
WILL WORK FOR FOOD!
AI Seeds

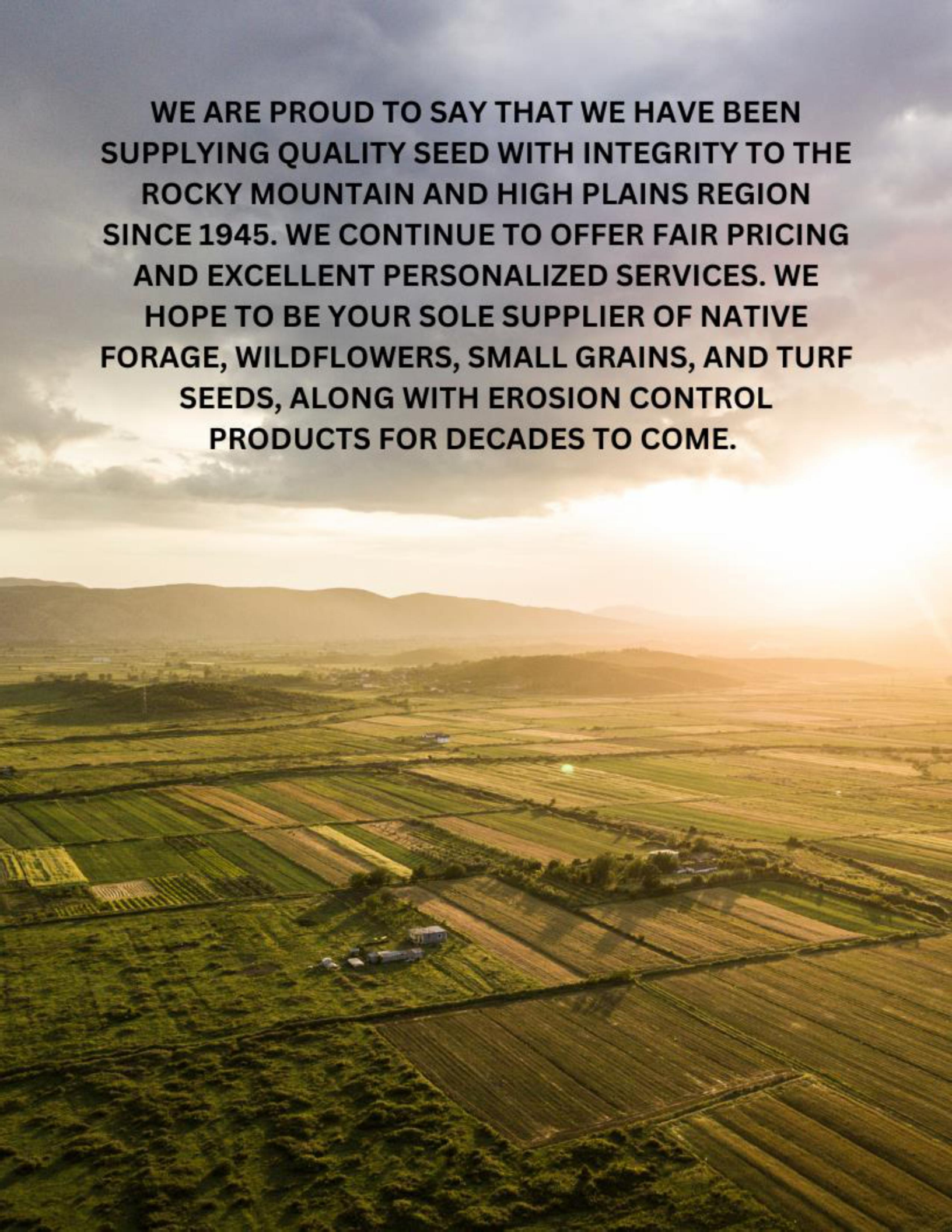

WE ARE PROUD TO SAY THAT WE HAVE BEEN SUPPLYING QUALITY SEED WITH INTEGRITY TO THE ROCKY MOUNTAIN AND HIGH PLAINS REGION SINCE 1945. WE CONTINUE TO OFFER FAIR PRICING AND EXCELLENT PERSONALIZED SERVICES. WE HOPE TO BE YOUR SOLE SUPPLIER OF NATIVE FORAGE, WILDFLOWERS, SMALL GRAINS, AND TURF SEEDS, ALONG WITH EROSION CONTROL PRODUCTS FOR DECADES TO COME.



TABLE OF CONTENTS

Company Overview 4

The Buzz Heard Around the World 6

Turfgrass Species 8

Farm Products 14

Grass Species 21

Wildflower & Forb Species 37

Shrubs & Tree Species 52

Wetland Species 59

Pure Live Seed & Seed Quality 63

Hard Good Products 64

Product Charts 66

Stock Mixtures 66
Turfgrass Species 67
Farm Products 68
Grass Species 70
Wildflower & Forb Species 74
Shrub & Tree Species 78
Wetland Species 81

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OUR ROOTS

Our story started in 1945 when Bob Appleman founded Arkansas Valley Seed in Rocky Ford, Colorado. Bob named the company after the beautiful Arkansas River Valley in southeast Colorado. As times changed, so did Arkansas Valley Seeds; in 2023, the company was rebranded to AVSeeds. Even though our name and people have changed, the one thing that will always remain the same is our reliability and quality of our seeds. Over the years, we've continued to provide quality seed at fair prices and improved all areas of our customer service. From a simple, friendly hello to our high-quality products, AVSeeds strives to give personalized service to each customer's unique and ever-changing demands in the seed world. As we move forward, we promise not to leave behind the time-honored commitment to quality that our philosophy embodies. So, let us extend a heartfelt thank you to those who already make AVSeeds their all-purpose seed resource. For those considering us for the first time, we look forward to forging new friendships and planting lifelong partnerships.

OUR PROMISE

We deliver VALUE to our customers:

- By staying current with all market conditions and carrying a wide selection of products to meet consumer demand.
- Providing technical assistance and advice to ensure customers use the right amount of quality seed to meet their job specifications.
- By providing on-site consultation and grass identification.
- By being able to mix promptly, recognizing the value of our customers' time and keeping them productive.
- By offering Certifications of Compliance by request for any job – large or small.
- And, by being Customer Service Oriented!

We are proud members and supporters of the following associations:

American Seed Trade Association

American Society of Reclamation Sciences (ASRS)

Associated Landscape Contractor's of Colorado Peaks

Colorado Seed Industry Association

Colorado Sports Turf Managers Association

Construction Financial Management Association

International Erosion Control Association

National Federation of Independent Business

Pollinator Partnership

Rocky Mountain Golf Course Superintendents Association

Rocky Mountain Sod Growers Association

Society for Range Management

Western Seed Association

Wyoming Crop Improvement Association

Please visit our website at: AVSEEDS.COM or call for more information. We look forward to earning your business today and for years to come.



"THE BUZZ HEARD AROUND THE WORLD"

In a world where the hum of nature once harmonized with the vibrant colors of flourishing meadows, Buzz the bumblebee faced a formidable challenge – ensuring food security for his family. The once-abundant flowers, Buzz's family's primary food source, were rapidly disappearing as urban structures took root, overshadowing the once-lush landscapes.

As Buzz witnessed the transformation of his world, the scarcity of food became an urgent concern. The concrete jungles that replaced the blooming meadows disrupted the delicate balance of pollinator habitats. Buzz, like many others in his plight, found himself struggling to adapt, eventually losing his job as a pollinator as the food supply dwindled.

Driven by a deep determination to secure a future for his family, Buzz embarked on a relentless mission. He explored every avenue for employment, even resorting to holding a sign that pleaded, "Will work for food." Yet, Buzz knew that these efforts were merely temporary solutions in the face of a larger crisis.

One day, while surveying the altered landscape, Buzz had an epiphany. He realized that the solution lay not in individual efforts but in a collective endeavor to restore the disrupted balance. Buzz envisioned a world where pollinator plants and flowers thrived once more, creating not only a sustainable ecosystem but also addressing broader issues of environmental degradation.

With a newfound purpose, Buzz set out to rally the planet's inhabitants. His message echoed far and wide, a plea for collaborative action to cultivate pollinator habitats. Buzz understood that the key to success lay in planting seeds that would bring back the essential greenery, the lifeblood of pollinators, and a guarantee of food security.

In this critical mission, Buzz found a crucial ally in AVSeeds, a provider of diverse seeds for native and reclamation purposes. Their offerings, ranging from warm- to cool-season grasses, wildflowers, shrubs, and trees, could contribute to pollinator habitats and broader environmental restoration efforts. Buzz's rallying cry was clear and compelling: "Help me, help my family, help the planet. Let's create a greener world together." The mission transcended the immediate concerns of pollinator habitats; it encompassed a collective commitment to addressing environmental challenges on a global scale.

The call to action reverberated across diverse landscapes, inspiring individuals from all walks of life. Fueled by Buzz's vision, people began to plant seeds and foster the growth of pollinator-friendly spaces.


WILL
WORK
FOR
FOOD!



TURFGRASS SPECIES

TURFGRASS PLANTING & ESTABLISHMENT

When selecting a turf species for turfgrass sites, choose one well-suited for the designated planting area. For instance, opt for Kentucky bluegrass in high-traffic areas and fine fescues for low-maintenance areas. Turf is ideal for large, flat spaces sloping away from buildings but is unsuitable for steep slopes and isolated islands prone to runoff. In such cases, native grasses and flora are more appropriate. When establishing a lawn, prioritize soil preparation. Take the necessary steps to ensure property health and resilience to hot and dry weather. Rocky Mountain soils typically lack organic matter. For sandy soil, incorporate 3 to 5 cubic yards of weed-free organic matter per 1,000 square feet. Clay soils benefit from 2 to 4 cubic yards, with the addition of inorganic amendments for improved porosity. Subsoil ripping may be needed to break up hard pans. A well-prepared soil contributes to a healthy lawn, reducing water use by up to 30% and defending against weeds, disease, and pests. Starting a lawn from seed offers advantages like direct root establishment, cost-effectiveness, and reduced labor. Prepare the soil, add a starter fertilizer, and provide frequent, light waterings until germination. Maintain soil moisture during establishment, consider mulch to prevent evaporation. Once established, reduce watering after the initial mowing. Watering should be focused during the cooler parts of the day. Fertilizing is crucial for lawn health. Adequate spring moisture activates fertilizer, releasing nutrients into the turf. Use a mixture of quick and slow available nitrogen sources, phosphorus, and potassium. Apply fertilizer during cooler growing times of year for cool-season grasses like Kentucky bluegrass and warmer parts of the year for Buffalograss. In the spring, consider lawn aeration to reduce compaction and enhance water, air, and nutrient penetration into root zones. Core aeration helps prevent runoff and thatch build-up, promoting a healthier lawn.

AVSeeds carries a wide variety of turfgrass species. If you do not see the species that you are looking for, please call us. As always, call for current pricing and availability.

ANNUAL RYEGRASS - *Lolium multiflorum*

Arkansas Valley does not recommend Annual Ryegrass for turf applications. The species presents a weedy appearance when mixed with other proprietary turf species. Please call us to discuss other options. *See Grass Species Section for more information on this species.*

BERMUDAGRASS - *Cynodon dactylon*



Bermudagrass is a warm-season sod-forming perennial that is spread by stolons, rhizomes, and seeds. Bermudagrass has a fibrous root system with vigorous, deep rhizomes. Bermudagrass is a major turf species for sports fields, lawns, parks, golf courses, and general utility turfs in the southern region of the U.S. Bermudagrass has excellent drought tolerance, traffic tolerance and can handle poor water quality compared to other turfgrasses. Due to its poor winter performance, the development of cold-tolerant turf-type varieties of Bermudagrass has increased interest in the species.

CREEPING BENTGRASS - *Agrostis palustris*



Creeping Bentgrass is a long-lived perennial grass. It is mainly used for golf greens and tees, croquet, lawn bowling, lawn tennis, and divot repair on fairways. You will find this high-quality, attractive grass on almost every championship golf course where it is adapted. It's the finest bladed, lowest growing, highest maintenance of the cool season turf grasses. Establishment for this soft, dense grass is slow to normal, and it requires a well-prepared seed bed with good drainage. Creeping Bentgrass spreads laterally, requiring more controlled management and limiting its use in home lawns and parks. This dense turf grass performs great when closely mowed at 1/8 to 1/2 inch, fertilized, and watered consistently. Creeping Bentgrass grows best in full sun but will survive in light shade. Because of the growth habit, Creeping Bentgrass doesn't blend well with other grasses.

FINE FESCUES - *Festuca ssp.*



- Chewings, *Festuca rubra var. falax*
- Strong Creeping Red, *Festuca rubra var. rubra*
- Slender Creeping Red, *Festuca rubra var. litoralis*
- Hard, *Festuca brevipila*
- Sheep, *Festuca ovina*
- Blue, *Festuca ovina var. glauca*

Fine fescues are a shade tolerant turf grass with a medium to dark green color. They require little maintenance and like to be mowed at 1½ to 2-1½ inches. The fine fescues are excellent choices for low maintenance sites, even as a part of showcase turf areas, due to their reduced water requirements, low nitrogen and reduced growth rates. They typically persist in soils that are droughty, acidic and infertile, if the soils are properly drained. Fine fescues also perform well in the shade and with tree root competition, so they can be utilized in areas where many other turfgrasses will not persist.

The five primary types used for turf – Chewings, Strong Creeping Red, Slender Creeping Red, Hard and Sheeps or Blue fescue, all have unique strengths, weaknesses and preferred uses. Areas such as golf course roughs, slopes, and bunker edges, parks, home lawns, roadsides and reclamation areas can all benefit from the use of improved fine fescues for high quality, low maintenance turf.

PERENNIAL RYEGRASS - *Lolium perenne*



Perennial ryegrass is one of the world's most widely used turf grasses. Its popularity comes from its ability to germinate in 7 to 10 days or less. This fine-bladed turf grass is preferred by many homeowners because of its dark color, strong root system, its fast response to fertilization and its rapid recovery from trampling. A cool-season grass, perennial ryegrass can adapt to many different kinds of soil, including poor soils, clay, and badly drained areas. A high level of endophytes allows this species to perform well under stress. Turf-type perennial ryegrass is a hardy grass that has been used in almost every premier sporting event and on the world's finest golf courses. This bunch type grass likes full sun but will tolerate some shade and can be mowed as short as 3/16 of an inch.

TALL FESCUE - *Festuca arundinacea*



Tall fescue is a bunchgrass that is more drought, shade, heat, and disease tolerant than many other cool season grasses. Tall fescues can provide excellent turf for home lawns, athletic fields, golf course roughs, and other high-traffic areas. The roots can grow from 4 to 6 feet deep, taking in moisture that shallow-rooted grasses can't reach. New and improved varieties are naturally insect-resistant due to high levels of endophytes. When mowing, it prefers to be mowed at 1½ to 3 inches. Most tall fescues don't mix well with other species. It is shade and drought-tolerant, course-textured, wide-bladed, and adapted to various soil types and climates. Some of the newest varieties that are commercially available exhibit some rhizome capability similar to Kentucky bluegrass.

TEXAS HYBRID BLUEGRASS - *Poa arachnifera x Poa pratensis*



Texas Hybrid Bluegrass is a cool season, perennial cross between Kentucky and Texas bluegrass. It produces a turf that has improved heat and drought tolerance derived from the Texas bluegrass while maintaining excellent turf characteristics and uniformity typical of Kentucky bluegrass. Seed size, seeding rates, germination, establishment, and handling are very similar to Kentucky bluegrass. It will establish well and persist under conditions of drought that would cause other species to die off or become dormant.

KENTUCKY BLUEGRASS - *Poa pratensis*



Kentucky bluegrass is the most widely used cool-season turfgrass in the continental United States region. It is most commonly used on home lawns, parks, cemeteries, institutional grounds, airfields, roadsides, golf course fairways and athletic fields because of its ability to withstand high turf injury. It prefers to be mowed at 1½ to 2½ inches. Select new varieties can be mowed down to a half inch for golf course fairways and tees. One of the biggest advantages is its extensive rooting and rhizomatous structure. Rhizomes are underground stems that allow the plant to repair itself quickly and survive through prolonged periods of stress. They also allow it to knit and present a dense turf. Kentucky bluegrass thrives in full sun and partial shade. It prefers a loam soil but can survive the extremes of sand or clay soils. Kentucky bluegrass exhibits excellent cold tolerance in the harsh winters of the Rocky Mountain region. Leaf texture of this species is fine to medium. Most have a dark green color.

KENTUCKY BLUEGRASS CLASSIFICATION - *Rutgers Turfgrass Proceedings*

The following characteristics are for general observation only. Individual performance of varieties within each classification may vary widely and require comparative regional NTEP results to determine the best performing variety. Arkansas Valley can provide varieties from each classification, please call for a list of the newest Kentucky bluegrasses on the market today.

COMPACT AMERICA
- Characteristics of compact type
- Finer leaf, higher density
- 1/2 inch cutting height
- Moderate winter dormancy
- Moderate summer recovery
- High summer patch resistance
- Resistant to powdery mildew
- Good in shade

COMPACT MIDNIGHT
- Characteristics of compact type
- Very dark green color
- 1/2 inch cutting height
- Late spring green-up
- Good heat tolerance
- Susceptible to powdery mildew
- Variable resistance to Summer Patch

COMPACT MID-ATLANTIC
- Deep, extensive roots and rhizomes
- Vigorous turf and medium-high density
- High summer stress tolerance
- Early spring green-up
- Good winter performance
- Rapid recovery from disease
- Leaf Spot susceptible

COMPACT
- Low, compact growth
- High quality turf
- 1/2 inch cutting height
- Excellent resistance to Leaf Spot
- Long winter dormancy
- Variable under summer stress
- Often purple winter color

COMPACT P-105
- Aggressive lateral growth
- High shoot density
- Very wear tolerant
- Quickly knit sod and repair
- May predominate in blend
- Variable in other characteristics

SHAMROCK
- Moderate winter color
- Good resistance to leaf spot
- Good turf quality and sod strength
- Billbug susceptible
- High seed yields
- Less stemmy than BVMG
- Summer performance variable

JULIA
- High turf quality
- Excellent wear tolerance
- High density
- Good summer performance
- Moderate winter performance
- Good Leaf Spot, Stripe Smut resistance
- Susceptible to Brown Patch, Dollar Spot

TEXAS KENTUCKY HYBRIDS
- Hybrids between Texas and Kentucky bluegrass
- Heat tolerant
- Extensive rhizomes
- Wear tolerant
- Drought tolerant with good recovery
- Variable based on KBG parent
- Moderate winter dormancy

BVMG
- Medium-good turf
- Stripe Smut susceptible
- Medium low growth
- Medium texture
- Medium wide leaf
- Very stemmy turf
- Poor winter performance
- Resistant to Leaf Spot
- Billbug susceptible

LIMOUSINE
- High density
- Fine textured
- Light green
- Wear tolerant

SYDSPORT
- Good turf quality
- Medium low growth, density and leaf width
- Good resistance to Stripe Smut
- Less stemmy than BVMG types
- Moderate resistance to Leaf Spot
- Moderate winter dormancy
- Good sod strength

EURASIAN
- Variable in many characteristics
- Less stress tolerant
- Many high density
- Rust resistant
- Medium light-green color

EURASIAN MIDWEST (COMMON)
- Midwest ecotypes
- Erect growth and narrow leaf blades
- High water use
- Dormant during summer
- High Leaf spot susceptibility
- Poor winter color and performance
- Stemmy early spring
- Good for soil stabilization and conservation

VITALITY TURF MIXTURES & BLENDS

Vitality
Seed with confidence.

Vitality™ blends and mixtures, formulated by professional seed experts, provide the finest, purest, best performing seed varieties to meet the quality and performance demands of our customers who make their living growing healthy turf, restoring natural landscapes. With Vitality™, you can Seed With Confidence.



BLUE VALLEY BLUEGRASS BLEND

This blend of elite Kentucky bluegrass is an excellent choice for overseeding fairways, sports fields, parks, and open spaces, as well as establishing new lawns or reseeding existing lawns originally established by sod. The bluegrass types selected for this mix exhibit a very dark green color, improved drought, and heat tolerance, and can handle the stress of multiple management levels. The entire genetics package tolerates high wear and traffic levels across a wide range of climates. Adapted to mowing heights as low as ½ inch and has dense growth habit to naturally crowd out Poa annua and other weeds.

LOW MAINTENANCE MIXTURE

Low Maintenance Turfgrass Mixture is perfect for areas where water and fertilizer conservation is important. Solution for difficult-to-manage areas. Heat and drought tolerant. This turfgrass mixture is excellent for establishing and stabilizing naturalized areas for wildlife cover, beds, and erosion buffers.

NATIVE WONDER

A mixture of warm season grasses including Buffalograss and Blue Grama. Native to the Great Plains, these grasses are ideal for those desiring a true native lawn with that "back to nature" look. Very heat and drought tolerant.

NATURE'S CHOICE

A mixture designed for areas where regular watering is not available. Ideal for those on wells or watering restrictions who cannot maintain more traditional types of lawn grass. This mixture features Ephraim crested wheatgrass, which is known as a deep-rooted and drought tolerant wheatgrass. Ephraim is one of only a few wheatgrass species that propagates through rhizomes.

PLAYGROUND MIXTURE

A three-way mix of Kentucky bluegrass, Creeping Red Fescue and Perennial Ryegrass. Playground Mixture can adapt to a wide range of soil types. An economic mixture offering good value.

PREMIUM LAWN MIXTURE

A top performer, this premium mix of Kentucky bluegrasses and Turf-Type perennial ryegrass establishes quickly and develops into a thick, beautiful lawn in one growing season. Excellent for starting new lawns or revitalizing existing ones. Ideal for moderate to high-traffic areas. Very winter hardy and establishes quickly and permanently.

PREMIUM SHADE MIXTURE

This mixture is developed for highly shaded areas but will thrive in sun areas. It contains a combination of fine fescues, shade-tolerant Kentucky bluegrass, and turf-type perennial ryegrass. This mix has a soft, medium-green appearance. Premium Shade can be found thriving in relatively infertile, deep shade, where turf can be neglected, tortured, and forgotten.

SPORTS TURF MIXTURE

Ideal for new seeding or renovating football, soccer, baseball fields, playgrounds, as well as home lawns. This mix was developed to provide durable, high-quality turf on high traffic areas. Resistant to diseases common to intensively managed turf areas. Superior wear tolerance and excellent winterhardiness. Excellent spring and fall vigor with superior midsummer performance.

TRIATHLAWN MIXTURE

An excellent blend of high-endophyte, rhizome-rich turf-type tall fescues. Deep-rooted and winter-hardy, tall fescues can access water from deeper soil depths than Kentucky bluegrass or perennial ryegrass - assuming adequate soil prep. Triathlawn exhibits good disease and pest resistance that survives on many soil types in full sun or shade. It is highly stress-tolerant and requires minimal care. It forms a tough, durable turf that easily tolerates constant use, heat, and drought.

TRIPLE STAR PERENNIAL RYEGRASS BLEND

This blend of elite perennial ryegrass is an excellent choice for overseeding fairways, sports fields, parks, and open spaces as well as overseeding existing lawns. The entire genetics package tolerates high wear and traffic levels across a wide range of climates. Adapted to mowing heights as low as 3/16 inch, it has rapid establishment to out-compete Poa annua and other weeds. Triple Star contains very high levels of viable endophyte. Due to these very high endophyte levels, the blend exhibits enhanced resistance to many important insects including billbugs, sod webworms, chinch bugs, armyworms, and aphids. The presence of the endophyte also contributes to improved stress tolerance with better summer survival, enhanced fall recovery and reduced weed invasion.

WEAR TOLERATE MIXTURE

This mixture of tough, vigorous varieties easily withstands the abuse of continual use. The durable green carpet stands up to summer stress and requires minimal upkeep. Features rhizome forming tall fescues. Excellent for high-traffic areas such as backyards and play areas. Stands up exceptionally well to summer heat and drought- assuming adequate soil prep.


WILL WORK FOR FOOD!



FARM PRODUCTS

SELECTING THE RIGHT ALFALFA

FALL DORMANCY (FD)

- Fall dormancy is defined as the reduction in alfalfa top growth in the fall due to decreasing temperatures and shorter day lengths.
- Fall dormancy scores range from 1 to 11, with the lower numbers exhibiting less growth (fall dormant varieties) and the high numbers showing more growth in the fall (non-dormant varieties).
  - A rating of 1.0 indicates alfalfa will go dormant early in the fall and green-up late in the spring.
  - A rating of 11.0 indicates alfalfa will go dormant late in the fall and green-up early in the spring.
  - Rocky Mountain and High Plains Region varieties are typically values of 3, 4 or 5.

WINTER HARDINESS (WH)

- A measure of the alfalfa plant's ability to survive the winter without injury.
- Scale of 1 to 6.
  - A rating of 1 indicates High Survivability, while 6 indicates Low Survivability.
  - Rocky Mountain and High Plains Region varieties are typically no higher than 3.0.

IMPROVING SUMMER ANNUAL FORAGE QUALITY

BMR TECHNOLOGY

Brown Mid Rib (BMR) increases digestibility of the stem fibers in Forage Sorghums by reducing the quantity of indigestible lignin. Lignin content is decreased approximately 40-60% depending upon environmental conditions. This reduction in lignin increases cellulose and hemi cellulose content; both are more digestible than lignin. Because lignin is a structural component of the stem, its reduction will result in stems that are somewhat softer and more limber. BMRs can equal corn in milk production per ton for dairy cattle.

MS TECHNOLOGY

Male Sterile (MS) hybrids will not produce a grain head unless a foreign pollen source is available. Male sterility offers high yields and has high levels of structural carbohydrates in stalks and leaves for improved forage digestibility and overall energy content under most conditions. Increases standability since it will not cannibalize the stalk as a process of grain fill. An excellent choice for baling.

FORAGE TERMINOLOGY

CRUDE PROTEIN (CP) is a mixture of a true protein and nonprotein nitrogen, and also includes insoluble crude protein. In general, a high CP level is desirable; it's usually obtained by harvesting at an early growth stage.

ACID DETERGENT FIBER (ADF) represents highly indigestible parts of the forage such as cellulose, lignin, silica, and insoluble nitrogen compounds. As forage plants mature, ADF increases and digestibility of forage decreases.

NEUTRAL DETERGENT FIBER (NDF) is composed mainly of the cell wall part of the forage and includes hemicellulose and the ADF components. The NDF part of the forage is only partially digestible. The higher the percentage NDF, the less of the forage the animal will eat. Therefore, a low NDF is desirable.

DRY MATTER (DM) is the percentage of the forage that is not water. If a forage is 55% dry matter, then it has 45% water (100 - 55 = 45). Rations are balanced on a dry matter basis.

DIGESTIBLE DRY MATTER (DDM) is an estimate of the percentage of the forage that is digestible as determined from ADF concentration. DDM can be used to estimate the energy value of the forage. The lower the ADF, the higher the DDM will be.

DRY MATTER INTAKE (DMI) is based on NDF concentration and is an estimate of the amount of forage an animal will consume.

DIGESTIBLE DRY MATTER INTAKE (DDMI) is an estimate of the DDM the animal will consume.

RELATED FEED VALUE (RFV) is an index that combines ADG (digestibility) and NDF (intake) nutritional factors to arrive at one number to measure and compare forage quality.

AVSeeds carries a wide variety of farm related products including alfalfas, grains and summer annuals. If you do not see the species that you are looking for, please call us. As always, call for current pricing and availability.

ALFALFA - *Medicago sativa*



Alfalfa is a deep rooted and moderately long-lived perennial. One of the most widely used legumes for hay production. Also found in pasture, range and revegetation mixes. Some varieties exhibit spreading ability that is suitable for grazing.

