## Picking your power for the late 1980's

CHICAGO, Il. - How much power will you need? What kind of drive will fit your operation best? Farm power experts tackle these tough questions ... and others.

In times like these, the future is truly a moving target - and no one's more aware of it than a farmer trying to plan his farm power/machinery mix for the next few years.

There's more horsepower to choose from. More drive systems.

More hydraulic and electronic options. And to confuse matters even more, major changes in tillage, weed control, fertilizers and management practices are in the works.

To help farmers get a handle on things, IH Farm Forum contacted several leading farm power experts to get their views on where we're headed; in general, guidelines for planning your farm power needs and what major

changes are likely in the next few years.

## The Horsepower Race

"The next era for tractors, in my judgment, is going to have to be something other than just raw power," says Dr. Howard Doster, Purdue University farm management specialist. In his view, the excitement will come from fine tuning tillage systems to make more efficient use of available horsepower.

That's a view shared by Dr. Leonard Bashford, University of Nebraska ag engineer. "I'm not sure the horse-power is going to increase as fast as we may have thought several years ago," Bashford says. "There's just so much power you can get out of these machines, and we may be reaching some of these practical limits."

In fact, Bashford goes one step further: "even with what's



available now, I think there's little doubt but what many farmers are over-powered," he suggests.

Washington, Iowa, farmer Bill Vittetoe puts it even more bluntly: "The way tillage is changing, I think the days are numbered for some of these really big, expensive monsters."

There's some agreement on this point from the manufacturing industry. "In our view, the horsepower race has pretty well peaked," says Bill Stover, IH market planning manager for farm tractors. "We don't forsee anything too drastic going on in this area because of several major trends in the ag sector."

Most manufacturers' attention, in Stover's view, likely will focus on three key areas of tractor design: 1) improved reliability and durability, 2) comfort and convenience features, and 3) making more effective use of horsepower from a dollars-and-cents standpoint to the farmer. "The area of improving fuel consumption and overall cost/performance will get a lot of attention, for sure," says Stover.

Purdue's Doster basically agrees. "The real opportunities in tractor design seem to be in electronics, hydraulics and the overall subject of measuring performance," he says. "Making your tractors fit with your overall management system will be a lot more important from now on.'

Farm Tractor Reliability

But Dr. Tom Colvin, ag engineer with USDA's Research Service at Iowa State University, questions how much more reliable farm tractors need to be. "In terms of mechanical systems, U.S. tractors have been extremely reliable over the years," notes Colvin, also a farmer himself. "Their reliability now is at that top-end percent which takes a lot of input cost to make even a little improvement."

Dr. John Siemens, University of Illinois ag engineer, is in a good position to observe tractor reliability, and he's noticed an improvement in recent years. "We used to have quite a tractor maintenance program here with a lot of participation," he says. "Not so, anymore. The way tractors are designed and built anymore, there just isn't much that goes wrong with them on a large scale. Our maintenance program has been pretty well phased out."

Even though engineer/farmer Colvin seems happy enough with U.S. tractors' reliability, he's not convinced everything is being done in the way of basic design which might be. "When you look at what

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