## DYNA-GRO CT14515 B2RF: A NEW MEDIUM-EARLY MATURITY VARIETY L. Stauber Dyna-Gro Seed Marion, AR C. Cook All-Tex Seed Victoria, TX

## **Abstract**

CT14515 B2RF is considered a medium-early to medium maturity upland variety type that has shown very good seedling vigor. This variety is considered smooth leaf cotton that has an open architecture with an associated bushy plant growth. Plant height is typically medium-tall which averages about 36 inches. This variety produces medium, oblong sized bolls averaging about 4.5 grams. Prior to harvest, CT14515 B2RF has demonstrated fiber retention of the open boll to provide a very good storm resistance score. It has also shown good tolerance to *Fusarium* Wilt diseases. *Verticillium* Wilt and Bacterial Blight disease responses are still being investigated. Preliminary data has indicated this variety expresses moderate tolerance to Southern Root Knot and Reniform nematodes. Plant growth regulators should be considered for vigorous in-season plant growth patterns. Observations of plant growth responses in various trials have concluded indeterminate behavior to production practices and environmental conditions. Often fruit set is early and rapid, thus typical late season stressors have not shown to affect extended boll development. Overall fiber quality in all trials provides lint fraction ranging from 40 to 44%, fiber uniformity index ranging from 83 to 86%, micronaire ranging from 4.5 to 4.9, fiber length ranging from 1.15 to 1.19 inches (37-38 staple), and fiber strength ranging from 30 to 34 g/tex. Estimated seed turnout percentages typically range from 50 to 52%.

Overall yield performance of internal and university data determined this variety to be adaptable to most all of the cotton growing regions and especially on sand to silt loam soils under well managed production systems (Fig 2.). However, limited yield data indicates very good adaptability for specific clay soil series. The best lint yield responses occur in the Southeast and Mid-South regions of the USA (Fig 1.). Lint yield analysis has shown that the variety is most stable when grown in environments with supplemented irrigation (Fig 3.). This variety has performed well with drip tape and pivot irrigation systems. Dryland production has provided very acceptable yield results. No-till production practices also compliment this variety. Best performance is achieved if planted early. Limited data indicates late plantings or double cropped production systems could achieve satisfactory yields. CT14515 B2RF additionally responds very well to irrigation and fertility for enhanced yields in most cotton growing regions. This variety has shown to be flexible for adaptation to mechanical harvesting methods of both stripper and spindle.

The average lint yield performance of CT14515, when compared to other commercially available varieties, resulted in a modest increase across all maturities evaluated. A more pronounced yield gain of 11.7% occurred against early and medium maturity comparisons. Fiber quality of CT14515 contributed positive advantages of more gin turn out, length, strength and uniformity as compared to the other evaluated commercial checks. Micronaire values were similar to the varietal checks studied. Based on preliminary analysis of the individual fiber parameters, premiums in crop loan value could be expected. Commercial variety checks used for reference measurements include, but not limited to, the following: All-Tex Nitro 44B2RF, DPL 0912B2RF, PHY 339WRF, PHY 499WRF, FM 1740B2RF, and DPL 1050B2RF.



Figure 1. Dyna-Gro CT14515 B2RF mean cotton lint yields per acre by geographic regions of USA.



Figure 2. Dyna-Gro CT14515 B2RF mean cotton lint yields per acre by soil texture.



Figure 3. Dyna-Gro CT14515 B2RF mean cotton lint yields per acre based on water management.