ALSIKE CLOVER - *Trifolium hybridum*



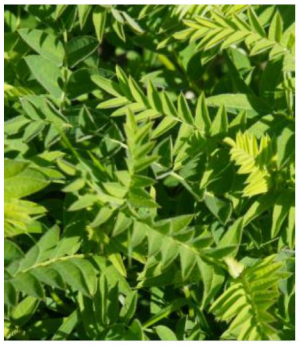
Alsike is a winter hardy, short-lived perennial clover that acts as a biennial. It is well-adapted to cool climates and wet soils. Alsike is ideal for hay production in areas of high precipitation or poorly drained soils and for short rotation pasture mixes.

BIRDSFOOT TREFOIL - *Lotus corniculatus L.*



Birdsfoot Trefoil is a long-lived legume, highly palatable, with a high feed value. It is winter hardy. Widely adapted, easy to maintain and has certain advantages over alfalfa, ladino or red clover. It is more tolerant of infertile and acidic soil, less likely to cause bloat and survives better than most legumes.

CICER MILKVETCH - *Astragalus cicer L.*



Cicer Milkvetch is an extremely winter-hardy, long-lived, sod forming perennial legume. Its forage is late-maturing, bloat free, succulent and very palatable for all classes of livestock.

COMMON VETCH - *Vicia sativa*



Common Vetch is a summer annual vine with leaves that are divided into many leaf-lets. Although considered a weed when found growing in a cultivated grainfield, this hardy plant is often grown as green manure or livestock fodder.

CROWN VETCH - *Securigera varia*



Synonyms: Coronilla varia

Crown Vetch is a sod forming and long-lived perennial. Use on slopes to stabilize erodible soils.

FIELD PEAS - *Pisum sativum L.*



Field pea is an annual cool season grain legume that produces a high-quality, high-protein crop. Field pea (also known as dry pea) differs from fresh peas in that field pea is marketed as a dry, shelled product for either human or animal food whereas fresh peas are typically marketed as a fresh vegetable for human consumption. Field peas may be interseeded with oats or spring triticale to improve the forage value of the hay.

HAIRY VETCH - *Vicia villosa*



Hairy Vetch is a hardy winter annual legume that can be planted in either fall or spring. It is used for hay, pasture or as erosion control and is commonly planted with cereal grains.

GRAINS

BARLEY - *Hordeum vulgare*



Barley is an annual grass that is widely cultivated for yielding grain for breakfast food, animal feed and in malt beverages. Black barley, awnless, hooded, 2 row, 6 row, different awn lengths and different spike lengths characterize the many barley types.

BUCKWHEAT - *Fagopyrum esculentum*



Buckwheat is an erect annual plant, with broad heart-shaped leaves and a reddish colored stem. It establishes very quickly, has low heat requirements for development, and will produce a crop in 80-90 days. Buckwheat grows vegetatively and flowers until killed by frost. Buckwheat has been primarily used for humans and livestock, honey crop, smother crop and green manure.

CEREAL RYE - *Secale cereale*



Cereal rye is a hardy annual grass that is widely cultivated for grain production, forage and soil improvement. Due to the late harvest of many crops, fall-planted cover crops often do not make adequate growth to provide winter soil protection, but cereal rye can germinate and grow under cooler conditions than other covers. Cereal rye can also be used for spring forage production, and fed as pasture, green chop, or put up as haylage.

OATS - *Avena sativa*



The Oat plant is an annual grass with kinds and varieties adapted either to fall planting and midsummer harvest or spring planting and late summer harvest. Most oats are used for livestock feed in this country either as grain, pasture, hay or silage. Less than 5% of the total oat production in this country is used as food for human consumption. The human consumption is mainly in the form of breakfast foods and oat flour.

TRITICALE - *Triticum aestivum x Secale cereale*



Triticale is a hardy hybrid of wheat and cereal rye producing a high yield of forage. Combination of grain quality, productivity, and disease resistance of wheat with the vigor and hardiness of rye. Both winter and spring types were developed, with emphasis on spring types.

WHEAT - *Triticum aestivum*



Wheat is an annual grass that is widely cultivated in temperate regions in many varieties for its commercially important grain. There are many different types of Wheat grown throughout the world, such as Soft/Hard/White/Red; however there are only two classifications of wheat, winter and spring. Each particular type of Wheat – Hard Red, Soft Red, Hard White, Soft White, and Durum have a different use in the flour milling industry and may require slightly different climatic growing conditions.

LADINO CLOVER - *Trifolium repens ssp. latum*



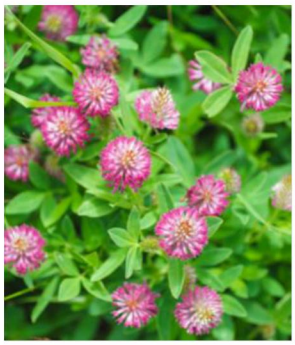
Ladino Clover is a long-lived perennial which spreads by creeping stems or stolons that root at the nodes. A giant form of white clover which is very high in protein, vitamins and minerals. It is a good producer of high-quality feed and is utilized extensively as a soil building crop. It is an excellent legume to use in combination with other legumes and grasses.

MAMMOTH RED CLOVER - *Trifolium pratense var. sativum*



Mammoth Red Clover or single-cut clover is not as desirable for hay or pasture as medium red clover. It blooms about 10 days to 2 weeks later than medium red clover and recovers very slowly after cutting. Mammoth is larger and coarser than medium and tends to be more perennial in growth habit.

MEDIUM RED CLOVER - *Trifolium pratense L.*



Red Clover is a short-lived perennial, 2-3 years, and usually produces 2-3 cuttings of hay or silage per year with most aggressive growth in the spring. Red Clover is an aggressive establisher and can be seeded alone, in mixtures with grasses, frost seeded with a nurse crop or interseeded into an existing stand. Forage quality is comparable with alfalfa quality under similar harvest schedule.

SAINFOIN - *Onobrychis viciifolia*



Sainfoin is a winter hardy, non-bloat legume whose forage is high in quality, very palatable and readily consumed. It is deep-rooted and very drought resistant.

STRAWBERRY CLOVER - *Trifolium fragiferum*



Strawberry Clover is a short-lived perennial with some creeping ability. It is tolerant of wet saline and alkaline soils. May be used for erosion control.

WHITE BLOSSOM CLOVER - *Melilotus alba*



White Clover is a short growing biennial used for grazing or haylage. It is shallow rooted and spreads by creeping branches which root at the nodes. It grows best under cool, fertile, moist conditions. It is an aggressive creeper.

WHITE DUTCH CLOVER - *Trifolium repens*



White Dutch Clover is short-lived creeping perennial. It is shallow-rooted so it makes a good choice for lawns and pasture mixes. Very cold hardy.

YELLOW BLOSSOM SWEET CLOVER - *Melilotus officinalis*



Yellow Blossom Sweet Clover is a cold-tolerant biennial that is very easy to establish. Drought and cold-tolerant, use for erosion control on saline and alkaline soils. Matures 10 to 14 days earlier than White Blossom Clover.

BRASSICAS

FORAGE TURNIPS - *Brassica rapa L.*



Turnips are short-season brassicas that provide roots, stem and leaf growth for rotational grazing or strip grazing 70 to 90 days after seeding. Turnips are one of the quickest growing fodder crops available to livestock farmers for cattle or sheep.

RAPESEED - *Brassica napus*



Rapeseed, or Canola is an annual, considered neither legume nor grass. It is a short-season leafy brassica show stems and leaves are ready for harvest 90-120 days after establishment. Rapeseed prefers rich and well-drained soils and is a heavy user of nitrogen.

SUMMER ANNUALS

SORGHUM - *Sorghum vulgare*



Widely cultivated as a grain and forage, a drought tolerant bunchgrass type. Typically used for milo grain production in the south and forage production in the north.

SUDANGRASS - *Sorghum sudanese*



Highly palatable and high-yielding summer annual forage. Adapted to many types of soils and environments, use with caution when grazing or haying because of nitrates and prussic acid.

SORGHUM-SUDANGRASS - *Sorghum bicolor x Sorghum sudanese*



HONEY SWEET / CATTLE CANDY SORGHUM-SUDANGRASS

Honey Sweet / Cattle Candy is an extra sweet and juicy three-way cross. The natural sweetness from the sorghum parent makes highly palatable and nutritious forage for grazing, green chop or hay. It is the smart choice for livestock producers in providing economical quality feed for livestock use. Excellent regrowth occurs after grazing or clipping cut at pre-boot stage for maximum tonnage and palatability.

FORAGE SORGHUM - *Sorghum bicolor*

An excellent and versatile feed option with equivalent feed values to corn. Very drought tolerant. Suitable for grazing, haying and silage. Each option requires different management.

FORAGE SORGHUM (BMR)

This hybrid has a very sweet stem with excellent green leaf retention. It has excellent foliar disease resistance and maintains a healthy canopy until harvest. Because the hybrid has an exceptional level of sugars in the stem palatability is very high. These sugars also provide additional energy and nutrition from the hybrid. Although the hybrid is designed for a one-time harvest it has good regrowth capacity that can be utilized for direct grazing after the silage crop has been removed.

GERMAN MILLET - *Setaria italica ssp. stramineofructa*



A popular hay type millet that is leafy and fine-stemmed with compact heads. It exhibits good lodging resistance. The hay is sweet and palatable when harvested at late bloom. It is later than Siberian millet with yellow seed.

HYBRID PEARL MILLET - *Pennisetum typhoides*



Hybrid Pearl Millet has little or no prussic acid with good regrowth after cutting. For best feed quality, clipping should be done in the pre-boot stage. Grazing should begin when plants are approximately 25 inches tall. Avoid grubbing to the ground to allow the best regrowth.

JAPANESE MILLET - *Echinochloa frumentaceae L.*



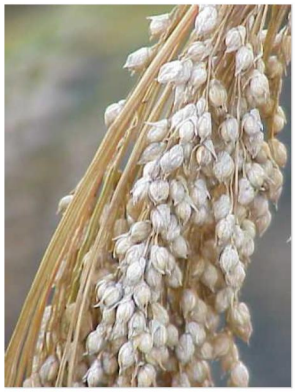
Japanese Millet grows 2 to 4 feet tall. Taller and coarser than other foxtail millets, it matures quickly and thus its forage yield is much less than that of pearl millet. Japanese Millet is also planted for wildlife feed and temporary soil stabilization on construction sites.

SIBERIAN MILLET - *Setaria italica ssp. rubrofructa*



An early maturing hay type, adapted to the northern Great Plains. Requires approximately 60 to 70 days to harvest. Early maturity is its strong point as the plant is short and not a heavy yielder. Seeds are orange in color.

WHITE PROSO MILLET - *Panicum miliaceum*



White Proso Millet is used primarily for birdseed. It grows to about 30 inches and its stems are hollow and coarse. Seed color varies among varieties, from white, cream, and red to brown or black.

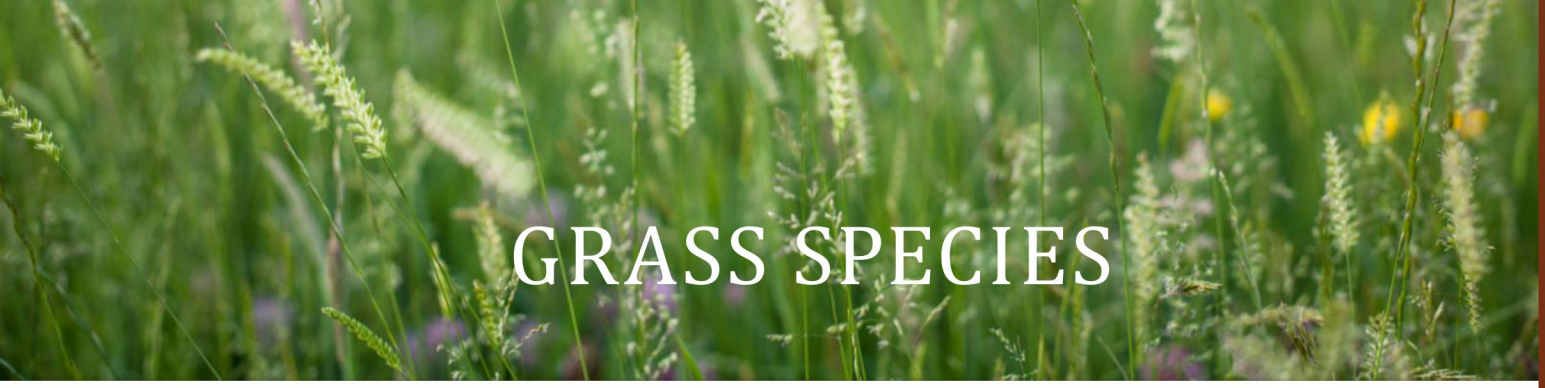
Depending on variety and growing season, Proso Millet requires 70 to 100 days to mature grain.

WHITE WONDER MILLET - *Setaria italica*



A Foxtail Millet that is used primarily as a forage crop but can be used for grain. Stems are heavy and the heads are dense and bristly. Can be over 50 inches in height and can be cut 75 to 90 days after seeding.


WILL WORK FOR FOOD!



GRASS SPECIES

NATIVE GRASS PLANTING & ESTABLISHMENT

PLANTING TIME

The best time to plant native grasses is in the early spring (mid-March to mid-May) when soil moisture is more abundant, and temperatures are cooler. Late summer/early fall (mid-August through September) can also be a good time, but supplemental water may be necessary to get good germination. Dormant seeding in late fall or early winter also works well, providing the soil is not frozen.

SITE PREPARATION

Preparing a good seedbed is very important to ensure proper seed to soil contact and provide a good growing environment. Rake, till or plow the site to loosen the top 3 to 4 inches (8 to 12 inches is ideal) of soil. Excess weeds or other undesirable vegetation should be removed or thoroughly worked into the soil. If needed, apply a high phosphorus fertilizer (18-46-0) at this time. Final seedbed should be smooth, free of large clumps and firm.

SEED APPLICATION

Drill seeding with a mechanical seeder is usually the most efficient method. If a seeder is not available, applying the seed with a broadcaster works well for large areas. Hand broadcasting can be done for small sites. Once the seed has been applied, rake or drag the site to cover the seed with 1/4 to 1/2 inch maximum of soil (this step can be omitted if drill seeded).

MULCHING

Applying a light layer (maximum 1/4 inch) of straw or other organic material on top of the seedbed greatly improves the chance of success, especially if no supplemental water is available. Mulching also helps protect the seed from blowing away or being eaten by rodents or birds.

WATERING

Lack of proper moisture during establishment is the number one cause of failure of most seeding projects in Colorado. Providing supplemental water to the site greatly improves the success rate (Mother Nature provides enough moisture during the growing season on average one out of every 3 years).

WEED CONTROL

Weeds grow and establish much faster and easier than grasses and can rob the soil of valuable moisture during the establishment period. The best method of weed control is by mowing the site before the weeds can mature and set seed. Chemical applications are generally not recommended unless you can spot spray areas of heavy weed growth.

PLEASE NOTE: *Do not mow if wildflowers have also been planted with the grasses.*

ESTABLISHMENT TIME

Under proper growing conditions you should start to see grass germination in 4 to 6 weeks with full development in 6 to 8 months. Depending on planting time, available moisture, and weed control, full establishment may take more than one growing season. The more care and effort you provide initially will greatly influence the establishment time and success.

AVSeeds carries a wide variety of native and introduced grass species. If you do not see the species that you are looking for, please call us. As always, call for current pricing and availability.

ALKALI SACATON - *Sporobolus airoides*



A tough perennial, warm season, native growing in large bunches 24" to 42" tall. It grows on dry to moist sites with sand or gravelly soil. This species is used for good forage or grazing grass in lowland and in alkali regions. Alkali Sacaton's abundant herbage is eaten by cattle, sheep, and horses. It ranges from South Dakota to Washington, south to Missouri, Kansas, Texas, and Mexico.

Varieties: Salado

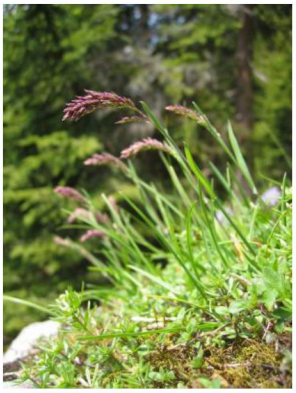
ALKALIGRASS - *Puccinellia distans*



A perennial, cool season, native bunchgrass standing 12" to 18" tall. It grows on a wide range of soils and can tolerate high amounts of salinity. This species is an excellent choice in reclamation, roadside stabilization or on saline sites requiring turf. Alkaligrass ranges from New Mexico to Canada and throughout the west.

Varieties: Fults

ALPINE BLUEGRASS - *Poa alpina*



A perennial, cold tolerant, native bunchgrass that grows 8" to 24" tall. Grows well in cooler alpine, subalpine zones and mountain meadows. Prefers open sites and well-drained soils. Utilized for erosion control, reclamation and restoration. Occurs in Colorado, Utah, Washington and Oregon.

ALPINE TIMOTHY - *Phleum alpinum*



A perennial, cold tolerant, native short grass that is traditionally a bunchgrass, but can exhibit some sod-forming capability. Grows 6" to 24" in height and is commonly found in mountain meadows, bogs and wet places. Also grows on relatively well-drained soils and grassy slopes. It is added to seed mixtures to revegetate livestock and big game ranges, to protect road, ski slopes and mined lands. Occurring in the cooler and higher regions of western United States.

ANNUAL RYEGRASS - *Lolium multiflorum*



Italian Type

A short-lived annual or biennial, depending on climate and growing season. Cool season, introduced bunchgrass. Can adapt to a wide range of soils but thrive on dark rich soils in regions having mild climates and will stand fairly wet soils with reasonably good surface drainage. It is relatively easy to establish and can be used for grazing, hay, silage, and conservation purposes. Found throughout the entire United States.

Varieties: Max - Italian (Tetraploid)

ARIZONA FESCUE - *Festuca arizonica*



A long-lived, perennial, cool season native densely tufted bunchgrass growing 12" to 36" tall. Found on shallow clay loam to loam and sandy to gravely soils. A heavy root system is an excellent soil binder. Suited for revegetating and stabilizing disturbed soils, road, ski slopes and construction in the mountains. Moderately palatable, can be used for forage and range land restoration. Native to the ponderosa pine zone from Colorado south to west Texas, Mexico and Nevada.

Varieties: Redondo

BIG BLUESTEM - *Andropogon gerardii*



A perennial, warm season, native , sod-forming grass. It is tall and tufted, reaching a height of 6 to 8 feet on most sites when left ungrazed. It has short, scaly rhizomes and seed heads that normally have 3 spikelets that appear like a 'turkey foot.' Occurring from the short grass prairie region to the Atlantic Ocean.

Varieties: Bison, Bonilla, Champ, Kaw, Pawnee

BLUE GRAMA - *Bouteloua gracilis*



A common perennial, warm season, native bunchgrass reaching 10" to 20". It reproduces by tillering and by seed. Mature seed heads are curved, resembling a human eyebrow. This grass demonstrates good drought, fair salinity, and moderate alkalinity tolerances. It does not tolerate dense shade, flooding, high water tables, or acidic soils. Blue Grama is distributed throughout the western United States, but primarily throughout the Great Plains.

Varieties: Alma, Bad River, Hachita, Lovington

BLUE WILDRYE - *Elymus glaucus*



A large perennial, cool season, native bunchgrass growing up to 5' in height. It is similar in stature and growth habit to slender wheatgrass. Blue Wildrye is good for streambank restoration, meadow and swale seeding. It is also excellent for reseeding burned or disturbed areas in oak woodland or forest. Found from California to Alaska and into the Great Plains and northern Mexico.

Varieties: Arlington, Elkton

BLUEBUNCH WHEATGRASS - *Pseudoroegneria spicata ssp. spicata*



\A long-lived perennial, cool season, native bunchgrass that grows from 18" to 48" tall with strong rhizomes. It is very drought resistant, persistent and adapted to stabilization of disturbed soils. This nutritious grass is used for hay production but is better suited and more palatable when used for grazing. Most common to the northern Great Plains and the Intermountain regions of the western United States.

Varieties: Anatone, Goldar, P-7, Secar

BOTTLEBRUSH SQUIRRELTAIL - *Elymus elymoides*



A perennial, cool-season, native bunchgrass growing between 4" to 25" tall. Sometimes called "bristlegrass" and is considered one of the most fire-resistant native bunchgrasses. It is considered fair to desirable forage for cattle, horses and sheep. Commonly found throughout the Rocky Mountain region and West.

Varieties: Sand Hollow

BUFFALOGRASS - *Buchloe dactyloides*



A perennial, low-growing warm- season, native sod-forming grass. Leaf blades are 10" to 12" long, but they fall over and give the turf a short appearance. This grass occurs naturally and grows best on clay loam to clay soils and does is not adapted to shaded sites. It has a low fertility requirement, and it often will maintain good density without supplemental fertilization. Buffalograss is found throughout the Midwest.

Varieties: Bison, Bowie (Turf-Type), Cody (Turf-Type), Sharps Improved II, Sharp Shooter (Turf-Type), Texoka, Topgun (Turf-Type)

CANADA BLUEGRASS - *Poa compressa*



A perennial, cool season, introduced grass growing to an average of 24" and spreading by underground rhizomes. Canada Bluegrass is similar to Kentucky bluegrass but is unrelated. It has some resistance to drought and salinity and is used to reclaim disturbed areas such as gravel pits, cut roads, roadsides, and mines. It is widely distributed throughout the United States but is mainly found in the northern states.

Varieties: Canon, Reubens, Talon

CANADA WILDRYE - *Elymus canadensis*



A short-lived perennial, cool season, native bunchgrass that grows to 48". It is moderately drought tolerant and winter hardy and has good tolerance to salinity and shade. Found on sandy shores and dunes, wooded areas, especially along trails, rivers and streams, and other disturbed sites. Canada Wildrye is found throughout the northeast, north, and western United States.

Varieties: Mandan

CREEPING MEADOW FOXTAIL - *Alopecurus arundinaceus*



A long-lived perennial, cool season, introduced sod-forming, grass that grows 12" to 24" tall. It is extremely winter hardy and recovers quickly from grazing due to its numerous aggressive underground rhizomes. Creeping Meadow Foxtail is palatable to all classes of livestock. Most commonly utilized throughout the Pacific Northwest, Intermountain West, Northern Great Plain States and western Canada.

Varieties: Garrison

CRESTED WHEATGRASS

CRESTED WHEATGRASS - *Agropyron cristatum*



A long-lived perennial, cool season, introduced bunch-type reaching 12" to 36" tall. Drought tolerant, and winter hardy grass with a deep- rooted system making and excellent soil binder. Crested Wheatgrass is commonly recommended for a palatable forage production. Crested Wheatgrass is well-adapted to stabilization of disturbed soils and does well on shallow to deep, moderately course to fine textured, moderately-well to well-drained soils. The grass commonly seeded in the arid sections of the western United States.

The Fairway type was first recognized in 1950 as being different than other crested types. Fairway is shorter, denser, finer stemmed, and less productive than Desert Wheatgrass at lower elevations and may exceed Desert Wheatgrass production at higher elevations. Newer varieties such as Ephraim and Roadcrest exhibit strong rhizome activity.

Fairway Type Varieties: Douglas, Ephraim, Kirk, Parkway, Roadcrest, Ruff

HYBRID WHEATGRASS
Agropyron cristatum x Agropyron desertorum

A hybrid cross between standard and Desert Wheatgrass, which results in a plant with excellent seedling stamina that establishes quickly. It is taller and has higher yielding forage potential than its parents during establishment.

Hybrid Type Varieties: CD-II, Hycrest

SIBERIAN WHEATGRASS
Agropyron fragile ssp. sibericum

A long-lived perennial, cool season, introduced bunchgrass. Similar to Desert Wheatgrass, Siberian is more drought tolerant and retains its greenness and palatability later into the summer than standard, fairway or even the hybrid cross types.

Siberian Type Varieties: P27, Vavilov

DAHURIAN WILDRYE - *Elymus dahuricus*



A short-lived perennial, cool season, introduced bunchgrass that grows 12” to 60” tall. Dahurian Wildrye has a deep root system allowing good drought tolerance, preferring well-drained fertile soils. It germinates quickly and regrows aggressively after cutting and grazing, thus providing excellent palatable forage and making it common in pasture mixes. Located in the Northeast, Midwest, and Northwestern United States.

FESTULOLIUM - *Festulolium braunii*



A short-lived perennial, cool season, introduced bunchgrass. Derived from a cross between Italian ryegrass and meadow fescue. Its ease of establishment and management, drought resistance, rapid regrowth and good disease resistance are combined with the season long productivity and high forage palatability quality.

Varieties: Duo, Spring Green

FOWL BLUEGRASS - *Poa palustris*



A perennial, cool season, native sod forming grass that grows 12” to 24” tall. Prefers fertile sandy to clayey alluvial soils and thrives in moist, cool, temperate climates and has winter hardiness. It is widely distributed in U.S. and used for lawns and landscaping, grows in meadows, stream banks and moist areas in northern U. S., south to New Mexico and California.

FOXTAIL BARLEY - *Hordeum jubatum*



A short-lived perennial, cool season, native bunchgrass without rhizomes, growing 12” to 24” tall. Foxtail Barley grows most abundant on poorly drained, wet soils, where textures vary from sandy loams to silty clay loams. It is tolerant of salts and alkali areas but can be prone to become weedy. It is highly palatable to cattle and wildlife, and moderately palatable to sheep.

GREAT BASIN WILDRYE - *Leymus cinereus*



A large, long-living perennial, cool season, native bunchgrass growing on average of 3 to 6 feet tall. Due to its extensive deep, coarse fibrous root system, Great Basin Wildrye adapts well to broad climates, stabilizes disturbed soils, and it is palatable to all classes of livestock and wildlife and native to the Great Plains and Intermountain regions of the western United States.

Varieties: Magnar, Trailhead

GREEN NEEDLEGRASS - *Nassella viridula*



A perennial, cool season, native bunchgrass growing between a height of 18” to 36”. It grows on medium to fine-textured soils. Green Needlegrass naturally occurs on bottomlands, flat benches and overflow area along streams. It is an important native of the Northern Great Plains and is found as far south as Arizona.

Varieties: Lodorm

GREEN SPRANGLETOP - *Leptochloa dubia*



A short-lived perennial, warm season, native bunchgrass growing 24" to 42" tall. Grows well on rocky sites and soils and is cold and drought tolerant. It is primarily used for erosion control and grazing as it is highly palatable and nutritious to all classes of livestock. It is adapted throughout Texas, Southern New Mexico, and Southeast Arizona and Florida.

HARD FESCUE - *Festuca brevipila*



A long-lived perennial, cool season, introduced, densely tufted bunchgrass growing 4" to 6" high. It is closely related to Chewing Fescue and a form of Sheep Fescue. It has broader, longer, coarser, more lax leaves than Sheep Fescue. It is a heavy root producer and drought tolerant. In addition, its abundant dense leaves and low crowns makes it an excellent erosion control plant. Primary use has been for soil protection on roadsides, ditch banks, airports, skid trails in the higher rainfall zones, and as a cover crop in irrigated orchards and windbreaks.

Varieties: Durar

Please see Turf Species section

IDAHO FESCUE - *Festuca idahoensis*



A perennial, cool season, native bunchgrass 12" to 36" tall. Although it will grow anywhere, it prefers silt loam or sandy loam soils. Idaho Fescue has excellent cold tolerance, moderate drought tolerance, moderate shade tolerance, and adapted to stabilization of disturbed soils. It is one of the most common and widely distributed grasses in the Western United States.

Varieties: Joseph, Winchester

INDIANGRASS - *Sorghastrum nutans*



A perennial, warm-season grass, native bunchgrass, growing 3 to 5 feet tall. It grows best in deep, well-drained floodplain soils and is highly tolerant of poorly to excessively well-drained soils, acid to alkaline conditions, and textures ranging from sand to clay. Indiangrass once dominated the prairies of the central and eastern United States, but today has adapted to the Northeast west to Texas and North Dakota.

