

EMPHASIS ON STEWARDSHIP LEADS PRODUCER TO MAXQ TALL FESCUE AND DURANA CLOVER

Turning off the main highway onto a gravel road, visitors to Town Creek Farm in West Point, MS can quickly see this is no ordinary cattle operation. The well-kept, pristine pastures dotted with slick and content Brangus cattle kept in place within painted iron fence rails immediately catch the eye. Upon closer inspection, one can see a state-of-the-art cattle handling system designed by renowned cattle handling expert Dr. Temple Grandin. A visit through the pastures reveals animals grazing lush fescue and white clover forage. Particularly noticeable are the fenced off stream riparian areas and numerous acres of planned natural wildlife habitat around field borders. All of these are components of Town Creek's keen emphasis on land, animal and natural resources stewardship.

Having grown up in a dairy and ranching family in Texas, owner Milton Sundbeck learned early on to "respect the land." Sundbeck is a hands-on manager in respect to developing and maintaining the various components of his farm operation. "There is an old Chinese proverb that I follow," relates Sundbeck. "It says the best fertilizer is the farmer's footsteps in the field."

"Our goal here at Town Creek is to produce problem-free cattle that are environmentally rooted to the southern half of the country," says Milton. "We focus on producing forage-based Brangus and Ultrablack cattle that function in a real world environment." According to Sundbeck, it starts with the forage system. As he developed the farm, Milton emphatically states, "Forage selection and management was at the top of my mind." He credits

Pennington's territorial sales manager Jimmy Ray Parish with having a major role in designing the ideal forage system for his farm. Milton states matter of factly, "Jimmy Ray knows everything about grass. If I have a question, Jimmy Ray gets the call."

As a committed steward of both animal and land resources, Sundbeck did not want his cattle consuming toxic forages. So, the first order of business was to eliminate the toxic KY 31 tall fescue. He tried fungus-free varieties at first, but found they would not survive long term. Upon Parish's advice, Milton began incorporating



Lush Texoma MaxQ II tall fescue and Durana white clover pastures provide the nutritional needs to support Town Creek's goal of producing functional, forage-based Brangus and Ultrablack cattle.



Town Creek Farm owner Milton Sundbeck (r) credits Pennington territory sales manager Jimmy Ray Parish (l) with providing excellent advice on designing an effective and sustainable forage grazing system for his pastures.

Texoma MaxQ II tall fescue into the farm grazing system. Jimmy Ray had extensive knowledge of Texoma from his previous job as manager of the forage variety testing program at Mississippi State. He candidly admits, "I wanted to see just how tough Texoma was, so I put it through the ringer. I literally tried to kill it with abuse."

Parish was impressed with Texoma's toughness and recommended it to Sundbeck without hesitation. "I knew the high standard Milton wanted to achieve with his cattle operation," explains Parish. "I didn't want to recommend an inferior forage program that would prevent him from obtaining his objective. I was confident that with Texoma as the base forage, Milton's cattle would have the best opportunity to reach their full genetic and production potential." Sundbeck is impressed with the results. "I don't know of a better answer for our black prairie soils than Texoma," says Sundbeck. "It produces lots of forage and cattle production, health and performance have been excellent." *(continued on page 5)*

