

Experts: Pasturing Is Agronomic Art

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grow soybeans, corn, alfalfa, but have forgotten how to grow grass," he said.

"Timing is key. It's (a matter of knowing) why it happens and when it happens," Craig said.

According to Craig, key to understanding the potential of pasturing, is to understand the plants themselves — what time of year and how often they can be grazed.

It is also key that a farmer considering increasing the use of pastureland must be realistic, Craig said. "Instead of trying to make things grow where they're not supposed to grow," Craig said, producers should concentrate on areas where forage production is possible.

In his preview, Craig said that three things have to come together in order for pasturing to work — the needs of the plant being foraged, the needs of the animal, and the abilities of the producer.

"By understanding the basics, you get an understanding of everything else," he said.

Pysher, in trying to make a point that pastures need to be cultivated in order for them to provide the types of returns and dependability that is needed to support livestock production, joked that he was sure that pastureland was sacred ground — it had to be, he said, "...because the lime and fertilizer truck are never allowed anywhere near it."

The major goal of prescribed pasturing is to provide quality forage for grazing animals throughout the growing season. Also, he reiterated what Craig said about effective pasturing being a combination of meeting the needs of the animal with the needs of the plant.

The key, according to all speakers, was the farmer himself — the farmer's ability to keep records, his efforts to learn about the plants that may work into a program on

his specific farm, and his ability to realistically analyze his land's potential.

The end result is not an isolated practice, but an integral practice, if pasturing is to be done correctly. The end result is a grazing system.

Pysher reviewed the basics of plant growth, but emphasized the difference between managing plant growth for continuous grazing stand production, and managing plant growth for fall harvest.

The difference is in understanding how plants operate.

Of the sunlight, water and carbon that plants combine into growth, a certain portion of the carbohydrates manufactured during photosynthesis is stored in the root system as reserves.

It is these reserves that an established plant uses to generate new growth, once the stems and leaves have been lost, either through season-end die-back, or through removal by grazing or cutting.

If the plant is grazed too often, the root reserves are drained, resulting in plant death or poor performance. If the plant is grazed too far down to the ground, the growth zone is removed and further growth must come from the base of the plant, or the root, which requires more energy by the plant.

If the plant is not grazed soon enough, it will go into its reproductive stage and lose its feed qualities.

Balancing the management of the animals, with the management of the forage plants is the role of the producer.

Pysher talked briefly about a couple of different types of forage plants most commonly in use, such as Kentucky Bluegrass, and he described its reserve energy storage in shallow roots called rhizomes.

He compared that with Orchard Grass, which typically stores its regrowth energy above the soil

line, in the first three inches. If a producer allows an animal to graze the plant below that point, there is no reserve for regrowth.

"You have to understand the morphological differences," he also said, between a plant in its vegetative stage and its reproductive stage.

Although, none of the experts used the analogy, anyone who has raised and harvest asparagus, knows that the edible part is the shoot, and a single plant can send up a number of shoots during a season, allowing for a relatively long harvest period.

If the asparagus plant's shoots aren't cut off, and the shoot is allowed to grow, the plant goes into its reproductive stage, which resembles a green leafy bush, and eventually goes into seed production.

Similarly, the grasses, legumes, brassicas, and other plants which can be used to establish a productive pasture are used for forage while in the vegetative stage, when moisture, energy, palatability, and digestibility are high in quality, and yield is still good.

There is more yield in allowing a plant to go into the reproductive stage, but the quality for forage is low, and the plant isn't as likely to respond well.

The balancing act comes at trying to graze a particular plant after it has reached a height that is protective of its regenerative abilities near the soil, but not yet mature enough to begin developing tough structural matter.

Dr. Hall, who has published much of the findings of Dr. Jung's 35 years of work with pasture research for Extension use, discussed improving pasture productivity, specifically as to the fundamentals of cool season forage crops.

According to Hall, generally through a season, there are two

periods of growth — in the spring into early summer, and again from the fall into early winter. The summer slump, when there is no growth, is something producers have to learn to live with.

While Hall doesn't necessarily recommend that beginning pasturers concern themselves with some of the plants which can be also raised in a pasture to provide summer forage, he said there is potential using warm season grasses and brassicas to extend pasture use longer into summer and fall.

Hall outlined the fundamentals of timing with grazing, talking about the quick regrowth of spring and the shorter intervals of rest required for a pasture between grazings during that time.

He said that cool season perennials are the backbone of pasturing in Pennsylvania, and they need to be nurtured just as well.

He suggested taking soil tests, sampling no deeper than three inches.

He also talked about identifying existing plants, and techniques for creating an established pasture. Fertilization, grazing and haying, and weed control are issues to be concerned with, he said.

Poor fertilization results in weeds outcompeting desired plants. The timing of grazing and haying is as critical as though alfalfa was being harvested for maximum protein and energy.

He gave a number of specific tips on management, all of which are available through Extension services. He warned against putting manure on young legumes, which actually helps the grasses and weeds to grow, not the legumes; applying fertilizer after first grazing, or an August grazing; and redefining the term, "weed."

For example, a variety of chickory, commonly considered a weed, and which previously required a permit to raise, can now be grown

because of its nutritional value as livestock feed.

Hall calls them forage weeds.

"Generally, weeds do not influence a pasture persistence, once the pasture is established," he said, adding that, like other established stands of plants, eventually pests, poor soil fertility, or poor grazing management can destroy the stand and allow an opportunity for weeds to become established.

In his talk, Jung discussed the variety of plants which can and perhaps should be found in a pasture, because of the animal benefits. He said there are a number of different plants which can provide minerals in good quantities, in addition to plants which provide energy and protein.

He also talked about some varieties of plants, such as the brassicas, which can be used for late fall grazing, and switch grass, a native grass, which has demonstrated some remarkable abilities to provide forage.

In fact, he said that in Switzerland, producers were trying to imitate American dairy production and reduced the number of varieties of plants in pasture to one or two. They experienced a number of animal health and nutrition problems, he said.

USDA Seeks Comment

WASHINGTON, D.C. — The U.S. Department of Agriculture is inviting dairy farmers, milk cooperative associations, milk handlers (shippers) and consumers to testify at a hearing on proposals to amend the Middle Atlantic federal milk marketing order.

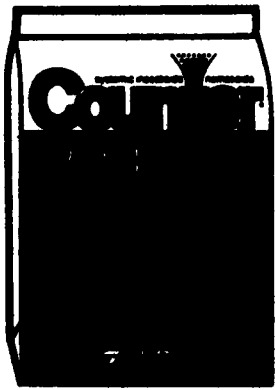
The hearing will begin on May 2 at 9 a.m., at the Holiday Inn-Independence Mall, 400 Arch Street, Philadelphia, Pa.

Lon Hatamiya, administrator of USDA's Agricultural Marketing Service, said a federation of dairy producer cooperatives, which requested the hearing, proposes to amend the order's "pooling" provisions. At issue are the rules for amounts of milk its members must deliver or distribute under the order to be eligible to receive the order's benefits, he said.

The Middle Atlantic milk marketing order affects northern Virginia, eastern Maryland, southeastern Pennsylvania, Delaware, southern New Jersey, and the District of Columbia.

Details of the hearing were published as a notice in the March 4 Federal Register. Copies of the notice are available from Rex F. Lothrop, Market Administrator, Suite 200 Essex Building, 333 N. Fairfax Street, Alexandria, VA. 22314, or USDA, AMS, Dairy Division, Order Formulation Branch, Rm. 2971-So. Bldg., P.O. Box 96456, Washington, D.C. 20090-6456, tel. (202) 720-7183, FAX (202) 720-4844.

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