

Perennial Maintenance - Setting Up a Schedule!

By Jon Cooner

One of the biggest benefits of Imperial perennial blends is that they're designed to last up to five years without replanting. Helping them last as long as they can isn't hard. It just requires a little maintenance on your part during the off-season, and setting up a maintenance schedule is a great way to make sure you cover the bases.

To understand how to set up an effective perennial-maintenance schedule, you should keep two things in mind: (1) perennial maintenance can greatly extend the life of the planting, so don't skip it, and (2) be sure you do it in a timely manner.

The reason you shouldn't skip perennial maintenance is the same as the reason you perform regular maintenance on your car. Doing it in a timely manner, though, is much more critical with perennial forages. That's true for several reasons. First, unlike maintaining your car, which is pretty much an on-going, never-ending process, maintaining your perennial must be started anew every spring and completed that year. Also, while being a little tardy changing your oil once in awhile is generally of little practical effect on the lifespan of your vehicle, the same is NOT true of perennial maintenance. Being late with some perennial maintenance steps can quickly cause problems you'll then have to spend additional money and time to correct.

In this article, we'll look at the order in which you should set dates on your maintenance schedule for each step. Then, we'll look at why by examining each step in greater detail. Finally, I'll provide an example of what a maintenance schedule looks like.

Step-By-Step Planning

<u>Order of Steps in Developing a Perennial Maintenance Plan*</u>	
<u>Step</u>	<u>Action</u>
1	Set date to spray Arrest for grass control <i>(the most critical step from a timing standpoint!)</i>
2	Set dates to mow in the spring and fall.
3	Set date to spray Slay (if you are maintaining Imperial Whitetail Clover)
4	Set fertilization date or dates
5	Set date to apply any lime needed
6	Soil test as early as possible in spring

* Note: All dates may vary based on temperature and rainfall.

How you structure your perennial-forage maintenance schedule depends almost entirely on one crucial point: some steps are more critical as to timing than others, and you should schedule the most critical first, and then the less critical around them. Here's the order to go by:

First, set your date to spray Arrest. The most critical step from a timing standpoint is grass control with Arrest, so set that date first.

Second, set your dates to mow in the Spring and Fall.

Remember, don't mow within two weeks before or after spraying Arrest.

Third, if you are maintaining Imperial Whitetail Clover, set your date to spray Slay. You have two timing options for optimum control with Slay: One alternative is to apply Slay "pre-emergent," or just before weeds green up in the spring. Unlike Arrest, Slay contains a residual that can stay in the soil for awhile, continuing to provide weed control even after spraying. You could select this option if, for example, the plot has been growing for several years, and your experience suggests that you will have broadleaf weeds in the plot when spring green-up arrives. The other alternative is to apply Slay "post-emergent," which means after weeds have re-appeared in the spring. If you elect this option, remember that like Arrest, Slay is also a "small-weed" herbicide, so you should spray before the weeds mature for optimum control. And remember – if you will be maintaining any Imperial perennial other than Imperial Whitetail Clover, don't apply Slay AT ALL.

Fourth set your fertilization date or dates. Some folks elect to fertilize once a year and others twice. Don't fertilize when plants are in

shock from mowing or when conditions are excessively hot or droughty. Also, don't fertilize when the forage leaves are wet, such as with dew, rain or herbicides.

Fifth, apply any needed lime at virtually any time. But, try to leave a few weeks between liming and fertilizing if possible.

And remember! Order your soil test kits early so that you'll have them on hand as you start maintaining your plots.

Perennial Maintenance Steps

Now, let's look at why the dates to perform each maintenance step should be set in the order shown above.

"When it comes to maintaining perennial food plots, grass control is your number one priority. The best time to spray Arrest to control grass depends on the age of the grass. For best results with Arrest, spray after grasses have started to actively grow and, for best results, before it matures to more than about 6-12 inches tall."

