



Adapting Roadside Vegetation Management Programs In A Pandemic

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 **BASF**

We create chemistry

Agenda

- **Pandemic impact on budgets**
- **Traditional PGR programs**
- **Adapting programs for 2021**
- **Advanced PGR programs**
- **How to avoid knee jerk reactions**
- **Resources**

Pandemic Impacts

- **Reduced budgets: 20% to 30%**
- **Reduced staff: No seasonal or temporary employees**
- **Sprayer restrictions due to COVID**
- **Evaluate options**
 - **What are the most impactful applications?**
 - **Bareground, PGR, Brush Control**
 - **Can we do more?**
 - **Opportunities to skip, change or combine applications?**
- **Present facts**
- **Make hard choices**

Traditional PGR Program

- To regulate the height of grass and the development of seedheads to minimize mowing. The addition of broadleaf weed control provides longer and more uniform results and invasive weed control.
- Only program that creates time
- The best program to expand
- The one program you cannot eliminate



PGR Program Goals

- **Decrease mowing**
- **Decrease costs**
- **Increase productivity**
- **Improve safety**
- **Create time for other important maintenance projects**
- **Minimize need for seasonal or temporary help**

Seedhead Suppression History



PGR Program Lessons

- **Largest savings occur**
 - High frequency mowing areas
 - Where travel times to work site are greatest
 - Difficult to mow areas like secondary highways
 - During compressed mowing windows

PGR Program Lessons

- **Use proper rates**
- **Calibration is critical**
- **Uniform application**
- **Add broadleaf weed control**
- **60 to 90 day grass growth regulation and seedhead suppression**
- **Dry conditions will extend PGR effects**



Benefits of PGR Programs

- **Reduce Cost**
 - 40% to 70%
- **Increase Productivity**
 - 50% to 70%
- **Improve Safety**
 - Fewer trips



Benefits of PGR Programs

Case Study – Hillsborough County, FL

- 2005 – 6 mowing cycles, no PGR at a cost of \$2.3 million
- 2007 – 2 mowing cycles (\$780,000) and 2 PGR applications of 3 oz. Plateau + 3.5 oz. Milestone + 16 oz. Garlon 3A (\$455,000) for a total of \$1.2 million
- Annual cost savings: \$1.1 million (48%)



Benefits of PGR Programs

2013 INDOT Study

- One mowing costs \$64 per mile and can cover 18.5 miles per day
- Average PGR costs \$36 per mile and can cover 60 miles per day
- Broadleaf weed control can last up to 2 years
- May not need as many PGR applications in drought conditions
- PGR programs are less expensive and more productive than mowing

Benefits of PGR Programs

Example

Indiana has 12,000 miles (Interstate, US and State Routes)

To Treat 10,000 miles (assumes 1 mowing or 1 spraying)

- **Mowing @ \$64 per mile = \$640,000**
- **Time to complete @ 18.5 miles per day = 541 days for 1 crew**
- **PGR @ \$36 per mile = \$360,000**
- **Time to complete @ 60 miles per day = 167 days with 1 crew**

Cost savings = \$280,000 or 44%

Time savings = 374 days or 69%

Additional Benefits of PGR Programs

- **Less wear on equipment**
- **Longer replacement cycles**
- **Fewer leased mowers required**
- **More can be accomplished with fewer people (no temporary help)**
- **Additional maintenance projects can be completed**
 - **Drainage structure repairs**
 - **Culvert and storm sewer replacement**
 - **Ditch cleaning**
 - **And more!**

Benefits of PGR Programs

Example

Assume: 10 Districts with 6 leased mowers per district

- **Mowers @ \$2,700/mo. for 6 months x 6 per District x 10 = \$972,000**
- **Cost of Spray Equipment @ \$5,400 x 3 per District x 10 = \$162,000**
 - **Keep one leased mower @ \$2,700/mo. for 6 month x 10 = \$162,000**
 - **Use existing trucks @ no cost**
 - **Each spray unit is one time cost**

Cost savings first year = \$648,000 or 67%

Cost savings in following years = 810,000 or 83%

Mowing

Cool Season Grass

- Early mowing results in only 2 weeks of height control
- Mid-summer mowing results in 4 to 8 weeks height control
- Skip mowing until summer
- Better for pollinator species

Warm Season Grass

- Seedheads are the biggest issue
- Seedheads grow quickly and are tall
- Seedheads temporarily reduced in height by mowing

Improve Safety



Minimize trips to mow or spray!

