

Southeast
AGRISEEDS^{LLC}



Winter Annual Manual



Ready for better winter forage
production?

We've got you covered.

Which **Winter Annual** is right for my farm?

Timing is everything.

Winter annuals can be an exciting addition to any hay field or pasture in need of fast production and improved quality, diversity and yield. The fast growth and high yield make winter annuals a great way to condition the soil for perennials, build organic matter, or just increase overall farm productivity. One of the most enjoyable aspects of winter annuals is the predictability of their timing of growth. Based on the species of grass you plant, you can very easily target when you should expect to graze or mow the field.



When determining what mix you need, always start with what grasses you want in place. Do you need fall grazing or do you have enough stockpiled forage to last until January? Use the general timing of grass production to select the grasses that you need in your mix. From there, think about what other species you could bring in to benefit your livestock, soil health, and future crop health.

Add legumes that will work together with specialized bacteria to produce their own nitrogen. This results in a plant that is high in crude protein and is very palatable to livestock. The nitrogen produced by the legume becomes available when grazed or when the plants start to decay. In winter annuals, up to 90% of the nitrogen produced is in the above ground tissue, not the roots.

Add Brassicas as they are nature's scavengers! These deep rooted crops are great for breaking up soil compaction, improving soil organic matter and infiltration rates, and grabbing those nutrients that have been lost deep in the soil profile. They grow quickly and are typically ready to graze within six weeks. They are high in protein and low in effective fiber, so pair these with grasses or use as part of a high fiber diet.

These can all be mixed and matched to provide an optimum window of productivity and quality- check out our ready made mixtures. If you are in need of a specific mix that is not standard in our lineup, we can do a custom mix for you!

Timing of Grass Production

FALL production

Spring oats are typically ready to graze within 45 days. Has a low cold tolerance (sub 20 degree weather), so pair with ryegrass or triticale to ensure winter and spring forage.

WINTER production

Triticale or cereal rye can provide forage from early through late winter. Triticale is higher in sugars and slower to mature than cereal rye.

LATE WINTER/EARLY SPRING production

A true winter oat will begin producing heavily during this time. Winter oats will jump up in the fall, and slow in growth during the coldest periods of the winter, then kick in strong as the days begin to warm slightly.

MID SPRING production

Annual or Italian ryegrass will germinate in the fall and then it will kick into it's prime in mid and late spring. Given the right conditions, it will persist into mid summer before dying out.



Spring Oats



THE BASICS:

SEEDING RATE

95-130lbs/A

PLANTING DEPTH

0.25" to 1"

HARVEST HEIGHTS/RESIDUAL HEIGHTS

6+” tall to harvest, leave behind 3”

BEST USED FOR:

Grazing, baleage, silage, grass and pasture finished beef, lactating dairy cows, growing animals, grazing within 45 days, wet areas, and emergency spring forage

NOT WELL SUITED FOR:

Overseeding bermudagrass prior to dormancy

Spring oats are one of the most unique winter annuals in the lineup. They differ from winter oats in that they produce forage FAST. Typically, within 45 days they are ready to graze or mow. For many people, this fall grazing is critical for reducing the amount of hay fed or quickly turning around forage to be chopped for wet hay. These spring oats are high in sugar, very tolerant to wet feet and flooding, and palatable. Spring oats are not the most winter hardy species- if there are 2-3 nights with temperatures in the teens they may winter kill. If forage is needed in the spring, it's best to mix them with a cold tolerant species like triticale or ryegrass. Spring oats are excellent for use in grazing pastures, as cover crops, and even as wet hay.

Planting Timing:

Late August-October, January-March

TESTIMONIALS

“Everleaf oats are the basis of our operation. We could never graze so early in the fall without them. Honestly, I’ve never even seen it head out in our pastures.”

Consider this...

