

About 150 Attend State Conference In Grantville

Tastier Forage, Bigger Bite Highlight Grazing Research

(Continued from Page A1)

Co. Down. His research has emphasized improving grazing management to increase intake and utilization of pasture.

At the 1,000-acre institute, grazing research has focused on intensively grazed paddocks made up of ryegrass and grass sward combinations.

Some of the strongest research has suggested, according to the scientist, that animals prefer a certain type of forage — the tetraploids over the diploids. The tetraploids have a higher sugar content and are easier to shear and digest by ruminants, according to Mayne.

Gradually, research emphasis has shifted from variety and maximum yields to "varieties that animals will eat more of," said the northern Ireland scientist.

Other strong evidence suggests that grazing animals prefer the "tall, erect varieties" of forage to the prostrate, or low-growing, plants at the research institute.

Devices to measure how often an animal reaches for forage, tears it off, chews on it, and ruminates, are used in the research. And what the researchers have found, according to Mayne, is that the more the animal can bite off, the more it can handle by its jaws, the more forage it processes, which can translate into improved milking.

Simply put, a "small increase in bite size has a major impact on grass intake," said Mayne. Simply increasing the amount of forage taken in from 0.5 gram to 0.6 gram per bite increases overall intake by 20 percent.

Sward height is also a key factor, Mayne noted. Cows prefer at least 4 inches of grass height. Tall, dense, leafy swards lead to large bites, noted the grazing scientist. In charts, the most intake came from swards measuring about 5-6 inches in height.

That's why, according to Mayne, it is important for graziers to control the grass left after grazing to ensure the height of the sward is suitable for the animals.

Why go about looking into improving forage palatability and investing time in studying forage types? Mayne noted that, three years ago, milk prices in Ireland were, based on U.S. figures, about \$18 per hundredweight. Now, the price has dropped to \$12 a hundredweight to the producer. And "all predictions see a further reduction to \$10 a hundredweight in the next 2-3 years," said Mayne, as European Union support prices continue to wither.

The trend is downward for the beef industry, which went through some major crises with the "mad cow" disease scare. The continuing trend, even for dairy producers, is an increase in size of units and a downward spiral for the amount of producers.

Mayne noted that 20 years ago, there were 20,000 dairy producers in Ireland; that number has fallen to 6,000 today.

Herd size, on average, is about 60 per farm. These "downward" trends are similar for the U.S.

So the idea of using grazing as a way to cut farm costs, including mechanization and labor, holds more appeal for producers.

As a result, the Institute has been tasked with looking at different varieties of the same grass species. Mayne noted that not all

ryegrass, for instance, is the same — some have relatively improved dry matter and sugar content than others.

Also, researchers are looking at ways to make the grasses more drought tolerant. And the tetraploid varieties can have up to a 20 percent more nutrients over the diploids, he noted.

In Ireland, as in many places in Europe, producers are under increasingly stringent legislation for nutrient management. The legislature penalizes farmers for not using controls. The idea of using abundant, inexpensive sources for nitrogen for grain crops has been fading. Now, there is more accountability that is written into law. That even includes "unrecovered" nitrogen — the nitrogen simply released into the air.

But along with the movement away from mechanization and the resultant high costs of maintenance and repair, many producers still fail to understand that "grazing is much more difficult to manage," Mayne said. It's harder to maximize management to graze effectively than it has been to simply go out and buy equipment and make the feed.

No matter what the program, eventually stored feeding is important, and producers have to be able to implement a plan that will continue the forage intake. Also, there are some benefits to targeted grain feeding and can act as supplement to the cows when no forage is available.

If storing forage, it is important to ensure that respiratory and proteolytic enzymes are available and that detrimental organisms, including yeasts and molds, are not present in the seal.

One item that surprised the scientists at the Agricultural Research Institute was the supposed length of the grazing season.

While traditionally the animals aren't put out to pasture until April, studies looked at grazing in February on frosted grass.

"The cows went out and were quite happy to eat the material," available to them for about two hours a day from February into March.

It is important for producers, if they want to use grazing on their operations, to determine how it will be implemented.

There is less overall benefits for the cows if, as an instance, 70 percent of the diet is taken in grain feeding/high TMR programs. The forage quality won't bear much of a factor. But if forages will be used almost exclusively, quality bears a huge role in animal productivity.

Overall the acceptance of grazing continues unabated, even in northern Ireland.

"The '90s, I believe, will be the ear of grazing," said Mayne. "I am convinced of that."

Other producers spoke of their experiences with grazing at the conference.

One day, dairyman Lewis Stuttle got "sick" of the three-times-a-day milking. "The payback was not there," he said, and some change was needed.

Even though the herd average stood at 23,000 pounds, Stuttle, of Lew-Lin Farm based in central New York State in the Finger Lakes region, a Dairy of Distinction, began grazing about five years ago.

The family includes Lewis' son, Steven; herdsman Gordie Morgan;

Lewis' wife, Linda; and some part-time help.

They have a herd that is 100 percent registered Holstein with 190 cows and 130 head of young stock.

Since switching to grazing, Lew-Lin Farm has gone from 140 to 190 cows using their own replacements. He was satisfied to simply "let the cows harvest the



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feed," and put in a five-acre pasture. The previous corn fields were seeded to orchardgrass and Ladino clover.

The Graze N.Y. Participating Farm now has 110 acres for the milking herd. In addition to the new seeding, the farm also added 500-800 pounds of high calcium limestone to all the paddocks. He also applies about 50 units to the acre of ammonium nitrate in the spring.

The cows are placed out early — about April 20-25. Some can be placed out even earlier and do quite well, he noted.

