Forage News
MISSISSIPPI STATE UNIVERSITY EXTENSION
Center for Forage Management and Environmental Stewardship

Preventing Annual Weed Germination by Using Pre-emerge Herbicides

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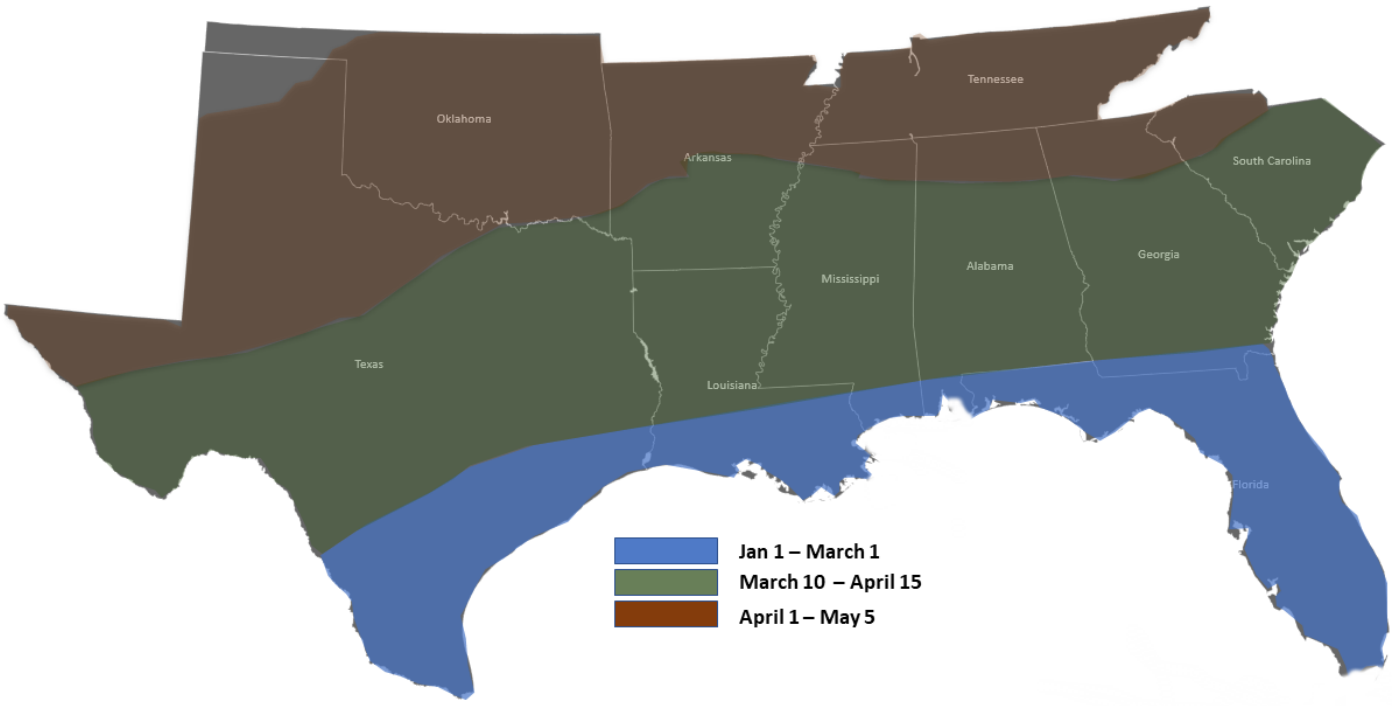
In pastures and hayfields, weeds can reduce the quantity of forage production and affect stand longevity. Producers need to develop an early plan of attack by evaluating their pastures and hayfields and determining the weeds species that affect productivity and nutrient use.

