



» APPLYING FIRST COAT of colorant to dormant bermudagrass.

Turning fields green using turf colorants

It has been called “instant overseeding”—the practice of applying a green turf colorant to dormant grass. Turf managers in the southeastern United States have traditionally overseeded dormant bermudagrass fields to have a green field during the winter and early spring months.

But the spring transition from overseeded grasses to bermudagrass is often problematic due to drought resistant cool-season grass varieties and extended cool and wet conditions in late spring. Applying colorant to semi-dormant to dormant bermudagrass fields provides an alternative to overseeding, while still providing an attractive, playable field surface. Before you start painting, it is important to research to find the pros and cons of the practice because the practice may not be a good fit for everyone.

One benefit associated with colorants rather than overseeding is affordability. A gallon of turf colorant will run from \$30 to \$75, with most distributors giving volume discounts. The average cost of colorant needed for a 2-acre field using the higher recommended application rates would be about \$600, with a range of

\$400 to \$1,000 an application, depending on the colorant brand and application rate. Overseeding establishment can costs can easily top \$1,000 (not including season-long maintenance costs). So colorant can be a less expensive alternative. And with seeding, there are all the issues with picking your seed, ground preparation, seeding, watering, fertilizing, mowing, pest control, spring transitioning, etc.

The painting process can be boiled down to

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pick/purchase a colorant, add water plus colorant to your sprayer, and begin spraying. If the color is not even or dark enough, you can go over the area again. There is some clean-up, but no season-long care like with overseeding.

Of course with anything good, there are also some downsides. The biggest issue is that it does not provide a wearable playing surface like an overseeded grass. Once the dormant bermudagrass tissue is worn away, there is no regeneration until spring. So, the “wear factor” must be considered. And while the unknowing observer may be fooled looking at a painted field, to a field manager it will be easy to notice the duller finish from painting versus the nicely stripped, shiny surface of a freshly mown, overseeded field.

Over the last few years, we have conducted numerous studies at North Carolina State University to evaluate various colorant products. Our first detailed studies were applied to putting greens in fall 2008 and 2009. Subsequent trials have included evaluations on bermudagrass mowed at heights similar to those commonly used on athletic fields.

Colorant brands that were used in the original trials included: Green Lawnger (Becker Underwood), LESCO Green (John Deere Landscapes), Mtp Turfgreen (Missouri Turf Colorant,), Titan



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>> **SMALL SPRAYER COLORANT APPLICATION** on semi-dormant bermudagrass athletic field.

Table 1. The progression of colorant color using Pantone® Color chips following colorant treatment.

Treatment/rate	Bermudagrass	
	Day 0	Day 56
Green Lawnger 80 gpa	PMS 354	PMS 358
LESCO Green 80 gpa	PMS 347	PMS 351
Mtp Turfgreen 80 gpa	PMS 7481	PMS 7464
Titan Green Turf 80 gpa	PMS 7482	PMS 636
Turf in a Bottle 80 gpa	PMS 346	PMS 344
Regreen 80 gpa	PMS 347	PMS 311
Wintergreen Plus 80 gpa	PMS 340	PMS 344
Ryegrass 80 gpa	PMS 374	PMS 372
Ultradwarf Super 80 gpa	PMS 363	PMS 577
Ultradwarf Plus 80 gpa	PMS 362	PMS 577
Bermudagrass 80 gpa	PMS 7481	PMS 344
Bermuda Green 80 gpa	PMS 340	PMS 290
Green Lawnger 160 gpa	PMS 355	PMS 360
Turf in a Bottle 160 gpa	PMS 354	PMS 358
Ultradwarf Super 160 gpa	PMS 364	PMS 362

Green Turf (Burnett Athletics), Turf in a Bottle (US Specialty Coatings), Regreen (Precision Laboratories), Wintergreen Plus (Precision Laboratories), Ryegrass (Pioneer Athletics), Ultradwarf Super (Pioneer Athletics), Ultradwarf Plus (Pioneer Athletics), Bermudagrass (Pioneer Athletics), and Bermuda Green (J.C. Whitlam Manufacturing).

It is worth noting that by the time this article is in print, we will have initiated new trials that will include most of these colorants plus at least thirteen others. Manufacturers/Distributors that have provided products (to date) for these trials include the companies listed above, plus products from D. Ervasti Sales, Enviroseal, Geoponics, Harrell's, Milliken, Poulenger USA, Solarfast, and World Class Athletic Surfaces. Some of the colorants we will be testing were from existing product lines but many are newly introduced colorants. The rapid increase in new products is in response to the growing interest in using colorants.

In the earlier studies we applied colorant treatments to completely dormant turfgrass in late October to early November using a boom sprayer calibrated at 40 gallons per acre (gpa). Each plot was sprayed in two directions to provide uniform coverage, resulting in application rates of 80 gpa for each colorant. A few of the colorants were applied at alternative rates due to their label recommendations and to verify the influence of rate and longevity. Applied to bermudagrass, colorant increased turf color from 38 to 67 percent relative to the control at the time of painting. Of course there was some variation in how the color was judged over time. But remember the saying, "beauty is in the eye of the beholder."

We felt that at 56 days after treatment the colorants Ryegrass, Ultradwarf Plus, Bermudagrass, and Bermuda Green failed to provide acceptable colorant color when applied to dormant bermudagrass. Only Turf in a Bottle had acceptable color 56 days after treatment on bermudagrass. This illustrates that most of these products will have a date in which they will need to be re-applied to get season-long green color.

In another study applied to semi-dormant turfgrass, the

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products performed much better due to the greater background color at the time of application. This is a very important point. Subsequent tests have proven that some background color goes a long way. Applied to semi-dormant turfgrass, the color will look better and may last longer. For optimum results, do not wait until the turfgrass is straw brown.

Some of the colorant-treated turf took a bluish tint over time (56 days after treatment). Regardless of application volume, Re-green had the greatest propensity to turn a bluish tint. Titan Green Turf also turned bluish when applied to dormant turf. Furthermore, Bermuda Green turned a bluish gray to blue on both grasses. These products may not be as color-stable over time compared to others but if the product is reapplied, even at a lighter rate, this may not be a significant issue. So, it may be important to think about how you want to use these products before selecting the

product. Some field managers like to put lighter rates on their field more frequently. If that is the case, then color stability is less an issue.

Applying the colorants at 160 gpa provided turf color increases up to 44 percent greater than the 80 gpa treatments. Applying colorants at rates above 80 gpa also resulted in increased color longevity over the winter season. We did not expect to see such a significant rate response in longevity of the products. More research is needed in this area to fully understand how to best use this information.

I often get asked, what is the best colorant? But in fairness, no one turf colorant was clearly superior on both grasses in terms of natural green color at the time of application and 56 days after application. Results from our earlier studies generally indicated that the colorants with the best natural green color did not generally last as long as some of the others. And with almost double the number of products available to field managers today versus just a few years ago, I can hardly wait to see how some of the newer products compare to some of the industry standards. There is no doubt, some turf colorant products can provide an attractive green putting surface at a reduced cost compared to overseeding. ■

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