

Texas Dairy Matters

Higher Education Supporting the Industry

Weed Management with Manure in Mind

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For any forage producers, weed management is a must, and has many well understood benefits. The standard benefits of weed management in improved pastures are for every 1 pound of weeds controlled, you grow an additional 5-7 pounds of grass, making this management practice important for producers looking to maximize forage production.

In recent years, the organic fertilizer and composting industries have grown. The development of newer weed control herbicides, that have a long residual, has created a challenge for forage producers who move hay or manure off site. Agriculture enterprises where manure is collected (such as dairies, feedlots or hay farms where hay is moved off site) need to be aware of what weed control herbicides were sprayed in fields where livestock are grazing or where hay is cut.

Many of our common weed control herbicides are designed to have a residual effect, giving forage producers weed control when applied as well as pre-emergent control for an extended period of time after the application has been made. The active ingredients of the pyridine family of herbicides have a long residual as well as remaining intact and active after passing through the gastrointestinal tract of grazing animals, leaving that animal's manure containing active herbicide. The

Forage and Manure Management

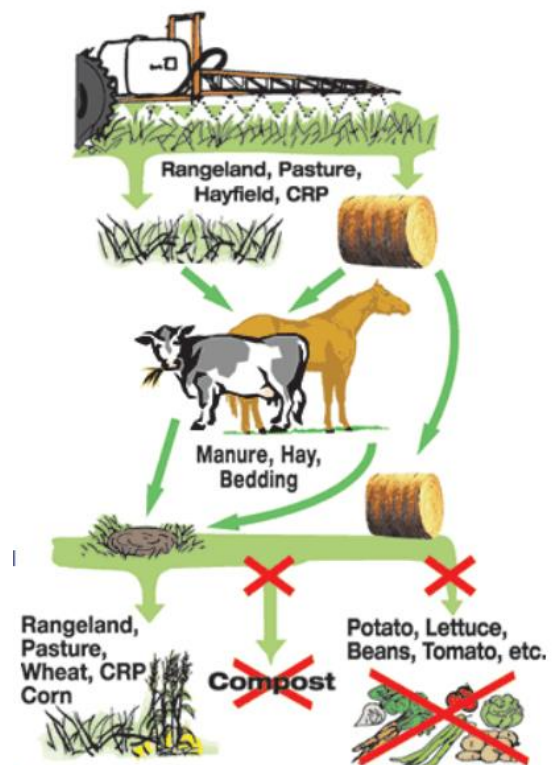


Figure 1: Forage and Manure Management with Aminopyralid
 Image courtesy of Corteva AgroSciences.

active ingredients that causes problems, and are labeled for pasture use are aminopyralid, picloram and clopyralid. Aminopyralid is the most common of these actives and is used in the common herbicides of GrazonNext HL, Chaparral, Sendero and the MezaVue. All these herbicides deliver excellent weed control and have the residual to potentially provide season long weed control with only one application applied in the spring depending on your location, environmental factors, and weed population.

While these herbicides are excellent choices for managers looking for a high rate of weed control, if you are in an industry where animal manure is collected or hay potentially could be composted, these herbicides are not for you. These herbicides will retain their herbicide properties on areas where the goal was to promote plant growth, not to end plant growth. These active ingredients are broken down over time as the plant material or manure decomposes, however; plant material decomposes at a faster rate than the herbicide active ingredient which increases the concentration of herbicide. The manufacturer label on aminopyralid, the most commonly used active ingredient (produced by Corteva AgriScience) that has these properties, states that 18 months after application all herbicide residual will be broken down, allowing the plant material to be safe for use in composting at that point.

For the forage producer who utilizes manure as a source of fertilizer or who are transporting hay off the farm there are other herbicide options that will still provide a high level of weed control while being broken down while passing through the animal's gastrointestinal tract. Some of these herbicides that are a safe alternative for these forage producers are 2,4-D, Cimarron Plus, Cimarron Max, Weedmaster and PastureGard HL. The herbicides 2,4-D and PastureGard HL are unique in that they do not have any residue activity. The herbicides Cimarron Plus, Cimarron Max and Weedmaster will all have some level of residual activity due to the active ingredient of Dicamba in the Cimarron Max and Weedmaster and Metsulfuron Methyl which is an active ingredient in the Cimarron Plus and Cimarron Max.

For the forage producer who does not utilize manure or move hay off the farm, the pyridine family of herbicides is an excellent tool for forage producers and land managers. The active ingredient picloram is an effective tool for managing prickly pear cactus on rangeland. Clopyralid is widely used to control mesquite trees and other legumes that are considered weeds on rangeland. Aminopyralid is used widespread due to its synergy with other active ingredients as well as being very active on hard to kill broadleaf weeds. While the pyridine family of herbicides does not fit and will cause problems in areas where manure is collected or hay being used for composting, this group of herbicides is very beneficial for many managers looking to manage weeds and brush in other areas.