



# Bio-Stimulant Guide

By Allyn Hane, "[The Lawn Care Nut](#)"

**Disclaimer:** this ebook is written for your reference and is not meant to be exhaustive. Everyone's results vary but these tips are designed to get you down the road to success. No matter what, it's your responsibility to follow safe practices and follow all label instructions from the products you buy.

In this book, I reference labels. I have done my best to ensure those labels are accurate to the products I recommend. However, labeling changes - so always be sure to reference the label that is on the exact product you have in your possession.



Hey there Lawn Care Nuts! Welcome to the Bio-Stimulant guide and plan.

For the last couple of years, I've [used these products on my lawn](#) for [double dark results](#), and on my [project lawn in NW Indiana](#) as well as helped my buddy Jake The Lawn Kid [test them out at his place](#).

Add that to the countless testimonials I see every week and I'm feeling really good about the choice I made to go with my gut and trust that [John Perry's](#) products (referred to as "Unicorn Pee") were the real deal, and they are.

If you are unsure about "Bio-Stimulants" and what I'm referring to here, make sure you subscribe to my [podcast](#) and [YouTube channel](#) where I use these products fairly often and explain what they do and how to apply them.

That said, you guys are conditioned to want a "plan" or "guide" to follow when it comes to adding something to your program (I have no idea who would have pushed that idea 😄😄😄 ).

But this time, that's not going to happen. That's because we have so many different items to choose from in the line, and on top of that, we now have a "[build your own box](#)" option where you can mix and match items of 1 gallon ([4-gallon case](#)) or 2.5 gallons ([5-gallon case](#)).

Instead, I'm going to talk about the primary products, what each can be used for, and then give you a couple scenarios where different combinations may work for you.

First off, however, if you get either my [cool season or warm season ebooks](#), that book utilizes the [Bio-Stimulant Pack](#) as the primary "go-to" and that still stands today. It's the most versatile and useful pack and it's what I recommend for 90% of you reading this.



If you just apply the 4 products in that pack every year for the next few years (as supplements to your regular fertilization regimen), you will have beautiful healthy soil and a healthy turf on top. With that, let me break down the uses of the products in that pack

**Note:**

All of the [N-Ext products](#) contain humic and/or fulvic acid as a carbon source. Some have more than others but you'll find this is one of the unique features of this line - Humic Acid is the chelator (coordinator/optimizer) in all of them.

And this is part of the secret, Humic Acid makes all the other inputs work better and more efficiently. It's a good idea to spread out the more concentrated products so you don't waste anything.

You won't hurt anything by over-applying but I also don't want you to waste money. I give you a plan below that keeps them fairly well spaced out but I'd like you to be mindful of that as you go along.

## Bio-Stimulant Pack - 4 Gallons, 1 Gallon of Each:



### RGS

Stands for **Root Growth Stimulator** and that's exactly what it does. Hormones from sea kelp that stimulate roots and stolons/rhizomes coupled with chelating Humic Acid.

It's truly the backbone of the program, hands down, and has the highest concentration of Sea Kelp hormones in the line. It's never a bad time to apply RGS to your soil.

If you want to stimulate roots, rhizomes and/or stolons (depending on grass type) then RGS is the best place to start! Water it in.

You really shouldn't need more than 3 oz/1,000 sq ft for any single application. I have learned directly from John Perry and he will tell you that 3 oz/1,000 sq ft is plenty.



I know we like to spray angry sometimes, but there is no need with this product. More will only be wasteful.

RGS should be applied right along with your regular fertilizer apps. Think of it as a "ride along" product to maximize your fert.

Whenever you are ready to start mowing and fertilizing for the year, that's a good time to get your first application down. In fact, this should be your very first N-Ext application of the season.

To make things easy, you can spike the RGS in with other products you plan to spray. An example is if you are applying a liquid fungicide from a pump sprayer, you can add in 3 oz/gallon/1,000 sq ft of RGS right along with it.

If you are applying liquid insect control via pump sprayer, same thing, feel free to spike in 3 oz/gallon/1,000 sq ft of RGS too. This can save you time.

