

# Five Years of Alfalfa Research in Alabama – What Have We Learned?

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**F**ive years ago, our team joined forces with colleagues from the University of Georgia and the University of Florida.

What have we learned through our research and in working with farmers? Below are a few high points based on our observations and on-farm experiences:

**1) Yes, we can grow alfalfa in Alabama.**

In the 1970s and 80s, alfalfa was more widely planted in the state. Over time, stand decline and acreage decreased due to insect and disease pressure which eliminated many stands. The success of alfalfa in the North and Midwest US has in part been to improved variety development. The same principle applies to the Southeast. Forage breeders over the last several decades have developed varieties that have a longer growing window and are less susceptible to the warm, humid environment found in our state. The development of dual-purpose use alfalfa varieties for grazing or hay/baleage production has changed the alfalfa game in the Southeast.

**2) Alfalfa requires good soil and fertility management for success.**

Alfalfa has specific growth requirements to work in our forage systems. This includes selecting a well-drained establishment site, having a base pH of 6.5 or greater for planting, and proactive fertility management, especially for potassium. Alfalfa complements bermudagrass well

because these are also conditions required for bermudagrass production to thrive.

**3) Alfalfa forage production potential in Alabama is good, especially in year 2 and 3 following establishment.**

We have conducted a multi-year study at the Wiregrass Research and Extension Center in Headland, Alabama evaluating the incorporation of Bulldog 805 alfalfa into Tifton 85 bermudagrass. During the first year, average yield of the mixture for the growing was 13,000 lb of dry matter per acre from May through September. In the next two years, overall production increased by 30%. This is primarily due to additional cuttings in April and October. Alfalfa is a cool-season perennial forage with growth that complements bermudagrass. It is most productive in the spring and fall months, whereas bermudagrass dominates the mixture in the summer. Bermudagrass and alfalfa have very similar requirements for other macronutrients like potassium (K). While P and K still have to be applied in the system, the yields above in year 2 and 3 were obtained with the input of no nitrogen fertilizer.

**4) Alfalfa forage quality can reduce or eliminate the need for feed supplementation in beef cattle.**

Alfalfa is known as the “queen of forages” for a reason. Forage quality of alfalfa meets or exceeds the nutrient



requirements of beef cattle at most stages of production. Alfalfa or alfalfa-bermudagrass mixtures can have relative forage quality values exceeding 150, 65 to 75% TDN, and  $\geq$  15% crude protein. In most cases, no additional supplementation of beef cattle is needed when these sources are fed to meet daily animal dry matter requirements. As an example, two producer collaborators we have worked with for on farm demonstrations use alfalfa baleage exclusively for backgrounding their calves with reports of 2.25 to 2.5 pounds of gain per day.

**5) Alfalfa is often thought of as primarily a hay crop, but alfalfa baleage has emerged as a good fit for our weather conditions.**

Because of the high moisture in alfalfa, drying conditions following harvest are not always suitable to reach the target moisture, especially for spring cuttings. Baleage has become a viable option in the Southeast in recent years because it allows harvested forage to be baled at 40 to 60% moisture, which decreases drying time required in the field. When cutting for hay or baleage, the recommendation is to use a 28 to 35 days interval of regrowth, which will depend on growth rate throughout the year. When producing baleage, it is essential to properly seal and remove oxygen from material by using several plastic layers to wrap bales.

Is alfalfa for everyone? No. Does it have the potential to fit operations in the Southeast? Yes. Site selection, soil conditions, and variety selection are keys to getting started with alfalfa in Alabama.

If you are interested in learning more about alfalfa, please visit the following resources for more detailed information on how it might be a fit for your farm:

Establishment and Management



Video Resources on Alfalfa in the South



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