MISSISSIPPI STATE UNIVERSITY EXTENSION

Using Improved Crabgrass Varieties in Southern Forage Systems

Volume 12, Issue 6

Rocky Lemus
Mississippi State University

June 2019

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As you travel across the southern USA, from Georgia to Texas to southern Florida, finding crabgrass in a pasture is very common. Although some producers might see it as a weed in our summer pastures, it has great forage attributes. Crabgrass is an annual warm-season forage crop that has prolific seed production, can reseed very well and it is adapted to a wide range of environmental conditions from drought to field with good water holding capacity. It grows well at soil pH ranging from 5.5 to 7.5.

Crabgrass should be established from mid-April to early June at a seeding rate of 4 to 6 pounds of pure live seed per acre since adequate sunlight is needed to stimulate proper seed germination. Planting after June could be risky due to the lack of dependability in good rainfall. Some seed is coated which allows better flow through the planter, but if the seed is fluffy and hairy, a carrier (fertilizer, dry sand or pelletized lime) might be needed to provide bulk and improve flow. Keep in mind that when using fertilizer as a carrier, a prolong seed contact with the fertilizer can damage the seed embryo and reduce germination. Broadcasting the seed can be difficult since the seed is very light and it will travel far from the spinner. Once germination starts and proper fertilization is provided, crabgrass can be grazed within 30 to 40 days. Nitrogen application of 50 units of nitrogen per acre per cut after emergence is recommended with a second application after grazing or cutting hay if extra forage is needed. Crabgrass can provide up to two cuts of hay per season when cut at the boot stage and leaving three to four inch stubble height, but it can dry slower due to the hairs in the leaf and stems. Grazing should begin when grass is 6 to 8 inches tall and stocking rates ranging from 800 to 1,200 pounds of live -weight per care can be implemented depending on biomass production, fertilization, and rainfall. Crabgrass can fit well into a rotation with your summer annual forage crops such as annual ryegrass or small grains.

Since the 1980s, there have been several cultivars released by R.L. Dalrymple and the Nobel Research Institute which include Red River, Quick-N-Big, Impact, Dal's Big River, and Quick-N-Big Spreader. These cultivars were tested at Mississippi State University in 2018 in a fertility trial where nitrogen was treated with fertilizer additives. Preliminary results indicated that Quick-N-Big Spreader was the highest yielding and had 24% greater biomass production than Impact, the lowest yielding (Fig. 1). Comparison of varieties under Mississippi conditions did not have significant advantage and variety selection and recommendation might be based most on seed cost. There was no nitrogen treatment impact on biomass production, but treatments containing fertilizer additives were lower yielding than the control (Fig. 2). This pre-

Table 1. Forage nutritive value concentrations among crabgrass varieties when pooled over nitrogen source treatments in 2018 at Starkville, MS.

Crabgrass Variety	CP	ADF	NDF	WSC
	Dry Matter (%)			
Dal's Big River	16.2	32.1	55.3	6.8
Impact	17.1	31.2	53.9	5.9
Quick-N-Big	15.8	33.0	56.9	6.7
Quick-N-Big Spreader	15.9	32.1	56.2	7.1
Red-River	16.6	32.3	55.2	6.5
Mean	16.3	32.1	55.5	6.6
$LSD_{0.05}$	NS	NS	NS	NS

CP = Crude Protein; ADF = Acid Detergent Fiber; NDF = Neutral Detergent Fiber; WSC = Water Soluble Carbohydrates.