Of course, you can also spray RGS by itself. Whatever it takes, get it down about every 5-6 weeks or so during the year and record the application in your [lawn journal](#) or Yard Mastery app ([Android](#) or [iOS](#)) to keep track.

RGS can be applied on top of granular fertilizer like Milorganite or granular pre-emergents too. And of course, it can be mixed with other N-Ext products.

In other words, it will not interfere with other applications you are doing and instead, enhance them. If you miss an application, no need to try and “make it up” just keep on going. Another reason to keep a [lawn journal](#)!



## Got new sod?

Apply RGS at 3 oz/gallon/1,000 sq ft right on top the day it's laid and water it in. Repeat every 3 weeks. [Your sod will root very nicely](#). You also may consider the [new sod starter pack](#) that has even more goodies.

## Got new seed?

Same as above. Although you may also want to consider the [new seed starter pack](#). But you'll do just fine with new seed if you only apply RGS to it every 3 weeks until fully rooted.

**Note:** when I use terms like “apply at 3 oz/1,000 sq ft” I mean mix 3 oz of RGS into 1 gallon of water in a pump sprayer and spray that out evenly across [1,000 sq ft of lawn area](#). You can also use a hose-end sprayer.

I like using a hose-end sprayer and have gone back and forth on which one I like best. Recently, I have been using the [Ortho Dial n Spray](#) and I highly recommend you modify it like you see John Perry [recommend here](#).

Also, keep in mind, this is a cheap, \$10 sprayer and some of them work well, others don't. If you modify yours and it still won't spray well, just get another one.

Recently I also came across a [2-gallon battery sprayer](#) that I REALLY like and works very well. However, you will want to get a [better flowing tip for it](#).

Here is the video to show you how to use it:

<https://youtu.be/efbJ8eljMKc?t=1000>

Here is the blue tip I used for spraying:

<https://amzn.to/2JqWhJb>

This is a simple setup and works well if you have a lawn of 5,000 sq ft or less.



## Humic12

This is the carbon powerhouse in the line. If you have “bad soil” then you want these higher concentrations of humics to really kick up the soil life and start pulling natural nutrients from that “bad soil.”

### The benefits of Humic12 are:

- Increased root growth
- Increased chlorophyll content
- Increased nutrient uptake
- Improved soil structure
- Improved plant quality

Generally speaking, you only need to apply Humic12 twice per year. Early in the growing season is a great time and another time just coming out of summer.

These tend to also be times of transitional weather in most of the country. Up north and down into the middle of the US (the transition zone) you will find that diseases like brown patch and dollar spot start to become a problem as you leave spring and head into summer.

Then there is a similar disease “window” coming out of summer and into fall. Getting a good dose of Humic12 down just before these transition times can help prevent disease. It’s not a replacement for fungicides but a natural way to increase resistance and recovery.

Humic12 will also help increase the efficacy of your regular fertilizing regiment. No matter what fertilizer you use (Milorganite, Ringer Lawn Restore, Scotts, CX DIY, etc.) Humic12 being applied to the soil will help these ferts work even better.

Apply Humic12 at 6 oz/1,000 sq ft in mid-late spring and again in later summer or early fall. Water it in. You can mix this in with one of your RGS applications, or again, with a fungicide or insecticide or both.

Just keep in mind, too many N-Ext products in the tank together can get a little thick. Either way, putting Humic12 down on top of other lawn sprays or applications is just fine. Remember, water it in - it needs to get to the soil.





## Air-8 - Liquid Aeration

This one was the toughest for me to get behind if I'm honest. I'm a guy who truly believed in the value of mechanical aeration for lawns. Seriously, the entire lawn care world preaches it and believes in it.

Mechanical aeration is the very best way to loosen up the soil and allow grass roots to spread, right?

Well, no.

John [explains it all here](#), but in a nutshell, the purpose of aeration is to produce more surface area in the soil. Air-8 does that by driving down into the soil and breaking bonds. Every bond that is broken creates more surface area (by driving down air) where grass roots can spread and grow.

