



Enriching land & lives

Enriching land and lives.

With over 35 years in the specialty seed industry, our team is focused on being trailblazers in sustainable land use. We can help anyone interested in exploring, diagnosing, and building a plan for the land.



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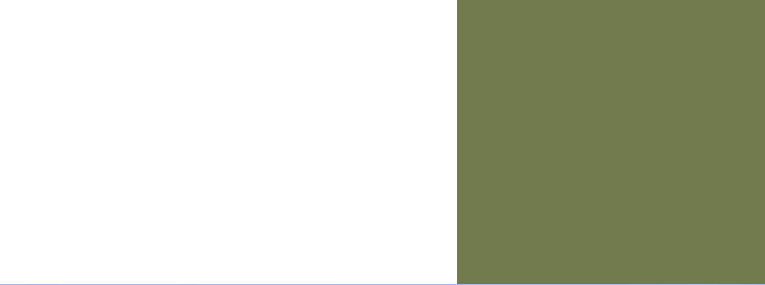
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PROBLEM-SOLVERS

There's no problem too big for our team. Since our beginning in 1987, we have focused on working together to find a solution for every situation. Through the years, we have walked hundreds of thousands of acres alongside farmers, ranchers, landowners, and contractors, with the goal of exploring, diagnosing, and building a plan for the land.

Our team comes to work each day with one purpose – enriching land and lives. We are dedicated to being trailblazers in the specialty seed industry through every problem we solve. Future generations depend on the decisions we make on our land today. At Millborn Seeds, we strive to understand the challenges each person faces on their land and aim to provide solutions that fit the problems at hand. Together, we can enrich land and lives, one acre at a time.

Thank you for trusting in our team. Let's plant some new roots this season.

TEAM MILLBORN



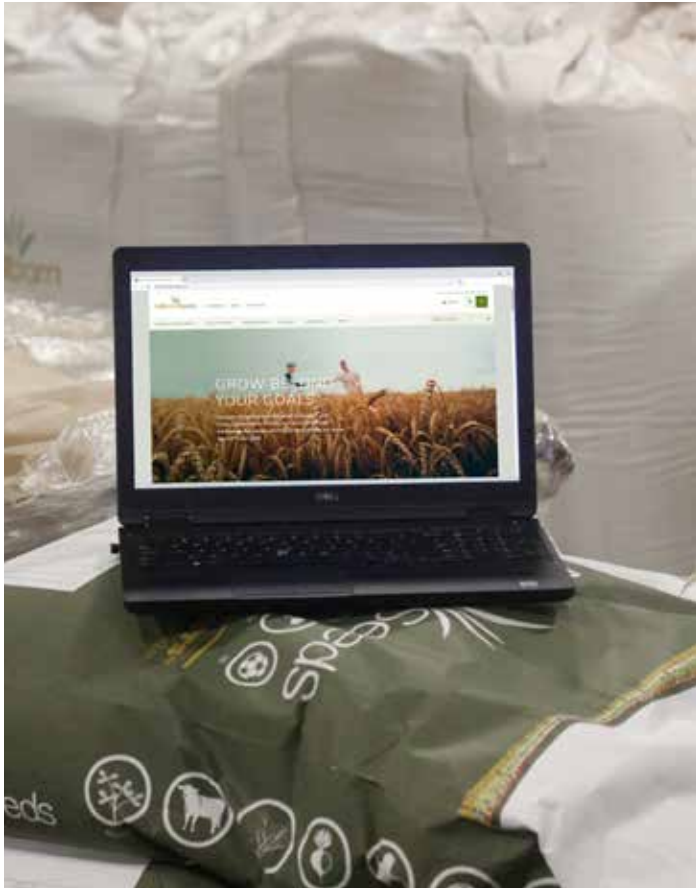


VISIONARIES

As a vertically integrated seed company with global reach, we have the vision and ability to deliver from the field to your door. Our product managers are solely focused on procuring the highest quality seed products and our team knows our products inside and out, so you can trust that what is in the bag is the best possible product for your operation.

Delivering products when and where you need it is top-of-mind for us, and we continually invest in the industry's most sophisticated tools to do just that. In 2022, we expanded our warehouse at our headquarters in Brookings, SD along with adding a top-of-the-line blending and packaging line. Investments in our facilities, technology, and processes will continue, as we lead the way as visionaries in the specialty seed industry.

- › **DISTRIBUTION CENTER:** Our 100,000 sq ft warehouse adjacent to the interstate provides easy access to major shipping corridors.
- › **CUSTOM MIXES:** With more than 1,200 species of seed on hand, we can fulfill even the most challenging and specialized orders.
- › **STREAMLINED PACKAGING:** Whether it's by the pound or the truckload, we can package our products to fit the needs of the customer. Our new automated packaging system and large capacity mixer will be complete in 2023.





LAND USE LINCHPINS

Our experts spend their time understanding the land and are truly the best in the field. It is our goal to enrich land and lives, and our team does just that through sharing our expertise.

We know information is power when it comes to decision-making, and our goal is to share what we know as much as we can. Our library of resources continues to grow and is available all day every day.

Tune In: Justin Fruechte and Jared Knock visit with special guests on the Roots + Ruminants podcast to explore creative and innovative use of pasture, rangeland, and practical land use applications. Tune in anywhere you get your podcasts.

See For Yourself: If you enjoy watching and learning, check out our extensive collection of videos organized by specialty on Youtube.

Follow Along: Follow @MillbornSeeds on Facebook, Instagram, Twitter and LinkedIn to keep up with the latest updates from our experts.

Get The Details: Our experts dive deep into the agronomics of making the most of your specialty seeds on our blog. Check back often for the latest tips and tricks.

Stay In The Know: Get all of these resources and more straight to your inbox monthly. Sign up for THE ROOTS newsletter to stay in the know.



HAY + PASTURE

When establishing perennial forage for pasture or hay, be sure to consider all of the variables involved in these projects. Growing conditions and intended use are the main factors that affect the species and variety selection to ensure long-lasting productivity.

Our hay and pasture mixes will provide solutions for a range of goals and growing conditions. We also keep hundreds of different individual species and varieties available, and are happy to assist you in designing custom blends for your specific project and seeding plan.

Looking for more information on ideal pasture conditions and products? Check out our blog!



PLANTING GRASS

PLANTING METHOD

Drilling grass into a firm seedbed at a shallow depth of ¼"–½" is the best way to quickly establish a stand. Grass seed can also be broadcast and rolled or packed to gain seed to soil contact. Most grass species are very small seeded, so planting too deep can result in stand failure.

PLANTING TIME

Spring planting of grasses can be done as early as the field is ready. Cool-season grasses can also be planted early in the fall, four to six weeks before the first hard frost. This allows them to germinate and establish before winter. Both warm and cool-season grasses can also be dormant seeded late in the fall or winter once temperatures are cold enough so germination won't be possible until spring.

WEED CONTROL

If you are only planting grasses, there are many broadleaf herbicides suitable for chemical weed control during the seeding year and throughout the life of the stand. If there are legumes or other broadleaves in the mix, chemical weed control options are very limited. Cutting the field for hay will likely be the best weed control option. Contact us or your chemical representative for specific product recommendations.

FIRST YEAR MANAGEMENT

Generally, new grass seedings should not be grazed during the seeding year. Cutting newly seeded grass after about 60–75 days of growth will help control annual weeds and stimulate grasses to tiller, which thickens the stand. Evaluate the seeding after it has gone through the majority of its first growing season and plan future grazing or haying according to stand health.



NEW!

HAY & PASTURE PRODUCT GUIDE

GROWING CONDITIONS

SEEDING RATE/
ACRE

SEEDING DEPTH

YIELD

QUALITY

LONGEVITY

MIX RATIO

GROWER NOTES

BOOST™

10 lbs

¼" - ½"

High

High

High

40% Medium Red Clover
25% Creeping Root Alfalfa
15% Ladino White Clover
10% Falcata Alfalfa
10% Alsike Clover

- › Top Choice for pasture overseeding
- › Creates nitrogen to increase grass yield
- › Increased livestock performance with increased forage quality

**GRASS
MAX™**

25 lbs

¼" - ½"

High

High

High

30% Orchard Grass
30% Timothy
20% Perennial Ryegrass
10% Meadow Brome
10% Smooth Brome

- › Most versatile blend on the market
- › Easy establishing mix
- › Persistent perennials that will grow in various soil types

**#3 Hay &
Pasture Mix™**

25 lbs

¼" - ½"

High

High

High

20% Late Maturing Premium Orchardgrass
20% STF 43 Tall Forage Fescue
20% Meadow Brome
15% Forage Perennial Ryegrass
15% Timothy
10% Meadow Fescue

- › Highest yield and forage quality
- › Ideal for fertile soils
- › Highly suitable for grazing or multiple cuttings

**Waterway
Mix™**

25 lbs

¼" - ½"

Avg

Avg

High

30% Tall Fescue
25% Brome
20% Perennial Ryegrass
15% Annual Ryegrass
10% Timothy

- › Great for highly erodible areas
- › Fast establishing

**Calving
Pasture Mix™**

25 lbs

¼" - ½"

Low

Avg

High

30% Ginger Kentucky Bluegrass
20% STF 43 Tall Forage Fescue
20% Crested Wheatgrass
10% Perennial Ryegrass
10% Smooth Brome
10% Switchgrass

- › Ideal for high hoof traffic areas
- › Peak growth period matches spring calving season

**Alfalfa
Patcher**

25 lbs

½" - ¾"

Avg

High

Low

60% Oats
20% Mammoth Red Clover
20% Italian Ryegrass

- › Ideal for overseeding
- › Use for a one year fix

**Pasture
Fix Mix™**

Full rate:
25 lbs
Overseed:
15 lbs

¼" - ½"

Avg

High

Avg

25% Meadow Brome
25% Perennial Ryegrass
25% Tall Forage Fescue
20% Italian Ryegrass
5% Timothy

- › Fast establishing in areas that have been destroyed by livestock
- › Low maintenance grass for reliable cover

**Select Horse
Pasture Mix™**

25 lbs

¼" - ½"

Avg

High

Avg

30% Paiute Orchardgrass
25% Timothy
15% Meadow Brome
10% Crested Wheatgrass
10% Kentucky Bluegrass
10% Perennial Ryegrass

- › Highly palatable grasses
- › Handles close grazing habits of horses

**The
Hamilton™**

15 lbs

¼" - ½"

Avg

Avg

High

25% Tall Wheatgrass
15% Intermediate Wheatgrass
15% Tall Fescue
15% Slender Wheatgrass
10% SalinityMax Alfalfa
10% Creeping Foxtail
10% Green Wheatgrass

- › Designed for high salinity areas
- › Production on otherwise unproductive areas

**Premium
Dryland
Pasture Mix™**

10-12 lbs

¼" - ½"

High

Avg

High

30% Pubescent Wheatgrass
30% Intermediate Wheatgrass
15% Western Wheatgrass
15% Creeping Alfalfa
5% Slender Wheatgrass

- › Top pasture option for dryland
- › Drought hardiness and longevity

Haymaker™

10-12 lbs

¼" - ½"

High

High

High

50% Alfalfa
20% Pubescent Wheatgrass
20% Intermediate Wheatgrass
10% Paiute Orchardgrass

- › Consistent hay production in challenging dryland conditions

BOOST™

Boost is your go-to-the-pasture blend when desiring an over-seeding mix that will increase yield and quality in your existing stand. It is an excellent choice for frost-seeding when broadcasting, as well as drilling into a suppressed stand of grass. If you desire a lusher, healthier pasture and want to build your own nitrogen on your land, give it a Boost!

Seeding Rate: 10 lbs/acre

40% MEDIUM RED CLOVER
25% CREEPING ROOT ALFALFA
15% LADINO WHITE CLOVER
10% FALCATA ALFALFA
10% ALSIKE CLOVER



GRASS MAX™

Grass Max is the most versatile grass blend on the market! It is an easy establishing mix of high yielding, high quality, persistent perennials that will grow in various soil types. If you are seeding down a grass hay field, planting a pasture, or have an area out back that needs grass, Grass Max can do it all.

Seeding Rate: 25 lbs/acre

30% ORCHARDGRASS
30% TIMOTHY
20% PERENNIAL
10% MEADOW BROME
10% SMOOTH BROME



WATERWAY MIX™

Our Waterway Mix is a great solution for grass establishment in highly erodible areas. This mix consists of cool-season grasses that are quick to establish and will fill in and form a sod over time. It will consistently produce one high yielding cutting of hay, or grazing throughout the year. This will be a very long-lasting and low maintenance stand of grass which makes it an excellent fit for areas that simply need grass cover and don't necessarily need to be the most productive pasture in the county.

Seeding Rate: 25 lbs/acre

40% SMOOTH BROME
20% TALL FORAGE FESCUE
20% PERENNIAL RYEGRASS
20% TIMOTHY



#3 HAY & PASTURE MIX™

Our #3 Hay & Pasture Mix™ is the top of the line pasture option for producers seeking the highest yield and forage quality from their grass. It is a diverse blend of the most productive cool-season grasses on the market and we use improved varieties to keep performance at the highest level possible. This blend will respond well to fertile soils and is well suited for grazing or multi-cut haying systems. #3 Hay and Pasture will perform best in areas of moderate to high rainfall, or drier regions under irrigation.

Seeding Rate: 25 lbs/acre

20% LATE MATURING ORCHARDGRASS
20% STF 43 TALL FORAGE FESCUE
20% MEADOW BROME
15% PERENNIAL RYEGRASS
15% TIMOTHY
10% MEADOW FESCUE

PREMIUM DRYLAND PASTURE MIX

Our Premium Dryland Pasture Mix is a blend of high-yielding forage grasses and grazing alfalfa for top performance on dryland. It provides extremely drought hardy and long-lasting production for pasture or haying in the challenging conditions of western states.

Seeding Rate: 10–12 lbs/acre

30% PUBESCENT WHEATGRASS
30% INTERMEDIATE WHEATGRASS
15% WESTERN WHEATGRASS
15% CREEPING ALFALFA
10% SLENDER WHEATGRASS



FORAGE GRASSES

PRODUCT GUIDE

SPECIES	FULL SEEDING RATE (LBS/ACRE)	SOIL CONDITIONS	GROWTH HABIT	YIELD	LONGEVITY
AC Saltlander	12	Saline	Sod Forming	4	5
(Garrison) Creeping Foxtail	5	Saturated	Sod Forming	4	4
Crested Wheatgrass	15	Dry	Bunch	3	5
Festulolium	25	Fertile	Bunch	5	3
Intermediate Wheatgrass	15	All	Sod Forming	5	5
(Forage) Kentucky Bluegrass	25	Fertile	Sod Forming	2	4
Meadow Brome	25	All	Bunch	5	4
Meadow Fescue	25	Fertile	Bunch	4	4
Orchardgrass	12	Fertile	Bunch	5	3
Perennial Ryegrass	25	Fertile	Bunch	4	2
Pubescent Wheatgrass	15	All	Sod Forming	5	5
Redtop	8	Saturated	Sod Forming	2	5
Reed Canarygrass	8	Saturated	Sod Forming	5	5
Smooth Bromegrass	25	All	Sod Forming	4	5
Tall Forage Fescue	25	All	Bunch	5	4
Tall Wheatgrass	15	Saline, Dry	Bunch	5	5
Timothy	8	Fertile	Bunch	3	3
All Native Grass Species also available				1 = Lowest 5 = Highest	

FORAGE BROADLEAVES & LEGUMES

PRODUCT GUIDE

SPECIES	FULL SEEDING RATE (LBS/ACRE)	SOIL CONDITIONS	BLOAT POTENTIAL	YIELD	LONGEVITY
Alsike Clover	8	Wet	Yes	3	2
Birdsfoot Trefoil	6	Wet	No	3	4
Cicer Milkvetch	20	Dry	No	4	5
Forage Chicory	6	Fertile	No	3	3
Ladino White Clover	5	Fertile	Yes	4	3
Mammoth Red Clover	10	All	Yes	4	2
Medium Red Clover	10	All	Yes	4	2
Plantain	10	All	No	3	2
Sainfoin	40	Dry	No	5	5
White Sweet Clover	12	All	Yes	5	2
White Dutch Clover	5	All	Yes	2	3
Yellow Sweet Clover	12	All	Yes	5	2

**All Native Forb Species
also available**

1 = Lowest
5 = Highest



ALFALFA

Without question, alfalfa is one of the most reliable sources of forage for producers. Its ability to withstand challenging growing conditions is surpassed only by native rangelands.

From seeding irrigated acres as an intensively managed forage crop, to improving the grazing production of a dryland pasture, there is a variety of alfalfa that will fit your needs. With hundreds of varieties on the market, we've determined which ones will work best for your production goals and strive to bring the top choice for each.

Stay up-to-date with all of the latest alfalfa product news. Check out our blog!



PLANTING ALFALFA

PLANTING METHOD

Alfalfa should be either drilled or broadcast onto a firm seedbed. If you are drilling alfalfa, shoot for a planting depth of $\frac{1}{4}$ "– $\frac{1}{2}$ ". If you are broadcasting alfalfa seed, rolling or packing the field after seeding will significantly help your stand by increasing seed to soil contact.

SEEDING RATE

Seeding rate on alfalfa can vary widely based on conditions. In good soil with adequate moisture, seeding rates should be 15–20 lbs/acre to establish a high population that will perform under more intensive management. For dry conditions, seeding rates of 10–15 lbs/acre will be more sufficient with less moisture to support a high population.

PLANTING TIME

Alfalfa can be successfully seeded in either the spring or early fall. Spring seedings should be done as soon as the field is fit, and the last danger of hard frost has passed. Fall seedings should be completed about six weeks before the first killing frost to allow the new plants to establish prior to winter.

WEED CONTROL

Controlling weeds prior to seeding alfalfa is very important. This can be done through tillage or chemical burndown of existing weeds immediately prior to seeding. In the seeding year, cutting alfalfa 60–75 days after planting provides control of annual weeds. In established alfalfa, there are numerous chemical options for weed control. Contact us or your chemical representative for site-specific recommendations.

NURSE CROPS

For spring seedings, it can be beneficial to plant a small grain nurse crop with alfalfa to provide weed and erosion control while the alfalfa gets established. Oats, barley, and spring triticale are the most common nurse crops to use in this way. Fall seeded alfalfa usually faces reduced weed pressure, and a nurse crop provides less benefit.

ALFALFA

PRODUCT GUIDE

	FALL DORMANCY	WINTER SURVIVAL	YIELD LEVEL	FORAGE QUALITY	ROOT TYPE	GROWER NOTES
Millborn Prime Cut™	4.2	1.8	10	Excellent	Tap	- Selected for lower lignin content - Outstanding RFQ and digestible fiber scores - High yield potential with great winter hardiness - DRI: 33/35
Millborn Final Answer™	4.3	1.7	10	Very Good	Tap/ Branch	- Alfalfa yield leader when using conventionally bred alfalfa - Very fast harvest recovery - Excellent for handling and longevity - DRI: 35/35
L-442RR Roundup Ready	4.4	1.3	9	Very Good	Tap	- Roundup Ready® technology - Great for getting weedy areas established - Excellent yield and forage quality - DRI: 30/30
Millborn SurvivorPlus™	3	2	8	Very Good	Tap/ Branch	- Top performing blend - Diversity ensures a great stand for a variety of situations - Suited well for grass/alfalfa seedings - Economical with high productivity
Big Sky Ladak	2.8	2	7	Good	Tap/ Branch	- Improved ladak genetic lines - Extremely winter hardy genetics - Excellent longevity in dryland conditions
Vernal	2	2	6	Good	Tap	- Original winter hardy line of alfalfa - Extremely drought hardy

Fall Dormancy:
Higher numbers are correlated to quicker regrowth following harvest as well as breaking dormancy earlier in the spring.

Winter Survival:
Lower numbers are correlated to better winter survival and include factors such as disease resistance and overall winter hardiness which affects the stand coming out of winter.

*Seeding rates can vary depending on soil conditions and other variables.
For questions about your specific soil type, call and speak with our specialists.

Due to the unique cropping practices do not plant Roundup Ready® Alfalfa in Imperial County, California, pending import approvals and until Forage Genetics International, LLC (FGI) grants express permission for such planting. Forage Genetics International, LLC ("FGI") is a member of Excellence Through Stewardship® (ETS). FGI products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with FGI's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. Roundup Ready® Alfalfa has pending import approvals. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Growers should refer to <http://www.biotradestatus.com/> for any updated information on import country approvals. Excellence Through Stewardship® is a registered trademark of Excellence Through Stewardship. ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready® Technology contains genes that confer tolerance to glyphosate. Glyphosate will kill crops that are not tolerant to glyphosate. Roundup Ready® and Roundup® are registered trademarks of Bayer Group, used under license by Forage Genetics International, LLC.

SPECIALTY ALFALFA PRODUCT GUIDE

NEW!

	FALL DORMANCY	WINTER SURVIVAL	YIELD LEVEL	FORAGE QUALITY	ROOT TYPE	FEATURES
 Millborn Hopper Stopper™	3.7	1.8	9	Very Good	Tap	› Highly resistant variety to Potato Leaf Hopper Pressure › DRI: 30/30
Millborn SalinityMax™ Salt tolerant	4	1.8	9	Very Good	Tap Branch	› Branched root trait selection › Tolerates areas of high salinity and moisture › DRI: 30/30
Creeping Alfalfa	2	2	6	Good	Branch	› Excellent in mixes with grass › Tolerates close grazing › Creeping root
Falcata Alfalfa Yellow flowered	1	2	7	Very Good	Fibrous	› Ideal for rangeland conditions › Best used for interseeding or mixing with grass › Lower bloat risk when grazing › Excellent longevity
Fall Dormancy: Higher numbers are correlated to quicker regrowth following harvest as well as breaking dormancy earlier in the spring.		Winter Survival: Lower numbers are correlated to better winter survival and include factors such as disease resistance and overall winter hardiness which affects the stand coming out of winter.				

*Seeding rates can vary depending on soil conditions and other variables.
For questions about your specific soil type, call and speak with our specialists.

PRIME CUT™

Prime Cut™ is an extremely high yielding alfalfa bred for forage quality without sacrificing persistence. High multi-leaf expression with an attractive round leaf and bright green plant color produces a consistent, high value hay product.

Fall Dormancy: 4.2

Winter Survival: 1.8

Yield Level: 10

Forage Quality: Excellent



FINAL ANSWER™

Final Answer™ is a yield leader with exceptional winter hardiness and disease resistance. Sunken crowns and high degree of branch root expression provide excellent traffic tolerance. Final Answer's trait package allows for placement with performance across a wide range of management systems and a huge geography.

Fall Dormancy: 4.3

Winter Survival: 1.7

Yield Level: 10

Forage Quality: Very Good



SALINITY MAX™

SalinityMax™ is a high yielding alfalfa selected for salt tolerance. It's branch root expression further helps with persistence in challenging conditions. SalinityMax provides impressive forage yields in both saline and highly productive soils.

Fall Dormancy: 4

Winter Survival: 1.8

Yield Level: 9

Forage Quality: Very Good



SHOLTY

Sholty Alfalfa will have superior yield compared to other yellow-flowered alfalfa varieties. It is well suited for delayed harvest management due to its ability to retain leaves after it has begun to flower. Sholty has also shown excellent ability to persist and compete with aggressive cool season grasses, such as crested wheatgrass. These traits make it a great choice for interseeding into existing grass or mixing with grasses in a new pasture seeding.



HOPPER STOPPER™

Save the insecticide expense and keep your alfalfa field growing when Leaf Hoppers attack with Hopper Stopper™. This product provides resiliency under Potato Leaf Hopper pressure to ensure you have an alfalfa crop. For the producer that has a hopper problem and needs a solution, Hopper Stopper is the answer.

Fall Dormancy: 3.7

Winter Survival: 1.8

Yield Level: 9

Forage Quality: Very Good



SURVIVOR PLUS™

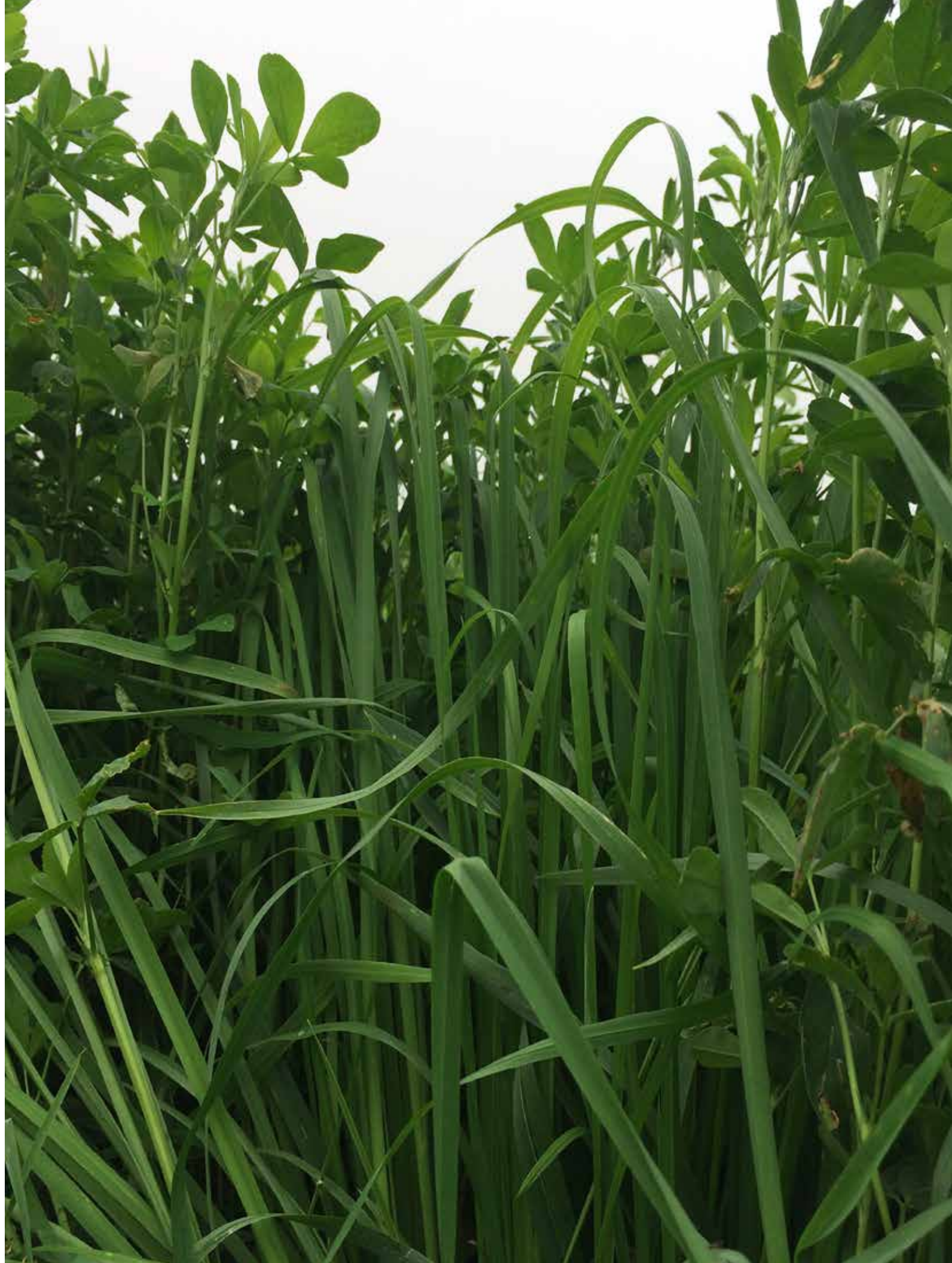
SurvivorPlus™ is an alfalfa blend that performs well across a wide range of growing conditions. Great persistence makes SurvivorPlus an excellent solution in two to three cut systems that use a longer rotation interval and rely on stand longevity with less intensive management.

