



# COVER CROP & FORAGE GUIDE



# REASONS TO PLANT A COVER CROP

A Cover crop is a plant used to improve soil health, control pests and diseases, reduce weeds and manage soil erosion. By Improving the soil, you will improve the health and productivity of the soil, and the crops produced from it.

The 3 most common reasons used to promote cover crops are:

## **Soil Improvement, Soil Nutrient Improvement, Soil Protection from Erosion.**

**Soil Organic Matter Improvement** Modern high tillage farming systems have depleted the original soil organic matter. By introducing a cover crop to the rotation, a grower can help stop this decline and reverse this trend over time. For every 1% increase in soil organic matter (SOM), the water holding capacity of the top 6" of soil is increased by 20,000 gallons or as much as 6%.

**Soil Nutrient Improvement** is usually associated with legumes in the cover crop fixing nitrogen, but the addition of a cover crop releases other nutrients from the soil as the plant material breaks down as well.

**Soil Protection** from erosion by water is reduced with cover crops by both protecting the soil surface and the increased infiltration under the cover crop. Soil with a standing cover crop is less likely to be prone to wind erosion. Water infiltration is increased by the pores left in the soil by the cover crop roots, and by increasing the time water is retained on the area by top growth slowing the water flow across an area.

## COVER CROPS CAN FULFILL MULTIPLE

### **Suppress Weeds**

- By competing with weeds for light, moisture and nutrients
- Management practices can reduce the amount of weed seed developed, early mowing.
- Management Practices can reduce the amount of weed seed developed, early mowing
- Living or killed mulches that smother weeds, killing the mulch can control weeds too

### **Allow Field Access for Winter Operations**

- Sod-based cover crops allow early spring spraying or operations
- Reduced ruts and compaction from working on wet soil

### **Address Soil Moisture Issues**

- Too much soil moisture: high water tables or high water holding capacity soils
- A perennial grass as a cover crop can use excess soil moisture
- Stretching irrigation water: plant matter mulches reduce soil evaporation
- A killed mulch will not be transpiring water, and shields the soil from evaporation

### **Increase Diversity Within The Field**

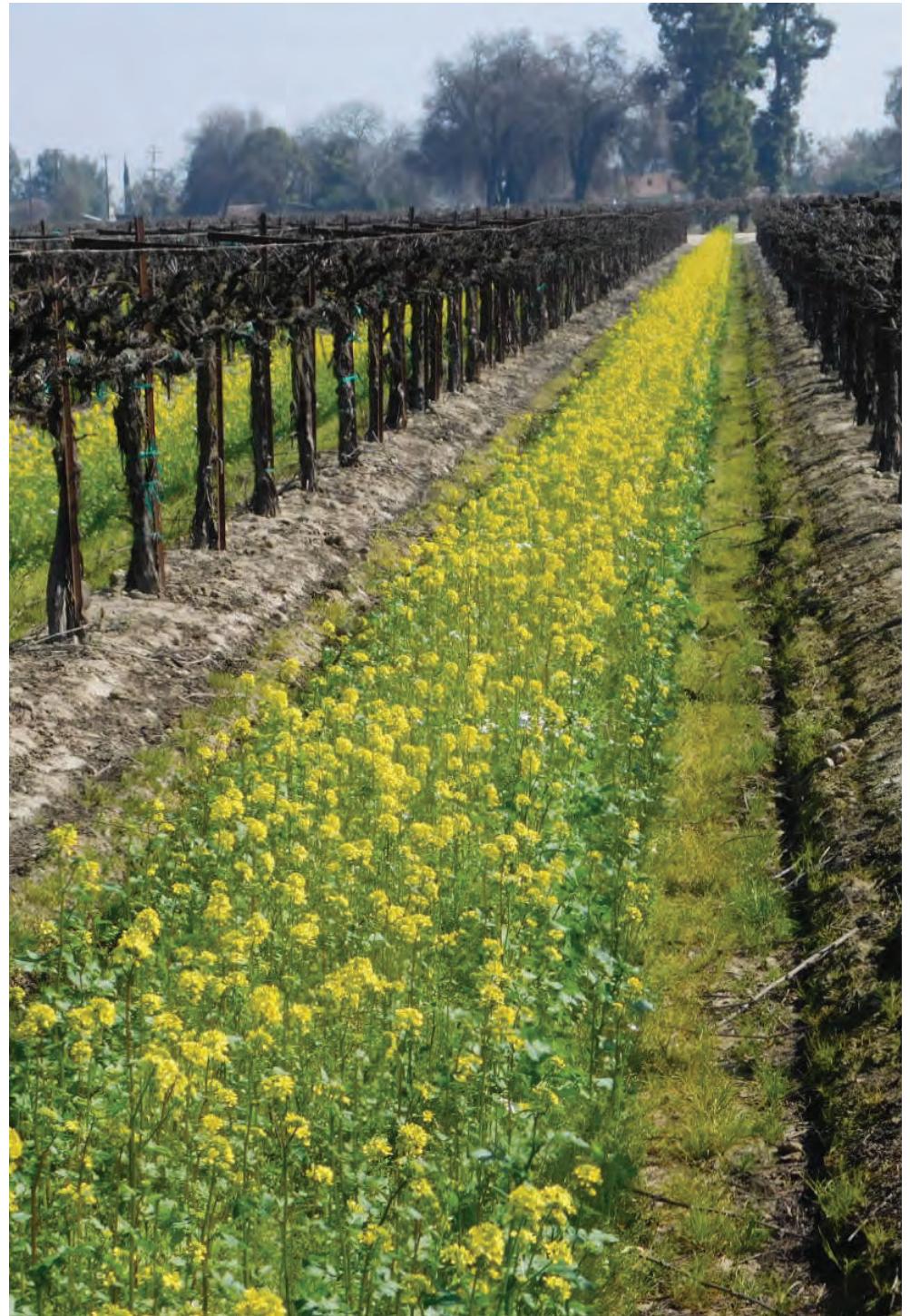
- Pollinator forage, diverse forage/pollen/nectar
- IPM practices, habitat and forage for beneficial insects
- Increased soil biota will increase soil
- Increased earthworms will increase carbon and nutrient cycling and increase infiltration.

### **Address Environmental Regulations**

- A cover crop can sequester soil and water Nitrates and help meet environmental regulations by having Best Management Practices in place that reduces potential nitrate/nutrient leaching
- Cover crops reduce off site movement of dust, pesticide drift and surface water.

# QUESTIONS TO ASK WHEN SELECTING A COVER CROP

1. What are your primary goals for this cover crop? Do you want to improve soil health, suppress weeds, reduce erosion, improve infiltration, provide nitrogen, increase pollinators, carbon sequestration, or a combination of benefits.
2. Where are you located? Does it tend to be hot and dry, or cool and wet? Consider the growing season length, as well as frost dates in the area.
3. What type of soil do you have? Is it sandy, loamy, or clay? Does it tend to be dry or wet? Knowing your soil type and texture can help you choose a mix that is well suited to your soil.
4. What is the mix going on; permanent/rotational crop, trees, grapes?
5. Type of irrigation if any; drip, rainfall, full coverage sprinklers?
6. How long would the crop be in place? What's the window and time of year for this planting?
7. What tillage or management equipment do you have to implement and terminate the crop?



# ADVANTAGES OF COATED SEED

Coated seed increases the bulk density of the finished product. This benefits many seeding applications, from hand spreading to aerial seeding, resulting in greater accuracy of the drop, and reduction of wind drift. As the seed reaches the ground, the increased density also increases the likelihood of the seed making the necessary contact with soil, where lighter seed may not have the velocity to bypass other plant material and surface debris.