Dr. C. Wiley Johnson

Maintenance Step: Arrest for Grass Control in Imperial Perennials **Your Number-One Maintenance Priority!**

The foregoing quotation is one of the many things the Institute's former Director of Plant Breeding, Dr. Wiley Johnson, hammered into our heads over and over. The reason is that the best way to control grass is with selective grass herbicides such as the Institute's Arrest™ herbicide product. Like other small-weed herbicides, Arrest offers the best control of "seedling" grasses (grass that is actively growing but has not yet matured to more than 6-12 inches tall.) Control is usually still possible even after grasses mature, but it can be harder and more expensive, often requiring a higher concentration of herbicide and additional applications. Let's examine this in greater detail.

There are many weed-control methods, but the best way to control grass is usually with selective herbicides such as Arrest. Technically, a "weed" is defined as "any plant that's growing where it's not wanted." Accordingly, any unwanted grass growing in our food plots is one of many types of "weeds" we might see in our food plots. There is a broad variety of weed-control methods, including for example herbicides, mowing,

hand-pulling, etc. However, given the broad variety of weed types, no single weed-control method will be the best in all situations. That's because weed-control methods generally work by interrupting one or more of a weed's life or reproductive cycles, and weeds reproduce in variety of ways. For example, many types of weeds that reproduce by re-seeding (flowering and dropping seeds on the soil) can be effectively controlled by mowing to prevent flowering. Grass, though, generally doesn't reproduce by re-seeding. Instead, grass generally grows and reproduces directly from its root system, so mowing may be of less effect for controlling grasses. Instead, selective herbicides can be a better option, since they are actually taken in by the grass and attack it that way.

For optimum grass control, Arrest applications should generally be timed during a window of a couple of weeks in the spring after grasses are actively growing again but before they mature.

Arrest is designed to enter the leaf area of an actively growing grass. Accordingly, it should not be sprayed until grasses have greened up and are actively growing again in the spring. A good rule of thumb for determining when any grasses in your food plots are actively growing to the point that they will take in the herbicide is to watch your lawn in the Spring. You'll probably notice that it will start getting green at first, but it will take a few more weeks until it starts quickly growing taller. It's a pretty safe assumption that grass in your food plots will green up and start growing about the same time as your lawn. So, watch your lawn, and when you see that it's starting to actively grow again, you'll know that it's time to spray your perennial plots with Arrest.

And don't wait too long to do it. Although you need to wait until grass is actively growing again before you spray, you want to try to spray before the grass has matured taller than 6-12" for best results. That's because Arrest and similar products are "small-weed herbicides," which are designed to provide optimum control of grasses that are still young, before their roots fully mature. It's still possible in most cases to control mature grass with Arrest, but it will almost certainly cost more money and time, since a stronger herbicide solution and additional applications may be required.

When it comes to setting a maintenance schedule for your perennial plots, the importance of timing grass-control efforts with Arrest is a good thing! Since grass control is your number-one priority that should be performed within a few weeks after spring green-up, you should start making your maintenance schedule by fixing the date you plan to spray Arrest. Once you set that date, then all the other steps can be timed around it.

As you set the dates for the other maintenance steps, you'll find that sometimes more than one can be performed each time you visit the plot site, which can save you time and money. And the really neat thing is that since grasses tend to green up at different times across North America, the maintenance schedule will usually have the same steps in the same order no matter where in North America you're located. You just have to start with a different date: the date grasses start actively growing in your area.

Maintenance Step: Mowing Imperial Perennials to (1) Help Keep Them Lush, Nutritious and Attractive, and (2) Control Weeds

Our maintenance instructions for all Imperial perennials include mowing them a few times in the spring and summer, and maybe again in early fall. For best results, you should try to mow before the forage plants and weeds have a chance to flower. Your goal is to prevent them from doing so. There are three reasons. First, it takes huge amounts of energy and nutrients out of a plant to flower. Since Imperial perennials sustain themselves from their root systems, and so do not need to re-seed, mowing to prevent flowering can keep vital energy and nutrients in the forage plants where they'll be available to your deer. Second, mowing the forage plants yields the same effects as pruning a bush, in that it can stimulate growth, especially at the lower levels of the forage plants, keeping them as lush, nutritious and attractive as possible. Third, mowing can help control many upright, annual weeds that rely on flowering to reproduce.