Fall Dormancy: 3

Winter Survival: 2

Yield Level: 8

Forage Quality: Very Good



ALFAGRASS

Our AlfaGrass blends allow producers to benefit from having both alfalfa and grass together in one mix. These mixtures will have a longer stand life than straight alfalfa and will face less pressure from disease and pests.

Drydown time is also reduced by having grass in the mixtures, which may benefit producers in higher rainfall regions. If you're looking for an alfalfa and grass mix that fits your needs, look no further than these AlfaGrass blends.

For recommendations on which forage products to use in different applications, check out our blog!



PLANTING ALFAGRASS

PLANTING METHOD

AlfaGrass should be either drilled or broadcast onto a firm seedbed. If you are drilling, shoot for a planting depth of 1/4"–1/2". If you are broadcasting seed, rolling or packing the field after seeding will significantly help your stand by increasing seed to soil contact.

SEEDING RATE

Seeding rate on AlfaGrass blends can vary widely. Seed at the rate based on composition and growing conditions.

PLANTING TIME

Grass blends can be successfully seeded in either the spring or early fall. Spring seedings should be done as soon as the field is fit, and the last danger of hard frost has passed. Fall seedings should be completed about six weeks before the first killing frost to allow the new plants to establish prior to winter.

WEED CONTROL

Controlling weeds prior to seeding is very important. This can be done through tillage or chemical burndown of existing weeds immediately prior to seeding. In the seeding year, cutting 60–75 days after planting provides some control of annual weeds. In established alfalfa, there are numerous chemical options for weed control.

NURSE CROPS

For spring seedings, it can be beneficial to plant a small grain nurse crop to provide weed and erosion control while the alfalfa and grass get established. Oats, barley, and spring triticale are the most common nurse crops to use in this way. Fall seeded AlfaGrass blends usually face reduced weed pressure, and a nurse crop provides less benefit.



HAYMAKER

We designed Haymaker to consistently produce in challenging conditions. This high-yielding grass and alfalfa mixture has exceptional hardiness combined with great forage quality for hay production on dryland acres.

Seeding Rate: 10–12 lbs/acre

50% ALFALFA
35% INTERMEDIATE WHEATGRASS
10% PAIUTE ORCHARDGRASS
5% WESTERN WHEATGRASS

THE STOCKMAN™

The Stockman™ is a top performing AlfaGrass mixture with huge popularity among hay and livestock producers. We blend our highest yielding alfalfa – Final Answer™ – with late maturing orchardgrass and endophyte free tall forage fescue. These two grasses offer high forage yield and quality that pairs well with alfalfa. Using improved varieties of these grasses ensures that the hay produced throughout multiple cuttings will maintain a consistent alfalfa to grass ratio. AlfaGrass mixtures will have a longer stand life than straight alfalfa and will face less pressure from disease and pests. Dry down time is reduced by having grass in the mixture, which may be the biggest benefit to producers in higher rainfall regions. We made this blend because it's how we feed our own livestock and we are confident that it has a place on your operation as well.

Seeding Rate: 10–12 lbs/acre

60% FINAL ANSWER ALFALFA
25% STF - 43 TALL FESCUE
15% LATE MORNING ORCHARDGRASS





ANNUAL FORAGES

Utilizing cropland acres to produce additional forage can be a very cost-effective way to increase your stored feed supply in years where range conditions are poor or feed use is higher than normal.

Selecting forage crops that fit your growing conditions, crop rotations, and livestock requirements is an essential part of forage planning. We are prepared to assist with this at any point from winter discussions to last-minute decisions during the growing season.

For recommendations on which forage products to use in different applications, check out our blog!



PLANTING ANNUAL FORAGES

PLANTING TIMES

Cool-Season Annuals: Plant your cool-season forages as soon as the field is fit in the spring. Small grains and other cool-season species can handle light frost that may occur after planting, and getting them in the ground early allows you to best utilize winter and spring moisture.

Warm-Season Annuals: These species will need soil temperatures near 60 degrees to germinate. They are sensitive to freezing, so avoid planting until you have passed the time when frost is likely to occur. Planting can be successful throughout the summer, which allows a large window to capitalize on timely rainfall or to plant after harvesting a spring crop.

Winter Annuals: Plant winter annual forages in the fall early enough that they will have time to germinate and produce ground cover before going dormant through the winter. Avoid planting too early, as excessive fall growth can be harmful to the winter survival of the stand.

COOL-SEASON ANNUAL FORAGE PRODUCT GUIDE

	SEEDING DEPTH	MODERATE RAINFALL OR IRRIGATED SEEDING RATE PER ACRE		LOW RAINFALL DRYLAND SEEDING RATE PER ACRE	DRY MATTER YIELD POTENTIAL	FORAGE QUALITY (1 = AVERAGE, 5 = HIGHEST)	GROWER NOTES
Forage Barley	1 ½"-2"	90-100 lbs (2 bushels)	70-80 lbs (1.5 bushels)		3-4 tons	4	› Handles saline soils › Drought hardy › Palatable hay
Spring Triticale	1 ½"-2"	80-100 lbs	60-80 lbs		3-5 tons	3	› High yield › Drought hardy
Oats	1 ½"-2"	80-100 lbs (2.5-3 bushels)	60-80 lbs (2-2.5 bushels)		3-4 tons	3	› Flexible planting window › Very reliable crop in a wide range of growing conditions
Everleaf Forage Oats	1 ½"-2"	80 lbs	60 lbs		3-5 tons	4	› High forage quality › Requires good moisture and fertility
Dual Threat Forage Oat Blend	1 ½"-2"	80 lbs	60 lbs		3-5 tons	4	› Blend of two forage oat varieties capitalizes on different maturities and features
Pea/Oat Mix (60/40)	1 ½"-2"	80-100 lbs	60-80 lbs		3-4 tons	5	› Reliable way to add quality to oats used as a forage
Pea/Barley Mix (60/40)	1 ½"-2"	80-100 lbs.	60-80 lbs.		3-4 tons	5	› High crude protein potential as hay or silage
Pea/Triticale Mix (60/40)	1 ½"-2"	80-100 lbs	60-80 lbs		3-5 tons	5	› Highest yielding of the common pea/grain mixes
Italian Ryegrass	½"	25-30 lbs	15-20 lbs		3-5 tons	5	› Extremely high quality › Multi-cut crop with adequate moisture and fertility

Seeding Rate

Seed at a rate to produce a population that your moisture outlook can support. Heavier seeding rates will produce a higher population which reduces weed pressure and improves yield potential.

DUAL THREAT

Dual Threat is a blend of two top-performing oat varieties developed for use as a spring hay or haylage crop. The combination of the forage oat and dual-purpose oat varieties creates a unique mixture for forage production. The late-maturing Everleaf forage oats have an extremely high leaf to stem ratio, which increases the quality and yield of the blend. The Goliath oats are a tall variety that will produce grain quicker than the Everleaf and cure more easily for hay. Combining the two varieties has proven to increase forage quality and dry matter yields. The harvest versatility makes this a popular option with livestock producers.

Seeding Depth: 1 ½"-2"

Moderate Rainfall or Irrigated Seeding Rate: 80 lbs/acre

Low Rainfall Dryland Seeding Rate: 60 lbs/acre

Dry Matter Yield Potential: 3–5 tons



PEA/OAT MIX

Our Pea/Oat blend is a commonly used spring forage option for livestock producers looking to increase tonnage and quality in their annual hay or haylage crops. Forage peas are very high in digestibility and crude protein and do not sacrifice yield. Using a taller variety of oat in the blend ensures good dry matter yield and provides structure for the peas to grow upwards with. This combination makes Pea and Oat seed mix a reliable source of quality forage for all classes of livestock.

Seeding Depth: 1 ½"-2"

Moderate Rainfall or Irrigated Seeding Rate: 80–100 lbs/acre

Low Rainfall Dryland Seeding Rate: 60–80 lbs/acre

Dry Matter Yield Potential: 3–4 tons

WARM-SEASON ANNUAL FORAGE PRODUCT GUIDE

	LOW RAINFALL DRYLAND SEEDING RATE PER ACRE			DRY MATTER YIELD POTENTIAL	FORAGE QUALITY (1 = AVERAGE, 5 = HIGHEST)	GROWER NOTES
	MODERATE RAINFALL OR IRRIGATED SEEDING RATE PER ACRE					
	SEEDING DEPTH					
SorMax 85 BMR Forage Sorghum	¾"–1"	10–15 lbs	8–10 lbs	5–7 tons	5	› Early maturing hybrid forage sorghum › High silage yields
Raptor PPS Sorghum Sudangrass	¾"–1"	15–20 lbs	12–15 lbs	5–7 tons	5	› Highly palatable › Versatile uses between graze, hay, and chop
Cow Conditioner BMR Sorghum Sudangrass	¾"–1"	15–20 lbs	12–15 lbs	4–6 tons	5	› Extremely high yield potential and water efficiency due to photoperiod sensitive trait
MS 9000 Sorghum Sudangrass	¾"–1"	15–20 lbs	12–15 lbs	4–6 tons	3	› Reliable and versatile › Economical sorghum sudangrass hybrid
Turbo BMR Sudangrass Hybrid	¾"–1"	15–20 lbs	12–15 lbs	3–6 tons	5	› Fast growing › Excellent persistence in multi-cut systems
Piper Sudangrass	¾"–1"	15–20 lbs	12–15 lbs	3–5 tons	2	› Finer stemmed than a sorghum sudangrass › Fast growing
Hybrid Pearl Millet	½"–¾"	15–20 lbs	10–15 lbs	3–5 tons	4	› Leafy, multi-purpose millet › Tillers well
German Millet	½"–¾"	20–25 lbs	15–20 lbs	2–4 tons	4	› Reliable and leafy › Most common hay millet
White Wonder Millet	½"–¾"	20–25 lbs	15–20 lbs	2–4 tons	3	› Slightly taller and coarser stemmed than German Millet › Drought hardy
Siberian Millet	½"–¾"	20–25 lbs	15–20 lbs	2–3 tons	3	› Quickest maturing hay millet
Japanese Millet	½"–¾"	20–25 lbs	15–20 lbs	2–4 tons	3	› Good regrowth › Tolerates wet and saline soils better than other millets
Teff Grass	¼"–½"	8–10 lbs	6–8 lbs	3–5 tons	5	› Extremely high quality grass hay crop › Multi-cut with fast regrowth
BMR Grazing Corn	1 ½"–2"	30–40 lbs	20–25 lbs	6–8 tons	5	› Highest energy grazing forage › Best used in blends as grazing cover crop

SORMAX 85

SorMax 85 is a BMR forage sorghum that we have selected for high silage yields and maturity suitable for short growing seasons or later planting in double crop systems. In a single cut silage system, SorMax 85 will be one of the highest returns on seed investment available in an annual forage crop. Feed quality harvested from SorMax 85 is excellent and sorghum silage can be fed alone, or as part of a mixed ration.

Seeding Depth: $\frac{3}{4}$ "–1"

Moderate Rainfall or Irrigated Seeding Rate: 10–15 lbs/acre

Low Rainfall Dryland Seeding Rate: 8–10 lbs/acre

Dry Matter Yield Potential: 5–7 tons



TEFF GRASS

Teff Grass is a warm-season annual grass commonly used for hay production or grazing. Teff has gained popularity for its excellent forage quality and fast growth which allows for multiple cuttings during the growing season. Teff Grass is very fine stemmed and fine-bladed, making it extremely palatable to all classes of livestock. Crude protein levels of Teff hay are much higher than other grass hay options. Teff Grass will adapt to a range of soil types but does not perform well in waterlogged soils or highly saline areas.

Seeding Depth: $\frac{1}{4}$ "– $\frac{1}{2}$ "

Moderate Rainfall or Irrigated Seeding Rate: 8–10 lbs/acre

Low Rainfall Dryland Seeding Rate: 6–8 lbs/acre

Dry Matter Yield Potential: 3–5 tons

WINTER ANNUAL FORAGE PRODUCT GUIDE

	MODERATE RAINFALL OR IRRIGATED SEEDING RATE PER ACRE		LOW RAINFALL DRYLAND SEEDING RATE PER ACRE		DRY MATTER YIELD POTENTIAL	FORAGE QUALITY	GROWER NOTES
	SEEDING DEPTH						
Forage Winter Wheat	1"-1 ½"	80-100 lbs	70-80 lbs	3-5 tons	5	› Awnless winter wheat › Late maturing for long harvest window	
Winter Triticale	1"-1 ½"	80-100 lbs	70-80 lbs	3-5 tons	4	› Drought and winter hardy › High yielding	
Winter Rye	1"-1 ½"	80-100 lbs (1.5-2 bushels)	60-80 lbs (1-1.5 bushels)	2-4 tons	3	› Best winterhardiness › Quickest growth and maturity	
Winter Barley	1"-1 ½"	72-96 lbs (1.5-2 bushels)	48-72 lbs (1-1.5 bushels)	1.5-2.5 tons	4	› Best option for saline soils › Awnless forage type	

Seeding Rate

Seed at a rate to produce a population that your moisture outlook can support. Heavier seeding rates will produce a higher population which reduces weed pressure and improves yield potential.



FERTILITY GUIDE

LBS/TON OF FORAGE REMOVED

		N	P ₂ O ₅	K ₂ O	S
HAY & PASTURE	#3 Hay & Pasture Mix™	45	15	50	4.5
	Waterway Mix™	45	15	50	4.5
	Calving Pasture Mix™	45	15	50	4.5
	Alfalfa Patcher	30	15	45	-
	Pasture Fix Mix™	45	15	50	4.5
	Select Horse Pasture Mix™	45	15	50	4.5
	Premium Dryland Pasture Mix™	45	15	50	4.5
	Haymaker™	50	15	50	5
ALFALFA & ALFAGRASS MIXES	Pure Alfalfa*	51	12	49	5.4
	The Stockman™	50	15	50	5
COOL-SEASON ANNUAL FORAGES	Oats*	9	11	45	-
	Spring Triticale	9	11	45	-
	Forage Barley	9	11	45	-
	Everleaf 126 Forage Oats*	9	11	45	-
	Italian Ryegrass*	43	12	43	-
	Pea/Oat Mix (60/40)	20	15	45	-
	Pea/Barley Mix (60/40)	20	15	45	-
	Pea/Triticale Mix	20	15	45	-
WARM-SEASON ANNUAL FORAGES	Dual Threat™*	9	11	45	-
	SorMax 85™*	28	8.3	42	5.9
	Raptoe	30	9.5	34	5.8
	Cow Conditioner™*	30	9.5	34	5.8
	MS 9000*	30	9.5	34	5.8
	Pearl Millet	10	5	12	-
	German Millet	10	5	12	-
	Japanese Millet	10	5	12	-
	Siberian Millet	10	5	12	-
	White Wonder Millet	10	5	12	-
	Teff Grass	15	11	40	-
	Turbo™	30	9.5	34	5.8
WINTER ANNUALS	Piper Sudangrass	30	9.5	34	5.8
	Cereal Rye	9	11	45	-
	Winter Triticale	9	11	45	4.5
	Forage Winter Wheat	9	11	45	4.5
	Winter Barley	9	11	45	-

*N, P, K, and S values courtesy of International Plant Nutrition Institute. All other values are approximate.

FERTILITY

Knowing your yield goal, previous crop, and having a soil sample will ensure a more accurate fertility plan. Legume crops do not need additional nitrogen if properly inoculated and nodules are formed. Grass/Legume mixtures do not need additional nitrogen if more than 1/3 of the crop is a legume and has proper nodulation.



GRAINS

With the challenging and ever-changing state of agriculture, many producers are examining their crop rotations and management practices as a whole. We continue to see new interest in diversifying crop rotations to allow for the inclusion of cover crops and livestock, reduction of inputs, and improvements of the overall soil health on cropland acres.

Millborn has years of experience in helping producers creatively turn simple crop rotations into diversified systems with more resilience to weather and market conditions. We monitor university trials and strive to carry top-performing varieties. Whether you have grown small grains for many years, or have just begun, we want to see success on your acres.

SMALL GRAIN PRODUCT GUIDE

SPECIES	SEEDING RATE PER ACRE	SEED DEPTH	YIELD POTENTIAL	PLANTING TIME	FEATURES
KWS Hybrid Rye	0.80 units*	0.80"	80–150 bu/acre	Fall	› Fastest germination, growth and maturity. High-yielding with excellent market quality characteristics.
Certified Winter Wheat	80–100 lbs	1"–1 ½"	50–70 bu/acre	Fall	› An easily marketable fall-seeded option that provides ground cover through the winter.
Certified Oats	80–100 lbs	1 ½"–2"	80–150 bu/acre	Spring	› A reliable and marketable spring-seeded option that allows for acre versatility.
Hybrid Grain Sorghum	4–8 lbs	¾"–1"	60–100 bu/acre	Early Summer	› A warm-season crop alternative that provides reliable production in dryer environments.

Yield will vary based on variety and environmental growing conditions. Contact us for specific variety information and availability.

*1 unit = 1 million live seeds

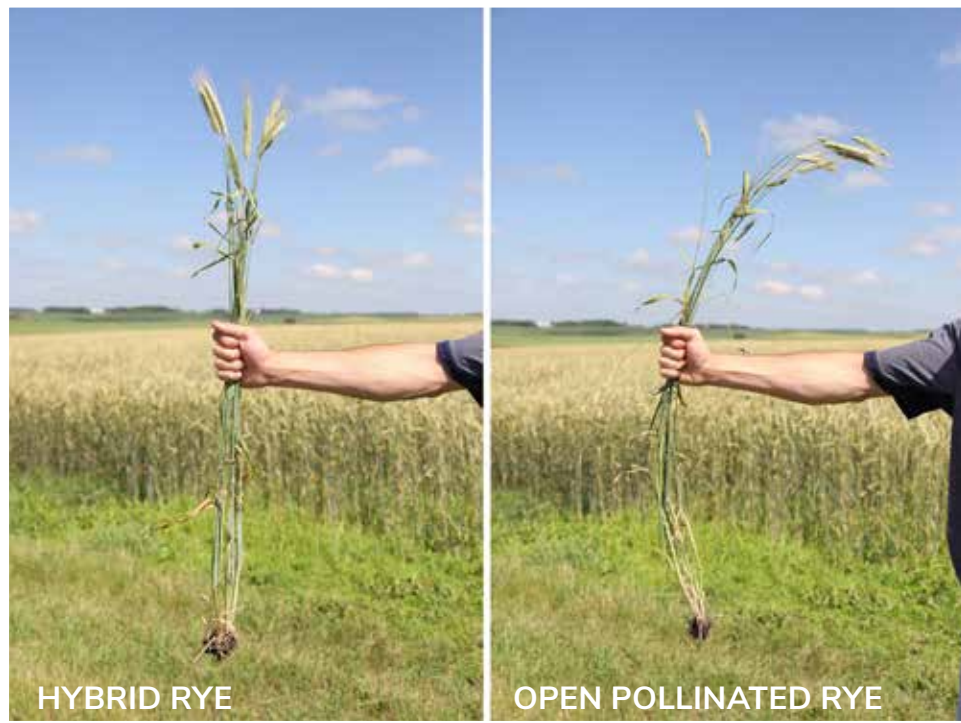
FERTILITY GUIDE

CROP		LBS/BU OF GRAIN PRODUCED			
		N	P ₂ O ₅	K ₂ O	S
KWS HYBRID RYE	Grain	1.12	0.46	0.31	0.10
	Stover	0.80	0.21	1.50	0.14
	Total	1.92	0.67	1.81	0.24
CERTIFIED WINTER WHEAT	Grain	1.16	0.48	0.29	0.10
	Stover	0.70	0.16	1.20	0.14
	Total	1.86	0.64	1.49	0.24
CERTIFIED OATS	Grain	0.77	0.28	0.19	0.07
	Stover	0.31	0.16	0.94	0.11
	Total	1.08	0.44	1.13	0.18
HYBRID GRAIN SORGHUM	Grain	0.66	0.39	0.27	0.06
	Stover	0.56	0.16	0.83	0.12
	Total	1.22	0.55	1.10	0.18

*N, P, K, and S values courtesy of International Plant Nutrition Institute.

KWS HYBRID RYE

Bred to be the highest yielding small grain on the market, the extensive tillering, solid stem, and uniform grain set of hybrid rye allows it to out yield other small grains in light and sandy soils. Pollen Plus Technology creates a shorter pollination window reducing the chances of ergot infestation, making hybrid rye grain more attractive to the rye grain markets.





MillbornSeeds

COVER CROPS

COVER CROPS

Cover crops continue to be a hot topic in farming and ranching, gaining more interest each year. With agriculture changing, so must our practices to remain viable in a challenging ag environment. As more producers utilize cover crops, the benefits they can have for your land and livestock continue to become more apparent.

Over the years, we have developed and modified mixes for specific goals that many producers have in common, serving as proven solutions. We encourage custom mixes for those who have a unique situation or are looking to expand their cover crop experience with a specialized blend. We keep more than 100 different cover crop species and varieties available to ensure that your mix is ready to be created when needed.

Looking for more information on practical cover crop applications? Check out our blog!



PLANTING COVER CROPS

PLANTING METHOD

Cover crops can be drilled or broadcast. Just remember to plant the small seeds shallow. Calibrate your drill using the drill's directions. For a mix, look at your seed tag and find the species that is the largest percentage by weight in the mix. Since your drill calibration guide may not list that species, find a seed that is very similar in size and density. On your seed label, the suggested seeding rate (pounds/acre) is listed in the upper right corner. Remember, if there are many smaller, heavier seeds in the mix, it will flow faster than your calibrated setting, and you'll have to slow the seed flow. This may not be perfect, but it's a great place to start the calibration process. Monitor actual seed usage to fine tune your drill setting.

PLANTING TIME

Plant as soon as conditions allow. As the days get shorter, it becomes crucial to have your cover crops growing as soon as possible.

GRAZING TIME

You can graze a cover crop at nearly any point during or after its growth. If there are sorghum hybrids in the mix, allow for seven days after a frost event before you graze it to reduce the concern of prussic acid.

INOCULANT

To maximize nitrogen fixation, we recommend inoculating any legumes in your cover crop mixes.

COVER CROP SYSTEMS

Cover crops can be utilized in a variety of cropping systems. We're highlighting the top six cover crop system scenarios. If you're new to cover crops, here's how to get started!



1. FOLLOWING SMALL GRAIN HARVEST

To reduce compaction following wheat or oats for grains, plant *The Producer* or *Balanced Plus*. These two mixes will also create grazing opportunities in the fall and winter months.

2. CORN SILAGE

If you're chopping corn in the fall, plant *Mellow Maker*, a cereal rye and brassica blend. *Mellow Maker* can be used for winter grazing, and as a green forage during calving seasons. Soybeans can also be planted into *Mellow Maker*.

3. FOLLOWING CANNING CROPS

The long window after canned crop harvest gives you an opportunity to plant a legume heavy, soil health building mix like *Nutrient Builder*. This mix will alleviate compaction, fix nitrogen, and reduce leaching and wind erosion.

4. FOLLOWING SPRING FORAGE CROPS

Producers planting spring forages will have a large growing window that allows them to plant late June–early July. *Premium Graze* or *Ranch Hand* are two warm-season blends designed for fall and winter grazing. These mixes will provide the most tonnage, while utilizing the covers when pasture gets short in the fall months.

5. CORN AND SOYBEAN ROTATION

Aerial application of cereal rye mixes, such as *Winter Wonder* into standing cash crops can give your covers a head start without sacrificing yield.

6. FULL-SEASON COVERS

Utilize spring or early summer planted covers like *Ranch Hand* or *Optigraze* for full-season growth and forage production. *Optigraze* can be grazed late June–July and *Ranch Hand* can be grazed in late July through the winter months.