## **Seed-to-Soil Contact:**

Once on the ground, the benefits of the coating material continue. Coated seed has a much greater surface area than uncoated seed which greatly increases seed to soil contact, and therefore increases that seeds opportunity for establishment.

## **Moisture Wicking:**

Another favorable property of the coating material we use is that it is naturally hygroscopic, in other words its capillary action wicks in moisture. This absorbent property softens the seed and provides a more consistent level of moisture for germination. With the neutral Ph level and water-holding capacity of our coating, coated grass seed is good insurance for establishing a healthy crop.

## **NCO Coated seed is OMRI Approved.**

## COATING ADVANTAGES FOR LEGUMES

### **Nitrogen**

In almost every scenario where legumes are used – whether for forage production, cover crops, wildlife, or pollinators - their maximum potential is directly related to their uptake of nitrogen. Given legumes ability to capture and utilize nitrogen freely from the atmosphere, it is essential that legumes are planted in a way which maximizes their ability to fixate nitrogen through nodulation. Nodulation requires the presence of a healthy population of rhizobium to infect the root hairs.

### **Lots of Live Rhizobium**

The Nitro-Coat® coating process, combined with very high quality inoculants, allows each seed to establish itself with a massive population of live rhizobium ready to colonize the developing root system.

### **More Biomass Cover Crops**

The amount of nitrogen benefit from a cover crop is directly proportional to the plants ability to maximize nitrogen fixing nodules in its root system and generate abundant nitrogen-rich biomass. It is critical in these application for each legume seed to begin with a high population of live rhizobium ready to go to work. This converts to hundreds of pounds of atmospheric nitrogen fixed per acre, as compared to raw or poorly inoculated seed.

“Seed Coating: Smith Seed Services.” Seed Coating | Smith Seed Services, [smithseed.com/seed-coating](http://smithseed.com/seed-coating). Accessed 24 May 2024.

# COVER CROP MATH

Cover cropping in orchards and vineyards plays a crucial role in improving soil health, managing weeds, and enhancing biodiversity. Precise calculation of the seed required ensures cost-effectiveness and maximizes the benefits of your cover cropping efforts. Here's a step-by-step guide to help you determine the amount of cover crop seed needed for the rows in your orchard or vineyard.

## **Step 1: Measure Row Dimensions (Length & Width of Rows):**

Begin by measuring the length and width of each row where you plan to plant cover crops. Typically, orchard and vineyard rows are long and narrow which can differ significantly in dimensions.

**Example:** Suppose each row is 400 feet long and the spacing in between rows is 10 feet.

**Step 2: Calculate The Area of One Row:** To find the area planted with cover crops in one row: Length of Row X Width of Row=400 ft x 10ft =4,000 Sq ft.

**Step 3: Determine The Number of Rows:** Identify how many rows will be planted with cover crops in your orchard or vineyard.

**Example:** If you have 20 such rows in total.

**Step 4: Calculate Total Cover Crop Area:** To find the total area to be planted with cover crops: Total Area (sq. ft) = Area of One Row (sq. ft) x Number of Rows. **Example Calculation:** Total Area = 4,000 x 20 rows = 80,000 (sq ft). Area of 1 row (sq ft) x Rows=Total area sq ft

**Step 5: Convert To Acres:** Since many seeding rates are given in pounds per acre, it's useful to convert the total area from square feet to acres. 1 acre =43,560 Sq ft. **Example Calculation:** Total acres = 80,000 sq ft / 43,560 sq ft = 1.84 Acres

## **Conclusion:**

By following these steps, you can accurately calculate the amount of cover crop seed needed for the rows in your orchard or vineyard.

## **Let's recap the process:**

1. Measure the length and width of a row.
2. Calculate the area of one row.
3. Multiply by the number of rows to get the total area.
4. Convert the total area from square feet to acres.
5. Find the recommended seeding rate.
6. Multiply the seeding rate by the total number of acres.

By ensuring that you have the correct amount of seed, you optimize the benefits of cover cropping, leading to healthier soil, better water retention, and a more sustainable orchard or vineyard.



# BROADCAST SEEDING: SEED TO SOIL CONTACT

Optimal seed-to-soil contact ensures proper moisture exchange, nutrient uptake, and anchorage for emerging seedlings, ultimately facilitating successful germination and subsequent plant growth. Seed size directly influences the ability of seeds to reach and establish contact with the soil, affecting their chances of germination and successful growth. Larger seeds, due to their size and weight, require more soil coverage for proper contact ensuring they receive the necessary nutrients and moisture for germination. In contrast, smaller seeds are more easily dispersed but may struggle to penetrate the soil surface and establish contact for germination.

To optimize seed-to-soil contact after broadcast seeding, incorporating techniques that enhance seed incorporation into the soil is essential. One effective method is rolling or pressing the seeded area with a roller or cultipacker after broadcasting. This action helps press the seeds into the soil, promoting better soil-seed contact and improving germination rates.



# DRILL CALIBRATION

HOW DO I SET MY DRILL FOR THIS COVER CROP BLEND?



43,560 ft<sup>2</sup>

(Wheel circumference ft x drill width ft) = Tire revolutions to cover 1 acre

**EXAMPLE:** If you had a 12ft drill with a drive tire that covers 8ft, your equation would look like this:

$$\frac{43,560 \text{ ft}^2/\text{acre}}{(8\text{ft} \times 12\text{ft})} = \frac{43,560 \text{ ft}^2}{96 \text{ ft}^2} = 453.75 \text{ Tire Rotations to reach 1 acre}$$

To make calibration a little easier you can divide it down into a tenth of an acre, so you don't need to spin your tire as many times. This can be done by dividing your rotations by ten then your pounds per acre by ten.

Example: calibration a little easier you can divide it down into a tenth of an acre, so you don't need to spin your tire as many times. This can be done by dividing your rotations by ten then your pounds per acre by ten.

$$\frac{453.75 \text{ Rotations}}{10} = 45.375 \text{ Tire rotations for 0.1 acres} \quad \frac{60\text{lbs/acre}}{10} = 6\text{lbs/acre}$$

After spinning your tire slightly over 45 times the weight of seed collected should be around 6lbs/acre., if it is not, adjust the drill setting and spin the tire again to see how close you are to the desired weight.

Now some of these are just arbitrary numbers, your numbers will most likely be different in some way than what is given in the examples. The only number that stays as constant is the square feet within an acre, because that number will never change. As long as you follow the same basic steps as shown above you should be able to reach the right calibration.



## COVER CROP, EROSION CONTROL & POLLINATOR MIXES



## PCS ANNUAL PLOWDOWN



# BELL BEANS

## Vicia Faba

Maturity: 100 Day Annual



PEAS

## **Pisum sativum**

Maturity: 110 Day Annual



## COMMON VETCH

## **Vicia Sativa**

Maturity: 120 Day Annual



## SPRING OATS

## **Avena Sativa**

Maturity: 115 Day Annual

**SPECIES**

**Bell Beans**

**Peas**

**Common Vetch**

**White Oats**

**Drilled Seeding Rate:** 100-120lbs/acre

**Broadcast Seeding Rate:** 100-120lbs/acre

## AVAILABLE IN ORGANIC!

## BENEFITS:

**Soil Fertility:** The mix, containing nitrogen-fixing crops like Bell Beans and Peas, helps replenish soil nutrients naturally, reducing the need for synthetic fertilizers.

