



How to Select the Right Forage...

Whether Your Conditions are Optimum or Not

By **Jon Cooner**

The Whitetail Institute's line of forage products is designed to cover virtually any need and planting situation our field testers have. Since each Imperial forage product is scientifically designed to perform best in a specific set of conditions, no single forage blend is going to be the best choice for all planting situations. This article will discuss the basic factors you should consider when choosing a forage for a particular plot site, and in what order you should consider them.

The factors that will influence your choice of a forage product include rainfall levels in your area, whether or not you can access the site with equipment, the soil type and slope of the site, and the specific function you want that particular site to fulfill in your overall food-plot system. Some of these may be different from one site to the next. Accordingly, you should start by selecting your plot sites, and then choosing a forage for one site at a time. Then, make a list of all Imperial forage blends, and go through the following steps in order, eliminating options from the list as you go. When you are done, you'll have one or more Imperial forages that will be the best options for that particular site.

For additional information or assistance in choosing the right forage for your needs, our highly trained in-house consultants are available from 8:00 am — 5:00 pm, Central Time, Monday through Friday, at (800) 688-3030, extension 2.

STEP ONE: SELECT A FORAGE FOR ONE PLOT SITE AT A TIME: As I mentioned, some of the forage-selection factors I mentioned are going to be different from one plot site to the next. Some of the factors I mentioned such as soil type and slope are unique to each site. Also, you may be able to access some sites with equipment, but not others. Each factor and step is important, so you should go through all the steps in the forage-selection analysis for one plot site at a time.

STEP TWO: MAKE A LIST OF ALL IMPERIAL FOR-

AGES: Choosing the correct forage for a particular site is pretty much a matter of elimination. As I said, although some conditions are ideal for several Imperial forages, each Imperial forage blend is designed to do best in a specific set of circumstances. So, make a list of all Imperial forage products, and list each according to whether it is a "perennial" (one designed to last multiple years without replanting) or an "annual" (designed to last for a specific part of a year).

Chart 1 shows what your list will look like at the beginning.

Chart 1

Perennial Forage Products

Imperial Whitetail Clover™
Imperial Whitetail Chicory Plus™
Imperial Whitetail Alfa-Rack Plus™
Imperial Whitetail Double-Cross™
Imperial Whitetail "Chic" Magnet™
Imperial Whitetail Extreme™

Annual Forage Products

Imperial Whitetail Power-Plant™
Imperial Whitetail Winter-Greens™
Imperial Whitetail Pure Attraction™
Imperial Whitetail No Plow™
Imperial Whitetail Secret Spot™

Chart 2: EQUIPMENT REQUIREMENTS FOR IMPERIAL FORAGES

Product	Ground Tillage Needed For Seedbed Preparation?	Mowing and Spraying Strongly Suggested For Yearly Maintenance?
Imperial Whitetail Clover	Yes	Yes
Chicory Plus	Yes	Yes
Alfa-Rack Plus	Yes	Yes
Double-Cross	Yes	Yes
“Chic” Magnet	Yes	Yes
Extreme	Yes	Yes
PowerPlant	Yes	No
Winter-Greens	Yes	No
Pure Attraction	Yes	No
No Plow	No	No
Secret Spot	No	No

The Planting and Maintenance Instructions for Imperial Whitetail Clover provide good example of what equipment is needed to prepare a seedbed for an Imperial perennial blend and maintain it each spring. You can review the instructions at <http://www.whitetailinstitute.com/info/planting/>.

STEP THREE: CAN YOU ACCESS THE SITE WITH EQUIPMENT?

All Imperial perennial blends and most Imperial annual blends should be planted in a seedbed that has been prepared with equipment. (Imperial Whitetail Extreme “can” be planted in a seedbed that has not been tilled, but for best performance, the seedbed should be prepared with equipment). All Imperial perennial forages, including Extreme, also require spring maintenance, including periodic mowing and, when necessary and appropriate, spraying with selective herbicides such as Arrest™ and Slay™ to control weed competition.

Chart 2 shows a list of Imperial forage blends showing whether each requires equipment for ground tillage when preparing a seedbed, for maintenance, or both.