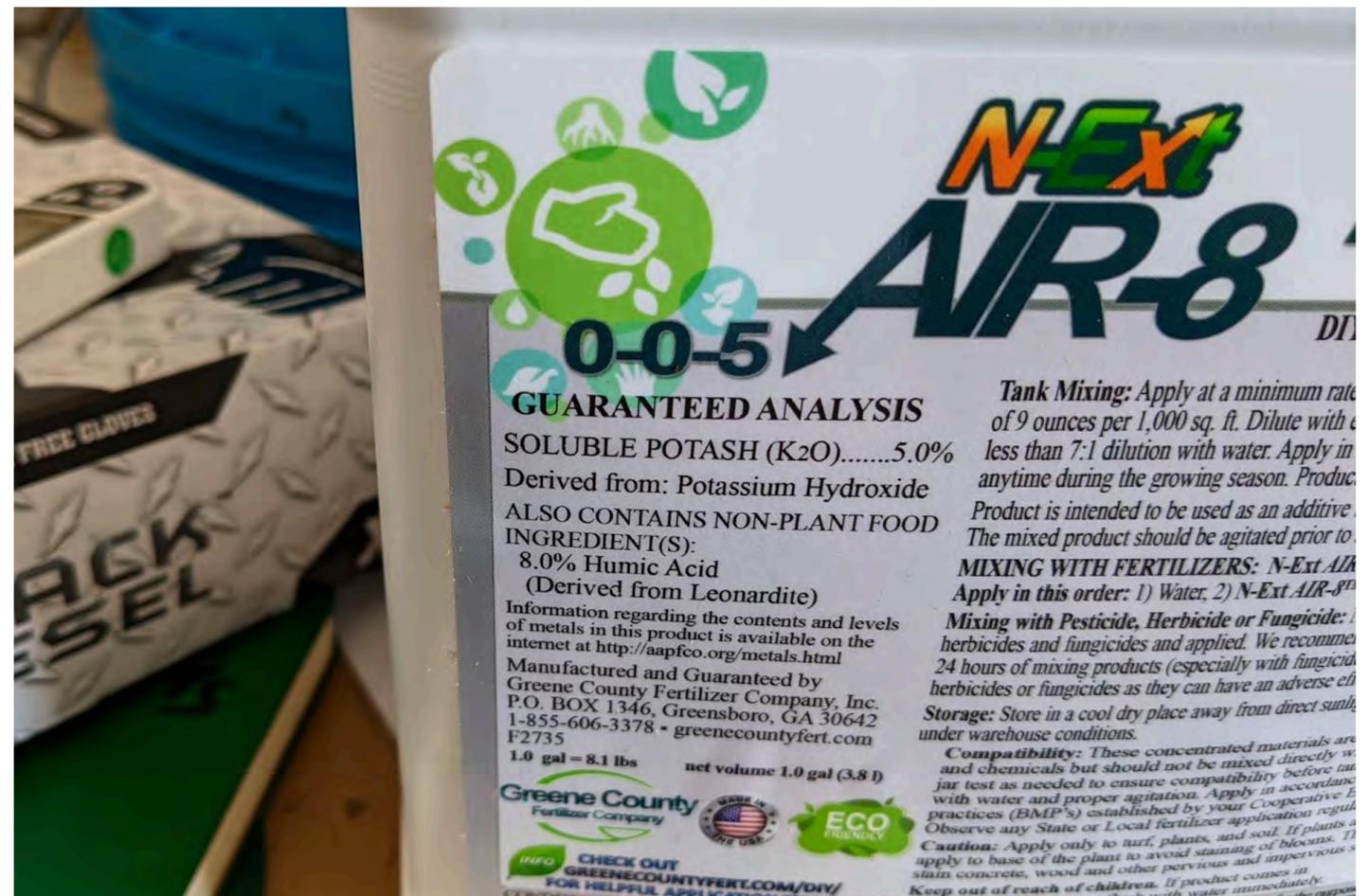
Now, I do still [recommend mechanical aeration](#) as a way to make a good seed bed if you are doing an overseeding. Poking all those holes really does help keep everything from washing away.

Plus, running an aerator is a butt-kicking that everyone needs to experience at least once in their life!