**Weed Management:** The dense cover provided by this mix helps suppress weed growth, reducing competition for resources and labor-intensive weed control practices.

**Erosion Control:** Common Vetch and Spring Triticale, with their robust root systems, aid in erosion control by stabilizing the soil, preventing soil loss during heavy rains or strong winds.

**Organic Matter Addition:** By incorporating organic matter into the soil upon plowing, this mix improves soil structure, enhances water retention, and promotes microbial activity.





PACIFIC COAST SEED™  
a NativeSeed Group company

# PCS SOIL BUILDER



## BELL BEANS

*Vicia Faba*

Maturity: 100 Day Annual



## PEAS

*Pisum sativum*

Maturity: 110 Day Annual



## MUSTARD

*Brassica Juncea*

Maturity: 80 Day Annual



## RADISH

*Raphanus sativus*

Maturity: 80 Day Annual



## CANOLA

*Brassica napus*

Maturity: 70 Day Annual



## TRITICALE

*X Triticale*

Maturity: 120 Day Annual

## BENEFITS:

**Soil Fertility:** The mix, containing nitrogen-fixing crops like Bell Beans and Peas, helps replenish soil nutrients naturally, reducing the need for synthetic fertilizers.

**Weed Management:** The dense cover provided by this mix helps suppress weed growth, reducing competition for resources and labor intensive weed control practices.

**Erosion Control:** Triticale, with its robust root system, aids in erosion control by stabilizing the soil, preventing soil loss during heavy rains or strong winds.

**Pollinator Benefits:** Canola, Radish, and Mustard flowers attract insects and pollinators enhancing diversity and potentially help pollination in orchards.

**Compaction:** The inclusion of Radish and Triticale helps break up soil compaction and improve water infiltration.

SPECIES
Bell Beans
Triticale
Peas
Mustard
Radish
Canola

**Drilled Seeding Rate:** 100-120lbs/acre

**Broadcast Seeding Rate:** 100-120lbs/acre



## POLLINATOR MIX

# PCS NITROGEN BUILDER



## BELL BEANS

*Vicia Faba*

Maturity: 100 Day Annual



## PEAS

*Pisum sativum*

Maturity: 110 Day Annual



## COMMON VETCH

*Vicia Sativa*

Maturity: 120 Day Annual

## SPECIES

**Bell Beans**

**Peas**

**Vetch**

**Drilled Seeding Rate:** 100-120lbs/acre

**Broadcast Seeding Rate:** 100-120lbs/acre

**AVAILABLE IN ORGANIC!**

## BENEFITS:

**Nitrogen Fixation:** The mix components fix atmospheric nitrogen and when broken down convert nitrogen into a plant usable form.

**Soil Health:** All three legumes contribute to increased soil organic matter, which enhances soil structure, water infiltration, and nutrient retention.

**Erosion Control:** The extensive root systems help bind soil particles together, reducing the risk of runoff and erosion.

**Beneficial Insects:** Bell Beans, Peas and Vetch can attract pollinators and other beneficial insects that prey on pests.

## ADDITIONAL FACTORS

**Soil type:** This mix prefers well-drained, fertile soils. Adjust the proportions or choose alternative species depending on your specific soil characteristics.

**Substitution:** If you're worried about vetch becoming a weed issue, Oats can be substituted in its place.

**Soil Conditions:** Adequate soil moisture and warm temperatures are crucial for microbial activity and faster decomposition. If the soil is dry, irrigation may be necessary to facilitate decomposition.

**Optimal Termination Time:** For optimal nitrogen benefits, terminate the cover crop when legumes are at approximately 50-60% bloom before they start producing seeds.

# PCS HIGH CARBON MIX



## OATS

*Avena Sativa*

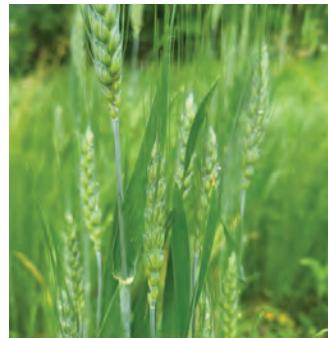
Maturity: 100 Day Annual



## TRITICALE

*Triticum aestivum x Secale*

Maturity: 120 Day Annual



## WHEAT

*Triticum Aestivum*

Maturity: 115 Day Annual



## PEAS

*Pisum Sativum*

Maturity: 110 Day Annual

## SPECIES

Oats

Triticale

Wheat

Peas

**Drilled Seeding Rate:** 100-120lbs/acre

**Broadcast Seeding Rate:** 100-120lbs/acre

**AVAILABLE IN ORGANIC!**

## BENEFITS:

**Carbon Sequestration:** The grains contribute significant aboveground biomass, which, upon decomposition, increases soil organic matter and promotes carbon sequestration.

**Nutrient Cycling:** Grasses like oats, triticale, and wheat are good at scavenging residual nutrients from the soil profile, reducing the risk of leaching.

**Reduced Compaction & Erosion Control:** The fibrous roots of oats, triticale, and wheat help alleviate soil compaction and improve soil structure, resulting in better water infiltration and reduced erosion.

**Weed Suppression:** The rapid growth of species like oats and triticale help suppress weed growth.

**Nitrogen Fixation:** Peas fix atmospheric nitrogen through a symbiotic relationship with bacteria, providing a natural source of nitrogen to the soil.



# PCS ANNUAL CLOVER MIX



## CRIMSON CLOVER

*Trifolium Incarnatum*

Maturity: 120 Day Annual



## PERSIAN CLOVER

*Trifolium Resupinatum*

Maturity: 120 Day Annual



## BALANSA CLOVER

*Trifolium Michelianum*

Maturity: 100 Day Annual



## ROSE CLOVER

*Trifolium Hirtum*

Maturity: 130 Day Annual



## MEDIC

*Medicago*

Maturity: 85 Day Perennial



## SUB CLOVER

*Trifolium Subterraneum*

Maturity: 100 Day Perennial

## BENEFITS:

**Annual Reseeding Mix:** To ensure successful reseeding, allow the clover and medic to go to seed naturally in the spring before mowing. Rainfall or cooler than normal temperatures during the summer can trigger premature germination potentially leading to seedling death if hot and dry conditions follow.

**Pollinator and Insect Forage:** The wide array of flowers and flowering time of the clovers makes for great pollinator habitat and can help attract beneficial insects.

**Low Residue:** With a low Carbon to Nitrogen (C:N) Ratio, the species should break down and release nutrients more rapidly while leaving minimal residue.

**Nitrogen Fixation:** The high amount of legumes in this mix can supply substantial amounts of nitrogen to the soil, potentially providing a nitrogen credit of 50-200 lbs per acre for subsequent crops.

