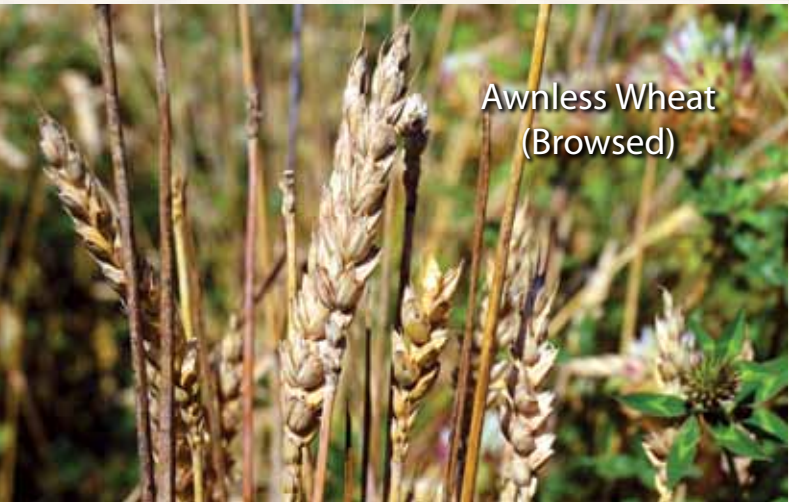


# Deer Prefer Awnless Wheat



Awnless Wheat  
(Browsed)



Awned Wheat  
(Not Browsed)

## By Craig Harper

Winter wheat is an excellent cool-season forage for white-tailed deer. Healthy, green, growing wheat contains more than 20 percent crude protein and less than 25 percent acid detergent fiber prior to maturing in mid-April to early May. Forage yield is commonly 4,000 to 6,000 lbs./acre (dry weight) from October through March, and wheat is a relatively high-preference forage of white-tailed deer. In cafeteria-style plot tests, wheat is consistently eaten by deer from the time it is planted in late summer/early fall through winter, regardless of what other forages are available. Wheat is cold-hardy, grows in a wide range of soil types, and is tolerant of relatively dry conditions. Thus, wheat can be grown in any region of the country where whitetails live. Wheat is easy to plant. It can be top-sown, even without cultivation, or it can be drilled. The germination rate is almost never below 80 percent, and seedling vigor is strong, all of which help make wheat the closest thing to a fail-safe, high-quality planting there is. All of this, however, *still* does not explain all the benefits of wheat. There is another attribute of wheat that is underappreciated, overlooked, and not well understood by many deer managers – wheat seedheads.

Wheat seedheads are a great source of energy, not only for white-tailed deer, but also mule deer, black bear, eastern gray squirrel, wild turkey, northern bobwhite, mourning dove, ruffed grouse, ring-necked pheasant, indigo bunting, blue grosbeak,

northern cardinal, American goldfinch, several species of sparrows, and... you get the picture. Lots of wildlife species benefit from wheat. Depending on variety, wheat seedheads rarely hit the ground. They are eaten on top of the stalk, beginning in the milk stage through mid-summer as long as they last. And for good reason. The energy and carbohydrate content of wheat seed, per weight, is comparable to that of corn and grain sorghum, and crude protein of wheat seedheads exceeds 12 percent, which is important in early summer when wheat matures as antlers are growing, does are lactating, and young turkeys and other birds are molting and growing. I am not suggesting wheat seedheads are a tremendous source of protein, but the protein content is greater than most seed, and it is a nice complement to the energy and carbohydrates provided. Micronutrients as well as vitamin content in wheat seedheads also are comparable or greater than that available in corn and grain sorghum.

**However, not all wheat seedheads are made equal.** Most varieties of wheat produce awned seedheads. Awns are those long, stiff, hair-like structures present on seedheads of some wheat varieties, as well as cereal rye and triticale. Awns actually are extensions of the lemma, which is part of the papery membrane that encases each seed on the seedhead. Other wheat varieties do not have awns. They are called “awnless” varieties. This distinction is important because it dictates preference of wheat seedheads by deer and other wildlife. Awnless wheat seedheads

are much preferred over awned varieties. Data collected by Ryan Blair, University of Tennessee Extension Area Grains and Cotton Specialist, and other UT personnel in west Tennessee show this clearly.