- Feed oats and spring oats could not be more different! Spring oats yield up to 3x what feed oats will. In addition, feed oats are very inconsistent from a quality standpoint.
- If cold nights are headed your way, graze or mow down the spring oats fairly short (2-3") to reduce cold damage. (25 degrees)
- Once a grain has formed, you have lost a lot of your quality and digestibility. Target harvest at boot stage.
- Spring Oats vary greatly in maturity and leafiness.

Canmore - A medium-early maturing variety with excellent rust resistance and high yield. Quickest to mature in our current lineup.

Everleaf 126 - The latest maturing variety in the lineup with a super wide leaf and greatest yield potential. The delayed maturity makes it a great variety for multiple cuttings or grazings. Great rust resistance.

Reeves - A tall, fast forage variety with great rust resistance.

Mixtures containing spring oats:

OATS PLUS™

DOUBLE PLAY™

RAY'S CRAZY FALL MIX™

LURE WILDLIFE MIX™

Ask us about adding spring peas with your spring oats!



Triticale



THE BASICS:

SEEDING RATE

100-150lbs/A

PLANTING DEPTH

0.25" to 1"

HARVEST HEIGHTS/RESIDUAL HEIGHTS

6+” tall to harvest, leave behind 3”

BEST USED FOR:

Baleage, haylage, silage, grazing, grass and pasture finished beef, lactating dairy cows, growing animals, horses, straw or bedding, well drained soils

NOT WELL SUITED FOR:

Wet natured soils, low fertility systems

This wheat and cereal rye cross brings together the best from both species. Leafy, heavy tillering, high yielding, and cold tolerance puts triticale at the top of the winter annual list. It's cold tolerance makes for flexible planting window keeps it productive during the early and late winter periods. Harvest at boot stage to maintain quality forage. Best suited for well drained soils and fields with moderate to good fertility.

Consider this...

- Triticale shines next to cereal rye with it's later maturity, leafiness, and higher sugar content and shows much higher yields than wheat.
- Triticale also does well for straw production because of it's great standability.
- The wide range of maturities in triticale varieties gives incredible flexibility in use- from early winter grazing to late spring silage harvests.
- Triticale outyields wheat for forage
- Triticale is a great cover crop because of its prostrate tillering.

TESTIMONIALS

“This Surge is incredible. I'm grazing it for the 5th time (Mar 15) and have no seed heads.”

Sam Dobson, Olin NC

Surge - Surge is a facultative variety, which results in growth early on in the season. Research trials in Georgia have suggested harvestable growth as early as mid November. Best opportunity for multiple harvests in a single season. Surge is the only triticale variety in our lineup that we recommend for fall grazing and spring harvest.

Gainer 154 - A new, high-yielding variety. Early-mid maturity.

TriCal 342 - An earlier maturing triticale with good grazing.

TriCal 1143 - An earlier maturing variety that is similar to 342, and will replace it in the future.

Mixtures containing triticale:

- TRITICALE PLUS™
- DOUBLE PLAY™
- RAY'S CRAZY MIX™
- SOIL BUILDER PLUS™
- LURE WILDLIFE MIX™
- SOY SUPREME™



Winter Oats

THE BASICS:

SEEDING RATE

80-100lbs/A

PLANTING DEPTH

0.25" to 1"

HARVEST HEIGHTS/RESIDUAL HEIGHTS

6+" tall to harvest, leave behind 3"

BEST USED FOR:

Baleage, haylage, silage, grazing, grass and pasture finished beef, lactating dairy cows, growing animals, wet areas, spring harvested haylage and silage

NOT WELL SUITED FOR:

High traffic areas



These oats are true winter oats- they are more cold tolerant than spring oats and will easily survive the winter in the Southeast. The majority of the yield of black oats will come in the spring, although there is a chance to get a winter harvest or grazing. The leaves are impressively wide and the dense crown really crowds out winter annual weeds. These are a great option for cover crop use as well! They are less stemmy and carbon heavy than cereal rye or triticale, but still provide a heavy residue to suppress weeds long term. They are slow to mature, which bodes well for haylage harvesting.



Cosaque Black Oats

Consider this...

