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PROFESSIONAL DAIRY MANAGERS OF PENNSYLVANIA

Helping dairy producers reach their full potential and profitability

System approach = more forage, milk, manure-use per acre

By SHERRY BUNTING
Special for PDMP

RONKS, Pa.—'Sustainability' is the buzz word today in discussions of agriculture and the environment.

But for boots-on-the-ground farmers, 'sustainability' means not only those practices that are good for managing soil, water, and land, it also means a few things practical to the cattle and business side of the dairy, such as having enough land and feed to sustain the dairy herd, or managing the dairy farm to stay profitable and in business, or managing the land and dairy in a way that brings opportunities to future generations, or optimizing herd health while minimizing purchased feed costs with high forage diets, or at its basic level, sustainability can mean maximizing the land's potential to produce more forage per acre and more milk per cow.

Whatever the definition of "sustainable," one thing is for certain: profitability is surely part of it. Talking to Tim Fritz, president and general manager of King's AgriSeeds, it is clear that sustainable farming and farmer profitability go hand-in-hand with the company's outlook on forage system rotations versus continuous straight corn and/or alfalfa cropping.

From perennial crop mixes to winter and summer annual crops to corn silage -- each is a component of a balanced forage system.

"In a forage system concept, we want the land to be as productive as possible for as many months of the year as possible," Fritz explains. "The objective is to get the most forage off the land as possible."

Not only does a multi-crop forage system spread the weather risk, it also helps farmers produce more forage from the land and a more diverse profile of forages in terms dairy nutrition: protein, digestible energy and effective fiber in the ration, with emphasis on digestible starch, fiber and plant sugars.

Dairy producers adopt these forage cropping systems depending on the goals of their farm.

"In addition to the farm's goals, we also want to match the crops to the farm's soils and climate," Fritz says, adding that it's important to take this one step at a time. It's not advisable to go from a straight corn / alfalfa crop production to a complex forage system, overnight. The more complex the forage system, the higher the level of management needed to gain the benefits.

King's AgriSeeds had its beginnings rooted in producing seed for grazing forages. As Fritz brought his background in dairy farming as well as extension work in dairy, agronomy and farm management to the business, successful forage systems became more about balancing the goals of a farm with the soils and climate -- for both grazing and mechanical harvest. He sees one of the biggest trends in dairy is toward higher and higher forage diets.

"High forage diets make a healthier animal and a lower-cost ration for the dairy farmer," says Fritz. "If farmers can grow more forage per acre, and feed that forage, they improve profitability because feed cost is the number one cost on the dairy. Addressing that by getting more forage production on the land is really where our heart is."

A forerunner of these trends, King's AgriSeeds, today, serves a wider geography from Maine to Georgia with everything from Masters Choice corn silage hybrids and forage sorghum to small grain annuals, triticale/ryegrass mixes and perennial mixes that take the traditional alfalfa stand to the next level by incorporating a balance of grasses for improved yields.

(Above) **Tim Fritz talks about forage systems in a test field across the road from his King's AgriSeeds based in Ronks, Lancaster County, Pa. The recently cut field is a perennial mix of alfalfa and grasses The grasses, bred for highly digestible plant sugars and fiber, add energy to the high protein of the alfalfa for a balanced and higher yielding forage in this flat field with areas of poor drainage where standalone alfalfa would be spotty.**
(At right) **Tim pulls a blade of soft-leaf tall fescue (light green) and compares it to a blade of typical tall fescue. The softer leaf with less lignin is bred for higher NDFd. The field also includes an even softer meadow fescue, bred for even higher digestibility.** *Photos by Sherry Bunting*

"When we put it all together, we are getting more yields in these forage systems because different crops bring different benefits to the farm," Fritz observes, noting that King's AgriSeeds does their own research on farms in different regions, and they have several longterm rotational farming system trials that are ongoing for both grazing and mechanical harvest.

"We focus on products that are for livestock farmers. We're not in the grains business," he adds, even though their seeds can also be used for grain.

"Our focus is on better digestibility of the starch, sugar and fiber. It's all three, combined, that make forages work. The total digestibility, together, builds a forage base for good production" ... while reducing the farm's need to purchase energy for the ration.

In the corn silage department, for example, King's carries Masters Choice, which is one of its most popular products and has been entered in the PDMP Corn Silage Research Project every year almost from the PDMP trial's beginnings.

The "floury grain" attribute is an easier grind and means the starch energy is more digestible to the cow without 'yield drag' and lodging issues for the plant.