In these studies, grain production of 24 wheat varieties was evaluated across nine sites in west Tennessee. Five of the

## Craig's Favorite Wheat Blends

### Annual Blends

Best All-Around Annual Mixture:

- 40 lbs./acre wheat
- 20 lbs./acre crimson clover
- 5 lbs./acre arrowleaf clover

One Full Year of Forage Mixture:

- 40 lbs./acre wheat
- 15 lbs./acre crimson clover
- 5 lbs./acre arrowleaf clover
- 10 lbs./acre red clover

Cold Climate Plus Winter Forage:

- 100 lbs./acre wheat
- 3 lbs./acre forage rape, kale, or radish  
(or 1 lb./acre of turnips)

### Perennial Blends

Great Perennial Mixture for Most Sites:

- 40 lbs./acre wheat
- 4 lbs./acre ladino clover
- 5 lbs./acre red clover
- 2 lbs./acre chicory
- 1 lbs./acre forage rape or kale

Well-Drained to Relatively Dry Sites:

- 40 lbs./acre wheat
- 10 lbs./acre alfalfa
- 5 lbs./acre red clover
- 3 lbs./acre chicory

varieties were awnless:

USG 3013  
Winfield 9203  
Becks 88  
Dyna-Gro 9223  
Winfield SRW 9434

Deer were present and commonly foraged in the wheat fields at one of the study sites: Ames Plantation. There was no meaningful difference in grain yield between the awned and awnless varieties at the eight sites where deer were not a factor. But at Ames Plantation, deer clearly selected the awnless varieties for foraging. Take a look at the photo on this page, which was taken by Ryan Blair. The wheat in the picture has not yet been combined. The darker strips are the awnless varieties where deer have selectively eaten the seedheads. Deer or any other wildlife species hardly ate any of the awned wheat seedheads. Awned wheat at Ames Plantation yielded 55 bushels per acre. Due to foraging by deer, awnless varieties yielded only 11.

A fallow wheat field provides additional benefits for wildlife. If you are interested in wild turkeys and northern bobwhite, a fallow wheat plot provides outstanding structure for wild turkey and



The darker strips in this University of Tennessee test plot are the awnless varieties of wheat. They are dark because the seedheads have all been eaten by deer.

quail broods, as well as other species you might not think of, including ground-feeding songbirds. Vegetation cover 2- to 3-feet tall with an open structure at ground level is very attractive for these birds, especially when various forbs, such as common ragweed, horseweed, and daisy fleabane, also occur in the plot.

Winter wheat can be planted with a variety of other forages in both annual and perennial plots. I commonly add wheat to my perennial mixtures because not only is the wheat eaten, but it also provides a nurse crop for the perennial forages as they establish. One of my favorite annual mixtures is listed in the sidebar on the facing page as the “Best All-Around Mixture.” In my opinion, there is no better annual mix-

ture for deer or wild turkeys. Of course, there’s nothing wrong with just planting 150 lbs./acre of wheat by itself! In a pure stand, I suggest Harmony Extra, Clarity or 2,4-D for broadleaf weed control.

Considering ease of planting, management, and nutritional benefits for many wildlife species, it is difficult to beat a planting of winter wheat... especially if you plant an awnless variety.



**About the Author:** Dr. Craig Harper is a QDMA Life Member, professor of wildlife management and the Extension Wildlife Specialist in the Department of Forestry, Wildlife and Fisheries at the University of Tennessee. He is a frequent speaker at QDMA’s National Convention, Deer Steward courses, and other events.



### About This Article

This article was published in *Quality Whitetails* magazine, the journal of the nonprofit Quality Deer Management Association (QDMA). To become a QDMA member and receive *Quality Whitetails* six times a year, or to learn more about deer and habitat management, visit:

[www.QDMA.COM](http://www.QDMA.COM)