Varieties: Cheyenne, Holt, Llano, Osage, Tomahawk

INDIAN RICEGRASS - *Achnatherum hymenoides*



A short to medium lived perennial, cool season, native bunchgrass growing 8" to 30" tall. It is very winter hardy, has a broad climatic adaptation and prefers dry and primarily loamy- sandy-gravelly sites. Indian Ricegrass is highly palatable to livestock and wildlife. One of its greatest assets is stabilizing sites susceptible to wind erosion. Indian Ricegrass is generally found in the plains, foothills, mountains, and intermountain basins of the western United States.

Varieties: Nezpar, Paloma, Rimrock

INTERMEDIATE WHEATGRASS
Thinopyrum intermedium



Synonyms: *Elytrigia intermedia ssp. intermedia*

A long-lived perennial, cool season, introduced grass growing 36" to 48" tall. It has short rhizomes and a deep feeding root system, preferring well drained loamy to clayey textured soils. Will tolerate slightly acidic to mildly saline conditions, can withstand periodic flooding in the spring, and is very tolerant of fire. It has good palatability to livestock and wildlife and adapts well to the stabilization of disturbed soils.

Varieties: Oahe

KENTUCKY BLUEGRASS - *Poa pratensis*



A perennial, cool-season, introduced, sod-forming grass growing 18" to 24" tall. It has darker green foliage, longer leaves, and pubescence at the bases of the leaves. In the west, it is very abundant and frequently used for hay and forage for sheep and cattle. In the east, it is planted as a pasture grass, but not usually used for hay.

Varieties: Troy, Ginger
Also hundreds of commercially available turf-type varieties, *please see Turf Species Section.*

LITTLE BLUESTEM - *Schizachyrium scoparium*



A slow growing perennial, warm season, native bunchgrass reaching a height from 18" in dry areas to 3 to 5 feet in deep in fertile soils. It displays coarse stems and basal leaves are greenish-blue to purplish in color, and grows on a wide variety of soils, but is very well adapted to well- drained, medium to dry, infertile high salinity soils. Resistant to trampling and fair forage it is very palatable for livestock, deer, and elk and suitable for hay. Distributed throughout the United States.

Varieties: Aldous, Blaze, Camper, Cimmaron, Pastura

MEADOW BARLEY - *Hordeum brachyantherum*



A short-lived perennial, cool season, native bunchgrass that grows 12" to 14" tall. Establishes rapidly and is a good cover crop in orchards and vineyards. Tolerates drought as well as infertile, alkaline, compacted soil. Meadow Barley is especially useful in reclamation and erosion control. Common in the western states and some of the northeastern states.

MEADOW BROME - *Bromus biebersteinii*



A long-lived perennial, cool season, introduced grass that spreads by short rhizomes. Reaching 2 to 6 feet in height when irrigated. Its primary use is for rotational forage production and is highly palatable to all classes of livestock and wildlife. Meadow Brome is very winter hardy. It performs best on fertile, moderately deep to deep, well-drained soils. Used in cool moist climates of across the northern United States.

Varieties: Fleet, Montana PVP, Paddock, Regar

MEADOW FESCUE - *Festuca pratensis*



A short-lived perennial, cool season, introduced bunchgrass that grows 6 to 12" tall. It is slow to establish but is very palatable and highly productive. Commonly found on cool and moist sites across the Pacific Northwest and northern U.S.

MOUNTAIN BROME - *Bromus marginatus*



A short-lived, perennial, cool season, native bunchgrass growing 3 to 4 feet tall. Prefers deep, fertile, mesic soils of medium to fine textures, but also survives on thin, dry or coarse soils, resulting in lower production levels. It is winter hardy and has good shade tolerance and fair tolerance to fire. Well-adapted to the Northwestern regions, the foothills and mountains of the Intermountain West and some Midwestern States.

Varieties: Bromar, Garnet

MUTTONGRASS - *Poa fendleriana*



A long-lived perennial, cool season, native bunchgrass that usually grows 12" to 24" tall. Leaves are 2" to 12" long, growing largely from the base of the plant has clusters of small silvery pink flowers. It is closely related to Cusick's Bluegrass. This is a common grass of open woodland and forested areas and commonly used for grazing. Grown on a wide range of elevation and ranges in the western part of the United States.

NEEDLE & THREAD GRASS - *Hesperostipa comata ssp. comata*



A perennial, cool season, native bunchgrass growing 12" to 36" tall. It is without rhizomes, erect to ascending growing, and its seed has a sharp attachment point with beards near the point, and is very drought tolerant. It has adapted to excessively drained, sandy or gravelly soils as well as shallow or deep sandy loam, fine sandy loam, or even clays that are shallow to deep. It is widely distributed throughout the western United States.

NEWHY HYBRID WHEATGRASS - *Elymus hoffmannii*



A long-lived perennial, cool season, introduced, sod-forming grass that grows 12" to 24" tall. Its cross between Quackgrass and Bluebunch Wheatgrass makes it both aggressive and productive. Will recover quickly after grazing. Used on both irrigated and dryland sites throughout the western United States.

ORCHARDGRASS - *Dactylis glomerata*



A persistent perennial, cool season, introduced bunchgrass, forming distinct flowering clumps 24" to 48" tall. It is one of the earliest species to grow in the spring, making tremendous growth during cool conditions. It performs well on different textured soils ranging from clay to gravely loams and on shallow to deep soils. The primary use of Orchardgrass is for forage production and is highly palatable to all livestock. Found in the high-rainfall regions of the western mountains and in irrigated areas throughout the West.
Varieties: Latar, Paiute, Potomac.
Plus numerous others.

PERENNIAL RYEGRASS - *Lolium perenne*



A perennial, cool season, introduced bunchgrass growing to a height of 18" to 36". Perennial Ryegrass is one of the most widely used grasses and is adaptable to a wide variety of soils and climatic conditions. With a leafy head and fine stem, it is considered very palatable, used for both forage and hay. A proven performer pastures in the northern area of the United States.
Varieties: Linn (Diploid), Herbie (Diploid), Elgon (Tetraploid), *plus numerous others.*
Please see Turf Species Section.

PLAINS BRISTLEGRASS - *Setaria vulpiseta*



A perennial, warm season, native bunchgrass that can grow up to 36" in height. Found on open dry ground, in dry woods, and on well-drained soils along gullies, stream courses, and other areas occasionally with abundant moisture. It provides moderate to high-quality forage for all types of grazing livestock. Plains bristlegrass makes up an appreciable part of the forage on southwestern ranges.

PLAINS LOVEGRASS - *Eragrostis intermedia*



A perennial, warm season, native bunchgrass growing 15" to 36"' tall. Poor grazing for wildlife, good grazing for livestock. Grows best on rich soils on rocky, gravelly or sandy land. Most commonly found throughout the southwest United States.

PRAIRIE JUNEGRASS - *Koeleria macrantha*



A perennial, cool season, native bunchgrass that grows 12" to 30" tall. Persists in open woodlands and ponderosa pine at higher elevations. Use for revegetating rangeland, mine sites and other disturbed sites. Commonly found across southern Canada to Texas, California, and Washington.

PRAIRIE SANDREED - *Calamovilfa longifolia*



A long-lived perennial, warm season, native, sod-forming grass growing 24" to 72" in height possessing rigid, leafy stems. Used mostly for range seedings in mixtures; prefers sandy sites and is drought tolerant and winter hardy. Prairie Sandreed is found in northern and central Great Plains and intermountain desert basins.

Varieties: Bowman, Goshen

PUBESCENT WHEATGRASS – *Thinopyrum intermedium ssp. barbulatum*



Synonyms: *Elytrigia intermedia ssp. trichophorum*

A long-lived perennial, cool season, introduced sod-forming grass 36" to 48". The grass has basal type leaves and spreads by rhizomes. Its strongest asset is its ability to stay green into the summer months when soil moisture is adequate. It has adapted to a wide range of conditions, including low-fertility and saline soils, making it drought and winter hardy. Pubescent Wheatgrass yields high-quality hay and pasture grass.

Varieties: Most common varieties are: Greenleaf, Luna, Mandan, Manska

PURPLE THREE-AWN - *Aristida purpurea*



A perennial, warm season, native bunchgrass that grows up to 16" in height. Deep-rooted when growing in well-drained soils. It has good forage potential and provides grass cover in hot deserts of the southwest. Found across the western United States.

QUICK-GUARD - *Triticum aestivum x Secale cereale*



An annual, cool season, introduced cover grass. A sterile, non-reseeding, cross between wheat and cereal ryegrass (aka Triticale). Well-adapted to a wide range of soil types. Used for reclamation and stabilization of disturbed areas. Adapted across the United States.

RED THREE-AWN - *Aristida purpurea var. longiseta*



A perennial, warm season, native bunchgrass that grows 8" to 16" tall. Deep-rooted growing in well-drained soils. A very competitive grass, it is best suited for disturbed sites and for erosion control. Found across parts of the western United States.

RED TOP - *Agrostis gigantea*



A perennial, cool season introduced sod-forming grass growing to 30" or 40" tall. A coarse but fairly dense turf that has slender stems. It will grow under a wide variety of soil and moisture conditions; it is drought-resistant and grows well on poorly drained soils. Redtop is used for erosion control, pastures, temporary grass in turf seedings and occasionally for hay. It is distributed throughout most of the United States.

Varieties: Streaker

REED CANARYGRASS - *Phalaris arundinacea*



A long-lived perennial, cool season, introduced sod-forming grass reaching a height of 6 to 8 feet. The extensive, rhizomatous root system protects it from drought, but is also suited to wet soils and dense growth of coarse erect stems, providing excellent erosion control, especially along stream banks, shorelines and waterways. It can be found throughout the west, north, and northeastern United States.

Varieties: Chiefton, Palaton

REGREEN - *Triticum aestivum x Elytrigia elongata*

An annual, cool season, introduced cover grass. A sterile, non-reseeding, cross between wheat and tall wheatgrass. Well-adapted to a wide range of soil varieties. Used for reclamation and stabilization of disturbed areas. Adapted across the United States.

ROCKY MOUNTAIN FESCUE - *Festuca saximontana*



A long-lived perennial, cool season, native bunchgrass. Cold and drought tolerant, it persists on fertile, silty and clayey soils, growing in well-drained meadows, sub-humid grassland sites. Rocky Mountain Fescue may be used on rangeland or erosion control on mine sites. Common at higher, subalpine and alpine elevations in the Rocky Mountains and the northwest of the United States.

RUSSIAN WILDRYE - *Psathyrostachys juncea*



A long-lived perennial, cool season, introduced bunchgrass reaching 2 to 4 feet in height. It can be grown on a fairly wide range of soil types but is most productive on fertile loam soils to heavy clay soils. Russian Wildrye is exceptionally cold and drought tolerant and is one of the most versatile forage grasses available for dryland pastures. Established in the Rocky Mountain region.

Varieties: Bozoisky, Swift, Vinall

SAND BLUESTEM - *Andropogon hallii*



A perennial, warm season, native bunch grassthat can reach 7 feet in height in ideal conditions. It is often used in erosion control plantings on sandy, loamy sand or sandy loam sites. Sand Bluestem is a good to excellent forage due to its palatability and high yield. Predominantly found west of the Mississippi River to the Rocky Mountains and from Canada to Mexico.
Varieties: Elida, Garden County, Goldstrike , Woodward

SAND DROPSEED - *Sporobolus cryptandrus*



A perennial, warm season, native bunchgrass growing 16" to 40" tall. It is without rhizomes and commonly grows on sandy soils but is also adapted to medium-textured soils. It does not tolerate wet soils. Sand Dropseed is an essential grass for wind erosion control on sandy soil sites.

SAND LOVEGRASS - *Eragrostis trichodes*



A perennial, warm season, native bunchgrass that grows 24" to 60" tall. Persists in deep sand and sandy loam soils. Occurs in central and southern Great Plains.
Varieties: Bend, Nebraska 27

SANDBERG BLUEGRASS - *Poa sandbergii*



A long-lived perennial, cool season, native bluegrass that reaches 24" to 48" in height. It thrives on a variety of soils from moderately coarse sands to fine clays. Sandberg Bluegrass is distributed throughout the Western United States.

SHEEP FESCUE - *Festuca ovina*



A perennial, cool season, introduced bunchgrass that grows 12" to 24" tall. Well-adapted to most soil conditions and can be used for erosion control and low-maintenance mixtures. Found across the entire United States.
Varieties: Bighorn, Covar, MX-86

SIDEOATS GRAMA - *Bouteloua curtipendula*



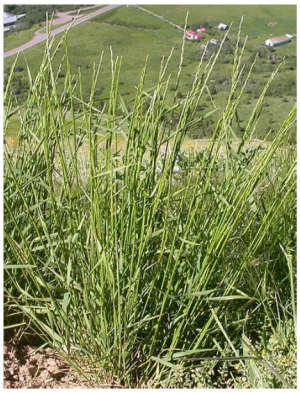
A medium-sized perennial, warm season bunchgrass or sod-forming grass that grows 15 to 30" tall or occasionally taller. Sideoats Grama is a large and course grass, found on rocky open slopes, woodlands, and forest openings up to an elevation of about 7,000 feet. It has adapted to most soil conditions and is one of the most important range grasses. Sideoats Grama is distributed throughout most of the United States.
Varieties: Butte, El Reno, Haskell, Killdeer, Niner, Pierre, Premier Trailway, Vaughn

SIX WEEKS FESCUE - *Vulpia octoflora*



An annual, cool season, native grass that grows 6" to 18" tall. The root system is coarsely fibrous and shallow. This grass spreads by reseeding itself; it occasionally forms sizable colonies. This weedy grass prefers full sun, dry conditions, and barren soil containing sand or gravel. This grass is often found in disturbed areas and degraded natural habitats across the US.

SLENDER WHEATGRASS - *Elymus trachycaulus ssp. trachycaulus*



A short-lived perennial, cool season, native tufted bunchgrass ranging in height from 24" to 30". It has very short rhizomes which prefer loams and sandy loams. It is common in the mountain and intermountain areas of the western United States and the northern Great Plains.

Varieties: Pryor, Revenue, San Luis

SMOOTH BROME - *Bromus inermis*



A perennial, cool season, introduced sod-forming grass growing 24" to 48" that spreads by rhizomes. The leaves are often marked by a transverse wrinkle resembling a "W" a short distance below the tip. It is resistant to drought and extreme temperatures. Smooth Brome is the most widely used of the cultivated brome-grasses. It is distributed throughout most of the United States.

Varieties: Carlton, Lincoln, Manchar

STREAMBANK WHEATGRASS - *Elymus lanceolatus ssp. psammophilus*



A long-lived perennial, cool season, native grass growing from 12" to 36" tall. The leaves have a light green and grey tint and are somewhat curled on the ends. It is drought tolerant and commonly used for reclamation rather than forage production. Found in the northern Great Plains and intermountain regions of the western United States.

Varieties: Sodar

SWITCHGRASS - *Panicum virgatum*



A perennial, warm season, native sod-forming grass that grows 3 to 5 feet tall. Switchgrass is very tolerant of poor soils, flooding and drought. Seedlings tend to be slow to develop and are susceptible to weed competition. Prefers moderately deep to deep, somewhat dry to poorly drained, sandy to clay loam soils. Provides high quality pasture and hay for livestock. Also used for reclamation on sand dunes and dikes. It has climatically adapted throughout most of the United States.

Varieties: Alamo, Blackwell, Cave-in-Rock, Dacotah, Forestburg, Kanlow, Nebraska 28, Grenville

TALL FESCUE - *Festuca arundinacea*



A long-lived perennial, cool season, introduced bunchgrass that grows up to 5 feet. It will grow fairly well on soils low in fertility due to its deep roots, but it is better adapted to fertile conditions. Beware of endophytes in this species especially when feeding to livestock. Adapted regions include all areas east of the Great Plains, except southern and central Florida.

Varieties: Fawn, KY-31

Plant breeders have developed tall fescue cultivars for every region of the tall fescue adaptation area. These cultivars include both forage and turf types, and low and high endophyte types. *Please see Turf Species Section*

TALL WHEATGRASS - *Thinopyrum ponticum*



A perennial, cool season, introduced bunchgrass that grows 3 to 7 feet tall. It is a tall, coarse, late-maturing grass that is especially tolerant of saline or alkaline soils and adapted to either irrigation or sub-irrigation. It prefers soils with a high water table. Used in wildlife plantings where its tall, persistent, bunchy growth provides nesting sites and cover for upland gamebirds. Occurs in the Rocky Mountain region from northern New Mexico to Canada.

Varieties: Alkar, Jose, Largo, Platte

THICKSPIKE WHEATGRASS - *Elymus lanceolatus ssp. lanceolatus*



This is a long-lived perennial, cool season, native sod-forming grass, growing from 12" to 36" tall. Its extensive rhizomatous root system combined with a few deep roots makes it more drought tolerant than Western Wheatgrass. This species is common in the northern Great Plains and intermountain region of the western United States.

Varieties: Bannock, Critana, Schwendimar

TIMOTHY - *Phleum pratense*



A relatively short-lived perennial, cool season, introduced bunchgrass grows in erect stools or culms 20" to 40" tall. It has a shallow, compact, and fibrous root system which thrives on rich, moist bottomlands and on finer textured soils, such as clay loams, but does not do well on coarser soils. Timothy is palatable and nutritious and mostly for used for hay but also makes good pasture and silage. It has adapted to cool and humid climates and is distributed across the entire United States.

Varieties: Climax, Drummond

TUFTED HAIRGRASS - *Deschampsia caespitosa*



A short-lived perennial, cool season, densely tufted, native bunchgrass, growing 24" to 48" tall. It grows in deep, moisture-saturated, poorly drained soils as well as well-developed soils. It is somewhat tolerant of salt and alkalinity. Tufted Hairgrass is considered a good forage for livestock and wildlife. It resists toxic wastes and is often used in the reclamation of mining sites. It is also recommended for the reclamation of subalpine, alpine, and mountain meadow habitats. Found in the Rocky Mountain region and west to the coast, and northeastern states.

Varieties: Nortran

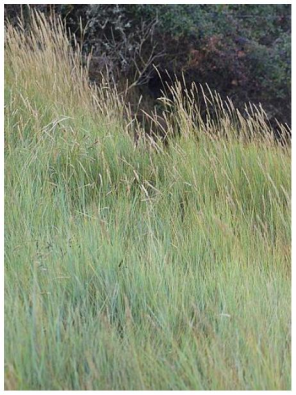
WEEPING LOVEGRASS - *Eragrostis curvula*



A rapidly growing perennial, warm-season, introduced bunchgrass, reaching heights of 2 to 4 feet. The drooping basal leaves give rise to the name "weeping" Lovegrass. Prefers a light-textured, well-drained soil, and will thrive on soils of low fertility. It produces excellent pasture during early spring and fall even if grazed close. Weeping Lovegrass is distributed throughout the southern Great Plains of the United States.

Varieties: A-67, Ermelo, Morpa

WESTERN WHEATGRASS - *Pascopyrum smithii*



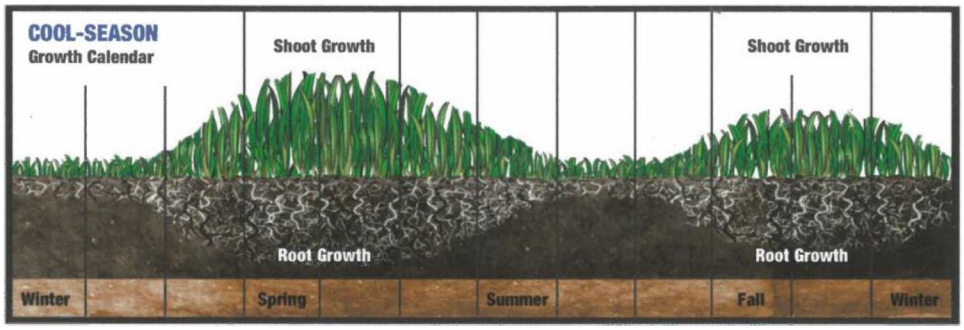
A long-lived perennial, cool season, native sod-forming grass growing in small clusters from 12" to 36" tall. It is common to moist, sometimes saline to saline-sodic, and medium-to-fine textured soils. It excels at stabilization of disturbed soils because of its extensive, strongly spreading rhizomes combined with a few deep roots. A good hay source and forage to domestic and wild animals across the Great Plains, southwest, and intermountain regions of the western United States.

Varieties: Arriba, Flintlock, Barton, Rosana, Rodan, Walsh

SPRING SEEDING - WHAT TO EXPECT

COOL VS. WARM SEASON GRASSES

Grasses are classified into two groups, cool season and warm season. These groups are determined by when the grasses grow best. Cool season grasses have a longer growing season compared to warm season grasses. Warm season grasses green-up later in the spring and go dormant earlier in the fall - usually after the first frost. Cool season grasses are much easier to establish than warm seasons. Maintenance for cool season grasses normally begins in early spring (April 1st) whereas warm season grasses are normally in mid-spring (May 15th). Ambient (air) temperature will determine when existing plants begin to actively grow and require care, as illustrated below. On the other hand, consistent soil temperatures dictate when new seedlings begin to wake-up from dormancy and germinate. The threshold for plant growth is a minimum soil temperature of 55 to 60 degrees F for cool season and 65 to 70 degrees F for warm season grasses. When seeding prior to these conditions, the seed will lay dormant and remain viable until they are met. During the growing season, optimal plant growth for established grasses occurs between 60 and 80 degrees F for cool season and 80 to 95 degrees F for warm season grasses. Dormant seeding in the late fall/winter is also an option.



Germination Threshold

55-60 degrees F in soil

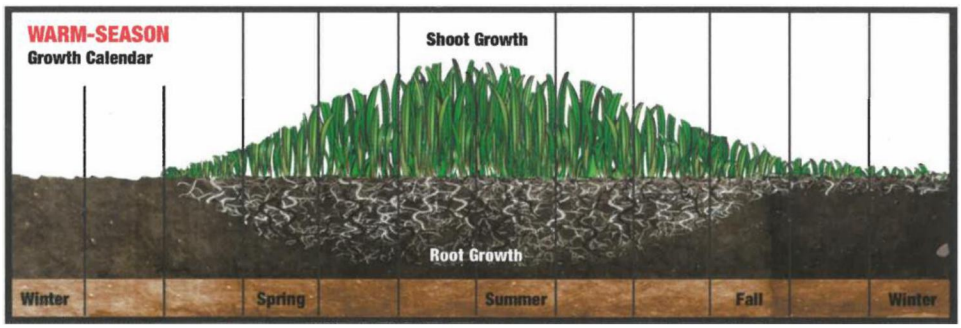
Elevation*

<6,000 ft = April 20th
6-8,000 ft = April 30th
8,000+ ft = After May 10th

Cool Season Species *(Average Germination Rate Once Soil Temperature Threshold Achieved)*

Kentucky Bluegrass *(14-21 days)*	Crested Wheatgrass *(14-21 days)*	Perennial Ryegrass *(7-10 days)*
Western Wheatgrass *(21-28 days)*	Turf-Type Tall Fescue *(10-14 days)*	Smooth Brome *(10-14 days)*

Fine Fescues including Creeping Red Fescue, Chewings Fescue, Hard Fescue and Sheep Fescue *(7-21 days)*



Germination Threshold

65-70 degrees F in soil

Elevation*

<6,000 ft = May 20th
6-8,000 ft = May 31st
8,000+ ft = After June 10th

Warm Season Species *(Average Germination Rate Once Soil Temperature Threshold Achieved)*

Buffalograss *(14-21 days)*	Little Bluestem *(21-28 days)*
Blue Grama *(21-28 days)*	Big Bluestem *(14-21 days)*

COVER CROP OPTIONS

Perennial grasses and other plant material are not always the answer when it comes to project planning or the lack of water for perennial establishment. Utilizing one of the following cover crops will stabilize topsoil and reduce erosion during that period of time. The following cover crops are recommended for use in the West; please contact us to find the right option for you.

Regreen | ***Triticum aestivum x Elytrigia elongata***
Quick Guard | ***Triticum aestivum x Secale cereale***
Winter Rye | ***Secale cereale***
Wheat | ***Triticum aestivum***
Oats | ***Avena sativa***
Barley | ***Hordeum vulgare***
Annual Ryegrass | ***Lolium multiflorum***

PREMIUM IRRIGATED PASTURE MIXTURE

This pasture mix is a formulation of high quality producing and palatable grasses to be used for grazing and or hay production. This combination is designed with cool season grasses that produce well in the Intermountain area as well as the High Plains of the Rocky Mountain region. Use this mix for intensive grazing or for the production of high-quality forage.

ECONOMY IRRIGATED PASTURE MIXTURE

This mix is formulated with production in mind. The grasses provided are high yielding and fast growing especially in the spring and fall. Yield is the major objective with this mix either by haying or grazing. Use this mix where water is limited because it includes hardy, drought tolerant grasses.

SMOOTH MEADOW IRRIGATED MIXTURE

The yield and quality of meadow brome combined with the aggressiveness and drought tolerance of smooth brome come together to form this high-yielding pasture mix. By combining these two brome grasses with Orchardgrass and Festulolium, this mix will deliver high-quality forage with excellent winter hardiness. For use in all soil types, this mix requires irrigation to realize maximum benefits of all grasses.

DRYLAND PASTURE MIXTURE

A mixture of hardy, drought tolerant grasses adapted to the Northern Plains and Intermountain regions. It provides good spring forage and fair regrowth in the fall. Widely adapted to many soil types and elevations of 3,000 to 10,000 feet. Ideal for areas not receiving regular irrigation.

MOUNTAIN MIXTURE

A mixture of grasses adapted to higher elevations. Very good for mountain pasture and meadows as well as soil stabilization for ski slopes and construction sites.

FOOTHILLS MIXTURE

A mixture developed for elevations of 3,000 to 8,000 feet to provide natural cover under dryland conditions. Contains both cool and warm season grasses adapted to the Western Great Plains and Southwest regions. Has excellent cold and drought tolerance. Good for soil stabilization on poor soils.

ROCKY MOUNTAIN NATIVE MIXTURE

This mixture was developed for the Rocky Mountain region. It consists of native grasses that include both cool and warm season species. Provides great cold and drought tolerance for the extremes of this region.

LOW GROW MIXTURE

A mixture of low growing (8-12 inches), drought tolerant grasses suitable for areas where mowing is difficult or not desirable. Our wildflower mixes are very compatible with this mix.

MULTI-COLOR HIGH ALTITUDE MIXTURE

A mixture of low-growing cool season grasses and native wildflowers. This mix is excellent for areas from 5,000 to 9,000 feet in elevation. Wildflowers will bloom in late-spring through the summer and into the fall.

Please visit our website or call us for current formulations.
Formulations and varieties are subject to change without notice.


WILL WORK FOR FOOD!



WILDFLOWER & FORB SPECIES

WILDFLOWER PLANTING & ESTABLISHMENT

PLANTING TIME

The best time to plant wildflowers is during the early spring when temperatures are cooler and the need for supplemental water is reduced. This spring planting allows the plants to fully establish before the hot, dry conditions of summer and gives you a longer period of blooming. For perennials, dormant seeding in the late fall allowing the seed to overwinter in the soil can also work well, especially if seeded with grasses.

SITE PREPARATION

Rake or till the site to loosen the top 2 inches of soil. Excess weeds or other undesirable vegetation should be removed to allow proper seed-to-soil contact. Wildflowers typically do not need soils with high fertility, but if a fertilizer is deemed necessary, use one that is low in nitrogen (5-10-10 ratio).

PLANTING METHODS

Because wildflower seed mixes contain seeds of many different sizes, blending an inert carrier like sand, potting soil, or vermiculite in a 2 to 1 ratio (sand to seed) will help to distribute the seed evenly over the site. For small areas, hand broadcasting the seed with the carrier works well. For larger areas, you may want to use a broadcast-type spreader. Once the seed has been broadcast, it must be covered by a light layer (1/8 to 1/4 inch maximum) of soil for proper germination to occur. This can be achieved by lightly raking the site for small areas or by using a drag or chain-link fence behind a tractor for large areas.

POST-PLANTING CARE

The planting must be kept moist for 4 to 6 weeks using supplemental watering if necessary. You should begin to see germination in 2 to 3 weeks and the first blooms in 6 to 10 weeks. Once established, adding supplemental water during the dry, hot time of year will help prolong the blooming period into the fall.

