

Cotton. (*Gossypium hirsutum*),
Applications of Quantum, Micro 581, 9% Boron
Yield Increase

J. Allen, Coastal AgroBusiness,
Greenville, NC

Application of Quantum, Micro 581 and 9% Boron F for Enhanced Cotton Yields, 2011

Four trials were conducted in 2011 to evaluate the effects on cotton yields following treatments of Quantum and compare to an untreated check. Two trials were located in Colerain, NC and one trial was located in Oak City, NC. Plot sizes were 24 x 50 ft² and the cotton variety was Phytogen 375. Two applications of Quantum 15-0-12-8S at 1 gal/A were applied starting at 1 week after bloom, July 11th 2011, and again 10 days later on July 21 or 22, 2011.

In the fourth trial located in Kinston, NC, a single application of Quantum 5-0-20 at 1 gal/A was applied 3 weeks after bloom on August 16th, 2011 with Micro 581 and 9% Boron both at 1 qt/A and compared to an untreated check.

The Quantum products are clean, chloride-free liquid foliar nutrient blends utilizing slow release nitrogen technology and potassium thiosulfate. Nutrisol 9% Boron is used in soil and foliar applications on crops requiring boron. NutriSol Micro 581 is a formulation designed for use on crops requiring a balanced fertility program requiring trace elements.

During the growing season no visual differences could be observed at any of the trial locations. Boll counts taken at 30 DAT at one site in Colerain indicated that the Quantum treated cotton had 14.8 bolls/foot while the untreated was 11.6 bolls/foot. All plots were hand harvested and converted into lb/A lint using a 38% turnout.

Colerain NC :1		
Treatment	Yield (lb lint/A)	% Increase
Untreated Check	854.46	
Quantum 15-0-12 8S - 2X	982.71	15%
	128.25	
Colerain NC: 2		
Untreated Check	442.63	
Quantum 15-0-12 8S - 2X	493.83	12%
	51.2	
Oak City, NC		
Untreated Check	502	
Quantum 15-0-12 8S - 2X	60	20%
	99	
Average of the 3 locations	92.7 lb	16%

Kinston, NC		
Treatment	lb/A Lint	% Increase
Untreated check	1053.25	
1gal Quantum 5-0-20, 1qt Micro581	1126.82	
+ 1qt Boron 9% (3wks after 1st bloom)		
	73.57	7%

A yield increase was observed at all locations ranging from 7 -20% over the untreated check. With 2 applications of Quantum applied during blooming, the average yield increase was 92.7 lb/A lint which is 16% over the check. In Kinston, the single application with Quantum, Micro 581 and boron yielded a 73.57 lb increase which was a 7% increase over the untreated. Fiber quality measurements of strength, length and uniformity were also improved; however, there were no differences in micronaire. The results of this study indicated that a well balanced fertility program during blooming can improve cotton yields.

Quantum is a product of Coastal AgroBusiness, 3702 Evans Street, Greenville NC 27834
NutriSol Micro 581 and 9% Boron are distributed by Coastal AgroBusiness.