Timing Mowing: Try to mow the plot a few times in the spring and summer, and maybe one more time as you start getting into fall. Generally, you should mow whenever you see either of two things: (1) the forage plants or upright weeds look like they're getting ready to put on seed heads, or (2) the plot reaches a height of about 10-12 inches.

Again, your goal is to mow the plot before the forage or any weeds have a chance to flower. If you can't mow until after they flower, though, still go and mow as soon as you can because mowing will still yield the other benefits I mentioned, such as thickening the forage plants at their lower levels.

Also, mow the forage plants to about 4-6 inches tall in the spring and summer, and don't wait until the forage gets more than about 12-14 inches tall before you mow. (Otherwise, for example, say if you let the forage plants get 20 inches tall and then mow them to 4-6 inches, you might remove too much of the foliage from the forage plants at one time, which can allow too much moisture to evaporate from the soil.) If you do wait too long and your forage is taller than about 12 inches when you're ready to mow, just reduce the height a couple of inches the first time you mow, wait a few weeks for the plants to recover, and then mow a little bit lower.

Finally, **DO NOT mow when conditions are excessively hot or droughty**, or within a couple of weeks either before or after you spray herbicides.

Maintenance Step: Slay for Broadleaf-Weed Control in Imperial Whitetail Clover

As I mentioned, many upright, annual weeds can be controlled quite well by mowing the plot to prevent the weeds from having a chance to flower. If you waited too long to mow and you let your weeds flower, or if you have other broadleaf weeds that mowing didn't tackle, you may have another option if the forage you're maintaining is Imperial Whitetail Clover or any other clover or alfalfa: the Institute's Slay™ herbicide. Slay is designed

to offer control of most broadleaf weeds, and it can be sprayed on Imperial Whitetail Clover and any other clover or alfalfa. It should not be used on any other Imperial forages because it will damage one or more of their components.

For optimum results, spray Slay either just before spring green-up, or within a few weeks after. Like Arrest, Slay offers optimum control of young weeds. However, it also contains something Arrest doesn't: a "pre-emergent." That means that it's designed to provide optimum results not only if sprayed when weeds are actively growing like Arrest, but also if it's sprayed just before spring green-up, before broadleaf weeds reappear. The pre-emergent in Slay also helps Slay continue to provide control of many weeds well after spraying.

Other Timing Issues: Remember, our whole perennial-maintenance schedule is based on the date we plan to spray Arrest to control grass. Slay applications should be timed so that they are done at least three days before or after any Arrest application. Also, don't spray Slay (or any other herbicide) within two weeks before or after mowing, or when conditions are excessively hot or droughty.

Additional Critical Information!

Before we go through the other maintenance steps, let's recap a few of the more critical timing issues with regard to the steps we've already covered: Arrest, mowing and Slay. These are very important, so keep in mind when setting up your perennial maintenance schedule.

Rule 1 - Before using Arrest, Slay or any other herbicide, you ***MUST*** do three things: (1) specifically identify the grass or other weed you are trying to control (e.g. Bermudagrass, Johnsongrass, curly dock, etc.), (2) specifically identify the forage plants you are trying to save (e.g.: clover, alfalfa, chicory, forb, etc.), and (3) once you have those pieces of information, check the label on Arrest, Slay or any other herbicide.

You'll be checking the herbicide label for some very important information. The label will tell you whether the herbicide will control the weeds you have and do so without harming your forage plants. It will also tell you how to mix the spray solution, and how to properly dispose of any solution you have left over after spraying. ***Always follow the label instructions precisely.***

The Arrest and Slay labels and an FAQ are available on-line here: <http://www.whitetailinstitute.com/products/herbicides/>. Also, an article that goes through herbicide basics in detail is available at the following link: <http://www.whitetailinstitute.com/info/news/mar08/6.html>. If you have any questions, call our consultants for advice BEFORE YOU SPRAY!