## AVAILABLE IN OMRI APPROVED COATING

 **POLLINATOR MIX**

SPECIES
Crimson Clover
Persian Clover
Balansa Clover
Rose Clover
Sub Clover
Medic

**Drilled Seeding Rate:** 20-25 lbs/acre, **Broadcast Seeding Rate:** 30 lbs/acre



# LOW PROFILE BENEFICIAL HABITAT MIX

AVAILABLE IN OMRI  
APPROVED COATING



POLLINATOR MIX



## LOW PROFILE HABITAT MIX **quick look**

Seed Rate	18-25lbs/acre
PLANTING DEPTH	1/4"
GROWTH HEIGHT	24"
PLANTING TIME	Aug-Nov 15
BAG SIZE	1-50lbs

## LOW PROFILE HABITAT MIX seed make up

COMMON NAME	TYPE
WHITE CLOVER	LEGUME
PERSIAN CLOVER	LEGUME
WHITE YARROW	WILDFLOWER
ALYSSUM	WILDFLOWER
CAMPEDA SUB-CLOVER	LEGUME
ANTAS SUB-CLOVER	LEGUME
CREEPING RED FESCUE	GRASS
CALIFORNIA POPPY	WILDFLOWER
WOOGENELUP SUB-CLOVER	LEGUME
RED CLOVER	LEGUME
HARD FESCUE	GRASS
DWARF CORN FLOWER	WILDFLOWER
BROADLEAF TREFOIL	LEGUME
PHACELIA	WILDFLOWER
BLUE FLAX	WILDFLOWER
BABY'S BREATH	WILDFLOWER

# POCO & PEA MIX



## POCO BARLEY

**Hordeum Vulgare**

Maturity: 60-80 Day Annual

## BENEFITS:

**Quick Establishment:** Poco barley is one of the quickest cover crops available, reaching maturity in just 60 days, making it suitable for planting throughout the growing season. This ensures rapid ground cover and weed suppression.

**Nutrient Management:** The pea component, a legume, offers moderate nitrogen fixation, while barley effectively scavenges and recycles existing nitrogen in the soil, preventing nutrient leaching. This combination helps improve soil fertility and reduce the need for external nitrogen inputs.



## PEAS

**Pisum Sativum**

Maturity: 60-80 Day Annual

**Roller Crimping Suitability:** This mix is ideal for roller crimping, a non-herbicide termination method. When roller crimped at the appropriate stage (barley in the late boot through milk stage), it creates a thick mat of residue that further aids in weed suppression and soil moisture retention.

SPECIES
POCO BARLEY
PEAS

**Drilled Seeding Rate:** 75-100lbs/acre   **Broadcast Seeding Rate:** 75-100lbs/acre

# PCS SPICY MUSTARD MIX



## WHITE MUSTARD

*Sinapis Alba*

Maturity: 80 Day Annual



## NEMFIX MUSTARD

*Brassica Juncea*

Maturity: 80 Day Annual



## CANOLA

*Brassica Napus*

Maturity: 70 Day Annual



## DAIKON RADISH

*Raphanus sativus*

Maturity: 80 Day Annual



## ORIENTAL MUSTARD

*Brassica Juncea*

Maturity: 80 Day Annual

SPECIES
White Mustard
Nemfix Mustard
Canola
Daikon Radish
Oriental Mustard

Drilled Seeding Rate: 10-15lbs/acre

Broadcast Seeding Rate: 15-20lbs/acre



# POLLINATOR MIX

## BENEFITS:

**Biofumigation/Pest Suppression:** The mix utilizes natural biofumigation properties of the mustard varieties. These plants contain a high level of glucosinolates, which when incorporated into the soil and broken down, release isothiocyanates (ITCs). The ITCs act as natural fumigants, helping to suppress soil-borne pests.

**Pollinator and Insect Forage:** The flowering mustard, canola and radish varieties attract a wide range of beneficial insects, honey bees and various native bee species.

**Compaction:** The Diakon radishes deep taproot helps alleviate soil compaction creating better water infiltration and aeration in the soil, leading to improved drainage and reduced runoff.

**Weed Suppression:** The vigorous growth of the mix as well as some allelopathic effects of the mustard may help inhibit weed seed germination.

## MANAGEMENT:

To prevent the mix from reseeding and becoming a weed problem in subsequent crops, timely termination is crucial. The optimal time for termination is typically after the cover crop has reached its peak biomass production but before it begins to set viable seed. For the mustard and canola components, this is generally after they have flowered and begun to put energy into seed production, but before the seeds mature and drop. Terminating at this stage significantly reduces the likelihood of successful reseeding.

# PCS POLLINATOR BRASSICA MIX



## WHITE MUSTARD

*Sinapis Alba*

Maturity: 80 Day Annual



## NEMFIX MUSTARD

*Brassica Juncea*

Maturity: 80 Day Annual



## CANOLA

*Brassica Napus*

Maturity: 70 Day Annual



## DAIKON RADISH

*Raphanus sativus*

Maturity: 80 Day Annual



## ORIENTAL MUSTARD

*Brassica Juncea*

Maturity: 80 Day Annual

SPECIES
White Mustard
Nemfix Mustard
Canola
Daikon Radish
Oriental Mustard

Drilled Seeding Rate: 10-15lbs/acre

Broadcast Seeding Rate: 15-20lbs/acre



## POLLINATOR MIX

## BENEFITS:

**Early Bloom/Pollinator Forage:** Mustards and Canola bloom relatively early, providing crucial nectar and pollen resources for honeybees and native pollinators, particularly important in supporting honey bee colony growth and strengthening hives before and after the almond bloom. Honey bee colonies with access to mustard-mix cover crops may show increased strength and performance.

**Nematode Control:** Mustard varieties like Martigenna and Nemfix, have been specifically bred for their biofumigant qualities, which can help aid in suppressing nematodes and other soil borne diseases. This is achieved through glucosinolates when the plant material is incorporated into the soil.

**Compaction:** The Diakon radishes deep taproot helps alleviate soil compaction creating better water infiltration and aeration in the soil, leading to improved drainage and reduced runoff.

## MANAGEMENT:

The Pollinator Brassica mix should be terminated through mowing or disking after the cover crop has finished blooming or once honeybee colonies have been removed following pollination. To minimize the risk of residue during almond harvest, it's best to terminate the cover crop in April or Early May, allowing sufficient time for the biomass to decompose. However, if reseeding the cover crop is desired, leaving the plants intact until May or June may be necessary. The optimal termination date will depend on the cover crop planting date and local climate.

# COMPONENTS OF ROADWAY MIX



## ANNUAL RYE

**Lolium Multiform**

Maturity: 100 Day Annual



## BLANDO BROME

**Bromus Hordeaceus**

Maturity: 120 Day Annual



## SMOOTH BROME

**Bromus Inermis**

Maturity: Varies Perennial



## PRairie Brome

**Bromus Willdenowii**

Maturity: Varies Perennial

## MIX BREAKDOWN:

SPECIES
Annual Rye
Blando Brome
Smooth Brome
Prairie Brome

**Drilled Seeding Rate:** 10-15lbs/acre

**Broadcast Seeding Rate:** 25-35lbs/acre

## BENEFITS:

### FIELD ACCESS

Gain early field access to your crops, this mix, with its annual rye and brome grass components, provides a rapidly establishing and soil stabilizing ground cover. The quick growth of the annual rye helps to quickly suppress weeds and prevent erosion, which is crucial for preparing the field for the following crop. The brome grasses contribute their soil-binding properties and improve soil structure, leading to better drainage and a more trafficable surface, allowing for earlier access to the field for planting or other operations.

### Outdoor Wedding/Event Venues

For venue or event parking, this mix offers a durable and functional surface. The rapid establishment of the annual rye provides a quick ground cover that helps manage dust in dry conditions and reduce mud when it's wet, ensuring a more pleasant experience for attendees and vehicles. The strong root systems of the brome grasses stabilize the soil, supporting the weight of foot and vehicle traffic and reducing compaction, which is particularly beneficial in preventing damage to the soil structure during events. Overall, this mix helps create a more reliable and resilient parking area for outdoor events.

