

## Pasture Herbicide Stewardship

*G. Neil Rhodes, Jr., Professor and Extension Specialist  
William P. Phillips, Jr., Graduate Research Assistant  
Plant Sciences*



### Introduction

Troublesome annual and perennial broadleaf weeds must be managed to optimize pasture quality and productivity. In most cases, broadleaf herbicides are necessary ingredients in a pasture weed management program. While most pasture herbicide applications are effective and have no impact on adjacent properties, instances of movement of herbicides such as 2,4-D and dicamba onto nearby sensitive crops are well-documented over the past several decades. These unfortunate episodes may result in expensive fines and/or lawsuits; lost time, productivity and profitability for affected producers; crop rejection; and bad publicity for our industry. Clearly, proper herbicide stewardship should be important to cattle producers and other pasture herbicide applicators.

### Aminopyralid and Picloram Persistence

Fortunately, while herbicides such as 2,4-D and dicamba are highly active on most broadleaf crops even in minute doses, these materials are relatively short-lived in soil and in treated pasture grasses and harvested hay. This is not the case with two other herbicide active ingredients, aminopyralid and picloram.

Residues of herbicides that contain aminopyralid (ForeFront R&P, Milestone and Chaparral) or picloram (Grazon P+D) are persistent in soil, grass and manure. Aminopyralid is a member of the substituted pyridine family of herbicide chemistry. Picloram is also a member of this family. Producers therefore are encouraged to plan ahead regarding use of treated pastures and hay, in the movement of animals that have been grazing in treated pastures or fed treated hay, and in the use of manure from animals that have been grazing in treated pastures or fed treated hay. **Herbicides that contain aminopyralid or picloram are for use in permanent grass pastures and grass hay fields only. They should not be used in fields that will be rotated to broadleaf crops.**

The relatively long persistence of these herbicides has numerous implications for producers and applicators. For example, drift of aminopyralid from an adjacent pasture application onto a tomato field even months prior to transplanting can cause serious damage to tomato plants, due to the chemical's persistence and soil activity. Another example would be where a producer treats a pasture with picloram in 2011, grazes cattle in that pasture a few weeks later and then moves the cattle directly to a field of tall fescue destined for rotation to tobacco in 2012. Everywhere the cattle defecate or urinate can, in effect, result in a dosage of picloram in sufficient concentration to produce noticeable injury to transplants set in 2012.

### Management of Cattle and Manure, Use of Treated Hay

Aminopyralid and picloram remain intact in treated pasture grasses or hay, and when these forages are consumed by animals, the chemical passes through their digestive and urinary systems without change and into the manure and urine. It takes several days for aminopyralid and picloram to pass through the digestive and urinary systems of an animal. Because of this, manure from animals that have been grazing treated pastures or fed treated hay should not be used to fertilize broadleaf crops or home gardens unless the animals have been withdrawn from treated pastures or hay for three days (aminopyralid), or seven days (picloram). Likewise, treated hay should not be used for mulch in vegetable production, gardens or landscape beds. Animals that have been grazing treated pastures or fed treated hay should not be moved to fields that will be rotated to sensitive crops unless they have been withdrawn from treated pastures or hay (three days for aminopyralid, seven days for picloram).

### **Sprayer Contamination and Spray Drift**

Aminopyralid and picloram are more difficult to rinse from a sprayer than many other pasture herbicides. It is particularly important to have a dedicated sprayer for use of these materials in pastures and hay fields and not to use this sprayer to apply other chemicals on sensitive crops. Also, avoid spraying these and other herbicides in windy conditions where drift to adjacent cropland is likely. For more information on spray drift prevention, please see Publication 1580, *Weed Control Manual for Tennessee*. A copy of this publication may be obtained at your local UT Extension office. It is also available online at [weeds.utk.edu](http://weeds.utk.edu).

So, all it takes is careful thought and planning. Producers are fortunate to have these highly effective tools for weed control in pastures, and good product stewardship as described above will help to keep these materials available for the foreseeable future. As is the case with all agricultural chemicals, be sure to read, understand and follow all label directions.

### **Picture Credits**

Boomless sprayer. Digital image. Web. 8 Feb. 2010. <[http://www.hardi-us.com/upload/images/usa/products/pasture%20trailer/pasture%20sprayer%2004\\_446x297.jpg](http://www.hardi-us.com/upload/images/usa/products/pasture%20trailer/pasture%20sprayer%2004_446x297.jpg)>.

Denton, Paul. Drift injury on tobacco. Digital image. 2009.

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication. Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others that may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author (s), the University of Tennessee Institute of Agriculture and University of Tennessee Extension assume no liability resulting from the use of these recommendations.