

### **Do intermediate white clovers like Durana and Patriot cause bloat problems in cattle?**

Certain nutrient rich legumes such as ladino or white clover and alfalfa as well as lush annual grasses can potentially cause bloat in cattle. However, bloat hazard from legumes is greatly reduced when the pasture contains at least 50% grass. Hungry cattle should be fed good quality dry hay prior to being turned on to a lush clover pasture. Slowly introducing cattle to pastures with lush clover stands by limit grazing them for a few days helps prevent bloat occurrence. Commercially available “bloat blocks” are also helpful in reducing bloat attacks. Bloat potential is greatest during rapid plant growth periods in the spring.

### **When drilling clover using a no-till drill what is the proper drill depth?**

One-eight inch maximum. Successful seed placement can occur if the seed are broadcast directly behind the drill’s shoes and in front of the press wheels. To do this, disconnect the tubes from the small seed box where it enters the drill’s shoes and secure the tubes behind the shoes or in front of the press wheels with wire or cable ties. This allows the seed to be metered out on the soil surface and pressed down into the soil by the press wheels. This practice will ensure that the seed are not planted too deep.

### **What are some management techniques to help insure that frost seeded white clover establishes and remains persistent?**

Tiny clover seedlings can be overwhelmed by lush spring fescue growth so it is important to keep the fescue forage in check by periodically grazing or mowing it during the spring following clover planting. This reduces competition during establishment and allows the clover seedlings to receive sunlight needed for early growth and development. Proper fertilization is also important. Clover forage is typically higher in content of phosphorous (P), potassium (K), magnesium (Mg) and certain micronutrients. Therefore, fertilizer requirements for these major nutrients in clover mixed pastures may be somewhat higher than those for grass only production. Soil tests should be taken ahead of planting clover and then every 2 or 3 years to insure proper levels of P, K, and micronutrients are available. During the year after planting, limit nitrogen fertilization to no more than 25 or 30 pounds of actual nitrogen/acre. This encourages clover nitrogen fixation and helps reduce grass competition with the clover. With clover mixed pastures, grazing management is particularly important. Periodic grazing on a regular basis throughout the year removes tall grass and allows penetration of sunlight down into the grass canopy to reach young clover seedlings and/or new growth from clover stolons. Using a rotational system of grazing greatly enhances clover persistence as it allows perennial clover varieties like Durana to re-foliate and build up energy reserves for times of heavy grazing or during periods of heat and drought stress.

### **Do Durana & Patriot white clovers have to reseed themselves to come back each year?**

No. While Durana and Patriot both produce abundant amounts of seed and are excellent re-seeders, they are true perennials that survive from crowns and stolons to return each year. These clovers were bred to have a high stolon density which greatly enhances their persistence, grazing tolerance and ability to compete with companion pasture forages.

### **Annual clover seed varieties are often considerably cheaper than perennial clover varieties like Durana. Is it worth spending the extra money on perennial clover?**

When shopping for forages, seed cost per acre should be considered over seed cost per pound. This is because different varieties or types within forage species may call for different seeding rates. For example, depending on the type of clover, seeding rates can range from 2 lbs. to 20 lbs. or more seed per acre. Another factor to consider is expected stand life. Annual clovers only last a single growing season while a perennial clover like Durana or Patriot remains productive 3-5 years or longer. While perennial clovers may cost more per pound, prorated establishment costs are often much lower than those of annual types that must be seeded every year.

### **Can Durana or Patriot clover be overseeded into stockpiled fescue pastures?**

While established stands of fescue and Durana or Patriot white clover work well together in a stockpile forage system, do not attempt to fall establish a new stand of clover in stockpiled fescue. If clover is to be added to the pasture mix, it is best done by frost seeding it in late winter or early spring after the accumulated fescue forage has been consumed. This exposes the ground for better seed-soil contact, allows greater sunlight penetration and reduces competition for the young clover seedling.

### **What does it mean to “inoculate” clover seed prior to seeding? How is it done?**

Clover is a legume and thus is able to “capture” nitrogen from the atmosphere and turn it into a form that it can use to grow and thrive. It does this through the aid of bacteria that live in the soil. The bacteria imbed themselves into clover roots forming nodules that capture and convert the nitrogen. To insure that the proper nitrogen fixing bacteria is present in the soil, a bacterial inoculant is applied to the seed as a coating. Some clover varieties like Durana and Patriot come pre-inoculated whereby the proper inoculant is already on the seed. Varieties that are not pre-inoculated must have an inoculant applied by hand just prior to planting. This is done by purchasing the powdered inoculant separately and applying it to the seed just prior to planting.

### **What preparations are needed to frost seed clover in existing grass pastures?**

Pastures slated for frost seeding to clover should be identified well in advance of planting. If not already done, a soil sample should be taken from the area to be planted to determine soil nutrient content and pH. Apply fertilizer and lime as recommended by the soil test. The area should be scouted for broadleaf weed pests and an appropriate herbicide applied if needed. Be sure to refer to the label for herbicide residual info and plant-back times for clover. Prior to planting, existing forage should be grazed down close to expose more of the soil surface and provide optimum seed/soil contact. This also allows the young developing clover seedlings to compete with the existing pasture forage.

### **Can clover be established in a pasture with a history of broadleaf weeds?**

This is a common question because many of the herbicides used to control pasture weeds will kill or severely injure legumes. However, with a little planning, perennial white clovers like Durana and Patriot can be successfully added and maintained in pastures with a history of weed problems. The key to success is to reduce the weed population in the pasture prior to planting clover. This process begins 6-12 months prior to planting clover. Pastures should be scouted from November through early March for winter annual and perennial broadleaf weeds such as thistle, henbit, chickweed, cudweed, sorrel, plantain, buttercup, etc. If needed, apply an appropriate herbicide. The pasture(s) should be re-scouted from May through early July for summer annual and perennial broadleaf weeds like dogfennel, bitter sneezeweed, horsenettle, spiny amaranth, pigweed, etc. and an appropriate herbicide applied if needed. Following such a program should adequately reduce pasture weed populations for 3-5 years; a period of time that easily allows clover to more than pay for itself. It is important to note that pasture herbicides vary in their soil persistence, therefore producers should read and follow any label restrictions when applying an herbicide prior to legume establishment.