



Annual Ryegrass - Cover

Seeding Tips

- ◆ Seed 25 pounds per acre.
- ◆ Seed at ¼" deep.
- ◆ Seed at least 60 days prior to killing frost.
- ◆ Getting the plants roots below the frost line prior to killing frost is one of the main keys to success.

Fertilization

- ◆ 30 Units of N in the fall.
- ◆ Manure can be used prior to seeding.

Management Tips

- ◆ Prevent annual ryegrass from going to head.
- ◆ Do not use in rotations with wheat.

Spring Control Management

- ◆ Glyphosate needs to be applied when the daytime temps are in the 50's and night time temps are above 40 for adequate translocation. An additional application of glyphosate may be needed 3-4 weeks after the initial application for a complete kill.
- ◆ Avoid burn down during cloudy wet conditions.
- ◆ Use full label rate of glyphosate and avoid using crop oil. <http://www.kbseed.com/tips.html>



Benefits

- ◆ Large quantity of root growth to add organic matter to the soil.
- ◆ Roots help break the soil hardpan.
- ◆ Scavenges deep nutrients.
- ◆ Can be used as a high quality forage.
- ◆ Sugars and root systems increase the beneficial bacteria in the soil to help offset toxins that affect feed quality and cow health.

BMR 6 Sorghum Sudans, Sudans, or Forage Sorghums - Forage

Seeding Tips

- ◆ Soil Temp 60 degrees and rising.
- ◆ Seed 1" depth in normal conditions or 1.5" in drier conditions.
- ◆ Seed 50 pounds per acre – Ensures a large first cut.

Varieties

- ◆ Summer Prince – More cold, wet, and disease tolerant.
- ◆ Summer Supreme – Large yields, photo sensitive gene-delays heading until daylight is less than 12.5 hours.
- ◆ Summer Dream – Dwarf plant, leafier, highest feed quality.
- ◆ AS9301 – Dry stalk for dry hay, aggressive plant, seed 30 pounds per acre.
- ◆ AF7401 – Plant 30" rows, 110 day maturity, dwarf plant, seed 6 - 7 pounds per acre.

Fertilization

- ◆ 60 units N for first cut – 40 days or 40 inches tall.
- ◆ 30 units N for second cut – 30 days after first cut.
- ◆ If using manure – check for available nitrogen.

Harvest Management

- ◆ Cut above two growth nodes – 6" for Summer Prince, Summer Supreme, Summer King, and AS9301, 3" for Summer Dream.
- ◆ AF7401 – Harvest with corn chopper approximately 2 weeks after flowering.
- ◆ Sorghum Sudans tiller after cutting making bigger yields on second cutting.

Feeding Management

- ◆ Add 12-15 points to the NEL calculation on NIR feed test.
- ◆ Digestible Fiber creates acetate to help buffer proprionate in the rumen.
- ◆ Enhances rumen health thus eliminating metabolic problems and increases butterfat production.
- ◆ Very high phosphorus digestibility – About 2 times higher than corn silage, also BMR 6 has better phosphorus digestibility than BMR 12 or BMR 18, higher phosphorus digestibility means more phosphorus utilization on the farm.
- ◆ Slow rate of passage in the rumen helps utilize the ration better.

Benefits

- ◆ Excellent root mass to increase soil organic matter.
- ◆ Breaks rootworm cycle eliminating need for GMO corn the next crop year.
- ◆ Superior cow health, soil health, and increased bottom line.
- ◆ Excellent weed suppression.



Radishes - Cover



We are the leaders in radish genetics and feel we will continue to be the leaders in radish genetics.

Steve Groff – Steve Groff Seeds, LLC

Seeding Tips

- ◆ No till after wheat.
- ◆ Chemical burn down may be needed prior to planting.
- ◆ Seed up to 1" deep.
- ◆ Mix with oats for highly erodible fields.
- ◆ Seed 6-10 pounds straight.
- ◆ Seed prior to September 30.

Fertilization Tips

- ◆ Seed immediately after manure applications to recover manure nitrogen.
- ◆ Apply 20 - 30 units of N as a starter fertilizer.

Growing Management

- ◆ Just sit and wait. Their size will simply amaze you.

Spring Planting Management

- ◆ No tilling into these fields works great, make sure you do preseed dress nitrogen test on these fields to see how much nitrogen was scavenged and released by the radish.