As you can see from Chart 2, if you cannot access the site with equipment to prepare a seedbed, you can narrow your list of options for the site down to two



products: Imperial No Plow and Secret Spot. Both are designed to be planted without equipment, and neither requires equipment-related maintenance. So, here’s

where we stand at the end of Step Three:

If you can’t access the site with equipment, select No Plow or Secret Spot for the Site. Choose No Plow if you will be planting in the spring (most but not all areas) or in the fall, and your plot will be 1/2 acre or larger. Choose Secret Spot if you will be planting in the fall, and your plot 1/0th acre (or 4,500 square feet) in size. Choose Secret Spot XL for a plot 1/4 acre in size.

If you can access the site with equipment, you still have all or most Imperial forage blends on your list of options for the site, so go on to Step Four.

STEP FOUR: DETERMINE YOUR AREA’S YEARLY RAINFALL LEVELS AND PATTERN: Some Imperial forage blends require more annual rainfall than others.

Chart 3 shows the “minimum” yearly rainfall requirements for each Imperial forage product.

Also, yearly rainfall patterns can affect your forage choice. Chart 3 shows the minimum rainfall requirements for each Imperial forage product. Be sure to read the explanatory information right below the chart! The levels shown assume that rainfall is received on a reasonably constant basis over the course of the entire year. Some areas of the U.S. receive more rain in some seasons of the year than others. Central Florida, for example, receives most of its annual rainfall during the spring, and then rainfall gradually begins to taper off in early summer with very little rainfall received in the last quarter of the year. If you’re in such an area, Imperial perennial blends can still be excellent options, although they may act more like annuals than perennials. Most areas east of the Mississippi River, though, receive at least 30 inches of rainfall every year and on a reasonably consistent basis throughout the year.

If you’re not sure exactly how much rainfall your area receives each year, you can make a pretty good estimate by looking at two things: a few years’ worth of historical rainfall information for your area, and rainfall forecasts. A great resource is the website of the National Oceanic and Atmospheric Administration’s National Weather Service, www.weather.gov. I haven’t checked the information for all cities in North America, of course, but whenever I have looked up a city, I have



If you can access the site with equipment, you still have all or most Imperial forage blends on your list of options for the site.

Chart 3: MINIMUM YEARLY RAINFALL REQUIREMENTS FOR IMPERIAL WHITETAIL FORAGES

Minimum Annual Rainfall Required	Products
30” per Year	Imperial Whitetail Clover Chicory Plus, Alfa-Rack Plus and Double-Cross
20” per Year	“Chic” Magnet
15” per Year	Extreme
At Least Enough in Spring and Summer to Grow Beans and Corn	Power Plant, No Plow
At Least Enough in Fall and Winter to Grow Winter Wheat and Oats	Winter-Greens, Pure Attraction, No Plow, Secret Spot

* Most areas of the United States east of the Mississippi River receive at least 30 inches of rainfall a year.
** No Plow can be planted in the Spring in most (but not all) areas. Planting dates for each area are listed on the back of the product bags and are also available on-line at <http://www.whitetailinstitute.com/info/planting/>.

Whitetail Institute Imperial Perennial Blends



found links to both historical and forecasted rainfall information.

When looking for historical rainfall information, try to find the actual levels. Many sources list historical rainfall data as an average for a certain time period. What you need, though, are the actual minimums because the rainfall requirements shown for forages are the minimum requirements you'll need every year, not averages.

Then, when you look for forecast data, try to find a forecast that is for as long a period in the future as you intend your forage to grow. For example, if you are considering planting an Imperial perennial, try to find forecast information out to 3 to 5 years. If you will be planting an annual, then you'll only need forecast information for the months that the forage will be growing.

We've covered a lot, so let's recap. If you still haven't selected a forage for the site yet, we know that the following facts are true about the plot site. If any of these isn't true, then you've missed a step and need to go start over. If they are true, though, then it's time to go on to Step FIVE.

1. You can access the site with ground tillage equipment to prepare the seedbed (required for all Imperial blends except No Plow and Secret Spot),
2. You receive at least 15 inches of rainfall in your area every year (minimum rainfall required for the most low-rainfall-tolerant perennial, Imperial Extreme),
3. You receive rainfall on a fairly regular basis throughout the year (not highly cyclical, such as almost all rainfall in the spring and almost none in the fall and winter).