And as we've already discussed, remember that Arrest and Slay should not be tank mixed together. Instead, at least three days should be left between spraying each. Also, Arrest and Slay should not be sprayed within two weeks before or after mowing, and you should not mow within two weeks before or after spraying Arrest or Slay. Do not spray when conditions are excessively hot and dry.

Maintenance Step: Soil Testing

Anyone who has read even a few issues of *Whitetail News* knows how critical soil testing is. In a nutshell, performing a proper soil test through a professional soil-testing laboratory is the only way to determine EXACTLY what your soil pH and nutrient levels are and how much lime and fertilizer you need to buy.

Most folks already do a good job of testing their soil before they plant. But when you consider how much the costs of lime and fertilizer have gone up over the past few years, you can see how important it is to test your soil ANY time you are considering buying lime or fertilizer. It's the only way to avoid wasting money by buying excess lime and fertilizer that you don't need.

Again, use a soil-test kit that actually sends the soil off to a lab for testing. The cheap do-it-yourself slurry or probe testers may not give you the consistently accurate readings or the level of precision you will get with a lab test. Also they don't tell you exactly how much lime or fertilizer you actually need.

Also, be sure to identify two things on the soil-test form: (1) the forage in the plot, and (2) that you'll be "maintaining" (as opposed to "planting") it. That way, the lab can precisely tailor its recommendations.

Try to perform your soil test far enough in advance so that you won't be rushed when your schedule says it's time to lime and fertilize.

Maintenance Step: Liming and Fertilizing

These two maintenance steps are very important. Like our other maintenance recommendations, they should not be skipped.

Soil pH is perhaps the most critical factor when it comes to the overall health of any plant. In simple terms, soil pH is a direct measurement of how well your forage plants will be able to uptake nutrients from the soil. Optimum soil pH for most forage plants is 6.5 or higher. Our planting instructions call for soil pH to be adjusted before planting by incorporating (disking or tilling) lime into the soil before planting. Once soil pH is raised to optimum range, though, it will start to return to an acidic state over time from the surface down, so you may need to add more lime to the surface every year or two in order to slow the process. Likewise, plants need food just like any other living thing, and you feed them by adding fertilizer to the plot every year. As I mentioned above, perform a proper soil test before buying lime and fertilizer to determine exactly how much you need.

Apply any additional lime needed at virtually any time. Apply fertilizer when plants are actively growing, but when the foliage is dry. Timing lime and fertilizer applications is not as critical as timing grass control. Accordingly, the dates you set in your maintenance schedule to lime and fertilize should depend on when you plan to do the other maintenance steps.

Generally, most folks lime and fertilize in the spring or fall. The only requirements for timing fertilizer applications are: (1) the plants should be actively growing, (2) the plants should not be in stress, such as just after mowing, and the foliage should not be damp, which might make the fertilizer stick to the leaves, and (3) if possible, leave a few weeks between lime and fertilizer applications.

Maintenance Schedule Example

Now we're ready to see what a perennial-forage maintenance schedule looks like. Before we get into the schedule itself, though, you need to know what I mean by a couple of terms you'll see in the example.

"Possible Slay Application Date" refers to alternative dates for applying Slay to Imperial Whitetail Clover for "pre-emergent" weed control (before spring green-up) or a "post-emergent" weed control (just after spring green-up). I decided to use Imperial Clover in the example since that's the only way I could work Slay applications into the example (Imperial Whitetail Clover is the only Imperial perennial that should be sprayed with Slay.) If you're setting up a maintenance schedule for any Whitetail Institute perennial other than Imperial Whitetail Clover, omit Slay applications entirely! As used in the example,

"Possible Fertilization Date" refers to alternatives when mowing and herbicide applications don't prohibit fertilization (as long as the plants are actively growing and not damp).

