

**“The Effects of Professional actosol® on Soybean Growth”
Beaufort, North Carolina, October 1998.**

Increasing Yields:

Open Grounds Farm, a 44,000 acre farm located in Beaufort, North Carolina, applied Professional actosol® to several of its soybean fields in spring 1998. The objective of the trial was to determine the capability of actosol® to increase overall yield. Six areas of similar soil composition and topography were designated as test plots. All fields were managed identically throughout the growing season, with the only difference being the application of actosol® to the designated test plots.

A total of 275 gallons of Professional actosol® was applied to the soybean test plots at rates of one, two and three gallons per acre. Soybeans were harvested during the second week of November 1998 with a resulting increase in yields in the actosol® treated plots over the non-treated plots. Highest increases in yields were reported in test plots where Professional actosol® was applied at the rate of three gallons/acre. Soybean yields in plots treated at the rate of three gallons/acre increased a minimum of 15% and a maximum of 44%.

Reduction of Phytotoxicity:

Professional actosol® was applied as a 550 mg L-1 humate concentration (1.1 lbs./acre AI) in a foliar application with a post-emergence application of Blazer (aciflourfen) herbicide, surfactant and manganese. The soybeans were in the fourth trifoliolate. The stunting effects and phytotoxic effects of Blazer on soybeans are well published. This effect is exhibited by spotting of the leaves and is usually outgrown within 20 days under normal conditions. However, Blazer is a popular product due to its low cost and broad spectrum of weeds that it controls.

Fourteen days after treatment, test plots treated with actosol® and Blazer had progressed to the eighth trifoliolate while soybeans treated with Blazer alone were just beginning their fifth trifoliolate. The addition of actosol® to the Blazer significantly reduced phytotoxicity and enhanced growth resulting in an increase of 6.8 bushels per/acre at harvest. At 1997 market prices, the grower's initial investment of \$24.00 per acre resulted in a net return of \$21.90 per acre (91%) based on the 6.8 bushel increase at a market price of \$6.75 per bushel. The effects of actosol® were further magnified when consideration was given to the 4.5 inches of rainfall received, which was less than half of the average for the region.