STEP FIVE: WHAT SPECIFIC ROLE YOU WANT THE SITE TO PLAY IN YOUR OVERALL FOOD-PLOT SYSTEM? Step Five is where the real fun starts. That's because Step Five is the first step that doesn't deal with what you "must do," but with what you "want to do." Specifically, Step Five will be for you to identify what role in your food-plot system you want the forage in the plot to play.

What you may be looking for is a year-around forage that will stay around for several years without having to be replanted. Or, you may want a year-around forage source that will have one forage for fall and winter, and another completely different forage for spring and summer. You may also just want the plot to be highly and attractive just for the hunting season, or even something that will be a short-term forage to keep the plot highly and nutritious for just a few months until you reach your next planting window for an Imperial perennial.

All of these goals can be broken down into one of two categories — the forage you want will be to either grow for multiple years without replanting, or meet a specific targeted need during part of the year. Let's look at how each of these works.

(A) If you want the forage in the plot to provide year-round food for deer, for multiple years, and without you having to replant every year, choose an Imperial perennial blend. Imperial perennial blends are designed to last year-around (with Mother Nature's cooperation of course). To select the right Imperial perennial blend, you should consider two factors specifically related to the plot site itself (remember, we're choosing a forage for one site at a time). Those factors are the soil type and the slope of the site.

Soil type for purposes of choosing an Imperial perennial will be one of two types: either what we refer to as a "good soil," or a "light or sandier soil." If you aren't sure which one you have in the site, here's a simple test: go out to the site a few days after a rain, pick up some of the soil, and squeeze it into a tight ball. Then, open your hand and watch to see if the ball either falls apart right away or holds together for a few seconds before doing so. If the ball holds together, then your plot has what we refer to as a "good soil." If the

ball falls apart immediately or almost immediately, it means that your plot has "light or sandy" soil. Be sure you understand — "sandier soil" doesn't mean sand — it means soil with some sand in it.

So, taking into account what you've already determined through the earlier steps, here's how to complete Step Five(A) — to select the correct Imperial perennial for the site:

1. You have already determined that you can access the site with ground-tillage equipment to prepare the seedbed for planting (required for all Imperial forages except No Plow and Secret Spot),
2. You have already determined that you can access the site with mowing and spray equipment to perform spring forage maintenance (required for all Imperial perennial blends), and
3. You have already determined that you receive enough rainfall to sustain an Imperial perennial.
4. To select the correct perennial for the site, choose the Imperial perennial designed for the soil type and slope of the site, as shown in Chart 4.

(B) If you want the forage in the plot to meet a targeted need for a specific part of the year, choose an Imperial annual blend. Imperial annual blends are designed for this purpose. If you've reached Step Five(B), you have also completed all the earlier steps required for perennial selection in Step Five(A). And, the same requirements apply to choosing an annual blend in Step Five(B), except for one — unlike perennial blends, which require maintenance mowing and maybe also the application of selective herbicides each spring, annual blends only last for part of one calendar year, so mowing and spray equipment for forage main-

Use Annual Forages for Specific Functions

Site can be accessed with ground tillage equipment			Ground tillage not an option	
				
Prolific high-protein forage for spring and summer antler growth	All-Season attraction	Highly attractive late-season attraction	Larger area Spring or fall	Smaller area Fall only

Chart 4

Product	Soil Type & Drainage (Slope) Designed For
Imperial Whitetail Clover:	Good soil & relatively flat
Chicory Plus:	Good soil & slightly drained
Alfa-Rack Plus:	Good soil & moderately to well-drained
Double-Cross:	Good soil & slightly drained
"Chic" Magnet:	Good soil & moderately to well drained, or Lighter or sandier soil & moderately to well-drained
Extreme:	Good soils & moderately to well drained, or Lighter or sandier soils & moderately to well-drained

Chart 5

Specific Need	Product Options
High tonnage Spring and Summer forage, huge amounts of protein for antler growth, doe lactation and overall herd health	PowerPlant
High tonnage high carbohydrates, and high protein during Fall and Winter, especially during coldest months.	Winter-Greens
Fast establishing, high sugar forage for early season, plus high carbohydrates and protein during the cold winter months.	Pure Attraction
Multi-level, forage for Spring and Summer (in most areas) and Fall and Winter in tillable and no-till sites acre and larger.	No Plow
Broad-Component forage specifically designed for Fall and Winter in tillable and no-till sites up 1/4 acre in deep cover.	Secret Spot (4-lb and Secret Spot XL)
Lower-pH sites inaccessible with large amounts of lime.	No Plow, Secret Spot
Perennial desired, but spring planting dates missed. Need forage to provide high protein and cover until fall planting dates.	Power Plant
Perennial desired, but soil pH too low for planting during fall planting dates. Need high carbohydrates, protein and attraction during Fall and Winter while lime raises soil pH in time for spring perennial planting.	Pure Attraction, No Plow, Secret Spot

tenance is usually not needed.