COVER CROP PRODUCT GUIDE

BROADCAST SEEDING RATE PER ACRE						
PREMIUM BLEND	PLANTING TIME	DRILLED SEEDING RATE PER ACRE			MIX RATIO	GROWER NOTES
		SEEDING DEPTH				
Optigraze	Spring	1/2"	25 lbs	30 lbs	30% Italian Ryegrass 25% Forage Oats 20% Winfred Brassica 15% Hunter Brassica 10% Graza Radish	› Excellent season-long grazing › High in crude protein and digestibility › Best Use: Rotationally grazed full-season forage crop
Premium Graze	Early to Mid-Summer	1/2"—3/4"	15 lbs	18 lbs	25% Millet 25% Turnip 20% BMR Sorghum Sudangrass 20% Winfred Brassica 10% Graza Radish	› Productive on a wide range of soil types › Excellent heat and drought tolerance › Best Use: Twice grazed forage crop or stockpiled winter grazing
Sweet Stover		1/4"	20 lbs	25 lbs	25% Annual Ryegrass 15% Rapeseed 12.5% Purple Top Turnip 10% Winfred Brassica 10% Crimson Clover 10% Graza Radish 7.5% Oats 5% Buckwheat 5% Sunnhemp	› Ideal for grazing later in the fall after corn harvest › Designed for drilled or broadcast applications › Best Use: Interseeded into wide row corn
Hi-Fly		1/4"	15 lbs	15lbs	30% Annual Ryegrass 30% Rape Seed 25% Crimson Clover 25% Cover Crop Radish	› An even blend of small seeds with a lower seeding rate › Simple yet concise
Ranch Hand		1/2"—3/4"	20 lbs	25 lbs	20% Sorghum Sudangrass 15% Peredovik Sunflowers 10% Oats 10% Common Vetch 10% German Millet 10% Rapeseed 10% Turnips 5% Crimson Clover 5% Flax 5% Winfred Brassica	› Will perform well in the tough conditions of western environments › Highly diverse warm-season mix › Best Use: Fall and winter grazing to boost soil health
Balanced Plus		1/2"	12 lbs	15 lbs	30% Turnip 20% Common Vetch 20% Cover Crop Radish 20% Sorghum Sudangrass 10% Flax	› Works to scavenge nutrients and alleviate compaction › Provides late-season grazing › Best Use: Following small grain, grazed or not grazed
Nutrient Builder		3/4"	25 lbs	30 lbs	30% Cover Crop Radish 20% Common Vetch 15% Flax 15% Crimson Clover 10% Oats 5% Sunnhemp 5% Peas	› Fixes nitrogen and builds organic matter › Increase soil's microbial activity › Great option for prevent plant acres › Best Use: Building soil quality

COVER CROP PRODUCT GUIDE

BROADCAST SEEDING RATE PER ACRE						
PREMIUM BLEND	PLANTING TIME	SEEDING DEPTH	DRILLED SEEDING RATE PER ACRE		MIX RATIO	GROWER NOTES
The Producer	Late Summer	1/2"-3/4"	20 lbs	25 lbs	25% Purple Top Turnip 25% Common Vetch 20% Cover Crop Radish 15% Flax 15% Oats	› Ideal for late-season growing › Cool-season version of Balanced Plus › Best Use: Quick fall cover, grazed or not grazed
Classic Trio		1/4"-1/2"	8 lbs	10 lbs	40% Cover Crop Radish 30% Purple Top Turnip 30% Rapeseed	› Quick establishing brassica blend › Creates a mellow seedbed › Best Use: High carbon or compacted soils for fall grazing
All American	Fall	3/4"	50 lbs	50 lbs	50% Rye 25% Winter Camelina 15% Radish 10% Crimson Clover	› Classic diversity to promote soil biology › Protect from soil erosion › Create an ideal seedbed for cash crops › Best Use: Fall diversity and spring growth
Mellow Maker		3/4"	50 lbs	50 lbs	50% Rye 20% Radish 15% Turnip 15% Rapeseed	› Deep-rooted mix to loosen soil › Increase water filtration and decrease compaction › Less residue › Best Use: Quick fall graze on compacted soils
Winter Wonder		3/4"	50 lbs	50 lbs	50% Rye 35% Winter Camelina 15% Hairy Vetch	› Trio of winter annuals › Promote soil biology through spring › Gain nitrogen › Best Use: Soil builder with spring growth

RANCH HAND™

A good Ranch Hand™ can do it all, and that's just what this mix will do. There's been an increase in demand for season-long covers with more diversity. The Ranch Hand is a warm season mix that is well suited for grazing. This mix will perform well as a multipurpose blend in the tough conditions of western environments.

Drilled Seeding Rate: 20 lbs/acre

Broadcast Seeding Rate: 25 lbs/acre

Planting Depth: 1/2" – 3/4"

MIX RATIO

20% SORGHUM SUDANGRASS
15% PEREDOVIK SUNFLOWERS
10% OATS
10% COMMON VETCH
10% GERMAN MILLET
10% RAPESEED
10% TURNIPS
5% BALANSA CLOVER
5% FLAX
5% WINFRED BRASSICA

*These amounts are based on percentage of full seeding rate.



HI FLY™

Bring it back! Hi Fly resurged last year and proved to be a fantastic mix for flying over crops. An even blend of small seeds with a lower seeding rate makes for a handy cocktail when aerial applying. Simple yet concise - it checks the boxes by having a grass, legume, and brassica to move soil health forward on your farm.

Drilled Seeding Rate: 15 lbs/acre

Broadcast Seeding Rate: 15 lbs/acre

Seeding Depth: 1/4"

MIX RATIO

30% RADISH
30% RAPESEED
20% ANNUAL RYEGRASS
25% CRIMSON CLOVER

*These amounts are based on percentage of full seeding rate.



PREMIUM GRAZE™

Premium Graze™ is a blend of warm-season grasses and brassicas designed as an annual grazing system throughout the summer months as well as late-season. The mixture provides high dry matter yields and exceptional forage quality for grazing livestock. The palatability of this blend improves dry matter intake and animal performance when used as a primary feed source.

Drilled Seeding Rate: 15 lbs/acre
Broadcast Seeding Rate: 18 lbs/acre
Planting Depth: 1/2" – 3/4"

MIX RATIO

- 25% MILLET
- 25% TURNIP
- 20% BMR SORGHUM SUDANGRASS
- 20% WINFRED BRASSICA
- 10% GRAZA RADISH

*These amounts are based on percentage of full seeding rate.



BALANCED PLUS™

Balanced Plus™ is our multi-purpose, smart-value blend that will accomplish a wide variety of your goals. This combination of brassicas, grasses, and legumes is designed to maximize soil health. Balanced Plus works to alleviate compaction, scavenge nutrients, and provide grazing.

Drilled Seeding Rate: 12 lbs/acre
Broadcast Seeding Rate: 15 lbs/acre
Planting Depth: 1/2" – 3/4"

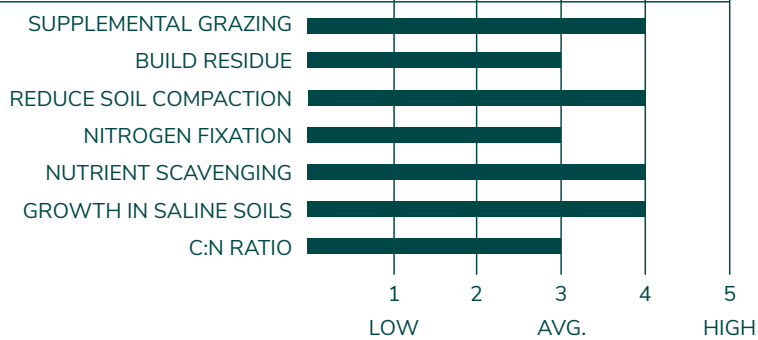
MIX RATIO

- 30% TURNIP
- 20% COMMON VETCH
- 20% COVER CROP RADISH
- 20% SORGHUM SUDANGRASS
- 10% FLAX

*These amounts are based on percentage of full seeding rate.



LANDOWNER SCORECARD



NUTRIENT BUILDER™

Nutrient Builder™ is a very diverse blend developed to improve soil for next year's cash crop. This cover crop cocktail will help fix nitrogen, build organic matter, and alleviate compaction. Seven different species will also help increase the soil's microbial activity.

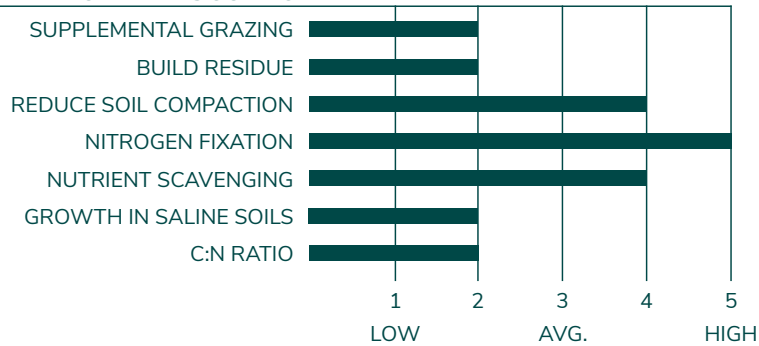
Drilled Seeding Rate: 25 lbs/acre
Broadcast Seeding Rate: 30 lbs/acre
Planting Depth: 3/4"–1"

MIX RATIO

- 30% COVER CROP RADISH
- 20% COMMON VETCH
- 15% FLAX
- 15% CRIMSON CLOVER
- 10% OATS
- 5% PEAS
- 5% SUNNHEMP

*These amounts are based on percentage of full seeding rate.

LANDOWNER SCORECARD



THE PRODUCER™

The Producer™ is our cool-season version of Balanced Plus™. This blend achieves a variety of goals such as late-season grazing, nutrient scavenging, and reducing compaction.

Drilled Seeding Rate: 20 lbs/acre

Broadcast Seeding Rate: 25 lbs/acre

Planting Depth: 1/2" – 3/4"

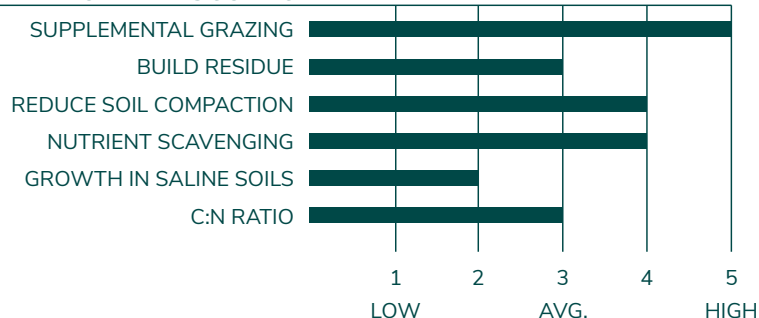


MIX RATIO

25% PURPLE TOP TURNIP
25% COMMON VETCH
20% COVER CROP RADISH
15% FLAX
15% OATS

*These amounts are based on percentage of full seeding rate.

LANDOWNER SCORECARD



CLASSIC TRIO™

Classic Trio™ is our quick establishing basic brassica blend. The deep tap roots will alleviate compaction, and you will create a mellow seedbed to plant back into.

Drilled Seeding Rate: 8 lbs/acre

Broadcast Seeding Rate: 10 lbs/acre

Planting Depth: 1/2"

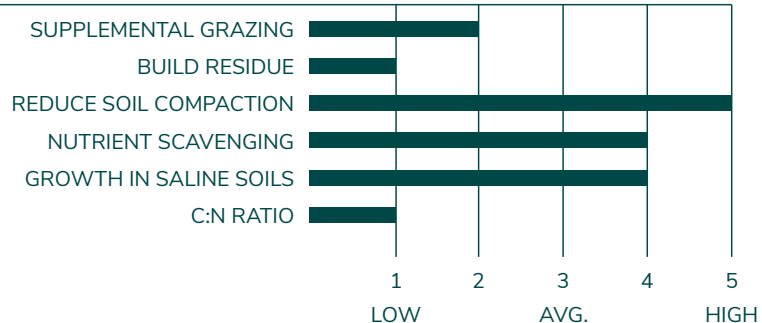


MIX RATIO

40% COVER CROP RADISH
30% RAPESEED
30% PURPLE TOP TURNIP

*These amounts are based on percentage of full seeding rate.

LANDOWNER SCORECARD



OPTIGRAZE™

Optigraze™ is a blend of cool-season grasses and brassicas that has been developed as a season-long grazing cover crop. Overall forage quality of Optigraze is very high in terms of both crude protein and digestibility. Animal performance and average daily gains reflect this rich grazing diet.

Drilled Seeding Rate: 25 lbs/acre

Broadcast Seeding Rate: 30 lbs/acre

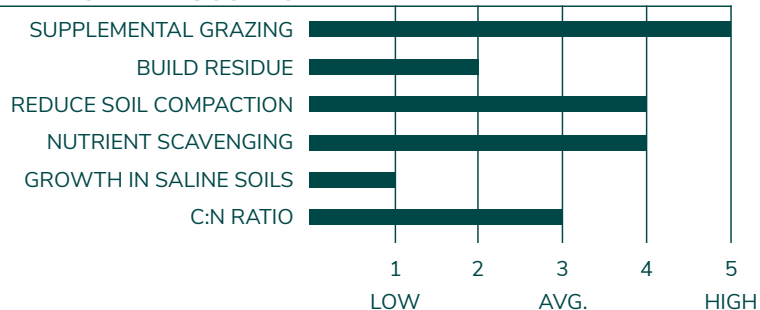
Planting Depth: 1/2" – 3/4"

MIX RATIO

30% ITALIAN RYEGRASS
25% FORAGE OATS
20% WINFRED BRASSICA
15% HUNTER BRASSICA
10% GRAZA RADISH

*These amounts are based on percentage of full seeding rate.

LANDOWNER SCORECARD



SWEET STOVER™

Sweet Stover™ is designed for broadcasting or drilling applications. This mix is to be interseeded into your wide row corn fields between V3-V8 of your corn growth. This diverse cocktail of brassicas, legumes and cool-season grasses provides a balanced diet for livestock out on stalks.

Drilled Seeding Rate: 20 lbs/acre

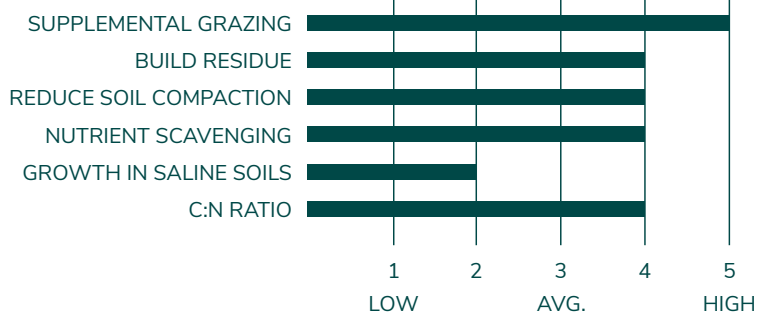
Broadcast Seeding Rate: 25 lbs/acre

Planting Depth: 1/4"

MIX RATIO

- 25% ANNUAL RYEGRASS
- 15% RAPESEED
- 12.5% PURPLE TOP TURNIP
- 10% WINFRED BRASSICA
- 10% CRIMSON CLOVER
- 10% GRAZA RADISH
- 7.5% OATS
- 5% BUCKWHEAT
- 5% SUNNHEMP

LANDOWNER SCORECARD



*These amounts are based on percentage of full seeding rate.





TAKE YOUR RYE TO THE NEXT LEVEL WITH **RYE COCKTAILS.**

WE KNOW THAT RYE HAS SOME INCREDIBLE BENEFITS.

From being a nutrient catch crop, to reducing erosion and fitting into a variety of crop rotations, rye is a cover crop workhorse. We're introducing Rye Cocktails to bring a new level of diversity and added soil health benefits. Three new mixes, available two ways. Our Rye Cocktails bring a level of diversity and added soil health benefits to your operation. Three mixes (All-American, Mellow Maker, and Winter Wonder - all seeded at 50 lbs/acre) available two ways.

Already have rye? Not a problem! The mixes are available without rye and seeded at 5 lbs/acre. Add 45 lbs/acre of rye for the perfect cocktail.

ALL AMERICAN™

All-American™ is a classic, diverse mix designed to promote soil biology, protect your soil from erosion, and create an ideal seedbed for your cash crops.

Pre-Mixed Seeding Rate: Pre-mixed: 50 lbs/acre

You Supply the Rye Seeding Rate: 5 lbs/acre

Planting Depth: Broadcast: 0" | Drilled: ¾"

MIX RATIO

50% RYE

25% WINTER CAMELINA

15% RADISH

10% CRIMSON CLOVER



MELLOW MAKER™

Mellow Maker™ is a deep-rooted mix designed to keep your ground mellow by loosening the soil to increase water infiltration and decrease soil compaction.

Pre-Mixed Seeding Rate: Pre-mixed: 50 lbs/acre

You Supply the Rye Seeding Rate: 5 lbs/acre

Planting Depth: Broadcast: 0" | Drilled: ¾"

MIX RATIO

50% RYE

20% RADISH

15% TURNIP

15% RAPESEED



WINTER WONDER™

A trio of winter annuals, Winter Wonder will provide spring green up from a grass, legume and brassica! In addition, this mix will promote soil biology through spring, and if time allows, gain nitrogen from the hairy vetch.

Pre-Mixed Seeding Rate: Pre-mixed: 50 lbs/acre

You Supply the Rye Seeding Rate: 5 lbs/acre

Planting Depth: Broadcast: 0" | Drilled: ¾"

MIX RATIO

50% RYE

35% WINTER CAMELINA

15% HAIRY VETCH



MILLBORNSEEDS.COM | 888.498.7333

DESIGNING A CUSTOM COVER CROP MIX

Designing your own cover crop mix should always be a goal-based process. Determine the top one to three goals that you would like to work towards by planting a cover crop, decide what your planting window will be, and begin building your mix from there.

Cover crop species are broken down into three main categories:

GRASSES

Any small grains such as oats, barley, or wheat as well as warm-season grasses like millets, sorghums, and sudangrass.

- › High dry matter yields for grazing
- › Higher carbon species that increase residue

BRASSICAS

Family of leafy broadleaf plants with a large taproot. Includes radishes, turnips, and other related species.

- › Taproots penetrate soil profile for nutrient scavenging and reducing compaction
- › Excellent forage yield and quality that is maintained late in the season

LEGUMES

Any plant that can form a nodule on its root and fix excess soil nitrogen. Clovers, peas, and vetches are some common examples.

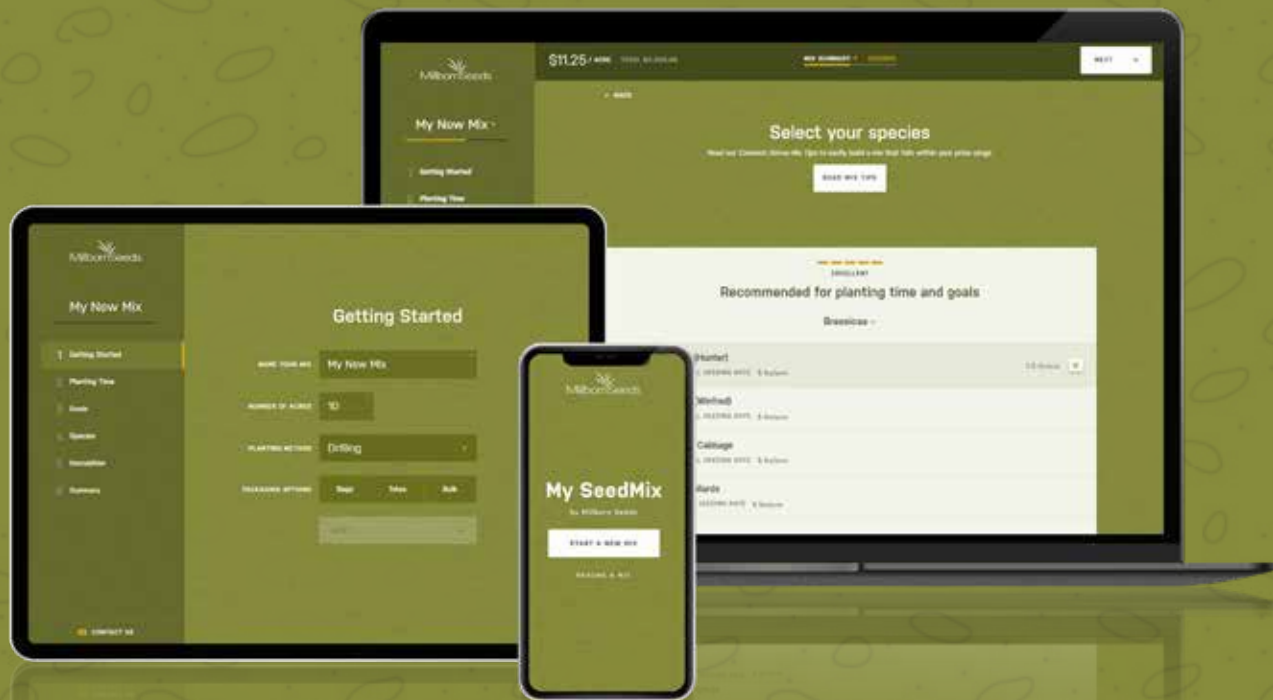
- › Form relationships with bacteria to fix atmospheric nitrogen in the soil
- › Promote breakdown and mineralization of residue due to higher nitrogen content

Other broadleaf species that do not fit any of these groupings are also commonly used and can have huge benefits to a mix, so do not overlook them. They are listed separately in the Cover Crop Species Guide on pages 60–61.



START MIXING YOUR OWN COVER CROP SEED MIX TODAY. WE'LL HELP.

1. NAME YOUR MIX AND CHOOSE YOUR PLANTING METHOD.
2. SELECT YOUR PLANTING TIME.
3. PRIORITIZE YOUR GOALS.
4. BUILD YOUR MIX!



Start creating your mix today!

MYSEEDMIX.COM



COVER CROP REFERENCE GUIDE

	COVER CROP	FULL SEEDING RATE LBS/ ACRE	IDEAL SEEDING DEPTH INCHES	SEED SIZE	NITROGEN FIXATION	GRAZING	REDUCTION OF SOIL COMPACTION	SALINITY TOLERANCE	C:N RATIO	NUTRIENT SCAVENGING
COOL-SEASON LEGUMES	Balansa Clover	10	¼–½	Small	Yes	Good	Good	Fair	Low	Fair
	Berseem Clover	15	¼–½	Small	Yes	Good	Poor	Fair	Low	Fair
	Chickling Vetch	50	½–1 ½	Large	Yes	Fair	Fair	Poor	Low	Fair
	Common Vetch	20	½–1	Medium	Yes	Good	Fair	Poor	Low	Fair
	Crimson Clover	15	¼–½	Small	Yes	Good	Poor	Poor	Low	Fair
	Fava Bean	80	1–1 ½	Large	Yes	Fair	Fair	Fair	Medium	Fair
	Hairy Vetch	25	½–1	Medium	Yes	Good	Fair	Poor	Low	Fair
	Lentil	30	1–1 ½	Medium	Yes	Fair	Poor	Poor	Low	Poor
	Pea	70	1 ½–2	Large	Yes	Good	Poor	Poor	Low	Poor
	Medium Red Clover	10	¼–½	Small	Yes	Good	Fair	Poor	Low	Fair
	Mammoth Red Clover	10	¼–½	Small	Yes	Good	Fair	Poor	Low	Fair
	Yellow Blossom Sweet Clover	10	¼–½	Small	Yes	Fair	Fair	Fair	Low	Fair
	Winter Pea	70	1 ½–2	Large	Yes	Good	Poor	Poor	Low	Poor
COOL-SEASON GRASSES	Annual Ryegrass	25	¼–½	Small	No	Good	Fair	Poor	Medium	Good
	Barley	100	1 ½–2	Large	No	Fair	Fair	Good	High	Fair
	Barley - Forage Type	100	1 ½–2	Large	No	Good	Fair	Good	High	Fair
	Winter Barley	100	1–1 ½	Large	No	Fair	Fair	Good	High	Fair
	Everleaf Forage Oat	80	1 ½–2	Large	No	Good	Fair	Poor	High	Fair
	Italian Ryegrass	25	¼–½	Small	No	Good	Fair	Poor	Medium	Good
	Oat	80	1 ½–2	Large	No	Good	Fair	Fair	High	Fair
	Cereal Rye	80	1–1 ½	Large	No	Good	Fair	Good	High	Good
	Spring Triticale	100	1 ½–2	Large	No	Good	Fair	Fair	High	Good
	Winter Triticale	100	1–1 ½	Large	No	Good	Fair	Fair	High	Good
	Winter Wheat	100	1–1 ½	Large	No	Fair	Fair	Fair	High	Fair
	Winter Wheat - Forage Type	80	1–1 ½	Large	No	Good	Fair	Fair	High	Fair
COOL-SEASON BROADLEAVES	Flax	20	½–¾	Medium	No	Poor	Poor	Poor	High	Fair
	Phacelia	5	¼–½	Small	No	Poor	Poor	Poor	Low	Good

COVER CROP REFERENCE GUIDE

	COVER CROP	FULL SEEDING RATE LBS/ ACRE	IDEAL SEEDING DEPTH INCHES	SEED SIZE	NITROGEN FIXATION	GRAZING	REDUCTION OF SOIL COMPACTION	SALINITY TOLERANCE	C:N RATIO	NUTRIENT SCAVENGING
WARM-SEASON LEGUMES	Cowpea	50	1–1 ½	Large	Yes	Good	Fair	Poor	Low	Fair
	Mung Bean	25	1–1 ½	Large	Yes	Fair	Fair	Poor	Low	Fair
	Soybean	50	1 ½–2	Large	Yes	Fair	Poor	Poor	Medium	Fair
	Sunn Hemp	25	½–1	Large	Yes	Fair	Good	Fair	Medium	Good
WARM-SEASON GRASSES	BMR Forage Sorghum	10	¾–1	Medium	No	Good	Good	Fair	High	Good
	German Millet	25	½–¾	Small	No	Good	Fair	Poor	High	Fair
	Grain Sorghum	8	¾–1	Medium	No	Fair	Good	Fair	High	Good
	Japanese Millet	25	½–¾	Small	No	Good	Fair	Fair	High	Fair
	Pearl Millet	20	½–¾	Small	No	Good	Fair	Poor	High	Fair
	Piper Sudangrass	15	¾–1	Medium	No	Good	Good	Fair	High	Good
	Siberian Millet	25	½–¾	Small	No	Good	Fair	Poor	High	Fair
	BMR Sorghum Sudangrass	20	¾–1	Medium	No	Good	Good	Fair	High	Good
	Sorghum Sudangrass	20	¾–1	Medium	No	Good	Good	Fair	High	Good
	BMR Sudangrass Hybrid	15	¾–1	Medium	No	Good	Good	Fair	High	Good
	Teff Grass	10	¼	Small	No	Good	Poor	Poor	Medium	Poor
	White Wonder Millet	25	½–¾	Small	No	Good	Fair	Poor	High	Fair
WARM-SEASON BROADLEAVES	Buckwheat	50	½–1	Medium	No	Poor	Poor	Poor	Medium	Fair
	Peredovik Sunflower	7	1–1 ½	Large	No	Good	Good	Good	High	Good
	Safflower	30	1–1 ½	Large	No	Poor	Good	Good	Medium	Good
	COVER CROP	FULL SEEDING RATE LBS/ ACRE	IDEAL SEEDING DEPTH INCHES	SEED SIZE	NITROGEN FIXATION	GRAZING	REDUCTION OF SOIL COMPACTION	SALINITY TOLERANCE	C:N RATIO	NUTRIENT SCAVENGING
BRASSICAS	Ethiopian Cabbage	5	¼–½	Small	No	Good	Good	Good	Low	Good
	Forage Collards	6	¼–½	Small	No	Good	Good	Poor	Low	Good
	Graza Radish	8	¼–½	Small	No	Good	Good	Poor	Low	Good
	Hunter Brassica	5	¼–½	Small	No	Good	Good	Fair	Low	Good
	Kale	4	¼–½	Small	No	Good	Good	Fair	Low	Good
	Mustard	8	¼–½	Small	No	Fair	Good	Poor	Low	Good
	Radish	8	¼–½	Small	No	Good	Good	Fair	Low	Good
	Rapeseed	5	¼–½	Small	No	Good	Good	Good	Low	Good
	Sugar Beet	4	¼–½	Small	No	Good	Good	Good	Low	Good
	Purple Top Turnip	5	¼–½	Small	No	Good	Good	Fair	Low	Good
	Winfred Brassica	5	¼–½	Small	No	Good	Good	Fair	Low	Good
	Winter Camelina	3	¼–½	Small	No	Poor	Fair	Fair	Low	Good



CONSERVATION + RECLAMATION

Whether you're establishing new habitat or reclaiming a disturbed area, we are here to help. Millborn offers standard mixes and an extremely wide variety of species to design your own custom mix.

