

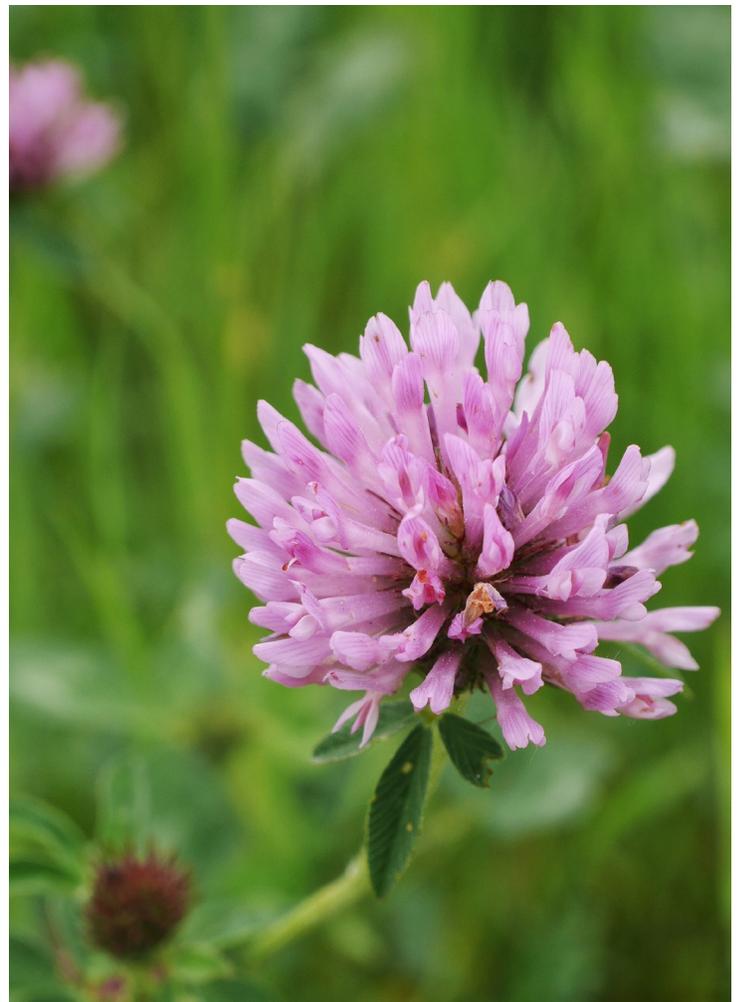
CONTROL WEEDS WHILE HANDLING CLOVER

Many grazing managers tend to be hesitant to use pasture herbicides due to the temporary loss of legumes such as white and red clover. **While legumes can be an important part of a good grazing system many producers will suffer an economic loss due to lower stocking rates brought on by allowing heavy weed pressure to persist in pastures.** The loss in beef production resulting from maintaining legumes within a weed infested pasture can cost producers more money than they may realize.

Consider the following when debating whether or not to use herbicides on legume laden pastures with significant weed pressure:

- Once 15-20% of your pasture is taken out of production from weed pressure the potential profit from increasing your stocking rate after herbicide renovation can easily pay for the cost of the herbicide treatment
- A clover stand's production and nitrogen fixing ability is dependent on good soil fertility. If you haven't monitored and made necessary corrections to soil phosphorus /potassium levels or adjusted soil pH, your legumes may be contributing little to your grazing system.
- Clover should make up a minimum of 25-30% of your pasture tonnage in order to maximize their benefit. This number is sometimes interpreted as meaning 25-30% of the total cover, which simply isn't the same as tonnage. In many situations clover will need to comprise 40-50% of the total cover in a grass-clover mixed pasture to obtain this desired level of tonnage.
- Common or wild type white clover commonly found in U.S. pastures are low yielding and tend to only contribute to pasture production during cooler months not during the summer when forage availability becomes critical.
- Increased forage production by inter-seeding newer, higher yielding legume species and varieties after renovation could have a greater impact on future pasture and beef production. This is another reason to consider improved varieties after herbicide renovation.
- White clover naturally comes back. White clover makes a lot of "hard seed" meaning that seed shed by plants may lie in the soil for weeks or maybe even years before germinating. Most herbicides will only have an effect on seed germination for 1-6 months, allowing white clover to come back over time.

