

WINTER ANNUALS MAKE \$ENSE

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Dennis Hancock, Extension Forage Specialist, and R. Curt Lacy, Extension Livestock Economist
The University of Georgia

It's likely that half-empty hay sheds and high feed prices will be the subject of discussion at most Cattlemen's meetings this fall and winter. But as we head into this fall, think seriously about grazing winter annuals this winter and next spring. If you manage them right, winter annuals can make a lot of sense (and money) on your farm. In this article, information will be shared on how to take full advantage of winter annuals and why grazing management affects how cost-effective winter annuals can be in your operation.

The Earlier, the Better

Oftentimes, winter annuals are lumped together without much thought about each species' unique characteristics. The two species that best illustrate this are cereal rye and annual ryegrass. Though they share similar common names and are often confused with one another, rye and ryegrass are quite different. Of course, the main difference that is important to cattlemen is their vastly different yield and growth patterns. Yield trials have shown that ryegrass will nearly always out-yield rye over the course of the entire season (Table 1). However, rye produces more forage earlier (in January – March), while ryegrass really doesn't take off until mid-March (Figure 1).

Table 1. Total forage productivity (lbs of dry matter per acre) of cereal rye and annual ryegrass in the UGA Statewide Variety Test Program's Tifton location from 1997 – 2007.*

Year	Rye	Ryegrass
	----- dry tons/acre -----	
1997	2.87	4.23
1998	2.77	3.77
1999	3.31	4.91
2000	3.25	4.68
2001	2.91	4.16
2002	3.91	3.63
2003	2.07	4.73
2004	4.30	5.78
2005	2.74	3.50
2006	3.32	5.16
2007	4.18	6.27
Average of 11-yrs.	3.24	4.62

* 'Wrens Abruzzi' cereal rye and 'Marshall' ryegrass were used in this summary since they were included in the variety trial in this location every year.

This difference in forage distribution between rye and ryegrass may seem subtle, but it can have a major impact on how many days your cows will spend grazing versus eating more expensive feedstuffs. In fact, researchers in Arkansas recently showed that when they added rye in the mix with ryegrass, one acre would support 10 cows (1200 lbs) for a total of 31 grazing days rather than the 24 days with ryegrass alone. That's a 30% increase just by adding rye into the rotation!

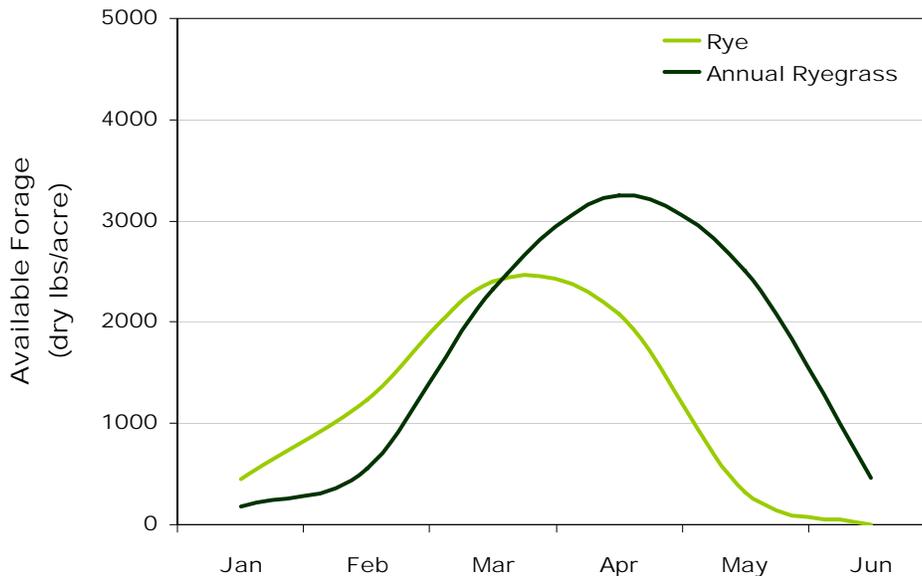


Figure 1. The typical distribution of available forage (dry lbs/acre) from rye (light green line) and annual ryegrass (dark green line) during late winter and early spring.

Winter Annuals must be Grazed Wisely

The objectives for this winter (perhaps more-so than in other years) is to get through with the minimum amount of feed. The mistake most people make with winter annuals is that they forget they need to dole it out like it is feed. Just because your rye or ryegrass is ankle-deep does not mean you should open up every gate on the place and let the cows have all of it at once. You need to feed winter annuals just like you feed grain: a little bit at a time.

Grazing strategy has a tremendous impact on the unit cost of winter annuals. Studies have shown that if cattle are continuously stocked (no rotation), they often will only harvest 35% of the potential growth. A slow rotational grazing system (4 or 5 paddocks rotated weekly) will increase grazing efficiency to 55%. A fast rotational grazing system using strips will increase that to about 75%, which is better than what could be expected from the most efficient use of hay (70%).

Sharpen your pencil and let's see what kind of effect this has on the bottomline. Let's look at a "best-case," "worst-case," and average scenario for rye and ryegrass. To do this, take today's costs for establishment and fertilizing an acre of winter annuals (\$150/acre) and divide it by the highest, lowest, and average yields of rye and ryegrass in the past 11 years from Table 1. That gives us the expected range in the cost per ton of forage produced. Remember, however, it is important to figure in how much is actually getting into the animal. To determine this "cost per ton of forage intake," the cost per ton of rye or ryegrass that is produced is divided by the grazing efficiency values for either the continuous stocking (0.35), slow rotational (0.55), or fast rotational (0.75) grazing systems. Below is an example calculation for a record rye yield of 4.3 dry tons/acre that is strip grazed.

$$\frac{\$150/\text{acre}}{4.3 \text{ tons/acre}} \div 0.75 = \$46.51/\text{ton of forage intake}$$

The results of this comparison for rye and ryegrass are in Figures 2 and 3. In general, rye will cost a little more than ryegrass on a "per ton of forage intake"-basis because ryegrass will typically out yield rye. However, notice in this comparison how important the grazing system is to the cost per ton of forage intake. If we had a bad year for winter annuals and we didn't manage the grazing, it would cost over twice as much (214%) than if we had stripped grazed it. Having a more intensive grazing system can thus help you hedge against a bad winter.