The perennial mixes are also quite popular, and it's this category King's AgriSeeds is sponsoring in the upcoming Pa. Dairy Summit Forage Analysis Contest. The perennial mixes, used in both grazing and mechanical harvest, are where King's AgriSeeds really got its start because they add the sought-after digestible energy and effective fiber of grass to the high protein feed value of the alfalfa, while improving overall forage yields at the same time.

Not only do the grasses even-out what could be spotty alfalfa stands in flatter fields with varying drainage, the grasses also improve the soil, which in turn improves alfalfa yields.

What makes these mixes work is the grass is bred to stage right with the alfalfa so both reach optimum feed quality in the same harvest window. In this way, the grasses don't mature ahead of the alfalfa. Grasses are most digestible when harvested before they head.

"We search the world for the best plant genetics that feed well. Most of our grasses are bred in Europe," Fritz noted, adding that there is growing emphasis on evaluating the feed value of forages by focusing even more attention on how the cow digests and utilizes forage.

Total Tract Neutral Detergent Fiber digestibility (TTNDFd) is a measure on the horizon to bring out the value of these high-end grasses that are bred for their quality in the dairy ration.

Farms that have incorporated these forage systems concepts to what once were traditional straight corn and alfalfa are finding they can get up to 14 tons of dry matter per are and seeing their soils go from the low 2's in organic matter to 5's.

"Healthy soils improve the drought tolerance of all plants. In a forage systems approach, with rotation, soil health is improved and the weed and pest patterns are interrupted by the rotations," Fritz explains. "By growing something on the land all the time, we're harvesting more feed, and improving the soil to support more forage production, which in turn allows farmers to apply more manure nutrients to their fields."

A forage systems approach helps farmers build more success on the success of each step from the ground up to support more cattle, more milk and more manure nutrients per acre.

Fritz will be talking about forage systems during the pre-conference part of the Penn State Nutrition Conference next Tuesday. He says farmers who want to realize the benefits of forage systems, "can take some first steps away from continuous corn and alfalfa. A typical first step is to add perennial grasses to their alfalfa stands."

Winter annuals are another easy first step to add as more than just a cover crop after corn silage production. Triticale is perhaps the most popular, although wheat and barley are also utilized as small grain forages for the dairy.

Fritz notes that the triticale / ryegrass mix has become quite popular as a winter forage, seeded in fall and harvested in spring. And farmers are utilizing summer annuals, like forage sorghum, on droughtier fields instead of corn silage.

King's AgriSeeds publishes a production guide that gives producers examples and ideas for forage systems and seed mixes and how they can be used in rations. They've seen 15% growth per year, largely because of their focus on education -- producing a good product and teaching farmers how to use it.

A system approach, pays off with the production of more forage, using more manure, and increasing the carrying capacity of the land as well as the health of the soil at the same time.

Says Fritz: "It's all in the balance."

Prepare now for Dairy Summit forage contest

LANCASTER, Pa. -- The 2015 Pa. Dairy Summit will again feature the "Forage Analysis Competition." The state's dairy producers and other crop growers are urged to prepare to participate with forages ranging from traditional corn silage to forage sorghum, baleage and perennial haylage to small grain forages.

This will be the second year of the competition producers made popular last year, when 100 entries were tallied for the 2014 Summit Forage Competition last February. The response to the first competition was far more than Dairy Summit planners had anticipated for their pilot year.

"We knew there were lots of great growers within our community, but we did not anticipate that many entries in our very first year hosting a competition between them" said Justin Risser, dairy producer from Lancaster County and chairman of the 2015 Pa. Dairy Summit. "We also learned how to improve the process and are excited about the changes being made to enhance this coming year's competition."

Categories for the 2015 "Pennsylvania Dairy Summit Forage Analysis Competition" include:

- o Traditional Corn Silage
- o BMR Corn Silage
- o Baleage (incl. Legume, mixed perennials)
- o Perennial Legume Haylage
- o Grass Haylage and Small Grain Forage
- o Forage Sorghum

Once again, the contest will be held as part of the Pennsylvania Dairy Summit, in 2015, which changes locations this coming year to the Lancaster Marriott and Convention Center in Lancaster, Pa. and is slated for Wednesday and Thursday, February 4-5.

Producers are encouraged to gather gallon-sized samples of forages and submit them to compete for monetary prizes.

Entry information will be posted at www.padairysummit.org in the next couple of weeks and forage sample entries will be accepted for the contest from December 1 – 31.

While all entrants will be given the complete analysis, done by Cumberland Valley Analytical Labs, they will not receive their results until after the winners are announced at the Pa. Dairy Summit.