

FOREWORD

A result demonstration is a cooperative effort between area producers and members of the Texas Cooperative Extension Service to demonstrate new and improved agricultural practices which have been proven through research. This information is then made public through informative meetings, news media, publications, tours, short courses and newsletters.

The following statement made in the early 1900's by Dr. Seaman A. Knapp, father of the farm demonstration method of teaching, probably best summarizes the purpose of these demonstrations.

***“What a person hears he may doubt,
What a person sees he may possibly doubt,
But what a person does himself he cannot doubt.”***

There are many people who are due thanks in preparation of this report for their contributions of time, effort, material, supplies and financial assistance. Their names are listed with each demonstration report.

A special thanks goes to the Honorable Curt Goetz, County Judge, and County Commissioners Tommy Hunter, Ed Wilson, Kealon Hightower and Bill Langford for the interest they show in the agriculture community of this county and the support they give to the various agriculture programs.

Sincerely,

Jerry Nickerson
County Extension Agent-Agriculture
San Augustine County

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San Augustine County Beef/Forage Committee

Charles Boyette

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ESTABLISHMENT AND YIELD OF JIGGS BERMUDAGRASS

Cooperator: C.B. Richards (2001)

**Author: Jerry Nickerson, County Extension Agent-Agriculture
San Augustine County**

Summary: The vast majority of pastureland and hay meadows in San Augustine County consists of either Alicia bermudagrass or bahia grass. This is primarily due to the gravelly, red clay soil type that is located throughout this county to which many hybrid grasses do not respond well. In addition, Alicia is easy and relatively inexpensive to establish since it does not have to be sprigged; the tops may simply be cut and plowed in. In order to determine if some of the new hybrid grasses might respond to these soil conditions, and yet be inexpensive to establish, a total of 5 acres of Jiggs bermudagrass was planted May 9, 2000, by rancher C.B. Richards. However, since no measurable precipitation fell during the latter part of June and all of July and August of that year, it was determined the grass had died and the demonstration was rescheduled for the spring of 2001. But with an abundance of rainfall during the spring and summer of 2001, the grass re-established and produced 13.7 tons of hay per acre.

Objective: To determine the response of new and improved hybrid bermudagrasses in this area and to compare establishment costs and yields against that of Alicia bermudagrass.

Materials and Methods: Prior to planting of the Jiggs bermudagrass land was deep disked. Grass that was approximately 24 inches in height and had at least two joints was then cut with a sickle mower and spread on the prepared bed by hand at the rate of 50 bushels per acre and disked in. This five acre plot were established May 9, 2000. On May 10 this plot received approximately one inch rainfall.

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Results and Discussion: Following the one inch rainfall on May 10, no more measurable precipitation was received until June 12. At that time .5 inch of rainfall was received. Less than one inch rainfall was received during July and no measurable rainfall was recorded during August. This tract was observed in early September and it was agreed that the stand was lost due to drought and would be replanted in the spring

of 2001.

An abundance of rainfall was received late in 2000 and the early months of 2001. In April of 2001 this plot began exhibiting signs of bermudagrass regrowth, enough to warrant fertilizing. Approximately 5 tons per acre of broiler litter was applied in early April and the first hay cutting was made May 9. This first cutting yielded 21 round bales weighing 1,580 pounds each, or 3.3 tons per acre. Immediately following this cutting 400 pounds per acre of 16-6-12 fertilizer was applied. The second cutting was made June 10 and produced 580 square bales weighing 65 pounds each, or 3.8 tons per acre. Four hundred pounds of 16-6-12 was once again applied. The third cutting, made July 14, produced 3.2 tons of hay per acre. The fourth and final cutting, made August 19, produced an additional 3.4 tons of hay per acre. Total per acre yield for the year was 13.7 tons.

Cost of broiler litter spread was \$10 per ton and cost of 16-6-12 spread was \$167 per ton, for a total per acre fertilizer cost of \$116.80. Fertilizer cost per ton of hay was \$8.53.

Cost of establishing (sprigging) Coastal bermudagrass is \$90 per acre. Ground preparation is the same whether establishing Alicia or Jiggs. The only cost difference is that Alicia tops typically sell for \$1.00 per bushel whereas Jiggs tops sell for \$1.50 per bushel. However, once a producer has established a nursery plot of Jiggs, cost of

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establishment will be the same as that of Alicia. In addition, a producer will have the added benefit of a much greater yield per acre. The typical yield for Alicia and Coastal bermudagrass is 7-8 tons per acre. Thus, in this demonstration, the Jiggs bermudagrass outproduced both of these grasses by 71 to 96 percent.

Acknowledgements: Appreciation is expressed to C.B. Richards, Wilma Richards,

and son William Richards for their interest and cooperation in conducting this demonstration.

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BAHIAGRASS CONTROL

Cooperator: Ray Neil McEachern

**Author: Jerry Nickerson, County Extension Agent-Agriculture
San Augustine County**

Summary: In a demonstration conducted with Ray Neil McEachern, the herbicide Ally was applied at the rate of .3 ounce per acre to a bermudagrass hay meadow infested

with bahiagrass. Forty-six days after treatment it was estimated that 98% of the bahiagrass had been controlled.

Objective: To determine the effectiveness and economics of using Ally in the control of bahiagrass.

Materials and Methods: This demonstration was established April 9, 2001, on an Alicia bermudagrass hay meadow. The meadow was heavily infested with bahiagrass and yields over the last several years had declined significantly.

Ally, a dry flowable herbicide, was applied at the rate of .3 ounce per acre. A pto driven boom sprayer calibrated to deliver 14 gallons of water per acre was used to apply the herbicide. A commercial surfactant was added according to label instructions.

Results and Discussion: The demonstration site was checked periodically over the next several weeks. Within two weeks of treatment the bahiagrass was showing signs of yellowing, which steadily progressed. On June 6, 46 days post treatment, it was estimated that a 98% kill had been achieved without any detrimental effects on the bermudagrass.

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From the time of treatment throughout the summer an abundance of rainfall was received, which not only aided in activating the herbicide but also allowed the bermudagrass a full growing season in which to fill in many of the thin and bare spots caused by the disappearance of the bahiagrass.

Cost of Ally was \$26.85 per ounce. Thus, at the rate of .3 ounce per acre, chemical cost per acre in this demonstration was \$8.95. Producers need to be aware that Ally will not eradicate bahiagrass in their meadows but will control it to the point that increased hay yields from bermudagrass more than offset the chemical cost. Once

bahiagrass has been brought under control producers have the option of treating their hay meadows only when they feel production is being compromised by an abundance of bahiagrass.

Acknowledgements: Appreciation is expressed to Ray Neil McEachern for his interest and cooperation in conducting this demonstration. Appreciation is also expressed to Daryl Evans, Dow AgroSciences, for supplying the needed chemical.

APPENDICES

San Augustine County Agri-Facts

Altitude	156 - 502 feet
Land Area	545 sq mi (348,800 acres)
Forestland	279,000 acres
Lake Area	40,960 acres
Cropland	25,712 acres

Agriculture Producers	355
Total Agriculture Income	\$51,459,000
Poultry	\$28,626,000
Timber	\$16,529,000
Beef	\$3,363,000
Hay	\$2,369,000
Other	\$572,000

Annual Climatic Profile

Average Rainfall	52.2 inches
Temperature	
Average January	36 degrees
Average July	94 degrees
Average Wind Speed	9 MPH
Average Growing Season	238 days
Average Frost Free Dates	March 15 - November 16