Each project is unique in its own way. That's why it's our goal to make this a simple and rewarding process by offering solutions to any issues that may arise.

For more information on managing successful native seedings, check out our blog!



CONSERVATION. MADE SIMPLE.

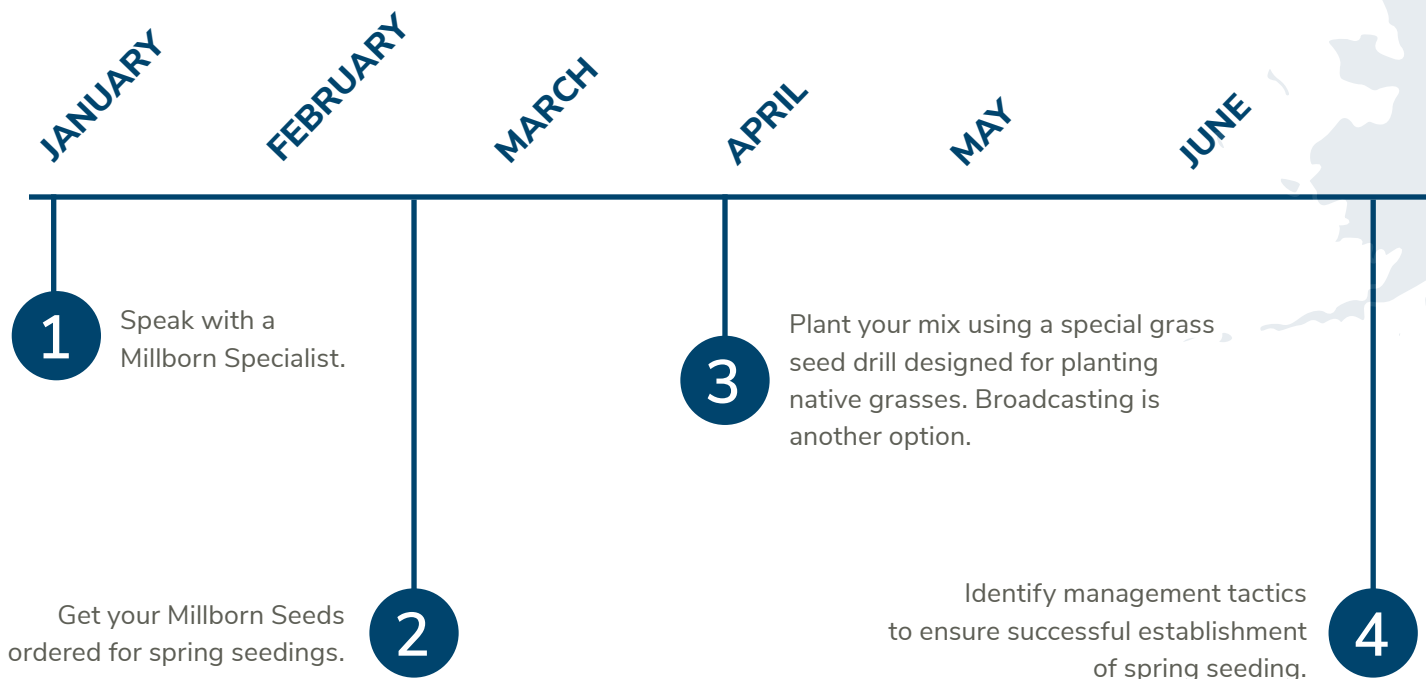
Each state has its own set of standards to follow when designing a mix for Conservation Reserve Programs. Millborn honors each of those standards and formulates the most highly specialized standard CRP mixes in the industry. It's a complex process that ultimately provides the simplest ways to achieve a healthy CRP stand.

All of our mixes are designed to help reduce the time and attention required to achieve a successful CRP stand. We combine diverse, fast-establishing grasses and forbs to help compete against weeds. This means less time fighting your project and more time enjoying it.

READY TO PLANT

Millborn Seeds offers powerfully fast delivery of standard CRP mixes, from basic grass-only mixes to highly diverse pollinator mixes.

Visit MILLBORNSEEDS.COM to view state-specific standard mixes.





MIXES AVAILABLE FOR ALL **50 STATES.**

JULY

AUGUST

SEPTEMBER

OCTOBER

NOVEMBER

DECEMBER

5

Speak with a
Millborn Specialist.

Get your Millborn Seed
ordered for dormant seedings.

6

7

Dormant seed your mix using a
special grass seed drill designed
for planting native grasses.
Broadcasting is another option.

Identify management tactics to
ensure successful establishment of
dormant seeding.

8

ESTABLISH A SUCCESSFUL STAND.

Setting healthy expectations is key to achieving a successful CRP stand. Follow the steps below for a healthy stand and achievable expectations. Have questions along the way? Our Conservation + Wildlife Specialists are here to help whenever you need it.

1

SELECT YOUR MILLBORN SEEDS CRP MIX.

If you are unsure which mix will meet your specific needs, get in touch with our Conservation + Wildlife Specialists for a custom plan



2

PROPER SEEDBED PREPARATION.

You want to start the season with a clean, weed-free seedbed to plant into. Failure to properly prepare your seedbed can result in soil that isn't uniform, leading to unsuccessful stands.



3

TIMING OF SEEDING.

The two primary seeding windows are spring and dormant fall. We fine tune our mixes depending on your desired seeding time.



4

SEEDING TECHNIQUE

We recommend using a drill capable of placing the seed no deeper than $\frac{1}{3}$ ". In our experience, Truax and Great Plains drills work the best for seeding native grasses and forbs.



5

POST-SEEDING MANAGEMENT

Every project's post seeding management is unique, but weed management and upkeep should be the number one priority during the first year. And keep in mind, you often won't see a mature species during the first year with your CRP mix.



PLANTING NATIVES

PLANTING METHOD

Using a drill capable of seeding native grasses is preferred to ensure better seed placement. Plant no deeper than 1/2", as you would rather have the seed too shallow than too deep. You also can broadcast and drag in. If you broadcast the seed, use a seeding rate at least 50% higher than the drilling rate.

Truax Drill Settings

The chart below shows seeding rates with and without seed gaskets for a general Millborn native CRP mix. The numbers listed represent bulk pound per acre.

	CONE SPROCKET SETTING	1	2	3	4	5
WITHOUT SEED GASKETS	54 TOOTH SPROCKET	6.6	11.8	21.4	36.5	62
	30 TOOTH SPROCKET	11.7	21.7	38.2	64.4	109.7
WITH SEED GASKETS	54 TOOTH SPROCKET	5.4	9.6	16.7	27.9	46.6
	30 TOOTH SPROCKET	9.7	17.3	30.1	50.4	84

The output rates are variable depending on individual conditions.

PLANTING TIME

Both warm and cool-season grasses can be planted in the spring. At a minimum, soil temp should be 50 degrees. Only cool-season grasses can be planted in late summer to early fall. Both warm and cool-season grasses can be dormant planted. Soil temps need to be at or below 40 degrees for dormant seeding.

SEEDING RATE

Plant at least 20–40 seeds/sq. ft depending on your location, growing conditions and goals.

WEED CONTROL

If you only have grasses in your mix, you can use Plateau® pre-emergence and any common broadleaf control herbicide post-emerge like 2,4-D, Milestone®, GrazonNext®, etc. (once grasses reach a three to four leaf stage). If you add flowers to your mix, you must select flowers that are tolerant to the herbicides you choose. Refer to the next page for a full list of herbicides.

WILDLIFE MIXES

For pheasant habitat, winter cover or nesting cover is best. An ideal winter cover mixture is designed with at least eight native grasses, and made predominantly of Big Bluestem, Indiangrass, and Switchgrass. A nesting cover is a mixture of both grasses (predominantly cool-season) and flowers. There should be at least 15 species in the mix, with half being flowers. You can also create a Dense Nesting Cover (DNC) by mixing wheatgrasses, alfalfa, and sweetclover. For deer bedding cover, a mixture of Big Bluestem, Indiangrass, and Switchgrass, with the mix predominantly being Switchgrass, is best.

CONSERVATION HERBICIDE GUIDE

CONSERVATION & RANGELAND	HERBICIDE	DESCRIPTION
	2,4-D Amine®	Good mid-summer broadleaf control
	Capstone®	Milestone® and Garlon® 3A mix for broadleaf & woody plant control
	Crossbow® L	Control of most types of unwanted trees and brush
	Curtail®	Broad-spectrum broadleaf weed control
	E-2®	Contains three active ingredients for broad-spectrum broadleaf control
	Escort® XP	Broad-spectrum control of woody brush and broadleaf weeds
	Facet® L	Residual and post-emergence control of grasses
	Garlon® 3A	Good woody plant control and some broadleaf control
	Grazon® P+D	2,4-D and Tordon mix for broadleaf, woody plant, and vine control
	GrazonNext® HL	2,4-D and Milestone mix for good broadleaf weed control
	Milestone®	Good broadleaf control with minimized activity on some native flower species
	Opensight®	Mixture of Milestone and Escort XP
	Pathfinder® II	Cut stump and basal bark application for control of woody plants
	Plateau®	Broadleaf and grass control used in native stand establishment
	Pursuit®	Broadleaf weed control used in alfalfa and other legume crops
	Rejuvra	Residual grass and broadleaf control in established perennial conservation sites and rangeland
	Rifle® D	Dicamba & 2,4-D premix
	Stinger®	Good thistle control in pastures and select crops
	Transline®	Good for thistle control in sensitive sites

WETLAND	HERBICIDE	DESCRIPTION
	AquaNeat®	RoundUp® for aquatic uses
	Aquathol® K	Controls submerged weeds in lakes & ponds
	Clearcast®	Controls cattails and common reed; easier on grasses and brush in sites
	Cutrine® Plus	Broad range control of algae
	Garlon® 3A	Woody plant and broadleaf control
	Habitat®	Control of emergent and floating vegetation
	Platoon® 2,4-D Amine	Good broadleaf control for mid-summer applications with aquatic label

GRASS GUIDES

Native Grasses are a group of mostly perennial grasses. Native Warm Season Grasses (NWSGs) are the backbone of the prairies, providing a variety of uses and benefits. Native Cool Season Grasses (NCSGs) fulfill an important ecological role.

NWSGs reach their maximum production during the summer months, once the soil temperature reaches 55°– 60° F. Most NWSGs are “bunch grasses,” which means they grow in clumps. This bunch grass structure provides an open understory, allowing for easy wildlife movement, while still providing overhead cover. Additionally, this stiff-stemmed plant can withstand heavy loads of snow. NWSGs are primarily used for conservation (wildlife) cover, grazing, haying and reducing soil erosion.

NCSGs actively grow when temperatures are cooler, reaching 50° - 55° F. They are especially active from early spring to early summer and then again in early fall. NCSGs are essential in providing forage, nesting cover and seeds early in the growing season. Additionally, NCSGs provide a cover for wildlife.



COOL-SEASON GRASSES

SCIENTIFIC NAME	COMMON NAME
<i>Achnatherum hymenoides</i>	Indian Ricegrass
<i>Agropyron smithii</i>	Western Wheatgrass
<i>Agropyron trachycaulum</i>	Slender Wheatgrass
<i>Bromus anomalus</i>	Nodding Brome
<i>Bromus carinatus</i>	California Brome
<i>Bromus ciliatus</i>	Fringed Brome
<i>Bromus kalmii</i>	Prairie Brome
<i>Bromus marginatus</i>	Mountain Brome
<i>Bromus purgans</i>	Hairy Wood Chess
<i>Calamagrostis canadensis</i>	Bluejoint Reed Grass (Canada Bluejoint)
<i>Danthonia spicata</i>	Poverty Oats
<i>Deschampsia cespitosa</i>	Tufted Hairgrass
<i>Elymus canadensis</i>	Canada Wildrye
<i>Elymus elymoides</i>	Bottlebrush Squirreltail
<i>Elymus glaucus</i>	Blue Wildrye
<i>Elymus lanceolatus</i>	Thickspike (Streambank) Wheatgrass
<i>Elymus riparius</i>	Riverbank Wildrye
<i>Elymus villosus</i>	Silky Wildrye
<i>Elymus virginicus</i>	Virginia Wildrye
<i>Elymus wawawaiensis</i>	Snake River Wheatgrass
<i>Festuca arizonica</i>	Arizona Fescue
<i>Festuca campestris</i>	Rough Fescue
<i>Festuca idahoensis</i>	Idaho Fescue
<i>Festuca obtusa</i>	Nodding Fescue
<i>Festuca occidentalis</i>	Western Fescue
<i>Festuca saximontana</i>	Rocky Mountain Fescue
<i>Glyceria canadensis</i>	Rattlesnake Grass
<i>Glyceria striata</i>	Fowl Manna Grass
<i>Hordeum brachyantherum</i>	Meadow Barley
<i>Hordeum jubatum</i>	Squirrel Tail Grass
<i>Koeleria cristata</i>	Prairie June Grass
<i>Leersia oryzoides</i>	Rice Cut Grass
<i>Leymus cinereus</i>	Great Basin Wildrye
<i>Leymus salinus</i>	Salina Wildrye
<i>Leymus triticoides</i>	Beardless Wildrye (Creeping Wildrye)
<i>Poa alpina</i>	Alpine Bluegrass
<i>Poa compressa</i>	Canada Bluegrass
<i>Poa fenderiana</i>	Muttongrass
<i>Poa nervosa</i>	Wheeler Bluegrass
<i>Poa palustris</i>	Fowl Bluegrass
<i>Poa secunda</i> ssp. <i>Ampla</i>	Big Bluegrass

COOL-SEASON GRASSES

SCIENTIFIC NAME	COMMON NAME
<i>Poa secunda</i> ssp. <i>Canbyi</i>	Canby's Bluegrass
<i>Poa secunda</i> ssp. <i>Sanbergii</i>	Sandberg Bluegrass
<i>Psathyrostachys juncea</i>	Russian Wildrye
<i>Pseudoroegneria spicata</i> ssp. <i>Inermis</i>	Beardless Bluebunch Wheatgrass
<i>Pseudoroegneria spicata</i> ssp. <i>Spicata</i>	Bluebunch Wheatgrass
<i>Pucinellia nuttalliana</i>	Nuttall's Alkaligrass
<i>Sphenopholis obtusata</i>	Prairie Wedgegrass
<i>Stipa comata</i>	Needle-and-Thread Grass
<i>Stipa spartea</i>	Porcupine Grass
<i>Stipa viridula</i>	Green Needlegrass
<i>Tripsacum dactyloides</i>	Eastern Gamma Grass
<i>Vulpia octoflora</i>	Sixweeks Fescue

WARM-SEASON GRASSES

SCIENTIFIC NAME	COMMON NAME
<i>Andropogon gerardii</i>	Big Bluestem
<i>Andropogon hallii</i>	Sand Bluestem
<i>Bouteloua barbata</i>	Sixweeks Grama
<i>Bouteloua curtipendula</i>	Sideoats Grama
<i>Bouteloua eriopoda</i>	Black Grama
<i>Bouteloua gracilis</i>	Blue Grama-Bad River
<i>Buchloe dactyloides</i>	Buffalograss
<i>Calamovilfa longifolia</i>	Prairie Sandreed
<i>Distichlis spicata</i>	Inland Saltgrass
<i>Eragrostis trichodes</i>	Sand Lovegrass
<i>Muhlenbergia asperifolia</i>	Scratchgrass
<i>Muhlenbergia montana</i>	Mountain Muhly
<i>Muhlenbergia porteri</i>	Bush Muhly
<i>Muhlenbergia racemosa</i>	Green Muhly (Upland Wild Timothy)
<i>Muhlenbergia wrightii</i>	Spike Muhly
<i>Panicum virgatum</i>	Switchgrass
<i>Schizachyrium scoparium</i>	Little Bluestem
<i>Sorghastrum nutans</i>	Indiangrass
<i>Spartina pectinata</i>	Prairie Cord Grass
<i>Sporobolus airoides</i>	Alkali Sacaton
<i>Sporobolus asper</i> (compositus)	Rough Dropseed
<i>Sporobolus contractus</i>	Spike Dropseed
<i>Sporobolus cryptandrus</i>	Sand Dropseed
<i>Sporobolus heterolepsis</i>	Prairie Dropseed
<i>Sporobolus wrightii</i>	Big Sacaton

WILDFLOWERS, SHRUBS & WOODY PLANTS

With the declining population of pollinators, the use of native wildflowers is becoming extremely important. Broadleaf plants increase species biodiversity of wildlife, providing essential food and habitat for beneficial insects, vital pollinators and all types of wildlife. When designing a pollinator friendly wildflower mix, keep the below points in mind.

- › Choose a variety of colors and shapes to attract a diversity of pollinators.
- › Provide pollen and nectar sources from early spring to late fall. There should be at least three flowering species blooming per season.
- › Choose plants that meet your growing conditions.

In addition to wildflowers, woody shrubs and trees are vital components of biologically diverse ecosystems. Shrubs and trees provide food, thermal cover, concealment, height diversity and a nesting habitat for numerous types of insects, pollinators, birds, and wildlife species.

Let us know what your goals and growing conditions are, and we will design a mix specific to your needs.

Did you know pollinators are responsible for one out of every three bites of food we eat?



WILDFLOWER GUIDE

SCIENTIFIC NAME	COMMON NAME
<i>Abronia vilosa</i>	Desert Sand Verbena
<i>Achillea millefolium</i>	White Yarrow
<i>Achillea millefolium occidentalis</i>	Western Yarrow
<i>Agastache foeniculum</i>	Anise (Fragrant Giant) Hyssop
<i>Agastache scrophulariifolia</i>	Purple Giant Hyssop
<i>Alisma subcordatum</i>	American (Common/Mud) Plantain
<i>Alisma triviale</i>	Northern Water Plantain
<i>Allium canadense</i>	Wild Garlic
<i>Allium cernuum</i>	Nodding Onion
<i>Allium stellatum</i>	Prairie Onion
<i>Anemone canadensis</i>	Canada (Meadow) Anemone
<i>Anemone cylindrica</i>	Thimble Weed
<i>Anemone patens</i>	Pasque Flower
<i>Anemone virginiana</i>	Tall Thimble Weed (Anemone)
<i>Angelica atropurpurea</i>	Angelica
<i>Aquilegia canadensis</i>	Columbine
<i>Aquilegia coerulea</i>	Colorado Blue Columbine
<i>Asclepias incarnata</i>	Swamp Milkweed
<i>Asclepias syriaca</i>	Common Milkweed
<i>Asclepias tuberosa</i>	Butterfly Milkweed
<i>Asclepias verticillata</i>	Whorled Milkweed
<i>Aster azureus</i>	Sky Blue Aster
<i>Aster ericoides</i>	Heath Aster
<i>Aster laevis</i>	Smooth Blue Aster
<i>Aster novae-angliae</i>	New England Aster
<i>Aster sagittifolius</i>	Arrow-leaved Aster
<i>Aster sericeus</i>	Silky Aster
<i>Aster umbellatus</i>	Flat-Topped Aster
<i>Astragalus canadensis</i>	Canada Milk Vetch
<i>Astragalus crassicaulus</i>	Ground Plum Milkvech
<i>Astragalus filipes</i>	Basalt Milkvech
<i>Balsamorhiza macrophylla</i>	Cutleaf Balsamroot
<i>Boltonia asteroides</i>	False Aster
<i>Campanula americana</i>	Tall Bellflower
<i>Campanula rotundifolia</i>	Harebell
<i>Castilleja linariifolia</i>	Wyoming Indian Paintbrush
<i>Chamaecrista fasciculata</i>	Partridge Pea
<i>Chamerion angustifolium</i>	Fireweed
<i>Clarkia amoena</i>	Farewell-to-Spring
<i>Cleome serrulata</i>	Rocky Mountain Bee Plant
<i>Coreopsis lanceolata</i>	Lance-Leaved (Sand) Coreopsis

WILDFLOWER GUIDE

SCIENTIFIC NAME	COMMON NAME
<i>Coreopsis palmata</i>	Prairie Coreopsis (Stiff Tickseed)
<i>Coreopsis tinctoria</i>	Plains Coreopsis
<i>Coreopsis tripteris</i>	Tall Coreopsis
<i>Dalea candidum</i>	White Prairie Clover
<i>Dalea ornata</i>	Western Prairie Clover
<i>Dalea purpurea</i>	Purple Prairie Clover
<i>Desmanthus illinoensis</i>	Illinois Bundleflower
<i>Desmodium canadense</i>	Showy Tick Trefoil
<i>Desmodium illinoense</i>	Illinois Tick Trefoil
<i>Dieteria bigelovii</i> var <i>bigelovii</i>	Plains Aster
<i>Dieteria canescens</i>	Hoary Tansyaster
<i>Dodecatheon meadia</i>	Shooting Star
<i>Dracopis amplexicaulis</i>	Clasping Coneflower
<i>Echinacea angustifolia</i>	Narrow-Leaved Coneflower (Black Sampson)
<i>Echinacea pallida</i>	Pale Purple Coneflower
<i>Echinacea purpurea</i>	Purple Coneflower
<i>Erigeron speciosus</i>	Aspen Fleabane (Aspen daisy)
<i>Eriogonum racemosum</i>	Redroot Buckwheat
<i>Eriogonum umbellatum</i>	Sulphur Flower Buckwheat
<i>Eryngium yuccifolium</i>	Rattlesnake Master
<i>Eschscholzia caespitosa</i>	Tufted Poppy
<i>Eschscholzia californica</i>	California Poppy
<i>Eupatorium maculatum</i>	Joe Pye Weed
<i>Eupatorium perfoliatum</i>	Boneset
<i>Eupatorium purpureum</i>	Sweet Joe Pye Weed
<i>Gaillardia aristata</i>	Blanket Flower
<i>Gaillardia pulchella</i>	Indian Blanket
<i>Gentiana andrewsii</i>	Bottle Gentian
<i>Gentiana flavida</i>	Cream Gentian
<i>Geranium maculatum</i>	Wild Geranium
<i>Geranium viscosissimum</i>	Sticky Purple Geranium
<i>Gilia capitata</i>	Globe Gilia
<i>Gilia tricolor</i>	Birds Eyes
<i>Glycyrrhiza lepidota</i>	Wild (American) Licorice
<i>Helenium autumnale</i>	Sneezeweed
<i>Helianthella uniflora</i>	Oneflowered Helianthella
<i>Helianthus annuus</i>	Annual Sunflower
<i>Helianthus giganteus</i>	Giant (Tall) Sunflower
<i>Helianthus grosseserratus</i>	Sawtooth Sunflower
<i>Helianthus maximiliani</i>	Maximilian Sunflower

WILDFLOWER GUIDE

SCIENTIFIC NAME	COMMON NAME
<i>Helianthus nuttallii</i>	Nuttal's Sunflower (Marsh Sunflower)
<i>Helianthus pauciflorus</i>	Stiff (Showy) Sunflower
<i>Heliomeris multiflora</i>	Showy Goldeneye
<i>Heliopsis helianthoides</i>	False (Early) (Ox-Eye) Sunflower
<i>Herrickia glauca</i>	Blueleaf Aster (Gray Aster)
<i>Heterotheca villosa</i>	Hairy Goldenaster
<i>Heuchera richardsonii</i>	Prairie Alumroot
<i>Hypericum pyramidatum</i>	Great St. John's Wort
<i>Ipomopsis aggregata</i>	Scarlet Gilia (Skyrocket)
<i>Iris missouriensis</i>	Rocky Mountain Iris (Western Blue Flag)
<i>Iris versicolor</i>	Northern Blue Flag Iris
<i>Iris virginica shrevei</i>	Southern Blue Flag Iris
<i>Kuhnia eupatorioides</i>	False Boneset
<i>Layia platyglossa</i>	Coastal Tidytops
<i>Leptosiphon grandiflorus</i>	Mountain Phlox (Large-flower linanthus)
<i>Lespedeza capitata</i>	Round-Head Bush Clover
<i>Liatris aspera</i>	Rough (Button) Blazingstar
<i>Liatris cylindracea</i>	Dwarf Blazingstar
<i>Liatris ligulistylis</i>	Meadow Blazingstar
<i>Liatris punctata</i>	Dotted Blazingstar (Gay Feather)
<i>Liatris pycnostachya</i>	Prairie Blazingstar (Thickspike Gayfeather)
<i>Liatris spicata</i>	Dense Blazingstar (Marsh Gayfeather)
<i>Linum lewisii</i>	Lewis Flax
<i>Linum perenne</i>	Blue Flax
<i>Lobelia cardinalis</i>	Cardinal Flower
<i>Lobelia siphilitica</i>	Great Blue Lobelia
<i>Lomatium foeniculaceum</i>	Desert Biscuitroot
<i>Lomatium macrocarpum</i>	Bigseed Biscuitroot
<i>Lomatium nudicaule</i>	Barestem Biscuitroot
<i>Ludwigia alternifolia</i>	Seedbox
<i>Lupinus argenteus</i>	Silvery Lupine
<i>Lupinus arizonicus</i>	Arizona Lupine
<i>Lupinus perennis</i>	Perennial Lupine
<i>Lupinus perennis</i>	Wild Lupine (Local EcoType)
<i>Lupinus polyphyllus</i>	Bigleaf Lupine
<i>Lupinus rivularis</i>	Riverbank Lupine
<i>Lupinus sericeus</i>	Silky Lupine
<i>Lupinus x alpestris</i>	Mountain Lupine (Great Basin Lupine)

