

# Pre-Emergent Guide

By Allyn Hane “The Lawn Care Nut”

[www.thelawncarenut.com](http://www.thelawncarenut.com)

Technical Advisor, Matt Martin

[The Grass Factor](#)

This is a long post all about pre-emergent strategies for both cool and warm season turf.

For those of you that are more advanced and don't like or need to bother with reading, the gist here is that I have found granular pre-emergent herbicides that make it MUCH easier for you guys to apply as opposed to liquid mixtures and hand cans. Additionally, I give you a step-by-step strategy for what to apply, and when to apply it.

- [Click Here for granular prodiamine.](#)
- [Click Here for granular dithiopyr.](#)

Keep reading for the best free information you have ever gotten on pre-emergent herbicides ...

Hey team, how is that deep freeze working for you? No worries, we actually hit 30F here last night so we could all enjoy our Florida one-day winter. I actually had to put warm spotlights on my palms to keep them from freezing to death.

Since we're all stuck inside, I figured I'd send a quick email today talking about pre-emergent herbicides and their importance in Spring.

It's never too early to prepare for a fast start knowing your first lawn application is probably only about 60-90 days away depending on where you live.

Here in Florida, my first app is going to be early Feb!

And that brings me to the primary point of the email: In my [coaching program](#), a good majority of the problems folks face are completely preventable as long as the timing is right.

And that is where pre-emergents become key. It's always better to prevent a problem than correct it. If you are reading this, then you are early enough to prepare now so you can prevent later.

Here are the two primary things you'll need to get the ground running in the Spring - [Prodiamine](#) and [Dithiopyr](#).

If you need a refresher, here is a video I did a while ago that talks about pre-emergents and how they work:

[https://www.youtube.com/watch?v=aj0TeNmV0\\_k](https://www.youtube.com/watch?v=aj0TeNmV0_k)

Now, let me give you some additional options here and clarify based on questions I get.

### Cool Season Grass Types:

- Kentucky BlueGrass
- Perennial Rye
- Fescue

## A couple major issues you guys typically face:

[Crabgrass](#) - Annual, germinates in early summer and into fall, drops seeds in later fall.

[Poa Annua](#) (annual bluegrass) - Annual, germinates in fall (some also in very early spring), drops seeds the following spring.

A pre-emergent strategy that targets these primary pests will also at the same time cover you against other, less common pests such as:

[Foxtails](#) - similar cycle to crabgrass

[Barnyardgrass](#) - similar cycle to crabgrass

The two best and most economical professional products to use to prevent these problems are [Prodiamine](#) and [Dithiopyr](#). You use these two interchangeably and you can cover the entire season with a formidable pre-emergent herbicide blanket. And the best news yet is that I have found these products in **granular form and available to homeowners**.

The reason this is important is that one of the primary challenges we face is that liquid applications are very difficult to make from available equipment like hand cans or backpack sprayers. Don't get me wrong, you can [do it successfully](#), but even the mixing adds an element of difficulty. From my experience, that's a blocker that many just don't overcome, so they end up skipping the pre-emergent

all together. Or, they buy something that is combined with high nitrogen content that we don't need.

With granular applications, you literally just measure the "pounds on the ground," fill your spreader and go.

TIP: don't forget, key to success is watering in these herbicides. ½" irrigation or rainfall

**As mentioned in the video, the best strategy is:**

- Early/Mid Spring - [Prodiamine](#)
- Early Summer - [Dithiopyr](#) (Dimension)
- Late Summer/Early Fall - [Dithiopyr](#)

The reason we want to use both interchangeably is due to labeling. The yearly maximum for the [prodiamine granular](#) I am recommending here is 6.2 LBs per 1000 Square Feet per year\*.