THE IMPORTANCE OF POLLINATOR HABITAT

With a rapidly growing global population, the demand for food has intensified, placing unprecedented pressure on agricultural systems. However, the very ecosystems that support our food production are under threat due to habitat degradation and loss. As natural habitats shrink, the delicate balance that sustains pollinator species—such as native bees, butterflies, and birds—is disrupted, leading to a decline in their populations.

Pollinators play a vital role in the reproduction of flowering plants, including many of the crops that form the foundation of our diets. Sustainable agricultural practices hinge on the health and vitality of surrounding ecosystems, emphasizing the need for robust habitats that foster diverse and resilient pollinator communities.

Looking ahead, the nexus of habitat and pollinator species holds the key to the future of crop management and food security. The preservation and restoration of habitats must become integral components of our strategies, recognizing the indispensable role of pollinators in ensuring robust crop yields.



Look for "Buzz's Sting of Approval" to find wildflower species that are pollinator habitat superstars!

AVSeeds carries a wide variety of wildflower & forb species. If you do not see the species that you are looking for please call us. As always, call for current pricing and availability.

AFRICAN DAISY - *Dimorphotheca aurantiaca*



Synonyms: Dimorphotheca sinuata, Cape Marigold

An annual with large orange, salmon or white flowers that are 2 inches wide and blooms in 53 days. Naturalized in parts of the U.S. Best in full sun, dry soils; an excellent cut flower but will close at night, drought-tolerant. Reseeds readily. Good for the colorful home garden.

ANNUAL BABY'S BREATH - *Gypsophila elegans*



A slender annual that produces graceful, open branches with clusters of l/2 inch white flower that blooms in 45 days. Naturalized in eastern North America in sandy places. Best in full to partial sun, dry soils; creates a misty effect in borders, rock gardens; prized for bouquets. Not invasive like Perennial Baby's Breath, *Gypsophila paniculata.*

ANNUAL GAILLARDIA - *Gaillardia pulchella*



Synonyms: Indian Blanket, Firewheel

An annual with leafy plants that bear large ruffled flowers, red tipped with yellow or entirely yellow. Found across most of the US except the northwest, on open, loose or sandy soil; prairies, fields and woodland openings. Good for conservation, pollinator, and garden plantings. Best in full sun, well-drained soils. Reseeds readily.

ANNUAL PHLOX - *Phlox drummondii*



Synonyms: Drummond Phlox (Mixed Colors)

An annual that produces showy clusters of flowers in lovely shades of pink, rose, red, purple and white. Found in south-central Texas; naturalized throughout the southeastern U.S. on sandy soils in disturbed areas, pastures, and hillsides. Best in full sun, dry soils; excellent for borders and rock gardens.

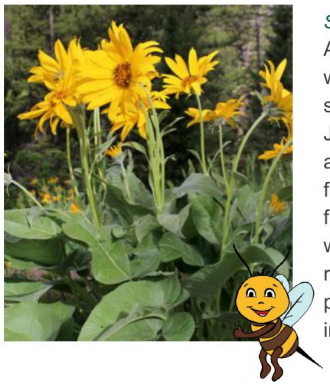
ANNUAL SUNFLOWER - *Helianthus annuus*



Synonyms: Common Sunflower, Mirasol

A robust annual that produces cheery yellow flowers, 2-4 inches across with purplish-brown centers. Has allelopathic properties. Distributed throughout U.S., southern Canada and northern Mexico; abundant in roadsides, waste places and other open sites. Best in full sun, dry soil; highly adaptable, produces seeds that attract seed-eaters.

ARROWLEAF BALSAMROOT - *Balsamorhiza sagittata*



Synonyms: Oregon Sunflower, Breadroot

A long-lived, tap rooted perennial with large, bright yellow flowers like small sunflowers; blooms May to June. Found across the western US and Canada on open hillsides and flats, valleys and foothills up to 9000 ft. elevation. Best in full sun, dry, well- drained, gravelly soils. Ideal for reclamation, pollinator, and meadow plantings. Dormant seeds best planted in late fall.

ARROYO LUPINE - *Lupinus succulentus*



Synonyms: Succulent Lupine

An annual that has succulent stems and palmately compound leaves; the bluish to purple flowers have a yellow dot on the banner. Found in western CA, northern Baja peninsula; abundant along roadsides and disturbed areas, establishes quickly in native coastal scrub areas that have burned. Best in full sun, dry soils, drought; attracts hummingbirds. Good for xeric plantings.

BABY BLUE-EYES - *Nemophila menziesii*



A short annual with delicate, trailing masses of bright blue flowers, with white centers. Found in California; moist flats and slopes below 2,500 ft. elev., foothills, grasslands, and coastal sage scrub. Best in partial sun to shade, moist soils; excellent for shady borders, containers, and pollinator gardens.

BERGAMOT - *Monarda fistulosa*



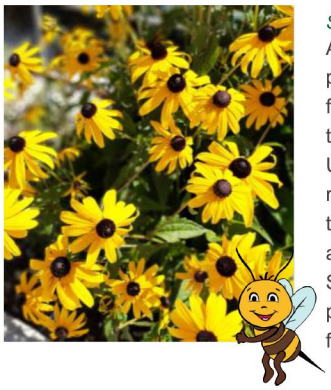
Synonyms: Bee Balm
A perennial with purple clusters of flowers in July through August. Rhizomatous, can be aggressive. Found across the US and Canada; in floodplains, shorelines and open woodlands and prairies. Best in full to partial sun; moderately dry to moist soils, tolerates sandy, clay or loam soils. Adaptable, ideal for rain gardens and bioswales, and reclamation and pollinator plantings.

BIRD'S EYES - *Gilia tricolor*



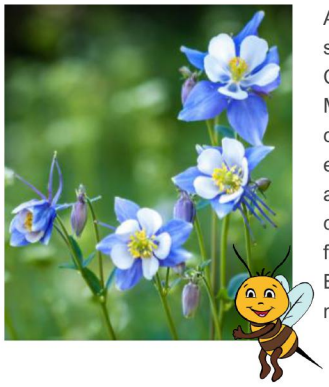
A slender annual with flowers to 1 inch across, pale violet with throats marked by paired purple spots surrounding a yellow or orange tube, fragrant. Up to 15" tall. Found in California on open grassy plains and slopes, below 2,000 ft. Best in full sun, moderate to dry soils. Lovely in fragrant and pollinator gardens.

BLACK-EYED SUSAN - *Rudbeckia hirta*



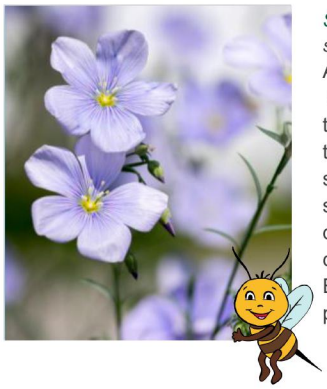
Synonyms: Hairy Coneflower
An annual, biennial or short-lived perennial leafy plant with bright yellow flowers. Blooms from late June through September. Native across the US, found in disturbed prairies, roadsides and waste places. Best in full to partial sun, various soils; quite adaptable and somewhat aggressive. Seeds attract birds. Excellent for native plantings as well as bioswales, cut flowers, and pollinator mixes.

BLUE COLUMBINE - *Aquilegia coerulea*



A perennial with unique blue and white spurred flowers. State flower of Colorado. Found in the Rocky Mountains associated with Alpine communities at 5,000-ll,000 feet elevation, but can grow in urban areas. Best in full sun to shady conditions, moist soils; provide filtered shade in sunny, hot climates. Beautiful in native and home garden mixes.

BLUE FLAX - *Linum lewisii*



Synonyms: Linum perenne, European species, Linum lewisii, native U.S. 'Appar'
A perennial, produces masses of sky-blue flowers. Blooms in mid-May through June. Found across parts of the western U.S. prairies and dry slopes and roadsides. Best in full sun, dry and well-drained soils; drought resistant; does not tolerate combination of heat and humidity. Excellent for reclamation plantings and pollinator gardens.

BLUE VERVAIN - *Verbena hastata*



Synonyms: Simpler's Joy
A clump-forming perennial with stiff, hairy stems; lance-shaped, toothed leaves to 6 inches long; small purple-blue flowers are found on thin spikes, blooming from top to bottom; blooms from July to September. Found across most of the US into Canada in wet meadows, fields and waste areas. B est in full sun, moderate to wet soils; self-sows readily. Useful in reclamation, bioswale and pollinator plantings.

BLUE-EYED GRASS - *Sisyrinchium bellum*



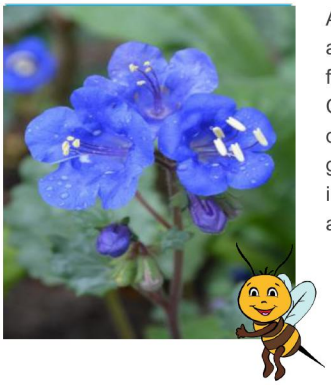
Synonyms: California Blue-Eyed Grass
A perennial and a member of the Iris family but resembling a tuft of bluish-green grass; the violet-blue clusters of flowers bloom May through June and again in September. Found in coastal California, open grassy places below 3000 feet elev. Best in full sun, dry to moderate soils; tolerates drought but prefers mesic conditions.

BUTTERFLY MILKWEED - *Asclepias tuberosa*



Synonyms: Butterflyweed, Pleurisy Root, Tuberroot
Perennial with deep, tuberous roots. Flowers are large orange clusters, from mid-June to mid-July. May be poisonous to livestock. Adapted to many parts of the U.S. Usually in dry open soils of prairies, roadsides and waste places. Best in full sun, well-drained sandy or gravelly soils; will endure drought well. Good for home gardens, meadows, and pollinator plantings.

CALIFORNIA BLUEBELL - *Phacelia campanularia*



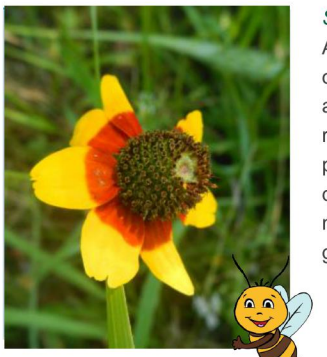
An annual, compact plant producing a profusion of dark blue, bell-shaped flowers. Found across southern California in the Colorado and Mojave deserts. Best in full sun, dry soils, grows best in sandy, well-drained, infertile soils. Excellent for pollinator and xeric gardens.

CALIFORNIA POPPY - *Eschscholzia californica*



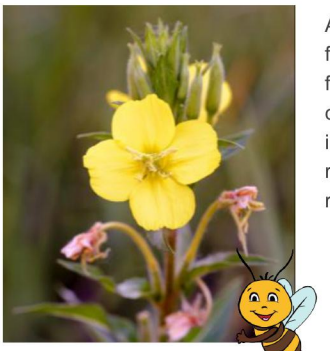
An annual to perennial with frothy blue-green leaves; flowers deep orange to pale yellow, blooms in 55 days. Found across Washington to California; common in grassy and open places up to 6,500 feet. Very adaptable to full sun, dry to moist soils, prefers well-drained poor soils. Reseeds readily in meadows, home gardens, and pollinator plantings.

CLASPING CONEFLOWER - *Rudbeckia amplexicaulis*



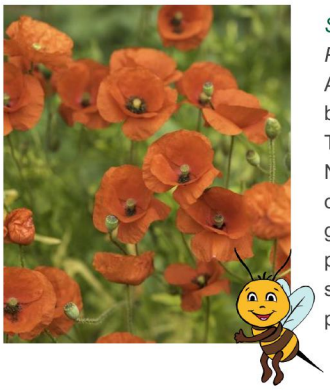
Synonyms: Dracopis amplexicaulis
An annual that produces an abundance of yellow flowers with red centers. Found across KS to TX, southeast to GA; roadsides, streambanks, fields, and prairies. Prefers full sun, various soils; drought-tolerant; use in reclamation mixes, pollinator gardens and as a good cut flower.

COMMON EVENING PRIMROSE - *Oenothera biennis*



A biennial to perennial with tall flowering stalks of large yellow flowers from summer to fall. Naturalized in cooler northern areas of the U.S. Best in full sun, moderate to dry soils; reseeds aggressively. Good for reclamation and pollinator plantings.

CORN POPPY - *Papaver rhoeas*



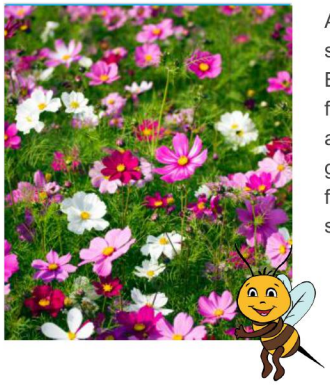
Synonyms: Flanders Poppy, Shirley Poppy
A slender annual that produces large blossoms of pink, red or white. This may be poisonous to livestock. Naturalized in the U.S. and found in open or shaded areas with sandy or gravelly soils, roadsides, waste places. Best in full to partial sun, dry soils; good for borders, pollinator plantings or rock gardens.

CORNFLOWER - *Centaurea cyanus*



Synonyms: Bachelor's Button, Bluebottle
An edible annual with blueish-green foliage; charming flowers are fringed, bright blue, blooms in 60 days. Naturalized in disturbed sites and roadsides in the U.S. Best in full to partial sun, dry soils; drought-resistant and aggressive. Good for home gardens, meadows, and pollinator plantings.

COSMOS - *Cosmos bipinnatus*



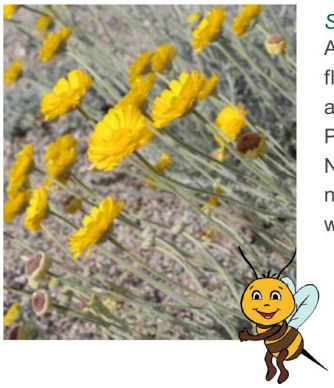
An annual with tall, airy plants with showy white, pink, or red flowers. Blooms in midsummer to fall. Best in full to partial sun, dry, sandy soils, avoid rich soils; excellent cut flower, good for backgrounds in flower beds, fairly aggressive, self-sows easily, seeds attract birds.

DESERT GLOBEMALLOW - *Sphaeralcea ambigua*



A bushy perennial, rhizomatous; pink to orange flowers appear spring and early summer, resemble miniature hollyhock flowers. Native to cold deserts of the Southwest. Requires full sun, prefers well-drained, sandy soils, very drought-tolerant; avoid overwatering as it can become aggressive. Excellent for reclamation, xeric, and pollinator mixes.

DESERT MARIGOLD - *Baileya multiradiata*



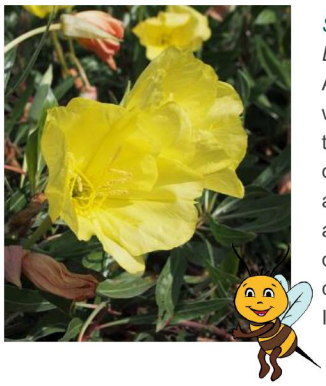
Synonyms: Wild Marigold
An annual or perennial; daisy-like flowers are single and yellow, 1-2 inches across; blooms for most of the season. Poisonous to livestock (sheep, not cows). Native across southwest US deserts. Good for native, xeric, and pollinator gardens as well as rock gardens.

DOTTED GAYFEATHER - *Liatris punctata*



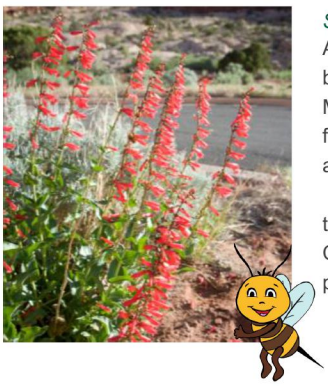
Synonyms: Dotted Blazingstar
A perennial with slender, unbranched plant with tall spike of purple flowers; blooms from July to mid-August. Native across the central US and Canada. Best in full to partial sun, moderate to dry soils; tolerates combination of heat and humidity. An excellent cut flower, also at home in xeric, pollinator, and meadow gardens.

DWARF EVENING PRIMROSE - *Oenothera missouriensis*



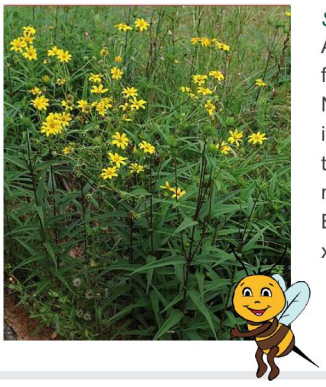
Synonyms: O. macrocarpa, Missouri Evening Primrose
A tap-rooted low-growing perennial with large yellow flowers. Long bloom time from mid-June through August, day-blooming. Native to the central and southern US in prairies, cliffs and slopes. Best in full to partial sun, dry, well-drained soil; does not tolerate combination of heat and humidity. Ideal for native and pollinator mixes.

EATON'S PENSTEMON - *Penstemon eatonii*



Synonyms: Firecracker Penstemon
A short to long-lived perennial with bright red tubular flowers from May to July. Growing upwards of 2 feet tall. It prefers well-drained soils and is cold and drought tolerant. Found on dry slopes in the southwest from Colorado to California. Ideal for hummingbird, pollinator, and xeric plantings.

ENGELMANN DAISY - *Engelmannia pinnatifida*



Synonyms: Cutleaf Daisy, E. peristenia
A cheery perennial with yellow flowers in spring and summer. Native to central and southern US. Best in full sun, dry locations; drought tolerant but supplemental watering may extend the flowering period. Beautiful in reclamation, meadows, xeric and pollinator gardens.

FIVE-SPOT - *Nemophila maculata*



A short annual with charming white and purple flowers in spring and summer. Native to California on mesic to moist slopes and flats, below 7,500 ft. elev., west of the Sierra Nevadas. Best in partial sun to shade, mesic to moist soils; excellent for shady borders, containers and pollinator gardens.

FLEABANE DAISY - *Erigeron speciosus*



Synonyms: Aspen Daisy
A perennial, 8-24 inches tall; produces masses of lavender flowers from mid-June to mid-July. Native across the western and parts of central US in open, wooded areas. Best in full to partial sun, dry to moist soils, prefers well-drained soil that is not too rich; attracts native bees and butterflies. Perfect for reclamation, cut flowers, and pollinator mixes.

FORGET-ME-NOT - *Myosotis sylvatica*



A small annual or biennial, depending on climate. Produces masses of miniature, sky blue blossoms from mid- April to June. Naturalized in the U.S. in moist, shaded places. Best in partial sun to shade, moist soils; perfect for borders, rock gardens and meadows. Attracts honey bees. Reseeds readily.

FOUR O'CLOCKS - *Mirabilis jalapa*



Synonyms: Marvel-of-Peru, Beauty-of-the-night

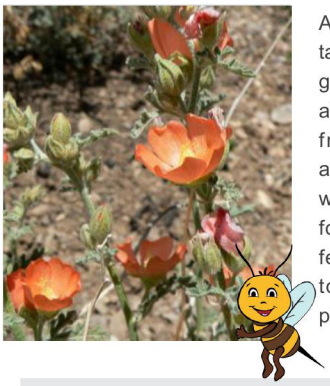
A tender perennial that produces handsome, trumpet-shaped flowers in shades of red, pink, yellow and white. Flowers open in late afternoon. Blooms late summer through autumn. Best in full sun, dry to moist soils; attracts birds and butterflies. Adaptable, reseeds readily.

FOXGLOVE - *Digitalis purpurea*



A biennial with tall stalks of purple or cream colored tubular flowers in June. Found on open woods and heaths in mountains. Best in partial sun to shade, moist soil; prefers porous but rich, moist soils; may reflower if cut back; dried leaves are the principal source of the drug Digitalis. Flowers attract hummingbirds. Plants are poisonous to animals and humans. Good for home gardens.

GOOSEBERRYLEAF GLOBEMALLOW - *Sphaeralcea grossulariifolia*



A native perennial with a strong taproot; leaves resemble those of gooseberries, produces an abundance of coral orange flowers from June to August. Distributed across the western US; found on well drained slopes, valley to foothills, elevation 3000 to 6000 feet. Best in full sun, very drought-tolerant. Excellent for native and xeric plantings.

GREY-HEADED CONEFLOWER - *Ratibida pinnata*



Synonyms: Yellow Coneflower

A perennial with flowers that have drooping yellow petals. Blooms in July and August. Native to Ontario and the midwest and southeastern US in dry to wet prairies and dry woods. Best in full to partial sun; dry to moist soils; good for reclamation, cut flower, native, and pollinator gardens.

HOARY VERVAIN - *Verbena stricta*



A native perennial with dense spikes of purple flowers from early July through mid-August. Found in southeast Canada as well as the eastern and central US in pastures, prairies and roadsides. Best in full sun, extremely drought tolerant, prefers dry sandy soils. Good for native, butterfly and pollinator mixes.

ICELAND POPPY - *Papaver nudicaule*



Synonyms: Artic Poppy

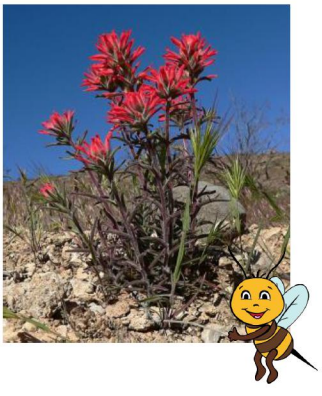
A short-lived perennial that produces large, white, orange or yellow flowers on slender stalks. Blooms in late spring and early summer. Found across arctic regions of North America, south to Colorado. Best in full sun, dry to moist soils; at home in cool climates, does not tolerate combination of heat and humidity, does not transplant well. Excellent for the home garden.

ILLINOIS BUNDLEFLOWER - *Desmanthus illinoensis*



Synonyms: Illinois Tick Clover, Prairie Mimosa, False Sensitive Plant. A warm-season perennial with frothy leaves and flowers that bloom mid-late summer. Common throughout tallgrass prairie and great plains, usually in disturbed sites, pastures, streambanks, and roadsides. Prefers full sun, dry to moist soils; commonly used for revegetation and prairie restoration as well as pollinator mixes.

INDIAN PAINTBRUSH - *Castilleja angustifolia*



Synonyms: Common Paintbrush, C. chromosa

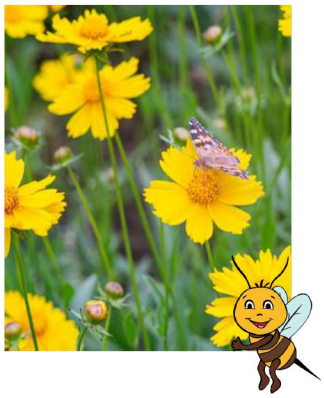
A perennial with scarlet flowers native to the central and western US. Best in full sun, dry soils; may benefit when planted with native grasses or sagebrush since it is partly parasitic.

JOHNNY JUMP-UP - *Viola cornuta*



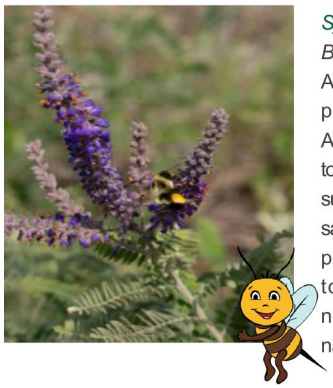
Synonyms: Horned Violet
An edible annual to perennial, produces tiny, Pansy-shaped flowers in purple and gold. Blooms all summer, strongest in spring and fall in hot climates. Best in full to partial sun, prefers moist soils; tolerates full sun best in cool summer areas, will not tolerate combination of heat and humidity; reseeds easily. Charming in containers, borders, and rock gardens.

LANCE-LEAVED COREOPSIS - *Coreopsis lanceolata*



Synonyms: Tickseed
A perennial with showy, bright yellow flowers from June through July. Native across most of the US into Canada. Best in full to partial sun, dry to moderately moist soils; fairly drought tolerant and tolerates a wide range of pH and combination of heat and humidity. A workhorse in native plantings, bioswales, as well as home and pollinator gardens.

LEADPLANT - *Amorpha canescens*



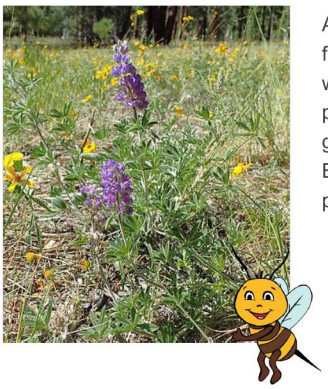
Synonyms: Prairie Shoestrings, Bastard Indigo
A shrub-like perennial with beautiful purple flower spikes in late June- July. Attracts butterflies. Native from Manitoba to central and southern US. Prefers full sun, mesic to dry soils, adapted to sandy or gravelly soil, can thrive in poor soil and is very drought tolerant, deeply tap-rooted. A nitrogen fixer. Perfect for reclamation, native and pollinator mixes.

MAXIMILLIAN SUNFLOWER - *Helianthus maximilliani*



A very tall perennial sunflower with 3-inch yellow flowers from late August through October. Rhizomatous and aggressive, dominant plant of the prairies across southern Canada and most of the US. Best in full to partial sun, dry to moist soils; important wildlife plant, deer forage on leaves and birds eat the seeds. Excellent for reclamation, native meadow and pollinator plantings.

MOUNTAIN LUPINE - *Lupinus alpestris*



A perennial native with blue flowers, from June-July. Distributed across western US in dry, rocky places, pine forests to subalpine ridges, generally 5,000-11,000 feet elevation. Best on dry, well-draining soils, full to partial sun, avoid overwatering.

NARROW-LEAF PURPLE CONEFLOWER - *Echinacea angustifolia*



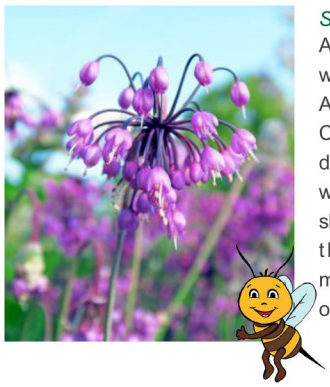
Synonyms: Black Sampson, E. pallida var. angustifolia
A perennial with narrow leaves and violet to pink flowers, with shorter petals than E. pallida or E. purpurea. Produces a long taproot. Blooms in mid-June to late July. Native from south-central Canada to central and midwest US. Best in full sun, dry well- draining soils; perfect for Shortgrass Prairie mixes, pollinator gardens and xeriscaping.

NEW ENGLAND ASTER - *Symphyotrichum novae-angliae*



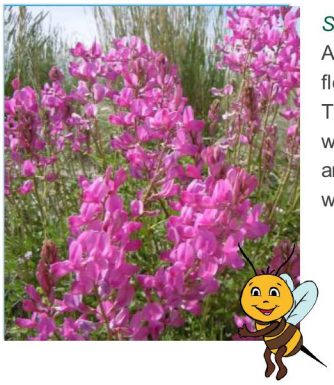
Synonyms: Aster novae-angliae
A tall perennial with thick clusters of pink to dark purple flowers from mid-August to mid-October. Found across most of southern Canada and across the US, on moist to mesic meadows, stream banks, roadsides and open woods. Best in full sun, tolerates partial shade; moist to mesic soils.

NODDING PINK ONION - *Allium cernuum*



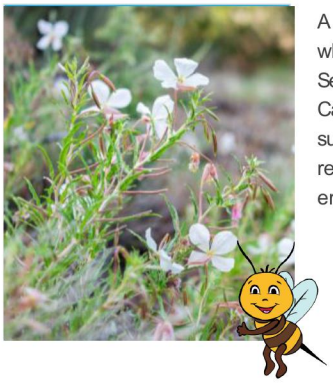
Synonyms: Wild Onion, Lady's Leek
A perennial with nodding pink to white flowers from July through August. Native across southern Canada and most of the US in dry meadows, hillsides and woodlands. Prefers full sun to light shade, well-draining soils; great for the garden or naturalized in a meadow. Very drought tolerant once established.