By selecting an annual forage to meet a “targeted need,” I’m referring to any need other than what you’d choose a perennial for in Step Five(A) — anything other than proving a year-around food source for multiple years without having to replant. The number of such situations is extremely broad, but here are some examples of what I’m talking about. And remember — No Plow and Secret Spot are designed to plant without equipment, but they can do even better in a prepared seedbed, so they’re also including on Chart 5.

As you can see, there might be no end to the number and type of specific needs you might want an Imperial annual to meet. For example, consider that some annuals are a bit more forgiving when it comes to soil pH, which can help you if you wanted to plant an Imperial perennial but your soil pH is too low to plant right way. In such a case, you could lime your plot now so that it would be ready for a perennial planting during your next planting window, and then immediately plant the site to No Plow to keep it attractive and nutritious during the interim.

Also, if you’re like the rest of us and have put off planting a perennial too long and have let the planting dates expire, annuals can be a great “bridge” to keep the site highly attractive and nutritious forage. In that case, you could plant the site to PowerPlant for the spring and summer and then re-plant it to the perennial the following fall.

IMPERIAL BLENDS USED IN COMBINATION PROVIDE LIMITLESS FLEXIBILITY. So far, we’ve discussed how to choose a forage for a particular plot site, and you know that Imperial forage blends are designed for specific sets of factors. By now, you may also have noticed that quite often, more than one forage blend may work well in the same plot site. It’s generally not a good idea to actually mix Imperial forage products

together before planting. However, planting different blends side-by-side can offer you virtually limitless flexibility in maximizing the forage benefits of your plot.

In some cases, more than one Imperial perennial blend will meet the requirements of a particular site. Let’s say that you can access the site with equipment (Step Three), you receive at least 30 inches a year in rainfall (Step Four), and you want a forage that will provide year-around nutrition, so you’ve decided to plant the site to perennials. Let’s say also that the plot fea-

tures good soils that are moderately drained (Step 5). You may have noticed that several Imperial perennial blends are designed for good soils that are moderately drained. In such a case, you might choose to plant part of the site to Alfa-Rack Plus and the rest to Extreme, since the perennials in the two blends are entirely different from one another, which can provide your deer even more variety.

Another great option is to plant part of a site to an Imperial perennial blend, and the rest to an annuals, for example PowerPlant in the spring and summer, and Winter-Greens or Pure Attraction for the fall and winter. The PowerPlant will maximize protein availability during spring and summer when it’s needed most. During the cold winter months, Winter-Greens and the late-season stage of Pure Attraction will provide an abundant forage source high in critical carbohydrates and protein. The perennial part of the plot will provide a sustained, year-around attraction and nutrition, and it will keep the plot attractive and nutritious during the brief periods in the spring and fall when you are switching annuals.

Also, Spring/Summer annuals can be rotated with just other annuals for Fall and Winter. A great example is an idea I learned from a field tester, and that I had great results with. Plant a few acres of PowerPlant in one spot for the Spring and Summer. Then, when the fall planting dates roll around, don’t take the PowerPlant completely out. Instead, locate a stand site at what is most often the down-wind corner of the site during the Fall and Winter. Mow a few lanes through the PowerPlant that you can see down, and plant the lanes to No Plow or Pure Attraction. Keep the lanes relatively narrow. Don’t mow so many lanes that deer will no longer feel comfortable using the PowerPlant for cover, but mow enough to keep the plot attracting deer after the PowerPlant dies with the first hard frosts of fall. If you try this, you may find as I did that during the early season, deer will continue to bed in the PowerPlant, and they’ll feel comfortable stepping into the No Plow or Pure Attraction lanes all throughout the day.

