Practice Specification
Cover Crop (Code 340)

Section

Cover Crop - 340 shall be planned and installed in accordance with the NRCS Standard detailed in the Field Office Technical Guide (FOTG) – Section IV – Conservation Practices. This document provides additional parameters, recommendations, references, and requirements for developing site-specific plans for this practice.

GENERAL DESIGN INFORMATION

Cover crops are crops that are not grown for harvest of grain, seed, hay, silage or other biomass, but which serve functions in crop rotation systems. Cover crops are typically grown to prevent soil erosion, improvement of soil quality, including the enhancement of soil structure, improvement of soil fertility, enhancement or preservation of environmental quality, provide food and habitat for beneficial insects and in the management of weeds, insect pests, and plant pathogens.

Producers often want to achieve more than one purpose when implementing this practice. It is important to properly determine the cover crops desired purpose(s) in order to select the best species –or species mixture - to achieve the intended purpose(s). Generally, no single cover crop species is ideal for all purposes. Criteria for the primary purpose of the cover crop selected by the decision-maker and identified in the cover crop standard shall be met. Achieving multiple purposes usually requires some compromise in the selection of species or mixture of species to plant. It is not required – and may not be possible – to meet all the Additional Criteria for each additional purpose designated by the decision-maker.

Table 1, Cover Crop – Common Species and Properties is a list of commonly used cover crop species in North Dakota, including information about the cover crops suitability for each purpose, plant growth characteristics and seeding recommendations. Evaluation of producer's intentions, site-specific conditions, and resource concerns are essential for selecting the species best suited to achieve the intended purpose(s). Table 1 is not an all-inclusive list, since most crop species could be considered as a cover crop. When planning/designing a cropping system with a cover crop specie that is not listed, consult the NRCS State Agronomist for species suitability or for the need to request a variance to determine if the crop is suitable for use in North Dakota.

Generally, multi-species cover crop plantings provide more and greater impacts/functions than single-species plantings. For example, oats and peas planted together tend to yield more and provide additional soil quality benefits then when planted alone. Where soil compaction is a concern, research has indicated a yield increase in crops following a cover crop of forage radish and rye, over following either planted alone.

To avoid seed production by the cover crop, plan seeding of the cover crop outside of its' normal seeding dates. For example, winter grains planted in the spring or warm season species planted late enough to be terminated by frost prior to seed maturity. However, a long vegetative period for some species may increase the potential for several leaf diseases. If not terminated in a timely manner, spring-seeded winter cereals may produce viable seed, which can be a potential weed source in the subsequent crop.

Be aware of herbicide carryover from prior crop years. Some herbicides may have residual effects lasting up to 18 months after application that inhibit various cover crop species establishment and or growth. NDSU-EXT has several publications to assist producers with herbicide carryover impacts on subsequent crop species.

Species Specific Considerations

Hairy vetch and sweet clover are not highly productive during the year of establishment, most of their production and/or function usually occurs during the second growing season. Consider planting these species with companion crops to maximize productivity (forage, soil organic matter, soil nitrogen, residue

for erosion control) during the first year and where they will be able to grow the following crop year. Hairy vetch is not considered winter-hardy in USDA Plant Hardiness Zone 3. When used north of Interstate 94, hairy vetch should not be used alone and should not exceed 20% of a cover crop mixture.

Two prolific seed producers, yellow sweet clover and black medic are listed as invasive in the ND Department of Agriculture Web-based Invasive Species Manual. These species shall be avoided near rangeland, since they can spread into pastures and displace native vegetation and may advance encroachment of introduced grass species such as smooth bromegrass and Kentucky bluegrass.

During its first year, yellow sweet clover root growth practically doubles between October 1st and freeze-up. Consider the effect of "hard-seed" and potential problems with volunteer plants in subsequent cash crops when selecting cover crop species. Live, dormant seed that fails to germinate is called hard seed. Hard seed that germinates in subsequent crop years may present a future weed problem. For example, sweet clover typically has hard seed that may lie dormant in the soil for up to 20 years.

Buckwheat (*Fagopyrum esculentum*) can cause certain allergenic reactions similar to peanut allergies. Buckwheat has a high percent of hard seed and volunteers easily in no-till systems and can become weedy in subsequent crops. To minimize the potential of buckwheat contamination in cereal crops (wheat, winter wheat, barley, oats), buckwheat is not recommended in cover crop and pollinator mixes planned in crop rotations with cereal crops or in areas adjacent (within 30 feet) of cereal crop fields. In cover crop or other plantings that include buckwheat, cereal crops should be avoided in those fields for the following 2 calendar years to minimize potential for volunteer buckwheat contamination in the harvested cereal crop.