\*for KBG and Perennial Rye

**Prodiamine 0-0-7:**

<b>Minimum and Maximum Application Rates (by Turf Grass Species)<sup>1</sup></b>		
<b>Turf Species</b>	<b>Minimum Rate</b>	<b>Maximum Annual Rate</b>
Bahiagrass, Centipedegrass Bermudagrass <sup>2</sup> , Zoysiagrass Seashore Paspalum St. Augustinegrass Tall Fescue (including turf-type)	4 pounds per 1000 sq. ft.	9.3 pounds per 1000 sq. ft. per year
Buffalograss Kentucky Bluegrass Perennial Ryegrass	4 pounds per 1000 sq. ft.	6.2 pounds per 1000 sq. ft. per year
Creeping Red Fescue	4 pounds per 1000 sq. ft.	4.6 pounds per 1000 sq. ft. per year
Creeping Bentgrass	4 pounds per 1000 sq. ft.	4.0 pounds per 1000 sq. ft. per year

If you are following my strategy of a triple application, then your first application is this [Prodiamine 0-0-7](#). It will be made in early spring, sometime after the forsythia bloom. Maybe around the time you see Red Bud trees blooming, and the first set of spring tulips is popping.

The rate I recommend here is 5LBs/1000 SF. That will give you a very strong 3-4 month residual as long as you keep foot traffic on the lawn minimal. At that rate, this bag will cover 10,000 square feet at a cost of about \$54. If you have a smaller lawn, you can pack this away in a dry, dark place and use the rest next season.

**NOTE:** never apply any lawn product to ground that is frozen - it will just run off in rain.

**NOTE2:** the "7" in this mix is just a little potash. That's good for the lawn, no worries.

Dithiopyr (Dimension):

**Use "Regions" within the United States:**



**Recommended Use Rates**

Amount of Hi-Yield® Turf & Ornamental Weed & Grass Stopper to Apply (Pounds of product to apply per 1,000 square feet of turfgrass †)

Region of U.S.	----- Length of Crabgrass Control -----		
	2 - 3 months	3 - 4 months	Early Postemergence Control
North	2.4 lb/1000 sq ft (0.128 lb ai/acre)	3.2 lb/1000 sq. ft. (0.174 lb ai/acre)	4.0 - 9.2 lb/1000 sq. ft. †† (0.22 - 0.5 lb ai/acre)
South	3.5 lb/1000 sq ft (0.192 lb ai/acre)	4.0 - 4.7 lb/1000 sq. ft. †† (0.22-0.256 lb ai./acre)	4.0 - 9.2 lb/1000 sq. ft. †† (0.22 - 0.5 lb ai/acre)

† 1,000 sq. ft. equals an area 100 ft. X 10 ft. or square area of about 32 ft. on a side  
 †† Use the higher rate in rate range in areas of high weed pressure or for increased length of control

**Maximum Application Rates:**

- Do not apply more than 9.2 lb of this product per 1,000 sq. ft. per application and no more than 27.6 lb of this product/1000 sq. ft. per year (equivalent to 0.5 and 1.5 lb of active ingredient (ai) per acre, respectively).
- In the state of New York, do not exceed 4.6 lb per 1000 sq. ft. per year of this product (equivalent to 0.25 lb of active ingredient (ai) per acre).

Your second application then, should be [granular dithiopyr](#) and it should come in early/mid June sometime. The assumption here is that your prodiamine was applied sometime in mid/late March, meaning you are ready for Dithiopyr in June. (3 months later)

If you have not yet figured this out, timing is critical and so are good observations on your part. If the spring went away early and summer rushed in and destroyed May with heat and humidity (which happens) then it's probably a good idea to get your second app down in May. You also have to adjust based on where you live. Northern Minnesota and Southern Indiana folks will share the same grass types, but one area is about 3-4 weeks behind the other coming out of winter... so feel free to use some logic in your timing.

Picture above is the label from the [Hi Yield dithiopyr](#) (Dimension is the brand name) I linked to. You can see that we have much more leeway with yearly maximums here and that is why we are using this product 2x this season.

The yearly maximum here is 27.6 LBs per 1000 Square Feet. Essentially we could use this product for all 3 applications and be just fine, but in my experience, Prodiamine is a little better product early on because it can "stick in the soil" and resist the heavy spring rains. Dithiopyr doesn't do as well here.

However, where Dithiopyr shines is with later season crabgrass control. You see, [Dithiopyr](#) can provide some post-emergence action on very young crabgrass that may be breaking through in June. Prodiamine can't do that.

**NOTE:** if you move into a new home in the summer, Dithiopyr should be the first thing you apply, even before your furniture is delivered. Just make sure you call the water company and get them turned on so you can water this in! ½" needed to get it into the soil.