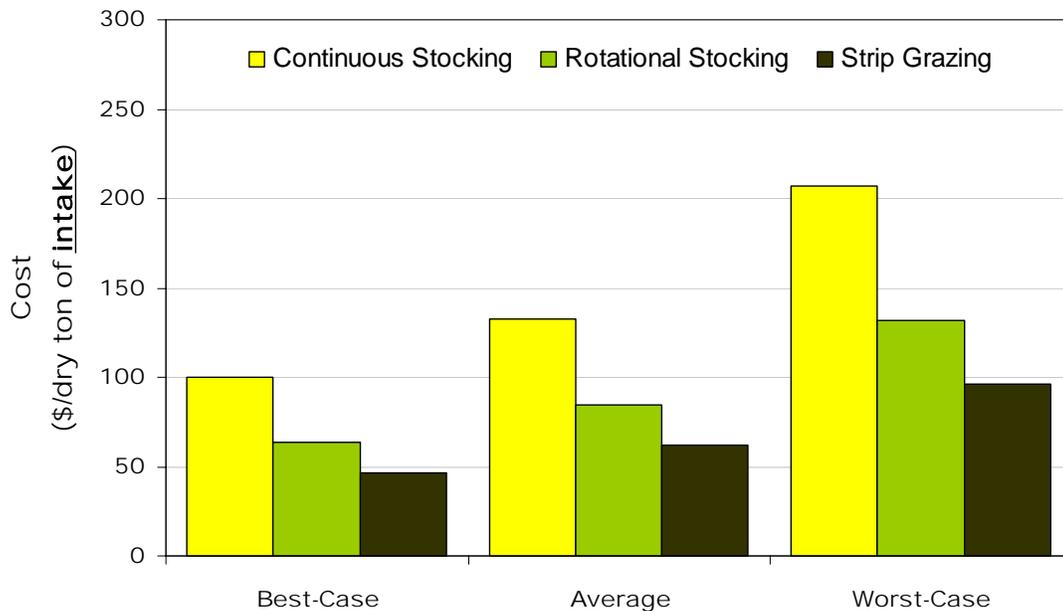


Figure 2. The estimated cost per ton of cereal rye forage under continuous, rotational, or strip grazing using the best, average, and worst yields during the last 11 years.

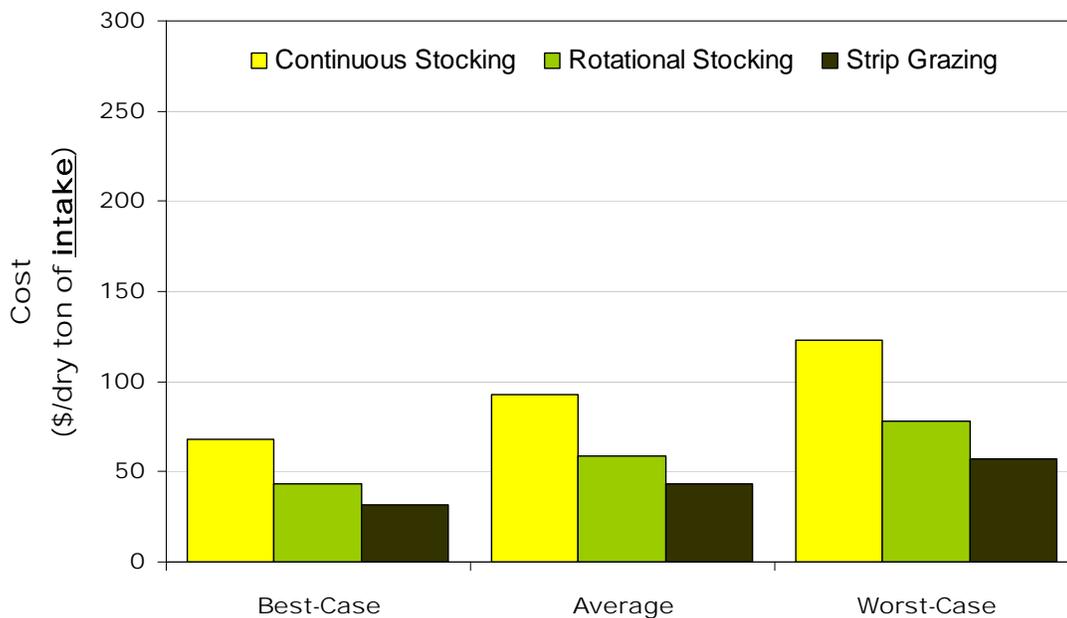


Figure 3. The estimated cost per ton of annual ryegrass forage under continuous, rotational, or strip grazing using the best, average, and worst yields during the last 11 years.

Now the homework assignment: Take it a step further and compare it to what it costs you to feed hay on a “cost per ton of forage intake.” Here’s a hint: If it comes out cheaper to feed hay than to strip graze winter annual pastures, you’ve probably done the math wrong.

To learn more about growing and grazing winter annuals, visit our website at www.georgiaforages.com or contact your local University of Georgia Cooperative Extension Service office.