In areas where cereal grain crops are not planned or grown there is no restriction on the inclusion of buckwheat in cover crop, pollinator or other plantings.

When initially establishing legumes, the proper strain of bacteria (inoculant) must be introduced into the forage system. The best way to introduce new bacteria is by planting inoculated seed. Inoculation of legume seed should occur prior to planting and can be successfully accomplished in several ways.

Inoculants contain live bacteria and should be used prior to the expiration date shown on the container. Likewise, pre-inoculated seed should be sown before the expiration date shown on the inoculant tag attached to the seed bag.

Inoculants and inoculated seed should NOT be stored where they will be subjected to high temperatures for a long time, and seed should NOT be mixed with fertilizer, as both practices can be lethal to bacteria.

Rhizobium bacteria are host specific, meaning certain bacterial strains work best with certain legume species. Therefore, it is important that the strain of bacteria is appropriate for the legume to be established. Commercial packages of inoculant list legume species for which the package is effective.

Once a field has a successful stand of a legume species, bacteria may remain viable in the soil for two to five years, and a subsequent planting of the same legume may not require inoculation. The most consistent method is to inoculate with the proper Rhizobium each time legume seed is planted, regardless of field crop history.

Seeding Guidelines

Cover crops have been grown successfully when seeded prior to or at the same time as the primary crop, inter-seeded or by broadcast seeding with incorporation. **No-till or direct-seeding of cover crops into the soil is the recommended and preferred method wherever possible. Seeding into a tilled, firm seedbed is also acceptable strategy.** A firm, weed-free seedbed is desirable to ensure accurate seed placement and good seed-soil contact at the proper depth to facilitate germination and stand success.

"Planting or Seeding Green" Method

Planting green refers to planting cash crops into living cover crops then terminating after instead of the more common practice of planting into desiccated cover crops terminated with herbicides or mechanical methods, such as crimping or rolling a week or more beforehand. Some farmers in North Dakota report

that they “plant green” (or “grow green”) to extend the soil conservation and soil health benefits of cover crops while mitigating the challenges of wet soil.

Producers are responsible to communicate with their crop insurance representative and understand any requirements relating to their crop production and cover crop termination dates when deciding to “plant green”. Refer to the NDSU-EXT publication, Growing Rye as a Cover Crop in North Dakota (A2010) for recommendations.

Large seed-size cover crops are recommended to be planted with a grain drill to optimize seed-soil contact and seed germination. Cover crop mixes consisting of entirely fine seed covers or cereal crops are suitable for broadcast seeding, see Table 1, Column 10 - Seed Size.

Broadcasting or spreading of the cover crop seed can be used when soil or crop conditions are not conducive to use of standard seeding equipment. **Aerial seeding is a broadcast seeding method.** Broadcast seeding methods without incorporation only offer a fair chance of adequate stand establishment and do not ensure uniform seed distribution, planting depth control, or provide adequate seed to soil contact.

When broadcasting cover crops, some method of light incorporation (harrowing, vertical disking, packing, etc.) shall be implemented to cover the seed and firm the seedbed in order to improve germination and cover crop success. Broadcast seeding of cover crops should be timed prior to forecasted precipitation events or scheduled irrigation applications when possible.

Due to the variability in success and lack of implementation data of broadcast seeding without seed incorporation, ND NRCS requires a variance for cover crop plantings without incorporation. The request will be submitted to the State Resource Conservationist, per ND variance policy.

Variance information needed when planning a broadcast seeding without incorporation.

- Producer Name
- Field Location maps
- Purpose of the cover crop
- Soil surface conditions at cover crop application
- Estimated soil moisture
- Crop / stubble conditions
- Cover crop seed/species planned
- Broadcast seeding rate
- Date of seeding
- Irrigation timing, amount, etc. (where applicable)
- Type of seeding equipment (spreader type mechanical or air delivery, high-wheel, floater, airplane, etc.)