So for this June application, you want to apply at the higher rate of 4LBs/1000 Square Feet. Typically you would get 3-4 full months control here, but it's summer, and clay soils can crack causing ruptures in the barrier. Again, it's a good idea to keep foot traffic to a minimum and keep the lawn properly irrigated. Tell your kids to go play in the park, not on the front lawn! :)

How far will the bag go then? It's a 35 LB bag and we are applying at 4LBs/ 1000 square feet. That means this bag will cover 8,750 Sq Feet\*.

*\*now you know why I harp on [measuring your lawn](#) [video] so often! [Free tool using Google Maps](#)*

Up until now, you should be good against crabgrass for the most part. However, I am of the opinion that crabgrass seeds germinate for months, all season long from June until October... not all at once in June like most people assume. This 3rd and final application will also stop any late appearing crabgrass but really, our primary concern here now is poa annua or annual bluegrass.

The timing here is also critical and I'm going to recommend late August, especially if you have been irrigating during the summer. Here we want to use the same high rate of the [Dithiopyr](#) at 4LBs/ 1000 Square Feet. Some of the more astute among you may be thinking: "can't we use up to 9.2LBs/1000 Square Feet and still be within our yearly maximum?"

And the answer is “yes” but that is overkill and expensive! I love to “Thrower’ Down” but I also love to spend money on other things like beer, cigars and Milorganite. So just stick to the lower rate and you will be fine.

Lastly - should any crabgrass breakthrough in fall, [Quinclorac](#) is your most economical post-emergence selective control. Use a [surfactant](#) too! It will literally turn the crabgrass red and dead!

(no surfactant needed for pre-emergents)

*It goes without saying, but you should always read the labels on products you buy. Labels change so do the math on your own based on the label that is on the product in your physical possession. Capish?*

## **Warm Season Grass Types:**

Thanks for hanging in there my warm season friends! Your pre-emergent journey is actually much more urgent! But please be sure to read everything above anyway... there are good nuggets there that still apply to you, even though your timing and some products are a bit different.

In the south, we have the same challenges with crabgrass and Poa Annua. But we also have the added challenges of:

[Sand Bur \(Sand Spur\)](#) - Florida and coastal areas. These germinate in spring and show up in later spring and summer. Hard to control but pre-emergents can help!

**Nutsedge/Kyllinga** - you have this up north also but here in the south, it can take over entire lawns. I have no idea what Kyllinga is supposed to be doing timing wise, but from my experience in Florida, it just grows and grows all year round even in winter. It requires a very good pre-emergent game, but also a strong post emergent game.

In addition to that, I've had some major battles with [Doveweed](#) and [Signalgrass](#). Both also preventable with a solid pre-emergence program!

So in the south, these are the warm season grasses we are working with:

- St Augustinegrass
- Bermuda
- Zoysia
- Centipede
- Bahia

Here is our application strategy:

- February: [Prodiamine](#)
- Early April (late March South FL): [Pennant Magnum](#) (this is for the sedges/kyllinga, doveweed and sandbur)

- June (optional): [Dithiopyr](#) (Dimension) if you have major pressure from crabgrass, signalgrass, poa annua.
- September/October: [Prodiamine](#)

So let's talk through the strategy together here. In South Florida (where I live) we are starting the first week of February with this strategy. Everywhere else up in and around Texas, Louisiana, Georgia and South Carolina... you guys will want to start mid-to-late Feb depending on temps and weather and such. When soil temps hit 55F... that is when to start. Get a [soil thermometer](#) and use it!

Prodiamine 0-0-7

<b>Minimum and Maximum Application Rates (by Turf Grass Species)<sup>1</sup></b>		
<b>Turf Species</b>	<b>Minimum Rate</b>	<b>Maximum Annual Rate</b>
Bahiagrass, Centipedegrass Bermudagrass <sup>2</sup> , Zoysiagrass Seashore Paspalum St. Augustinegrass Tall Fescue (including turf-type)	4 pounds per 1000 sq. ft	9.3 pounds per 1000 sq. ft. per year
Buffalograss Kentucky Bluegrass Perennial Ryegrass	4 pounds per 1000 sq. ft.	6.2 pounds per 1000 sq. ft. per year
Creeping Red Fescue	4 pounds per 1000 sq. ft.	4.6 pounds per 1000 sq. ft. per year
Creeping Bentgrass	4 pounds per 1000 sq. ft.	4.0 pounds per 1000 sq. ft. per year

So for the warm season grasses, we have some more leeway with our yearly maximums (I told you to read all the cool season grass stuff too - just for educational purposes :))

This is good because we are using this product twice this year. This first application or [Prodiamine](#) in Feb, apply at 5LBs/1000 Square Feet. In most years, this should give you a solid 4 months control. If your soil is very sandy, that will be shortened a bit but we will be fine since we have the Pennant Magnum coming in - it is going to give us some redundancy.