# PREMIUM WILDFLOWER EROSION MIX



## BLANDO BROME

*Bromus Hordeaceus*  
Maturity: 120 Day Annual



## ANNUAL RYE

*Lolium Multiflorum*  
Maturity: 100 Day Annual



## ROSE CLOVER

*Trifolium Pratense*  
Maturity: 130 Day Annual



## BALANSA CLOVER

*Tritifolium Michaelianum*  
Maturity: 100 Day Annual



## PERSIAN CLOVER

*Trifolium Resupinatum*  
Maturity: 120 Day Annual



## CRIMSON CLOVER

*Trifolium Incarnatum*  
Maturity: 120 Day Annual



## MEDIC

*Medicago*  
Maturity: 85 Day Annual



## CALIFORNIA POPPY

*Eschscholzia Californica*  
Maturity: 70-90 Day Annual

## BENEFITS:

**Erosion Control/Reseeding:** The combination of grasses with their fibrous root systems and legumes this mix provides dense ground cover, binds soil particles, and improves soil structure. This mix is ideal if your looking for an annual reseeding mix. Species need to be allowed to go to seed before mowing.

**Biodiversity and Beneficial Insects:** The inclusion of California Poppy attracts pollinators and beneficial insects, while clovers provide food and habitat, enhancing the overall ecosystem and potentially reducing pest problems.

**Enhanced Soil Fertility:** The high proportion of legumes in the mix boosts nitrogen fixation significantly. The various clovers also contribute to increased soil organic matter and improved soil structure.

**Weed Suppression:** The dense growth of the grasses helps to outcompete weeds.

SPECIES
Blando Brome
Annual Ryegrass
Rose Clover
Balansa Clover
Persian Clover
Crimson Clover
Medic
California Poppy

Drilled Seeding Rate: 25-30lbs/acre      Broadcast Seeding Rate: 30lbs/acre

# RS-401 EROSION MIX W/WILDFLOWERS



## BLANDO BROME

*Bromus hordeaceus*  
Maturity: 120 Day Annual



## ROSE CLOVER

*Trifolium pratense*  
Maturity: 130 Day Annual



## CRIMSON CLOVER

*Trifolium incarnatum*  
Maturity: 120 Day Annual



## CREEPING RED FESCUE

*Festuca rubra*  
Maturity: Varies Perennial



## ZORRO FESCUE

*Vulpia myuros*  
Maturity: 115 Day Annual



## PERSIAN CLOVER

*Trifolium resupinatum*  
Maturity: 120 Day Annual



## PCS WF MIX

Maturity: Mixed

## BENEFITS:

**Erosion Control:** The combination of grasses with their fibrous root systems and legumes this mix provides dense ground cover, binds soil particles, and improves soil structure. \*Mulching may be recommended for establishing on steep slopes.

**Biodiversity and Beneficial Insects:** The inclusion of our PCS WF mix attracts pollinators and beneficial insects, while clovers provide food and habitat, enhancing the overall ecosystem and potentially reducing pest problems.

**Enhanced Soil Fertility:** The high proportion of legumes in the mix boosts nitrogen fixation significantly. The various clovers also contribute to increased soil organic matter and improved soil structure.

**Weed Suppression:** The dense growth of the grasses helps to outcompete weeds.

SPECIES
Blando Brome
Rose Clover
Crimson Clover
Creeping Red Fescue
Zorro Fescue
Persian Clover
Wildflower Mix

**Drilled Seeding Rate:** 25-30lbs/acre    **Broadcast Seeding Rate:** 30lbs/acre

# RS-501 GENERAL PURPOSE EROSION MIX



## BLANDO BROME

*Bromus hordeaceus*  
Maturity: 120 Day Annual



## ANNUAL RYE

*Lolium multiflorum*  
Maturity: 100 Day Annual



## ROSE CLOVER

*Trifolium pratense*  
Maturity: 130 Day Annual



## CREEPING RED FESCUE

*Festuca rubra*  
Maturity: Varies Perennial



## PERSIAN CLOVER

*Trifolium resupinatum*  
Maturity: 120 Day Annual



## CRIMSON CLOVER

*Trifolium Incarnatum*  
Maturity: 120 Day Annual



## ZORRO FESCUE

*Vulpia myuros*  
Maturity: 115 Day Annual

## BENEFITS:

**Erosion Control/Reseeding:** The combination of grasses with their fibrous root systems and legumes this mix provides dense ground cover, binds soil particles, and improves soil structure. This mix is ideal if your looking for an annual reseeding mix. Species need to be allowed to go to seed before mowing.

**Nitrogen fixation:** The clovers in the mix form symbiotic relationships with soil bacteria (rhizobia) to convert atmospheric nitrogen into a form soluable by plants.

**Increased microbial activity:** Legumes, release root exudates that stimulate the growth and activity of beneficial soil microbes. The enhanced activity contributes to nutrient cycling and a more diverse soil ecosystem.

**Weed Suppression:** The fast establishing nature of annual ryegrass helps it compete with and suppress weeds.

SPECIES
Blando Brome
Annual Ryegrass
Rose Clover
Creeping Red Fescue
Crimson Clover
Zorro Fescue
Persian Clover

Drilled Seeding Rate: 25-35lbs/acre      Broadcast Seeding Rate: 35lbs/acre

# RS-601 QUICK COVER MIX



## ANNUAL RYE

*Lolium multiflorum*

Maturity: 100 Day Annual



## BLANDO BROME

*Bromus hordeaceus*

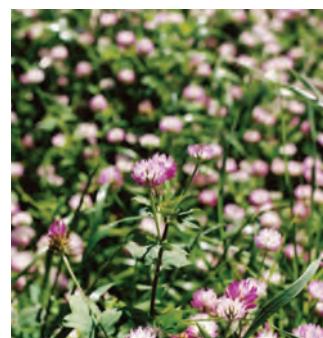
Maturity: 120 Day Annual



## ROSE CLOVER

*Trifolium pratense*

Maturity: 130 Day Annual



## PERSIAN CLOVER

*Trifolium resupinatum*

Maturity: 120 Day Annual



## CRIMSON CLOVER

*Trifolium incarnatum*

Maturity: 120 Day Annual

## BENEFITS:

**Erosion Control:** The combination of grasses with their fibrous root systems and legumes in this mix provides dense ground cover, binds soil particles, and improves soil structure. This mix is ideal if you're needing a quick erosion control solution.

**Nitrogen fixation:** The clovers in the mix form symbiotic relationships with soil bacteria (rhizobia) to convert atmospheric nitrogen into a form soluable by plants.

**Increased microbial activity:** Legumes, release root exudates that stimulate the growth and activity of beneficial soil microbes. The enhanced activity contributes to nutrient cycling and a more diverse soil ecosystem.

**Weed Suppression:** The fast establishing nature of annual ryegrass helps it compete with and suppress weeds.

SPECIES
Annual Ryegrass
Blando Brome
Crimson Clover
Rose Clover
Persian Clover

**Drilled Seeding Rate:** 25-35lbs/acre

**Broadcast Seeding Rate:** 35lbs/acre

## DRYLAND RANGE/EROSION MIX



### INTERMEDIATE RYE

*Trifolium incarnatum*  
Short lived perennial



### ANNUAL RYE

*Lolium multiflorum*  
Maturity: 100 Day Annual



### BLANDO BROME

*Bromus hordeaceus*  
Maturity: 120 Day Annual



### ROSE CLOVER

*Trifolium pratense*  
Maturity: 130 Day Annual



### BALANSA CLOVER

*Tritifolium michelianum*  
Maturity: 100 Day Annual



### PERSIAN CLOVER

*Trifolium resupinatum*  
Maturity: 120 Day Annual



### SUBCLOVER

*Trifolium subterraneum*  
Maturity: 100 Day Annual

## BENEFITS:

**Erosion Control:** Was originally developed for reseeding after fires on rangeland. This mix balances fast establishment while also providing forage for livestock.