However, if you are not seeding, then just spray down Air-8 and you will get great results and never need to rent an aerator again.

**Apply Air-8 at 6 oz/1,000 sq ft in spring and fall.** Water it in.

You can mix Air-8 with other stuff just like the other products mentioned but keep in mind, too many N-Ext products in the tank can get thick, even in a hose-end sprayer.



Also, you've heard me mention now a few times that humic acid is a great soil chelator, optimizer, coordinator... it's all of those things. It truly does make everything it gets around even better - an amplifier of sorts.

Just so you know, Air-8 contains 8% humic acid as well. So just to keep things neat and tidy, you may want to separate your Air-8 applications from your Humic12 applications by 4-6 weeks.

Again, not required, but just be smart about it.

Since these both have higher humic acid concentrations and both are applied at higher rates it's best to stretch them out some for maximum benefit and minimum waste. All the more reason to keep a [lawn journal](#) so you can "play the lawn by ear" more and go on feel, and not so much on a defined schedule.

If you feel like something needs to be applied, or you just need to scratch the itch to "[spray and pray](#)" then look at what you have in your arsenal that hasn't been applied in a while and go squirt!

So far, you've got RGS to apply every 4 weeks and you've got Humic12 and Air-8 to apply in spring and fall. That's got to be enough to keep even the most aggressive amongst you satisfied!

## 0-0-2 MicroGreene

### 0-0-2 MicroGreene

So of the 4 products in the Bio-Stimulant pack, this is the only one that I'd say has any "fertilizer value." What I mean by that is this one will actually give you a visual response in the lawn within just a few days.

Typically the lawn turns quite dark blue-green from the heavier applications of 9 oz/gallon/1,000 sq ft.

And of course, I'm the Lawn Care Nut, so I care most about the visuals. But let's first look at the benefits of the MicroGreene.

Basically speaking, everyone should have in their arsenal a micronutrient stack product. If you look at a [soil test](#), ([blog post on soil tests](#)) you will find that there are macronutrients and micronutrients.

The macros are the ones we talk about most, there are three: Nitrogen, Phosphorus, and Potassium (N-P-K).

Then on the other end of the soil test you have your micronutrients. These are just as important as the macros, but are needed in much much smaller amounts.

And that is why the 0-0-2 MicroGreene is the perfect micro stack. Look at what it contains:



It pretty much hits all the bases of the micros but more than that, it too contains Humic Acid (8%) and the Sea Kelp (2%) that you find in the RGS!

I use this as a summer product mostly. That's because here in Florida, we have fertilizer blackout periods (remember all the red tide news in 2019?) where we cannot apply macro fertilizers to our lawns from June 1 until September 30.

But 0-0-2 MicroGreene is approved to use! It will keep the lawn nice and dark green and it won't push growth.

And that is where the rest of you can benefit too. You see, I've never been a big fan of pushing a ton of nitrogen on your lawn in summer anyway.

That's because heat causes stress, especially in northern cool season lawns and pushing too much N can cause flushes of growth and that's not good when summer heat is hitting full force.

If you are irrigating, and you want to keep the lawn green without unnecessary nitrogen blasts, then 0-0-2 MicroGreen is PERFECT for you no matter what type of grass you have, or where you live.

You can apply 0-0-2 MicroGreene any time of the year that you want a blast of green. Don't go crazy with it, but I like to apply this product 10 days before Halloween since everyone is going to come by to see the lawn anyway... we call this "[Halloween Domination](#)."

You can also apply it 10 days before a summer party if you want your lawn to look extra dark green and lush for your guests.

Of course, if your [soil test](#) tells you that you are lacking in micros, then this will help for sure there too.

Rates can vary depending on what you have going on - 3 oz/1,000 sq ft of MicroGreene makes a great "ride along" to an application of 18-0-1 Greene Punch.

It can also be used at those rates to kick up an application of any other fertilizer you are applying. You'll see me incorporate it in different ways below. Feel free to "mix and match" and learn as you go. This is the one product that is a secret weapon turning lawns dark dark blue.