NORTHERN SWEETVETCH - *Hedysarum boreale*



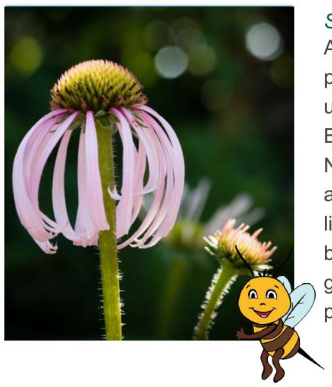
Synonyms: Utah Sweetvetch
A perennial with beautiful pink flowers that bloom July to August. The plant prefers full sun in deep well-drained, but moist sandy, loamy and clay soils. Found across most of the western half of the U.S.

PALE EVENING PRIMROSE - *Oenothera pallida*



A rhizomatous perennial with large white flowers in late June to September. Native to the western US and Canada up to 7,500 ft. elev. Best in full sun, dry soils. Excellent for reclamation, xeriscape mixes, and erosion control on slopes.

PALE PURPLE CONEFLOWER - *Echinacea pallida*



Synonyms: Rudbeckia pallida
A perennial with long reflexed lavender petals; strongly taprooted, leaves are usually narrower than *E. purpurea.* Blooms in mid-July to mid-August. Native to the midwest to parts of north and southeast US. Best in full sun to light shade, dry to moderate soils best, attracts birds and butterflies, a good cut flower. Suitable for tallgrass prairie and pollinator plantings.

PALMER PENSTEMON - *Penstemon palmeri*



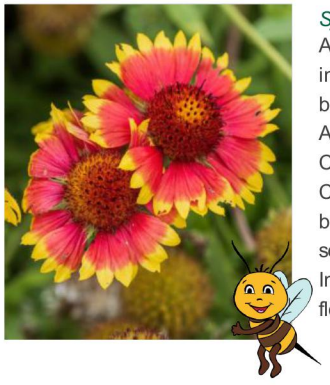
A native perennial with tall pink flower stalks blooming early June through mid-July. Found across CA, east to UT and AZ in open, rocky areas. Best in full sun, prefers sandy, gravelly soils; drought-tolerant; does not tolerate combination of heat and humidity. Ideal for reclamation, pollinator, and xeriscape mixes.

PARTRIDGE PEA - *Chamaecrista fasciculata*



A tall annual legume with bright yellow flowers growing from 1 to 4 feet tall. Blooms in August through July. Found across most of the US. Prefers full sun, well-draining sandy soils in old fields, pastures and open woodlands. Flat seeds are an important food source for many game and songbirds. Important reclamation plant.

PERENNIAL GAILLARDIA - *Gaillardia aristata*



Synonyms: Blanketflower
A perennial with vivid bicolor flowers in shades of yellow, bronze and burgundy. Blooms from June through August. Found across North Dakota to Colorado, west to Oregon and southwest Canada. Best in full sun; very adaptable but prefers light, well-drained, infertile soils; withstands heat and drought. Important component of native, cut flower, pollinator, and xeric plantings.

PERENNIAL LUPINE - *Lupinus perennis*



Synonyms: Sundial Lupine, Wild Lupine
A taprooted perennial, with flowers in spikes, mostly blue but sometimes pink or white. Blooms from mid-May through June. Native across eastern US. Best in full sun, dry to moist soils; thrives in well- drained soil, do not transplant. Poisonous to livestock. Excellent for meadow, native and pollinator gardens.

PLAINS COREOPSIS - *Coreopsis tinctoria*



Synonyms: Tickseed, Calliopsis tinctoria
A slender annual, produces masses of flowers, ranging in color from deep red and bronze to bright yellow with red centers. Native across the eastern and central US; common garden escape elsewhere. Best in full to partial sun, dry to moist, well-drained soils; attracts seed eaters. Excellent for home gardens, meadows and pollinator plantings.

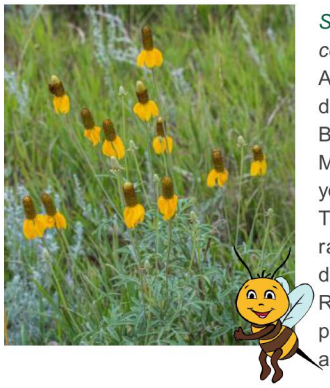
PRAIRIE ASTER - *Machaeranthera tanacetifolia*



Synonyms: Tahoka Daisy, Tansyleaf Aster, Aster tanacetifolius

A winter annual, compact plants with lavender flowers from mid-summer through fall. Found across Alberta to South Dakota, south to north-central Mexico; somewhat aggressive, colonizing disturbed sandy and silty soils, plains and hillsides. Best in full to partial sun, dry soils. Reseeds readily. Excellent for meadows, native, pollinator, and xeric mixes.

PRAIRIE CONEFLOWER - *Ratibida columnifera*



Synonyms: Mexican Hat, Rudbeckia columnifera, Ratibida columnaris

A biennial to perennial, flowers with drooping yellow or bronze petals Blooms from July through August. Mexican Hat is mostly red with a little yellow. Native from Alberta to NM, TX, and AR in dry plains, prairies and ravines. Best in full sun; dry, well-drained soils, quite drought-tolerant. Reseeds readily. Perfect for native plantings as well as cut flower, pollinator and xeric gardens.

PRICKLY POPPY - *Argemone polyanthemos*



This sticky plant can be either annual, biennial, or perennial growing upward of 3 feet. Its white flower blooms up to 5 inches across. Prefers sandy soils and found in flood plains, disturbed areas and roadsides. It can be poisonous to cattle but usually left uneaten due to its spines.

PURPLE CONEFLOWER - *Echinacea purpurea*



Synonyms: Hedgehog Coneflower

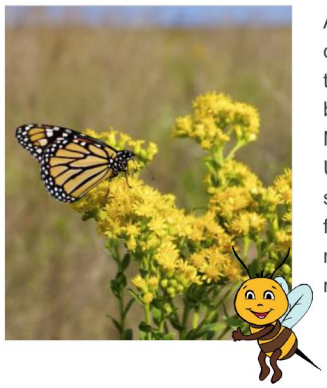
A perennial with large rose- purple flowers blooming from late June through August. Native across central and eastern US in dry, open woods and rocky prairies. Best in full sun to light shade, tolerates various soil types but does best in moderately moist but well-drained soil which is rich in humus; tolerates combination of heat and humidity. Fabulous in cut flower, pollinator, native and rain gardens. Seeds attract birds.

PURPLE PRAIRIE CLOVER - *Dalea purpurea*



A perennial taprooted legume with dark purple flower spikes blooming from July to early August. Native across the high plains and central US in rocky plains and hillsides, open wooded areas and roadsides. Best in full sun, dry to mesic well-drained soils; palatable to wildlife. Attracts beneficial insects and is ideal for native and pollinator seed mixes.

RIGID GOLDENROD - *Solidago rigida*



A perennial with dense clusters of dark gold flowers from late August through October. Does not spread by rhizomes like other goldenrods. Native across the midwest and east-central US into south-central Canada. Best in full sun, prefers moderate to dry soil; use for late season color. Wonderful for native, pollinator, reclamation, and meadow garden mixes.

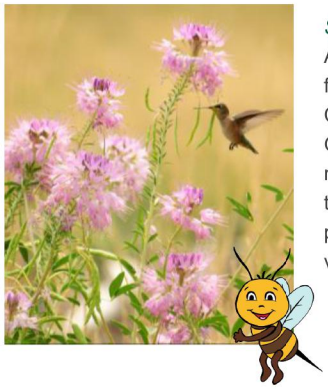
ROCKET LARKSPUR - *Consolida ajacis*



Synonyms: Consolida ambigua, Delphinium ajacis

A popular annual from the Mediterranean, flower spikes are pink, blue, purple or white in early to mid-summer. Best in full to partial sun, moist to dry soils, avoid acid soils; attracts hummingbirds. Reseeds readily. Wonderful for cut flowers, hummingbird, and pollinator plantings.

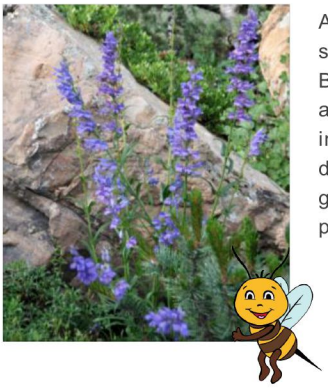
ROCKY MOUNTAIN BEEPLANT - *Cleome serrulata*



Synonyms: Spiderplant, Stinking Clover

An annual that has pink to lavender flowers. Wide ranging, native from California and eastern WA, east to the Great Plains. Best in full sun, dry to moderate soil moisture. Birds will eat the seeds. Suitable for reclamation, pollinator, and xeric gardens. Seed is very dormant- best planted in fall.

ROCKY MOUNTAIN PENSTEMON - *Penstemon strictus*



A perennial that produces spikes of showy blue or blue-violet flowers. Blooms from June through July. Native across the Rocky Mountain region. Best in full to partial sun, dry soils- very drought tolerant. Excellent for home garden as well as native, pollinator and xeric plantings.

RUSSELL LUPINE - *Lupinus polyphyllus*



A taprooted perennial with large flower spikes in red, blue or pink. Blooms late May to June. Found from California to British Columbia. Best in full sun, dry to moist soils; attracts hummingbirds. Wonderful as a cut flower and in the home garden, hummingbird mixes, and meadow gardens.

SCARLET FLAX - *Linum grandiflorum rubrum*



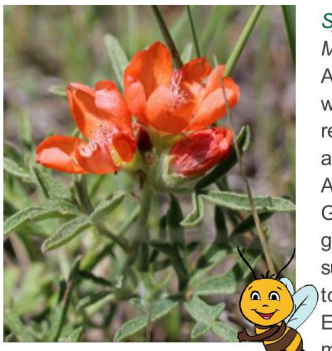
An annual that produces masses of brilliant red flowers from April to September. Best in full sun, dry to moist, well-drained soils. Blooms in 55 days. Highly adaptable- heat and drought-tolerant. Suitable for the home garden.

SCARLET GILIA - *Ipomopsis aggregata*



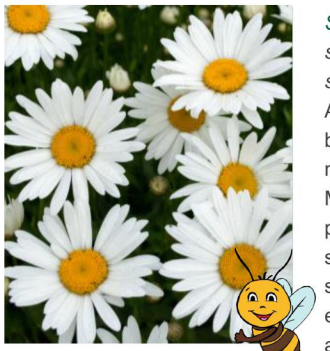
Synonyms: Gilia aggregata, Skyrocket
A biennial with pink to white tubular flowers pollinated by hawkmoths and hummingbirds. Blooms from mid-July to September. Found across British Columbia to MT, south to CA and NM, common in the mountains, foothills and dry ground on the open plains. Best in full sun, dry soils, good for xeriscaping.

SCARLET GLOBEMALLOW - *Sphaeralcea coccinea*



Synonyms: Cowboy's Delight, Prairie Mallow, Malva coccinea
A low spreading perennial with deep woody taproot; flowers are orange to red blooming May to August. Native across Manitoba south to Texas and Arizona; primarily a species of the Great Plains; semi-deserts, foothills, grasslands and prairies. Best in full sun, very drought and grazing-tolerant, tolerates heat, drought and poor soils. Excellent for reclamation, pollinator, and xeric mixes.

SHASTA DAISY - *Chrysanthemum maximum*



Synonyms: Chrysanthemum X superbum, Leucanthemum X superbum
A perennial similar to Ox-Eye Daisy, but flowers are generally larger and not as aggressive. Blooms from mid-May to early August. Best in full to partial sun, moist to moderately dry soils but does best in rich, well-drained soils; deadhead to extend bloom, an excellent cut flower, attracts butterflies and beneficial insects.

SHOWY EVENING PRIMROSE - *Oenothera speciosa*



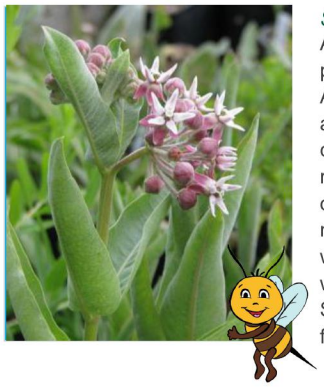
A low-growing annual to perennial, has running rhizomes; day flowering, white to pink flowers bloom March to July. Distributed Kansas to Texas; various soils in prairies, open woodlands and plains. Best in full to partial sun, dry or moist soils. Can form large patches and be quite invasive. Good for reclamation, native and pollinator plantings.

SHOWY GOLDENEYE - *Heliomeris multiflora*



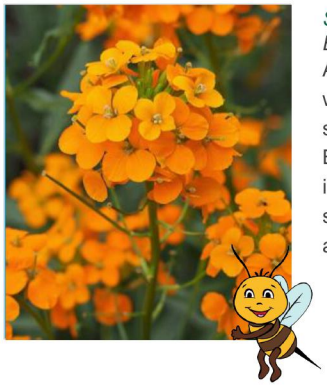
Synonyms: Viguera multiflora
A long-lived native perennial with golden-yellow flowers. Abundant in summer and fall mountain meadows, frequently brightening many acres; blooms July to September. Widely distributed in the Intermountain West. Prefers full sun to partial shade in rich to well-drained soils. Excellent for reclamation, erosion control, and pollinator mixes.

SHOWY MILKWEED - *Asclepias speciosa*



Synonyms: Asclepias giffordii
A perennial, with large clusters of pink flowers appearing from June to August. Rhizomatous, may be aggressive. Native across most of the central and western US along roadsides, fields, streamsides and other moist sites. Best in full sun, moderate to moist sites, considered a wetland species. Good for bioswales, wetland, butterfly and pollinator plantings. Seeds have high dormancy- best planted in fall.

SIBERIAN WALLFLOWER - *Cheiranthus allionii*



Synonyms: Erysimum hieraciifolium, Erysimum x marshalii
A biennial or perennial, slender plants with fragrant, bright orange flowers, similar to Stock. Native to Europe. Blooms in late April to early June. Best in full sun, moderately dry to moist soils. Use in fragrant gardens and to attract butterflies and beneficial insects.

SILVERY LUPINE - *Lupinus argenteus*



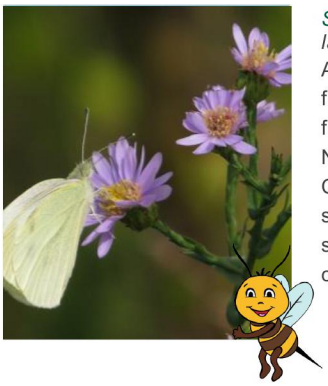
A hardy perennial with blue flowers, sometimes white or pink; blooms from March to June. Poisonous to livestock. Prominent in meadows, roadsides, wooded areas and found from 6,000-10,500 feet elevation. Best in sunny to shady areas; prefers drier soils; attracts hummingbirds. Native primarily in California and Oregon.

SMALL BURNET - *Sanguisorba minor*



Synonyms: Delar
A long-lived, evergreen, perennial forb growing 2 to 25 inches with peculiar petal-less flowers. The purple thumb-sized flower heads blooms May to July. Distributed primarily throughout the west and northeast. Prefers full to partial sun, well-drained soils and infertile to disturbed soils. Is cold and drought tolerant.

SMOOTH ASTER - *Symphyotrichum laeve*



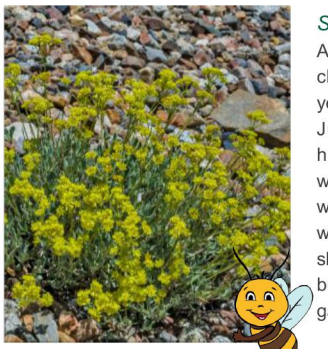
Synonyms: Smooth Blue Aster, Aster laevis
A perennial, has smooth, bluish-green foliage and pale purple flowers from mid-August to early October. Native to most of the US and southern Canada. Prefers full sun, dry to moist soils, drought tolerant. Excellent late-season pollinator plants good for conservation and meadow gardening.

SNOW-IN-SUMMER - *Cerastium biebersteinii*



A mat-forming perennial from Crimea with bluish-green leaves and white flowers. Blooms from May through June. Best in full sun, dry to mesic soils that are well-draining; fairly aggressive, spreads rapidly, good ground cover. Use for home gardens and xeriscaping.

SULFUR FLOWER BUCKWHEAT - *Eriogonum umbellatum*



Synonyms: Sulfur flower
A native, low-growing perennial with clusters of tiny flowers ranging from yellow to orange or reddish. Blooms June to August. Commonly found on hot, dry sunny areas throughout the west. Sulfur Flower Buckwheat plants withstand sun, heat, drought and wind, making them ideal plants for dry slopes. Beautiful fall color. Excellent for butterfly and bee conservation, rock gardens and xeriscaping.

SWAMP MILKWEED - *Asclepias incarnata*



Synonyms: Marsh Milkweed, Rose Milkweed, Silkweed
A clump-forming perennial with pink to mauve flowers blooming July to September. Native across most of central and eastern US in swamps, wet meadows and prairies. Best in full sun, moderate to wet soils. Perfect for bioswales, wetland, butterfly and pollinator mixes.

SWEET ALYSSUM - *Lobularia maritima*



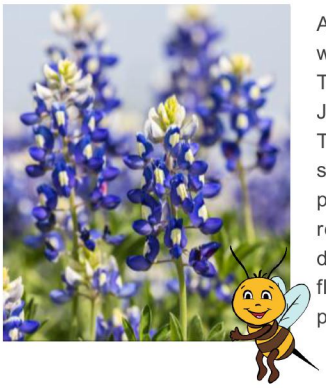
Synonyms: Alyssum maritimum
A tender spreading perennial, produces fragrant masses of white, pink or purple flowers. Blooms quickly. Highly adaptable, blooms all year round in warm climates. Best in full to partial sun, dry to moist soils. Attracts beneficial insects. Perfect for home gardens, ground covers, and containers.

SWEET WILLIAM PINKS - *Dianthus barbatus*



An annual to short-lived perennial, produces clusters of flowers in white, pink, red, violet, often bi-colored. Sweet-scented. Blooms from mid-May to mid-July. Native to Europe, widely adapted but best in full sun, dry to moist soils, prefers rich, well-draining soil. Good for fragrant gardens and cut flowers, attracts butterflies.

TEXAS BLUEBONNET - *Lupinus texensis*



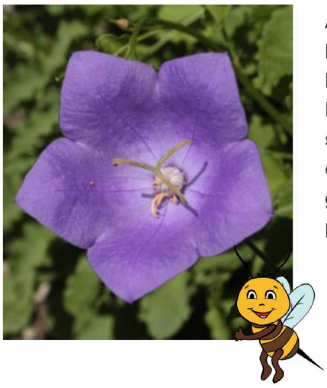
A taprooted winter annual or biennial with blue and white flower spikes in s. The state flower of Texas. Blooms late July through September. Native to Texas and parts of the deep south in dry sandy or gravelly soils, plains, hillsides and along roadsides. Best in full to partial sun, dry to moist soils, requires moisture to flower. Good for native and pollinator plantings.

THICKSPIKE GAYFEATHER - *Liatris pycnostachya*



Synonyms: Prairie Blazingstar, Prairie Gayfeather, Kansas Gayfeather
A tall, hardy perennial with spikes of purple flowers which bloom from July to mid- August. Found across IN to NY, south from MS to TX. Best in full sun, prefers moderate to moist soils but can be drought-resistant, tolerant of heat and humidity. May need staking in the garden. Excellent for cut flowers, meadows, native and pollinator gardens.

TUSSOCK BELLFLOWER - *Campanula carpatica*



A clump-forming perennial; has broad, bell-shaped flowers in white or violet blooming from late June through July. Best in sun to shade, dry to moist soils, prefers some shade in hot climates. Excellent for the rock garden, home garden borders and pollinator mixes.

WESTERN LARKSPUR - *Delphinium occidentale*



Synonyms: Tall Larkspur, Tall Mountain Larkspur, Duncecap Larkspur
A tall perennial with pale blue to purple spurred flower spikes; blooms June to August. Found across the western U.S. Best in partial sun, moist soils, considered an invasive weed in some areas; poisonous to livestock. Good for meadows and native gardens.

WESTERN WALLFLOWER - *Erysimum capitatum*



A native perennial with numerous bright yellow flowers blooming in April through July, may rebloom if cut back. Prefers sunny and dry conditions. Native across most of the US except the north and southeast. Good for native, pollinator, and xeric plantings.

WESTERN YARROW - *Achillea lanulosa*



Synonyms: Achillea millefolium var. occidentalis, A. millefolium var. lanulosa
A perennial with dense, white flower clusters; leaves are aromatic. Blooms from June through July. Native across the western US on dry, open rocky places. Prefers full sun; well-draining soils. Very drought- tolerant; will be aggressive in moister soils, spreads by rhizomes. Ideal for reclamation, xeric, and pollinator mixes.

WHITE PRAIRIE CLOVER - *Dalea candida*



A native perennial legume with small white flower spikes blooming June to August. Native across the High Plains and central US. Grows well in full sun and prefers loamy, clay, sand or gravel soils. Good for wildlife, pollinator, and native plantings.

WHITE UPLAND ASTER - *Solidago ptarmicoides*



Synonyms: Stiff White Aster, Stiff Aster, Asterptarmicoides

A clump-forming perennial; produces masses of white flowers from August to late September. Native across eastern Canada to northeastern and north-central US in dry prairies, sandy sites, gravelly hills and dunes. Best in sunny locations and dry soils. Beautiful fall foliage. Fabulous for conservation, meadows, pollinator, xeriscape, and native mixes.

WHITE YARROW - *Achillea millefolium*



Synonyms: Common Yarrow

A perennial with dense white flower clusters and aromatic leaves. Blooms from mid- June through August. Naturalized throughout the U.S., usually in fields and roadsides. Prefers full sun, dry to moist soils; very aggressive with spreading rhizomes, difficult to eradicate. Can be mowed to form a groundcover. Good for erosion control, reclamation and pollinator plantings.

WILD BLUE IRIS - *Iris missouriensis*



Synonyms: Western Blue Flag, Rocky Mountain Iris

A hardy rhizomatous perennial with blue to pale lilac flowers resembling smaller garden Iris. Blooms April-June; usually flowers the 3rd year. Native to southwest Canada across to MN down to NM to CA. Prefers full sun, moist soils. Seeds have high dormancy, best planted in fall. Great for the rock garden, pollinator and moist native plantings, spreads readily.

WILD GERANUIUM - *Geranium maculatum*



Synonyms: Cranesbill

A native perennial covered with delicate rosy-lavender to soft pink flowers. Blooms April to June. Wild Geranium is adaptable but prefers moist, humus-rich, well-drained soil and shady to sunny conditions with moisture but will go dormant in drought conditions. Occurs in rich or rocky open woods from the southeastern Canada through the Midwest to the eastern United States. Deadheading will prolong bloom time. Wonderful for shade gardens and pollinator mixes.

BLOOMERS



The Bloomers™ blends and mixtures, meticulously crafted by expert seed professionals, offer superior, pristine, and high-performing seed varieties. Our products cater to customers' exacting standards dedicated to cultivating vibrant wildflower landscapes and nurturing robust forages. With The Bloomers™, you can Seed With Confidence and witness the beauty of flourishing wildflowers

ALL ANNUAL WILDFLOWER MIX

This annual wildflower seed mix is excellent when there is an immediate need for colorful wildflowers. Grows from 10 to 30 inches and is very drought tolerant.

ALL PERENNIAL WILDFLOWER MIX

This all-perennial wildflower seed mix will provide colorful blooms year after year. Grows from 10 to 30 inches and is very drought tolerant.

LOW-GROW WILDFLOWER MIX

A specially formulated low-growing mix of colorful annual and perennial wildflowers designed to only grow to around 12 inches.

POLLINATOR WILDFLOWER MIX

A specially formulated wildflower seed mix designed to attract pollinators like birds, bees, and butterflies. A balanced wildflower seed mix of annuals and perennials with varying heights for year after year of beautiful blooms.

ROCKY MOUNTAIN WILDFLOWER MIX

Our most popular wildflower seed mix, the Rocky Mountain Wildflower Mix is a special blend of annuals and perennials that provides color throughout the season and year after year. Grows from 10 to 30 inches high and is very drought tolerant. Not recommended for planting during the heat of the summer or near natural areas.

WESTERN WILDFLOWER SEED MIX

A specially formulated mix of wildflowers adapted for the Western Region of the United States.

WILDFLOWER FOR BIRDS MIX

This beautiful mix of annual and perennial wildflowers is designed to provide seeds and nectar for wild birds and colorful habitats all season long. Also great for cutting flower gardens and pollinators besides birds.





SHRUB & TREE SPECIES

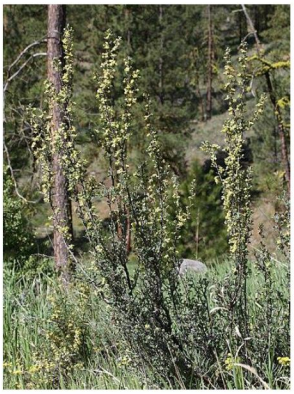
INTRODUCTION

A shrub or bush, distinguished from a tree by its multiple stems and lower height, typically stands less than 12 feet tall. Numerous plants can exhibit characteristics of both shrubs and trees, depending on their growing conditions. Trees and shrubs are commonly planted in urban or community settings for aesthetic appeal or to provide shade. However, these woody plants serve various other essential functions, and it is beneficial to consider these aspects when choosing them for landscaping.

Trees and shrubs play a crucial role in improving the environment by mitigating climate effects, enhancing air quality, conserving water, and supporting wildlife. Climate moderation occurs through the trees ability to temper the impact of sun, wind, and rain, resulting in cooler temperatures in their vicinity. The larger the tree, the more significant the cooling effect. Improved air quality is achieved as leaves act as natural filters, removing dust and other particulates from the air we breathe. Above ground, the dense stems of shrubs and trees divert surface runoff from fields and excessive floodwater. Below ground, the extensive root systems of native trees and shrubs enhance soil porosity, enabling greater absorption of surface runoff into the soil.

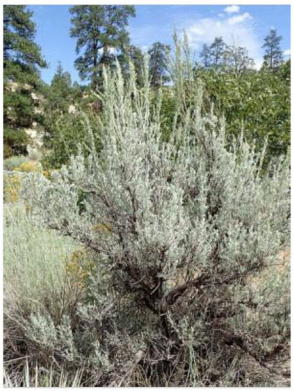
AVSeeds carries a wide variety of tree & shrub species. If you do not see the species that you are looking for please call us. As always, call for current pricing and availability.

ANTELOPE BITTERBRUSH - *Purshia tridentata*



A long-lived perennial evergreen growing to an average of 9 feet. Stems are short and spear-shaped, buds are small and scaly. It has dark green leaves and funnel-shaped flowers blooming in May and June. It is palatable to wildlife in the winter months and is recommended for disturbed sites in the intermountain west. Has long taproots that grow well in coarse textured, deep, well-drained soils. Found in the Intermountain Region west of the Rocky Mountains to California and in northern Arizona and New Mexico.

BASIN BIG SAGEBRUSH - *Artemisia tridentata ssp. tridentata*



A perennial evergreen shrub averaging 4 feet high but can grow as high as 15 feet. Tall rounded shrubs with short branched, woody trunks. Numerous yellow tubular flowers cover the shrub from July to September. Prefers moderately shallow to deep, well drained, sandy to silt loam soils, neutral to slightly alkaline, and is drought tolerant. Better for cover for livestock and wildlife than for palatability. Distributed throughout the western United States.

BIRCH-LEAF MOUNTAIN MAHOGANY - *Cercocarpus montanus*



A shrub or small deciduous tree growing to 12 feet tall. Severe drought, changes of climate, and poor soil may cause the growth to be stunted. The bark is grayish in color, and can be scaly, with twigs that are spur like and a bright reddish brown. The flower clusters bloom from March to June, followed by silky spiral seeds. It is fire resistant, sprouting new growth quickly from its roots. Most common in the California Chaparral Mountains and dry, rocky slopes from South Dakota to Mexico.

