

## Foraging Around



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### Fundamentals Of Forage Fertilization

It occurs to me that for one or more of several reasons — the farm economy, this year's severe heat and drought in many areas, your concern for effective nutrient management — you may have lost sight of the continued importance of a sound forage fertility program. So in this month's column I'd like to get back to basics and review just what a sound fertility program means to you.

Fertilizer is, in the opinion of many experts, one of the most, if not the most, important inputs to profitable forage yields. However, with today's rapidly changing prices — both for production inputs and farm products — it's hard to come up with specific figures on net returns from fertilization. And, of course, fertilizer responses depend on soil fertility levels at the time fertilizer is applied. *That's why a regular soil testing program is so essential.*

### Forage Fertilization Dividends

Adequate fertilization, based on soil testing, can give your forage crops a big boost in a number of ways. It helps seedlings get off to a fast start. It assures consistently higher yields. It helps plants survive winter better. It permits earlier, more frequent cutting for top quality. And it helps plants recover better from insect attacks and other stresses.

An added bonus, say many animal scientists, is that fertilizer applications may also initiate a host of chemical and physiological changes in forage plants that can affect, significantly, the health and nutritional status of animals consuming the forage.

### Fertilizing Established Legume Stands

For established legumes, especially alfalfa, potassium is the key to high yields, high quality forage, and long-lived stands. But phosphorus is important too. Legumes actually need about one-third as much phosphorus as potassium. But, since phosphorus moves slowly in the soil, it may take time before the plants respond.

Generally, when potassium and phosphorus are applied to legumes is not critical — if adequate amounts are applied for the growth period. For single applications, apply now, or as soon as possible after the last harvest. Where higher rates of fertilizer are needed, split applications, one-half now and one-half after first cutting may be best.

What is important is the ratio of phosphate to potash in your top-dressing fertilizer. In fact many studies suggest a fertilizer ratio of 0-1-4 (N, P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O) may be best on most soils for intensive, high yielding legume production.

Based on Pennsylvania studies, and the data from our alfalfa growers program, for alfalfa at

least, annual applications of 100-pound P<sub>2</sub>O<sub>5</sub> per acre and 400 pounds K<sub>2</sub>O per acre may be about right for yield goals of 6 to 8 tons of hay equivalent per acre. However, a soil test is still your best guide.

And while phosphorus and potassium are the key nutrients for top legume yields, secondary elements and micronutrients may also be important. Of the former, several research trials show alfalfa responding to sulfur fertilization. And boron should be applied annually at the rate of at least two pounds per acre.

### Fertilizing Established Grasses

Cool season grasses need all three major nutrients — nitrogen, phosphorus, and potassium. However, nitrogen is the key to higher yields and quality. Normally for cool season grasses, such as orchardgrass, a split application of nitrogen (60 pounds in early spring, another 40-50 pounds after each cutting) is considered best.

However, I've just reviewed some Virginia research on orchardgrass suggesting that some nitrogen (40# N/A) applied right now, either as N fertilizer or as manure, may actually result in more vigorous, weed-free orchardgrass stands that last longer than those maintained under more traditional fertilization practices. The verdict is still out on this but it is something to consider.

### Animal Manures

Speaking of manure, there's no doubt that the use of properly handled and stored animal manure can greatly reduce your fertilizer needs, especially on cool season grasses.

Manure contains the three

major plant nutrients — N, P<sub>2</sub>O<sub>5</sub>, and K<sub>2</sub>O — as well as other nutrients. Normally we would not recommend applications of manure to good young (1 or 2 years) stands of legumes. However, summer or fall applications can be effectively made on old legume or legume-grass stands, or pure grass stands.

One caution — don't count on

the manure to supply all of the nitrogen. And, when used, it should be applied to fields at the rate which supplies just the amount of nutrients used by the crop.

In this regard, a manure analysis can be very helpful. And it, along with a good soil testing program, can save fertilizer and also keep soil nutrient levels in place.

## NFU Members Speak To Madigan

WASHINGTON, D.C. — Twenty-four members of the National Farmers Union (NFU) told U.S. Agriculture Secretary Edward Madigan that the Bush Administration needs to begin focusing attention on the immediate needs of American farmers in addition to activities in the international arena.

The Farmers Union delegation, headed by NFU President Leland Swenson, told Madigan that "sensible, reasonable, and significant changes" in U.S. farm policies are necessary for the survival of family farm producers.

"I agree with Senator (Robert) Dole (R-KS) when he calls the farm economy a 'house of cards,'" Swenson said in reference to a letter Dole sent to the White House last week.

The Farmers Union members, in Washington lobbying as part of an NFU legislative "fly-in," told Madigan that immediate action is needed to reform federal dairy policy and to provide disaster assistance to farmers whose crops were hurt by weather disasters this year. The Farmers Union members

articulated the hardships they are facing because of low prices for milk, grains, and livestock. They believe policies that would provide incentives for production management are the key to their survival on the farm.

A proposed two-tier dairy program, under which farmers would be discouraged from overproducing as a way to stabilize market forces, is an example of the kind of program the farmers say they want. Although a version of the two-tier proposal did not make it through Congress before the August recess and is still pending, NFU is pushing to have it considered again before lawmakers adjourn for the year.

But the farmers said Madigan was intransigent about the dairy bill. "He expressed no willingness whatsoever to negotiate or compromise at all on a supply-management program for dairy," said Swenson.

The secretary did say however that he was willing to support up to a billion dollars in disaster assistance for farmers if it can be done this fiscal year, which ends September 30.

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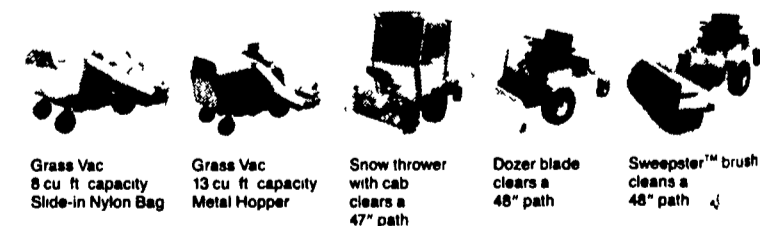
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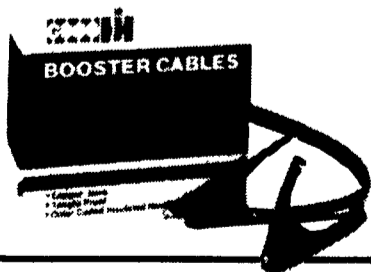
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