Recommendations to improve success when broadcast applying cover crops over standing soybeans:

1. *Start application of cover crops when the soybean plant is showing 25-50% yellowing of leaves.*
2. *Apply cover crops when 40-50% of the sunlight can reach the ground between the rows. (Walk in the field a few rows to determine this)*
3. *For success, do not fly cover crops into soybeans that are immature (still very green). The seeds will most likely germinate and then mold (not enough sunlight to conduct photosynthesis and too moist of conditions).*
4. *Rule of thumb…don’t plant in the full shade.*

Recommendations to improve success when broadcast applying cover crops over standing corn:

1. *Apply cover crops when the corn plant is dried approximately to the ear.*

2. *Apply cover crops when approximately 50% of the sunlight can reach the ground between the rows. (Walk in the field a few rows to determine this.)*
3. *For success, do not apply cover crops into corn that is immature (still very green). The seeds will most likely germinate and then mold (caused by moist of conditions and insufficient sunlight to conduct photosynthesis).*

Seeding Rates

Seeding rates for individual crops when planted with a grain drill are provided in Table 1, Column 12 – Seeding Rate. There is a significant diversity in cover crop species and potential cover crop mixtures and rates, depending on the intended purpose or result by planting the cover crop.

Broadcast seeding rates for broadcast seedings will be increased 20% over the drilled rates.

Use certified seed and recommended species / cultivars whenever available. When certified seed is not available, common seed that is adapted to local soil and climatic conditions may be used. Consult State Agronomist prior to planting species not on cover crop list.

In accordance with all Federal and North Dakota Seed Laws Agricultural Seed Act and Administrative Rules, the germination and purity of each species in a mixture must be listed on the seed tag, as well as the percentage of each species in the mixture, to verify adequate amounts of Pure Live Seed (PLS).

Bulk seed must be a minimum of 85% PLS (Pure Live Seed). For seed lots testing below the minimum the seed rate must be based on PLS and not the bulk seed rate.

Seeding depth

Recommended seeding depths for individual species is found in Table 1 – Column 13, Seeding Depth. For cover crop mixtures, the ND-CPA-340 Workbook calculates a recommended average seeding depth based on the species selected.

Seeding Dates

Species Type and Season of Planting	**Dates** [1]
Cool Season Species & mixes with predominant cool season species	
Spring / Early Summer	April 1 – July 1
Late season (Post harvest)	August 5 to September 5
Warm Season Species & mixes with predominant warm season species	
Spring / Summer	June 1 to August 10

[1] Seeding dates may be adjusted up to 10 days (earlier or later) by the District Conservationist, based on local climatic and site conditions.

When planning with the client, Field Offices shall refer to the Average Frost Dates for the area where the cover crop is planned. These dates shall be used to determine the appropriate seeding date to establish a cover crop and expect to see benefits from it. Most brassicas (mustard, winter rape or canola, radish, turnip) are very winter hardy and will not terminate growth until air temperatures are at 25 degrees Fahrenheit or less.

Cover Crop Termination

Terminating cover crops using the right methods at the right time is critical to minimize detrimental water use, prevent excess vegetative growth and/or prevent the cover crops from producing seed, ensuring timely planting of the next cash crop. The three general methods of cover crop termination are freezing or winter kill, chemical, and mechanical (crimper, mow or clip, rolled, etc). Refer to the current NRCS/RMA Cover Crop Termination Guidelines for cover crop termination and subsequent cash crop planting guidance.

Planning Considerations

- Utilize cover crops to enhance crop diversity by adding crop types which are missing in the cash crop rotation (cool-season grass, cool-season broadleaf, warm-season grass, warm-season broadleaf). Diverse cover crop mixes improve the potential for a good, productive stand and positive impacts on multiple resource concerns.
- Check field conditions for multiple years of crop residue on the soil surface (an indicator of imbalance in the Carbon-Nitrogen Ratio). Plant residue with a lower C:N ratio will break down faster than plant residue with a high C:N ratio.
- Check for tillage-induced, restrictive (compaction) layers in the soil (use a tile spade to find crop roots growing horizontally above the compacted layer).
- Consider applying starter fertilizer (20-50 pounds of 18-46-0) especially in areas of nutrient-deficient or low organic matter soils and where residue accumulation is excessive. Soil nutrient tests are recommended to determine specific crop/field fertility requirements.
- Determine the leaching potential of design soil. Refer to FOTG – Section II – Soil Information – Soil Data Mart – Select State – Select County – Select Survey Area – Generate Reports – Select All or individual Map Units – Selected Soil Interpretations – Generate Report – Nitrogen Loss Potential – Generate Report and utilize producer's soil test nitrogen reports to determine the amount and depth of nitrogen in the soil profile.
- Consider using seed sources already on hand to reduce expense.
- If grazing cover crops, leave at least 50% of the available biomass on the soil surface as a component of a Prescribed Grazing (528) system.
- Utilize cover crops in a manner that maintains sufficient ground cover to prevent erosion.
- Consider potential use of cover crops by beneficial insects and wildlife for food or shelter.