Finally, remember this critical point! Planning starts with setting a date to perform grass control with Arrest. ***I'll assume in the example that grass in the area where the forage is growing tends to start actively growing again around May 1, and the schedule setting for most other maintenance steps depend on that date!*** When you make your own schedule, use the date grass starts actively growing in your own area as the starting point.

Now, let's look at a perennial-forage maintenance schedule in action. Keep in mind that the dates shown may vary based on temperature and rainfall.

A Month or So Before Spring Green-Up: Order your soil-test kits from the Whitetail Institute so you'll have them on hand when you start maintaining your plots. Order one kit for each site.

April 1: **Start watching your lawn to see when it begins to show a little green. When it does, start watching a bit more closely to determine when it begins to actively grow again.** You know that if you need to spray Arrest to control grass in your plots, you'll get optimum results if you spray as soon as grasses have started actively growing again. Generally,

they'll be actively growing within a few weeks after you start to see a little green appearing. It's a pretty safe bet that grasses in your food plot will appear and start actively growing about the same time as the grass in your law.

April 15: Possible Slay Application Date (Imperial Whitetail Clover Only):
If you already know that your Imperial Whitetail Clover plots will have broadleaf weeds that you have identified as weeds Slay will control, you can spray Slay just before spring green-up as a pre-emergent.

May 1: **YOU SEE YOUR LAWN STARTING TO ACTIVELY GROW!**
The window for optimum results with Arrest has started.
You'll need to go to the plots to see if you have weeds invading them. If so, you'll need to identify the weeds to determine if they can be controlled with a herbicide. That means you'll have to specifically identify the weeds, so take along a weed-ID book. Alternatively, take along a digital camera so you can have them identified by the Whitetail Institute by email, or by your local farm-supply store or county agent.

While you're there, you might as well pull your soil-test samples too.

Afterwards, send your soil-test samples to the lab. If you found grass or broadleaf weeds starting to infest the plot, identify them and then check the Arrest and Slay labels on the website to make sure that the herbicides will control the unwanted plants without harming your forage plants. If you determine that Arrest, Slay or both should be sprayed, buy the products and get ready to spray. By then, you should have also received your soil test results.

May 15: Once your soil-test results are in, lime the plot if the soil-test report says it's necessary. Then, spray the plot with Arrest if necessary.

May 18: Possible Slay Application Date (Imperial Whitetail Clover Only):
If you are maintaining Imperial Whitetail Clover, you didn't spray Slay before green-up, and you have identified the weeds in your plot as something Slay will control, you can spray Slay. If you sprayed Arrest, then wait three days after spraying the Arrest solution before spraying the Slay solution. Omit this step if you are maintaining a Whitetail Institute perennial other than Imperial Whitetail Clover.

June 1: At least two weeks after you last sprayed Arrest or Slay, check the plot to see if either (1) the forage plants and any weeds look

like they're getting ready to flower, or (2) the forage plants are getting a little taller than 10-12 inches.

If either is the case, then mow the plot to a height of 4-6 inches.

If neither is the case, then this is a Possible Fertilization Date, as long as the plants are actively growing, and not under stress from recent mowing or due to excessively hot, droughty weather. If you decide to fertilize, wait until the forage is not damp from dew or rain.

June 15 – August 15: Mow when necessary until weather becomes excessively hot and droughty, and then stop. Try to mow before the forage gets over 10-12 inches tall.

August 15: Possible Fertilization Date, if you have not already put out all the fertilizer recommended by your soil-test report, and as long as the plants are actively growing and not under stress from recent mowing or due to excessively hot, droughty weather. If you decide to fertilize, wait until the forage is not damp from dew or rain.

August 30: Mow the plots once more to stimulate them as they enter fall.

See? Maintaining an Imperial perennial isn't hard. But, like anything you want to last, maintenance is something you have to do. Now that you understand how to set up a perennial-forage maintenance schedule that can help you make sure you cover all the bases efficiently and with as little cost as possible.