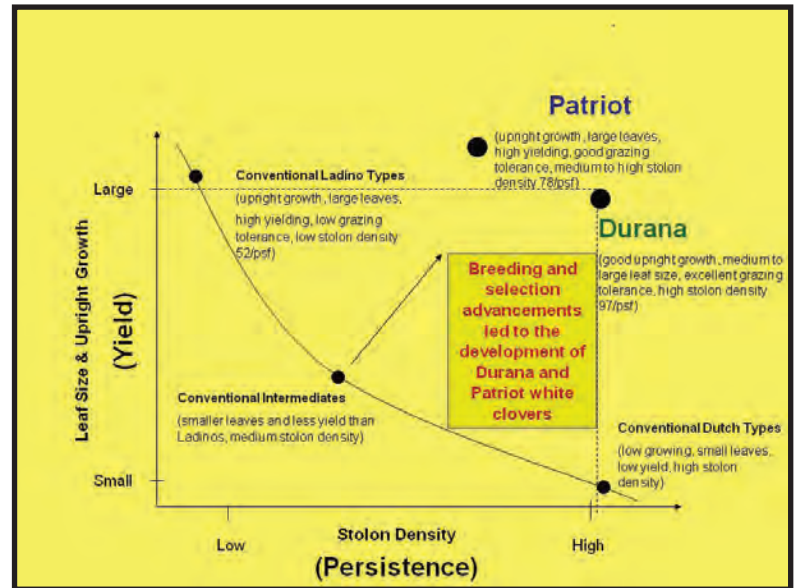
WHITE CLOVER ECOTYPES COMPARED

When clovers are discussed, they are often collectively grouped into broad categories such as white clover, red clover or annual clover. However, within each species, there can be huge differences among varieties and types. This is particularly true of white clovers. White blooming clovers can be perennial or annual plants. Perennial white clovers are further differentiated into Dutch, Intermediate or Ladino types. There are significant differences between the three types. It is important that producers understand these differences in order to choose the best white clover for their specific situation.

Dutch types of white clover are typically low growing plants with small leaves. They have high stolon densities (120-140 stolons/sq.ft.). The high stolon density helps make this clover very persistent with excellent heat, drought and grazing tolerance. Dutch types also have excellent disease tolerance and are widely adapted. However, they tend to be low yielding.

At the opposite end of the spectrum are the conventional **Ladino** clover types. These clovers feature upright plant growth, large leaves and relatively high forage yields. However, they lack heat and drought tolerance and because stolon density is low (52 stolons/sq.ft.), grazing tolerance is also low. They perform best in cooler regions of the U.S.

In between the Dutch and Ladino types are conventional **Intermediate** types. Stolon density, yield and persistence traits of these white clovers are “intermediate” between those of Dutch and Ladino types. Extensive selection efforts by plant breeders have led to the release of improved



As illustrated in the graph, breeding and selection advancements resulted in two improved intermediate white clovers - Patriot & Durana - that combine the high yield trait of ladino clover types with the hardiness and persistence of Dutch types.



The excellent adaptability, hardiness and persistence of intermediate white clovers like Durana has led to multiple uses including in pecan orchards, on commercial Christmas tree farms, in wildlife food plots and in the commercial erosion control industry.

Intermediate varieties of white clover like Pennington's **Durana** and **Patriot**. These clovers combine the superior drought and grazing tolerance, adaptability and persistence traits of Dutch types with the larger leaf and higher forage yield traits of the Ladino types. These combined traits make improved Intermediate white clovers popular choices for use in pastures. These traits have also led to the use of intermediate type white clover in multiple ways including (1) as a low maintenance, nitrogen supplying floor cover in pecan orchards, (2) as a sustainable and highly effective soil stabilizing plant for the commercial erosion control industry, (3) as a low maintenance, aesthetically pleasing ground cover on commercial Christmas tree farms, (4) as a highly nutritious food source in wildlife food plots and (5) for enhancing wildlife habitats (game and nongame) in pine plantations. (Refer to the Durana product page on the Pennington website for more information.)



CREEP GRAZING, MIXING MAXQ AND KY 31, ESTABLISHING WHITE CLOVER AND GRAZING RYEGRASS – CONSUMER QUESTIONS ANSWERED

(Editors note: Knowledgeable forage and wildlife experts respond to dozens of clientele questions weekly as part of Pennington's emphasis on providing outstanding customer service and support. Some of the recent questions and responses are included in this article.)

Question: Can I use MaxQ fescue for creep grazing suckling calves?

Response: Research has shown that allowing calves grazing access to higher quality forage than where their mothers are maintained can result in higher calf daily gains. Certainly, well fertilized, non-toxic MaxQ tall fescue can fall into the category of higher quality forage, especially if a grazing system known as “forward creep grazing” is utilized. The forward creep grazing system is usually a component of a rotational or strip grazing system that is utilized for the entire cattle herd. This system allows calves to enter a paddock through a small opening or beneath a single strand of electric fence to gain access to fresh, ungrazed forage one or more days ahead of their mothers.



