



### PRODUCT OVERVIEW

**ProAct™** is a **Plant Health Regulator** product based on **Harp-N-Tek™**, which is a proprietary harpin protein technology from Plant Health Care. When **ProAct™** is applied to cotton, the harpin protein active ingredient binds to harpin receptors on the plant. Receptors respond to harpin as if it was a pathogen, and this reaction initiates an “inside-out plant response” that turns on cotton’s own intrinsic growth and stress-defense capabilities.

### RESEARCH FINDINGS

**ProAct™** activates growth mechanisms that result in improved plant vigor, increased plant stamina, and healthier plants which reinforce the plant’s ability to generate growth and stress-defense responses. This reinforcing circle of plant health results in improved yields.

→ Harpin-induced **plant growth effects** can include increased ion exchange reaction, elevated protein, sugar, starch transportation, increased nutrient uptake, increased net photosynthesis, and physiological changes associated with transpiration and respiration.

→ Harpin-induced **defense effects** include hypersensitive response, ion exchange and oxidative burst which induces production of active oxygen and K/Cl effluxes and Ca/H influxes, induction of salicylic acid accumulation locally and systemically, activation of multiple plant defense pathways including salicylic acid pathways, jasmonic acid pathways, phenylalanine ammonia-lyase (PAL) mediated pathways, as well as novel gene induction and pathways.

### PRODUCT PERFORMANCE SUMMARY

**ProAct™** offers a new technology to turn on plant defenses and growth systems from the inside-out.

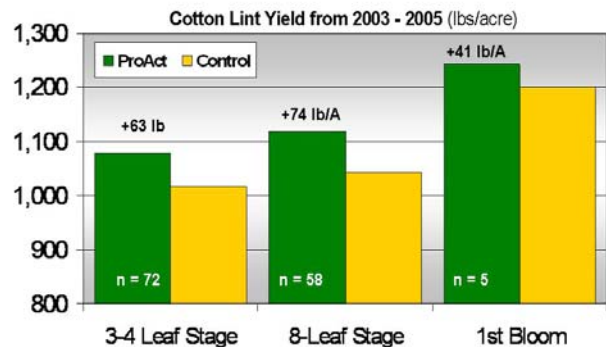
- ✓ **Turn On Plant Defenses** and protect your cotton from the “Inside-Out.”
- ✓ **Turn On Your Cotton** and get stronger plants from “Inside-Out.”
- ✓ **Enhance Crop Production** and achieve higher yields.

**In demonstration trials and replicated small plot trials, ProAct™ increased cotton lint yields.**

### PACKAGING, FORMULATION, REGULATORY INFORMATION, AND RAINFASTNESS

- Available in a 40 ounce, foil bag. Formulated as a wettable dry granule with 1% harpin<sub>αβ</sub> protein.
- Excellent safety profile, easy to use, and **not** a restricted use material; REI is 4 hours; PHI is 0 days.
- ProAct is rain fast after 30 minutes or after spray residues dry.

### ProAct™ Increases Cotton Yield Average Yield by Timing



ProAct at 1.0 oz per acre, n = number of data points; includes replicated and commercial field trials; based on analysis of all available trial results as of Jan. 11, 2006; value based on \$0.55/lb.

### IMPORTANT THINGS TO CONSIDER:

Unlike standard materials, ProAct’s performance is not a function of plant absorption or residual. In fact, there will be no detectable residue of ProAct remaining within hours of application. ProAct has **not** been found to cause phytotoxicity or crop injury.

### PROACT™ USE RATE AND HANDLING

- **USE RATE AND TIMING:** 1 oz per acre; Apply ProAct early season, typically from 2-4 to 8-Leaf. ProAct can be applied as late as early bloom and achieve a yield response. ProAct is commonly applied with post-emergence herbicides or foliar insecticides
- **MIX AND USE PROMPTLY:** Within 8 hours of mixing.
- **PARTIAL BAGS:** Reseal opened packets to minimize exposure to air and moisture. Use within 3 weeks.

### MIXING ORDER, pH, and COMPATIBILITY:

- After ensuring pH has stabilized between 5 and 10, **ProAct™** should be first product added to the tank.
- **ProAct™** is compatible with many products. For a complete list, please contact your local dealer.

**Always read and follow label instructions before using this product.**

[www.planthealthcare.com](http://www.planthealthcare.com) 1-800-421-9051