Example 1: PLOT NAME: CREEK CROSSING PLOT

Factors:

• Location	Northern Missouri
• Plot Size	2 Acres
• Soil Type and Drainage:	Good, moderately drained
• Minimum Annual Rainfall:	40 inches
• Rainfall Pattern:	Consistent throughout the year
• Tillage Equipment Availability:	Yes
• Maintenance Equipment Availability:	Yes
• Role of Plot in Food-Plot System:	Multiple Years, Single Planting

Forage Options: Alfa-Rack Plus, “Chic” Magnet, Extreme

Removed From List

Imperial Whitetail Clover
Imperial Chicory Plus
Alfa-Rack Plus
Double-Cross
PowerPlant
Winter-Greens
Pure Attraction
No Plow
Secret Spot

Main Reason

Wrong soil type and drainage
Lasts only one Spring to Fall
Lasts only one Spring to Fall

EXAMPLES: We've covered a lot, so let's look at the forage-selection process in action. Example 1 shows what your forage-option list might look like for a par-

ticular site after considering the factors we've discussed.

Now, what if we had changed one thing in Example

1, specifically the role we wanted the forage in that plot to play in our overall food-plot system? See Example 2.

The first examples were pretty easy. Now, let's look at a more difficult situation (Example 3) — one with several problems that, together, will require the planter to make some tough decisions!

This should give you a good idea about how to choose the ideal forage for each plot you have. Product selection and other topics on our products and deer nutrition are also covered in detail, on our website, www.whitetailinstitute.com, and on our exceptionally informative video, *Producing Trophy Whitetails*. And again, our in-house consultants are available to answer your questions any time between 8:00 and 5:00 central time, Monday through Friday, at 800-688-3030, ext. 2.

Example 2: PLOT NAME: CREEK CROSSING PLOT

Factors:

- Location: Northern Missouri
- Plot Size: 2 Acres
- Soil Type and Drainage: Good, moderately drained
- Minimum Annual Rainfall: 40 inches
- Rainfall Pattern: Consistent throughout the year
- Tillage Equipment Availability: Yes
- Maintenance Equipment Availability: Yes (but not needed for forage options)
- Role of Plot in Food-Plot System: (1) Maximum tonnage of high-protein forage during spring and summer, (2) cover during early hunting season, (3) maximum attraction for early hunting season, (4) high carbohydrate forage available over late-season snow

Forage Options: Combination Planting; PowerPlant in the Spring. In Fall, mow lanes through PowerPlant. Plant strips to Winter-Greens, Pure Attraction or No Plow

Removed From List

- Imperial Whitetail Clover
- Imperial Chicory Plus
- Alfa-Rack Plus
- Double-Cross
- Extreme
- Secret Spot

Main Reason

- Wrong soil type and drainage
- Doesn't provide the cover of PowerPlant
- Largest bag size is 1/4 Acre

Example 3: PLOT NAME: PALMETTO PLOT

Factors:

- Location: Central Florida
- Plot Size: 1 Acre
- Soil Type and Drainage: 1 inch of topsoil over sand & well-drained
- Area's Minimum Annual Rainfall: 30+ inches
- Area's Rainfall Pattern: Seasonal — good rains through June, then decreasing, but with enough early fall rain to grow winter wheat and oats
- Tillage Equipment Availability: Yes
- Maintenance Equipment Availability: Yes
- Role of Plot in Food-Plot System: Provide year-round nutrition for multiple years without replanting

Annual Forage Options: No Plow planted in Spring and Fall
Combination Forage Options: Extreme planted no-till in spring*, No Plow in Fall

Removed From List

- Imperial Whitetail Clover
- Imperial Chicory Plus
- Alfa-Rack Plus
- Double-Cross
- Winter-Greens

Main Reason

- Wrong soil type and drainage
- Requires tillage to prepare seedbed. Tillage not advisable because mixing the thin layer of topsoil with the sand below would destroy the topsoil.
- Largest bag size is 1/4 Acre

Secret Spot

Our general recommendations are that Imperial forages should not be planted in the spring in Florida. Accordingly, the safest option is to plant No Plow only in the fall. However, in addition to the fall No Plow planting, the planter may also choose to risk a spring planting of Extreme or No Plow, understanding that it is substantially risky for forage survivability, and that even Extreme may act like an annual in these conditions.



Choosing the correct forage for your particular plot site can produce the proper nutrition necessary for a healthy deer herd.