

## **Crabgrass Treatment and Timing**

Crabgrass (*Digitaria spp.*) is a pervasive annual grassy weed that poses significant challenges to maintaining healthy lawns and pastures in Oklahoma. Its rapid growth and prolific seed production enable it to outcompete desirable turfgrasses, leading to unsightly and weakened lawns. Effective crabgrass management hinges on the strategic use of pre-emergent herbicides, which prevent the weed's seeds from germinating and establishing.

### **Understanding Crabgrass and Its Lifecycle**

Crabgrass germinates in the spring when soil temperatures consistently reach 55°F to 60°F, usually between late February and mid-March in Oklahoma. The weed continues to grow throughout the summer, producing seeds that can remain viable in the soil for several years. Without intervention, crabgrass can dominate lawns, leading to a decline in turf quality and density.

### **The Role of Pre-Emergent Herbicides**

Pre-emergent herbicides are formulated to create a chemical barrier in the soil, inhibiting the germination of crabgrass seeds. **It is crucial to apply these herbicides before the seeds begin to germinate, as they are ineffective against established plants.** Timing and proper application are paramount to achieving optimal control.

### **Optimal Timing for Pre-Emergent Application in Oklahoma**

In Oklahoma, the recommended window for applying pre-emergent herbicides is between March 15 and April 1. This timing aligns with the soil temperature thresholds critical for crabgrass germination. Applying the herbicide within this period ensures that the chemical barrier is active before the seeds begin to sprout.

## **Selecting Appropriate Pre-Emergent Products**

Several pre-emergent herbicides are effective against crabgrass. Common active ingredients include:

- **Dithiopyr:** Offers pre- and early post-emergent control, making it versatile for controlling young crabgrass plants.
- **Prodiamine:** Known for its long residual effect, providing extended control throughout the growing season.
- **Pendimethalin:** Effective against a broad spectrum of annual grasses and some broadleaf weeds.

**When selecting a product, it is essential to consider the specific turfgrass species in your lawn, as some herbicides may not be suitable for all grass types.** Always read and follow the label instructions to ensure safe and effective use.

## **Application Best Practices**

To maximize the efficacy of pre-emergent herbicides:

1. **(BEFORE) Soil Preparation:** Mow the lawn to the appropriate height and remove debris to allow the herbicide to reach the soil surface effectively.
2. **(DURING) Proper Calibration:** Ensure your spreader or sprayer is correctly calibrated to apply the recommended product uniformly across the lawn.
3. **(AFTER) Post-Application Irrigation:** Lightly water the lawn after application to activate the herbicide and establish the chemical barrier in the soil.
4. **(AFTER) Avoid Disturbance:** After application, minimize soil disturbance, such as aeration or dethatching as it can disrupt the herbicide barrier and reduce effectiveness.

## **Integrating Cultural Practices for Enhanced Control**

While pre-emergent herbicides are a critical component of crabgrass management, integrating cultural practices can further enhance control:

- **Maintain Dense Turf:** A thick, healthy lawn can outcompete crabgrass by reducing available space and resources for weed establishment.
- **Proper Mowing:** Mow at the recommended height for your turfgrass species to promote vigor and shade the soil, inhibiting weed seed germination.
- **Adequate Fertilization:** Provide balanced nutrition to your lawn to encourage robust growth and resilience against weed invasion.
- **Efficient Irrigation:** Water deeply and infrequently to promote deep root growth, making the turf more competitive against weeds.

## **Monitoring and Follow-Up**

Regularly inspect your lawn for signs of crabgrass breakthrough, especially in areas with a history of infestation. If crabgrass plants emerge despite pre-emergent application, consider using post-emergent herbicides labeled for crabgrass control. **Early intervention is crucial**, as young plants are more susceptible to chemical control.

## **Environmental Considerations**

When using herbicides, it is always essential to consider their potential impact on the environment:

- **Runoff Prevention:** Avoid application before heavy rainfall to reduce the risk of herbicide runoff into water bodies.
- **Buffer Zones:** Establish untreated buffer zones near waterways to protect aquatic ecosystems.
- **Proper Disposal:** Dispose of unused herbicides and containers according to local regulations to prevent environmental contamination.

## **Conclusion**

Effective crabgrass management in Oklahoma requires a proactive approach that combines the timely application of pre-emergent herbicides with sound cultural practices. By understanding the weed's lifecycle and adhering to recommended application guidelines, homeowners and land managers can maintain healthy, crabgrass-free lawns and pastures. Regular monitoring and adaptive management strategies will ensure long-term success in controlling this persistent weed.

## **References:**

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