JUST BECAUSE YOU HAVE CLOVER DOESN'T MEAN YOU HAVE ENOUGH TO GAIN A BENEFIT



Balancing the control of troublesome broadleaf weeds in rangeland and pastures with the desire to encourage legumes can be challenging. Therefore, improved legume restoration within the framework of an integrated weed control program is an important need for many cattle producers.

Controlling weeds that compete with forages in pastures can lead to greater forage productivity and availability to livestock and more efficient forage utilization.

It is important to know how to incorporate herbicides into pasture renovation programs and how herbicides impact forage legume establishment. Use of Dow AgroSciences' herbicides not only allows control of weeds that reduce pasture forage yield and quality, but also provide a means to replace agronomically obsolete forage legumes in weed infested pastures with improved forage legume varieties.

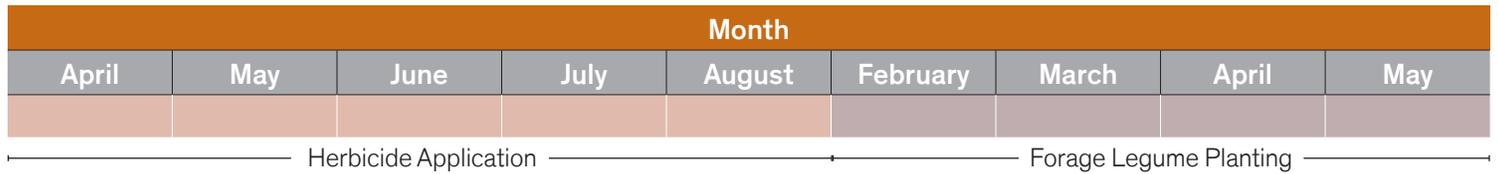
Over the past decade there have been a several experiments conducted to determine the interval between application of

GrazonNext® HL and Chaparral™ herbicides and successfully establishing forage legumes such as red clover, white clover, birdsfoot trefoil, and alfalfa. These experiments were conducted in cooperation with weed and pasture management specialists at the University of Nebraska, Iowa State University, University of Missouri, University of Wisconsin, University of Kentucky, Virginia Tech University, Pennsylvania State University, and the University of Georgia.

COOL SEASON GRASS PASTURE RECOMMENDATIONS:

GrazonNext® HL up to 1.5 pints/A or Chaparral up to 2 oz/A:

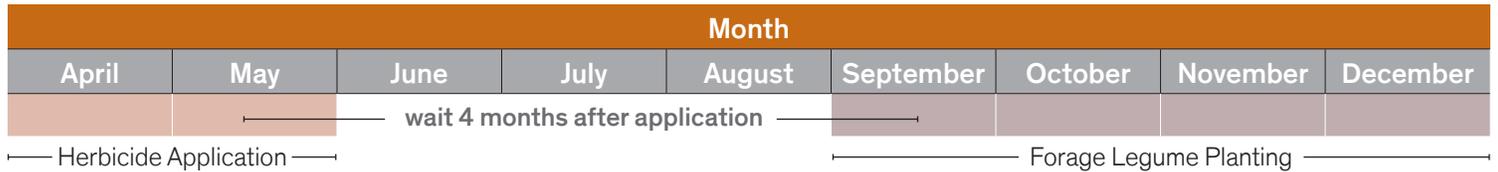
Perennial clover can be (frost) seeded in the spring when applications are made no later than Sept. 15th of the previous year



WINTER FORAGE FOR BERMUDA GRASS PASTURE RECOMMENDATIONS:

GrazonNext® HL up to 1.5 pints/A or Chaparral up to 2 oz/A:

Annual clover can be seeded in the fall four months or more following application



GUIDELINES:

- Follow your state's Extension recommendations for optimal forage legume planting dates, seedbed preparation, and planting techniques.
- If the herbicide rates are greater than those mentioned here, a bioassay using forage legumes that will be planted should be conducted before planting.
- Always read and follow herbicide label instructions.

Label precautions apply to forage treated with Chaparral, GrazonNext and to manure from animals that have consumed treated forage within the last three days. Consult the label for full details.

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Chaparral and GrazonNext are not registered for sale or use in all states. Contact your state pesticide regulatory agency to determine if a product is registered for sale or use in your state. Always read and follow label directions.
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