

Fall Planted Cover Crops

August is a great month to plant fall cover crops, especially after wheat harvest. There are three major types of cover crops: Grasses, Brassicas, and Legumes. Grasses (oats, cereal rye) have a fibrous root system and absorb soil nitrogen (N) and phosphorus (P) while adding soil organic matter. Brassicas (oilseed radish, rape/canola) suppress weeds and insects and reduce soil compaction and add active organic matter. Legumes (crimson clover, winter peas) are nitrogen fixers that add soil nitrogen.

Oats are easy fall crop to grow and may also be a source of forage. As a cover crop, drill 1 bushel or 30 to 60 pounds about 0.5 to 1.5 inches deep in the soil. If you are broadcasting seed, increase the seeding rate 10% (works well before a rain). Good seed to soil contact increases growth. Add 40 -50# N which may be in the form of manure, fertilizer, or as a legume companion crop to increase growth by 50% or more. If forage is desired, drill 2 bu./A and add fertilizer or manure to get 1-3 tons of forage that may be wet baled by Thanksgiving or early December. Oats tolerates temperatures down in the 20°'s F before it dies. If going to corn the following year, mow or cut the oats before it flowers to prevent spring N tie up due to a high carbon:nitrogen ratio in the straw. In other words, keep the oats in a vegetative stage.

Cereal rye loosens the soil and the fibrous roots provide P to the soybean plant. Drill cereal rye at 1.0-1.5 inches deep using 0.75-1 bushel/A. If you want forage in the spring (up to 4-5 tons), drill 2 bu./A and fertilize the cereal rye with manure or commercial fertilizer at 50-7#/A in the fall and spring. Cereal rye germinates at 32° F but for best results, try to plant before Mid-October to get a fall stand to reduce soil erosion, otherwise it will germinate in the spring. Cereal rye can be harvested in the spring in the boot stage and makes excellent haylage or silage. Cereal rye has an allelopathic (negative) effect on germinating weeds.

Oilseed radish or the Daikon radish is a white tuber that reduces soil compaction with roots 2-5 feet deep. Drill radish at 3-5#/A and 0.25 to 0.5 inches deep or broadcast seed on the soil surface. Oilseed radish perform better in mixtures and requires some nitrogen (50#/A) for good growth. Drilling or broadcasting oilseed radish at 1-2#/A with 7-8#/A crimson clover is a good mixture or 1-2# radish in alternating rows with 15-18#/A of winter peas is a good practice before corn. The radish force the legumes to produce more N but they die at 15° F and then the legumes will take back the N and carry it forward to the next crop. Radishes suppress weeds, promote earthworms, and increase beneficial insects. Radishes tend to really stink when they decompose (40-60°F) so be careful where you plant them!

Rapeseed or canola is another brassica that has deep fibrous root system and grows 3-5 feet tall. Rapeseed is a wild cousin of canola (oilseed) with greater winter hardiness than canola grown for seed. Drill rapeseed 0.25 to 0.5 inches deep at 2-5#/A. Rapeseed grows well in the fall and tolerates poor soil fertility and germinates at 41°F.

Crimson Clover (Dixie variety) is commonly grown with the radish in a mixture. If grown by itself, drill 16 pounds per acre (7-8#/A in a two-way mixture) 0.25 to 0.5 inches deep. Radish and crimson clover, due to their small seed size, are often broadcast on the soil surface and a good rain will promote good seed to soil contact and germination if planted in August or early September. Cover crops need a minimum of 60 to 90 days of growth to survive the winter. The later they are planted in September, the poorer the growth. One day in September is like 3 days of growth in October and a week of growth in November (unless it is really warm and sunny). Crimson clover can supply 100-125 pounds of N to the next crop.

Winter peas (Austrian or Windham) can be planted at 30#/A by themselves or 15-18#/A with radish. Austrian winter peas will generally die in the fall after growing 3-5 feet and produce 100-150 # N/A. The Windham variety of winter peas are more cold tolerant and are grown after early soybeans (harvested in September). If they survive the winter, let them grow in the spring to produce 75-100# N/A. All legumes and clover need to be properly inoculated to produce N.