BLACK GREASEWOOD - *Sarcobatus vermiculatus*



A deciduous native shrub growing 2 to 8 feet tall. It has moderate to dense vegetation with spiny appearance and the bark is yellowish-gray to light brown with deep grooves. Flowers are green with hint of red; the males are cone-like with terminal spikes and the females are wing-like, from June to August. The hardy shrub is common in saline or alkaline, deep clay, silty clay, sandy clay or loam soils. Located in the northern parts of the Rocky Mountain region.

CHOKECHERRY - *Prunus virginiana*



A perennial, native, deciduous shrub or small tree rarely reaches a height of over 30 feet. The bark is smooth and grayish brown with many white flowers. The fruit is deep red to dark red purple. Chokecherry is nutritious throughout the growing season; however, new leaves and growth can be poisonous to livestock and humans. It spreads by rhizomes making it excellent for erosion control. Common throughout the central and northern states from the Pacific to the Atlantic oceans.

COMMON SNOWBERRY - *Symphoricarpos albus*



A perennial, deciduous, native shrub or small tree that grows between 2 to 5 feet. Has many small, white flowers blooming May to July followed by white fruits that turn black when ripe. Grows well in sun or shade and found along stream banks, in swampy thickets, moist clearings and open forests at sea level to middle elevations. It tolerates all soil types but grows best in heavy clay, well drained soils and either in sun or shade. Common among all the northern United States.

CURL-LEAF MOUNTAIN MAHOGANY - *Cercocarpus ledifolius*



An evergreen large shrub or small tree growing an average of 25 feet tall. The deeply grooved bark is reddish-brown, with leaves that are lance-shaped with rolled margins. The flowers grow in singles or clumps and bloom from May to July. Reproduces with a screw shaped seed. It is dense and strong and was used for cooking as it produces little smoke. Palatable to livestock primarily in the winter months. Adapted to a wide range of soil textures, most abundant in dry coarse-textured soils. Found on hills, rocky slopes and rocky ridges, and canyons in the western United States.

GOLDEN CURRANT - *Ribes aureum*



A deciduous shrub growing 3 to 8 feet. Leaves are a glossy green with rounded lobes turning yellow to red in the fall. The golden yellow long tubular flowers have a fragrance of cloves, blooming in April to June. Prefers fertile, moist, well drained soils on cliffs, rocky slopes, ravines, bluffs, open hillsides and sandy areas. A great food source for birds and small mammals. Easily reproduced from seeds, cuttings or with rhizomatous roots. Found throughout most of the western United States.

MOUNTAIN BIG SAGEBRUSH - *Artemisia tridentata ssp. vaseyana*



A perennial evergreen shrub averaging 2 to 5 feet. Tall rounded shrubs with short branched, woody trunks. Numerous yellow tubular flowers cover the shrub from July to September. Prefers moderately shallow to deep, well drained, sandy to silt loam soils, neutral to slightly alkaline, and is drought tolerant. Better for cover for livestock and wildlife than for palatability. Distributed throughout the western United States.

MOUNTAIN SNOWBERRY - *Symphoricarpos oreophilus*



A deciduous, perennial shrub growing 2 to 5 feet. Leaves are usually slightly hairy. The pink or white bell shaped flowers bloom in late spring. Seeds are small, light green to white in color. Occurring in woodlands and moist areas. Reproduces by its seeds, sometimes by layering and rhizomatous roots. Favors well drained, sandy loam to clay loam soils, and does not tolerate alkaline or saline soils. Good forage for wildlife and livestock, but not very palatable. Also used for landscapes and recreational planting. Found in central northern states to north Texas.

NARROWLEAF YUCCA - *Yucca glauca*



Synonyms: Spanish Bayonet, Small Soapweed

A perennial shrub growing an average of 2 to 3 feet tall. The leaves are stiff, and fibrous with inrolled edges and sharp tips that can cause harm to animals and humans. Green-white flowers grow on a spike 2 to 3 feet long, blooming in June and July. At maturity, the large capsules enclose long black seeds. Grows on dry prairie slopes and open lands. Native west of the Missouri River to the Rocky Mountains and North Dakota to Texas. *Over 40 different species.*

NEVADA MORMON TEA - *Ephedra nevadensis*



A deciduous, semi-evergreen shrub growing 2 to 5 feet. The bark is gray; twigs are pale green, becoming yellow with age with tiny scales leaves at the stem joints. The individual flowers male and female grow on separate shrubs and bloom in early spring. Prefers full sun with well-drained sandy, and loamy soils. It is drought and lime tolerant and grows well in any alkaline soil. Common on dry, rocky slopes and hills, rarely in sandy flat areas. Found throughout Nevada and into the surrounding states.

PRAIRIE SAGE - *Artemisia ludoviciana*



Synonyms: White Sage, Louisiana Sage

A white-woolly, perennial herb growing 1 to 3 feet tall. The leaves are irregularly toothed or lobed. Flowers are small tight greenish clusters blooming August through September. Adapted to wide variety of soils, dry, sandy and rocky; quickly reestablishes by creeping rhizomes that form clusters and spread. Provides forage to small and large wildlife. Found from the plains to the Pacific coast.

RED ELDERBERRY - *Sambucus racemosa*



A deciduous spreading shrub that can reach 18 feet in height. It has thin long leaves, and clusters of small creamy white flowers that bloom in the spring. The berries grow in clusters and become red when ripening in the summer. Grows quickly and does well in poor, moist soils; best in cool shaded areas, although it will tolerate mostly sunny sites. The extensive root system holds soil to prevent erosion. Palatable to small and large wildlife and livestock; however, uncooked berries are poisonous to humans. Found throughout the western United States.

RUBBER RABBITBRUSH - *Ericameria nauseosa ssp. nauseosa*



A deciduous perennial shrub growing 1 to 7 feet. The trunk has small gray brown cracks and bark that is fibrous. The yellow-green, umbrella-shaped flower blooms June to September. Grows best on medium to coarse-textured and somewhat basic soils but may range from moderately acidic to strongly alkaline and somewhat salt tolerant. Commonly grows on dry, sandy, gravelly or heavy clay. Prefers full sun and open plains, valley and mountains. Reproduces from seeds and root sprouts and quickly reestablishes. Common throughout the western United States.

SAND SAGEBRUSH - *Artemisia filifolia*



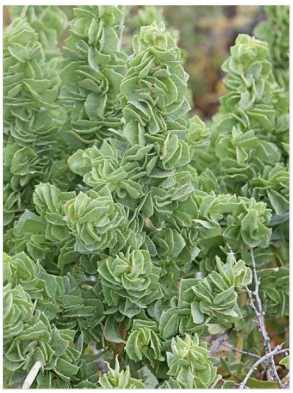
A perennial, evergreen shrub growing 2 to 6 feet. Thread like leaves are deciduous, silvery and aromatic. Flowers are yellow blooming in August through September. This sprawling shrub is used for landscaping as background brush and against wind erosion. It grows in deep sands, dunes, sometimes calcareous soils and is very drought tolerant. Found in desert regions in the southwestern United States.

SASKATOON SERVICEBERRY - *Amelanchier alnifolia*



A deciduous, native shrub growing 3 to 15 feet. It has thin light brown bark and green leaves with a few small teeth at the top. The flowers are white with short petals that bloom April to June. The fruit is sweet and waxy with smooth skin, purple-black with a slightly gray-blue sheen, used in pies, jams, syrup and wine, ripening from June to August. Reestablishes from seed or vegetative cuttings or by its extensive root system growing in clumps with horizontal and vertical rhizomes. Used for reclamation and is good forage for livestock and wildlife. Pacific coast through the Rocky Mountains and the north midwest States.

SHADSCALE SALTBRUSH - *Atriplex confertifolia*



An evergreen shrub growing up to 3 feet tall. Leaves are silvery gray-green and scruffy, crushed leaves may have a “fishy” smell. The inconspicuous green flowers bloom in the spring. Prefers alkaline soils of valleys and slopes. Native across most of the western United States and northern Mexico.

SILVER SAGEBRUSH - *Artemisia cana*



A perennial evergreen shrub growing 2 to 5 feet tall. Silvery leaves are lobed, with yellow flowers blooming in September. Grows on rocky, open sites, river valleys, uplands and floodplains, preferring moist, deep loamy or sandy soils and is moderately salt tolerant. It has deep taproot and is rhizomatous growing 3 times the height of the shrub. Palatable to livestock and wildlife and provides cover to birds and small animals. Native to Montana, Wyoming and northern Colorado into central North and South Dakota and northwestern Nebraska.

SKUNK BRUSH - *Rhus trilobata*



Synonyms: Three-Leaf Sumac
A long-lived, deciduous shrub growing on average 3 to 4 feet. Leaves are divided into 3 leaflets that turn rich red-orange in the fall and give off the odor of a skunk, thus the name. Tiny yellow flowers form a dense cluster in the spring. The tart red berries attract birds and taste like tart lemons. Prefers full sun to partial sun locations with well drained soils. It is drought and winter tolerant. Great for landscaping as a background hedge or screen and for erosion control. Range extends across the western U.S., and Canada, and south to Mexico. Occurring at elevations from 3,000 to 10,000 feet.

SMOOTH SUMAC - *Rhus glabra*



A deciduous shrub or small tree growing up to 20 feet. The stems have a whitish waxy coating with dark green and lustrous leaves that are sharply serrated at the margins. Flowers are green, maturing from the bottom up with drupes that have a flattened-globe shape and are covered with red, sticky hairs; the seeds are yellow and smooth. Beautiful fall color. Prefers moist, fertile, well drained soils, reestablishing by strong rhizomes growing 4 to 7 feet. Found in open woodlands, prairies, on dry rocky hillsides and in canyons across most of the United States.

SPINY HOPSAGE - *Grayia spinosa*



A long-lived perennial, deciduous, evergreen, shrub growing 1 to 5 feet. The leaves are spatula shaped and fleshy, with a gray-green surface. The green flowers are clustered with the male and female growing on separate plants blooming April to July. Establishes from wind or gravity-dispersed winged seed and vegetatively by sprouting after top-killing disturbances such as fire. Native to dry plains, deserts and foothills and preferring sandy soils but will grow in alkaline, limestone, gravelly and dry, heavy, clay soils. It is highly tolerant of drought and fairly tolerant of grazing and fire. Found across the western United States.

UTAH SERVICEBERRY - *Amelanchier utahensis*



A perennial, cool season shrub or small tree growing to an average of 15 feet tall. Leaves have coarse toothed edges with fine soft hairs, turning brown in the fall. The flowers have white petals that grow in small clusters covering the full plant, blooming April to June. The small berries or seeds turn red to brown and then black when ripe. The fruit is sweet, juicy and palatable. It is drought tolerant. Found in arid areas in canyons, rocky areas, and foothills preferring coarse to medium well drained soils and is not salt tolerant. Reproduction is by seed or by sprouting from the root crown. Found across the western United States.

WAX CURRANT - *Ribes cereum*



A deciduous shrub reaching to 5 feet. Leaves are small, fan shaped, dark green, fuzzy when young; 3-5 lobed with irregularly round toothed, crinkly edges. Small, white to faint pink tubular flowers hang in clusters and bloom in late spring. The fruit is bright orange-red turning to dark red when ripening in late summer. Prefers dry to moist soils in areas of dry mountain slopes, mostly rocky areas, open forest and in forest openings. Wildlife find the forage moderately palatable and small mammals consume many of the berries. Found across the western part of the United States.

WINTERFAT - *Krascheninnikovia lanata*



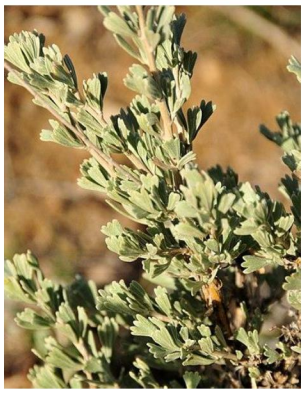
Low-growing, cool season shrub with numerous annual stems growing to 4 feet. Leaves have rolled edges and are densely hairy. Flowers are apetalous and white, wooly outside. It has an extensive fibrous root system and a deep penetrating taproot, helping stabilize soils. Growing well on a wide range of soil textures, although it prefers more basic or limy soils, tolerating moderate to highly saline soil. Easily established thus used for erosion control and disturbed sites. Both nutritious and palatable for livestock and wildlife. Native to the western United States.

WOODS ROSE - *Rosa woodsii*



A perennial shrub growing 2 to 5 feet tall. Leaves are deciduous, long and finely toothed toward the tip. Pink or lavender, 5 petal flowers occur in a cluster at the stem tip, bloom from June to August. Has a fleshy red berry when ripe. Rhizomatous-sometimes forming nearly impenetrable thickets. Adapted to a broad range of moisture conditions, it is easily established thus used for erosion control, disturbed sites and even wetland. Moderately palatable to livestock and wildlife and small mammal consume the berries. Native across the western United States.

WYOMING BIG SAGEBRUSH - *Artemisia tridentata ssp. wyomingensis*



A perennial, evergreen shrub growing 1 to 3 feet tall. Leaves are 3-toothed with dense hair on both sides. It also contains oils giving them a distinct odor when crushed. The small and yellow flowers are in composite heads of 3-5 disk. It has a long taproot and shorter fibrous roots and prefers well-drained shallow soils. Forage is fair palatability for wildlife and great cover for small mammals and birds. Found on lower slopes and plains in the Intermountain west, east of the Continental Divide.


WILL
WORK
FOR
FOOD!



WETLAND SPECIES

INTRODUCTION

Wetlands are areas where water covers the soil or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during the growing season. Most wetlands are seasonal and, particularly in the arid and semiarid west, may be wet only periodically. When water does persist for a long period of time, it creates conditions that favor the growth of specially adapted plants and promote the development of characteristic wetland soils. Wetlands comprise a small but very significant percentage of the land area of the continental United States.

There are four types of wetlands: marshes, swamps, bogs, and fens. All are valuable because they improve water quality, regulate water levels within watersheds, recharge water supplies, reduce flood risks, and provide fish and wildlife habitat. In addition, wetlands support a high diversity of plants and animals, provide recreational opportunities, aesthetic benefits, sites for research and education, and commercial fishery benefits.

AVSeeds carries a wide variety of wetland grass and grass-like species. If you do not see the species that you are looking for please call us. As always, call for current pricing and availability.

ALKALI BULRUSH - *Schoenoplectus maritimus*



A perennial herb with rhizomes that grows up to 48" tall. Found at low to mid elevations in marshes, transient wet spots, pond margins and backwater areas. Distributed from the West Coast of the U.S east to Minnesota and south to Louisiana.

AMERICA THREE SQUARE BULRUSH - *Schoenoplectus americanus*



Synonyms - Olney's Three-Square Bulrush
A perennial herb with long rhizomes that grows 8" to 40" tall. Found in marshes, pond and lake edges and other wet areas across the entire U.S.

AQUATIC SEDGE - *Carex aquatilis*



Synonyms - Water Sedge
A perennial herb that grows 8" to 32" tall. Found in large meadows in high montane or around ponds and streams at lower elevations across the northern U.S.

BALTIC RUSH - *Juncus balticus*



A cool season wire-like rush, growing up to 32" tall, with numerous rhizomes. Baltic rush is the most common of the rushes found in the Intermountain west. It occurs most abundantly at low to mid elevations. It can be found on a variety of soils, ranging from silt and clay loams to coarser sandy substrates.

BEAKED SEDGE - *Carex rostrata*



A cool season sod-forming perennial that grows 40" tall. Found along streams, around lakes and ponds, wet meadows, swamps, from sea level to the mountains. Distributed across northern parts of the U.S.

BECKMANN'S SLOUGHGRASS - *Beckmannia syzigachne*



Synonyms - American Sloughgrass
A cool season short-lived perennial that grows up to 24" tall. Found along streams, in marshes, around ponds and lakes, in wet roadside ditches. Distributed across northern parts of the U.S.

BLUEJOINT REEDGRASS - *Calamagrostis canadensis*



A sod-forming cool season perennial that grows 20" to 48" tall. Found in lowland wet sites, semi-shaded woodlands and windswept alpine ridges across the U.S except for southeast parts.

COLORADO RUSH - *Juncus confusus*



A perennial herb with fibrous roots that grows up to 20" tall. Found in wet meadows, along streams and in moist woods in the Intermountain west of the U.S.

COMMON RUSH - *Juncus effusus*



A grass-like perennial with short rhizomes that grows up to 36" tall. Found in wet ditches, the edges of streams and ponds and in tidal zones throughout a majority of the U.S.

CREEPING SPIKERUSH - *Eleocharis palustris*



A perennial, heavily rhizomatous wetland plant that grows up to 40" tall. Found in wet ditches, meadows and around lakes and ponds from the West Coast east to Michigan and south to Louisiana.

DARK GREEN BULRUSH - *Schoenoplectus atrovirens*



A perennial herb with short rhizomes that grows up to 60" tall. Found in wet meadows, bogs and along streams throughout eastern parts of the U.S.

FOWL MANNAGRASS - *Glyceria striata*



A tufted perennial herb with short rhizomes that grows up to 40" tall. Found on wet meadows, low woods, bogs, roadside ditches and swamps. Distributed across the eastern half of the U.S and parts of the west.

FOX SEDGE - *Carex vulpinoidea*



A perennial herb with thickened rootstocks that grows 8 to 36" tall. Found on wet ditches, ravines, prairie swales and the edges of marshes, springs, lakes and ponds. Distributed across the entire U.S. with the exception of the desert southwest.

GIANT MANNAGRASS - *Glyceria grandis*



Synonyms - American Mannagrass
A cool season perennial bunchgrass that grows up to 60" tall. Found in shallow water or wet meadows across the northern U.S and west.

HARDSTEM BULRUSH - *Schoenoplectus acutus*



A perennial herb with stout rhizomes that grows up to 10 ft tall. Found in deep and shallow marshes, lakes, streams and occasionally bog lakes.

INLAND SALTGRASS - *Distichlis stricta*



A warm season perennial with tough, scaly rhizomes that will grow 4 to 16" tall. Found in wetlands, swales and margins of ponds, lakes and reservoirs across the entire U.S.

MEADOW SEDGE - *Carex praegracilis*



Synonyms - Silver Sedge
A native perennial plant with short rhizomes that grows 8" to 30" tall. Found in openings of woodlands, swamps, weedy meadows and abandoned fields. Distributed across the western and northeast U.S.

NEBRASKA SEDGE - *Carex nebrascencis*



A cool season perennial with numerous rhizomes that grows 10" to 30" tall. Found on swamps, wet streambanks and wet swales throughout the Intermountain and Pacific Northwest.

NUTTALL ALKALIGRASS - *Puccinellia nuttalliana*



A tufted perennial grass with fibrous roots that grows up to 24" tall. Found on alkaline flats throughout the Intermountain and Pacific Northwest.

POPCORN SEDGE - *Carex microptera*



Synonyms - Small-Winged Sedge
A perennial herb with short rhizomes that grows up to 20" tall. Found in wet meadows, stream banks and springs throughout the western half of the U.S.

PRAIRIE CORDGRASS - *Spartina pectinata*



A perennial grass that grows up to 10 ft tall. Found in wet prairies, roadsides, marshy meadows and along stream, dams and drainages across most of the U.S with the exception of a few southern states.

SMALL-FRUITED BULRUSH - *Schoenoplectus microcarpus*



A perennial herb from slender rhizomes that grows up to 10 ft. tall. Found in deep and shallow marshes, lakes, streams, A perennial herb with long, stout rhizomes that grows up to 48" tall. Found on sloughs, streambanks, ditches and wet clearings throughout the west and northeast.

SOFTSTEM BULRUSH - *Schoenoplectus tabernaemontani*



A perennial herb from slender rhizomes that grows up to 10 ft. tall. Found in deep and shallow marshes, lakes, streams and occasionally bogs throughout the entire U.S.

TICKLEGRASS - *Agrostis scabra*



A tufted perennial that grows 16" to 24" tall. Found on wet meadows, seepage area, ditches, stream banks and shores throughout the continental U.S.

TORREY'S RUSH - *Juncus torreyi*



A perennial with rhizomes that grows 16" to 40" tall. Found in marshes, wet prairies and roadside ditches throughout a majority of the U.S.

WOOLY SEDGE - *Carex pelita*



A perennial sedge that can grow 12" to 40" tall. Found in low moist prairies, marshy areas and along shores. Distributed across the Midwest to Texas and California.

PURE LIVE SEED (PLS)

Pure Live Seed is a calculation that determines the quantity of pure viable seed, of the desired species, in each bag. A bag of seed typically includes inert materials such as dust, chaff and empty seed. Each bag may also contain a small percentage of weed and other crop seed. Excluding all other factors except germination percent and purity percent, we can determine the PLS percentage of an individual lot of seed. PLS allows the customer to purchase the right amount of clean, viable seed for the job. And since each lot varies, the PLS calculation gives a value by which to distinguish them.

Let's look at an example:

Lot 549A is 90% pure and germinates at 80% - purchase price of $5.00 per bulk lb

Lot 601B is 70% pure and germinates at 60% - purchase price of $3.50 per bulk lb

Lot 549A: .90 x .80 = .72 PLS %

Lot 601B: .70 x .60 = .42 PLS %

Now divide the purchase price of the seed by the PLS percentage to determine the Pure Live Seed price:

Lot 549A: $5.00 / .72 = $6.94 per PLS lb

Lot 601B: $3.50 / .42 = $8.33 per PLS lb

Even though the lower quality seed costs less per bulk pound, it actually ends up costing you more to equal the quality of the better lot. For this reason, the PLS price should be established prior to purchasing so that the best value can be passed on to the customer.

Once a decision is reached to purchase the seed, a calculation to determine the weight of the seed to be sold can be made. Assuming 200 PLS pounds are bought:

Lot 549A: 200 PLS lbs / .72 = 277.8 bulk lbs

Lot 601B: 200 PLS lbs / .42 = 476.2 bulk lbs

To ensure you get what you paid for and more, Arkansas Valley Seed rounds up the bulk calculation, so we provide at least the minimum PLS pounds ordered.

WHAT'S IN THE BAG?

We will custom mix to any specification and to instill confidence of what you are buying we enforce strict standards for the tagging of every bag. The following items must be attached to every bag of seed that leaves our warehouse:

Kind & Variety	Inert Percentage	Origin of Seed
Lot Number	Weed Percentage	Date of Germination Test
Purity Percentage	Total Germination	Net Weight of Bag
Crop Percentage	Hard/Dormant Seed Count	Noxious Weeds if Present

UNDERSTANDING THE HIERACHY OF SEED PRODUCTION

- Breeder – The purest quality of a variety of seed directly from the seed breeder
- Foundation – Grown from Breeder seed
- Registered – Grown from Foundation seed
- Certified – Grown from either Foundation or Registered seed - most common seed available to the public
- Source Identified Seed – Verifies the origin and ecotype of a given species
- Common - Undocumented variety but still is a reliable seed source - typically sold as VNS (Variety Not Stated)

PVP – The Plant Variety Protection Act gives developers of new varieties of plants patent-like rights that protect the reproduction and distribution of their varieties. Varieties that are protected under the Plant Variety Protection Act can only be sold with permission of the PVP holder and in some cases, only as a class of certified seed. Varieties that are protected must have labels on the seed containers indicating the type of protection.

EROSION CONTROL PRODUCTS

SINGLE NET STRAW BLANKET

- Comprised of 100% agricultural straw stitched with degradable thread to a single photodegradable polypropylene netting.
- Provides erosion protection for up to 12 months on 4:1 to 3:1 slopes and low flow channels.
- Dimensions: 8 ft by 112 ft

BIONET® SINGLE NET STRAW BLANKET

- Comprised of 100% agricultural straw stitched with biodegradable thread to a biodegradable natural fiber top netting (100% organic).
- Provides erosion protection for up to 12 months on 4:1 to 3:1 slopes and low flow channels.
- Dimensions: 8 ft by 112 ft

DOUBLE NET STRAW BLANKET

- Comprised of 100% agricultural straw stitched with degradable thread between two photodegradable polypropylene nettings.
- Provides erosion protection for up to 12 months on 3:1 to 2:1 slopes and moderate flow channels.
- Dimensions: 8 ft by 112 ft

BIONET® DOUBLE NET STRAW BLANKET

- Comprised of 100% agricultural straw stitched with biodegradable thread between two biodegradable natural fiber nets (100% organic).
- Provides erosion protection for up to 12 months on 3:1 to 2:1 slopes and moderate flow channels.
- Dimensions: 8 ft by 112 ft

DOUBLE NET STRAW-COCONUT BLANKET

- Comprised of 70% agricultural straw/30% coconut fiber matrix stitched with degradable thread between a UV stabilized top netting and a standard polypropylene bottom netting.
- Provides erosion protection for up to 24 months on slopes up to 1:1 and medium flow channels.
- Dimensions: 8 ft by 112 ft

BIONET® DOUBLE NET STRAW-COCONUT BLANKET

- Comprised of 70% agricultural straw/30% coconut fiber matrix stitched with biodegradable thread between biodegradable natural fiber nets (100% organic).
- Provides erosion protection for up to 18 months on slopes up to 1:1 and medium flow channels.
- Dimensions: 8 ft by 112 ft

UV DEGRADABLE STRAW WATTLES™

- Comprised of weed-free straw wrapped in tubular plastic netting.
- Cost effective way to prevent sediment pollution from bare lots and cut slopes.
- Replaces silt fences, straw bales, earth berms and sandbag barriers.
- Dimensions: 9 in diameter by 25 ft.

GENERAL EROSION CONTROL RECOMMENDATIONS

- Add 10% for overlap and waste when calculating blanket needs.
- Approximately 100 staples required for each blanket or 10 stakes for each straw wattle.
- Other erosion control products available, please contact us for more information.

18-46-0 STARTER FERTILIZER

A fertilizer rich with phosphorus to stimulate root growth in young plant establishment. Apply 50 lbs evenly across 10,000 square feet of soil or 200 lbs per acre after seed planting.

Fertilizing is highly recommended to maintain the health of your plant materials. Adequate spring moisture will activate the fertilizer and release the nutrients. During the spring, the ideal fertilizer will include a mixture of both quickly and slowly available Nitrogen (N) sources. Phosphorus (P) and Potassium (K) are also highly recommended nutrients to supplement to your soil. Phosphorus stimulates root growth throughout the growing season and Potassium enhances your plant's tolerance to heat and other stresses.

BIOSOL FORTE'S

Properties:
Biosol Forte's beneficial bacterial biomass and fungal biomass enhances soil health and microbial life. This unique slow-release nutrient formulation provides vital plant nutrients throughout the entire growing season due to the fermented organic material There is an increased effect on the formation of humus, root mass, and the living microbial biomass in the soils. Promoting a healthy balance of microbial life insures the long-term plant color and plant healthy. This results in far lower concentrations of nitrates or phosphorous in ground water than mineral fertilizers. Safe to be used around pets, animals, children, lakes and streams.

Composition: 96% fungal and bacterial biomass, 4% water **Nutrient Ratio:** N-P-K = 7-2-1

Guaranteed Product Analysis:	
Total Nitrogen (N)	7%
Water Soluble Nitrogen (N)	0.50%
Water Insoluble Nitrogen (N)	0.50%
Available Phosphate ($P_2 0_5$)	2%
Soluble Potash ($K_2 0$)	1%

Nutrients deried from: Fermented Cottonseed Meal and Soybean Meal	
Organic Matter:	94%
Carbon/Nitrogen Ratio	2%
pH level	7.1

Application Rates:

Revegetation of Disturbed Soils: 1000 - 2,000 lbs. Per acre depending upon soil conditions.

Lawns and playing fields: 12-15 lbs. Per 1,000 sq. feet twice per year

Garden preparation: 2 oz. Per sq. yard (1/3 cup) - 1 1/3 lbs. Per 100 sq. feet (3 3/4 cups)

HUMATE

A natural freshwater trace mineral, carbon, and humic acid based granular soil conditioner that acts as an organic chelator and microbial stimulator. It has a unique carbon matrix incorporating a high concentration of trace minerals and organic acids, specifically humic acid, which improves the plant's ability to take in vital nutrients. For plant growth and development.