9 oz/1,000 sq ft is all you need for regular applications. If you are going with a "summer blackout" type application program, then 12 oz/1,000 sq ft will do fine.

Either way you go, you should only need 2 applications of 0-0-2 MicroGreene in the summer.

Once again: 9 oz/1,000 sq ft if you are still applying regular fertilizer [according to my lawn plans](#), or 12 oz/1,000 sq ft if you are in summer blackout mode.

## Summary

Here's how it all shapes up, remember, space these out how you like, be smart about it, mix them together if you want:

### Spring:

- RGS - 3 oz/1,000 sq ft
- Humic12 - 6 oz/1,000 sq ft
- Air-8 - 6 oz/1,000 sq ft
- RGS - 3 oz/1,000 sq ft

### Summer:

- 0-0-2 MicroGreene - 9 oz/1,000 sq ft
- RGS - 3 oz/1,000 sq ft
- 0-0-2 MicroGreene - 9 oz/1,000 sq ft

### Fall:

- Humic12 - 6 oz/1,000 sq ft
- Air-8 - 6 oz/1,000 sq ft
- Optional Halloween: 0-0-2 MicroGreene - 9 oz/1,000 sq ft
- RGS - 3 oz/1,000 sq ft

Here is how much of each product you will use in 1 full year if you have a **5,000 sq ft lawn**.

Remember, you have 1 gallon of each product and one gallon is 128 oz.

### RGS - 4 applications per year:

$$5 \times 3 = 15$$

That's 5,000 sq ft x 3 oz/app rate = 15 oz per application.

$$15 \times 4 = 60 \text{ oz used in one season.}$$

$$15 \times 4 \text{ applications per year} = 60 \text{ oz used.}$$

You will have 68 oz leftover for use on your plants or wherever else.

**Note:** if you are someone who gets the itch to spray stuff down even when I tell you it's not needed, this is the product to use as your "go-to" - you could actually apply this every 4 weeks if you really wanted to.

## **Humic12 - 2 applications per year:**

5 x 6 = 30 x 2 = 60 oz used in one season.

You will still have plenty leftover for the next season.

## **Air-8 - 2 applications per year**

5 x 6 = 30 x 2 = 60 oz used in one season.

You will still have plenty leftover for the next season.

## **0-0-2 MicroGreene - 2 applications per year**

5 x 9 = 45 x 2 = 90 oz used in one season.

You will still have some leftover if you want to juice things up prior to Halloween or another special occasion.

For the most part, you will get nearly 2 years worth of applications out of the Bio-Stimulant Pack if you have a 5,000 sq ft lawn and follow this plan. You may need to [reload on the MicroGreene](#) but other than that, be all good.

The [Bio-Stimulant Pack](#) costs \$104 so figure about \$52 per year added to your budget. Not bad really when you consider the cost of [DIY vs Professional lawn programs](#).

## **Bio-Stim FAQ:**

If you still have lingering questions on these N-Ext bio-stim products here are some of the most frequently asked ones.

### **Do I have to water these in?**

They do need to get into the soil to be effective and I also recommend there is some soil moisture present before spraying. Anything you spray, including plain water, on barren dry ground is just going to run off. If you are irrigating regularly, then your soil moisture will be fine.

After you apply, you should get them watered in. If you use a hose end sprayer, that goes down with quite a bit more water but you should still run the sprinkler for a few minutes to move the stuff into the soil.

### **Can I mix them together?**

Yep, sure can. They all play nice together. They also play nice with any other liquid blanket apps you may be spraying.

So if you are blanket spraying prodiamine for a pre-emergent app you can also add in 3 oz/gallon of RGS if you like. That would be a good idea considering prodiamine can have some negative effect on roots.

Not enough to really do damage per say, but it's still not "good for the plant" either, so give er' a little RGS to sooth the pain and stimulate a speedy recovery.

You could also mix RGS, 0-0-2 MicroGreene, or 7-0-0 GreenEffect into your grub control, nuisance pest control or fungicide application too. All good, spray and pray, save time in the process.

Just use a 3 oz/gallon rate when you do this. No need to get too carried away. You could also mix your fungicide with your grub control with your RGS. All good too, and soupy!