Benefits

- ◆ Provides large amount of organic matter.
- ◆ Help break up hard pan thus expanding the root zones for crops.
- ◆ Expanded root zone makes more nutrients available and increases your crop yield potential.
- ◆ All brassicas scavenge a lot of sulfur. Over time the soil's sulfur leaches into or below the compaction pan, and once the radishes reach this level they pull that sulfur to the surface for future crop use. Sulfur helps with the following plant functions: 1. Converts inorganic N to protein 2. Aids in chlorophyll production 3. Promote nodule formation in legumes. www.tillageradish.com

Forage Plus Oats/Trical 2700 - Forage

Seeding Tips

- ◆ Seed after August 1 since it is a cool season crop.
- ◆ Seed Trical 2700 at 70 pounds per acre.
- ◆ Can be put out after corn silage for a quick cover that will winter kill.
- ◆ Seed oats at 2 bushel per acre.
- ◆ Seed 1" deep.

Fertilization Tips

- ◆ Seed after manure applications to capture nutrients.
- ◆ Apply 30-40 units of N per acre if not using manure.

Harvest Management

- ◆ With adequate moisture and temperature they will be ready to harvest after October 15.
- ◆ Make haylage/balage.

Feeding Management

- ◆ There are no adjustments to the feed test when balancing a ration.
- ◆ Rate of digestion will be high because they will be in a vegetative stage at cutting compared to the reproductive stage.

Benefits

- ◆ Highly digestible fiber for healthy cows.
- ◆ Reduce soil erosion after corn silage.
- ◆ Lots of small roots to increase soil organic matter.
- ◆ Excellent weed suppression.

Trical 336 – Fall Trical - Forage

Seeding Tips

- ◆ Seed immediately following corn silage.
- ◆ Seed 100 pounds per acre, the earlier the seeding the better the yields and feed quality.
- ◆ Seed 1" deep.

Fertilization Tips

- ◆ Apply 20 units of N in the fall and 60 units of N in the spring. Will tolerate manure application in the spring.

Harvest Management

- ◆ Cut prior to flag leaf drop. Typically May 15th.
- ◆ Make haylage/balage.
- ◆ Cut in wide swath to reach ensiling moisture quickly.
- ◆ Slower heading than Rye.

Feeding Management

- ◆ Excellent energy and protein.
- ◆ Enhances rumen bacteria growth for increased cow health.
- ◆ No adjustment to the feed test.

Benefits

- ◆ Lots of small roots.
- ◆ Reduced soil erosion
- ◆ Extra nutrient utilization when added to your crop rotation.
- ◆ Helps break corn on corn cycle.

Cereal Rye - Cover

Seeding Tips

- ◆ Seed at 100 pounds per acre.
- ◆ Seed at 1" deep.
- ◆ Can be broadcasted.

Fertilization Tips

- ◆ 20 Units of N for early root development, spring fertilization is not required.

Management Tips

- ◆ Best time for burn down is between 12 and 20 inches tall.
- ◆ The carbon/nitrogen ration will start to imbalance after 20 inches.
- ◆ If wet weather conditions are present let grow longer to help dry soil, if dry are present burn down early.

Benefits

- ◆ Captures excess nitrogen in the soil.
- ◆ Helps with weed suppression.
- ◆ Roots and above ground biomass create large amounts of organic matter to help improve soil quality.

Timothy

Seeding Tips

- ◆ Seed until November 1.
- ◆ Seed 15 pounds per acre.
- ◆ Can be no tilled or conventional tilled.
- ◆ Plant a very early heading Timothy.
- ◆ Can be harvested or burned down.
- ◆ Contains 1.4 million seeds per pound and at 15 pounds per acre imagine the biomass produced on the field.

Fertilization Tips

- ◆ Apply 60 units of N in the spring if planning to harvest.

Management Tips

- ◆ Spray with 1 pint of 2-4-D in the spring for broad leaf weeds.

Harvest Management

- ◆ Will be ready by June 10.
- ◆ Double crop soybeans or sorghum sudan after harvest.
- ◆ Proper planting and weather produces 2 plus tons of dry matter per acre.

Benefits

- ◆ Excellent dry cow feed.
- ◆ Lots of small fine roots condition the soil.

Fertilizing Cover Crops

Cover crops grown for forage or strictly a cover do need an initial nutrient source for getting started. This nutrient source can be in the form of livestock manure or a commercial fertilizer. It is often thought that cover crops do not need any fertilization because they are supposed to be scavenging the excess nutrients from the prior crop. However, some fertilization to get started helps build the early roots to ensure winter survival on cover crops and early root development enhances later nutrient uptake. Forage cover crops utilize an additional 13 pounds of phosphorus for every ton of dry matter produced. Utilizing more phosphorus with forage cover crops helps utilize more manure on your farm.