Guaranteed Product Analysis:		Phosphate ($P_2 0_5$)	<0.10%	Iron (Fe)	0.30%
Humic Acids	50.00%	Calcium (Ca)	1.04%	Manganese (Mn)	0.0004%
Nitrogen (N)	1.00%	Sulfur (S)	0.18%	Copper (Cu)	0.0002%
Potassium ($K_2 0$)	<0.10%	Magnesium (Mg	0.14%	PH	3.4

Application Rate for Tees and Fairways: 10-20 lbs. / 1,000 ft² (5-10 kg / 100 m²) annually applied in 4-6 equal monthly applications.

Application Rate for Permanent Crops: 250 lbs. per acre (275 kg / ha) in early spring and fall.

MYCOAPPLY MICRONIZED ENDOMYCORRHIZAL POWDER

MycoApply® Micronized endomycorrhizal micronized powder inoculum consists of a 4 species blend of spores of arbuscular mycorrhizal fungi (endomycorrhizal fungi). The powder comes in a particle size less than 300 microns (#50 screen). About 90% of the world's plant species form mycorrhizae with these beneficial endomycorrhizal fungi. These beneficial fungi colonize plant roots, expand into the surrounding soil and greatly increase the root's ability to absorb water and nutrients, while improving plant yields and health.

Reduces:
- Drought stress
- Water inputs
- Transplant shock
- Nutrient loss

Increases:
- Yields
- Fruiting & flowering
- Survivability

Promotes:
- Rooting
- Nutrient uptake
- Self-sufficient plants

Ingredient: Endo's = Glomus intraradices, G. mosseae, G. aggregatum, G. etunicatum: 100,000 propagules/lb

Application Rates:

Agriculture: Band or mix with seed on average approximately 1lb. per acre. Rates vary by crop and seed planting density. **Restoration**: Use 10 pounds per acre for broadcast or hydromulch applications.

Nurseries: Inoculum can be mixed in planting soil before/during filling cavities, pots, and trays. Use .25 to .75 pounds per cubic yard.

Transplants: Touch damp roots to the inoculum so a small amount sticks to the roots or sprinkle into planting holes. Use 1/4 tsp. under each cutting: 1-2 tsp. for potted transplants or 1/2 ounce per inch of stem caliper plantings.

Vitality Turf	Cool/Warm Species	Seeding Rate per 1,000ft²	Germination
Blue Valley Bluegrass Blend	Cool	3-4	21-28
Low Maintenance Mixture	Cool	4-6	10-14
Native Wonder	Warm	3-4	21-28
Nature's Choice	Cool	4-5	14-21
Playground Mixture	Cool	4-5	7-21
Premium Lawn Mixture	Cool	3-4	14-21
Premium Shade Mixture	Cool	4-5	14-21
Sports Turf Mixture	Cool	4-5	14-21
Triathlon Mixture	Cool	8-10	10-14
Triple Sta Perennial Ryegrass Blend	Cool	5-6	7-10
War Tolerant Mixture	Cool	8-10	1-14

Wildflower Mixtures	Seeding Rate Bulk#/Acre	Seeding Rate per 6,000ft²	Seeding Rate per 3,000 ft²	Germination
Rocky Mountain Wildflower Mixture	6-8	1	0.5	14-21
All Perennial Wildflower Mixture	6-8	1	0.5	14-21
LowGrow Wildflower Mixture	6-8	1	0.5	14-21
All Annual Wildflower Mixture	6-8	1	0.5	14-21

Reclaimation Mixtures	Cool/Warm Species	Broadcast Seeding Rate Bulk#/Acre	Drilled Seeding Rate Bulk#/Acre	Germination
Foothills Mixture	Cool & Warm	20-25	15-20	7-21
Rocky Mountain Native Mixture	Cool & Warm	20-25	15-20	14-28
LowGrow Mixture	Cool	30-35	20-25	14-28
Multi-Color High Altitude Mixture	Cool	30-35	20-25	14-28

Pasture Mixtures	Cool/Warm Species	Broadcast Seeding Rate Bulk#/Acre	Drilled Seeding Rate Bulk#/Acre	Germination
Premium Irrigated Pasture Mixture	Cool	30-35	21-28	14-28
Economy Irrigated Pasture Mixture	Cool	30-35	14-21	14-28
Smooth Meadow Irrigated Mixture	Cool	30-35	14-21	14-28
Dryland Pasture Mixture	Cool	20-25	10-14	14-28
Mountain Mixture	Cool	30-35	14-21	14-28

Scientific Name	Common Name	Cool/ Warm	Growth Habit	Seeding Rate Per 1,000 ft²	Seeds/Lb	Germination	Recommended Mowing Height	Water Use (ET Rate)	Drought Tolorance	Nitrogen Require-ment	Salinity Tolorance
Agrostis canina	Velvet Bentgrass	Cool	Spreads by Stolons	.75 - 1.25#	8,000,000	10-14 days	.10"- 2.0"	Low	Very Good	Low	Low
Agrostis capillaris	Colonial Bentgrass	Cool	Bunch Type	1.5 - 2.5#	5,000,000	7-10 days	0.5"- 2.0"	Low	Good	Low	High
Agrostis palustris	Creeping Bentgrass	Cool	Spreads by Stolons	1 - 1.5#	6,000,000	7-10 days	.125"- 2.0"	Medium	Poor to Good	Low to Medium	High
Buchloe dactyloides	Buffalo Grass	Warm	Spreads by Stolons	2 - 3#	50,000	14-21 days	2.0"- 4.0"	Low	Excellent	low	Medium
Cynodon dactylon	Turf-Type Tall Fescue	Warn	Spreads by Rhizomes/ Stolons	1 - 5#	1,600,000-2,000,000	7-30 days	0.5"- 3.0"	Low to Medium	Excellent	Medium	High
Festuca arundinacea	Hard Fescue	Cool	Bunch Type	8 - 10#	225,000	10-14 days	2.0"- 3.5"	High	Good	Medium	High
Festuca brevipila	Sheep Fescue	Cool	Bunch Type	5 - 6#	530,000	14-21 days	1.5"- 3.5"	Low	Excellent	Low	Low to Medium
Festuca ovina	Blue Fescue	Cool	Bunch Type	5 - 6#	400,000	10-14 days	0.5"- 3.5"	Low	Excellent	Very Low	Low to Medium
Festuca ovina var. glauca	Chewing Fescue	Cool	Bunch Type	5 - 6#	400,000	10-14 days	1.5"- 3.5"	Low	Excellent	Very Low	Low to Medium
Festuca rubra var. falax	Slender Creeping Red Fescue	Cool	Bunch Type	5 - 6#	365,000	7-10 days	0.5"- 3.5"	Low	Very Good	Low to Medium	Low
Festuca rubra var. litoralis	Strong Creeping Red Fescue	Cool	Weak Rhizomes	5 - 6#	500,000	10-14 days	1.5"- 3.5"	Low	Good	Low to Medium	High
Festuca rubra var. rubra	Perennial Ryegrass	Cool	Strong Rhi-zomes	5 - 6#	365,000	10-14 days	1.5"- 3.5"	Low to Medium	Good	Low to Medium	Low
Lolium perenne	Kentucky Bluegrass	Cool	Bunch Type	6- 8#	225,000	7-10 days	0.5"- 3.5"	Medium	Very Good	Medium to High	High
Poa arachnifera x Poa pratensis	Texas Hybrid Bluegrass	Cool	Spreads by Rhizomes	3- 4#	1,200,000	14-21 days	1.0"- 3.0"	Low	Excellent	Medium	High
Poa pratensis	Kentucky Bluegrass	Cool	Spreads by Rhizomes	3- 4#	800,000-1,600,00	14-21 days	0.5"- 3.5"	Low to Medium	Excellent	Medium to High	Low to Medium
Poa supina	Supina Bluegrass	Cool	Spreads by Rhizomes	1.5 - 3#	2,000,000	14-21 days	.75"- 1.5"	Medium	Poor to Good	Medium to High	Low
Poa trivialis	Rough Bluegrass	Cool	Spreads by Rhizomes	1 - 2#	2,000,000	7-14 days	.125"- 2.0"	Very High	Poor to Good	High	Low

Scientific Name	Common Name	Grain	Hay	Grazing	Recommended Planting Date	Irrigated	Dryland	Seeds/Lb	Germination
Astragalus cicer L.	Cicer Milkvetch		X	X	Apr-May	10-12	5	130,000	14-21
Avena sativa	Oats	X	X	X	Feb-Jun	70-100	40-50	16,200	7-14
Brassica napus	Rape	X		X	Mar-May, Sep-Oct	8	5-6	156,960	4-7
Brassica rapa L.	Forage Turnips			X	July-Aug	2-5	2-3	80,000	4-7
Coronilla varia	Securigera varia		X	X	Apr-May	15-25	5-10	110,000	21-28
Echinochloa frumentaceae L.	Japanese Millet		X	X	May-June	15-25	10-15	120,000	4-10
Fagopyrum esculentum	Buckwheat	X		X	Apr-May	60-75	35-45	20,400	4-7
Hordeum vulgare	Fall Barley	X	X		Aug-Oct	80-100	60	14,000	7-14
Hordeum vulgare	Spring Barley	X	X		Feb-Mar	80-100	60	14,000	7-14
Lotus corniculatus L.	Birdsfoot Trefoil		X	X	Apr-May	15	5-10	375,000	10-14
Medicago sativa	Alfalfa		X	X	Mar-Apr, Aug	15-18	12-15	200,000	7-10
Melilotus alba	Wite Blossom Cover		X	X	Mar-May, Aug-Sep	N/R	5	260,000	4-7
Melilotus offi cinalis	Yellow Blossom Sweet Clover		X	X	Mar-May, Aug-Sep	N/R	5	260,000	4-7
Onobrychis vicilfolia	Sainfoin		X	X	Apr-May	35-45	20-25	30,000	10-14
Panicum miliaceum	White Proso Millet	X			May-Jun	20	5-10	80,000	4-7
Pennisetum typhoides	Hybrid Pearl Millet		X	X	May-Jun	15-25	10-15	80,000	4-7
Pisum sativum L.	Field Peas		X	X	Mar-May	100-120	60	3,000+	3-8
Secale cereale	Cereal (Winter) Rye	X			Mar-May, Sep-Oct	80-100	60	18,200	7-10
Setaria italica	White Wonder Millet		X	X	May-Jun	20	5-10	80-100,000	4-7
Setaria italica ssp. rubrofructa	Siberian Millet		X	X	May-Jun	20	5-10	80-100,000	4-10
Setaria italica ssp. stramineofructa	German Millet		X	X	May-Jun	20	5-10	80-100,000	4-10
Sorghum bicolor	Forage Sorghum		Silage		May-Jun	10-20	5-15	16,000	4-10
Sorghum bicolor x Sorghum sudanese	Sorghum-Sudangrass		X	X	May-Jun	15-25	5-12	20-22,000	4-10
Trifolium fragiferum	Strawberry Clover		X	X	Mar-May, Aug-Sep	10-15	N/R	290,000	4-7
Trifolium hybridium	Alsike Clover		X	X	Mar-May, Aug-Sep	4-5	N/R	680,000	7-10
Trifolium pratense L.	Medium Red Clover		X	X	Mar-May, Aug-Sep	10-15	N/R	260,000	4-7
Trifolium pratense var. sativum	Mammoth Red Clover		X	X	Mar-May, Aug-Sep	10-15	N/R	260,000	4-7

Scientific Name	Common Name	Grain	Hay	Grazing	Recommended Planting Date	Irrigated	Dryland	Seeds/Lb	Germination
Trifolium repens	White Dutch Clover		X	X	Mar-May, Aug-Sep	4-5	N/R	700,000	4-7
Trifolium repens ssp. latum	Ladino Clover		X	X	Mar-May, Aug-Sep	4-5	N/R	780,000	7-10
Triticum aestivum	Hard Red Winter Wheat	X			Aug-Oct	80-120	60	18-20,000	7-14
Triticum aestivum	Hard Red or Soft White Spring Wheat	X			Feb-Mar	80-120	60	18-20,000	7-14
Triticum aestivum x Secale cereale	Fall Triticale		X	X	Aug-Sep	100	50-60	18,000	7-14
Triticum aestivum x Secale cereale	Spring Triticale		X	X	Mar	100	50-60	18,000	7-14
Vicia sativa	Common Vetch		X	X	Apr-May	40-50	20	18,000	10-14
Vicia villosa	Hairy Vetch		X	X	Apr-May	20	10	20,000	10-14

Scientific Name	Common Name	Varieties	Height (in)	Native/ Introduced	Cool/ Warm	Growth Habit	Seeding Rate PLS#/ Acre	Seeds/Lb	Germination
Achnatherum hymenoides	Indian Ricegrass	Nezpar, Paloma, Rimrock	8-30	Native	Cool	Bunch	4-6	161,920	40-60
Achnatherum lettermanii	Letterman Needlegrass		6-24	Native	Cool	Bunch	8-12	150,000	21-28
Achnatherum nelsonii ssp. dorei	Columbia Needlegrass		6-24	Native	Cool	Bunch	6-8	150,000	7-28
Achnatherum speciosum	Dester Needlegrass		18-24	Native	Cool	Bunch	5	150,000	7-28
Agropyron cristatum	Crested Wheatgrass	Ephraim, Roadcrest, Douglas, Ruff, Parkway, Kirk	12-36	Introduced	Cool	Bunch	5-10	311,200	14-21
Agropyron cristatum x Agropyron desertorum	Hybrid Wheatgrass	CD-II, Hycrest	24-48	Introduced	Cool	Bunch	5-10	311,200	14-21
Agropyron desertorum	Dester Wheatgrass	Nordan, Summit	12-36	Introduced	Cool	Bunch	5-10	311,200	5-14
Agropyron fragile ssp. sibericum	Siberian Wheatgrass	P27, Vavilov	12-36	Introduced	Cool	Bunch	6-11	206,000	14-21
Agrostis gigantea	Red Top	Streaker	30-40	Introduced	Cool	Sod	.5-1		7-10
Alopecurus arundinaceus	Creeping Meadow Foxtail	Garrison	12-24	Introduced	Cool	Sod	3-5	786,064	10-14
Andropogon gerardii	Big Bluestem	Bison, Bonilla, Champ, Kaw, Pawnee	72-96	Native	Warm	Bunch/Sod	5-8	144,240	14-21
Andropogon hallii	Sand Bluestem	Woodward, Garden County, Elida, Goldstrike	12-84	Native	Warm	Sod	6-8	96,640	21-28
Aristida purpurea	Purple Three-Awn		16-24	Native	Warm	Bunch	6	250,000	7-21
Aristida purpurea var. longiseta	Red Three-Awn		8-16	Native	Warm	Bunch	4-7	300,000	7-21
Bothriochloa barbinodis	Cane Beardgrass		24-48	Native	Warm	Bunch	2-4	754,000	21-28
Bothriochloa ischaemum	Old World Bluestem	Ganada, Plains, King Ranch, WW Spar	12-60		Warm	Bunch	2	479,000	7-21
Bouteloua aristidoides	Needle Grama		6-12	Native	Warm	Bunch	5	414,000	7-21
Bouteloua curtipendula	Sideoats Grama	El Reno, Vaughn, Butte, Pierre, Trailway, Niner, Haskell, Killdear, Premier	15-30	Native	Warm	Bunch/Sod	4-6	159,200	14-21
Bouteloua eriopoda	Black Grama		12-24	Native	Warm	Sod	1-2		7-14
Bouteloua gracilis	Blue Grama	Alma, Bad River, Hachita, Lovington	10-20	Native	Warm	Bunch/Sod	3-5	724,400	7-10
Bouteloua rothrockii	Rothrock's Grama		6-12	Native	Warm	Bunch	1-2		7-28
Bromus anomalus	Nodding Brome		6-12	Native	Cool	Bunch	5-10	142,800	7-14
Bromus biebersteinii	Meadow Brome	Paddock, Regar, Fleet, Montana	24-72	Introduced	Cool	Bunch	8-12	86,875	10-14
Bromus inermis	Smooth Brome	Lincoln, Manchar, Carlton	24-48	Introduced	Cool	Sod	8-12	142,880	10-14
Bromus marginatus	Mountain Brome	Bromar, Garnet	36-48	Native	Cool	Bunch	10-15	64,080	10-14
Buchloe dactyloides	Buffalograss	Sharps Improved II, Texoka, Cody, Bowie, Topgun, Bison, Sharp Shooter	10-12	Native	Warm	Sod	10-15	45,000	14-21
Calamovilfa longifolia	Prairie Sandreed	Goshen, Bowman	24-72	Native	Warm	Sod	4-7	274,000	21-28

Scientific Name	Common Name	Varieties	Height (in)	Native/ Introduced	Cool/ Warm	Growth Habit	Seeding Rate PLS#/ Acre	Seeds/Lb	Germination
Dactylis glomerata	Orchardgrass	Bronc, Crown Royale, Jack Rabbit, Latar, Paiute, Potomac, Pizza, Renegade, Profile	24-48	Introduced	Cool	Bunch	8-10	427,000	14-21
Deschampsia caespitosa	Tufted Hairgrass	Nortran	24-48	Native	Cool	Bunch	1-2	1,500,000	7-14
Digitaria californica	Arizona Cottontop		12-24	Native	Warm	Bunch	2-4	980,000	7-14
Elymus canadensis	Canada Wildrye	Mandan	24-48	Native	Cool	Bunch	11-15	114,000	7-21
Elymus dahuricus	Dahurian Wildrye		12-60	Introduced	Cool	Bunch	10-15	80,000	7-21
Elymus elymoides	Bottlebrush Squirreltail	Sand Hollow	4-25	Native	Cool	Bunch	7-12	192,000	10-14
Elymus glaucus	Blue Wildrye	Arlington, Elkton	20-60	Native	Cool	Bunch	12	134,500	6-10
Elymus hoff manii	Newhy Hybrid Wheatgrass		12-24	Introduced	Cool	Sod	12-14	122,000	7-14
Elymus lanceolatus ssp. lanceolatus	Thickspike Wheatgrass	Critana, Bannock, Schwendimar	12-36	Native	Cool	Sod	5-10	154,000	21-28
Elymus lanceolatus ssp. psammophilus	Streambank Wheatgrass	Sodar	12-36	Native	Cool	Sod	5-10	156,000	21-28
Elymus trachycaulus ssp. trachycaulus	Slender Wheatgrass	Pryor, Sand Louis, Revenue	24-30	Native	Cool	Bunch	5-10	135,000	21-28
Elytrigia elongata	Tall Wheatgrass	Alkar, Jose, Largo, Platte	36-48	Introduced	Cool	Bunch	12-15	75,320	21-28
Elytrigia intermedia ssp. Intermedia	Intermediate Wheatgrass	Oahe	36-48	Introduced	Cool	Sod	7-10	80,080	21-28
Elytrigia intermedia ssp. trichophorum	Pubescent Wheatgrass	Luna, Mandan, Manska, Greenleaf	36-48	Introduced	Cool	Sod	7-10	95,000	21-28
Eragrostis curvula	Weeping Lovegrass	A-67, Ermelo, Morpa	24-48	Introduced	Warm	Bunch	1-2	1,482,320	7-10
Eragrostis intermedia	Plains Lovegrass		15-36	Native	Warm	Bunch	2-3	3,500,000	7-28
Eragrostis lehmanniana	Lehmanns Lovegrass		12-24	Introduced	Warm	Sod	.5-1	6,500,000	7-10
Eragrostis trichodes	Sand Lovegrass	Nebraska 27, Bend	24-60	Native	Warm	Bunch	1-2	1,625,680	10-14
Festuca arizonica	Arizona Fescue	Redondo	12-36	Native	Cool	Bunch	3-5	480,500	14-21
Festuca arundinacea	Tall Fescue	Fawn Fuego, KY-31, Seine, Longhorn	24-60	Introduced	Cool	Bunch	15-18	230,000	7-10
Festuca brevipila	Hard Fescue	Durar	4-6	Introduced	Cool	Bunch	3-5	600,000	10-14
Festuca campestris	Rough Fescue		12-14	Native	Cool	Bunch	6-10	200,000	7-21
Festuca idahoensis	Idaho Fescue	Winchester, Joseph	12-36	Native	Cool	Bunch	3-6	450,000	8-10
Festuca ovina	Sheep Fescue	Covar, Bighorn, MX-86	12-24	Introduced	Cool	Bunch	3-5	530,320	14-21
Festuca pratensis	Meadow Fescue		6-12	Introduced	Cool	Bunch	10-15	230,000	10-14
Festuca saximontana	Rocky Mountain Fescue		12-24	Native	Cool	Bunch	1.5-3	1,300,000	7-21
Festuca thurberi	Thurber Fescue		18-36	Native	Cool	Bunch	3-5	500,000	7-21

Scientific Name	Common Name	Varieties	Height (in)	Native/ Introduced	Cool/ Warm	Growth Habit	Seeding Rate PLS#/ Acre	Seeds/Lb	Germination
Festulolium braunii	Festulolium	Spring Green, Duo	20-48	Introduced	Cool	Bunch	15-18	150,000	7-14
Hesperostipa comata ssp. comata	Needle & Th read Grass		12-36	Native	Cool	Bunch	7-10	137,857	14-21
Heteropogon contortus	Tanglehead		36-96	Native	Warm	Bunch	4-7	630,000	14-21
Hilaria belangeri	Curly Mesquite Grass		6-12	Native	Warm	Bunch	5-9	270,000	7-21
Hordeum brachyantherum	Meadow Barley		12-14	Native	Cool	Bunch	12-15	85,000	7-14
Hordeum jubatum	Foxtail Barley		12-24	Native	Cool	Bunch	6-9	136,000	4-14
Koeleria macrantha	Prairie Junegrass		12-30	Native	Cool	Bunch	1-2	2,315,000	7-14
Leptochloa dubia	Green Sprangletop		24-42	Introduced	Warm	Bunch	3-5	538,000	7-21
Leymus angustus	Altai Wildrye		24-48	Introduced	Cool	Bunch	15-20	58,300	7-21
Leymus cinereus	Great Basin Wildrye	Magnar, Trailhead	20-40	Native	Cool	Bunch	5-7	130,000	21-28
Leymus racemosus ssp. racemosus	Mammoth Wildrye	Volga	18-36	Introduced	Cool	Sod	8-15	100,000	7-21
Leymus triticoides	Beardless Wildrye	Shoshone	10-36	Naative	Cool	Sod	5-7	170,304	21-28
Lolium hybridium	Intermediate Ryegrass	Bison	18-36	Introduced	Cool	Bunch	15-18	153,280	7-14
Lolium multifl orum	Annual Ryegrass	Gulf, Graze-n-Go, Max, Striker	10-36	Introduced	Cool	Annual	8-16	227,000	4-7
Lolium perenne	Perennial Ryegrass	Linn, Herbie, Elgon	18-36	Introduced	Cool	Bunch	4-8	227,000	5-8
Muhlenbergia wrightii	Spike Muhly	El Vado	12-18	Native	Warm	Bunch	1-3	1,635,000	7-21
Nassella viridula	Green Needlegrass	Lodorn	18-36	Native	Cool	Bunch	5-8	167,840	21-28
Panicum coloratum	Kleingrass		36-48	Introduced	Warm	Bunch	3-5	490,000	7-28
Panicum obtusum	Vine Mesquite Grass		12-30	Native	Warm	Sod	6-12	145,000	7-28
Panicum virgatum	Switchgrass	Blackwell, Nebraske 28, Forestburg, Alamo, Greenville, Cave-in-Rock, Dacotah, Kanlow	36-60	Native	Warm	Sod	2-3	259,000	21-28
Pascopyrum smithii	Western Wheatgrass	Arriba, Barton, Rosana, Flintlock, Rodan, Walsh	12-36	Native	Cool	Sod	5-10	115,000	21-28
Phalaris arundinacea	Reed Canarygrass	Cheifton, Palaton	72-84	Introduced	Cool	Sod	3-5	537,920	14-21
Phleum alpinum	Alpine Timothy		6-24	Native	Cool	Bunch/Sod	1-2	1,044,689	7-10
Phleum pratense	Timothy	Climax, Drummond	20-40	Introduced	Cool	Bunch	3-5	1,163,200	7-10
Pleuraphis jamesii	Galleta Grass	Viva	3-20	Native	Warm	Sod	5-8	151,850	10-14
Poa alpina	Alpine Bluegrass		8-24	Native	Cool	Bunch	1-2	1,069,291	7-21
Poa ampla	Big Bluegrass	Sherman	24-48	Native	Cool	Bunch	3-5	910,000	14-21

Scientific Name	Common Name	Varieties	Height (in)	Native/ Introduced	Cool/ Warm	Growth Habit	Seeding Rate PLS#/ Acre	Seeds/Lb	Germination
Poa canbyi	Canby Bluegrass	Canbar	8-16	Native	Cool	Bunch	3-5	925,000	14-21
Poa compressa	Canada Bluegrass	Canon, Reubens, Talon	8-24	Introduced	Cool	Bunch/Sod	3-5	2,392,820	14-21
Poa fendleriana	Muttongrass		12-24	Native	Cool	Bunch	2-3	2,000,000	7-28
Poa palustris	Fowl Bluegrass		12-24	Introduced	Cool	Bunch/Sod	1-3	1,900,000	7-21
Poa pratensis	Kentucky Bluegrass	Troy, Ginger	18-24	Introduced	Cool	Sod	2-4	1,389,840	14-21
Poa sandbergii	Sandberg Bluegrass		24-48	Native	Cool	Bunch	2-4	1,046,960	7-21
Poa trivialis	Rough Bluegrass		6-12	Introduced	Cool	Sod	2-3	2,090,320	7-21
Psathyrostachys juncea	Russian Wildrye	Bozoisky, Swift, Vinall	24-48	Introduced	Cool	Bunch	12-15	162,600	14-21
Pseudoroegneria spicata ssp. inermis	Beardless Bluebunch Wheatgrass	Whitmar	12-30	Native	Cool	Sod	5-10	150,000	14-21
Pseudoroegneria spicata ssp. spicata	Bluebunch Wheatgrass	Anatone, Goldar, P-7, Secar	18-48	Native	Cool	Bunch	5-10	125,680	14-21
Puccinellia distans	Alkaligrass	Fults	12-18	Native	Cool	Bunch	3-4	2,000,000	10-14
Schizachyrium scoparium	Little Bluestem	Aldous, Camper, Blaze, Pastura, Cinarron	20-60	Native	Warm	Bunch	4-6	240,670	21-28
Setaria vulpiseta	Plains Bristlegrass		12-36	Native	Warm	Bunch	5-9	293,000	7-21
Sorghastrum nutans	Indiangrass	Cheyenne, Holt, Tomahawk, Llano, Osage	36-60	Native	Warm	Bunch	5-8	174,720	21-28
Sporobolus airoides	Alkali Sacaton	Salado	24-42	Native	Warm	Bunch	1-2	1,750,000	7-10
Sporobolus cryptandrus	Sand Dropseed		16-40	Native	Warm	Bunch	.5-1	5,600,000	14-21
Sporobolus giganteus	Giant Dropseed		24-60	Native	Warm	Bunch	2-3	1,723,000	7-14
Triticum aestivum x Elytrigia elongata	Regreen		18-24	Introduced	Cool	Bunch	10-20	12,000	3-7
Triticum aestivum x Secale cereale	Quickguard		18-24	Introduced	Cool	Bunch	10-20	14,000	3-7
Vulpia octoflora	Six Weeks Fescue		6-18	Native	Cool	Annual	2-3	965,000	7-21