- Nematodes? No problem. Black oats release compounds that reduce nematode pressure.
- Black oats have a fairly wide planting window- in the Southeast, we can plant them into the winter with success.
- Black oats have a more ideal carbon to nitrogen ratio, which helps build organic matter in soil more quickly.

Cosaque - These black seeded oats are a very productive variety with great cold and disease tolerance. They will germinate and grow quickly in the fall, stall out a bit during the deep winter, and then will grow aggressively late winter. Their timing of maturity and high sugar content makes them an ideal crop for chopping or harvesting for haylage.

Mixtures containing winter oats:

CORN SUPREME™

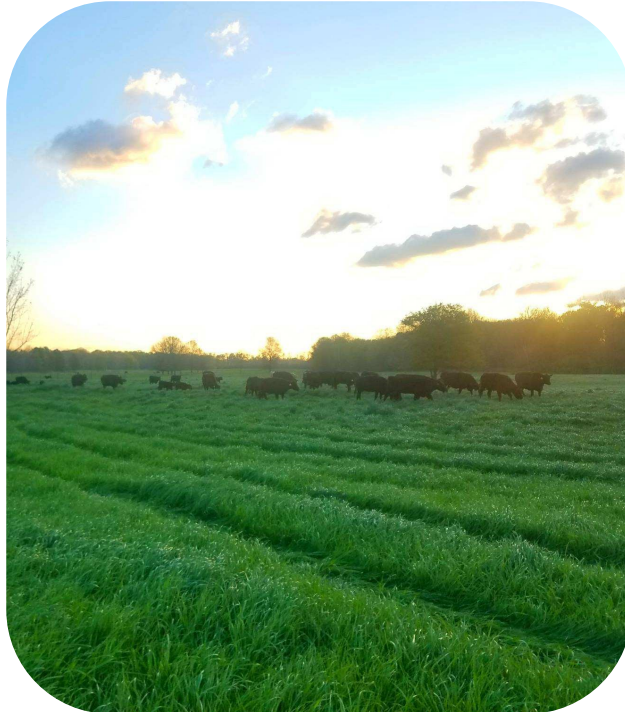
SOY SUPREME™

BETA MAXX™



Cosaque Black
Oats

Ryegrass



THE BASICS:

SEEDING RATE

15-25lbs/A

PLANTING DEPTH

Soil surface to 0.25"

HARVEST HEIGHTS/RESIDUAL HEIGHTS

6+” tall to harvest, leave behind 3”

BEST USED FOR:

Baleage, haylage, silage, grazing, grass and pasture finished beef, lactating dairy cows, growing animals, wet fields, and high traffic areas

NOT WELL SUITED FOR:

Fall growth

Spring wouldn't be the same without ryegrass. This high sugar, high yielding species is used widely across the Southeast for a good reason. It germinates quickly after planting but is a bit of a winter sleeper. Come early spring, ryegrass growth is so quick it can be harvested in intervals as short as 15 days. Keep ryegrass seed shallow when planting and wait until there is moisture in the ground to seed. Ryegrass can be easily broadcasted through most of the fall and even into the early winter. It has a tendency to reseed itself, so limit ryegrass usage ahead of establishing a cool season perennial. The waxy coat makes it take a day or two longer to dry down for hay production.

Mixtures containing ryegrass:

TRITICALE PLUS™

RYE PLUS™

OATS PLUS™

SOUTHERN BROADCASTER™

DOUBLE PLAY™

RAY'S CRAZY MIX™

SOIL BUILDER PLUS™

ENTICE WILDLIFE MIX™



Baqueano Ryegrass

TESTIMONIALS

“This Credence is unbeatable.”
Producer in Gray Court SC

Why Tetraploid vs. Diploid?

Diploid ryegrasses have two sets of chromosomes per cell, compared to a tetraploid which has four. Diploids combine yield and robustness and Tetraploid's are extremely palatable with a wider growing season.