Interesting Ideas

Last summer I was contacted by an individual who was interested in cow peas and tillage radishes. The goal of this planting combination was to have the cow peas produce nitrogen that would in turn provide nitrogen for the radishes to reach maximum growth and provide an abundance of nitrogen in the spring. A Kinze bean planter was used to plant this mixture. The cow peas and radishes were put in separate rows in the planter and were alternated. The radishes had cow peas 15 inches on each side of the plant and the radishes were spaced 30 inches from another radish row. The mix was planted around the end of July and the first frost killed the cow peas and the radishes were able to sustain until the temperatures dropped below 20 degrees. This spring the radishes and cow peas were completely broke down and when the corn was planted the goal was to place the corn row between the radish and cow peas rows. The cow peas have the ability to produce 100 – 150 pounds of nitrogen per acre. It was noted that when the corn was planted this spring the ground was extremely mellow.

BMR 6 Digestibility

Lignin is the primary constituent that provides strength to the cell wall. It is very much like rebar used in concrete. Lignin is the primary non-digestible component of forages. BMR 6 sorghums have 40-60% less lignin compared to conventional sorghums and BMR 6 sorghum silage has similar and often times better nutritive value than corn silage. The BMR 6 gene is highly superior to other BMR types, which include BMR 12 and BMR 18 genes. Studies have also shown that feeding BMR 6 silage in place of corn silage at either 35% or 45% of dietary dry matters resulted in greater milk production efficiency and higher milk fat percentage. The BMR 6 silage had greater NDF digestibility (NDFd) and cows fed the BMR 6 silage derived more energy from digestion of NDF compared with cows fed corn silage. In addition to providing nutritional benefits to livestock, increased forage digestibility of BMR 6 sorghums also provides economic benefits to the product in a couple of ways. First, more digestible forages can be substituted directly for a standard forage and because of the greater nutrient availability, animal performance will increase. Second, the composition of the diet can be change to reflect the additional nutritional value of the more digestible forage, which will reduce the need for energy concentrates and reduce overall production cost. Moreover, NDFd is an excellent tool for evaluation feedstocks. It has been demonstrated that cows have greater feed intake and produce more milk/meat when fed forages with higher NDFd values. A one unit increase in NDFd corresponds to a 0.37 pound per day increase in dry forage intake and a 0.55 pound per day increase in milk production. (Source: Growing Value in the Green – Sorghum for Forage Field Guide – This is an excellent publication available from Byron Seeds and Alta Seeds.)

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Broadcast seeding with light mulching

Last summer tillage radishes were broadcast into wheat stubble and a following the broadcast a light drag was pulled over the wheat stubble. The radish stand was good and this procedure showed good potential. With this in mind, I spread radishes between the rows of sweet corn prior to falling the sweet corn. After falling, I left the corn stalks over the radishes, and the moisture held very well under the stalks and provided a great environment for the radishes to grow up through the stalks. With this in mind, I feel there could be good potential in broadcasting radishes into wheat stubble, and immediately after broadcasting mow the wheat stubble with a bush hog or flail mower to create a mulch layer to hold the moisture in the soil.

Aerial Seeding

Aerial seeding is a good management tool when you want to get quicker cover crop growth in a field. It can be beneficial when seeding annual ryegrass into a corn grain crop in order to get the 60 days of growth prior to the killing frost. However, if soil moistures are not adequate and forecasted rainfall is low, the results that are desired may not be achieved.



Radish Names Defined

What's in a name? - Radishes have become quite popular the past few years primarily because of consistent yield increases on crop that are planted the following year. However, there is confusion in the some farming circles— particularly in the Midwest about what kind of radish we are talking about. Tillage Radish, oilseed radish, and daikon radish are the most frequent names associated with *Raphanus sativus*, the scientific name for this species. All these listed below are *Raphanus sativus* radishes with many different names associated with different uses. They are different when compared one with another. It'd be like using the generic term, "corn" to describe the many varieties of corn - sweet corn included.

Oilseed radish— As the name indicates these are *Raphanus sativus* selected for oilseed production, not root production. Seeding rate is sometimes double because of increased seed size. Roots are less aggressive and the plants are generally harder to winterkill. There are named varieties of oilseed radish.

Daikon radish— A selection of *Raphanus sativus* used for human consumption.

Tillage Radish - A trademarked name that describes the **best selection** of *Raphanus sativus* currently available for use as a soil conditioner and cover crop. Tillage Radishes are backed with 8 years of research at Cedar Meadow Farm in conjunction with the University of Maryland. (Source: www.tillageradish.com)