2019 NCDOT Results



NCDOT PGR/Broadleaf RESULTS on Fescue
Western Divisions

2019 ODOT Results



1 MAT

2019 ODOT Results



2 MAT

2019 ODOT Results



6 MAT

Northern U.S. Timing

■ Without Mowing - Recommended

- ▶ Start spraying just as grass begins to grow (end of April)
- ▶ Spray vegetation before it becomes uneven in height
- ▶ Results in no rutting

■ After Mowing

- ▶ Spraying starts in mid May
- ▶ Wait 7 days after mowing before you spray
- ▶ Mowing starts vegetation even in height

Southern U.S. Timing

■ Without Mowing - Recommended

- ▶ Start spraying after full grass green-up (early April)
- ▶ Spray vegetation before it becomes uneven in height
- ▶ Results in no rutting

■ After Mowing

- ▶ Spraying starts after full grass green-up (end of April)
- ▶ Wait 7 days after mowing before you spray
- ▶ Mowing starts vegetation at an even height

General Recommendations - North

Fescue and Bluegrass

- Use 3 oz. Plateau + 5 oz. Milestone (or 4 oz. Method) + 0.3 oz. Escort XP + 1 oz. Detail + MSO

Smooth Bromegrass

- Use 6 oz. Plateau + 5 oz. Milestone (or 4 oz. Method) + 0.3 oz. Escort XP + 1 oz. Detail + MSO
 - ▶ Smooth Bromegrass can handle higher Plateau rate which provides longer growth regulation

NOTE: TerraVue may also be a broadleaf weed control option

General Recommendations - South

Bermudagrass

- Use 4 – 6 oz. Plateau + 5 oz. Milestone or 4 oz. Method
 - ▶ After full grass green-up
 - ▶ Add Detail where marestail or pigweed control is required
 - Use 1 oz. Detail only where temporary injury (leaf tip burning) to Bermudagrass is acceptable.
- Rotate to MSMA to prevent broomsedge release

General Recommendations - South

Bahiagrass or Unimproved Centipede

- Use 3 oz. Plateau + 5 oz. Milestone or 4 oz. Method
- Use no more than 2 oz. per acre of Plateau applied at seeding of Centipede
- Do not use Detail on actively growing Bahiagrass
- Rotate to MSMA to prevent broomsedge release

Adapting During The Pandemic

- **Plan now for next year**
- **Weigh you options**
- **Avoid knee jerk reactions**
- **Implement your new plan**

Advanced PGR Program

Managing During the Pandemic

- **Increase cost savings by expanding PGR program**
 - ▶ Target most difficult and expensive areas
 - ▶ Secondary highways
- **Mow only when necessary and only in summer**
- **Change PGR program broadleaf components for one year**
 - ▶ Use Detail + Escort XP
 - ▶ Only if Milestone or Method was used the previous year

