

TIMELY INFORMATION

Agriculture & Natural Resources

Beef cattle performance from grazed mixtures of triticale and wheat with ryegrass

This Timely Information Sheet highlights the results of a cool-season annual grazing trial for growing cattle in South Alabama.

Why small-grain/ryegrass mixtures for growing cattle?

The main reason is the opportunity to extend the grazing season!

By planting mixtures of cool-season annuals that differ in their growth pattern, high-quality forage can be distributed more uniformly throughout the winter grazing season. The addition of ryegrass with small-grains is not a novel practice, but is often underutilized. The combination of small grains and ryegrass can produce longer grazing seasons, greater gain per acre and greater number of grazing days compared with cool-season annuals grown alone.

Why plant wheat and/or triticale with ryegrass?

Previous research in this area has shown that, when grown alone, ryegrass and wheat support greater beef performance than triticale. However, little information is available on beef production from mixtures of these species. A two-year study was conducted at the Wiregrass Research and Extension Center in Headland, Alabama to evaluate forage and animal production from these mixtures.

What are the forages mixtures that were evaluated?

Treatments:

Triticale + ryegrass

Wheat + ryegrass

Triticale + wheat + ryegrass

Seeding rates:

92 lb/ac 'Trical 2700' triticale + 10 lb/ac 'Marshall' ryegrass

92 lb/ac 'SS 8641' wheat + 10 lb/ac 'Marshall' ryegrass

45 lb/ac 'Trical 2700' triticale + 45 lb/ac 'SS 8641' wheat + 10 lb/ac 'Marshall' ryegrass

How were they established?

The above mixtures were planted into a prepared seedbed on replicate 3.5-acre pastures in November of each year of the experiment.

How were they managed?

Four Angus x Simmental steers were placed on each pasture to graze for the entirety of the grazing season beginning in January 2013 (Year 1) and December 2013 (Year 2). Prior to the start of the grazing season, steers were backgrounded on medium-quality bermudagrass hay for 60 days.

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Additional steers were added to pastures in order to maintain a forage mass of 1,500 to 2,000 lb of dry matter/acre. Grazing was terminated in May of each year when forage quantity and quality could no longer support animal performance greater than 2 lb of gain per day.

What are the key results and conclusions?

- All treatments produced high ADG with an average of ≥ 3 lb per day across the experiment.
- The table below shows the animal performance of the test steers during the experiment. There were no differences in animal performance among pasture systems. Mixtures of triticale + ryegrass were comparable to mixtures that include wheat + ryegrass in supporting average daily gain and total body weight gain per acre.
- Mixtures of triticale + wheat + ryegrass did not offer an advantage over triticale + ryegrass or wheat + ryegrass mixtures in the present study.
- The cost of gain was also similar among production systems.

	Treatment		
	Triticale + ryegrass	Wheat + ryegrass	Triticale + wheat + ryegrass
Initial body weight (lb per hd)	763	768	763
Final body weight (lb per hd)	1179	1181	1177
Average daily gain (lb per day)	3.1	3.3	3.2
Grazing season length (days)	128	128	128
Gain per acre (lb per acre) [†]	492	506	476
Stocking Rate (steers per acre)	1.2	1.2	1.2
Cost of gain (\$/lb of body weight)	0.66	0.63	0.64

[†]Calculated from average daily gain x grazing season length x stocking rate

Final Thoughts?

Many environmental and management factors affect the productivity and quality of small-grain/ryegrass mixtures. These different levels of forage productivity and quality affect animal performance and thus profitability. Producers should also consider the cold-tolerance of a given variety when selecting for more northern locations. Forages should be kept in a vegetative state and not allowed to become reproductive to maintain nutritive value throughout the grazing season.

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