WILDFLOWER GUIDE

SCIENTIFIC NAME	COMMON NAME
<i>Lycopus americanus</i>	Water Horehound
<i>Machaeranthera tanacetifolia</i>	Prairie Aster
<i>Mimulus ringens</i>	Monkey Flower
<i>Mirabilis multiflora</i>	Colorado Four O'Clock
<i>Monarda citriodora</i>	Lemon Beebalm (Lemon Mint)
<i>Monarda fistulosa</i>	Wild Bergamot (Bee Balm)
<i>Nemophila maculata</i>	Five Spot
<i>Nemophila menziesii</i>	Baby Blue Eyes
<i>Oenothera biennis</i>	Evening Primrose
<i>Oenothera speciosa</i>	Showy Evening Primrose
<i>Osmorhiza occidentalis</i>	Sweet Anise (Western Sweetroot)
<i>Papaver nudicaule</i>	Iceland Poppy (Arctic Poppy)
<i>Parthenium integrifolium</i>	Wild Quinine
<i>Penstemon acuminatus</i>	Sharpleaf Penstemon
<i>Penstemon cyananthus</i>	Wasatch Penstemon
<i>Penstemon digitalis</i>	Foxglove Beardtongue
<i>Penstemon eatonii</i>	Firecracker Penstemon
<i>Penstemon grandiflorus</i>	Shell Leaf Penstemon (Large-Flowered Beardtongue)
<i>Penstemon palmeri</i>	Palmer's Penstemon
<i>Penstemon procerus</i>	Smallflower Penstemon (Littleflower Penstemon)
<i>Penstemon strictus</i>	Rocky Mountain Penstemon
<i>Phacelia crenulata</i>	Desert Bluebells (Cleftleaf Wildheliotrope)
<i>Phacelia tanacetifolia</i>	Lacy Phacelia
<i>Phlox drummondii</i>	Drummond Phlox
<i>Phlox pilosa</i>	Prairie Phlox
<i>Physostegia virginiana</i>	Obedient Plant
<i>Potentilla arguta</i>	Prairie Cinquefoil
<i>Prairie Larkspur</i>	Delphinium Virescens
<i>Psoralea esculenta</i>	Prairie Turnip (Indian Breadroot)
<i>Pycnanthemum virginianum</i>	Mountain Mint
<i>Ratibida columnifera</i>	Prairie (Longheaded) Coneflower
<i>Ratibida columnifera</i> var. <i>pulcherrima</i>	Mexican Hat (Upright Prairie Coneflower)
<i>Ratibida pinnata</i>	Grayhead (Yellow) Coneflower
<i>Rudbeckia hirta</i>	Black-Eyed Susan
<i>Rudbeckia laciniata</i>	Wild Golden Glow
<i>Rudbeckia occidentalis</i>	Western Coneflower
<i>Rudbeckia subtomentosa</i>	Sweet Black-Eyed Susan
<i>Rudbeckia triloba</i>	Brown-Eyed Susan

WILDFLOWER GUIDE

SCIENTIFIC NAME	COMMON NAME
<i>Sagittaria latifolia</i>	Common Arrowhead
<i>Senna covesii</i>	Desert Senna
<i>Silphium integrifolium</i>	Rosin Weed
<i>Silphium laciniatum</i>	Compass Plant
<i>Silphium perfoliatum</i>	Cup Plant
<i>Silphium terebinthinaceum</i>	Prairie Dock
<i>Sisyrinchium bellum</i>	Blue-Eyed Grass
<i>Solidago gramnifolia</i>	Grass-Leaved Goldenrod
<i>Solidago nemoralis</i>	Old Field (Gray) (Dwarf) Goldenrod
<i>Solidago rigida</i>	Stiff Goldenrod
<i>Solidago speciosa</i>	Showy Goldenrod
<i>Sphaeralcea ambigua</i>	Desert Globemallow
<i>Sphaeralcea coccinea</i>	Scarlet Globemallow
<i>Sphaeralcea grossulariifolia</i>	Gooseberryleaf Globemallow
<i>Sphaeralcea munroana</i>	Munro's Globemallow
<i>Thalictrum dasycarpum</i>	Purple Meadow Rue
<i>Thermopsis montana</i>	Mountain Goldenbanner
<i>Tradescantia bractea</i>	Prairie Spiderwort
<i>Tradescantia ohiensis</i>	Ohio Spiderwort
<i>Verbena hastata</i>	Blue Vervain
<i>Verbena stricta</i>	Hoary Vervain
<i>Vernonia fasciculata</i>	Ironweed
<i>Veronicastrum virginicum</i>	Culver's Root
<i>Vicia americana</i>	American Vetch
<i>Viola pedatifida</i>	Prairie Violet
<i>Wyethia amplexicaulis</i>	Mule Ears
<i>Wyethia mollis</i>	Woolly Mule Ears
<i>Zizia aptera</i>	Heart Leaf Golden Alexanders
<i>Zizia aurea</i>	Golden Alexanders

SHRUBS & WOODY PLANTS GUIDE

SCIENTIFIC NAME	COMMON NAME
<i>Amelanchier alnifolia</i>	Saskatoon Serviceberry
<i>Amorpha canescens</i>	Leadplant
<i>Amorpha fruticosa</i>	Desert False Indigo
<i>Artemisia cana</i>	Silver Sagebrush
<i>Artemisia filifolia</i>	Sand Sagebrush
<i>Artemisia frigida</i>	Fringed Sage
<i>Artemisia ludoviciana</i>	Prairie Sage (Cudweed Sagewort)
<i>Artemisia nova</i>	Black Sagebrush
<i>Artemisia tridentata</i> ssp. <i>Tridentata</i>	Big Sagebrush
<i>Artemisia tridentata</i> ssp. <i>Wyomingensis</i>	Wyoming Big Sagebrush
<i>Atriplex canescens</i>	Fourwing Saltbrush
<i>Baptisia alba</i>	White Wild (False) Indigo
<i>Ceanothus integerrimus</i>	Deerbrush
<i>Ceanothus sanguineus</i>	Redstem Ceanothus
<i>Ceanothus velutinus</i>	Snowbrush Ceanothus
<i>Chrysothamnus viscidiflorus</i>	Douglas Rabbitbrush (Low Rabbitbrush)
<i>Ericameria nauseosa</i>	Rubber Rabbitbrush
<i>Gutierrezia sarothrae</i>	Broom Snakeweed
<i>Krascheninnikovia lanata</i>	Winterfat
<i>Purschia tridentata</i>	Antelope Bitterbrush
<i>Rosa arksnsana</i>	Prairie Wild Rose
<i>Rosa woodsii</i>	Woods Rose
<i>Yucca glauca</i>	Soapweed Yucca (Small Soapweed)



NATIVE MIXES

We offer standard native mixes designed for a wide variety of uses. With options for grasses, wildflowers, wetlands, and all combinations of environmental conditions, we have the right mix for your project. Our native mixes are designed with diversity in mind. A diverse mix can thrive in different soil types and adapt as environmental conditions change.

Whether you're looking for a dependable native grass mix, a transitional mix around water, or a flower mix to add visual appeal, we have the right mix for you. If you have specific needs, our specialists can also design custom mixes.

To shop all of our specialty native mix options,
check out our website!



MILLBORN NATIVE MIX

PRODUCT GUIDE

BROADCAST/COMMERCIAL SEEDING RATE PER ACRE

DRILLED SEEDING RATE PER ACRE

PREMIUM BLEND	SEEDING DEPTH			PACKAGE SIZE	GROWER NOTES
Big Country	1/4"–1/2"	15 lbs	22.5–30 lbs or 1–2 bags	15 lbs	› Native warm-season grass mix › Reaches 4'–6' tall at maturity › Excellent deer bedding and winter cover
Little Country	1/4"–1/2"	15 lbs	22.5–30 lbs or 1–2 bags	15 lbs	› Short native grass mix › Reaches 2'–3' tall at maturity › Low maintenance, natural look for landscaping
MSI Tree Belt Mix	1/4"–1/2"	15 lbs	22.5–30 lbs or 1–2 bags	15 lbs	› Prevents erosion between tree rows › Provides wildlife cover
MSI Native Wildflower Mix	1/4"–1/2"	5–6 lbs	7–8 lbs	1 lb*	› Diverse blend of forbs › Seeded alone or with grass mixes
Prairie Flower Medley Mix	1/4"–1/2"	10 lbs	15 lbs	1 lb* or 5 lbs with mulch	› Wildflowers that will do well in drier areas that receive a lot of sun › Grows to around 3' tall › Available in bulk or 5 lbs bags
Shade Flower Medley Mix	1/4"–1/2"	10 lbs	15 lbs	1 lb* or 5 lbs with mulch	› Low maintenance mix › Reaches 3' in height at maturity › Requires four hours of filtered sunlight
Short & Showy Grass and Wildflower Mix	1/4"–1/2"	15 lbs	22.5–30 lbs or 1–2 bags	15 lbs	› Mixture of grasses and wildflowers › Grows up to 2.5' in height › Provides color throughout the growing season
Frontier Grass and Wildflower Mix	1/4"–1/2"	15 lbs	22.5–30 lbs or 1–2 bags	15 lbs	› Attractive all-season mixture › Works well on moist soils and elevations up to 7,000 ft.

*These mixes are sold per pound to fulfill your needs.

MILLBORN NATIVE MIX

PRODUCT GUIDE

BROADCAST/COMMERCIAL SEEDING RATE PER ACRE				PACKAGE SIZE	GROWER NOTES
PREMIUM BLEND	SEEDING DEPTH	DRILLED SEEDING RATE PER ACRE			
High Country Flower Medley Mix	1/4"—1/2"	10 lbs	15 lbs	1 lb* or 5 lbs with mulch	› Native and introduced flowers › Adapts well on sites up to 7,000 ft in elevation › Does well in full sun to partial shade
Detention Basin & Rain Garden Mix	1/4"—1/2"	15 lbs	22.5–30 lbs or 1–2 bags	15 lbs	› Perfect for storm water features › Grasses, flowers and wetland plants › Can tolerate a variety of conditions
Wetland Emergent Mix	1/4"—1/2"	15 lbs	22.5–30 lbs or 1–2 bags	15 lbs	› Ideal transition around wetlands › Performs best in full sun to partial shade › Broad range of adaptability in standing water to drier areas
Economy Emergent Mix	1/4"—1/2"	15 lbs	22.5–30 lbs or 1–2 bags	15 lbs	› Contains grasses, flowers and wetland species › Ideal for detention and retention basins, ponds, sloughs and lakes
Wet Prairie Mix	1/4"—1/2"	15 lbs	22.5–30 lbs or 1–2 bags	15 lbs	› Perfect for overly saturated low-lying areas › Provides structure and native prairie appearance
Western Native Reclamation Mix	1/4"—1/2"	7–10 lbs	14–18 lbs	1 lb*	› Broadly adaptable › Quick establishing › Ideal for regenerating vegetation
Western Big Game and Bird Mix	1/4"—1/2"	8–12 lbs	15–20 lbs	1 lb*	› Ideal for tough growing conditions › Provides nutrition and cover for big game and bird species › Grows well in low to mid-elevations

*These mixes are sold per pound to fulfill your needs.

BIG COUNTRY™

This predominantly warm-season grass mix will grow well in most soil conditions and will reach four to six feet tall at full maturity. The diversity of this mix creates the structure to provide visual appeal and wildlife habitat year-round. Big Country™ is an excellent choice for all native grassland applications, although it does not meet the requirements of most conservation programs.

Drilled Seeding Rate: 15 lbs/acre

Broadcast/Commercial Seeding Rate: 22.5–30 lbs/acre

Planting Depth: 1/4"–1/2"

Seeds per sq. ft: 45.7

Specialist Establishment Tip: in all native mixes, you often won't see a mature species during the first season. Weed management and upkeep should be the number one priority during the first year. To give this mix a boost and reduce erosion during establishment, we added QuickGuard Sterile Triticale to the mix.

43% SWITCHGRASS

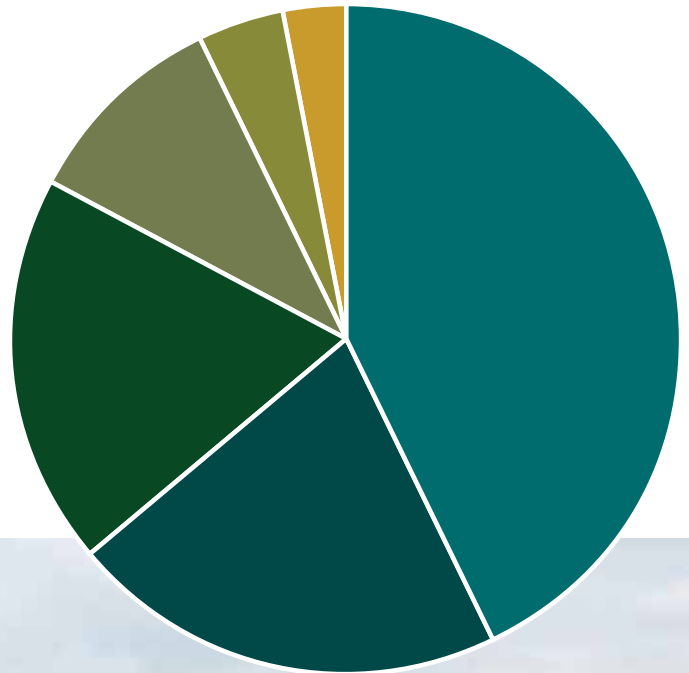
21% BIG BLUESTEM

19% INDIANGRASS

10% SIDEOATS GRAMA

4% SLENDER WHEATGRASS

3% CANADA WILDRYE



These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For percentages of all species visit MillbornSeeds.com.

LITTLE COUNTRY™

This short native grass mix is predominantly warm-season grasses that will reach a height of two to three feet. Little Country™ is a great option for providing wildlife cover that is easy to hunt, or can be used as a low maintenance way to add a natural look to your landscaping. The diversity of this mix makes it easy to grow on most sites and in most soil conditions.

Drilled Seeding Rate: 15 lbs/acre

Broadcast/Commercial Seeding Rate: 22.5–30 lbs/acre

Planting Depth: 1/4"–1/2"

Seeds per sq. ft: 47.4

31% LITTLE BLUESTEM

31% SIDEOATS GRAMA

16% BLUE GRAMA

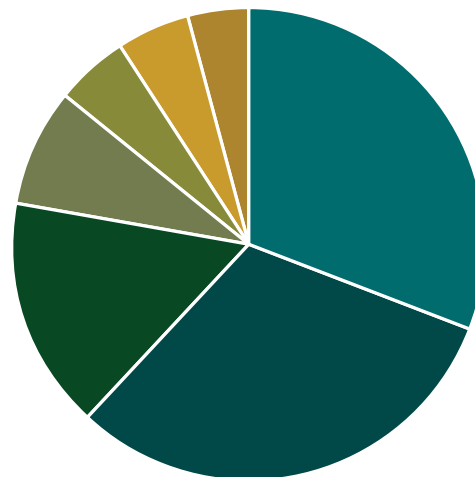
8% PRAIRIE JUNEGRASS

5% SAND DROPSEED

5% SLENDER WHEATGRASS

4% VIRGINIA WILDRIE

These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For percentages of all species visit [MillbornSeeds.com](https://millbornseeds.com).



Specialist Establishment Tip: in all native mixes, you often won't see a mature species during the first season. Weed management and upkeep should be the number one priority during the first year. To give these mixes a boost and reduce erosion during establishment, we added QuickGuard Sterile Triticale to the mix.

MSI Tree Belt Mix™

Made of two native warm-season grasses and one native cool-season grass, MSI Tree Belt Mix™ is designed to provide cover between both newly planted, as well as established tree rows. The mix will help prevent erosion, as well as provide wildlife cover throughout the year.

Drilled Seeding Rate: 15 lbs/acre

Broadcast/Commercial Seeding Rate: 22.5–30 lbs/acre

Planting Depth: 1/4"–1/2"

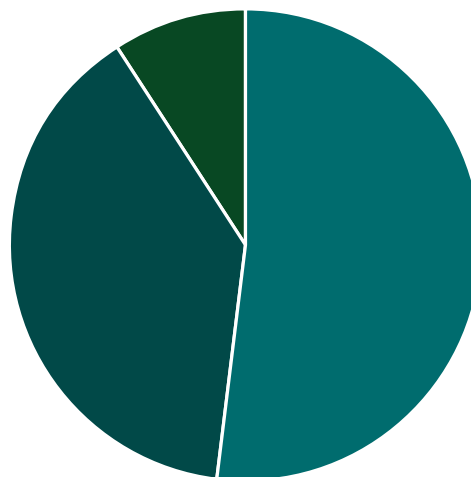
Seeds per sq. ft: 60

50% Blue Grama

40% Sideoats Grama

10% Prairie Junegrass

These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For percentages of all species visit [MillbornSeeds.com](https://millbornseeds.com).



MSI NATIVE WILDFLOWER MIX™

MSI Native Wildflower Mix™ is a very diverse blend of native forbs that can either be seeded alone to create a focal point in any landscape, or as an addition to any of our grass mixes. We took color, bloom period, and height structure into account when designing this mix, maximizing visual appeal and pollinator attractiveness.

Drilled Seeding Rate: 5–6 lbs/acre

Broadcast/Commercial Seeding Rate: 7–8 lbs/acre

Planting Depth: ¼"–½"

Seeds per sq. ft: 45.7

Specialist Establishment Tip: in all native mixes, you often won't see a mature species during the first season. Weed management and upkeep should be the number one priority during the first year.

11% BLACK-EYED SUSAN

9% PLAINS COREOPSIS

8% EVENING PRIMROSE

7% PRAIRIE CONEFLOWER

7% WESTERN YARROW

5% LANCE-LEAVED COREOPSIS

5% PRAIRIE CINQUEFOIL

5% SLENDER PENSTEMON

5% WILD BERGAMOT

4% GRAYHEAD CONEFLOWER

3% BLUE FLAX

3% CULVER'S ROOT

3% HOARY Vervain

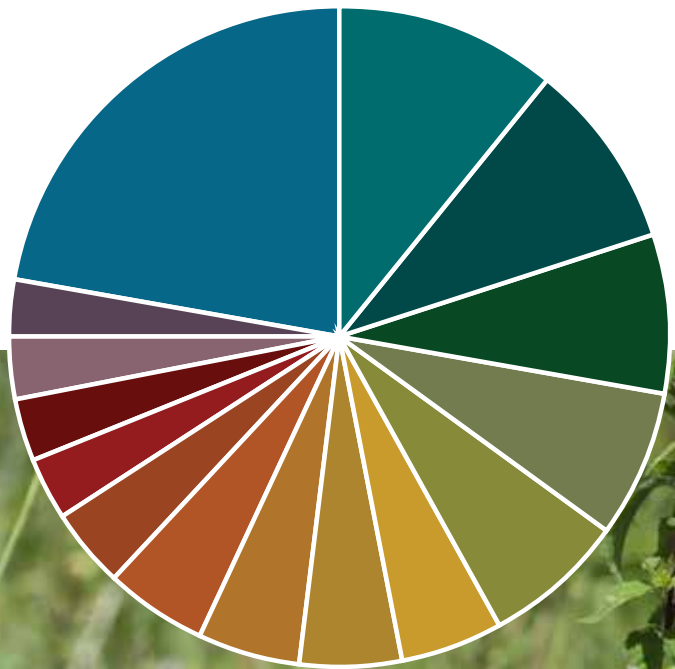
3% PURPLE PRAIRIE CLOVER

22% OTHERS

None of the following exceed 2% of the Total Mixture Weight:

Anise Hyssop
Blanketflower
Butterfly Milkweed
Canada Milkvetch
Common Milkweed
False Sunflower
Foxglove Beardtongue
New England Aster
Illinois Bundleflower
Indian Blanket

Maximilian Sunflower
New England Aster
Partridge Pea
Prairie Blazingstar
Purple Coneflower
Rocky Mountain Bee Plant
Show Tick Trefoil
Smooth Blue Aster
Stiff Goldenrod
White Prairie Clover



These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For a full list of other species not listed, visit [MillbornSeeds.com](https://millbornseeds.com).



PRAIRIE FLOWER MEDLEY MIX™

Prairie Flower Medley Mix™ is a mix of wildflowers that will do well in drier areas that receive a lot of sun. This mix can add a splash of color to your property. At maturity, this mix will grow to around three feet tall. Prairie Flower Medley is available either in bulk or in five lb bags that are premixed with mulch, making application a breeze.

Drilled Seeding Rate: 10 lbs/acre

Broadcast/Commercial Seeding Rate: 15 lbs/acre

Planting Depth: 1/4"–1/2"

15% BABY'S BREATH

12% SIBERIAN WALLFLOWER

8% AFRICAN DAISY

8% "POLKA DOT" CORNFLOWER MIX

8% CALIFORNIA POPPY

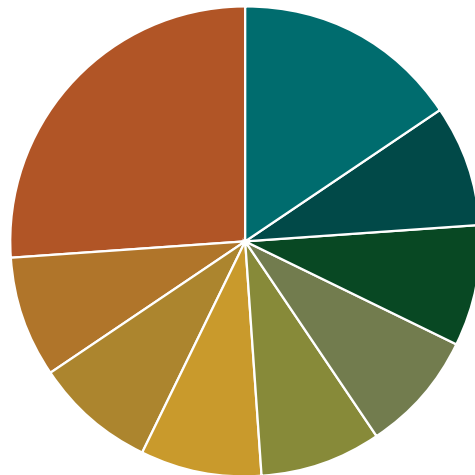
8% BLANKETFLOWER

8% INDIANBLANKET

8% BLUE FLAX

25% OTHER WILDFLOWER SPECIES

These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For a full list of other species not listed, visit [MillbornSeeds.com](https://millbornseeds.com).



Specialist Establishment Tip: in all native mixes, you often won't see a mature species during the first season. Weed management and upkeep should be the number one priority during the first year.

SHADE FLOWER MEDLEY MIX™

Shade Flower Medley Mix™ is a great way to add color in areas that can be difficult to establish and maintain grass. This low maintenance mix will grow to three feet in height and requires little moisture. This mix of flowers will do well in shady areas but will require at least four hours of filtered sunlight to succeed.

Drilled Seeding Rate: 10 lbs/acre

Broadcast/Commercial Seeding Rate: 15 lbs/acre

Planting Depth: 1/4"–1/2"

20% CHINESE FORGET-ME-NOT

20% "POLKA DOT" CORNFLOWER MIX

10% SWEET WILLIAMS PINK

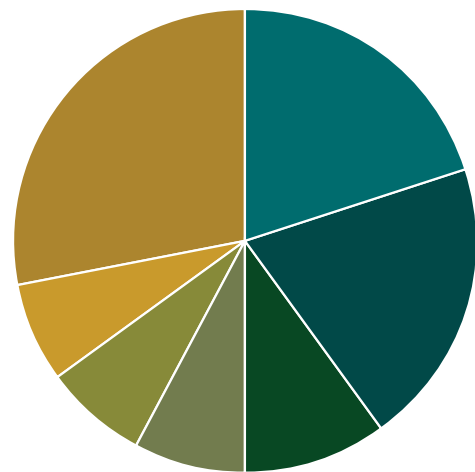
8% LANCE LEAVED COREOPSIS

7% ROCKET LARKSPUR

7% ANNUAL BABY'S BREATH

28% OTHER WILDFLOWER SPECIES

These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For a full list of other species not listed, visit [MillbornSeeds.com](https://millbornseeds.com).



SHORT & SHOWY GRASS & WILDFLOWER MIX™

Short & Showy Grass and Wildflower Mix™ is a low maintenance mixture of native grasses and wildflowers that works well on most sites. This mix will grow up to around 2.5' in height and provide color throughout the growing season. The low maintenance durability of this mix makes it a perfect fit for every site from a steep shoreline to a back lot or property border.

Drilled Seeding Rate: 15 lbs/acre

Broadcast/Commercial Seeding Rate: 22.5–30 lbs/acre

Planting Depth: 1/4"–1/2"

Seeds per sq. ft: 57.3

24% LITTLE BLUESTEM

21% SIDEOATS GRAMA

7% BLACK-EYED SUSAN

7% PLAINS COREOPSIS

7% WESTERN YARROW

7% BLUE GRAMA

4% PRAIRIE CONEFLOWER

4% PRAIRIE JUNEGRASS

3% FOXGLOVE BEARDTONGUE

3% PURPLE PRAIRIE CLOVER

3% VIRGINIA WILDRYE

10% OTHER GRASS AND WILDFLOWER SPECIES

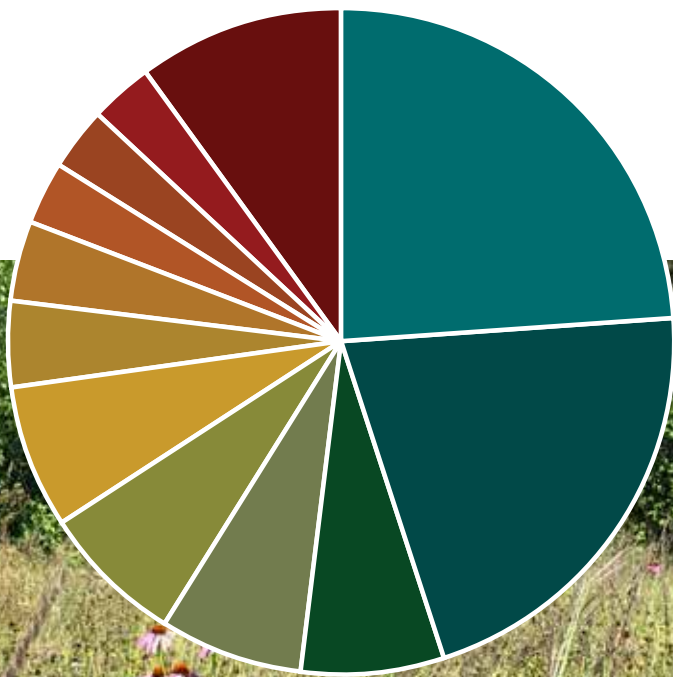
Specialist Establishment Tip: in all native mixes, you often won't see a mature species during the first season. Weed management and upkeep should be the number one priority during the first year. To give this mix a boost and reduce erosion during establishment, we added QuickGuard Sterile Triticale to the mix.

None of the following exceed 2% of the Total Mixture Weight:

New England Aster
Blanketflower
Blue Flax
Lance-Leaved Coreopsis

Ohio Spiderwort
Purple Coneflower
White Prairie Clover
Sand Dropseed

These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For a full list of other species not listed, visit MillbornSeeds.com.



FRONTIER GRASS AND WILDFLOWER MIX™

Frontier Grass and Wildflower Mix™ is a low maintenance, yet attractive mixture for anywhere you need all-season color. With hard, durable grasses that come back year after year, it works well on most soils and elevations up to 7,000 ft.