**Boost forage quality in rangelands:** Seeding this mix as a range supplement where grasses are dominant can be beneficial in diversifying forage in the rangeland.

**Enhanced Soil Fertility:** The high proportion of legumes in the mix boosts nitrogen fixation significantly. The various clovers also contribute to increased soil organic matter and improved soil structure.

**Resilience to stress:** A diverse mix of species may be more resilient to environmental stresses like disease outbreaks.

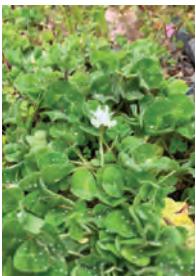
SPECIES
Intermediate Ryegrass
Annual Ryegrass
Blando Brome
Rose Clover
Balansa Clover
Persian Clover
Subclover

Drilled Seeding Rate: 25-30lbs/acre      Broadcast Seeding Rate: 30lbs/acre

# MOTHERLODE RANGE MIX



ROSE CLOVER



SUBCLOVER



ANNUAL RYE



HARDINGRASS



ORCHARDGRASS



PERSIAN CLOVER



BALANSA CLOVER



VETCH



BLANDO BROME

*Trifolium pratense*

*Trifolium subterraneum*

*Lolium multiflorum*

*Phalaris tuberosa*

*Dactylis glomerata*

*Trifolium resupinatum*

*Trifolium michelianum*

*Vicia sativa*

Maturity: 130 Day Annual

Maturity: 100 Day Annual

Maturity: 100 Day Annual

Maturity: 100 Day Annual

Maturity: Varies

Maturity: 120 Day Annual

Maturity: 100 Day Annual

Maturity: 120 Day Annual

*Bromus hordeaceus*

Maturity: 120 Day Annual

## BENEFITS:

**Erosion Control:** Was originally developed for reseeding after fires on rangeland. This mix balances fast establishment while also providing forage for livestock.

**Boost forage quality in rangelands:** Seeding this mix as a range supplement where grasses are dominant can be beneficial in diversifying forage in the rangeland.

**Enhanced Soil Fertility:** The high proportion of legumes in the mix boosts nitrogen fixation significantly. The various clovers also contribute to increased soil organic matter and improved soil structure.

**Resistance to stress:** A diverse mix of species may be more resilient to environmental stresses like disease outbreaks.

SPECIES
Rose Clover
Campeda Sub Clover
Woogenelup Sub Clover
Antas Sub Clover
Hardingrass
Berber Orchardgrass
Persian Clover
Balansa Clover
Vetch
Blando Brome

Drilled Seeding Rate: 25-30lbs/acre

Broadcast Seeding Rate: 30lbs/acre

BELL BEANS

PEAS

POCO BARLEY

## FLEX MIX

Flex enhances soil fertility through nitrogen fixation, improves soil structure and health by reducing compaction and increasing organic matter, suppresses weeds naturally, and controls erosion effectively. Ideal for use in vineyards, orchards. **Seeding Rate: 100-130lbs/acre**

CREEPING RED FESCUE

CHEWINGS FESCUE

SHEEPS FESCUE

## LOW GROW SHADE TOLERANT

Low-growing, shade-tolerant ground cover solution. All three fescue varieties in this blend are perennial, meaning they'll return year after year, establishing a long-term cover. This mix is often used in low maintenance or "no-mow" applications due to its slow growth habit, reducing the need for frequent mowing. Additionally, these fine fescues can contribute to soil health and provide erosion control in appropriate settings. **Seeding Rate: 15-18bs/acre**

OATS

WHEAT

BARLEY

## 3-WAY BLEND

This mix provides quick soil cover and helps suppress weeds and prevent erosion as a cover crop. This mix also makes a great forage blend when beardless wheat and barley are included in the mix.

**Seeding Rate: 100-120lbs/acre**

TRITICALE

RADISH

MUSTARD

CANOLA

## SOIL BREAKER

The dense growth of triticale and mustard provides excellent ground cover, suppressing weeds and preventing erosion, while radish and canola break up compacted soil and improve water infiltration. Additionally, mustard and canola's natural bio fumigant properties help reduce soil-borne pests and diseases, making this mix an effective cover crop. **Seeding Rate: 45-50lbs/acre**

BLANDO BROME

ZORRO FESCUE

ROSE CLOVER

CRIMSON CLOVER

## VINEYARD MIX

This mix provides robust ground cover to control erosion and suppress weeds, while the nitrogen-fixing clovers enrich the soil and improve its structure through their biomass. Additionally, the combination of these species supports a diverse and resilient ecosystem, promoting better water infiltration, nutrient cycling, and overall vineyard sustainability. **Seeding Rate: 30-35lbs/acre**

ANNUAL RYEGRASS

POCO BARLEY

ROSE CLOVER

## PCS EROSION MIX

Designed to provide robust ground cover and enhance soil health, particularly in erosion-prone areas. Annual Rye establishes quickly to suppress weeds and protect the soil, while Poco Barley offers superior erosion control through its dense growth and extensive root system. Crimson Clover enriches the soil with nitrogen through bacterial fixation and supports overall soil structure and fertility with its decomposing organic matter. **Seeding Rate: 30lbs/acre**



## Dryland & Irrigated Forage Mixes Hay Mixes Horse Pasture Mixes



## IRRIGATED PASTURE MIXES

OUR 6 IRRIGATED PASTURE MIXES ARE DESIGNED TO COVER ALL YOUR NEEDS. WHETHER YOUR PASTURE IS FOR SHEEP OR BEEF, LOW ELEVATION OR HIGH ELEVATION, WE HAVE YOU COVERED.

Bloat Resistant Mix	
COMMON NAME	TYPE
FORAGE TALL FESCUE	GRASS
ORCHARDGRASS	GRASS
LOFA FESTULOLIUM	GRASS
RILEY INTERMEDIATE RYEGRASS	GRASS
PK STRAWBERRY CLOVER	LEGUME
PK BROADLEAF TREFOIL	LEGUME

Beef and Sheep Mix	
COMMON NAME	TYPE
FORAGE TALL FESCUE	GRASS
LOFA FESTULOLIUM	GRASS
RILEY INTERMEDIATE RYEGRASS	GRASS
PK LADINO CLOVER	LEGUME
PK STRAWBERRY CLOVER	LEGUME
PK BROADLEAF TREFOIL	LEGUME
PK Red Clover	LEGUME

Dairy Pasture Mix	
COMMON NAME	TYPE
ORCHARDGRASS	GRASS
LOFA FESTULOLIUM	GRASS
RILEY INTERMEDIATE RYEGRASS	GRASS
TETRA. ANNUAL RYEGRASS	GRASS
PK RED CLOVER	LEGUME
PK LADINO CLOVER	LEGUME
PK STRAWBERRY CLOVER	LEGUME

SEEDING RATE	
SEED RATE	25-30 lbs per acre
PLANTING DEPTH	1/4"
PLANTING TIME	Spring or Fall
BAG SIZES	1-50lbs



Alkali Pasture Mix	
COMMON NAME	TYPE
FORAGE TALL FESCUE	GRASS
TALL WHEATGRASS	GRASS
PK HAY & GRAZE ALFALFA	GRASS
PK STRAWBERRY CLOVER	LEGUME
PK BROADLEAF TREFOIL	LEGUME