This is a 40LB bag and we are using 5LBs for each 1000 Square Feet in this app, then this bag is large enough to cover 8,000 Square feet.\*

\*now you know why I harp on [measuring your lawn](#) [video] so often! [Free tool using Google Maps](#)

## [Pennant Magnum](#)

### Turfgrass

Warm Season Grasses (Bermudagrass, Centipedegrass, St. Augustinegrass, Bahiagrass, and Zoysiagrass) including Commercial St. Augustinegrass Sod Production

Do not use Pennant Magnum on turfgrasses in New York State.

Apply Pennant Magnum **before weeds emerge**. Since soil moisture is necessary to activate Pennant Magnum, irrigate with 1/2 inch of water if rainfall does not occur within 7 days after treatment (See following Precautions).

### Weeds Controlled

Scientific Name	Common Name	Rate of Pennant Magnum*
<i>Cyperus compressus</i>	Annual sedge	2.6 pt/A (see Restrictions)
<i>Cyperus esculentus</i>	Yellow nutsedge	
<i>Digitaria ischaemum</i>	Smooth crabgrass	
<i>Digitaria sanguinalis</i>	Large crabgrass	1.3-2.6 pt/A (see Restrictions)
<i>Leptochloa fascicularis</i>	Bearded sprangletop	
<i>Leptochloa uninervia</i>	Mexican sprangletop	
<i>Murdannia nudiflora</i>	Doveweed	
<i>Poa annua</i>	Annual bluegrass	

\*1.0 pt/A = 11 ml/1,000 sq ft

1.3 pt/A = 14 ml/1,000 sq ft

2.6 pt/A = 28 ml/1,000 sq ft

**Restrictions:** (1) Split rate of applications can be made at rates not less than 1 pt/A. (2) Do not apply more than once every 6 weeks. (3) For commercial sod production, do not apply more than 4.2 pt/A per year to the same area used for sod production. (4) For other turf uses, do not apply more than 2.6 pt/A per year.

The label above is the **Pennant Magnum** concentrate (no granular exists) that you will mix in your pump sprayer. I highly suggest a quality [backpack sprayer](#) here. Our goal right now is to suppress kyllinga/nutsedge and prevent doveweed. Kyllinga starts germinating in April usually and Doveweed is later spring and summer. This product is also giving us redundancy on crabgrass and poa annua.

If Sandbur is your major issue - then you should use [Pennant Magnum](#) in early March no matter where you live (they tend to germinate a little earlier). This product suppresses but cannot fully prevent sandbur.

The mix rate of this liquid concentrate is going to be 28ml/1 gallon water. 1 gallon covers 1000 sq ft. If you have a 4 gallon spray unit, that's 112ml into 4 gallons of water and you should evenly spray that across 4,000 Sq Ft.

The [Pennant Magnum](#) seems expensive, it's about \$225 for a 128oz jug. But keep in mind, we only need milliliters here to mix. There are 3,785 ml in that jug.

**Here's the fun math that you all love so much:**

- 1 oz = 29.57 ml
- 128oz jug = 3,785 ml
- $3,785 / 28$  (our mix rate per 1000 SF) = 135,178 Sq Ft coverage total

You can cover 135,000 square feet with that one jug! This will last most of you a couple years so keep it sealed, cool, dry and out of sunlight. (or share with your neighbors who have the same issue and split the cost)

**NOTE:** you only get one app per year with this product at this rate. So make it count and get it watered in.

**NOTE2:** if sandbur is your biggest concern, apply the Pennant Magnum in early March. (a few weeks earlier than I suggest above)

# Dithiopyr

Use "Regions" within the United States:



### Recommended Use Rates

Amount of **Hi-Yield® Turf & Ornamental Weed & Grass Stopper** to Apply (Pounds of product to apply per 1,000 square feet of turfgrass †)