Consider blending tetraploids and diploids. The sugars and leafiness of tetraploids along with persistence and standability of diploids makes an ideal blend with the best of both worlds.

DIPLOID ANNUAL

McKinley - Finally- a dense, leafy ryegrass that leaves those old varieties in the past. This diploid product is cold tolerant and tops the yield charts.

Rapido - Rapido is an early maturing ryegrass, ideal for overseeding Bermudagrass or shifting that yield up a few weeks.

LowBoy- This low growing product has the same root development as other varieties, but not the heavy mat. Excellent for a low residue cover crop or erosion control. Learn more at "lowboyryegrass.com"!

Marshall - An old diploid variety with good yield.

Gulf- Ideal for overseeding lawn and erosion control areas.

TETRAPLOID ANNUAL

Credence- An absolute beast of a product. A tetraploid variety that keeps coming back, has high sugars, and pairs well with small grains.

Baqueano - A late maturing, tetraploid variety of ryegrass. Impressive in University trials.

Andes - A newer diploid winter-hardy variety with high yield and quality.

Angusta- A ryegrass with aggressive growth in the deep south. Great in south Georgia!

Koga- An extremely late maturing tetraploid.

ITALIAN

Meroa - The only Italian ryegrass in the lineup. Matures up to 4 weeks later than annual ryegrass. Persists more aggressively into the summer. Learn more at "meroaryegrass.com"!

Crusader- Late-maturing diploid Italian ryegrass with great heat tolerance and regrowth.

Timothy

THE BASICS:

SEEDING RATE

10-15lbs/A

PLANTING DEPTH

Soil surface to 0.25”

HARVEST HEIGHTS/RESIDUAL HEIGHTS

At 10% heading, leave behind 3”

BEST USED FOR:

Single cut dry hay in the late spring

NOT WELL SUITED FOR:

Multiple harvests, perennial fields, late planting



Yes, we meant to put timothy in our winter annual manual. In the southeastern region, there has yet to be a variety of timothy that can come out of dormancy after our long, hot summers. However, our most progressive customers have found success with harvesting timothy as a single cut annual crop. The low seeding rate and seed cost keep the total cost down, yet this forage sells for a premium. Expected yields are between 1.5-2 tons per acre. Broadcast or drill into a very firm prepared seed bed in the fall prior to the first frost. The seed is small, so don't underestimate how firm the seed bed needs to be.

TESTIMONIALS

“Without question, prettiest hay I've ever mown [Zenyatta Timothy]. More dry matter per acre than I expected.”

David Collins, Stoneville NC

Consider this...

- Timothy starts out slow and the stand will look like the picture on the far left for most of the winter and early spring.
- If conditions are just right, a second cut may be possible.
- Timothy matures much later than fescue and orchardgrass, making timothy an excellent way to spread out forage harvest.

Zenyatta - An exceptional variety with high spring yield and late maturity. Excellent match for alfalfa.

Basho— An early maturing timothy known for its' high quality hay and forage.



Legumes

THE BASICS:

Annual legumes increase the palatability and crude protein of annual and perennial fields and create nitrogen to be put back into the soil. Reduce your nitrogen fertilizer bill by adding clovers! Timing of planting is critical as they need ample time to germinate and establish a root system in the fall before severe frosts hit. Pick a legume that pairs perfectly with your favorite winter annual grass!



Balady Berseem Clover - Fast growing, fast recovery with good palatability with less bloat risk.

Arrowleaf Clover - A non-bloating annual legume that tolerates acidic and sandy soils very well. Gets quite tall in the spring, great for interseeding into thin perennial stands or pairing with late maturing winter annuals like black oats or ryegrass.

Crimson Clover - The earliest maturing legume in the lineup. This bunch type clover has great grazing tolerance and can fix up to 150 units of nitrogen in a season. Ideal for grazing or for use in silage mixtures. It pairs well with any winter annual legume, including the early maturing small grains.

Viper Balansa Clover - A cool season annual legume with similar winter hardiness to winter peas and crimson clover.