Advanced PGR Program

Managing During the Pandemic

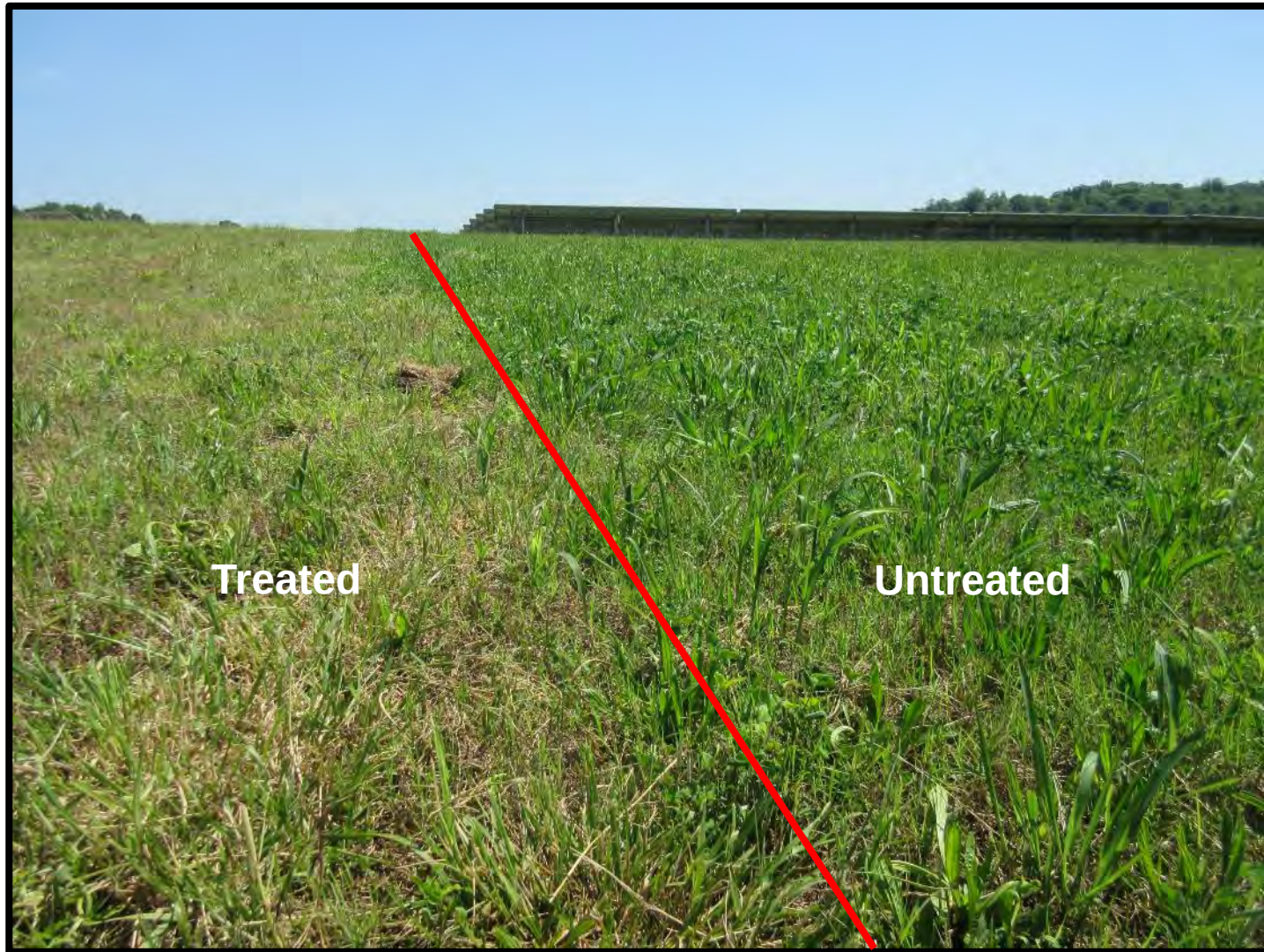
- **Replace guardrail bareground program with PGR's**
 - ▶ **Reduces cost of products and eliminates an application**
 - ▶ **Reduce erosion**
- **Expand PGR program into zone 3**
 - ▶ **Release native grasses and pollinator species**
 - ▶ **Eliminate establishment costs**
 - ▶ **Eliminate mowing costs**