High Elevation Mix	
COMMON NAME	TYPE
FORAGE TALL FESCUE	GRASS
OLATHE ORCHARDGRASS	GRASS
SMOOTH BROME	GRASS
RILEY INTERMEDIATE RYEGRASS	GRASS
PK RED CLOVER	LEGUME
PK WHITE CLOVER	LEGUME
PK STRAWBERRY CLOVER	LEGUME
PK BROADLEAF TREFOIL	LEGUME

General Purpose Mix	
COMMON NAME	TYPE
ORCHARDGRASS	GRASS
RILEY INTERMEDIATE RYEGRASS	GRASS
FAWN FESCUE	GRASS
TETRAPLOID ANNUAL RYEGRASS	GRASS
PK LADINO CLOVER	LEGUME
PK TREFOIL	LEGUME
PK STRAWBERRY CLOVER	LEGUME
PK RED CLOVER	LEGUME

## Premium Dryland and Irrigated Horse Mixes

OUR IRRIGATED AND DRYLAND HORSE MIXES FEATURE FORAGE GRASSES ADAPTED FOR HORSE HEALTH AND GRAZING BEHAVIOR, FOCUSING ON PALABILITY AND DIGESTABILITY. MADE TO WITHSTAND GRAZING AND REGENERATE QUICKLY ALLOWING FOR EXTENDED PASTURE LIFE AND CONSISTENT FORAGE PRODUCTION

### SEEDING RATE

SEED RATE	25-30 lbs per acre
PLANTING DEPTH	1/4"
PLANTING TIME	Spring or Fall
BAG SIZES	1-50lbs

### Horse Mix #1

COMMON NAME	TYPE
ORCHARDGRASS	GRASS
LOFA FESTULOLIUM	GRASS
RILEY INTERMEDIATE RYEGRASS	GRASS
TETRAPLOID ANNUAL RYEGRASS	GRASS
PK STRAWBERRY CLOVER	LEGUME*
PK RED CLOVER	LEGUME*
PK HAY & GRAZE ALFALFA	GRASS

### Horse Mix #2

COMMON NAME	TYPE
ORCHARDGRASS	GRASS
RILEY INTERMEDIATE RYEGRASS	GRASS
TETRAPLOID ANNUAL RYEGRASS	GRASS
LOFA FESTULOLIUM	GRASS



### Dryland Horse Mix

COMMON NAME	TYPE
PAIUTE ORCHARDGRASS	GRASS
BLANDO BROME	GRASS
ANNUAL RYEGRASS	GRASS
HOLDFAST HARDINGGRASS	GRASS
PK DALKIETH SUB CLOVER	LEGUME*
PK CAMPEDA SUB CLOVER	LEGUME*
PK PERSIAN CLOVER	LEGUME*

### Thoroughbred Horse Mix

COMMON NAME	TYPE
LOFA FESTULOLIUM	GRASS
RILEY INTERMEDIATE RYEGRASS	GRASS
TETRAPLOID ANNUAL RYEGRASS	GRASS
ORCHARDGRASS	GRASS
KENTUCKY BLUEGRASS	GRASS
TIMOTHY	GRASS

## Hay Mixes

PRODUCING QUALITY HAY STARTS WITH QUALITY SEED. THE CAREFULLY SELECTED HAY MIXES OFFER YOU WELL BALANCED BLEND THAT WILL PROVIDE NUTRITIONAL BALANCE TO YOUR HAY.

SEEDING RATE	
SEED RATE	25-30 lbs per acre
PLANTING DEPTH	1/4"
PLANTING TIME	Spring or Fall
BAG SIZES	1-50lbs

### Overseeding Hay Mix

COMMON NAME	TYPE
RILEY INTERMEDIATE RYE	GRASS
TETRAPLOID ANNUAL RYE	GRASS

### Premium Hay Mix

COMMON NAME	TYPE
RILEY INTERMEDIATE RYE	GRASS
TETRAPLOID ANNUAL RYE	GRASS
ENDURANCE ORCHARDGRASS	GRASS
POTOMAC ORCHARDGRASS	GRASS
MARTIN TALL FESCUE	GRASS
PK RED CLOVER	LEGUME

### Grass Hay Mix

COMMON NAME	TYPE
RILEY INTERMEDIATE RYE	GRASS
TETRAPLOID ANNUAL RYE	GRASS
MARTIN TALL FESCUE	GRASS
ENDURANCE ORCHARDGRASS	GRASS
LOFA FESTOOLIUM	GRASS



# ANNUAL COOL SEASON, SMALL GRAIN GRASSES

PRODUCT	USES	SEED DEPTH	BEST PLANTED	PLANTING RATE (LBS/ACRE)	DAYS TO HEADING (OPTIMAL)
<b>Barely</b>	Forage, Cover	<b>1 - 2.5"</b>	Drill, Incorporated Broadcast	<b>50-100 (100)</b>	<b>120</b>
<b>Ryegrain, Fall</b>	Cover	<b>1 - 2.5"</b>	Drill, Incorporated Broadcast	<b>50-100 (100)</b>	<b>150</b>
<b>Ryegrain, Spring</b>	Cover	<b>1 - 2.5"</b>	Drill, Incorporated Broadcast	<b>50-100 (100)</b>	<b>100</b>
<b>Winter Triticale</b>	Cover	<b>1 - 2.5"</b>	Drill	<b>50-100 (100)</b>	<b>150</b>
<b>Spring Triticale</b>	Forage, Cover	<b>1 - 2.5"</b>	Drill	<b>75-120 (100)</b>	<b>115</b>
<b>Oats</b>	Forage, Cover	<b>1 - 2.5"</b>	Drill	<b>75-120 (100)</b>	<b>Varies by Variety</b>
<b>Wheat</b>	Forage	<b>1 - 2.5"</b>	Drill	<b>75-120 (100)</b>	<b>115</b>
<b>Annual Rye</b>	Forage, Cover, Erosion	<b>0.5 - 1"</b>	Drill, Incorporated Broadcast	<b>10-25 (20)</b>	<b>100</b>
<b>Blando Brome</b>	Cover, Erosion	<b>.125 - 0.5"</b>	Drill, Incorporated Broadcast	<b>10-30 (20)</b>	<b>120</b>
<b>Zorro Fescue</b>	Cover, Erosion	<b>0.125 - 0.5"</b>	Drill, Incorporated Broadcast	<b>4-10 (10)</b>	<b>115</b>