Drilled Seeding Rate: 15 lbs/acre

Broadcast/Commercial Seeding Rate: 22.5–30 lbs/acre

Planting Depth: 1/4"–1/2"

Seeds per sq. ft: 37

Specialist Establishment Tip: in all native mixes, you often won't see a mature species during the first season. Weed management and upkeep should be the number one priority during the first year. To give this mix a boost and reduce erosion during establishment, we added QuickGuard Sterile Triticale to the mix.

14% IDAHO FESCUE

13% SLENDER WHEATGRASS

10% WESTERN WHEATGRASS

8% BLUEBUNCH WHEATGRASS

8% MOUNTAIN BROME

7% PRAIRIE JUNEGRASS

6% PLAINS COREOPSIS

5% BLACK-EYED SUSAN

5% LITTLE BLUESTEM

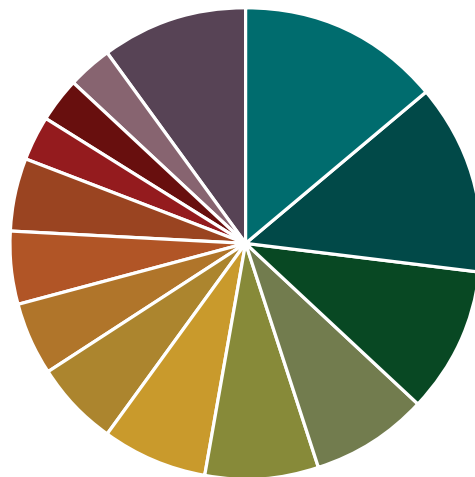
5% PRAIRIE SANDREED

3% PRAIRIE CONEFLOWER

3% FRINGED BROME

3% SANDBERG BLUEGRASS

10% OTHER WILDFLOWER SPECIES



These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For a full list of other species not listed, visit MillbornSeeds.com.

HIGH COUNTRY FLOWER MEDLEY MIX™

High Country Flower Medley Mix™ is a blend of native and introduced flowers that will work well on most sites up to an elevation of 7,000 ft. This medley prefers dry to mesic soil and does well in full sun to partial shade. With good growing conditions, this mix will reach a height of three feet.

Drilled Seeding Rate: 10 lbs/acre

Broadcast/Commercial Seeding Rate: 15 lbs/acre

Planting Depth: 1/4"–1/2"

15% PERENNIAL LUPINE

14% BLANKETFLOWER

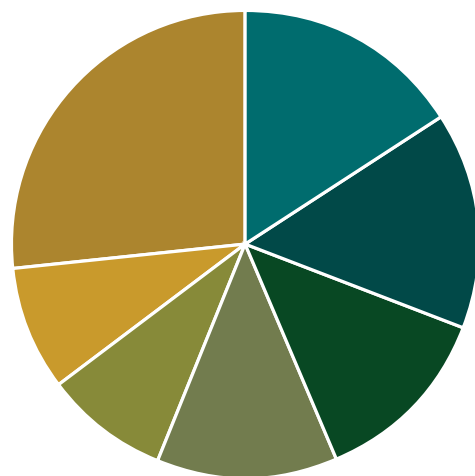
12% ANNUAL CANDYTUFT

12% CALIFORNIA POPPY

8% CORN POPPY

8% BLUE FLAX

25% OTHER WILDFLOWER SPECIES



These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For a full list of other species not listed, visit MillbornSeeds.com.

DETENTION BASIN & RAIN GARDEN MIX™

Detention Basin & Rain Garden Mix™ is a perfect fit for designed storm water features where both form and function are priorities. This low maintenance mixture of grasses, flowers and wetland plants is as adaptable as it is diverse. This mix will work well on a variety of sites and can tolerate changes from dry conditions to standing water and excels in locations that temporarily flood and then drain out. With full sun or partial shade, this mix will reach five to seven feet.

Drilled Seeding Rate: 15 lbs/acre

Broadcast/Commercial Seeding Rate: 22.5–30 lbs/acre

Planting Depth: ¼"–½"

Seeds per sq. ft: 97.9

14% DARK GREEN BULRUSH

13% WOOL GRASS

7% DUDLEY'S RUSH

6% SWITCHGRASS

6% BROWN FOX SEDGE

5% AMERICAN MANNAGRASS

5% BIG BLUESTEM

5% CANADA BLUEJOINT

4% MONKEY FLOWER

4% INDIANGRASS

4% VIRGINIA WILDRIE

4% TORREY'S RUSH

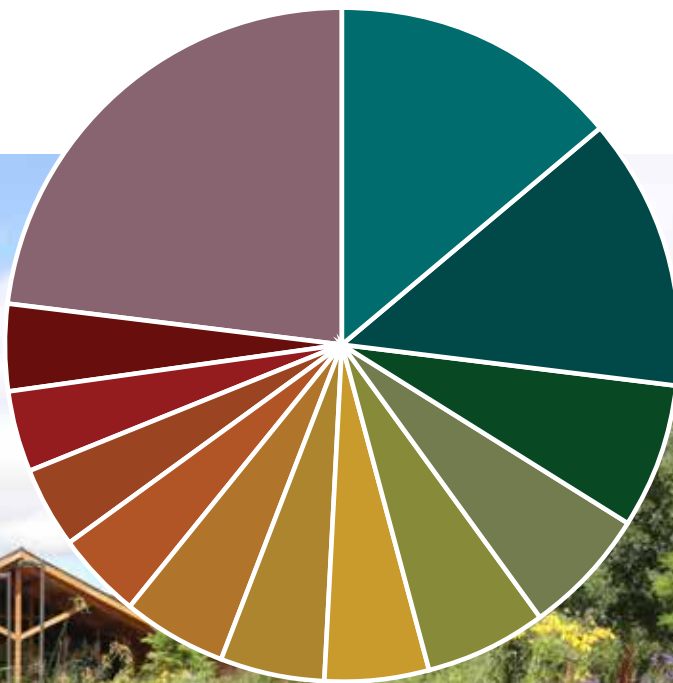
23% OTHERS

None of the following exceed 2% of the Total Mixture Weight:

American Water Plantain
Black-Eyed Susan
Blue Vervain
Boneset
Cardinal Flower
Cream Gentian
Flat-Topped Aster
Great Blue Lobelia
Great St. John's Wort
Marsh Blazingstar
Mountain Mint
New England Aster
Nodding Bur Marigold
Prairie Dock
Seedbox
Sneezeweed

Swamp Milkweed
Sweet Black-Eyed Susan
Sweet Flag
Sweet Joe Pye Weed
Canada Wildrye
Fringed Brome
Prairie Cordgrass
Bebb's Sedge
Porcupine Sedge
River Bulrush
Smooth-cone Sedge
Softstem Bulrush
Three Square Rush
Wheat Sedge
Yellow Fruit Sedge

These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For a full list of other species not listed, visit MillbornSeeds.com.



WETLAND EMERGENT MIX™

Wetland Emergent Mix™ is ideal for transition areas around wetlands. The diversity of the mix allows it to adapt and excel in standing water, normally dry soils, and everything in between. Ideal uses are along shorelines, ponds, marshes, and sloughs. Mixture height will vary depending on environmental conditions and will perform best in full sun to partial shade.

Drilled Seeding Rate: 15 lbs/acre

Broadcast/Commercial Seeding Rate: 22.5–30 lbs/acre

Planting Depth: 1/4"–1/2"

Seeds per sq. ft: 37

15% WOOL GRASS

11% AMERICAN SLOUGHGRASS

10% FOWL MANNAGRASS

10% BROWN FOX SEDGE

10% DARK GREEN BULRUSH

7% MONKEY FLOWER

6% AMERICAN MANNAGRASS

5% TORREY'S RUSH

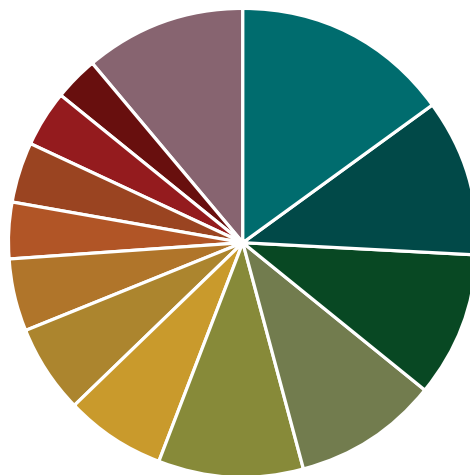
**4% AMERICAN WATER
PLANTAIN**

4% SEEDBOX

4% CANADA BLUEJOINT

3% RICE CUT GRASS

**11% OTHER WILDFLOWER
AND GRASS SPECIES**



These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For a full list of other species not listed, visit [MillbornSeeds.com](https://millbornseeds.com).

Specialist Establishment Tip: in all native mixes, you often won't see a mature species during the first season. Weed management and upkeep should be the number one priority during the first year. To give these mixes a boost and reduce erosion during establishment, we added QuickGuard Sterile Triticale to the mix.

ECONOMY EMERGENT MIX™

Economy Emergent Mix™ is a more affordable version of our Wetland Emergent Mix that is designed for use in areas that may see conditions vary between prolonged standing water and dry conditions. This mix of grasses, flowers, and wetland species will work in detention and retention basins, ponds, sloughs, and lakes.

Drilled Seeding Rate: 15 lbs/acre

Broadcast Seeding Rate: 22.5–30 lbs/acre

Planting Depth: 1/4"–1/2"

Seeds per sq. ft: 80

15% FOWL BLUEGRASS

11% SWITCHGRASS

8% BROWN FOX SEDGE

7% FOWL MANNAGRASS

7% BIG BLUESTEM

7% INDIANGRASS

5% VIRGINIA WILDRYE

5% WOOL GRASS

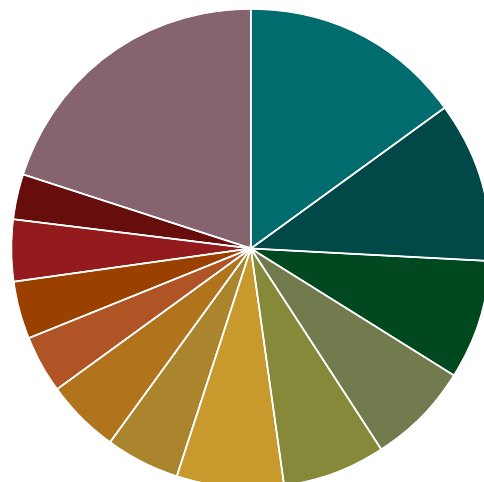
4% DUDLEY'S RUSH

4% DARK GREEN BULRUSH

4% CANADA BLUEJOINT

3% MONKEY FLOWER

**20% OTHER WILDFLOWER
AND GRASS SPECIES**



These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For a full list of other species not listed, visit [MillbornSeeds.com](https://millbornseeds.com).

WET PRAIRIE MIX™

This low maintenance mixture of native grasses, wildflowers, and wetland plants is a perfect fit for low lying areas that are frequently saturated. Wildflowers will provide color while the grasses and wetland plants will provide structure and a native prairie appearance to areas that are tough to utilize due to wet conditions.

Drilled Seeding Rate: 15 lbs/acre

Broadcast/Commercial Seeding Rate: 22.5–30 lbs/acre

Planting Depth: 1/4"–1/2"

Seeds per sq. ft: 62.6

10% WOOL GRASS

9% BIG BLUESTEM

8% INDIANGRASS

7% FOWL BLUEGRASS

7% SWITCHGRASS

7% VIRGINIA WILDRIE

6% CANADA BLUEJOINT

5% AMERICAN MANNAGRASS

5% FOWL MANNAGRASS

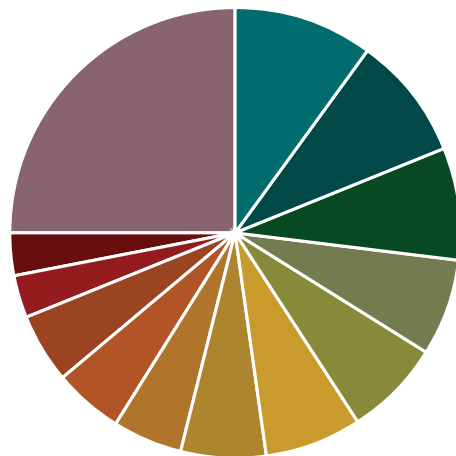
5% DARK GREEN BULRUSH

3% SEEDBOX

3% FRINGED BROME

25% OTHER WILDFLOWER AND GRASS SPECIES

Specialist Establishment Tip: in all native mixes, you often won't see a mature species during the first season. Weed management and upkeep should be the number one priority during the first year. To give this mix a boost and reduce erosion during establishment, we added QuickGuard Sterile Triticale to the mix.



These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For a full list of other species not listed, visit [MillbornSeeds.com](https://www.millbornseeds.com).



WESTERN NATIVE RECLAMATION MIX™

Millborn's Western Native Reclamation Mix™ is broadly adaptable and quick establishing. It contains both cool and warm season native grasses, as well as native forbs that will flourish in low to mid elevations. The purpose of this mix is to regenerate vegetation on disturbed soils.

Drilled Seeding Rate: 7–10 lbs/acre

Broadcast/Commercial Seeding Rate: 14–18 lbs/acre

Planting Depth: 1/4"–1/2"

10% TRITICALE

10% WESTERN WHEATGRASS

8% GREEN NEEDLEGRASS

8% SLENDER WHEATGRASS

6% BLUEBUNCH WHEATGRASS

5% BLUE GRAMA

5% CANADA WILD RYE

5% IDAHO FESCUE

5% LITTLE BLUESTEM

5% PRAIRIE JUNEGRASS

5% PRAIRIE SANDREED

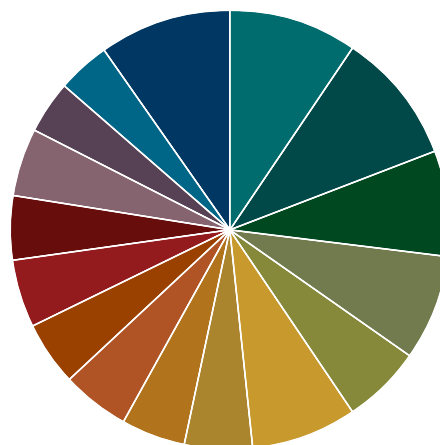
5% SIDEOATS GRAMA

5% THICKSPIKE WHEATGRASS

4% SAND DROPSEED

4% SANDBERG BLUEGRASS

10% OTHERS



These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For a full list of other species not listed, visit [MillbornSeeds.com](https://millbornseeds.com).

Specialist Establishment Tip: in all native mixes, you often won't see a mature species during the first season. Weed management and upkeep should be the number one priority during the first year.

WESTERN BIG GAME AND BIRD MIX™

Millborn's Western Big Game and Bird Mix™ is designed to handle the tough growing conditions of the western states. This mix will provide superb cover while providing nutrition and attraction for all western big game and bird species, and will grow in low to mid elevations.

Drilled Seeding Rate: 8–12 lbs/acre

Broadcast Seeding Rate: 15–20 lbs/acre

Planting Depth: 1/4"–1/2"

15% TALL WHEATGRASS

15% WESTERN WHEATGRASS

10% GREEN NEEDLEGRASS

10% SANDBERG BLUEGRASS

10% SLENDER WHEATGRASS

5% ALFALFA

5% SAINFOIN

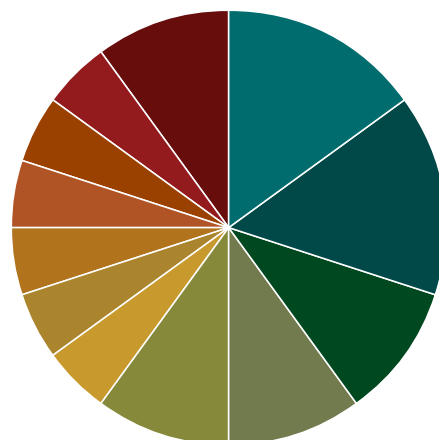
5% INTERMEDIATE WHEATGRASS

5% PUBESCENT WHEATGRASS

5% BLUEBUNCH WHEATGRASS

5% THICKSPIKE WHEATGRASS

10% OTHERS



These amounts are based on percentage of population. Comparable substitutions may be necessary depending on species availability. For a full list of other species not listed, visit [MillbornSeeds.com](https://millbornseeds.com).



PRIMAL

We've used years of real-life experiences and customer feedback to develop and fine tune our line of food plot mixes. It's our goal to continue to improve and evolve our lineup to meet the needs of our customers, while providing specialist knowledge to take your food plot from a drawing on a map, to something you'd be proud to show to your hunting buddies.

So, whether you're trying to hold more roosters on your property, chasing spring gobblers or growing the biggest deer in your neighborhood, Primal Food Plots® offers a mix that will provide results and specialists to help you get there.

Visit PRIMALFOODPLOTS.COM



PLANTING FOOD PLOTS

PLANTING TIME

Pheasant food plots are typically planted in late spring (mid-May through mid-June) or when soil temperatures reach 60° F. When planting deer food plot mixes, the best time to seed is late summer to early fall, typically August through beginning of September, depending on your location. For more specific recommendations, see our zone maps for each big game food plot.

WEED CONTROL

If you have a grass or weed problem, use Poast® herbicide and apply at 1.5-2.5 pints/acre. If you have a broadleaf weed problem, use Pursuit® herbicide and apply at three to six ounces/acre. For more information, please see the Food Plot Herbicide Guide on page 106.

BEST LATE SEASON DEER FOOD PLOT

Green Beast™ and Final Stand™ are the two best late-season food plot mixes. You can plant individually or mix together.

UPLAND GAME PRODUCT GUIDE

PREMIUM BLEND	SEEDING DEPTH	BROADCAST SEEDING RATE PER ACRE			PACKAGE SIZE	GROWER NOTES		
		DRILLED SEEDING RATE PER ACRE						
Double Barrel	1/2"	8 lbs	12 lbs	50 lb bags	Ingredients: Longtail Delight™ and Pheasant Pheast™ Height: Ranges 3.5' to 5' Maturity: 70–95 days Plant Date: Late Spring			
Longtail Delight	1/2"	8 lbs	12 lbs	50 lb bags	Ingredients: White Grain Smart Sorghum™ (Milo) Height: Ranges 3.5' to 4' Maturity: 70–80 days Plant Date: Late Spring			
Pheasant Pheast	1/2"	8 lbs	12 lbs	50 lb bags	Ingredients: Red Grain Smart Sorghum™ (Milo) Height: Ranges 3.5' to 5' Maturity: 80–95 days Plant Date: Late Spring			
Over Under	1/2"	8 lbs	12 lbs	24 lb or 50 lb bags	Ingredients: Longtail Delight (White Milo), Pheasant Pheast, and Forage Sorghum Height: Ranges 3.5' to 7' Maturity: 70–95 days Plant Date: Late Spring			
Final Flush	1/2"	20 lbs	20 lbs	20 lb or 50 lb bags	Ingredients: Longtail Delight™ (White Milo), Pheasant Pheast™ (Red Milo), Oats, Sunflower, White Proso Millet, Buckwheat, Forage Sorghum, Mustard, Flax, Phacelia, Crimson Clover, Sunn Hemp Height: Ranges 2' to 7' Maturity: 70–80 days Plant Date: Mid–Late Spring			

DOUBLE BARREL™

Double Barrel™ provides benefits of both Longtail Delight™ (White Milo) and Pheasant Pheast™ (Red Milo) in one package.

Ingredients: Longtail Delight™ (White Milo), Pheasant Pheast™ (Red Milo)

Height: Ranges 3.5' to 5'

Maturity: 70–95 days

Plant Date: Late Spring — soil temps > 60°

Drilled Seeding Rate: 8 lbs/acre

Broadcast Seeding Rate: 12 lbs/acre

Seed Depth: ½"

Package: 50 lb bags



FOOD PLOT POWER TIP

Don't jump the gun and seed too early in the spring. Sorghum is a warm-season species and will not respond well to cold temperatures after establishment. The quick maturing varieties allow for plenty of time to reach seed production before hunting season.



LONGTAIL DELIGHT™

Longtail Delight™ is a multifunctional food source, providing nutrition and protection for upland game birds throughout the fall and winter months. It features the earliest maturing Milo available, which is beneficial for northern states. Its short stature provides maximum visibility of your hunting dog.

Ingredients: White Grain Smart Sorghum™ (Milo)

Height: Ranges 3.5' to 4'

Maturity: 70–80 days

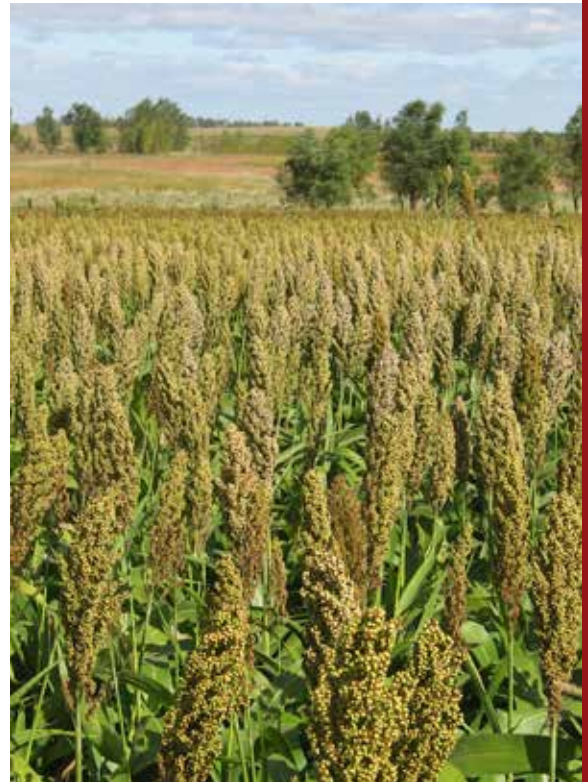
Plant Date: Late Spring — soil temps > 60°

Drilled Seeding Rate: 8 lbs/acre

Broadcast Seeding Rate: 12 lbs/acre

Seed Depth: ½"

Package: 50 lb bags



PHEASANT PHEAST™

Pheasant Pheast™ is desired by upland game birds because it provides them with daily energy and a protective structure for survival. Its seed will become sweeter in taste as the plant matures.

Ingredients: Red Grain Smart Sorghum™ (Milo)

Height: Ranges 3.5' to 5'

Maturity: 80–95 days

Plant Date: Late Spring — soil temps > 60°

Drilled Seeding Rate: 8 lbs/acre

Broadcast Seeding Rate: 12 lbs/acre

Seed Depth: ½"

Package: 50 lb bags

FINAL FLUSH™

Final Flush™ is an intelligent blend that provides a diverse, yearlong food source necessary for chick and adult pheasant survival. It also provides excellent winter habitat and hunting cover.

Ingredients: Longtail Delight™ (White Milo), Pheasant Pheast™ (Red Milo), Oats, Sunflower, White Proso Millet, Buckwheat, Forage Sorghum, Mustard, Flax, Phacelia, Crimson Clover, Sunn Hemp

Height: Ranges 2' to 7'

Maturity: 70–80 days

Plant Date: Mid–Late Spring

Drilled Seeding Rate: 20 lbs/acre

Broadcast Seeding Rate: 20 lbs/acre

Seed Depth: ½"

Package: 20 lb or 50 lb bags



FOOD PLOT POWER TIP

Due to its diversity of species, Final Flush is limited in post-emergent chemical options. You'll want to rotate into a chemical tolerant mix like Double Barrel™ to control your weed bank over the years.



OVER UNDER™

Over Under™ was designed to enhance our standard sorghum food plots by increasing the height structure of the mix. This mix is excellent for hunters and can provide more diversity and winter cover than your conventional sorghum planting.

Ingredients: Longtail Delight (White Milo), Pheasant Pheast, and Forage Sorghum

Height: Ranges 3.5' to 7'

Maturity: 70–95 days

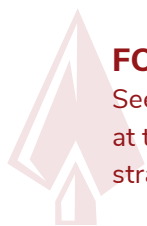
Plant Date: Late Spring — soil temps > 60°

Drilled Seeding Rate: 8 lbs/acre

Broadcast Seeding Rate: 12 lbs/acre

Seed Depth: ½"

Package: 24 lb or 50 lb bags



FOOD PLOT POWER TIP

Seed Over Under at the end of your food plots to help keep your birds held at the end of your plots. With the taller structure, birds are more likely to fly straight up, allowing for a safer shooting experience for walkers and blockers.



BIG GAME

PRODUCT GUIDE

BROADCAST SEEDING RATE PER ACRE					
PREMIUM BLEND	SEEDING DEPTH	DRILLED SEEDING RATE PER ACRE		PACKAGE SIZE	GROWER NOTES
Green Beast	1/4"	8 lbs	8 lbs	4 lb or 40 lb bags	› Late-season kill plot
Final Stand	1/2"–1"	100 lbs	100 lbs	50 lb bags	› Quick establishing › Ideal for early seasons
Elkridge Greens	1/4"–1/2"	40 lbs	60 lbs	40 lb bags	› High protein content › Drought resilient
Whitetail Premium	1/4"	10 lbs	10 lbs	5 lb bags	› Spring through early fall food source › Shade tolerant
Elevate	1/4"	10 lbs	10 lbs	5 lb bags	› Nitrogen fixing for fall plots › Soil building
Center Stage	1/4"–1/2"	30 lbs	30 lbs	15 lb bags	› Yearlong attractiveness › Diverse species
Hideout	1/2"	15 lbs	15 lbs	15 lb bags	› Privacy screen for stand access
Primal Soybeans	1"– 1 1/2"	50 lbs	50 lbs	50 lbs bags	› High yielding › Attractive summer through winter
Sierra Flats	1/2"	15 lbs	15 lbs	15 lb bags	› Perennial western blend › Hardy food source for poor soil

GREEN BEAST™

Green Beast™ is a highly digestible protein source for deer during the harsh winters. This blend of New Zealand brassicas is ideal for forage production and provides excellent nutrition. After the first frost, deer graze the sweet leafy top growth of the plant until grazing the bulbs as the snow starts to fall. While promoting deer health, Green Beast is the mix you need for hunting small plots late in the season.