Region of U.S.	----- Length of Crabgrass Control -----		
	2 - 3 months	3 - 4 months	Early Postemergence Control
North	2.4 lb/1000 sq ft (0.128 lb ai/acre)	3.2 lb/1000 sq. ft. (0.174 lb ai/acre)	4.0 - 9.2 lb/1000 sq. ft. †† (0.22 - 0.5 lb ai/acre)
South	3.5 lb/1000 sq ft (0.192 lb ai/acre)	4.0 - 4.7 lb/1000 sq. ft. †† (0.22-0.256 lb ai./acre)	4.0 - 9.2 lb/1000 sq. ft. †† (0.22 - 0.5 lb ai/acre)

† 1,000 sq. ft. equals an area 100 ft. X 10 ft. or square area of about 32 ft. on a side

†† Use the higher rate in rate range in areas of high weed pressure or for increased length of control

#### Maximum Application Rates:

- Do not apply more than 9.2 lb of this product per 1,000 sq. ft. per application and no more than 27.6 lb of this product/1000 sq. ft. per year (equivalent to 0.5 and 1.5 lb of active ingredient (ai) per acre, respectively).
- In the state of New York, do not exceed 4.6 lb per 1000 sq. ft. per year of this product (equivalent to 0.25 lb of active ingredient (ai) per acre).

June is pretty much summer everywhere in the South. Here in Florida, it's also the rainy season so you have to be careful. You don't want to apply this and have it all wash away in a heavy rainstorm.

However, it's important where I live to get this one down because of the amount of sand in the soil and the amount of rain we get -- it can shorten the efficacy of pre-emergents. Because of that, I apply this app in summer as a hedge. I'm not using Prodiamine here because I don't want to exceed the yearly max and I'd rather save the second app of Prodiamine for fall.

Additionally, this is when crabgrass is pushing through and gain, [Dithiopyr](#) can have some post emergence control on very young crabgrass plants that may have started to get through.

Either way, this is optional for most of you. Clay soil, you should be fine as long as you are not getting massive cracks which definitely break up the pre-emergent.

I'm being budget conscious here and not going to go with the highest rates either. I recommend this one go down at 4LBs/1000 Square Feet.

At our rate of 4LBs/1000 Square Feet, the bag will cover 8,750 Square Feet. A 35LB bag is \$52.

You can do the math and see what the application cost will be according to your lawn size. Again, this one is optional.

Prodiamine 0-0-7 (app #2)

<b>Minimum and Maximum Application Rates (by Turf Grass Species)<sup>1</sup></b>		
<b>Turf Species</b>	<b>Minimum Rate</b>	<b>Maximum Annual Rate</b>
Bahiagrass, Centipedegrass Bermudagrass <sup>2</sup> , Zoysiagrass Seashore Paspalum St. Augustinegrass Tall Fescue (including turf-type)	4 pounds per 1000 sq. ft.	9.3 pounds per 1000 sq. ft. per year
Buffalograss Kentucky Bluegrass Perennial Ryegrass	4 pounds per 1000 sq. ft.	6.2 pounds per 1000 sq. ft. per year
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Creeping Bentgrass	4 pounds per 1000 sq. ft.	4.0 pounds per 1000 sq. ft. per year

For our final pre-emergent app of the year, we want to cover ourselves for fall but also over winter. It doesn't get cold enough for things to stop growing in most parts of the south. Even though the lawns may go dormant, the weeds and problem grasses don't. With [Prodiamine](#), we have already used 5LBs/1000 SF and our yearly maximum is 9.3 LBs/1000 SF.

Math then tells us this app is going to be 4.3LBs/1000 SF. You can round down to 4 just to make your math easy.

Again here our bag is 50LBs so that means it will cover 12,500 Square Feet at this rate.

Don't forget, water it in!

There you go folks- I hope this was helpful. If you like this type of long form content, please let me know by hitting my up on [Twitter](#) or [Facebook](#). Also, please feel free to forward this to a friend. This text contains affiliate links which means I get a commission on products you buy that I refer you to. I hope that's cool with you. If not, clear your cookies and then go buy anyway :)

Lastly, please wear proper personal protective equipment (eye protection, gloves, long sleeves, etc) as listed on the label of each product you buy. Never take your safety for granted, even if I do in my vids.

I'll see YOU in the lawn!

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