Persian Clover— An upright annual clover with good palatability.



Consider this...

- Winter annual legumes can increase protein by up to 2%.
- Annual legumes perform very well interseeded into cool season perennial fields.
- Most of the nitrogen fixation will occur when soil temps are 58 degrees and higher.
- Don't forget the inoculant! If you buy untreated seed, be sure to ask for the proper inoculant to ensure the legumes can create nitrogen.
- This nitrogen becomes available to the field to be used once the legume has been grazed or dies off and decays.

Blue Lupine - This reseeding annual legume performs best in well drained soils. Grows upright.

AU Merit Vetch - A higher yielding and earlier maturing variety compared to VNS hairy vetch. This vining legume tolerates traffic and wet feet extremely well, but is a bit of winter sleeper. Ideal for grazing and spring weed suppression. Fixes up to 250lbs of nitrogen per season. Pairs perfectly with ryegrass. Learn more at "aumeritvetch.com"!

Patagonia Hairy Vetch— Bred in southern Argentina for winter hardiness, early growth, and high yields.

Keystone Winter Pea - This vining legume is productive during the late winter and early spring. Very palatable, suitable for grazing or silage mixtures. Keystone is an extremely cold tolerant, high yielding variety with a white flower. Pairs well with all winter annual grasses.

Austrian Winter Pea - Use in mixtures and plant 1-2 weeks before recommended barley seeding dates.

WyoWinter Pea— A solid, forage type winter pea. Purple flower.

4010 Spring Pea— A spring type winter pea for fast Fall growth.



Brassicas

THE BASICS:

Brassicas are a high protein, high digestibility plant. There is a very wide variety of species and varieties, each one with very unique characteristics that will help you place them on your farm. Radish's have a very large, impressive tuber that will grow below and above the soil. This tuber is the storage organ for the plant, fed by a deep taproot mining for nitrogen and other nutrients deep in the soil. Turnips have a round bulb that doesn't penetrate as deep as the radish, but tolerates grazing without much damage and has more foliage growth. Rapes, kales, and collards do not have a tuber or bulb but have a tremendous amount of taproots present. These are among the most grazing and traffic tolerant and high yielding within the brassicas. Seeding rates are kept low, in part because of how quickly the brassicas come out of the gate. Quick to germinate, quick to be ready to graze, and quick to recover. Brassicas are a great addition to any grazing mix or as part of a cover crop for building soil health.

RADISH

Nitro Radish - An impressively fast grower, this radish has a large tuber and an ideal C:N ratio to build soil. Seed 30 days prior to frost.

TURNIP

Purple Top Turnip - A small bulbed variety with moderate forage growth.

Barkant Turnip - A large bulb with thick forage production. Traffic tolerant until late in the season.

HYBRIDS, RAPE, KALE, COLLARD

Impact Forage Collard - A great option for early planting. Very grazing tolerant and high on the charts for digestibility, protein, and yield.

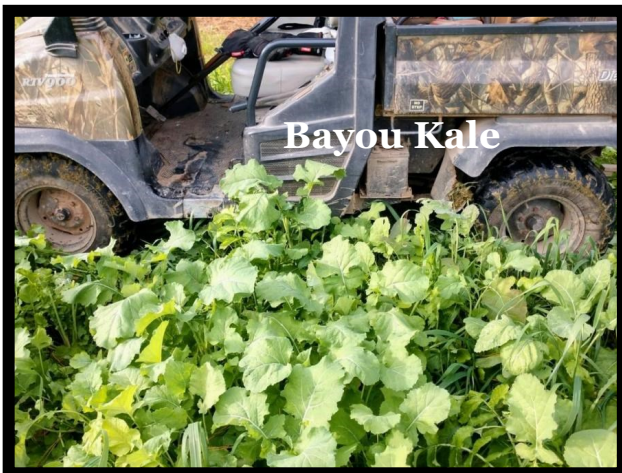
Bayou Kale - A high yielding variety with medium maturity and good winter hardiness. More palatable stems than rape.