Protein Content: Up to 34% protein

Seeding Rate: 8 lbs/acre

Seed Depth: ¼"

Durability: Ability to withstand 10°F temperatures

Package: 4 lb or 40 lb bags

Planting Zones:

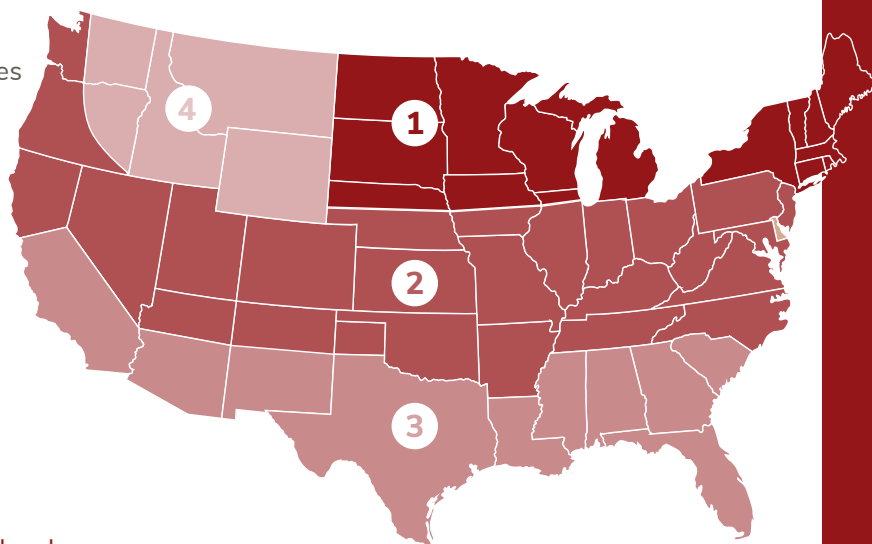
Zone 1: Late Summer

Zone 2: Late Summer, Early Fall

Zone 3: Fall

Zone 4: Not Recommended

*Plant at least 50 days before the typical first frost.



FOOD PLOT POWER TIP

Mix with Final Stand to create a longer attraction and food source for your deer herd.



FINAL STAND™

Final Stand™ provides deer with a nutritious, green food source for fall and winter months and is highly attractive late into hunting season. Ready to hunt in two to three weeks, this deadly archery blend is able to withstand browsing pressure.

Protein Content: Up to 18% protein

Seeding Rate: 100 lbs/acre

Seed Depth: ½" to 1"

Durability: Rye grain and forage winter wheat boost cold tolerance

Package: 50 lb bags

Planting Zones:

Zone 1: Late Summer, Early Fall

Zone 2: Late Summer, Early Fall

Zone 3: Fall (Plant at least 50 days before first frost.)

Zone 4: Not Recommended

*Plant at least 50 days before the typical first frost.



FOOD PLOT POWER TIP

Mix with Green Beast to create a longer attraction and food source for your deer herd.

ELKRIDGE GREENS™

ElkRidge Greens™ was designed with a high-producing, high-protein food source in mind. The mix of cool-season grains and brassicas makes it an excellent choice when both year-round and late-season forage attraction is desired.

Drilled Seeding Rate: 40 lbs/acre

Broadcast Seeding Rate: 60 lbs/acre

Planting Depth: ¼"–½"

Package: 40 lb bags

Planting Zones:

Zone 1: Late Summer

Zone 2: Late Summer, Early Fall

Zone 3: Fall

Zone 4: Early Summer

*Plant at least 50 days before the typical first frost.

FOOD PLOT POWER TIP

Consider planting ElkRidge Greens where moisture is limited. The standing vegetation will capture and conserve moisture, allowing for a quicker and more even establishment.



WHITETAIL PREMIUM™

Whitetail Premium™ provides deer with excellent nutrition to enhance antler growth, body size, and overall health of the deer herd. The unique blend of clovers and other perennial broadleaves provides high protein, lush green growth, and a forage source all year long. It is the combination of high nutrition and robust regrowth both deer and turkeys cannot resist.

Protein Content: Up to 30% protein

Seeding Rate: 10 lbs/acre

Seed Depth: 1/4"

Package: 5 lb bags

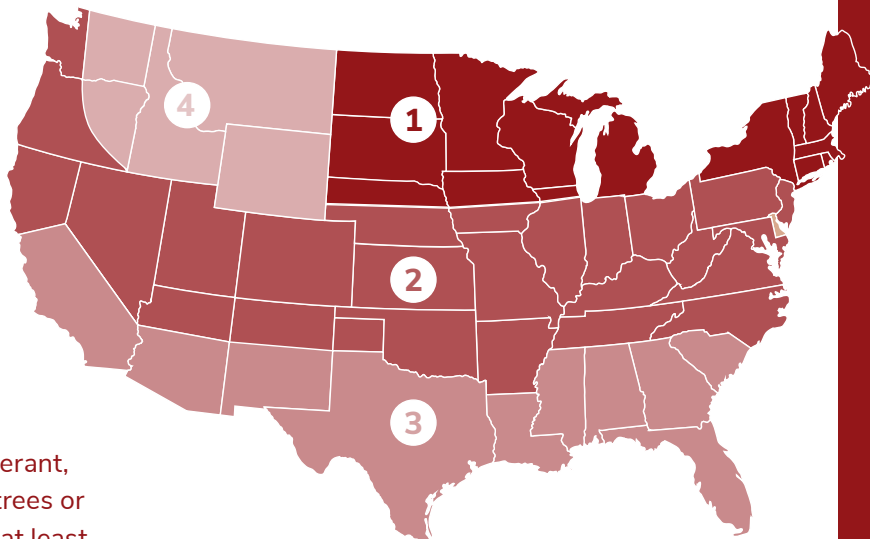
Planting Zones:

Zone 1: Spring, Late Summer

Zone 2: Spring, Late Summer

Zone 3: Early Spring, Fall

Zone 4: Not Recommended



FOOD PLOT POWER TIP

Whitetail Premium is partially shade tolerant, allowing it to grow in thicker stands of trees or vegetation. However, it will still require at least four hours of sunlight per day.



ELEVATE™

Elevate™ is the perfect mix to suppress weeds, save fertilizer costs, and build soil in the summer months. This mix of annual clovers provides nutritional summer forage by adding nitrogen to your soil, improving water absorption, and preventing unwanted insects.

Seeding Rate: 10 lbs/acre

Seed Depth: 1/4"

Package: 5 lb bags

Planting Zones:

Zone 1: Early Spring

Zone 2: Early Spring

Zone 3: Early Spring

Zone 4: Not Recommended

FOOD PLOT POWER TIP

If planted early enough, Elevate will help fix nitrogen for your fall green plots. Simply terminate and work in the soil before you plant Green Beast and/or Final Stand and save on fertilizer costs.



CENTER STAGE™

Center Stage™ is a mixture of various clovers, forbs, herbs, and grains that provides excellent regrowth for 1–3 years. The combination of hearty grains and perennial broadleaves is a multi-benefit. From the green source in the spring months and a food source in the summer and fall months, Center Stage provides excellent yearlong forage for deer, turkeys, and other wildlife.

Protein Content: Up to 32% protein

Seeding Rate: 30 lbs/acre

Seed Depth: 1/4"–1/2"

Package: 15 lb bags

Planting Zones:

Zone 1: Spring, Late Summer

Zone 2: Spring, Fall

Zone 3: Fall

Zone 4: Not Recommended

FOOD PLOT POWER TIP

Sometimes the best food plots are smaller, more secluded. If you allow yourself to shoot to all corners of the plot, you will have more success.



HIDEOUT™

Hideout is a quick-establishing food plot blend that provides height of 8'–12'. This mix creates a privacy screen around food plots for undetected ease in and out of your stand, while providing structure in your plots.

Ingredients: Specialized Sorghum Hybrid, Egyptian Wheat, Pearl Millet

Height: Ranges 8'–12'

Maturity: 70–100 days

Seeding Rate: 15 lbs/acre

Seed Depth: ½"

Package: 15 lb bags

Planting Zones:

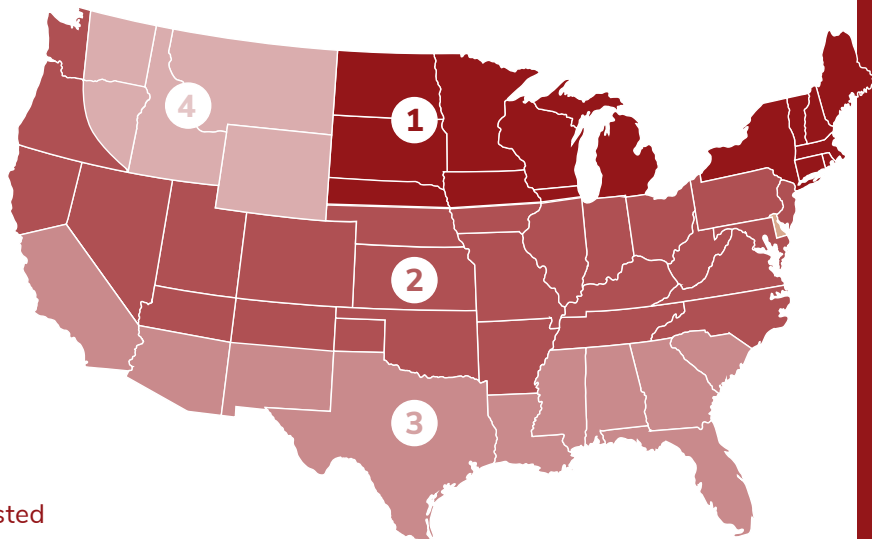
Zone 1: Late Spring, Early Summer

Zone 2: Late Spring, Early Summer

Zone 3: Late Spring, Early Summer

Zone 4: Not Recommended

*Plant when soil temps reach > 60°.



FOOD PLOT POWER TIP

Do not exceed the 15 lbs/acre suggested seeding rate. By increasing the seeding rate, you will see shorter, weaker plants that won't reach full maturity.



PRIMAL SOYBEANS

Soybeans will provide a high-quality food source for deer throughout the year. Primal Soybeans have excellent standability to combat harsh midwest winters and are shatter resistant, retaining grain for deer to forage on.

Seeding Rate: 50 lbs/acre

Seed Depth: 1" to 1 ½"

Package: 50 lb bags

Planting Zones:

Zone 1: Late Spring, Early Summer

Zone 2: Late Spring, Early Summer

Zone 3: Late Spring, Early Summer

Zone 4: Not Recommended

*Plant when soil temps reach > 60°.

FOOD PLOT POWER TIP

Primal™ Soybeans are developed to produce a high forage food source. If a late-season pod producing variety is desired, consider adding a variety to suit those needs as well.



SIERRA FLATS™

Sierra Flats™ was designed to provide a year-long perennial browse and protein source for western game animals. Specifically designed for the correct environment, this blend of legumes and cool-season grasses is a superb choice for any wildlife manager.

Drilled Seeding Rate: 15 lbs/acre

Planting Depth: ½"

Package: 15 lb bags

Planting Zones:

Zone 1: Spring, Late Summer

Zone 2: Spring, Fall

Zone 3: Fall

Zone 4: Spring

FOOD PLOT POWER TIP

Sierra Flats™ offers a perennial food plot option, so planning and location are key. Establish this plot on an area according to predominant winds, topography, and past wildlife patterns.

FOOD PLOT FERTILITY GUIDE

CROP	SOIL FERTILITY LEVEL	APPLICATION (LBS/ACRE)		
		NITROGEN (N)	PHOSPHORUS (P ₂ O ₅)	POTASSIUM (K ₂ O)
Double Barrel™ Longtail Delight™ Pheasant Pheast™ Hideout™ Over Under™	High	20	0	0
	Medium	50	30	30
	Low	70	45	50
Whitetail Premium™	High	0	0	0
	Medium	0	25	35
	Low	0	60	70
Green Beast™ ElkRidge Greens™	High	20	0	0
	Medium	35	20	25
	Low	50	40	50
Final Stand™	High	10	0	0
	Medium	25	10	40
	Low	40	30	70
Primal Soybeans	High	0	0	0
	Medium	0	10	15
	Low	0	35	50
Center Stage™ Sierra Flats™	High	10	0	0
	Medium	20	20	35
	Low	30	40	70
Final Flush™	High	20	0	0
	Medium	35	20	25
	Low	50	40	50
Elevate™	High	0	0	0
	Medium	0	30	30
	Low	30	50	60

*Rates are recommended if no soil test is taken. Knowing your previous crop and having a soil sample will ensure a more accurate fertility plan.

FOOD PLOT HERBICIDE GUIDE

		CONTROL METHOD (C=CONTACT, R=RESIDUAL)		
		WEEDS CONTROLLED (B = BROADLEAVES, G = GRASSES)		
CROP	TIMING	PRODUCT (ACTIVE INGREDIENT)		
Double Barrel™ Longtail Delight™ Pheasant Pheast™ Over Under™	PRE-EMERGENCE	Atrazine® 4L (Atrazine)	B	C, R
		Dual II Magnum® (S-Metolachlor)	B, G	R
		Explorer® (Mesotrione)	B	C, R
		Makaze® (Glyphosate)	B, G	C
		Sharpen® (Saflufenacil)	B	C, R
	POST-EMERGENCE	2,4-D Amine (2,4-D)	B	C
		Atrazine® 4L (Atrazine)	B	C, R
		Broclean® (Bromoxynil)	B	C
		Rifle® (Dicamba)	B	C
		Starane® Ultra (Fluroxypyr)	B	C
Hideout	PRE-EMERGENCE	Makaze® (Glyphosate)	B, G	C
	POST-EMERGENCE	Broclean® (Bromoxynil)	B	C
		Starane® Ultra (Fluroxypyr)	B	C
Final Flush™ Center Stage™ Elevate™ Sierra Flats™	PRE-EMERGENCE	Makaze® (Glyphosate)	B, G	C
Whitetail Premium™	PRE-EMERGENCE	Makaze® (Glyphosate)	B, G	C
	POST-EMERGENCE	Poast® (Sethoxydim)	G	C
		Pursuit® (Imazethapyr)	B, G	C
Green Beast™ ElkRidge Greens™	PRE-EMERGENCE	Makaze® (Glyphosate)	B, G	C
	POST-EMERGENCE	Poast® (Sethoxydim) *Green Beast only.	G	C
		Stinger® (Clopyralid)	B	C
Final Stand™	PRE-EMERGENCE	Makaze® (Glyphosate)	B, G	C
		Sharpen® (Saflufenacil)	B	C, R
Primal™ Soybeans	PRE-EMERGENCE	Dual II Magnum® (S-Metolachlor)	G	R
		Makaze® (Glyphosate)	B, G	C
	POST-EMERGENCE	Makaze® (Glyphosate)	B, G	C
		Mongoose® (Lactofen)	B	C
		Poast® (Sethoxydim)	G	C

*Always read and follow label instructions and consult your local chemical dealer and seed dealer before making any applications.



TURF

From standard to specialized, Millborn's turf mix lineup is as diverse as it is precise. Every turf mix features premium grass seed and a strategically designed mixture of grass seed species.

Whether you are a homeowner, groundskeeper, contractor, or sports complex director, Millborn's turf mixes have helped thousands of people serious about their turf be successful.

To shop all of our specialty turf options,
check out our website!



PLANTING TURF

PLANTING METHOD

A seeder will do the best job of ensuring even disbursement and seed to soil contact. If a seeder is not available for new plantings, broadcast the seed and follow up with a drag or rake. If broadcasting into existing turf, mow the grass short and core aerate the area prior to seeding.

SEEDING RATE

Different lawn mixes have different seeding rates based on the characteristics of each plant type. Under most circumstances, we recommend following prescribed seeding rates. Using less seed than recommended can allow room for weeds to take hold or create a clumpy look and feel. Using more can change the permanent composition of the turf mix. The exception is that when hydroseeding, it is recommended that the seeding rate be increased by 50%.

WEED CONTROL

The best way to control weeds is to keep your turf healthy. This is accomplished in several ways including watering, fertilizing, and core aerating annually. Another simple change that can have a major impact is to increase the mowing height to around three inches. If weeds persist, apply Speedzone® for broadleaf weeds or Tenacity for a pre-emergence solution for crabgrass and other grassy weeds. (Refer to page 123 for a full list of herbicides.) When planting seed and applying weed control, follow label instructions for application times, rates, and how long to wait before seeding can occur.

LAWN CARE

It is not necessary to wait to fertilize before or after seeding if it's straight fertilizer. If applying fertilizer with weed control, follow the manufacturer's instructions. Turf fertility treatment is a personal choice. To get the best performance out of your turf we recommend four fertilizer treatments per year (see pages 122–123 for further details on fertilizer treatments). Following our four-step fertilizer program will result in a thicker, more attractive turf, but also means more watering and mowing. We recommend aerating your yard once a year in the fall to reduce soil compaction and allow the roots more room to grow, making for a healthier lawn.

WATERING

For new seedings, watering two to four times per day is recommended, until grass has fully emerged. The goal at this stage is to keep the ground surface damp. For established lawns, there are several factors to consider such as natural precipitation, daily temperatures, and amount of sunshine. During the hottest months of the summer, a total of one inch per week of moisture either from rain or sprinkler is usually about right. Around a three inch mowing height is ideal. Many people mow their lawns way too short, and then fight weeds and use extra water to keep them looking good, or just give up.

TURF

PRODUCT GUIDE

		BEST USES	ESTABLISH RATE	COST	SHADE	COLD	DROUGHT	TRAFFIC	GROWTH HABIT	SEEDING RATE PER 1,000 SQ. FT.
GK Elite	STANDARD MIXES	› Meticulous lawns & sports fields › Requires good fertility › Will match most bluegrass sod › Irrigated	21–28 Days	\$\$\$	★	★★	★	★★★★	Rhizome Bunch	4 lbs
Quality Sun & Shade		› Any situation › High quality, adaptable turf › Irrigated or non-irrigated	14–28 Days	\$\$	★★	★★★★	★★	★★		5–6 lbs
Tough Play Tough Play RTF		› Sports fields/high traffic › Drought tolerant › Irrigated or non-irrigated	14–21 Days	\$\$\$	★★	★★	★★★★	★★★★		8–9 lbs
Fairgrounds		› Adaptable turf › Tree belts and out-buildings › Non-irrigated	14–28 Days	\$	★★	★★	★★	★★		2 lbs
Heartland		› Grows well in most soil types › Drought and shade tolerant › Durable, low maintenance lawns	14–28 Days	\$\$	★★	★★	★★★★	★★		5–6 lbs
Landscaper's Blend		› Any situation › Economical version of Quality Sun & Shade › Irrigated or non-irrigated	14–28 Days	\$	★★	★★	★★	★★		5–6 lbs
Deluxe Interseeder	SPECIALTY MIXES	› Overseed existing lawns and sports fields › Irrigated	14–28 Days	\$\$\$	★	★★	★	★★★★	Rhizome Bunch	5–6 lbs
Supreme Shade		› Shady and transition areas › Irrigated or non-irrigated	14–28 Days	\$\$	★★★★	★★	★★★★	★★		6–7 lbs
Boulevard Blend		› Harsh, salty areas › Irrigated or non-irrigated	14–28 Days	\$\$	★★	★★★★	★★	★★		6–7 lbs
Developer's Mix		› Low cost, new developments › Quick establishment › Provides greenery and cover for 3–5 years	7–14 Days	\$	★	★★	★★★★	★		2–4 lbs
Wet Turf Mix		› Designed for stormwater retention › Can be mowed to turf height or left to grow	14–21 Days	\$\$	★★	★★	★★★★	★★★★	Rhizome Bunch	4–5 lbs
Ultimate Sports Mix		› Highly durable › Irrigated	21–28 Days	\$\$\$	★	★★★★	★	★★★★		4 lbs
Premium Tall Fescue		› Sports fields › Does best with some irrigation › Requires less water and fertilizer than Kentucky Bluegrass	14–21 Days	\$\$\$	★★	★★	★★★★	★★★★	Bunch	8–10 lbs
EZ Lawn	ALTERNATIVE MIXES	› No mow › Alternative lawn › Irrigated or non-irrigated	21–28 Days	\$	★★★★	★★	★★★★	★★	Rhizome Bunch	6–7 lbs
Great Plains		› No mow › Use in place of Buffalograss lawn › Low fertility areas › Non-irrigated	21–28 Days	\$\$\$	★★	★★★★	★★★★	★★	Bunch Stolon	4 lbs

BEAUTIFUL LAWNS MADE SIMPLE.

PLANTING NEW LAWNS

SCHEDULE YOUR PLANTING

- › Spring planting should be done from April through early June.
- › Fall planting should be done between August and mid-September.
- › Dormant plantings can be done when the ground temperature is expected to remain below 50° F (typically late October or early November). Seeding can continue until the soil is too frozen to be workable.

PREPARE YOUR SOIL

- › Six inches or more of premium black top soil.
- › If weeds are present, apply Roundup® and allow 14 days before planting seed.
- › Remove rocks and other debris.
- › Till the top four to six inches of soil.
- › Roll pack the soil so when you walk on it, you don't sink more than 1/2" into it.

INSTALL EROSION CONTROL

- › Install an erosion control blanket to protect against erosion, help with germination, and prevent washout.

APPLY FERTILIZER

- › Apply fertilizer such as 13-13-13 or Sustane® 4-4-4.
- › Roll pack, rake or drag broadcast seed one time to ensure good soil contact.

PLANT MILLBORN SEED

- › Use a broadcaster or seeder.
- › Apply at a half rate in two different directions to help provide even distribution.
- › Refer to Millborn's Turf Guide for seeding rate.



- › Keep the soil moist for the first 21 days.
- › Decrease frequency and increase the duration used once the grass has emerged.

OVERSEEDING EXISTING LAWNS

PREPARE THE LAWN

- › Mow the lawn to a short height and remove the clippings.

PLANT MILLBORN SEED

- › Slit seed at 1/2" deep at a half rate in two different directions to help provide even distribution.

APPLY FERTILIZER

- › Apply a fertilizer such as Millborn's slow release 24-05-10 or Sustane® 8-2-4.
- › Roll pack one time.

OR

- › Shallow core aerate two to three times.
- › Broadcast seed at a half rate in two different directions to provide even distribution.
- › Water heavily.



- › Water four to seven times per week for the first four to six weeks.

GK ELITE™

GK Elite™ is the best of the best! The GK stands for Grounds Keeper, because even the most selective turf managers use GK Elite. This mix is most commonly used on sports fields and highly maintained lawns. It is a mixture of Elite Kentucky Bluegrasses that are extremely disease resistant and traffic tolerant, especially when irrigated. The rhizomatous growth pattern of the Kentucky Bluegrass plant means that this turf has the ability to fill in bare spots as damage occurs. This extremely tough mix stands up to the rigors of competition and its deep blueish-green color is highly attractive.

Cost: \$\$\$

Maintenance: High

Seeding Rate: 4 lbs per 1,000 sq. ft

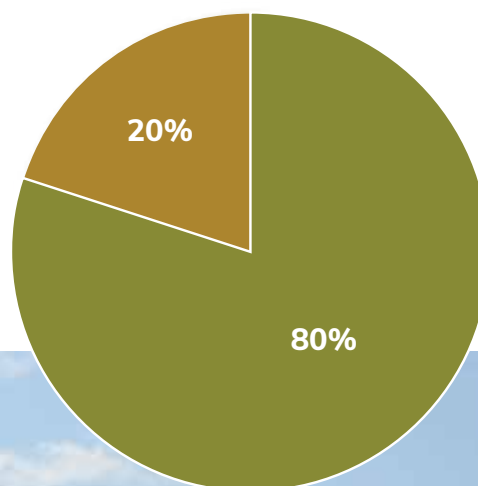
Establishment Rate: 21–28 days

80% ELITE KENTUCKY BLUEGRASS ^R

20% FINE-LEAF PERENNIAL RYEGRASS ^B

R = RHIZOME

B = BUNCH



DELUXE INTERSEEDER™

Deluxe Interseeder™ is the perfect solution for a lawn or sports field that has become thin and unhealthy due to poor care, poor genetics or wear and tear. Deluxe Interseeder was developed to revitalize existing damaged turf by introducing seed with elite genetics to improve overall turf appearance and performance.

Cost: \$\$\$

Maintenance: High

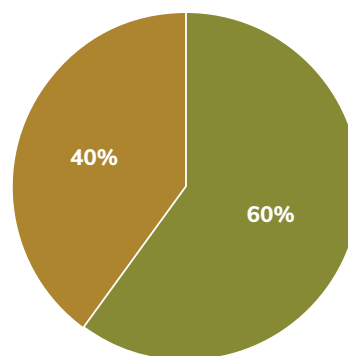
Seeding Rate: 5–6 lbs per 1,000 sq. ft

Establishment Rate: 14–28 days

60% KENTUCKY BLUEGRASS ^R

40% FINE-LEAF PERENNIAL RYEGRASS ^B

R = RHIZOME
B = BUNCH



TOUGH PLAY™ & TOUGH PLAY RTF™

Tough Play™ is a Tall Fescue mix that is equally durable and attractive. Tall fescue requires less water and fertilizer than Kentucky Bluegrass to reach its full potential. This mix is available in two forms — standard Tough Play and Tough Play RTF™. Standard Tough Play is a lush turf suited for lawns and sports fields. Tough Play RTF improves upon the standard by adding Rhizomatous Tall Fescue varieties. The rhizomes allow the turf to self-heal and fill in damaged spots. Tough Play RTF also includes varieties that are approved by the Turfgrass Water Conservation Alliance (TWCA).

Cost: \$\$\$

Maintenance: Medium

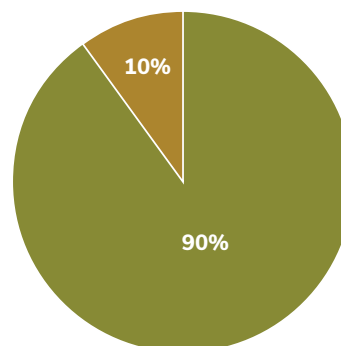
Seeding Rate: 8–9 lbs per 1,000 sq. ft

Establishment Rate: 14–21 days

90% ELITE TALL FESCUE ^{B (STANDARD), B+R (RTF)}

10% ELITE KENTUCKY BLUEGRASS ^R

R = RHIZOME
B = BUNCH



QUALITY SUN & SHADE™

Quality Sun & Shade™ is our most popular turf mix. It is the go-to mix for lawns because of its durable and long-lasting quality. The formulation of this mix is what makes it perfect for any situation. If you're looking for an affordable, high quality, easy to care for lawn, this is the perfect mix for you.