Stuttle noted that paddocks are mowed in May and June to prevent the growth from getting ahead of the cows. They are mowed with a 12-foot discbine and winrowed and chopped for haylage. The grass is kept at 8-10 inches maximum height so it is highly palatable and less feed is wasted by trampling. After four years, he noted, the herd milking average is at 21,000 pounds on 50 percent less TMR fed during the grazing season, with less labor.

The high average of milk is 72 pounds.

Stuttle uses a 3/4-inch water line to all the paddocks.

Fences are simple polywire on posts. Paddocks are rotated every 10-14 days in the spring.

A simple corn meal supplement is added to the diet.

In the past, milking used to be from a double-4 milking parlor (eight units). Now, they built a new parlor within the existing one and are up to a double-8 with 16 units milking twice a day, at 2 a.m. and 2 p.m. Taking the cows off the fields on hot, humid days at 2 p.m. helps the cows stay healthy.

Also, providing water lines to troughs in the paddocks is working to improve milk yield. Stuttle noted that the cows "like to drink out of the troughs better than in the barn."

Stuttle also explained some renovations done to the laneways. Where at one time they were mud-

dy and unmanageable, with "six to eight inches of slop," the Stuttles dug the lanes out, put in a textile fabric and gravel, 6 inches of limestone dust, and smoothed them out.

Also, the farm makes use of a mobile grazing unit for the calves, raised in hutches. In the units, the young stock gradually get adjusted to feeding off the land.

The use of grazing has worked well for neighbors. An electric fence was installed and the cows are content to harvest their own feed. Also, the neighbors like it because no more manure slurry is going on the fields.

More information about the conference will be published in the PFGC *Foraging Around*, a special section of *Lancaster Farming* to be published April 18.



The key to increasing the milking capability of that harvest machine is to "allow that cow to take a big mouthful of grass," said Dr. Sinclair Mayne, a scientist at the Agricultural Research Institute of Northern Ireland, at the Pennsylvania Grazing and Forage Conference.

Reception Honors Program Winners

ANDY ANDREWS
Lancaster Farming Staff
GRANTVILLE (Dauphin Co.)

Several award-winning forage and grazing supporters were honored for their work in promoting forages and grazing in the state Wednesday evening here at the 1998 Pennsylvania Grazing and Forage Conference at the Holiday Inn.

The Outstanding Pasture Producer Award was presented to Jimmy Garner, Montrose, Susquehanna County.

Garner has been intensively grazing his 70 dairy cows on 35 acres for nearly seven years. He has been actively involved in the Chesapeake Bay Program and the use of grazing to meet the program goals.

"This accomplishment speaks for itself in highlighting Jimmy's grazing management skills," noted Dr. Marvin Hall, extension forage specialist, Penn State. "Mr. Garner is always willing and ready to share his grazing experiences and knowledge with others."

Garner has hosted numerous field days and tours at his farm. These have included visiting farmers from as close as his neighbors to as far away as Russia.

Dick Kauffman, Pennsylvania Forage and Grassland Council, a co-sponsor of the event, presented the award to Garner.

The Conservation Award reci-

ipient is Louis A. Kopczyk, Clymer, manager of the Indiana County Conservation District.

Kopczyk has been active in providing opportunities for the residents of Indiana County to learn about uses of forages and grazing management.

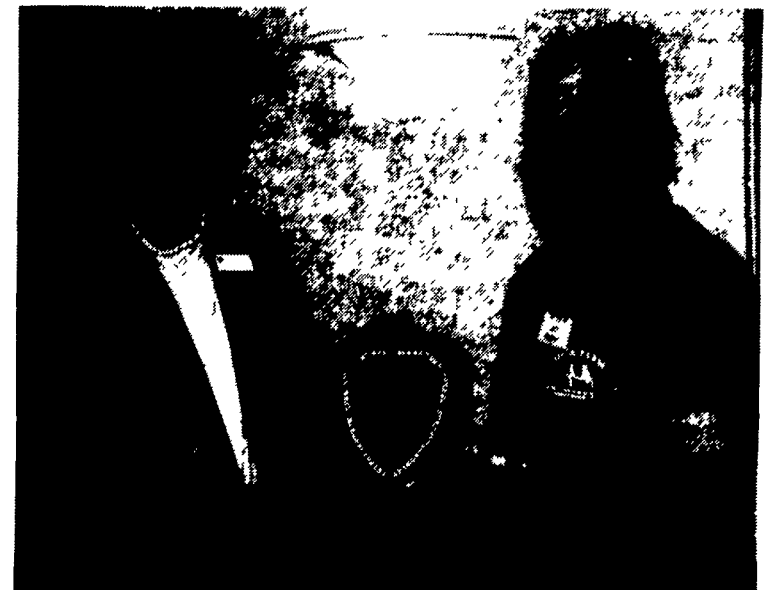
"Louis tries to emphasize the role forages can play in proper conservation practices," said Marvin Hall, Penn State extension forage specialist. "Although Louis discusses grazing management with many landowners on a one-to-one basis, these educational opportunities are provided primarily by organizing and conducting field days and pasture management meetings on farms around the county."

These field days and meetings are supplemented with presentations on a variety of related topics presented by farmers, businesses, lending agencies, and government agencies.

Hall noted, "His involvement of many diverse groups and organizations into these on-farm meetings stimulates understanding and better cooperation."

Kopczyk also obtained a grant and produced a fact sheet on various methods of supplying water to grazing livestock. This publication, noted Hall, has been "extremely well received by farmers in both Pennsylvania and

(Turn to Page A28)



Jim Garner, Montrose, right, receives the Outstanding Pasture Producer Award from Dick Kauffman, PFGC president.