified 8N Ford pedal tractor with 3-pt. hitch.

He is currently working on an Oliver 2-row mounted corn picker.

For others who aspire to build scale implements, Brunner advises that it's best to start off simple with something like a disc or harrow, gradually increasing the projects' difficulty level.

"You don't want to get discouraged and give up, so you have to ease yourself into it



Tom Brunner's made more than 50 models. Whenever possible, he buys the real implement and its owner's manual before starting construction.



He says each of his scale model projects is a learning experience, and he's driven to make the next one more detailed and precise than the one before.

and build up your skills. One thing you'll really need is never-ending patience," he explains.

Brunner has been offered a lot of money for some of his units but he has never sold

any. He enjoys looking at them himself too much.

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