CRITERIA FOR PLANNED PURPOSES

Reduce Sheet, Rill and Wind Erosion

Where the primary purpose of the cover crop is erosion control on cropland, tillage for seedbed preparation should be avoided or limited to maintain sufficient amounts prior crop residue necessary to control erosion to tolerable levels (T) or less. Most cover crop species, when allowed to grow near maturity provide sufficient residue to protect the soil surface. Refer to Table 1 – Column 1, Erosion Reduction for species selection.

When cover crops will be installed on sites where Critical Area Planting (342), found in FOTG – Section IV – Conservation Practices, is planned, plant the cover crop as soon as practical and according to the applicable seasonal requirement listed below. Seed perpendicular to the slope where water erosion is a potential hazard.

- Spring planting - seed two bushels of small grains per acre.
- Summer planting - seed 20 - 30 pounds per acre of warm season grasses per acre (millet, sorghum, sorghum-sudan).
- Fall planting - seed two bushels of winter wheat or winter rye per acre.

Additional Criteria to Protect Growing Crops from Damage by Wind-borne Soil Particles

Crops such as sugarbeets, edible beans, soybeans, and potatoes are very sensitive to wind damage from emergence to about the 4-5 leaf stage. The damage caused by sandblasting of tender seedlings by wind-borne soil particles, and physical damage from strong winds twisting and damaging the leaves and stems reduces both crop quality and yield. Use the current wind erosion prediction method to design and install a cover crop mix to reduce wind erosion to less than 0.5 ton per acre during the critical erosion period to protect seedlings.

Spring planting of small grain cover crops at .75 to 1.0 bushel per acre

- May be drilled or broadcast (use the higher rate when broadcast seeding)

- Timely application of herbicides and/or, mechanical methods to terminate the cover crop after sufficient growth and to prevent competition.
- Consider the “planting green” techniques for additional guidance.

Additional Criteria to Reduce Particulate Emissions into the Atmosphere

Where the primary purpose of the cover crop is wind erosion control on cropland, tillage for seedbed preparation shall be avoided or limited to maintain sufficient amounts of prior crop residue necessary to control erosion to tolerable levels (T) or less. Timely planting of cover crop species to allow sufficient growth prior to critical erosion periods, provide effective cover to protect the soil surface. Use the current wind erosion calculation method for determining the required amount of crop vegetation and / or residue needed to control wind erosion and reduce PM10 emissions. Refer to Table 1 – Column 1, Erosion Reduction for species selection.

Maintain or Increase Soil Organic Matter Quantity

Select cover crop species which produce the greatest biomass (above and below ground), refer to Table 1, Column 2 – Increase Soil Organic Matter Content and Column 17 - Mycorrhizal Fungi Association. Improvements in soil quality are related to healthy and balanced soil biology. A diverse plant community, both above and below ground is essential in building and maintaining good soil quality.

Terminate the cover crop as late as possible prior to seeding the subsequent crop to maximize the harvest of sunlight and the production of biomass.

When cover crops will be grazed, Prescribed Grazing – 528 shall be planned to ensure proper management of cover crop growth and used (i.e. take half, leave half) as a forage component of a planned grazing system. Refer to Table 1, Column 7 - Provide Supplemental Grazing to determine suitable cover crop species.

Reduce Water Quality Degradation by Utilizing Excess Soil Nutrients

Select species based on their ability to utilize or uptake large amounts of nutrients from deeper in the soil profile. Consider the carbon to nitrogen (C: N) ratio and its effect on nutrient cycling and residue decomposition. Brassicas (mustard, canola, radish, turnip) typically root deeper; therefore, are able to capture and utilize nitrogen from deeper in the soil profile. Brassicas also have lower C:N ratios (less than 30:1) in their plant residue. Lower C:N ratios will typically increase the decomposition rate of plant residue and nutrient release for immediate crop use. Refer to Table 1, Column 3 – Capture/Recycle Soil Nutrients, Column 8 – Rooting Depth/Water Use and Column 15 – Carbon to Nitrogen Ratio.

