

July 11, 2014

AGRIVIEW

By: Rick Hirsch
County Extension Agent

Texas A&M AgriLife Research has released a new white clover, named Neches after the Texas river, that promises higher yields and much earlier flowering and seed production than any heretofore variety adapted to East Texas and the southeastern U.S.

The clover was developed by Dr. Gerald Smith, AgriLife Research plant breeder at the Texas A&M AgriLife Research and Extension Center, Overton. Neches clover combines a lot of traits that are ideal for East Texas.

Like other white clovers, Neches does well on the wet, loamy bottomland soils of East Texas, he said. However, other white clovers do not flower profusely — and therefore do not produce much seed — until at least early to midsummer. In East Texas, midsummers are usually hot and dry, and white clover stands are likely to die out before they can produce seed.

This means white clovers in bottomlands must be reseeded every year to reestablish the stand, which can be an expensive proposition.

With this limitation of existing white clovers in mind, Smith's goal was to develop a variety at least as highly productive and had as much disease and pest resistance as existing varieties, but that would flower and produce seed before the stand was lost in summer.

Early this June it was obvious Neches fits the bill perfectly, he said. In side-by-side demonstration fields of Neches and a ladino white clover, the difference in flowering was obvious. While Barblanca, the ladino clover, had one or two flowering seed heads per square foot, Neches had 20 to 30 seed heads per square foot.

He also selected for larger leaves, which means high forage yields, another obvious advantage.

Neches' advantages didn't come easily, a fact Smith tends to understate. They are the result of years of meticulous crossings and selection of the right plant parent lines that began in 2000.

The parent lines of Neches are highly diverse, including plant introduction lines from Uruguay and Israel, an East Texas ecotype collection and two pest-resistant lines from USDA at Mississippi State University.

During the years 2000 through 2004, Smith screened each of these five breeding populations at Overton for early and profuse flowering, large leaf size and high forage production potential, he said.

Early high seed production means a Neches white clover stand has a good chance of returning yearly, even if plants are killed by summer heat or drought. A grazing/daily gains study with these cattle is currently being conducted as a cooperative project with Dr. Monte Rouquette, also at the Overton center.

Plants not selected were removed from the field planting. All field nurseries were isolated from other white clover plants and natural bee pollination was used for seed production.

In 2005, Smith grew 200 plants from each of the five advanced populations in a combined nursery and selected once again for the same traits, he said. Seed harvested from these final selections was used as breeder seed for Neches.

Barenbrug USA was granted an exclusive license to market Neches in 2011, and has been increasing the seed at sites in Oregon and California, Smith said.

According to its website, Barenbrug is a “world leading developer of proprietary turf and forage grass varieties and legume species. The company has been in turfgrass plant breeding, seed production and marketing since 1904.”

Neches should be available this fall anywhere Barenbrug seed is sold.

POND MANAGEMENT:

No two ponds are exactly alike. Even ponds in the same watershed and built very close to each other can be very different in appearance, and differences in watershed and soil characteristics are particular to each pond. Differences affecting management are those associated with water quality, plankton and fish populations. Another factor that demands attention in Henderson County is weed control.

Aquatic weeds are a common problem in farm ponds, although some aquatic vegetation might be good for the pond. Rooted aquatic vegetation does provide small fish with places to hide from larger predators. The problem with weeds is uncontrolled growth. If too many weeds become established in the pond, too many small fish survive (over populate) and predators become thin because they are not able to prey on the forage species. Large growths of weeds also remove nutrients, which reduces algae production (food).

Aquatic weeds can be controlled by manual, chemical and biological means. Manual

of species such as cattails is practical when they first start to colonize a pond.

Woody vegetation along the dam also can be controlled manually.

Chemical control with herbicides is possible but few herbicides are approved for aquatic vegetation. Vegetation must be accurately identified before it is treated. Herbicides can kill planktonic algae, which leads to oxygen depletion. Oxygen depletion after herbicide treatment is particularly common in hot weather. Check with a fisheries biologist or your county Extension office for plant identification information and current herbicide recommendations. When using chemical pesticides, protect yourself and others by strictly following all label directions.

The simplest and most economical long-term aquatic weed control method for aquatic weeds such as duckweed, hydrilla, pondweed and milfoil is to stock sterile triploid grass carp. The grass carp, or white amur, is an Asian carp brought to this country for aquatic weed control. Grass carp consume vegetation almost exclusively after they reach 10 inches in length. They will not reproduce in the pond, will not muddy the pond like common carp, will not disturb the nests of other fish and they consume 30 to 40 percent of their body weight in weeds every day during warm weather.

The use of grass carp is regulated by the Texas Parks & Wildlife Department. Contact the department or your local county Extension office for information on required permits, stocking rates and lists of available sources.

Rick Hirsch is the Henderson County Extension Agent - Agriculture for the Texas A&M AgriLife Extension Service. Visit our web page at <http://henderson.agrilife.org/>.