Calves creep grazing MaxQ tall fescue in a forward creep grazing system.

Question: Can I use MaxQ to thicken a thin stand of KY 31 in my pastures?

Response: While fescue stands can be successfully thickened by interseeding fescue seed into existing stands, the practice of mixing toxic and non-toxic fescue together in the same pasture is generally discouraged. The reason is two-fold. By mixing toxic and non-toxic fescue, one would be simply diluting the amount of toxin that may be ingested by the grazing animal. The goal should be to eliminate all toxins in order to maximize animal production and health. But perhaps the main reason not to mix the two is that cattle will selectively graze the non-toxic fescue over the toxic fescue creating a situation where the non-toxic fescue is overgrazed. If overgrazed, both toxic and non-toxic fescue varieties can suffer severe damage and stand loss.

Question: I plan to frost seed Durana clover into my pasture in February. How do I insure that I get a good stand of clover established?

Response: Prior to planting, the pasture forage should be mowed or grazed down to a height of 2-3”. If seed are broadcast on the soil surface, allow the cattle to trample it in or use a culti-packer or similar roller device to press the seed into the soil. If a no-till drill is used, plant the seed no deeper than 1/8-1/4 inch. During the spring following seeding, periodically graze or mow the pasture grass to reduce competition with the young clover seedlings and to improve sunlight exposure that is essential for early clover growth and development. During the establishment year, limit nitrogen fertilization to 25-30 lbs. of nitrogen per acre. This will encourage nitrogen fixation and reduce grass competition with the young clover.

Question: I overseeded my bermuda hayfields with Passerel Plus annual ryegrass. When can I start to graze it?

Response: Winter annuals should be well rooted and established with 6-12” of forage growth prior to initiating grazing. Grazing should cease when animals have eaten the forage down to a height of 3-4”. This will allow the grass to quickly regrow for another round of grazing.

Question: Can I overseed MaxQ tall fescue into my bermuda pastures so I can have both winter and summer grazing?

Response: Yes, it can be done, but Pennington forage experts do not recommend it. If both cool and warm season grazing is needed, it is best to maintain dedicated pasture acreage to each as pure stands. Managing a cool and warm season pasture forage mixture for long term productivity and survival is difficult. This is because nitrogen fertilization timing, growing season, grazing management and stress periods are all different for cool and warm season forage species.

USING NOVEL ENDOPHYTE TALL FESCUE/CLOVER MIXED PASTURES LEADS TO HIGHER PROFITS

“...*ECONOMIC BENEFITS CANNOT BE IGNORED...*”

Numerous studies at major land-grant universities across the country have repeatedly shown significant increases in livestock gains and performance when animals are allowed to graze non-toxic novel endophyte-infected tall fescue pastures versus those forced to forage on pastures containing toxic Kentucky 31 fescue. Similar studies have further shown that the inclusion of clover in the grazing system can increase cattle gains by an additional ½ lb/hd. or more per day regardless if animals are grazing novel or toxic endophyte-infected tall fescue pastures. These same studies have also shown significant operational cost savings when clover is included in the grazing system.

The added economic benefits of utilizing a mixture of novel endophyte-infected tall fescue and clover for the livestock grazing system cannot be ignored. This is especially true with current cattle market prices and the escalating cost of production. The proven production and economic benefits of using novel endophyte fescue include:

- (1) **At least 50 lbs. added to every calf weaned.** At a \$2.00/lb. market price, that is \$100 more per calf.
- (2) **A 10 - 30% increase in calving percentage.** Every extra calf weaned can result in \$1,000 or more income.
- (3) **Increased stocker gains of 100 lbs/hd. or more.** At a market price of \$1.50/lb., that is \$150 more income per stocker. At a 2 head per acre stocking rate, that is \$300 more income per acre.

In addition, animals grazing non-toxic tall fescue pastures show improved animal health resulting in reduced mortality and lower vet bills.

