

Nutrient Scavenger Crop

Definition/Purpose

A Nutrient Scavenger Crop is a crop of small grain grown primarily as a seasonal nutrient scavenger. The purpose is to scavenge and cycle plant nutrients. The nutrient scavenger crop also adds organic matter to the soil, improves infiltration, aeration and tilth, improves soil quality, reduces soil crusting, provides residue for conservation tillage, and sequesters carbon. Benefits may include reduction of soil erosion, sedimentation and pollution from dissolved and sediment-attached substances.

Policies

1. For a nutrient scavenger crop to improve water quality, it must become quickly established, grow vigorously, and accumulate significant biomass in the early fall before nutrients are leached below the root zone. Only the following crops are eligible for this incentive. They **must** be planted by the planting deadline and sown at the seeding rates given below for each region.

Nutrient Scavenger Crop	Minimum Planting Rate	Coastal Plain Plant Deadline/ <i>Earliest Kill Date*</i>	Piedmont Plant Deadline/ <i>Earliest Kill Date*</i>	Mountains Plant Deadline/ <i>Earliest Kill Date*</i>
Barley	2-3 bu	Oct. 15/ <i>April 1</i>	Oct. 10/ <i>April 10</i>	Oct. 10/ <i>April 10</i>
Oats	3 bu	Oct. 15/ <i>April 1</i>	Oct. 10/ <i>April 10</i>	Nov.1/ <i>April 10</i>
Rye	2 bu	Nov. 30/ <i>April 1</i>	Nov. 30/ <i>April 10</i>	Nov.1/ <i>April 10</i>
Triticale	90 lb	Nov. 30/ <i>April 1</i>	Nov. 30/ <i>April 10</i>	Nov.1/ <i>April 10</i>
Wheat	2-3 bu	Nov. 30/ <i>April 1</i>	Nov. 30/ <i>April 10</i>	Nov. 1/ <i>April 10</i>

*Note: Planting deadline in standard print and earliest kill date shown in *italics*.

2. Establishment of nutrient scavenger crops must be planned well in advance to achieve a good stand. Seedbed preparation may be done by any suitable method. Seedbed preparation may be eliminated when nutrient scavenger crops are seeded by broadcasting into a standing crop, into residues of a previous crop by conservation tillage methods or when the harvesting procedure or residue shredding will cover seeds. No-till methods are preferred.
3. Drill or broadcast methods of seeding may be used. Broadcast methods of seeding should be completed prior to harvest for cotton and soybeans. For cotton or soybeans, it is highly recommended that seed be broadcast during the defoliation pass or before leaf drop. Subsequent leaf drop and harvest operations will cover seeds and help ensure good germination.

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4. Nutrient scavenger crops must be allowed to grow throughout the winter and early spring to achieve the purpose of the incentive. Greatest effectiveness is achieved if left to grow until the early boot stage. The planting and kill dates (see table under policy #1) are given in order to achieve optimum physiological maturity. Earliest kill date is April 1 in the Coastal Plain and April 10 for the Piedmont and Mountains.
5. No animal waste or fertilizer will be applied to these nutrient scavenger crops. The fields must not be grazed nor the crop removed. No burning of crop residue will be permitted.
6. No payment for this incentive shall be made until the nutrient scavenger crop reaches the kill date. Field office representatives shall verify each spring that cover has reached physiological maturity or has been left to grow until the required kill date. Field offices unwilling to assist operators in achieving success and monitor nutrient scavenger crop establishment and stand quality should not offer this incentive to cooperators in their district.
7. Disking or plowing destroys the majority of the soil quality gains associated with nutrient scavenger crop management. Therefore, while disking or plowing may be allowed by this practice, conservation tillage is encouraged.
8. Certified seeds or bin seed may be used for each year to receive the annual incentive payment. **Cooperators using bin seed must be careful to adhere to the restrictions imposed by the federal Plant Variety Protection Act, the NC seed rules and statutes, and laws governing the use of seed from patented plants.** Seed allowed for cost share includes rye, triticale, oats, barley, or wheat. Rye or triticale is preferred for higher rates of nutrient scavenging and biomass accumulation. Incentive rates are dependent on the species planted can be found on the average cost list.
9. Practice has a \$25,000 lifetime cap per cooperator. Each field is eligible for up to three annual contracts per cooperator. Annual contracts do not need to be consecutive years. The life of the BMP is one year.
10. Growers currently receiving state or federal cost share for any conservation tillage practice are not eligible for this practice on the same field or group of fields. (All conservation tillage incentive rates include cost of nutrient scavenger crops.)
11. Growers who have previously received state or federal cost share for any conservation tillage practice are eligible for this BMP.
12. When determining the acreage for which payments can be made for this practice, only the acreage actually planted shall be considered. The area occupied by farm roads, best management practices, ditches, structures, etc. shall not be included in planted acreage.
13. BMP soil, nitrogen, and phosphorus impacts are required on the contract. Include the planted acreage as well. Refer to the Minimum NCACSP Effects Requirements table later in this section for the correct methods of calculation.
14. On occasion it may be unavoidable for the cooperator to need to access the field when the traffic will result in ruts in the field (e.g., harvest operations). With documented approval from field staff, the cooperator can spot disk/level ruts to smooth out the

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surface. The field staff will work with the cooperators to stay in compliance with his/her conservation tillage contract. If field staff determines adequate cover can be established prior to next crop being planted, a cover crop should be planted immediately. The field staff can provide a recommendation on what might be best to plant as a quick cover. Cooperators must contact their district office for assistance.

- a. Field staff needs to determine the level of need for isolated disking. If smoothing the ruts will allow for the cooperators to stay in compliance, no contract extension will be required.
- b. If extensive disking and leveling occurs, contract must be extended by one year or cooperators must refund entire amount of incentive payment.

Recommendation

Growers are encouraged to establish this BMP using conservation tillage or long term no-till.

Standards

NC NRCS Technical Guide, Section IV, Standard #340 (Cover Crop), # 328 (Conservation Cropping Rotation), #329A (Residue and Tillage Management, No-Till and Strip Till), and #778 (Long Term No Till).

(Revised July 2009; Policy #14 added March 2010)