

Use of Triticale as a Cover Crop in Southeast U.S.

Maintaining a healthy soil, meeting environmental regulations and making a profit has increased interest in cover crops for some producers. One of the primary benefits of a cover crop desired by many producers is the addition of organic matter, which may in turn increase water infiltration and reduce runoff. Properly managed over time, these added benefits would increase yields and improve soil tilth. However, cover crops have the added benefit of potentially increasing beneficial insects, reducing weed pressure, increasing water holding capacity, increasing nutrient availability to the following crops, reducing soil compaction, reducing sand blasting of small seedlings that follow the cover crop, capturing nutrients that would otherwise leach into ground water during the fallow season and fixation of nitrogen (legumes). Thus, long-term use of cover crops has the potential of improving soil's productivity.

Selecting a cover crop, regardless of the tillage system, will greatly depend upon the crop rotation, producer's equipment and desired outcome. For producers with a mix of tobacco, peanuts, corn and soybeans, the desirable cover may include a mixture of legumes to fix nitrogen for corn and utilization of small grains for the higher value crops of tobacco and peanuts where precise nitrogen management is a concern. . Producers of continuous cotton may choose small grains alone to provide residue that adds organic matter, reduces erosion and sandblasting. Therefore, it is important to evaluate the needs before planting the cover crop. Regardless of the desired outcome, general traits that all cover crops should provide are as follows:

- Fast germination and seedling vigor
- Easy to suppress
- Provide desired benefits
- Low-cost to establish
- Competitive
- Re-seed (if desired)

Given these desirable traits, many producers are now experimenting with triticale as a cover crop. New varieties of triticale, a cross between rye and wheat, are currently available through Resource Seeds, Inc, that offer advantages as a cover crop. Resource Seed has spent years developing new varieties that are shorter, more tolerant of a wider spectrum of soil types, more vigorous and have potentially greater yields. In addition, Resource Seeds has specifically examined potential new varieties for forage and cover crop characteristics.

Two popular varieties developed by Resource Seeds, Inc. are Trical® 498* and Trical® 308* . Trical® 498 and 308 tend to be earlier-maturing varieties that may actually benefit from later plantings from mid-November through early-December. The later planting date may be beneficial to producers aiming to distribute the farm workload more evenly. These varieties have the potential traits for an excellent cover crop.

Trical triticale varieties are distributed by Southern States Cooperative, Richmond, VA and White Hat Seed Farms, Hertford, North Carolina.

It is important to note that many varieties of triticale are available on the market. Triticale is not a new crop. In fact, varieties have existed since the 1970's. However, past varieties tended to be tall and adapted only to a narrow range of conditions. Most varieties were classified as either winter-hardy, later maturing winter-types or winter-tender, early maturing spring-types. A lack of understanding of this difference resulted in many producers planting inappropriate varieties. As such, triticale often failed to meet producer or buyer's expectations. Trical® varieties are bred as intermediate maturing varieties better adapted for a wider area. Since the breeding and testing occurred in the Southeast from Virginia to South Carolina, the potential diverse differences in agronomic conditions of the Southeast are considered.

Since triticale is a cross of wheat and rye, it may offer producers the good qualities of both. Producers using triticale claim that it tolerates late plantings, emerges under harsh conditions, has good seedling vigor, tillers rapidly, has a deep, fibrous root system and matures early. Too, recent research suggests that some varieties of triticale are very winter hardy compared to most wheats. Triticale's mature size is approximately the same as, or slightly larger than wheat. Generally, the newer varieties tend to head some time from late-March to early-April depending upon the variety and when planted. Due to the extensive tillering and slightly larger stalk, residue is more similar to rye than wheat.

Termination of the crop can be earlier than wheat or rye without sacrificing greater capture of nutrients since heading generally occurs earlier than wheat or some ryes. Thus, the triticale cover crop can be terminated in a timely manner that should not delay subsequent planting. Producers utilizing this crop claim that triticale is easy to suppress, unlike rye. As an added benefit, triticale is believed to suppress many weeds allelopathically. Triticale is easy to grow, scavenges nutrients, provides cover to meet the environmental requirements and may be a perfect agronomic fit for many situations.

For many, the concept of cover crops may seem too costly. Consider, however, that cover crops recover unused portions of nutrients. A producer that applies the rate of 150 lbs. of nitrogen to corn that yields 100 bushels/acre removes only 53% nitrogen per acre. For cotton, yields of two bales remove approximately 63 lbs of nitrogen per acre.

TRICAL® Forage Triticale

Trios™ BioCrop Triticale

For either of these crops, lesser yields results in greater amounts of nitrogen remaining in the field to be potentially lost to runoff and leaching. Likewise, other nutrients are lost and must be replaced annually. Cover crops have the ability to recapture these nutrients and build soil tilth at a minimum cost. Simply stated, cover crops utilize existing nutrients during the fallow period. Prior to planting row crops, the cover crop or a portion of the cover crop is terminated to release these nutrients back into the soil over time.

Unfortunately, for many producers cover crops are often considered as a last resort when the soil has become unresponsive to high management inputs. Obviously, these producers have not been convinced that the value of these systems outweighs the costs.

For additional information on Trical triticale varieties, visit Resource Seeds website: www.resourceseeds.com or contact William(Bill) A. Smith, regional manager at (859) 802-2288 or wsmith@resourceseeds.com.

- Protection by the United States Plant Variety Protection Act as amended in 1994 has been applied for.

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