



A STURDY FORAGE FOUNDATION

Pioneer offers a stable, four-legged approach to help customers optimize forage programs.

No decision about a live-stock feeding program is made in a vacuum. Dairy and beef producers, along with their nutritionists, need to consider an array of factors when choosing corn silage hybrids, alfalfa varieties or inoculants.

The Pioneer forage program is like a sturdy three-legged stool, featuring strong corn silage, alfalfa and additive lineups. But, making the structure even more stable, it adds a strong fourth leg: nutritional expertise and relevant advice to help growers get the most out of each individual product lineup.



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“We tend to talk about the ingredients in a forage program separately,” says David Miller, Ph.D., Pioneer alfalfa researcher. “We’re really looking to help growers provide the best nutritional package for their operation, given the weather and circumstances they face.”

“Pioneer develops forage and additive products for performance in a feeding program,” says Bill Mahanna, Ph.D., Pioneer nutritionist. “We talk to academic experts who are doing the leading research. We talk to consulting nutritionists and customers to obtain real-world perspectives.”

Each forage-related product line stands on its own merits. However, customers should see the best real-world results when they tap into the knowledge of their nutritionist and Pioneer experts to meld these products into a comprehensive nutritional program for their animals.

Let’s look at each product line to understand how Pioneer works to provide choices that meet customers’ needs. ▶

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Leg one: Mining more ore for corn silage gold



Technology can be a wonderful thing, particularly when it's wielded by researchers driven to find the best products. Pioneer forage researchers are using new tools to cast their nets around a larger pool of experimental hybrids and find those with the best traits for corn silage production.

"Pioneer has increased the scope of hybrid testing," notes Bill Curran, Ph.D., Pioneer research scientist. "We're finding better and better ways to meet customer demands for improved hybrids for corn silage."

"We're using mechanization to harvest, collect, label and test more experimental lines for their forage value," Mahanna says. "Simply put, we're looking at more genetics these days. This means we have to ramp up our ability to analyze test plots."

Defining energy two ways

Pioneer attempts to stay on the front end of developments in animal nutrition. One example is the company's long standing efforts to educate growers and nutritionists about the differences between energy sources.

Fiber and starch are distinct and different sources of energy for dairy animals. Pioneer has worked hard to make customers aware of the need to quantify both nutrients and nutrient digestibility.

"We have a genetic component on the input side with the forage," notes Bill Mahanna, Ph.D., Pioneer nutritionist. "We also have a genetic component on the animal side. We have to understand how these nutrients work in the animal. It doesn't do any good to develop a product with nutritional traits if we don't have a good understanding of how the animal uses them."

silage testing network in the industry," Curran notes. We're testing hybrids in Woodland, Calif., to ensure products meet the needs of

Searching more candidates

"The only way to find superior hybrids is to look at more of them," Curran says. "We've increased the throughput of our testing programs significantly. We're expanding our ability to look for germplasm with substantial differences. We're looking at experimental lines earlier than ever and advancing those with traits forage growers want."

Most seed companies are moving to shorter hybrids for standability. Pioneer will not reject a good corn silage hybrid because of stature.

"We have the broadest

growers in areas such as the San Joaquin Valley. We're doing the same type of testing at facilities from east to west."

Pioneer does this to ensure the hybrids it markets fit the regional and local needs of growers. In addition, the company is using new tools and technologies to understand how hybrids react in different growing environments. The forage group will be able to use a growing database of information to position products where they will perform best.

International intelligence

"We're learning from our extensive forage research activities in Europe and transferring that knowledge here," Mahanna says. Pioneer is starting to use molecular markers to identify traits of value.

"We're working on stover digestibility, for one," Curran says. "We can look at parent lines and see which offer higher — or lower — stover digestibility. We can sort these parent lines and develop hybrids to fit the needs both of dairy and beef producers."

Pioneer uses laboratory methods, as well as traditional breeding, to identify superior hybrids for corn silage.

"We're using analytical tools to learn about genetic traits and coupling that with research into important management issues such as chop height or how processing can affect starch digestibility," Mahanna says. The goal is to deliver livestock producers information to get the most out of their inputs. "We're not trying to take over the nutritionist's job. We're trying to make that job a little bit easier."