## Do I have any heat or cold restrictions?

The only concern that may come about is spraying RGS at over a 6 oz/gallon rate on grass on days over 90 degrees. If you do this, you may see some tip burn. If you forget and do it, just get it watered in immediately. Tip burn is not serious anyway.

## Will any of this interfere with my fertilizer or pre-emergent applications?

Nope. I'd like you to think of these applications as a completely separate program but also know that the N-Ext products will optimize your turf and soil to better utilize the N-P-K you are applying.

That's really it. Feel free to spray and pray with the rest of it whenever you like, just keep in mind some of these products can stain concrete so don't get too crazy.

## Additionally, you should still follow general common sense rules with these products such as:

1. Never spray on dormant turf. Not summer dormant or winter dormant turf.
  - **Exception:** if you are coming out of summer and plan to get things going again in fall, ok to spray soil products (RGS, Humic12, Air-8) on dormant turf, water them in.
2. Never spray on frozen ground.
3. Never spray in a downpour.
4. Never spray if the ground is saturated.
5. Don't spray any of these products on plants that are in bloom. Wait until blooms drop.

## Additional Program (optional)

Some of you have extremely compacted clay soils where you live. Just so you know, clay soil is my very favorite type of lawn soil. Trust me, once you work in locked up sandy soils like we have here in Florida, you'll be wishing you had that hard-as-concrete clay soil back in no time!

That said, if yours truly is hard and compacted, then instead of getting the Bio-Stimulant Pack, get the [Compaction Cure Combo](#) and run with that for this season.

It contains 2 familiar products but we are going to really hammer them in deep for a season. Much deeper than recommended before. This hammering is going to loosen surface compaction AND root zone compaction.

By stimulating root growth at the same time that the entire soil surface is opened up, you allow for increased air and water penetration. Think of it like attacking compaction at the soil's surface as well in and below the root zone.

As an additional benefit, each [Compaction Cure Combo](#) application leaves behind carbon particles that serve as both a food source to soil organisms and a block against the binding (re-compaction) of soil particles.

The result is a noticeably softer feel to the lawn, a significant increase in root mass and depth, increased soil organic matter, better water infiltration and penetration, significantly increased plant available water, healthier turf, and more consistent color.

If you want to test this: try sticking a screwdriver down into your lawn before each application.

Wait a week after you have watered it in and go test again. Each time it will get easier and easier.

## Compaction Cure Applications

This mix will get a little thick so it's recommended you apply with a hose-end sprayer.

- RGS - 6 oz/1,000 sq ft
- Air-8 - 9 oz/1,000 sq ft

Mix and spray them together, water them in right away - we want this in the soil. Apply this 2x in spring, and 2x in fall.

Do not apply when outside temps are over 85 degrees. No matter what, water it in immediately (pack comes with more instructions on the label).

If your soil is hard and compacted, get the [Compaction Cure](#) here.

## Final Thoughts

In the end, these bio-stimulants are meant to optimize or enhance whatever your current program is. They are not a replacement for regular fertility but instead, are there to optimize it.

Good news is that optimization comes with efficiency so you actually can, over time, use less macro fert and still get the same or even better results overall.

That's why the pros use bio-stimulants, BTW.

Whether it's on a sod farm, or a landscape spray pro treating 20 lawns per day, bio-stimulants such as humic acid will reduce the amount of needed macronutrients to get the same overall result.

So if you are really looking to dial in your program, the [Bio-Stim Pack](#) is a great place to start.

Want further info and training? Get [one of my lawn guides](#) that gives you the full season lawn plan that includes the bio-stimulants and a few different plans to choose from.

It's got a beginner plan, an all-liquid plan, and a more advanced plan. In the beginner's plan, most of the recommended products can be found right at your local Home Depot, Ace, or Lowes.

Of course, you can juice things up by purchasing a [Bio-Stim Pack](#)... but you don't have to. Thousands of people get great results from following my plans without adding any of the extras.

Just be careful though, because eventually you will get hooked and at some point, go "full nut" on this stuff.

Until then, I'll see YOU in the lawn!

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Of course, YouTube:

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