

Latest New Products, Ideas From New Zealand

Featured here are just a few "best of the show" ideas which caught Editor Mark Newhall's eye at the recent New Zealand National Fielddays held in Hamilton, New Zealand. The 3-day event attracts over 80,000 visitors from around the world to view the more than 500 exhibits.



Hay Conditioning "Comb" Mounts On Sicklebar Mower

"How could a barber cut hair if he only had a pair of scissors and no comb?" asks Peter Linklater, inventor of a new rotating "comb" for sicklebar mowers that he says improves cutting ability and also conditions hay. "It's like cutting a piece of string. It always cuts easier if it's held tight."

Linklater's invention consists of a series of combs made out of loops of metal rod attached to a rotating shaft positioned just inches above the cutterbar on a standard sicklebar mower. Powered by separate drive and gearbox driven off the pto, the giant comb spins at about 800 rpm's, raking through hay stalks as they come up against the cutterbar.

"It's the only mower conditioner that pre-conditions hay before it's cut. At a ground speed of 4 to 5 mph, the combs pass up through the crop once before it's cut. That results in a very positive conditioning action since the crop cannot move - its roots are still in the ground. The action is not strong enough to uproot the crop but just enough to evenly condition it without requiring a lot of power, and it holds the stalks

tight while it's cut, reducing power needs of the cutterbar," says Linklater.

When the comb rakes through the stalks it flattens them out, conditioning the lower stem areas where the most moisture resides. The heavier the crop, the better it works, according to Linklater. Another benefit of the comb is that it eliminates second cuts, which occur when stems drop back down onto the sickle bar after they're cut only to get cut again. With the rotating comb installed, crop material is thrown backwards as soon as it's cut. "It keeps the knife clean and doesn't wrap because it spins at such high rpm's. It untangles the lower crop areas, making penetration easier for the sicklebar," says Linklater.

He almost no additional power is required to run the comb since the sicklebar runs so much easier. He plans to install the comb on his self-propelled swather and has applied for a patent.

Contact: FARM SHOW Followup, Peter Linklater, Tahakopa, RD 2, Owaka, South Otago, New Zealand (ph 415 8027).



"Maintenance-Free" 3-In-1 Rake

"There's never been anything like it. It's the rake of the 90's - unique and trouble-free," says Nico Sieling, inventor and manufacturer of this new "maintenance-free" 3-in-1 rake that can be quickly configured to work as a side rake, V-rake or tedder.

Sieling started from the ground up in designing his new rake. "I didn't like existing rakes because of all the maintenance they required, especially on rough or rocky ground, and because you could only use them one way. My new rake lets you adapt to changing conditions and you'll never break a tooth off this rig. Also, it only has two grease points," he says.

The rake has four rotating wheels, each fitted with hollow rubber tires with tines sticking out of them. The tines are standard double-teeth spring tines lying on their sides. They lie loosely inside the tire - not bolted in place - but when the wheel starts turning, centrifugal force pushes them outward. Because of the way the holes are cut in the tires, the teeth are forced outward and angled toward the ground when the wheels turn. But because they're just lying loose inside the tire, if they hit an obstacle, they bounce back or inward without damage.

The rake wheels each have their own hydraulic motor. Their hydraulic lines are all plumbed into the rake's rear lift assist wheels, which are fitted with hydraulic cylinders, so that if any of the wheels should be stopped or slowed up by an obstacle, oil

backs up through the lines to the lift cylinders, automatically raising the entire rake up over the object. "It's simple. The operator doesn't even have to think about it. The rake lifts itself up and over anything that gets in its way," says Sieling.

The rake frame pivots at the center of the two main bars and each pair of rake wheels also pivot independently. The rake can be moved into a variety of configurations, as needed, held in place by short lengths of chain.

For example, you can line the wheels up in an angled line to work like a side delivery rake. Or you can arrange them in a V to work like a standard V-type rake. For transport, the wheels close in directly behind the tractor. The two lift-assist wheels are steerable, which makes changing configuration easy and quick.

To use the rake for tedding, you simply reverse the rotational direction of the tines by switching the hydraulic hoses on each wheel.

"We've done more than 1,000 acres with our prototype machine without any trouble at all. Nothing's broken or even worn. It's worked better than we ever could have imagined," says Sieling, who's selling the rakes for \$8,000.

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Skid Steer ATV

New Zealand farmer-inventor Richard Treloar wanted a vehicle that would be strong and tough yet have the versatility of an ATV. He got that with his home-built "skid steer" farm buggy.

Built from the ground up, the rig is powered by a 4-cyl. car engine yet it's no bigger than a standard 4-wheeler. It's fitted with four flotation ATV wheels, each of which is chain-driven by a driveshaft that runs across the center of the machine, positioned exactly between the wheels. Treloar simply used an auto rear end, with brake drums mounted on either end of the driveshaft. Drive sprockets on either end of the driveshaft mount next to the drums. There's a chain on each side, running from the drive

sprocket on the driveshaft to both of the wheels on each side. To steer, Treloar simply brakes either side, alternately stopping each drive chain so the rig skid-steers.

He controls the steering with two levers in front of the operator's seat. Each lever controls a separate master cylinder. To stop, he activates both levers at the same time. The rig is fitted with an automatic transmission.

"It's compact, powerful and easy to drive," says Treloar, who built the machine for his own use.

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