

COTTON PLANT GROWTH AND YIELD ENHANCEMENT BY LIPO-CHITOLIGOSACCHARIDE (LCO) AND ISOFLAVINOIDS

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Abstract

Cotton is the number one among all other fiber crops in the world. With the global economic recession and less cotton production in recent years, the price of cotton has gone noticeably high. LCO Promoter Technology is incorporated in 'Optimize' brand of products for legumes such as soybean, peanut, pea/lentils, and alfalfa, and it provides enhanced growth parameters and yield. EMD Crop Bioscience is evaluating LCO responses in non-legumes, including cotton. From production perspective, LCO could improve cotton production which was exhibited by our greenhouse and field trials. Greenhouse seed treatment showed increase leaf chlorophyll and overall plant dry weight increase by cotton seedlings. In replicated field trials, cotton seed treated with LCO helped increase cotton lint production. In 2007-2009, the average yield increase recorded from 12 sites was 109 lb/ac. Improvement in emergence, early seedling vigor and overall plant dry biomass all together led to final lint yield enhancement.