Scientific Name	Common Name	Type	Native/ Introduced	Height (in)	Flower Color	Bloom Period	Cultural Re-quirements	Seeding Rate PLS#/ Acre	Seeds/Lb
Achillea filpendulina	Gold Yarrow	P	Introduced	36-60	Gold	Summer	Sun-Dry/Moist	1	2,790,000
Achillea lanulosa	Western Yarrow	P	Native	12-36	White	Summer	Sun/Dry	1	3,240,000
Achillea millefolium	White Yarrow	P	Introduced	12-36	White	Summer	Sun-Dry/Moist	1	2,790,000
Allium cernuum	Nodding Pink Orion	P	Native	12-18	Pink	Summer	Sun-Dry/Moist	19	138,000
Alyssum saxatile	Basket-of-Gold	P	Introduced	8-12	Yellow	Spring/Summer	Sun-Dry	4-6	567,000
Amorpha canescens	Leadplant	P	Native	24-40	Purple	Summer	Sun-Dry	5	277,000
Aquilegia caerulea	Blue Columbine	P	Native	24-36	Blue/White	Spring/Summer	Sun/Shade-Moist	3-6	431,000
Aquilegia vulgaris	Dwarf Columbine	P	Introduced	10-18	Red/Violet/Blue	Spring/Summer	P/Shade-Moist	3-5	315,000
Argemone polyanthemos	Prickly Poppy	P	Native	12-48	White-Yellow	Summer/Fall	Sun-Dry	1	1,576,000
Asclepias incarnata	Swamp Milkweed	P	Native	36-60	Pink	Summer	Sun-Moist	8-12	102,000
Asclepias speciosa	Showy Milkweed	P	Native	24-40	Pink	Summer	Sun-Dry/Moist	7-10	87,000
Asclepias tuberosa	Butterfly Milkweed	P	Native	24-36	Orange	Summer	Sun-Dry	7-10	87,000
Aster laevis/Symphyotiichum laeve	Smooth Aster	P	Native	30-48	Violet	Fall	Sun-Dry/Moist	2-3	1,014,000
Aster novae-angliae	New England Aster	P	Native	24-72	Pink/Violet/Purple	Fall	P/Sun-Dry/Moist	1-2	1,305,000
Aster ptarmicoides/Solidago ptarmicides	White Upland Aster	P	Native	18-24	White	Summer/Fall	Sun-Dry	4	1,000,000
Aquilegia Spp.	Columbine	P	Native	12 - 36	White, Blue, Violet, Lavender	Spring/Summer	Full Sun/ Partial Shade	.5 – 2	432,000
Baileya multiradiata	Desert Marigold	A/P	Native	18-24	Yellow	Spring/Summer	Sun-Dry	1-2	43,000
Balsamorhiza sagittata	Arrowleaf Balsamroot	P	Native	16-30	Yellow	Spring/Summer	Sun-Dry/Moist	10-15	5,670,000
Campanula carpatica	Tussock Bellflower	P	Introduced	8-18	Lavender-Blue	Summer	P/Sun-Dry/Moist	.25-.50	56,700
Cassia fasciculata	Partridge Pea	A	Native	6-24	Yellow	Summer/Fall	Sun-Dry	15-18	4,000,000
Castilleja chromosa	Indian Paintbrush	P	Native	8-24	Scarlet/Rose/Yellow	Summer/Fall	P/ Sun-Dry/Moist	.75-1	89,000
Centaurea cyanus	Cornflower	A	Introduced	12-36	Blue	Summer	P/Sun-Dry	10-14	1,112,000
Cerastium biebersteinii	Snow-in-Summer	P	Introduced	6-12	White	Spring/Summer	P/ Sun-Dry/Moist	2-3	346,000
Cheiranthus allionii	Siberian Wallflowr	B/P	Introduced	10-18	Orange	Spring	P/Sun-Dry/Moist	4-6	436,000
Chrysanthemum maximum	Shasta Daisy	P	Introduced	16-24	White	Summer	P/Sun-Moist	4-6	436,000
Cleome serrulata	Rocky Mountain Beeplant	A	Native	12-48	Pink/Lavender	Summer	Sun-Dry	10-16	62,000
Coreopsis lanceolata	Lance-Leaved Coreopsis	P	Native	18-36	Yellow	Summer/Fall	P/Sun-Dry/Moist	5-8	202,000
Coreopsis tinctoria	Plains Coreopsis	A	Native	18-36	Yellow-Maroon	Summer/Fall	P/Sun-Dry	1-2	1,666,000

KEY

TYPE: **A** = Annual **B** = Biennial **P** = Perennial **TP** = Tender Perennial *(grown as an annual in cold climates)*

CULTURAL REQUIREMENTS: **Sun** = Full Sun **P/Sun** = Full or Partial Sun **P/Shade** = Partial Sun or Shade **Sun/Shade** = Sun or Shade

Dry = 10-30 inches rainfall per year or sandy, well-drained soil **Moist** = Over 30 inches rainfall per year or regular irrigation

Scientific Name	Common Name	Type	Native/ Introduced	Height (in)	Flower Color	Bloom Period	Cultural Requirements	Seeding Rate PLS#/ Acre	Seeds/Lb
Cosmos bipinnatus	Cosmos	A	Introduced	36-60	White/Pink/Crimson	Summer/Fall	P/Sun-Dry	10-14	80,800
Dalea candida	White Prairie Clover	P	Native	18-36	White	Summer/Fall	Sun/Dry	5-7	259,000
Delphinium ajacis	Rocket Larkspur	A	Introduced	12-36	White/Pink/Blue/Violet	Summer	P/Sun-Moist	10-15	142,000
Delphinium occidentale	Western Larkspur	P	Native	36-60	Blue/Purple	Summer	P/Sun-Moist	10-13	157,000
Desmanthus illinoensis	Illinois Bundleflower	P	Native	36-60	Cream	Summer	Sun-Dry	10-15	67,000
Dianthus barbatus	Sweet William Pinks	P	Introduced	12-24	White/Pink/Red	Summer	Sun-Dry/Moist	3-5	437,000
Dianthus deltoides	Maiden Pinks	P	Introduced	6-16	Pink	Summer	Sun-Dry/Moist	1	2,270,000
Digitalis purpurea	Foxglove	B/P	Introduced	24-48	Purple/Cream	Summer	P/Shade-Moist	0.5	4,753,000
Dimorphotheca aurantiaca	African Daisy	A	Introduced	8-12	Yellow/Orange	Spring/Summer	Sun-Dry/Moist	4-8	251,000
Echinacea angustifolia	Narrow-Leaf Purple Coneflower	P	Native	12-24	Violet	Summer	Sun-Dry	10-13	110,000
Echinacea pallida	Pale Purple Coneflower	P	Native	24-48	Lavender	Summer	P/Sun-Dry	9-12	106,000
Echinacea purpurea	Purple Coneflower	P	Native	24-36	Purple	Summer	P/Shade-Dry/Moist	7-12	117,000
Engelmannia pinnatifi da	Engelmann Daisy	P	Native	24-36	Yelllow	Spring/Summer	Sun-Dry	6-8	120,000
Epilobium angustifolium	Fireweed	P	Native	14-84	Pink	Summer/Fall	Sun-Dry/Moist	.25	8,500,000
Erigeron speciosus	Fleabane Daisy	P	Native	8-24	Violet	Spring/Summer	P/Sun-Dry/Moist	1	1,892,000
Eriogonum umbellatum	Sulfur Flower	P	Native	6-12	Yellow	Fall	P/Sun-Dry	4-7	140,500
Erysimum capitatum	Western Wallflower	B/P	Native	12-24	Yellow/Orange	Spring/Summer	Sun-Dry	2-3	856,000
Eschscholzia californica	California Poppy	TP	Native	12-18	Yellow/Orange	Spring/Summer	Sun-Dry/Moist	6-10	250,000
Eutrochium Spp.	Joe Pye Weed	P	Introduced	36-60	Red, Purple, Pink	Summer	Full Sun/ Partial Shade	.5 - 2	1,520,000
Gaillardia aristata	Perennial Gaillardia	P	Native	18-30	Yellow/Red	Summer	Sun-Dry	8-10	160,200
Gaillardia pulchella	Annual Gaillardia	A	Native	12-24	Yellow/Red	Summer	Sun-Dry	7-9	223,300
Geranium maculatum	Wild Geranium	P	Native	12-48	Pink/Lavender	Summer	P/Sun-Dry/Moist	6-12	52,000
Gilia tricolor	Bird's Eyes	A	Native	12-18	Lavender/White	Spring	Sun-Dry	1-2	1,024,000
Gypsophila elegans	Annual Baby's Breath	A	Introduced	8-18	White	Summer	P/Sun-Dry	3-5	378,000
Hedysarum boreale	Northern Sweetvetch	P	Native	10-24	Pink/Purple	Spring/Summer	Sun-Dry/Moist	15-25	33,600
Helianthus annuus	Annual Sunflower	A	Native	24-72	Yellow	Summer	Sun-Dry	18-20	59,800
Helianthus maximiliani	Maximilian Sunfl ower	P	Native	39-96	Yellow	Summer/Fall	Sun-Dry	4-8	182,000
Heliomeris multiflora	Showy Goldeneye	P	Native	12-36	Yellow	Summer/Fall	P/Sun-Dry/Moist	1	1,200,000

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Ipomopsis aggregata	Scarlet Gilia	B	Native	12-36	Scarlet	Summer	Sun-Dry	3	488,000
Iris missouriensis	Wild Blue Iris	P	Native	12-24	Blue	Summer	Sun-Moist	25-30	26,400
Liatris punctata	Dotted Gayfeather	P	Native	10-16	Purple	Summer/Fall	Sun-Dry	8-10	197,000
Liatris pycnostachya	Thickspike Gayfeather	P	Native	24-48	Purple	Summer	Sun-Dry/Moist	10-12	131,000
Linanthus grandiflorus	Mountain Phlox	A	Native	12-24	White/Lavender	Spring/Summer	Sun-Dry	1.5-3	969,000
Linaria maroccana	Spurred Snapdragon	A	Introduced	12-24	Pink/Yellow/Violet	Spring/Summer	P/Sun-Dry	0.5	6,632,000
Linum grandiflorumrubrum	Scarlet Flax	A	Introduced	12-36	Scarlet	Summer	P/Sun-Dry/Moist	10-15	132,000
Linum lewisii	Blue Flax	P	Native	12-30	Blue	Spring/Summer	Sun-Dry	6-7	200,000
Lobularia maritima	Sweet Alyssum	TP	Introduced	8-16	White	Spring/Fall	P/Sun-Dry/Moist	1.5-2	1,115,000
Lupinus alpestris	Mountain Lupine	P	Native	18-24	Blue	Summer	P/Sun-Dry	25-35	21,000
Lupinus argenteus	Silver Lupine	P	Native	10-28	Blue	Summer	Sun-Dry/Moist	20-30	18,300
Lupinus perennis	Perennial Lupine	P	Native	12-36	Blue	Spring/Summer	Sun-Dry/Moist	25-35	21,300
Lupinus polyphyllus	Russell Lupine	P	Native	12-36	Pink/Blue/Red/Yellow	Spring/Summer	Sun-Dry/Moist	25-35	22,400
Lupinus succulentus	Arroyo Lupine	A	Native	24-48	Blue	Spring/Summer	Sun-Dry	35-45	15,600
Lupinus texensis	Texas Bluebonnet	A	Native	16-20	Blue/White	Summer	Sun-Dry/Moist	20-30	16,000
Machaeranthera tanacetifolia	Prairie Aster	B	Native	12-18	Violet	Summer/Fall	Sun-Dry	4-6	408,000
Mirabilis jalapa	Four O'Clocks	TP	Introduced	12-36	Red/Pink/Yellow/White	Summer/Fall	Sun-Dry/Moist	50-60	6,300
Monarda Spp.	Bee Balm	P	Native	24-36	Violet, Purple	Summer/Fall	Full Sun/Partial Shade	.5 - 2	1,395,000
Monarda fistulosa	Bergamot	P	Native	36-48	Purple	Summer	P/Sun-Dry	1	1,463,000
Myosotis sylvatica	Forget-Me-Not	A/B	Introduced	10-18	Blue	Spring/Summer	Sun-Dry/Moist	2-3	732,000
Nemophila maculata	Five-Spot	A	Native	4-6	White-Purple	Spring/Summer	P/ Sun-Dry/Moist	16-20	74,000
Nemophila menziesii	Baby Blue-Eyes	A	Native	4-12	Blue	Spring/Summer	P/Shade-Moist	5-8	243,000
Oenothera biennis	Common Evening Primrose	B/P	Introduced	24-60	Yellow	Summer	P/Shade-Moist	1.5	864,000
Oenothera missouriensis	Dwarf Evening Primrose	P	Native	8-12	Yellow	Summer	P/Shade-Moist	12-14	92,000
Oenothera pallida	Pale Evening Primrose	P	Native	8-20	White	Summer/Fall	Sun-Dry	1-2	653,000
Oenothera speciosa	Showy Evening Primrose	A/P	Native	12-24	Pink	Srping/Summer	P/Sun-Dry/Moist	1	3,024,000
Papaver nudicaule	Iceland Poppy	P	Native	12-24	Yellow/Orange/White	Srping/Summer	Sun-Dry/Moist	1	2,630,000
Papaver rhoeas	Corn Poppy	A	Introduced	12-30	White/Pink/Red	Summer	P/Sun-Dry	1	3,179,000

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Penstemon angustifolius	Narrow-Leaved Beardtongue	P	Native	9-12	Pink/Violet	Spring/Summer	Sun-Dry/Moist	8	270,000
Penstemon barbatus	Scarlet Bugler	P	Native	24	Red	Summer	Sun-Dry	2-4	550,000
Penstemon cyananthus	Wasatch Penstemon	P	Native	18	Blue	Spring/Summer	P/Sun-Dry/Moist	2-4	550,000
Penstemon eatonii	Eaton's Penstemon	P	Native	12-40	Scarlet/Rose/Sallmon	Spring/Summer	Sun-Dry	2-4	600,000
Penstemon palmeri	Palmer Penstemon	P	Native	24-48	Pink	Summer	Sun-Dry	2-4	507,000
Penstemon strictus	Rocky Mountain Penstemon	P	Native	24-36	Blue	Summer	P/Sun-Dry	2-4	478,000
Petalostemon purpureum	Purple Prairie Clover	P	Native	12-36	Purple	Summer/Fall	Sun-Dry	6-8	293,000
Phacelia campanularia	California Bluebell	A	Native	8-20	Blue	Summer	Sun-Dry	8-10	259,000
Phlox drummondii	Annual Phlox	A	Native	8-20	White/Pink/Red/Purple	Summer/Fall	Sun-Dry	8-10	241,000
Ratibida columnifera	Prairie Coneflower	B/P	Native	12-36	Red/Yellow	Summer	P/Sun-Dry	1-2	832,000
Ratibida pinnata	Grey-Headed Coneflower	P	Native	36-48	Yellow	Summer	P/Sun-Dry/Moist	2-4	445,000
Rudbeckia amplexicaulis	Clasping Coneflower	A	Native	18-30	Yellow/Red	Summer/Fall	P/Sun-Dry/Moist	1.5-3	796,000
Rudbeckia hirta	Black-Eyed Susan	A/B/P	Native	12-36	Yellow	Summer/Fall	P/Sun-Dry/Moist	1-2	1,967,000
Sanguisorba minor	Small Burnet	P	Introduced	8-24	Pink	Summer	Sun-Dry	15-25	55,000
Sisyrinchium bellum	Blue-Eyed Grass	P	Native	6-18	Dark Blue	Spring	Sun-Moist	3-5	315,000
Solidago rigida	Rigid Goldenrod	P	Native	36-60	Glold	Summer/Fall	Sun-Dry/Moist	2-3	772,000
Sphaeralcea ambigua	Desert Globemallow	P	Native	20-38	Orange/Red	Spring	Sun-Dry	2-4	500,000
Sphaeralcea coccinea	Scarlet Globemallow	P	Native	6-14	Orange	Spring/Summer	Sun-Dry	2-4	500,000
Sphaeralcea grossulariifolia	Gooseberryleaf Globemallow	P	Native	24-36	Orange-Red	Summer/Fall	Sun-Dry	2-4	335,000
Sphaeralcea munroana	Munro Globemallow	P	Native	24-48	Red-Orange	Summer	Sun-Dry	2-4	500,000
Symphyotrichum novae – angliae	New England Aster	P	Native	36- 48	Purple, Lavender	Summer/Fall	Full Sun	.5 – 2	1,100,000
Thermopsis montana	Golden Banner	P	Native	12-48	Yellow	Summer	Sun-Moist	20-40	15,000
Thymus serpyllum	Creeping T yme	P	Introduced	3-6	Lavender	Summer	P/Sun-Dry	1.5	2,700,000
Tradescantia occidentalis	Prairie Spiderwort	P	Native	8-24	Blue/Purple	Spring/Summer	Sun-Dry	14-16	166,000
Verbena hastata	Blue Vervain	P	Native	24-48	Blue	Summer	Sun-Moist	1	1,793,000
Verbena stricta	Hoary Vervain	A/P	Native	24-36	Purple	Summer	Sun-Dry	2-4	527,000
Viola cornuta	Johnny Jump-Up	A/P	Introduced	4-12	Purple/Yellow/Blue	Spring/Fall	P/Sun-Moist	6-8	394,000

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Ambrosia deltoidea	Triangle-Leaf Bursage	Native	1-3	Inconspicuous	Spring	9,000
Amelanchier alnifolia	Saskatoon Serviceberry	Native	3-15	White/Blue-purple berries	Summer	25,800
Amelanchier utahensis	Utah Serviceberry	Native	3-12	White/Blue-purple berries	Spring/Summer	25,800
Arctostaphylos uva-ursi	Bearberry	Native	0.5-1	White to Pink; Pink to Red Drupes	Spring/Summer	37,900
Artemisia cana	Silver Sagebrush	Native	2-5	Inconspicuous	Fall	850,000
Artemisia filifolia	Sand Sagebrush	Native	2-4	Inconspicuous	Fall	2,000,000
Artemisia frigida	Fringed Sagebrush	Native	0.5-1.5	Inconspicuous	Fall	4,536,000
Artemisia ludoviciana	Prairie Sage	Native	1-2	Inconspicuous	Fall	4,500,000
Artemisia nova	Black Sagebrush	Native	0.5-2	Inconspicuous	Fall	907,200
Artemisia tridentata ssp. tridentata	Basin Big Sagebrush	Native	3-12	Inconspicuous	Fall	2,500,000
Artemisia tridentata ssp. vaseyana	Mountain Big Sagebrush	Native	2-5	Inconspicuous	Fall	2,500,000
Artemisia tridentata ssp. wyomingensis	Wyoming Big Sagebrush	Native	1-3	Inconspicuous	Fall	2,500,000
Atriplex canescens	Four-wing Saltbush	Native	2-7	Inconspicuous	Summer	52,000
Atriplex confertifolia	Shadscale Saltbrush	Native	1-3	Inconspicuous	Spring/Summer	64,900
Atriplex corrugata	Mat Saltbush	Native	<1	Inconspicuous	Spring	60,000
Atriplex cuneata	Castle Valley Clover Saltbush	Native	0.5-1	Inconspicuous	Spring/Summer	30,300
Atriplex gardneri	Gardner Saltbush	Native	0.5-1	Inconspicuous	Summer	111,500
Atriplex polycarpa	Desert Saltbush	Native	1-4	Inconspicuous	Spring/Summer	800,000
Ceanothus velutinus	Snowbrush Ceanothus	Native	3-10	White	Summer	124,275
Cercocarpus ledifolius	Curl-leaf Mountain Mahogany	Native	8-30	Pale Yellow	Spring/Summer	30,000
Cercocarpus montanus	Birch-leaf Mountain Mahogany	Native	3-15	Pale Yellow	Spring/Summer	59,000
Chilopsis linearis	Desert Willow	Native	20-30	Lavender to Pink	Spring/Fall	75,000
Chrysothamnus viscidifl orus	Douglas Rabbitbrush	Native	1-2.5	Yellow	Summer/Fall	782,000
Coleogyne ramosissima	Blackbrush	Native	2-4	Yellow	Spring	22,400
Cornus sericea ssp. sericea	Redosier Dogwood	Native	3-9	White/White Berries	Spring/Summer	173,000
Encelia farinosa	Brittlebush	Native	1-3	Yellow	Spring	175,000
Ephedra nevadensis	Nevada Mormom Tea	Native	2-5	Inconspicuous	Spring	19,900

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Ephedra viridis	Green Mormon Tea	Native	2-4	Inconspicuous	Spring	25,000
Ericameria nauseosa ssp. nauseosa	Rubber Rabbitbrush	Native	2-7	Yellow	Fall	400,000
Fallugia paradoxa	Apache Plume	Native	3-6	White-Rose	Spring/Summer	420,000
Grayia spinosa	Spiny Hopsage	Native	2-4	Inconspicuous	Spring	166,800
Gutierrezia Sarothrae	Broom Snakeweed	Native	2	Yellow	Fall	1,600,000
Juniperus scopulorum	Rocky Mountain Juniper	Native	15-40	Inconspicuous/Blue-Purple Berries	Spring	27,000
Kochia prostrata	Prostrate Summer Cypress	Introduced	1-3	Inconspicuous	Summer/Fall	407,700
Krascheninnikovia lanata	Winterfat	Native	1-3	Inconspicuous	Spring	56,700
Larrea tridentata	Creosate Bush	Native	3-10	Yellow	Spring/Summer/Fall	80,000
Lycium andersonii	Wolfberry	Native	1-4	Lavender/Red Berries	Spring/Summer	592,000
Mahonia repens	Creeping Oregon Grape	Native	0.5-1.5	Yellow/Purple Berries	Spring	54,000
Parkinsonia florida	Blue Palo Verde	Native	15-30	Yellow	Spring	3,000
Parkinsonia microphylla	Foothills Palo Verde	Native	10-25	Pale Yellow	Spring	4,500
Pinus contorta var. latifolia	Lodgepole Pine	Native	75-150	Inconspicuous	Summer	94,000
Pinus ponderosa	Ponderosa Pine	Native	75-150	Inconspicuous	Spring/Summer	12,000
Prosopis velutina	Velvet Mesquite	Native	8-30	Cream to White	Spring	13,500
Prunus virginiana	Chokecherry	Native	5-30	White/Purple to Black Berries	Spring	4,800
Pseudotsuga menziesii	Douglas Fir	Native	150-300	Inconspicuous	Spring/Summer	38,000
Psilostrophe cooperi	Paperflower	Native	1-2	Yellow	Spring/Fall	491,200
Purshia glandulosa	Desert Bitterbrush	Native	3-7	Yellow	Spring/Summer	20,800
Purshia mexicana	Mexican Cliffrose	Native	3-20	Pale Yellow	Spring/Summer	64,600
Purshia tridentata	Antelope Bitterbrush	Native	2-15	Yellow	Spring/Summer	15,000
Quercus gambelii	Gambel Oak	Native	15-30	Inconspicuous	Spring/Summer	250
Rhus glabra	Smooth Sumac	Native	4-7	White/Dark Red Berries	Spring	49,000
Rhus trilobata	Skunk Brush	Native	2-6	Yellow/Red Berries	Spring	20,300
Ribes aureum	Golden Currant	Native	3-8	Yellow/Yellow to Red Berries	Spring	356,200
Ribes cereum	Wax Currant	Native	3-5	White to Pink/Red Berries	SpringSummer	350,000
Ribes montigenum	Mountain Gooseberry	Native	1-2	White to Rose/Red Berries	Summer	195,000

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Rosa nutkana	Nootka Rose	Native	2-10	Rose to Purple/Purple Hips	Spring	45,000
Rosa woodsii	Woods Rose	Native	2-6	Pink/Orange to Red Hips	Spring/Summer	45,300
Sambucus racemosa	Red Elderberry	Native	3-6	Cream to White/Red Berries	Spring/Summer	286,000
Sarcobatus vermiculatus	Black Greasewood	Native	2-8	Inconspicuous	Spring/Summer	210,000
Shepherdia argentea	Silver Buffaloberry	Native	6-13	Yellow/Gold or Scarlet Berries	Spring/Summer	45,000
Shepherdia canadensis	Russet Buff aloberry	Native	3-12	Cream to Yellow/Golden Berries	Spring/Summer	59,215
Symphoricarpos albus	Common Snowberry	Native	2-5	White to Pink/White Berries	Summer	76,000
Symphoricarpos oreophilus	Mountain Snowberry	Native	2-5	White to Pink/White Berries	Summer	75,000
Xanthocephalum sarothrae	Broom Snakeweed	Native	2	Yellow	Fall	1,600,000
Yucca glauca	Narrowleaf Yucca	Native	3-5	Cream to White	Spring/Summer	22,680
Zinnia acerosa	Desert Zinnia	Native	0.5-1.5	Cream	Spring	392,500

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Agrostis scabra	Ticklegrass	16-24	1	5,400,000
Beckmannia syzigachne	Beckmann's or American Sloughgrass	8-24	3-5	1,150,000
Bolboschoenus maritimus	Alkali Bulrush	10-48	8	162,600
Calamagrostis canadensis	Bluejoint Reedgrass	20-48	2-4	2,270,000
Calamagrostis stricta	Northern Reedgrass	12-36	1-2	4,480,000
Carex aquatilis	Aquatic or Water Sedge	8-32	5	485,000
Carex atrata	Black Sedge	8-30	6-7	338,150
Carex bebbii	Bebb's Sedge	8-32	2	1,402,000
Carex douglasii	Douglas Sedge	4-12	4	944,550
Carex hystericina	Bottlebrush Sedge	4-40	6-7	379,210
Carex intumescens	Bladder Sedge	12-40	7	417,600
Carex lanuginosa	Wooly Sedge	12-40	5-8	312,075
Carex microptera	Popcorn or Small-Winged Sedge	6-20	2-3	846,700
Carex nebrascencis	Nebraska Sedge	10-30	5	534,100
Carex obnupta	Slough Sedge	12-36	4-6	567,000
Carex praegracilis	Meadow or Silver Sedge	8-30	3-4	664,900
Carex rostrata	Beaked Sedge	12-40	6-7	444,000
Carex simulata	Slender Sedge	6-20	4	971,560
Carex vulpinoidea	Fox Sedge	8-36	2	1,440,000
Distichlis stricta	Inland Saltgrass	4-16	4-10	520,000
Eleocharis acicularis	Needle Spikerush	1-8	2	1,250,000
Eleocharis palustris	Creeping Spikerush	4-40	2-4	620,000
Glyceria grandis	Giant or American Mannagrass	40-60	1-2	1,280,000
Glyceria occidentalis	Western Mannagrass	60-100	6-8	196,000
Glyceria striata	Fowl Mannagrass	8-40	7-12	180,000
Juncus balticus	Baltic Rush	8-32	1-2	10,900,000
Juncus confusus	Colorado Rush	12-20	.75	12,300,000

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Juncus effusus	Common Rush	8-36	.50	16,000,000
Juncus hallii	Hall's Rush	4-12	.50	16,000,000
Juncus mertensianus	Merten's Rush	4-16	.50	16,000,000
Juncus tenuis	Poverty or Path Rush	6-24	.50	51,300,000
Juncus torreyi	Torrey's Rush	16-40	.75	12,300,000
Puccinellia nuttalliana	Nuttall Alkaligrass	12-24	1-3	2,788,000
Schoenoplectus acutus	Hardstem Bulrush	10-120	5	377,000
Schoenoplectus americanus	America or Olney's Three Square Bulrush	8-40	4	300,000
Schoenoplectus tabenaemontani	Softstem Bulrush	40-80	2-4	550,000
Scirpus atrovirens	Dark Green Bulrush	12-60	4	460,000
Scirpus fluviatilis	River Bulrush	12-60	7-8	108,000
Scirpus microcarpus	Small-Fruited Bulrush	30-48	1-2	4,500,000
Scirpus pallidus	Pale Bulrush	30-40	.50-1	6,550,000
Scirpus pungens	Common Th ree Square Bulrush	10-48	4	400,000
Sparganuium eurycarpum	Giant Bur Reed	30-60	7	227,000
Spartina gracilis	Alkali or Slender Cordgrass	12-40	7	250,000
Spartina pectinata	Prairie Cordgrass	40-80	6-8	197,000
Typha latifolia	Cattails	40-80	.50	10,000,000



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