Mycorrhizal fungi associated with the roots of many cover crops increase the capture and cycling of nutrients by effectively extending the reach of the crop’s root system. See Table 1, Column 17 - Mycorrhizal Fungi Association, for information on the extent of mycorrhizal activity for each cover crop species.

Supply Nitrogen to the Subsequent Crop

The amount of nitrogen (N) produced by a legume cover crop and the amount of N available to the following crop can be estimated with the procedures detailed on pages 22-23 of “Managing Cover Crops for Profitability”, Third Edition, Sustainable Agriculture Network.
http://www.sare.org/publications/covercrops/covercrops.pdf

The specific rhizobium bacteria for the selected legume(s) will be applied at planting. When initially establishing legumes, the proper strain of bacteria (inoculant) must be introduced into the forage system. The best way to introduce new bacteria is by planting inoculated seed.

It is not necessary to incorporate legume cover crop residue with tillage to utilize its nitrogen content. Leaving legume residue on the soil surface will result in some nitrogen being lost to volatilization. Nitrogen contained in crop residues left untilled is mineralized (made available to plants) at a slower rate, is less prone to leaching, and tends to be available to subsequent crops throughout the growing season.

Tilling and disturbing the soil will initiate a faster nitrogen release, but has substantial negative effects to soil carbon, soil organic matter, aggregate stability and overall soil quality.

Yellow sweet clover terminated at 6-10" height stage of its second year will provide 80% of its potential nitrogen benefit, while allowing an extended period for soil moisture recharge. Annual legumes do not fix a significant amount of nitrogen beyond the flowering stage. Refer to Table 1 – Column 4, Promote Biological Nitrogen Fixation, for cover crop species that fix nitrogen.

Improve Habitat for Pollinators, Beneficial Organisms, or Natural Enemies of Crop Pests

Cover crops are an excellent tool to add to the diversity of crop types within an existing crop rotation. Avoid the use of seeds treated with insecticides or fungicides. Select cover crop species to achieve one or more of the following: species mix with different maturity dates, attract beneficial insects, attract pollinators, increase soil biological diversity, serve as a trap crop to manage damaging insects, and/or provide food and cover for wildlife habitat management.

Install cover crop plantings to grow the biomass to provide nutrition to the insects, animals and micro-biology in the soil which decompose the crop residue throughout the growing season, adding diversity to the soil biology. Mycorrhizal fungi and their reproductive spores can be sustained by including a diversity of mycorrhizal dependent cover crops.

Design the cover crop mix with multiple broadleaf species with differing bloom periods to provide pollen and nectar for pollinators and other beneficial insects. The composition of these mixes may vary due to seed availability. Refer to Table 1, Column 11 – Crop Types and Column 16 – Attract Beneficial Insects, when considering species for improving crop rotation diversity.

Reduce Weed and Plant Pest Pressure

Mowing or clipping a cover crop prior to seed maturity reduces potential seed production in the cover crop and manage weed species that are present. (refer to Table 1 – Column 5, Pest Suppression).

Cover crops can be an important and effective component of an Integrated Pest Management program. Plant the cover crop in a timely manner, for production of sufficient biomass and or competition for weed species.

Using diverse crop types with varying growth and plant characteristics will help to alter or break weed, disease and insect life cycles. This occurs by changing the micro-climate in the crop canopy (shading, cooling, using soil moisture, etc.). Some plant pathogenic nematodes are suppressed by cover crops of oats, Brassicas (like oilseed radish and forage turnip), rye, sudangrass, and sorghum-sudangrass hybrids. Cover crops can be used to attract and trap damaging insects away from cash crops.

Winter cereals (wheat, rye and triticale) have vigorous growth which allows the plant to effectively compete with weed seedling, thereby suppressing or controlling weeds. Refer to NDSU Extension Bulletin A-199 for information on the use of rye in a crop rotation.
http://www.ag.ndsu.edu/pubs/plantsci/smgrains/a199w.htm

Improve Moisture Management

Cover crops can improve the water cycle on cropland where plant moisture use (transpiration) is insufficient and help reduce soil salinity at or near the surface. Seeding cover crops early in the season and allowing them to grow until terminated by frost will maximize water use and the harvest of sunlight (refer to Table 1 – Column 8, Rooting Depth/Water Use).