Leg two: Offering alfalfa alternatives to growers



Alfalfa plays an important role in dairy diets. The goal of Pioneer alfalfa researchers is to provide choices to forage producers that will meet their individual needs.

"We categorize alfalfa varieties by major attributes as a first step to help customers decide the best fit for their agronomic and nutritional situations," Miller says. "We have insect-resistant varieties, disease-resistant varieties and different levels of relative feed quality (RFQ) as well as those with the highest yields."

In addition, Pioneer has released a lodging-resistant variety and is incorporating an improved lodging-resistance trait into several new products.

"We're continuing to work on lodging resistance, breeding it into our highest-yielding and best pest-resistant varieties," Miller says. "We also are researching ways to improve digestibility and,

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Leg four: Weaving the tapestry together



“We try to develop and profile products with enough detail that operators, working with their nutritionists, can reduce risk,” Mahanna says.

Pioneer belongs to several industry organizations that conduct research and share information on livestock nutrition issues. This helps Pioneer develop new and better products and also helps the company assist growers in managing forage inputs from planting to feeding.

“With the assistance of Pioneer agronomists and account managers, we can help producers across the entire silage spectrum from planting to harvest to feed-out,” Mahanna says. “We understand the impact of plant population, growing environment and bunker management and work with customers and their consultants to improve their forage production and management.

“We also conduct research on various forms of corn in the diet,” Mahanna continues, “whether it is fed as high-moisture corn, steam-flaked or rolled. We also work with Pioneer nutritionists in Germany, France, Italy, Portugal and other countries to introduce new tools, such as infrared photography, to better understand heat loss and nutrient shrink in all types of fermented crops.”

Pioneer also leverages its Nutritional and Grain Sciences Analytical Laboratory in Urbandale, Iowa, close to Pioneer headquarters in Johnston. In 2006, this facility analyzed more than 50,000 samples. Of these, 18,500 were corn forage samples, nearly 20,000 were corn grain samples and 7,000 were alfalfa samples.

Pioneer not only collects information, it provides customers with access to an up-to-date collection of management resources.

“We provide a library of management strategies to help customers,” Curran says.

“Nobody puts out more information to help customers than Pioneer,” Mahanna says. “Our goal is to help the customer get the best performance — whether that’s pounds of milk or feed:gain ratio — out of the Pioneer® brand products they use.”

The three product legs and the considerable service leg combine to form a strong foundation customers can count on to help them optimize their forage programs. Combining solid products with sound understanding will lead to improvements in animal performance. 🌱

Pioneer reinforces dairy assets

Pioneer has added three experienced members to its staff of dairy experts.

Dann Bolinger is the new dairy specialist for Michigan. He comes to Pioneer from Michigan State University, where he has served as an Extension dairy educator. Bolinger led efforts to educate growers in bunker management, alfalfa harvest and corn silage management, along with developing solutions to on-farm storage problems. He earned both his B.S. and M.S. degrees in Dairy Science from Purdue University.



Dann Bolinger



Kevin Putnam

Kevin Putnam is the new dairy specialist for New York and New England. A 2003 graduate of Cornell University, Putnam has worked with Blue Seal Feed Company as a nutritionist. He participated in the Dairy Fellows Program at Cornell.

Paul Porter, Ph.D., is the new dairy specialist in Wisconsin. Porter, raised on a dairy farm in Massachusetts, earned his M.S. and Ph.D. from Cornell University. He spent the past 18 years in the dairy feed industry in Ohio, New York and the Upper Midwest.



Paul Porter

Pioneer also has bolstered its Nutritional and Grain Sciences Analytical Lab in Urbandale, Iowa. The lab has added drying capacity to accelerate sample testing. It also has increased near-infrared spectroscopy (NIR) capacity. These changes mean the lab can test more samples and get results out more quickly.

Pioneer also has made significant improvements at the Pioneer Livestock Nutrition Center to increase capacity for grain handling and conditioning. This leads to better diet formulation for animal-feeding trials. It also supports the regulatory approval process for transgenic products while helping with product characterization. 🌱