Cost: \$\$

Maintenance: Medium

Seeding Rate: 5–6 lbs per 1000 sq. ft

Establishment Rate: 14–28 days

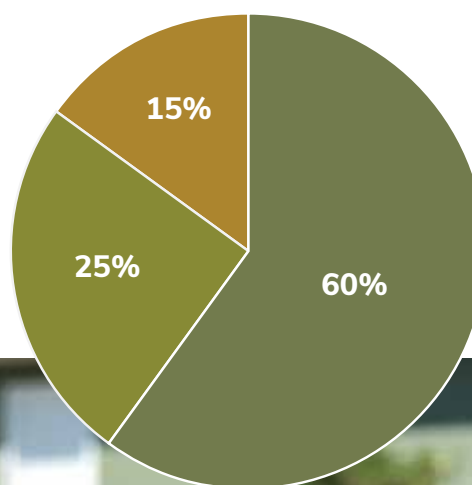
60% IMPROVED KENTUCKY BLUEGRASS^R

25% FINE-LEAF PERENNIAL RYEGRASS^B

15% CREEPING RED FESCUE^R

R = RHIZOME

B = BUNCH



LANDSCAPER'S BLEND™

Landscaper's Blend™ is an economical version of the highly popular Quality Sun & Shade. The combination of fescue, ryegrass, and bluegrass results in a turf that will stand up to the hottest summer and the harshest winter in both sunny and shady areas of your lawn.

Cost: \$

Maintenance: Low to Medium

Seeding Rate: 5–6 lbs per 1,000 sq. ft

Establishment Rate: 14–28 days

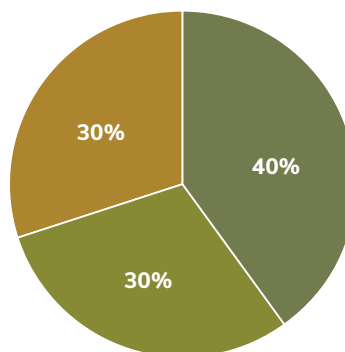
40% KENTUCKY BLUEGRASS^R

30% FINE-LEAF PERENNIAL RYEGRASS^B

30% CREEPING RED FESCUE^R

R = RHIZOME

B = BUNCH



FAIRGROUNDS™

Fairgrounds™ is a cross between a field and turf mix that is very hardy and extremely drought tolerant. This mix can be used for lawn turf, tree belts, out-building and other non-irrigated areas. Fairgrounds matches closely with older seedings to help with patching and repair of older lawns.

Cost: \$

Maintenance: Low

Seeding Rate: 2 lbs per 1,000 sq. ft

Establishment Rate: 14–21 days

25% KENTUCKY BLUEGRASS^R

20% FINE-LEAF PERENNIAL RYEGRASS^B

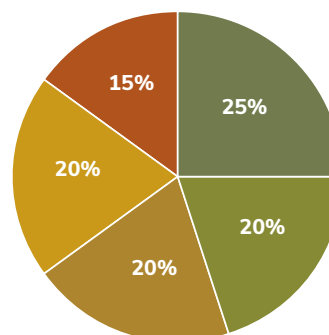
20% CREEPING RED FESCUE^R

20% FAIRWAY CRESTED WHEATGRASS^R

15% TURF TYPE TALL FESCUE^B

R = RHIZOME

B = BUNCH



SUPREME SHADE™

Supreme Shade™ is for those areas that are mostly in shade or transition. Supreme Shade is your best bet for getting turf to establish in the shadiest areas of your property. A minimum of three to four hours of filtered sunlight is necessary for even the best turf to survive.

Cost: \$\$

Maintenance: Medium

Seeding Rate: 6–7 lbs per 1000 sq. ft

Establishment Rate: 14–28 days

25% CHEWINGS FESCUE ^B

20% IMPROVED KENTUCKY BLUEGRASS ^R

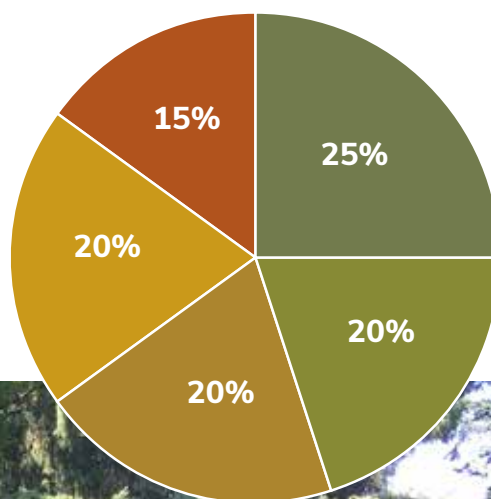
20% FINE-LEAF PERENNIAL RYEGRASS ^B

20% CREEPING RED FESCUE ^R

15% HARD FESCUE ^B

R = RHIZOME

B = BUNCH



HEARTLAND™

Heartland™ is a blend of hearty and durable grasses that is very drought and shade tolerant, grows well in most soil types, and provides a nice looking turf. Heartland works well around the house, at your cabin in the hills or anywhere a durable low maintenance lawn is desirable.

Cost: \$\$

Maintenance: Low

Seeding Rate: 5–6 lbs per 1,000 sq. ft

Establishment Rate: 14–28 days



35% CREEPING RED FESCUE^R

15% HARD FESCUE^B

15% SHEEPS FESCUE^B

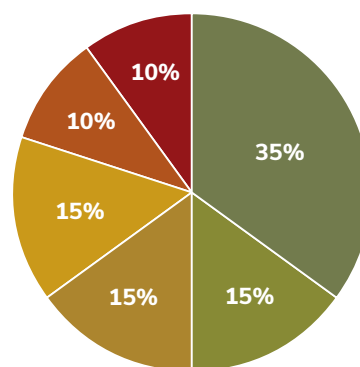
15% KENTUCKY BLUEGRASS^R

10% KENTUCKY + TEXAS BLUEGRASS^R

10% PERENNIAL RYEGRASS^B

R = RHIZOME

B = BUNCH



BOULEVARD BLEND™

Boulevard Blend™ is designed to stand up to the harsh, salty conditions that may exist on boulevards, near parking areas and anywhere that may be exposed to ice melt salt.

Cost: \$\$

Maintenance: Medium

Seeding Rate: 6–7 lbs per 1,000 sq. ft

Establishment Rate: 14–28 days



20% KENTUCKY BLUEGRASS^R

20% FINE-LEAF PERENNIAL RYEGRASS^B

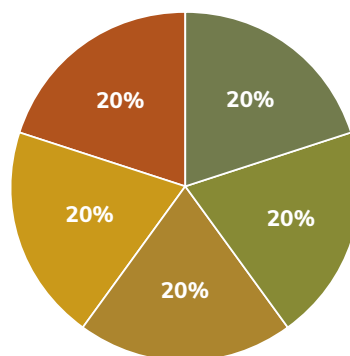
20% CREEPING RED FESCUE^R

20% SALTY ALKALIGRASS^B

20% CHEWINGS FESCUE^B

R = RHIZOME

B = BUNCH



EZ LAWN™

EZ Lawn™ is a "no mow" mix that requires little maintenance and results in a nice looking turf. The fine leaves of the fescue grasses create a soft turf with a natural, wispy appearance. This mix is tough and drought tolerant. Because of its slow growth and adaptable traits, it is often seen in both its natural and mowed condition on golf courses. When left unmown this mix can reach 12" and will lay over creating a natural wispy look.

Cost: \$

Maintenance: Low to Medium

Seeding Rate: 6–7 lbs per 1000 sq. ft

Establishment Rate: 21–28 days

25% CHEWINGS FESCUE^B

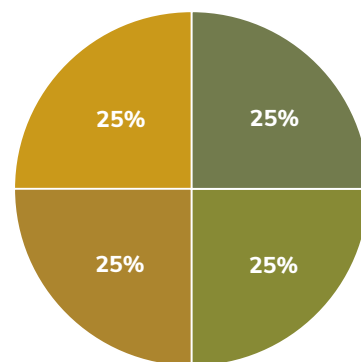
25% HARD FESCUE^B

25% SHEEPS FESCUE^B

25% CREEPING RED FESCUE^B

R = RHIZOME

B = BUNCH



WET TURF MIX™

Wet Turf Mix™ is a blend of turf and field grasses that is designed for use in a stormwater detention basin or similar area that may temporarily hold water to eventually drain it out. This mix can be mowed to turf height or left to grow to a height of two to three feet.

Cost: \$\$

Maintenance: Low

Seeding Rate: 4–5 lbs per 1,000 sq. ft

Establishment Rate: 14–21 days

20% CREEPING RED FESCUE^B

20% KENTUCKY BLUEGRASS^R

20% PERENNIAL RYEGRASS^B

12% CRESTED WHEATGRASS^R

10% CHEWINGS FESCUE^B

10% ANNUAL RYEGRASS^B

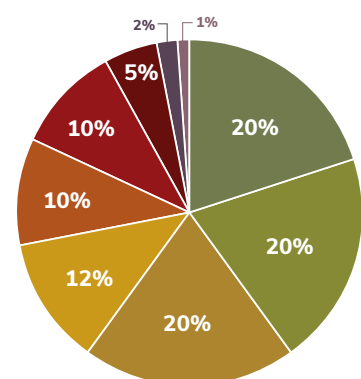
5% ALKALIGRASS^B

2% TIMOTHY^B

1% CREEPING FOXTAIL^R

R = RHIZOME

B = BUNCH



GREAT PLAINS™

Great Plains™ is a mixture of cool and warm-season grasses to keep the turf green all season. Once established, this lighter colored turf is very low maintenance and is a "no mow" option. It's perfect for low fertility areas and in place of a Buffalograss lawn.

Cost: \$\$\$

Maintenance: Low

Seeding Rate: 4 lbs per 1,000 sq. ft

Establishment Rate: 21–28 days



25% CHEWINGS FESCUE^B

25% SHEEPS FESCUE^B

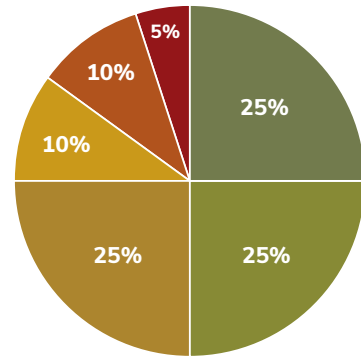
25% HARD FESCUE^B

10% BLUE GRAMA^B

10% ANNUAL RYEGRASS^B

5% BUFFALOGRASS^S

B = BUNCH
S = STOLON



DEVELOPER'S MIX™

Developer's Mix™ is a perfect low cost solution for new developments where the most important attributes are green cover, low maintenance, quick establishment, and erosion control. This perennial mix will continue to come back, but quality will begin to diminish after three to five years.

Cost: \$

Maintenance: Low

Seeding Rate: 2–4 lbs per 1,000 sq. ft

Establishment Rate: 7–14 days



25% CREEPING RED FESCUE^B

20% OATS^B

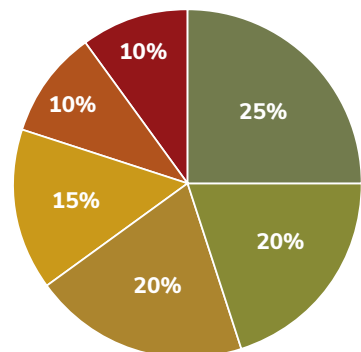
20% ANNUAL RYEGRASS^B

15% PERENNIAL RYEGRASS^B

10% CHEWINGS FESCUE^B

10% KENTUCKY BLUEGRASS^R

R = RHIZOME
B = BUNCH



ULTIMATE SPORTS MIX™

This blend of elite kentucky bluegrass will stand up to the rigors of sports and will look great. It will perform best with regular irrigation and fertilizer applications.

100% KENTUCKY BLUEGRASS ^R

R = RHIZOME

Cost: \$\$\$

Maintenance: Low

Seeding Rate: 4 lbs per 1,000 sq. ft

Establishment Rate: 21–28 days



PREMIUM TALL FESCUE

Tall Fescue is a highly-durable, medium-bladed bunch grass that creates a thick, lush turf. Tall Fescue requires less water and fertilizer than other turf species but performs best with some irrigation in the hot, dry summer months.

100% PREMIUM TALL FESCUE ^B

B = BUNCH

Cost: \$\$\$

Maintenance: Low

Seeding Rate: 8–10 lbs per 1,000 sq. ft

Establishment Rate: 14–21 days

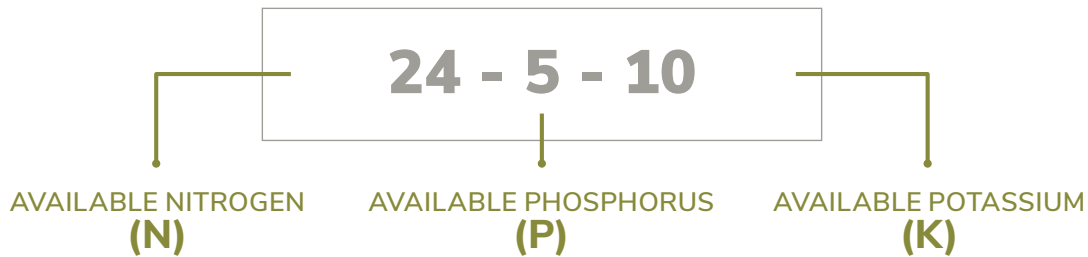


EROSION CONTROL PRODUCT GUIDE

Millborn's complete line of erosion control products helps protect your investment in seed as well as preventing erosion within and around your project.

PRODUCTS	DESCRIPTION
Erosion Control Blankets	Curlex Erosion Control Blankets from American Excelsior are made with aspen wood excelsior and provides the best erosion protection and germination aid of any erosion blanket material available. Erosion Control Blankets are a temporary solution commonly applied to slopes, ditches, outlets, riverbanks and anywhere seeding failure is not an option.
Turf Reinforcement Mats	Recyclex Turf Reinforcement Mats work with vegetation to develop a matrix that can stand up to repeated significant water events. The 100% post-consumer recycled plastic fibers are crimped and curled to interlock, resulting in a permanent, durable solution for ditches and channels.
Hydro Mulch	Hydro Mulches from MAT Inc. are available in a variety of formulations to meet the needs of any project. Wood or paper mulches such as MAT Fiber Plus are used for vegetation establishment while Soil Guard BFM and Flex Guard FRM are used for erosion control.
Soil Stabilizers and Tackifiers	Soil stabilizers and tackifiers can be granular, liquid or powder. The granular products such as PAM 12 Plus can be applied with a broadcast spreader or with hydroseeding equipment. Liquid and powder soil stabilizers are applied with hydroseeding equipment.
Silt Fence and Fabrics	High flow and low flow silt fences commonly used for perimeter control are available in 1,000' rolls. Landscape fabric, separation and reinforcement fabrics are available to meet the needs of any project.
Sediment Logs and Wattles	Curlex Sediment logs and compost or straw wattles are commonly used as ditch checks, slope interrupters, inlet protection and perimeter control. Sediment logs work by slowing and filtering water while wattles work by stopping water for sediment to drop out of the flow.
Inlet Protection	Top Guard inlet protectors by ERTEC are made to be easy to install and maintain while minimizing risk to both employees and employers. Options are available for combination, curb and area inlets in a variety of sizes. Rock logs are also available.
Stakes, Staples and Accessories	Millborn Seeds carries staples for erosion control blankets and turf reinforcement mats, stakes for sediment logs and wattles and other accessories.

FERTILIZER LABELS MADE SIMPLE.



The numbers denote the percent of each nutrient within the mix. For example, this mix will have 24 lbs of nitrogen, five lbs of phosphorus, and ten lbs of potassium for every 100 lbs of this fertilizer.

NITROGEN

Nitrogen encourages above ground growth and overall plant health. When your turf has the right amount of nitrogen, it will have a rich, deep green color.

PHOSPHORUS

Phosphorus is essential in the development of a healthy root system.

POTASSIUM

Potassium helps strengthen plants' abilities to resist disease while improving overall quality and protects the plant when the weather is cold or dry.

4 STEP FERTILIZER GUIDE

EARLY APRIL
EARLY MAY

1. CRABGRASS PREVENTER | 18-0-6 WITH DIMENSION®

Application Dates: Early April to Early May

Apply when soil temperature reaches 50°–52°. Helps prevent crabgrass and other annual grasses from invading your lawn while promoting spring growth of lawns.

MID MAY
JUNE

2. WEED & FEED | 22-0-5 WITH TRIMEC®

Application Dates: 4–8 weeks after Step 1

Apply early in the morning when blades of grass are wet or irrigate prior to application for best performance. Provides control of broadleaf weeds and nutrients to support plants through this active part of the growing season.

LATE JUNE
EARLY AUG

3. TURF BUILDER | 24-5-10 OR 29-0-3

Application Dates: 6–10 weeks after Step 2

Turf Builder provides slow release nitrogen for the long summer months and has an excellent greening effect on the lawn. Provides enough nutrients for 10–12 weeks. Works best when watered in lightly.

EARLY SEPT
OCT

4. STARTER/WINTERIZER | 13-13-13

Application Dates: 10–12 weeks after Step 3

Puts your lawn in tip top condition going into the long winter months. Can also be applied to new seedings anytime during the growing season.

CHEMICAL + FERTILIZER PRODUCT GUIDE

FERTILIZER PRODUCTS	PACKAGE	COVERAGE	DESCRIPTION
18-0-6 w/Dimension®	50 lb bag	9,000 sq. ft	› Spring applied fertilizer › Prevents growth of crabgrass while feeding your lawn › Used on any established turf areas
22-0-5 w/Trimec®	50 lb bag	12,500 sq. ft	› Weed and feed fertilizer › Slow release nitrogen › Added Trimec for control of broadleaf weeds
24-5-10	50 lb bag	12,000 sq. ft	› 50% slow release component › Will last up to 12 weeks › Can be applied throughout the growing season
13-13-13	50 lb bag	6,500 sq. ft	› Balanced starter/winterizer fertilizer › Great for new seedings and preparing lawn for winter › Lasts 6 weeks
Milorganite®	50 lb bag	3,000 sq. ft	› Organic, slow-release fertilizer › Safe for turf, gardens, plants and trees › Can be applied any time of the year
Gypsum Super Cal 04	50 lb bag	3,000 sq. ft	› Best used cultivated and mixed into clay or heavy soils › Used to relieve compaction in heavy soils of established lawns
Sustane® 4-6-4 Sustane® 4-4-4	50 lb bag	4,000 sq. ft	› 6–8 week product, applied throughout the growing season › Adds organic matter to the soil
Sustane® 8-2-4	50 lb bag	4,000 sq. ft	› Slow-release nitrogen fertilizer › Promotes a rapid rate of vegetative establishment › Quick ground cover minimizes soil erosion

HERBICIDE PRODUCTS	PACKAGE SIZE	DESCRIPTION
SpeedZone®	20 ounce container 2.5 gallon container	› SpeedZone herbicide starts visually deteriorating broadleaf weeds such as clover, dandelion, ground ivy and spurge within a matter of 24 hours. Weed death typically occurs from 7 to 14 days. It is great to use for residential lawns, golf courses and commercial properties.
Tenacity®	8 ounce container	› This herbicide is the most effective treatment for crabgrass and controls more than 46 broadleaf weed and grassy weeds. When used as a pre-emergent, it will prevent crabgrass and other weeds from germinating. As a post-emergent, it will eliminate seedlings of unwanted weeds and grasses.



COMMERCIAL

Commercial projects come with all kinds of challenges — tight deadlines, fixed budgets and complex specifications to name a few.

Millborn's robust product line-up combined with expert knowledge from our specialists simplifies your project and helps you and your project be successful.

Check out our website for more information
on our full commercial product lineup.





MILLBORN DIFFERENCE

COMMERCIAL SPECIALIST

When you collaborate with Millborn Seeds, you benefit from having the expertise, insight, and overall caring approach from a Commercial Specialist. This helps identify potential pitfalls within the project as well as helps solidify the most intelligent approach and products.

LUNCH & LEARN OPPORTUNITIES

Whether you want an in-house presentation or wish to join one of the scheduled Lunch and Learn events, Millborn is dedicated to educating fellow professionals on the ever changing commercial products marketplace.

ON-SITE CONSULTATION

To help your project remain on target, Millborn's Commercial Specialists are ready and able to mobilize. This allows you to stay focused on your tasks at hand on the job site.

PRE-CONSTRUCTION CONSULTATION

There is no substitute for formulating an intelligent pre-construction plan. We've learned that part of the magic in this process is involving the right people into the early stages of the discussions. Millborn's Commercial Specialists offer a team-based perspective in the planning stages of your project.

STANDARD MIXES

Millborn's line up of turf, DOT, and specialty native mixes are formulated to fit the most demanding growing conditions. Over thirty years of learning the ever-changing commercial and construction marketplace helps keep our grass seed products and solutions at the top of the industry.

1200+ SPECIES ON HAND

With one of the most diverse and in depth inventories of seed on the planet, you can trust that if your needs are urgent, Millborn is ready to deliver.

CUSTOM MIXES

It's how we started. And it's how we continue to bring the most on-target seed solutions to our clients. One custom built solution after another, Millborn understands the unique demands across different industries. We're ready to help formulate a custom mix to fit your exact project needs.

BLENDED ON DEMAND

To help give you the assurance that "when you're ready, we'll be ready," Millborn offers one of the industry's most in depth and diverse grass seed inventory. When others may need weeks to complete your order, Millborn Seeds gets it done in a matter of days, if not hours.

QUALITY

We seek out leaders in the grass seed growing business. Leaders who also value integrity. That way we can all benefit. Whatever it says on our label is what's inside the bag — guaranteed. And we put our money where our claim is. We conduct precise and thorough testing on all our seed, ultimately delivering you only the highest quality seed.

COMMERCIAL PRODUCT GUIDE

PRODUCTS	DESCRIPTION
Erosion Control Blankets	Millborn offers Curlex® Blankets from American Excelsior. These wood fiber blankets are made from aspen excelsior fibers that are curled and barbed to help hold onto the soil. These blankets are commonly applied to channel and ditch linings, slopes, culverts, and outfalls. Erosion control blankets are generally classified as temporary erosion control intended to hold everything in place until vegetation is established. Erosion control blankets can also be used on sensitive seeding projects where failure is not an option. The moisture holding properties of the wood fibers create a greenhouse effect which provides a terrific environment to get your grass started.
Turf Reinforcement Mats	Millborn offers Recyclex® Turf Reinforcement Mats from American Excelsior. These mats are made from 100% post-consumer recycled materials. These plastic fibers are more than 5" long and crimped to create a strong interlocking fiber matrix. Turf Reinforcement Mats (TRM) are a permanent erosion control solution. The plastic fibers, soil and root system work together to create a turf that will stand up to concentrated flows.
Sediment Logs and Wattles	What's the difference? Curlex sediment logs are filled with wood excelsior fibers that slow water flows and filters particles. Straw Wattles are filled with straw which will slow water, but instead of filtering, holds the water for sediment to settle out. Both of these products work well for perimeter controls and ditch checks although the straw wattles require more labor to install properly.
Silt Fence	Both High Flow and Low Flow Silt Fence is available. Silt fence is typically used for perimeter control of silt and sediment.
Nurse Crops	Nurse Crops are an annual grain or grass used to prevent erosion and assist in the establishment of your primary grass planting. The species and application rate will vary from one project to another, but the basic principles apply across the board. Using nurse crops is typically the least expensive method of erosion control. Although admittedly not as effective as other methods, it offers great value, especially on large sites.
MycoApply	MycoApply Super Concentrate-10 is a powdered material containing mycorrhizal fungi that colonize roots and extend into the surrounding soil. Incorporating Myco greatly increases the root's ability to absorb water and nutrients, while improving plant survival, vigor and health.
Fertilizers	Millborn offers proven, effective fertilizers to help kickstart your vegetation towards healthy establishment and maintenance of existing vegetation.

COMMERCIAL PRODUCTS AVAILABLE FOR ALL **50 STATES.**



FEDERAL



MINING



OIL & GAS



CITY



LAND
DEVELOPMENT



STATE



PRIVATE



STATE PARKS



RECLAMATION

PRODUCTS	DESCRIPTION
Hydromulch	Millborn carries a complete line of MAT Inc. Hydromulch products. Hydromulch can include paper and wood and can be used with or without tackifier.
Mat Fiber and Mat Fiber Plus	These are 100% wood fiber hydraulic planting mulches. Their long fibers interlock and cling to the soil, forming a protective web-like network that holds seed and soil in place. MAT Fiber Plus is rated for slopes up to 2.5:1.
Spray Guard (SMM)	A Stabilized Mulch Matrix for use on any type of soil with moderate slopes. This formulation aids plant development and prevents erosion for slopes up to 3:1.
Soil Guard	A hydraulically applied Bonded Fiber Matrix conforms to the ground as it dries and will hold soil and seed in place. The wood fibers hold moisture to reduce the amount of watering required for plant germination. Soil Guard can provide protection on slopes up to 1:1.
Flex Guard (FRM)	A Fiber Reinforced Matrix designed with wood fibers, synthetic fibers and soil-bonding agents for immediate, effective erosion protection on challenging terrain. This formula maintains fiber loft for impact resistance from heavy rains, air circulation and provides moisture retention that promotes seed germination.
Soil Stabilizer	Millborn offers a variety of products that can be used to meet Soil Stabilizer specifications. Spec Tack and the psyllium based tackifiers are applied with hydromulching equipment and are typically blended with 300 lbs of hydromulch per acre. Application rates vary based on the steepness of the slopes and the tackifier used.
Custom Seed Mixes	Millborn Seeds has the inventory, expertise and facilities to develop a seed mix to meet any specification or project requirement.



SWEET CORN

PRODUCT GUIDE

PREMIUM GRADE	DAYS TO MATURITY	KERNEL COLOR	QUALITIES
Ambrosia	75	Bi-color	Ambrosia is a bi-color, 8-inch ear known for its superior eating quality. Ambrosia has amazing seedling vigor and fast early growth while still having high tolerance to Stewart's wilt. This mid-day variety is a homozygous sugary enhancer. A little salt and butter and you've just made Ambrosia the highlight of your BBQ.
Bodacious RM	75	Yellow	Bodacious RM is your mainstay for a consistent product that you need come August. This popular yellow corn will give you a sturdy 8-inch ear that will be dependable for your roadside stand or local market. With disease resistance to Common Rust, Maize Dwarf Mosaic, and Stewart's Wilt, you can count on Bodacious to fill an ear every year.
Delectable	84	Bi-color	Delectable will be your top seller when you show up to the farmer's market! Delectable is bi-color, with large well-filled ears and deep dark green husks. Tenderness and taste will keep your customers coming back. With resistance to Common Rust, Stewart's Wilt, and Northern Corn Leaf Blight, you can be at ease about producing a crop.
Sweetness	68	Bi-color	Sweetness will allow you to be the first to impress your neighbors with that gift of sweet corn this summer.
Incredible	85	Yellow	Incredible is the most popular, gourmet homozygous sugary enhanced sweet corn in the world. This yield topper has beautiful tight kernels that will explode with sweetness at every bite. It is disease resistant to Common Rust, Maize Dwarf Mosaic, and Stewart's Wilt.

STAY CONNECTED.

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