When the primary purpose of cover crop is to utilize soil moisture, the cover crop should be allowed to grow until a killing frost unless early termination is needed to allow seeding of the next crop or to prevent seed production. Hardy winter annual small grains are the most effective cover crop for the earliest spring growth and water utilization. Winter rye can be seeded late fall as a dormant seeding and still meet vernalization requirements.

Grass cover crops preceding a winter grain crop should be terminated by herbicides early enough (at least two weeks prior to planting of the winter wheat) to minimize competition for moisture and nutrients and eliminate the “green bridge” for leaf diseases.

Where limited soil moisture is a concern, the cover crop may be terminated early, while still achieving the other desired benefits. Manage soil moisture use by selecting efficient, water-using cover crop species and terminating the cover crop before excessive transpiration occurs. When lack of moisture may be a concern for seed germination of a row crop planted into spring cover crop a skip row planting technique can be used to have a zone of higher soil moisture.

When using a cover crop to manage for snow catch consider tall, strong-stemmed species like corn, sunflower, flax, etc, that remain upright over winter. These plants or their remaining stubble can effectively trap and distribute snow across a field, particularly on slopes and hilltops.

Other impacts of cover crops on soil moisture management include, canopy cover effects on soil temperature and evaporation, improvements in organic matter, water holding capacity, infiltration, and reduced compaction layers.

Minimize and Reduce Soil Compaction

Where soil compaction is the primary concern, design a cover crop mixture of strong, tap-rooted and shallower, fibrous-rooted species to provide the greatest potential benefit by improving soil organic matter, while breaking through the deeper compaction layers.

Cover crops with deep, penetrating taproots such as brassicas (i.e. forage radish, turnips), sugar beet, or sunflower can reduce subsoil compaction, improve infiltration and soil porosity. Grass crops (wheat, barley, rye or triticale), corn or sudangrass have fibrous root systems, adding significant biomass on and below the soil surface, reducing surface crusting and improving soil structure, aeration, and infiltration. Refer to Table 1 – Column 9, Minimize / Reduce Soil Compaction for species selection.

Operation and Maintenance

Prevent damage to the cover crop from fire, herbicide drift, excessive grazing, mowing too short or tillage.

Control growth of under-seeded cover crops as needed to manage moisture competition and shading stress on the primary crop by managing cover crop planting and termination dates.

Control weeds and other pests in cover crops by clipping, grazing, or using other appropriate integrated pest management techniques. Avoid use of insecticides when flowering species will attract pollinators or beneficial insects.

CHECK OUT AND DOCUMENTATION

- Minimum documentation required to certify this practice with the ND-CPA-340 Cover Crop Workbook FOTG – Section IV - Forms. NRCS will certify practice installation by documenting on the ND-CPA-340 Cover Crop Workbook Certification Worksheet with one or more of the following methods, (visual assessments of cover crop growth, percent ground cover, biomass produced, stand counts, photo documentation, etc.) indicating if the practice installation met the planned purpose and was completed according to NRCS standards and specifications.
- Complete a field visit by a NRCS employee with cover crop job approval authority verifying seeding and status of the stand.
- Review the decision-maker’s purpose(s) for applying the cover crop(s).
- Record site conditions at planting time (soil condition, residue cover, weeds, etc.)
- Document the practice area on the plan map (aerial photo, ARCGIS map), indicating the area planted and legal description.
- Document the seeded cover crop mix, seeding date(s), rates, and method.
- Seed tag label(s) - the minimum bulk seed germination allowed for each species is 85%. If less than 85%, the seed rate must be based on PLS.

- Receipt or other documentation of how much seed was purchased.
- When a cover crop is planned to protect crops against soil abrasion or blow-out, identify the crop to be protected and its tolerance to wind erosion. Use current approved wind and water erosion prediction technology to determine required crop residue amounts needed.
- Use current approved wind and water erosion prediction technology to determine the Soil Conditioning Index (SCI), where applicable.
- Where supplemental grazing of cover crops is planned, include documentation of use for the Prescribed Grazing (528) plan.
- Assistance notes will document producer's site-specific conditions, discussions with decision-maker, and any factors relevant to the cover crop design and installation.

REFERENCES

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Specific Site Requirements