PGR Program On Secondary Highways



3 oz. Plateau + 7 oz. Milestone + .3 oz. Escort XP

Change PGR Broadleaf Products



3 oz. Plateau + 1 oz. Detail + .5 oz. Escort XP

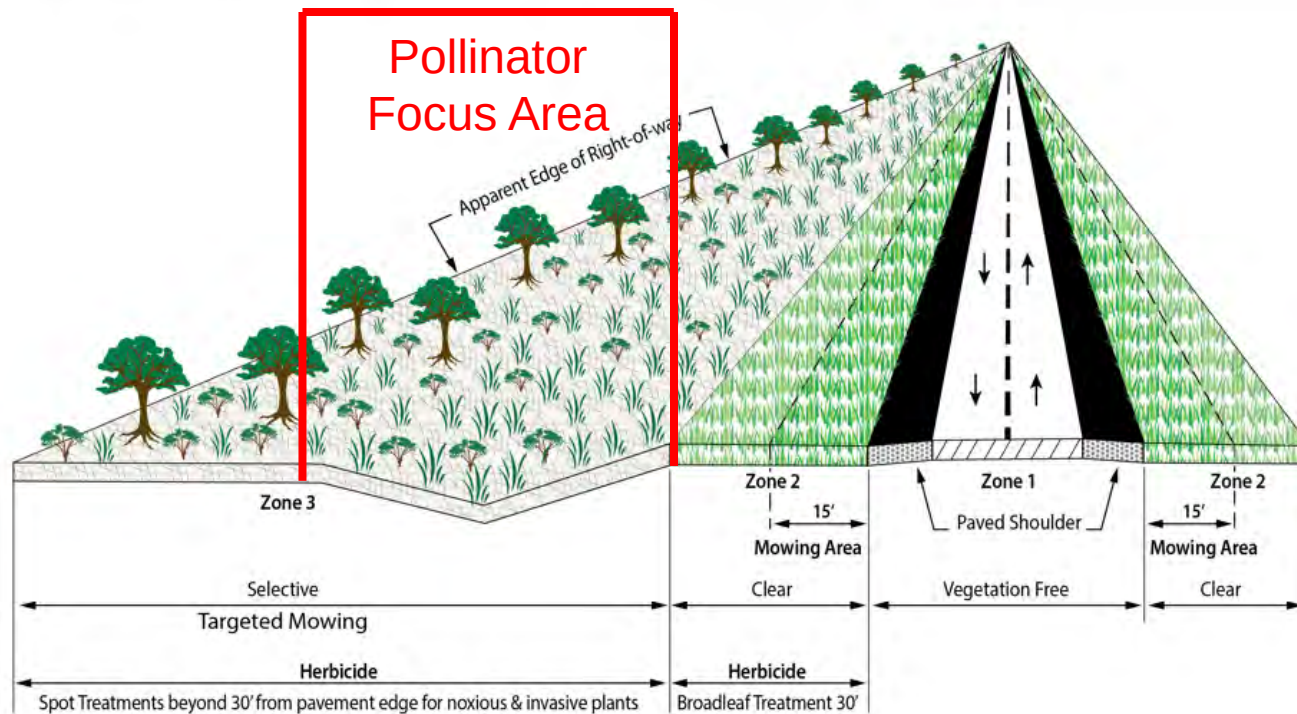
Guardrail PGR Program



3 oz. Plateau + 7 oz. Milestone + .3 oz. Escort XP

Expand PGR Program into Zone 3

Vegetation Management Zones



Zone 3 - Native Grasses

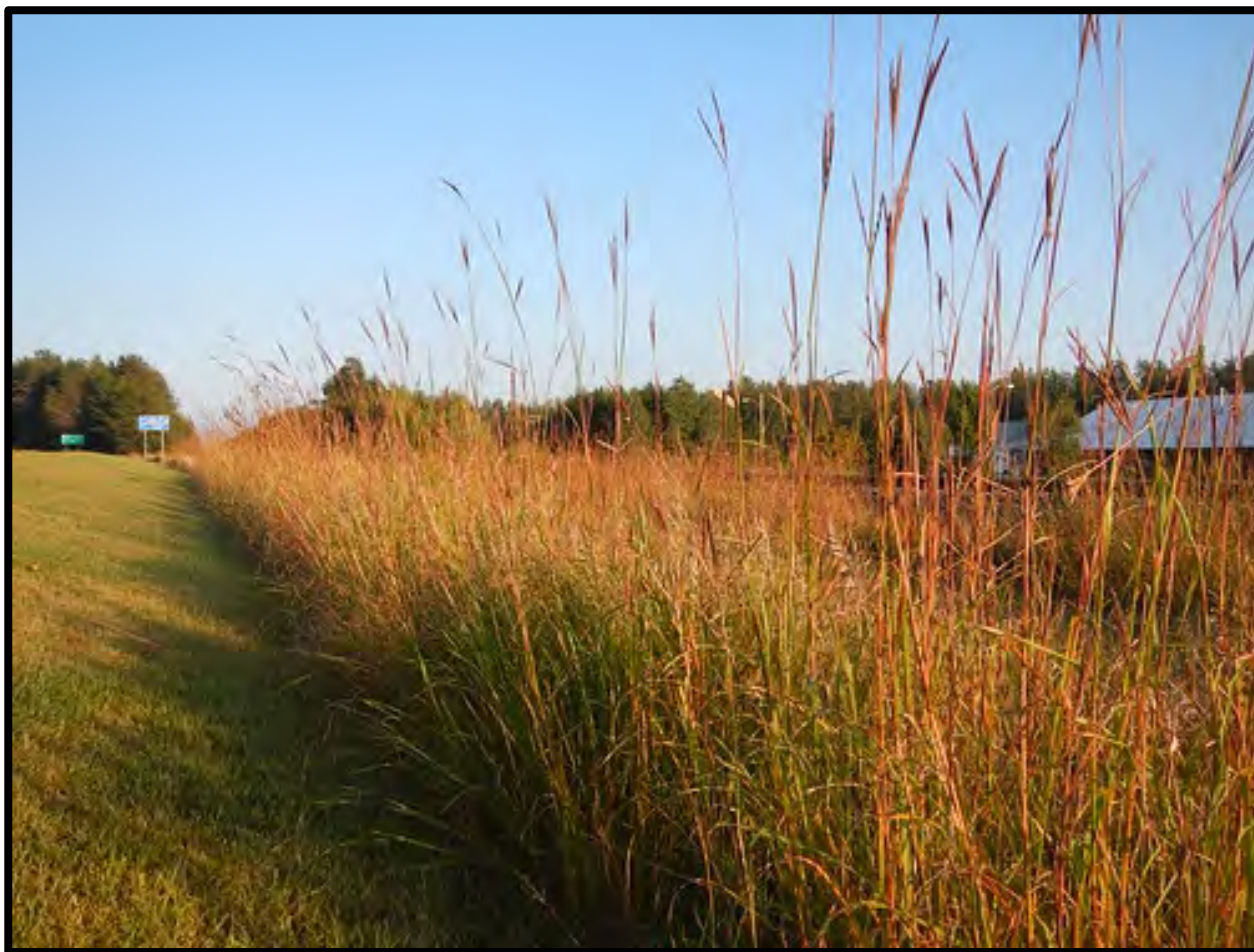
- Plateau is labeled for native grass release, establishment and maintenance
- Native grasses reduce the need to mow
- Big bluestem, Little bluestem and Indiangrass are tolerant up to 12 oz. Plateau
- Spray Plateau anytime before or after drilling these 3 species. Other species will vary
- I recommend establishing native grasses first then introduce wildflowers as desired



Zone 3 - Native Grasses



Zone 3 - Native Grasses



Zone 3 – Pollinator Release

- **Use Plateau to release existing pollinator seed**
 - Low rates suppress the grass with no impact on wildflowers
 - Species diversity will be limited but cost is much lower
 - Only works where seed is available in the soil
- **Save the cost of seed and establishment**
- **Use in areas treated the previous year with Milestone + Method for invasive weeds**



Zone 3 - Pollinator Release



Pollinator Release



3 oz. Plateau + 1 oz. Detail + .5 oz. Escort XP
Sprayed 3 years in a row then delayed mowing

Advanced PGR Programs

- **Streamline spraying activities**
- **Reduce mowing**
- **Increase cost savings**
- **Improve efficiency**
- **Improve safety**
- **Encourage native grasses and pollinators where they fit**

Avoid Knee Jerk Reactions

- **Be prepared with facts**
- **Have a flexible plan**
- **Communicate the benefits**
- **Accentuate the positive**
 - **Safety and Aesthetics**
- **Highlight the small budget % devoted to veg mgt**
- **Stick to your guns**

Summary

- **Modify your program to manage reduced resources**
- **Let us know how we can help**
- **We are in this together!**

BASF ProVM Podcasts

- 5 - 7 Minute Podcasts
 - Posted on the ProVM website
 - Timely subjects

www.bettervm.basf.us



BASF ProVM Webinars

- 15 – 30 Minutes
 - Slides and Audio
 - Posted on the ProVM website
 - Timely subjects



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Look for the PGR and Pollinator webinars!

Questions?

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Thank You!