

How no-till can boost forage production

UNIVERSITY PARK — If you raise livestock, it might be time to reconsider your protein source.

Part of the feed supply probably comes from forage production because it's both inexpensive and high in quality.

So it makes sense that boosting forage acres, can boost profits. But how?

Specialists at Penn State University are now saying that with no-till production, many "unproductive" pastures will support healthy forage crops.

One of the primary advocates of this practice is Bill McClellan, Penn State professor and extension agronomist.

He lists a variety of reasons why no-till forages can produce substantial amounts of protein in areas where conventional seeding is, at best, minimally productive.

"When you till the ground and culpack it twice, you destroy the surface soil structure . . . or at least reduce it to fine particles," he explains. "And it washes badly under those conditions."

He also notes when forages are grown with the no-till method, seedbed environment is more conducive to germination.

"When you don't disturb the soil, breaking up capillaries, conditions for germination are just more favorable," McClellan says.

He's quick to point out, however, that growing no-till forages requires more intensive management than conventional farming.

To help growers get started on the right foot with this technique, McClellan and his colleagues have developed a set of guidelines.

He notes they're generally adaptable to the four categories of forages now grown in the Northeast: perennial grasses, legumes, summer grasses, and small grains.

According to McClellan, if you're considering no-till, your first step should be site selection.

That involves three questions you'll want to ask yourself about a particular field: what crops or weeds are present, is the area wet or stoney, and is the field well-fenced?

"If quackgrass is a major weed, it will mean at least two years lead time so that triazine herbicides can be used without danger of excess residues," McClellan says.

"If Canada thistle is obviously a problem, there will be a necessity for two or more applications of 2,4-D and/or lanvel. Banvel will also go a long way toward controlling brushy species in an old pasture."

McClellan warns, however, that Banvel cannot be used within six months of seeding.

"If the area is extremely wet," he continues, "you should consider corrective measures to improve drainage. Otherwise, it would be best to wait until mid-summer to make the seeding, or choose another site."

As for stoniness, it's true that no-till farming is more adaptable to rocky Northeastern soils than conventional cropping, because field tillage usually pulls stones to the soil's surface.

Be cautious in areas that have too many stones, however.

According to McClellan, "excessive stoniness may mean poor seed placement with some planters and extreme machinery wear on others."

And the final consideration with site selection — fencing — is important to maintain organized grazing both before and after seeding.

"Good fences just make the job easier," McClellan says.

With those points in order, it's time to prepare the soil for seeding. That includes

soil testing, applications of lime and fertilizers, grazing or clipping, and herbicide applications.

McClellan stresses lead time is always an essential in no-till forage production.

A soil test should be taken approximately one year prior to seeding so lime can be applied, if necessary.

Though lime, as well as potassium and phosphorus, (Turn to Page C40)

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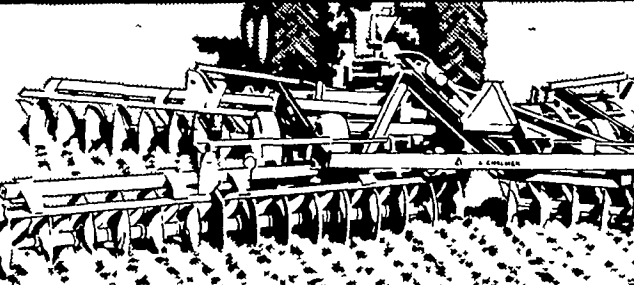
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