Consider this...

- Brassicas have tested up to 30+% crude protein!
- Brassicas are sensitive to herbicide carryover, so double check those herbicide labels prior to seeding.
- Rape has the greatest cold tolerance of all the brassicas and can be a little tricky to kill off come spring.
- The tuber is a show off. Don't underestimate how aggressive smaller taproots are at addressing soil compaction as well.
- Brassicas are surprisingly tolerant to all soil conditions- from dry to wet.

Winfred Rape - An impressive, highly traffic and grazing tolerant variety. Highest yield potential in the lineup.

Ethiopian Mustard— Yellow flower, tap root, similar to wild type mustard.



Bayou Kale



Daikon Radish



Winfred Rape



Forage Turnips



Forage Turnips

Mixtures

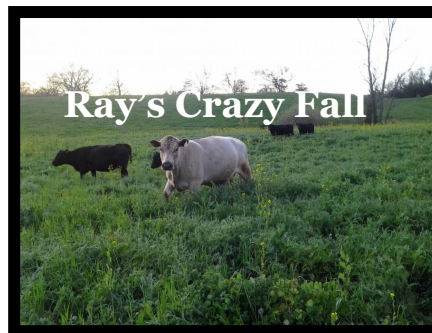
THE BASICS:

Don't compromise! Mixtures are the best way to utilize all of the unique characteristics of each grass, legume, and brassica. Find the mixture that works exactly the way you need it to when you need it to. These mixtures all contain legumes and brassicas along with grasses.

Southern Broadcaster - A mix of annual ryegrass, crimson clover, radish and turnip. A high energy, high digestibility mixture that builds soil organic matter quickly. These all broadcast very reliably and provide heavy grazing come mid spring.

Soil Builder Plus - Triticale, annual ryegrass, crimson clover, vetch, and radish all come together to provide big biomass from early winter late into spring. Great for grazing or haylage.

Ray's Crazy Fall Mix - Our most diverse winter annual mix! Ray's Crazy is designed to be a dual purpose mix- build the soil and feed livestock. Spring oats, triticale, ryegrass, crimson clover, Austrian winter peas, vetch, radish and T-Raptor hybrid brassica come together to provide high quality, diverse forage all winter and spring while building the soil.



Consider this...

- Your drill can handle it- mixtures flow well through drills when properly calibrated and seed sifting is rarely an issue.
- Harvest the mixture based on the height of the grasses, the legumes and brassicas will handle the pressure well.
- Diverse mixtures are best fit for grazing or wet hay production because dry down time is so variable between these species.

Lure wildlife mixture - An exciting mixture designed to attract and feed wildlife. Spring oats, triticale, Keystone winter peas, crimson clover, and the Winfred rape come together to feed wildlife from late fall through early spring.

Entice - A mixture designed to be broadcasted that will also effectively attract and grow wildlife. Annual ryegrass, crimson clover, Winfred brassica, TRaptor brassica, and Six Points chicory are cold tolerant high energy forages.



LEFT: Entice



RIGHT: Lure
Wildlife Mix



Mixtures

THE BASICS:

Don't compromise! Mixtures are the best way to utilize all of the unique characteristics of each grass, legume, and brassica. Find the mixture that works exactly the way you need it to. These grass heavy mixes are great options if yield is the greatest need. All of these mixtures have the potential to be harvested multiple times!

Double Play - For those who need it all! Fall, winter, and spring grazing come together with this mixture. Spring oats, triticale, and ryegrass are all perfectly balanced in this mix to give you as many grazing days as possible.

Oats Plus - A fantastic mix with large, bunchy spring oats that come in quickly are filled in with annual ryegrass. A mix that can handle wet feet very well.

Triticale Plus - A mix of triticale and ryegrass. Good for Fall and Spring grazing/harvest.

Wheat Plus— A mix of wheat, tetraploid, and diploid ryegrasses.

Rye Plus - Old reliable. A very standard mix of cereal rye, cold tolerant and productive during the winter, and followed by a big flush of ryegrass in the spring.