**\*Many Other Species Available**

# PERENNIAL COOL SEASON GRASSES

PRODUCT	USES	SEED DEPTH	BEST PLANTED	PLANTING RATE (LBS/ACRE)	BEST TIME TO PLANT
<b>Perennial Rye</b>	Irrigated Pasture, Turf, or Sod Cover	<b>0.125-0.5"</b>	Brillion, Drill, Broadcast (Incorp)	<b>20-30 (25)</b>	Fall, Early Spring
<b>Tall Fescue</b>	Irrigated Pasture, Turf, or Sod Cover	<b>0.125-0.5"</b>	Brillion, Drill, Broadcast (Incorp)	<b>20-35 (25)</b>	Fall, Early Spring
<b>Rescuegrass</b>	Dryland Range, Irrigated Pasture, Forage	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>20-35 (25)</b>	Fall, Early Spring
<b>Smooth Brome</b>	Pasture, Forage, and Hay	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>20-35 (25)</b>	Fall, Early Spring
<b>Orchardgrass</b>	Pasture, Forage, and Hay	<b>0.125-0.5"</b>	Brillion, Drill, Broadcast (Incorp)	<b>20-30 (25)</b>	Fall, Early Spring
<b>Timothy</b>	Pasture, Forage, and Hay	<b>0.125-0.5"</b>	Brillion, Drill, Broadcast (Incorp)	<b>5-20 (20)</b>	Fall, Early Spring
<b>Harding Grass</b>	Dryland Range, Irrigated Pasture, Forage	<b>0.125-0.5"</b>	Drill, No Till		Fall
<b>Kentucky Bluegrass</b>	Turf, Irrigated Pasture	<b>0.125-0.25"</b>	Brillion, Drill, Broadcast (Incorp)	<b>5-15 (15)</b>	Fall, Early Spring
<b>Creeping Red Fescue</b>	Turf, Erosion, Sod, Cover Crop	<b>0.125-0.5"</b>	Brillion, Drill, Broadcast (Incorp)	<b>15-35 (20)</b>	Fall, Early Spring
<b>Chewings Fescue</b>	Turf, Erosion, Sod, Cover Crop	<b>0.125-0.5"</b>	Brillion, Drill, Broadcast (Incorp)	<b>15-35 (20)</b>	Fall, Early Spring
<b>Hard Fescue</b>	Turf, Erosion, Sod, Cover Crop	<b>0.125-0.5"</b>	Brillion, Drill, Broadcast (Incorp)	<b>15-35 (20)</b>	Fall, Early Spring
<b>Sheeps Fescue</b>	Turf, Erosion, Sod, Cover Crop	<b>0.125-0.5"</b>	Brillion, Drill, Broadcast (Incorp)	<b>20-30 (25)</b>	Fall, Early Spring
<b>Festulolium</b>	Irrigated Pasture, Forage and Hay	<b>0.125-0.5"</b>	Brillion, Drill, Broadcast (Incorp)	<b>20-30 (25)</b>	Fall, Early Spring

\*Many Other Species Available

# ANNUAL COOL SEASON LARGE SEEDED LEGUMES

PRODUCT	USES	SEED DEPTH	BEST PLANTED	PLANTING RATE (LBS/ACRE) (REC)	DAYS TO FLOWER (OPTIMAL)
<b>Common Vetch</b>	Cover, Forage	<b>0.5-1.5"</b>	Drill, Broadcast (Incorp)	<b>15-30 (25)</b>	<b>120</b>
<b>Purple Vetch</b>	Cover, Forage	<b>0.5-1.5"</b>	Drill, Broadcast (Incorp)	<b>15-30 (25)</b>	<b>125</b>
<b>Hairy Vetch</b>	Cover, Forage	<b>0.5-1.5"</b>	Drill, Broadcast (Incorp)	<b>10-25 (20)</b>	<b>120</b>
<b>Woolypod Vetch</b>	Cover, Forage	<b>0.5-1.5"</b>	Drill, Broadcast (Incorp)	<b>10-25 (20)</b>	<b>120</b>
<b>Spring Peas</b>	Cover, Forage	<b>0.5-1.5"</b>	Drill, Broadcast (Incorp)	<b>30-75 (50)</b>	<b>100</b>
<b>Winter Peas</b>	Cover, Forage	<b>0.5-1.5"</b>	Drill, Broadcast (Incorp)	<b>30-75 (50)</b>	<b>110</b>
<b>Bell Beans</b>	Cover	<b>1-2"</b>	Drill	<b>50-120 (100)</b>	<b>100</b>
<b>Large Fava Beans</b>	Food	<b>1-2.5"</b>	Hand Planted	<b>75-100 (75)</b>	<b>100</b>

**\*Many Other Species Available**

# ANNUAL COOL SEASON SMALL SEDED LEGUMES

PRODUCT	USES	SEED DEPTH	BEST PLANTED	PLANTING RATE (LBS/ACRE) (REC)	DAYS TO FLOWER (OPTIMAL)
<b>Crimson Clover</b>	Cover, Forage, Erosion	<b>0.5-0.75"</b>	Drill, Brillion, Broadcast (Incorp)	<b>15-40 (25)</b>	<b>120</b>
<b>Rose Clover</b>	Cover, Forage, Erosion	<b>0.5-0.75"</b>	Drill, Brillion, Broadcast (Incorp)	<b>10-25 (20)</b>	<b>130</b>
<b>Persian Clover</b>	Cover, Forage, Erosion	<b>0.125-0.5"</b>	Drill, Brillion, Broadcast (Incorp)	<b>5-15 (8)</b>	<b>120</b>
<b>Balansa Clover</b>	Cover, Forage, Erosion	<b>0.125-0.5"</b>	Drill, Brillion, Broadcast (Incorp)	<b>5-15 (8)</b>	<b>100</b>
<b>Subclover</b>	Cover, Forage	<b>0.125-0.5"</b>	Drill, Brillion, Broadcast (Incorp)	<b>10-25 (20)</b>	<b>100 (Varies By Variety)</b>
<b>Medic</b>	Cover, Forage	<b>0.125-0.5"</b>	Drill, Brillion, Broadcast (Incorp)	<b>10-25 (20)</b>	<b>85 (Varies By Variety)</b>
<b>Berseem Clover</b>	Cover, Forage	<b>0.5-0.75"</b>	Drill, Brillion, Broadcast (Incorp)	<b>15-40 (25)</b>	<b>130</b>
<b>Sweet Clover</b>	Cover, Pollinators	<b>0.125-0.5"</b>	Drill, Brillion, Broadcast (Incorp)	<b>75-100 (75)</b>	<b>100</b>

\*Many Other Species Available

# ANNUAL COOL SEASON FORBS

PRODUCT	USES	SEED DEPTH	BEST PLANTED	PLANTING RATE (LBS/ACRE) (REC)	DAYS TO FLOWER (OPTIMAL)
<b>Flax</b>	Diversity, Pollinators	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>5-25 (10)</b>	<b>120</b>
<b>Coriander</b>	Diversity, Pollinators	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>10</b>	<b>90</b>
<b>Carot</b>	Diversity, Pollinators	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>5</b>	<b>120</b>
<b>Dill</b>	Diversity, Pollinators	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>5</b>	<b>100</b>
<b>Phacelia</b>	Diversity, Pollinators	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>5-15 (12)</b>	<b>75</b>

**\*Many Other Species Available**

# COOL SEASON BRASSICAS

PRODUCT	USES	SEED DEPTH	BEST PLANTED	PLANTING RATE (LBS/ACRE) (REC)	DAYS TO FLOWER (OPTIMAL)
<b>Radish</b>	Cover, Forage, Pollinators	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>10-15 (12)</b>	<b>80</b>
<b>Yellow Mustard</b>	Cover, Pollinators	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>5-15 (8)</b>	<b>80</b>
<b>Brown Mustard</b>	Cover, Pollinators	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>5-15 (8)</b>	<b>90</b>
<b>Canola</b>	Cover, Pollinators	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>5-15 (8)</b>	<b>70</b>
<b>Forage Rape</b>	Cover, Pollinators	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>5-15 (8)</b>	<b>90</b>
<b>Kale</b>	Cover, Pollinators	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>5-10 (8)</b>	<b>90</b>
<b>Turnips</b>	Cover, Pollinators	<b>0.25-0.5"</b>	Drill, Broadcast (Incorp)	<b>5-10 (8)</b>	<b>90</b>

**\*Many Other Species Available**

# THANK YOU!

Good Luck on the upcoming season, we are always here to help at the contacts below.

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