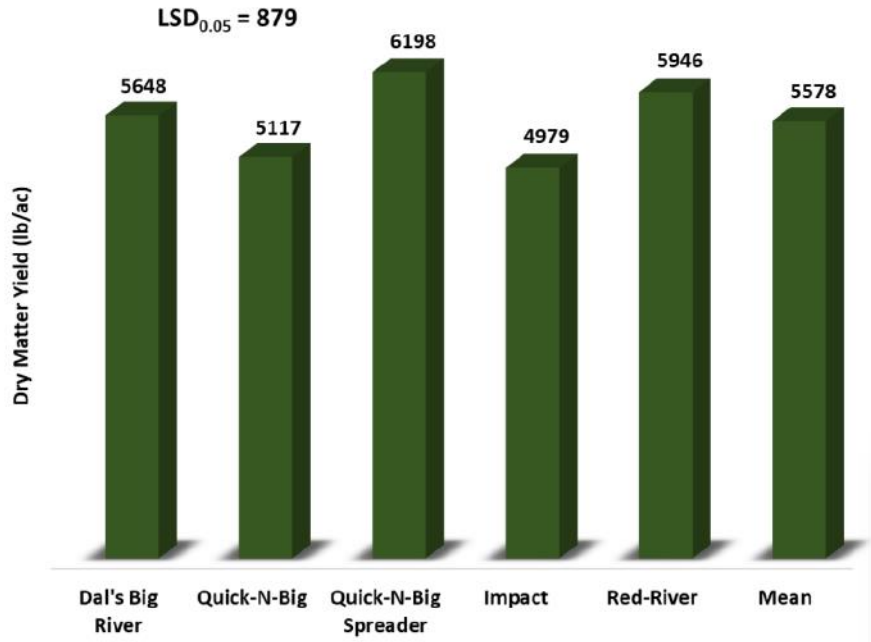

Figure 1. Forage biomass production among crabgrass cultivars in 2018 at Starkville, MS.

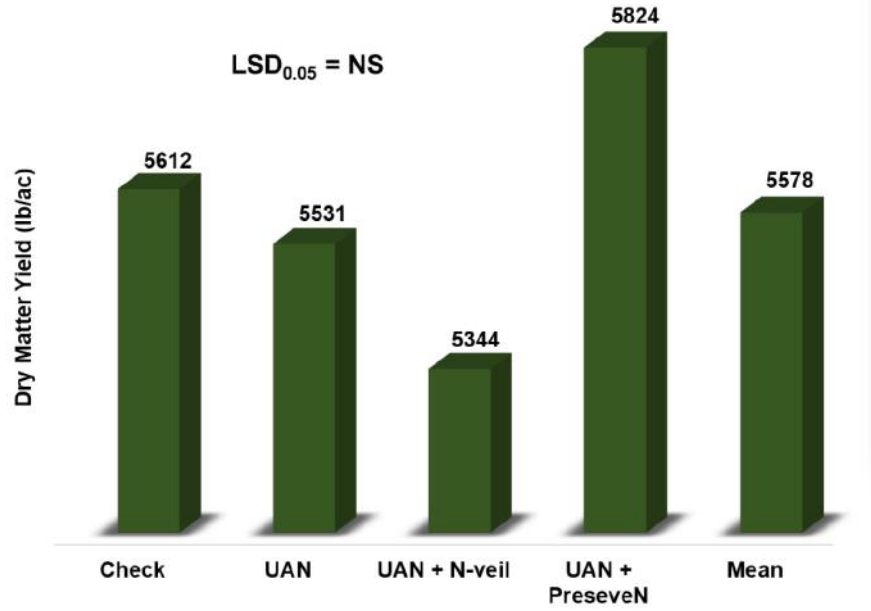

Figure 2. Influence of applied N treatments on crabgrass biomass production in 2018 at Starkville, MS.

liminary data indicates that nitrogen fertilizer additives does not guarantee that maximum forage biomass yields can be produced with the addition of these products to liquid urea ammonium nitrate (32%) in annual crabgrass production under the study conditions. Varieties had similar crude protein and acid detergent fiber concentrations (Table 1). It can provide good supplementation for stocker calves, lactating cows, horses and small ruminants (goat and sheep).

Upcoming Events

June 24—25, 2019—Grazing and Forage Production Workshop, Starkville, MS
July 16-17, 2019—Southern Cover Crop Conference, Auburn, AL

For upcoming forage related events visit: ***http://forages.pss.msstate.edu/events.html***

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