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

By SHERRY BUNTING
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RONKS, Pa. — “Sustainability” is the buzz word today in discussions of agriculture and the environment.

But for the 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 maximizing 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.

“All 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 for 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 fiber. The fiber that comes from grass is more digestible and it is more efficient at providing the nutrients to the animal.

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 dairies 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 focusing even more attention on how the cow digests and utilizes forage. The total digestible energy and effective fiber in the ration, with emphasis on digestible fiber. The fiber that comes from grass is more digestible and it is more efficient at providing the nutrients to the animal.”

A forerunner of these trends, King’s AgriSeeds, today, serves 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.

Winter annuals are another easy first step to add as more than 100 entries were tallied for the PDMP trial’s beginnings.

“Typical first step is to add perennial grasses to their alfalfa stands.”

He says farmers who want to realize the benefits of forage systems, 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 to 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 rotation,” 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.

Forage systems that have realized 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.”

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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 drought-tolerant fields instead of corn silage.

King’s AgriSeeds publishes a production guide that provides guidance to producers and ideas for forage systems and seed mixes and how they can be used in rotations. “We’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.”

**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.

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