Two types of herbicides can be used as tools to control some weeds in pasture and hayfields. These two methods include pre-emerge and post-emerge herbicides. Pre-emerge herbicides are products that are applied before different weed species start to germinate. Post-emerge herbicides are those products that are used to control weeds after they have germinated and are actively growing. There are several annual weed species (grassy and broadleaf types) in pastures and hayfields that can be difficult to control with post-emerge herbicides and they include barnyard grass, crabgrass, seedling Johnsongrass, annual foxtail (green and yellow), dandelions, plantain, pigweed, wood sorrel.

Due to the mode of action of these herbicides, application timing is the most important aspect of successful weed prevention. If the weed has already sprouted and it is visible, pre-emergent herbicides will not solve the weed problem. For best results, these herbicides should be applied when soil temperatures are 50 °F or above for at least 36 to 72 hours which ideally is two weeks before seed germination might start. The ideal window to apply pre-emerge herbicides across most of the southern US will be March 10 to April 15, which the exception of the coastal areas with earlier warm temperatures where applications can be made from January 1 to March 15. The upper areas across AL, MS, GA, SC could have an application window between April 1 and May 5 due to colder temperatures.



Two main pre-emerge herbicides are labeled for use in pasture and hay fields in Mississippi. These products include Prowl H_2O (Pendimethalin) and Rezilon (Indaziflam). These products are to be used on well-established pastures and hayfields (grasses that have gone through at least one mowing or cutting) and not in the establishment of new forages. Most pre-emerge herbicides will not prevent the germination of the seed but instead help control it, so it does not sprout

(no radicle and root development). These are used to control annual grasses and small-seeded broadleaf weeds (spiny amaranth, bitterweed, and spurge). Prowl H_2O can be applied at a rate of 1.1 to 4.2 quarts per acre in 20 to 40 gallons of water. It is not recommended to apply to warm-season grasses after spring green-up before first cutting. Do not apply more than 4.2 quarts per acre per year and there is a 30-day application interval if sequential applications are to be used. Prowl H_2O is **NOT** labeled for use on tall fescue or other cool-season hay and pasture grasses. There are no grazing or haying restrictions when the application of Prowl to forage grasses. Rezilon should be applied at a rate of 3 to 5 ounces per acre in more than 15 gallons of water per acre. Do not exceed more than 5 ounces per acre in a single application. Do not apply more than 6 ounces of Rezilon per acre per year and sequential applications must be done 60 days apart. Do not seed any cool-season grasses in areas treated with Rezilon before a soil bioassay is done 18 months after the application. There are no grazing restrictions associated with Rezilon, but there is a 40-day haying restriction.

Pre-emerge herbicides can be a useful tool for weed management in pastures and hayfields. They should be used where appropriate and when cost-effective. While pre-emergent weed control for pastures and hayfields can be effective in preventing certain weeds from impacting forage production, these chemicals will not kill all weeds. Weeds seed populations present at the time of herbicide application may be controlled, but if there is poor soil fertility and the forage stand is not vigorous to reduce competition, new weed seedlings will soon emerge and occupy the bare areas that remain in the pasture or hayfield. Producers should know and adhere to any grazing or haying restrictions. Different products vary in their restriction guidelines. Many products that have no grazing restrictions for beef cattle will have grazing restrictions for dairy cattle. Most will also have a withdrawal period before slaughter. It is always important to read the product label.

The information in this publication is provided for educational and informational purposes only. The use of any brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by Mississippi State University nor does it imply discrimination against similar products not mentioned. Recommendations for the use of agricultural chemicals may be included in this publication as a convenience to the reader. Individuals who use agricultural chemicals are responsible for ensuring that their intended use of the chemical complies with current regulations and conforms to the product label.

Upcoming Events

March 4, 2022— **Cool-season Forage Field Day | Starkville, MS**
Pre-register by March 2 at https://bit.ly/CSFIELDDAYMARCH4

March 31, 2022— **Beef Cattle Field Day | Newton, MS**
Pre-register by March 25 at 601-683-2084.

June 2, 2022— **White Sand Experiment Station Field Day | White Sand (Poplarville), MS**
More information coming soon.

For upcoming forage related events visit: ***http://forages.pss.msstate.edu/events.html***

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