Nitro Boost - Already have your own small grain? Consider Nitro Boost to spice up and add diversity to your bin run cereal grains. Crimson clover, Austrian winter pea, and The Cover Crop radish are an excellent, soil building addition to any small grain.



Consider this...

- Cover crops don't have to sit all winter. Due to the aggressive regrowth of these mixes, they can reasonably be grazed and still provide weed control and soil building properties.
- Rye Plus and Triticale Plus are great options for a late planting.
- Don't be afraid to harvest in the fall and winter! Some of the lesser cold tolerant species, like spring oats and radishes/turnips, need to be used or they may be lost.

Corn Supreme - Intended to be planted ahead of a corn crop or other heavy nitrogen crop. A great mix for increasing soil organic matter, weed suppression, and leaving behind nitrogen for future crops. A mix of cereal rye, Cosaque black oat, Austrian winter pea, and crimson clover.

Soy Supreme - A grass heavy mix of cereal rye, triticale, Cosaque oats, and radish. Designed to suppress weeds aggressively all season and build the soil. Ideal for cover crop ahead of a slow starting cash crop, like soybeans. Can also be grazed during the growing season.

BetaMaxx - Common vetch, spring peas, cosaque, flaxseed, berseem clover, and phacelia. (Special order item, not kept in stock regularly)

MaizePro DT— A diverse cover mix to plant ahead of corn. Part of the TerraLife™ program. (Special order item, not kept in stock regularly)

On Time Cover Crop— A cover crop mix containing oats, cereal rye, sorghum sudan, crimson clover, vetch, buckwheat, sunflower, and radish. Not recommended for forage use.



Management

Choosing the right mix is a small part of the process of having lush, productive forage. Planting, fertilizing, managing for weeds, and timing of harvest all play into how productive these winter annuals will be.

Planting

Removing competition prior to seeding will generally improve stand uniformity and production. The cereal grains and larger legume seeds, like winter peas, should be drilled OR broadcasted and incorporated to ensure enough seed to soil contact. Annual ryegrass, vetch, clover, and brassicas on the other hand need to be placed shallow in the soil since their energy reserves are limited. Always take every precaution you can to limit soil residue and existing competition. Most drills don't have a seed chart for mixtures, so calibrate to ensure you are getting the seeding rate you intend. Drill a few hundred feet, get off the tractor and check depth. Check moisture prior to planting. All of these steps are critical for the success of your winter annual stand.

Fertilization

Refer to your most recent soil test to interpret your phosphorous and potassium needs. Most soil tests do not calculate actual nitrogen needed, so use your best judgement to determine the amount needed at or shortly after planting. A safe rate to use is typically 40-70 units per acre, but use the color of the forage and tissue analysis to find the best rate. To maximize production, apply nitrogen after each harvest if cutting for wet or dry hay.

Don't underestimate the need and power of nutrients!

This establishing orchard seeded a mixture between the rows of Pecan trees. This land was severely depleted of soil nutrients. Fertilizer was applied to the row on the left, but was not on the row to the right. Which would you rather have?



Harvest Timing

Yield versus quality-what's the right answer? Find that ideal balance between having a high quality, digestible forage and getting as many bales per acre as you can. For most forages, this intersection is at **BOOT STAGE**. This is when seed head is formed but has not yet emerged. This will also increase the opportunity for multiple harvests! In a mixture, time your harvest based on the stage of the grasses in the mix. When grazing, to increase the number of rotations of the crop you can begin grazing more quickly than boot stage. Typically, 6-8" height is a safe start height.

Harvest Height

Increase the speed of your regrowth and the overall yield by leaving behind 3-4" of residual, regardless of grazing or mowing. This keeps the plants from losing too much energy and can increase the speed of regrowth by as much as 2x. This also keeps stands thick, as overgrazing or mowing too low can permanently damage forages.



Product List

LET'S CHAT

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Call us if you didn't see what you're looking for!