Adding and maintaining clover in the pasture forage mix has also shown impressive economic benefit. While the inclusion of clover in the pasture forage mix has shown to improve animal gains resulting in \$150/hd. more value, perhaps the most significant impact of clover is in reducing operating costs. It does this in a number of ways including:

- (1) **Savings in cost of purchased Nitrogen (N).** As a legume, clover captures atmospheric nitrogen. Much of this is recycled back onto the pasture reducing the amount of purchased N needed. This can lead to savings of \$50-\$75/acre or more annually.
- (2) **Providing an extra 30 days of grazing per year.** When used in warm season pastures, this represents a potential winter feed cost savings of \$40 per cow.
- (3) **Decreasing the need for purchased supplemental protein.** Having high protein clover forage available during the winter feeding months can reduce the need for purchased supplemental protein resulting in savings of \$30/cow or more annually.

Livestock producers, who are serious about maximizing income and minimizing costs, should strongly consider incorporating novel endophyte tall fescue varieties such as **Jesup MaxQ** or **Texoma MaxQ II** and perennial white clovers like **Durana** or **Patriot** into their forage grazing systems.



The animal performance enhancement of cattle grazing non-toxic, novel-endophyte infected tall fescue and clover pastures and its positive effect on farm profitability should not be ignored.

MaxQ
A Non-Toxic Endophyte
to Enhance Tall Fescues

TEXOMA
MaxQ II
A Non-Toxic Endophyte
to Enhance Tall Fescues

CONSIDER SEEDING RATE AND STAND LIFE WHEN COMPARING CLOVER ESTABLISHMENT COSTS

When shopping for clovers, farmers should not simply look at cost per pound of seed when making a decision on which type or variety to plant. Rather, producers would be better advised to look at per acre seeding rates and expected stand life when making an economic decision on which clover to plant. Seeding rates can vary from 2 lbs. to 20 lbs. seed per acre or more depending on the type of clover. Expected stand life can range from a single growing season up to five years or longer. As illustrated in the table below, perennial clover seed may cost more per pound, but prorated establishment costs of these clovers are often much lower than annual clover types that must be seeded every year. As long lasting intermediate type white clovers, **Durana** and **Patriot** offer lower prorated seed establishment costs when compared to annual clovers and other short lived clover varieties.

Comparison of Prorated Seed Costs of Clover Types*

	<u>Interm.WC</u>	<u>Ladino</u> ¹	<u>Red</u> ¹	<u>Crimson</u> ²	<u>Arrowleaf</u> ²
Seed Cost/lb	\$7.00	\$4.00	\$2.40	\$1.25	\$2.00
Seeding Rate (lbs/A)	3	3	10	20	10
Seed Cost/A	\$21.00	\$12.00	\$24.00	\$25.00	\$20.00
Stand Life	3-5 yrs**	1-2yrs	1-2yrs	6 mos	6-8 mos
Seed Cost/A over Stand Life	\$4 - \$7	\$6 - \$12	\$12 - \$24	\$25	\$20

*Approximate seed cost only

**Estimated stand life for comparison purposes - university trials and on-farm experience have shown many stands of Durana and Patriot to persist more than 5 years.

1-Short lived perennial in southern areas of adaptation

2-Annual clover

EMPHASIS ON STEWARDSHIP... (CONTINUED FROM PG. 1)

To further improve cattle performance and cut nitrogen costs, Sundbeck uses Durana white clover. “We started using Durana about ten years ago,” says Milton. “Some of those original plantings are still there.” According to Jimmy Ray, an application of approximately 45 lbs. per acre of nitrogen is applied to the pastures in late winter to boost fescue growth. “The Durana clover kicks in after that and supplies the nitrogen needed for the rest of the year,” says Parish. Sundbeck says his goal is to get Durana established in all of his Texoma tall fescue pastures.

It is a special point of pride with Milton and his production team at Town Creek that when their breeding stock is sold, buyers can be assured that their purchases have been raised and developed under the highest of care under the most natural and animal-friendly management and environmental conditions possible.



Sundbeck's emphasis on land stewardship includes fencing off streams and allowing riparian areas to develop to help protect water quality and enhance wildlife habitat.

Pennington Pointer

When establishing new Jesup MaxQ or Texoma MaxQ II tall fescue pastures, Pennington forage experts recommend they be seeded alone. Clover can be overseeded the following fall after the fescue is well established.