SP Windrowers From Ford New Holland

NEW HOLLAND (Lancaster Co.) — Ford New Holland has introduced two new self-propelled windrowers for the 1993 season.

The new 87HP Model 2450 and the 100 HP "2550" are available with 12-foot, 14-foot, and 16-foot headers. Both windrowers feature new, quiet cab designs with improved visibility, easy-to-operate control systems, and seating.

"Their 96-inch wide swath capability is even more important," said Product Manager Joe Weicksel. "Both models have 102-inch conditioner rolls that can deposit the crop in wide, 8-foot fast-curing swaths or in windrows as narrow as 38 inches."

He said, "This results in more management flexibility and profit irrigated alfalfa growers in the cool part of the growing season. Spreading the crop out in fully conditioned, uniform swaths cuts days from curing time. That lets growers apply irrigation water days sooner for quicker regrowth."

Serviceability and routine maintenance of the new windrowers are made easier by flip-up shielding and simplified design. Hydrostatic pumps connect directly to the engine. Transmission motors direct-drive power wheels to eliminate intermediate drive parts.

Engines shut down automatically if engine coolant overheats or oil pressure drops. A floating 20-inch diameter auger handles heavy crops without plugging, said Weicksel. Conditioner roll pressure adjusts easily. The electronic instrument cluster is easy to read and large diameter tires provide a smoother ride, Weicksel adds. There's plenty of storage space for tools, spare parts, extra sickles and even a lunch cooler.

Ford New Holland 87HP Model 2450 and 100HP "2550" Speedrower windrowers are available with 12-foot, 14-foot, or 16-foot dual counter-stroke sickle headers. Crops can be deposited in windrow/swath widths of 38 to 96 inches. Cabs are quiet and feature ergonomically efficient controls and seating.

An Alternative Way To Get Rid Of Sludge?

COLLEGE PARK, MD. — Every day, Maryland produces eight to nine thousand tons of wet sludge. About one quarter of this sludge is being recycled as farmland fertilizer.

While application continues on the state's dwindling farmland, Maryland is looking for alternative areas to put the sludge. Forestland may be an alternative.

"A prime concern with sludge application to forestland," said Marla McIntosh, from the University of Maryland College Park, "is the fate of nutrients in the sludge, especially nitrogen."

As part of an ongoing regional project partially supported by the Maryland Agricultural Experiment Station, she is looking at how sludge can be applied to forestland and still be environmentally safe.

After applying sludge to forestland, McIntosh looks at nitrate levels in the soil water — the water in the soil located above the groundwater. This may be different from farmland, she said.

You cannot extrapolate from research done on farmland, McIntosh said. The rich organic material in the layer of the leaf litter may immobilize — prevent from moving into the groundwater — sludge-borne nitrogen, therefore decreasing the amount of nitrogen that can leach into the groundwater.

Forestland has other advantages over farmland as well: sludge can be applied year-round, forests are more accessible because they are often located near municipalities, and there is less concern with contaminating the food supply, McIntosh said.

Applying municipal sludge to forestland has been quite successful on the West Coast. The nutrients in the sludge have benefitted the timber industry by improving tree growth. However, Maryland forests are very different from those on the West Coast, so local research is needed.

Results of sludge application are site specific, McIntosh said. "You cannot generalize to other areas." In fact, she has not found improved growth in her study. Researchers in Pennsylvania and New Hampshire, also participating in the regional project, got different results as well.

McIntosh applied three different sludge concentrations — low, medium, and high — to a plot of trees at the Central Maryland Research and Educational Center in Clarksville.

Nitrogen increased slightly in the soil water with low sludge concentrations and returned to normal after a short time, McIntosh said. However, the medium and high concentrations resulted in soil water with above acceptable nitrogen levels. The nitrogen levels also did not return to normal, even after two years.

To be useful, research has to be able to predict nitrogen leakage under worst-case conditions — where nitrogen is not being cycled into the ecosystem, leaving more to leach into the ground water. Maryland experienced this worst-case scenario with its two-year drought in 1986 and 1987, where rainfall was half that of normal, McIntosh said. This may have caused the lack of growth as well as the varied results in nitrogen leaching.

When water is scarce — for instance, during a drought — two things can happen: plants do not take up as much nitrogen and denitrification does not occur. Denitrification is the process by which nitrogen is released into the atmosphere as nitrogen gas and occurs only under waterlogged conditions, McIntosh said.

Although the high sludge concentration (714 lbs/acre) was twice that of the medium (357 lbs/acre), leaching levels were about the same for both. It is possible, according to McIntosh that under better conditions, such as more rain, leaching might not occur or be as high.

Nitrate leaching into the ground water is the limiting factor for applying sludge to forestland. "You need to keep a vigilant eye" on the nitrogen levels, McIntosh said. "It is important to allow them to return to the base-line levels before re-application."

Sludge application on farmland is highly regulated, but no regulations exist for forestland, McIntosh said. She hopes that her research results will aid the government in forming environmentally sound regulations.


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