

ProAct™

Plant Health Regulator

Usage Tip Sheet for Rice

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 rice, 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 rice’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.

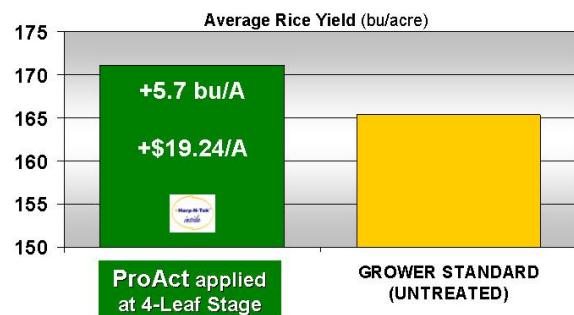
- ✓ **Turn On Plant Defenses** and protect your rice from the “Inside-Out.”
- ✓ **Turn On Your Rice** and get stronger plants from “Inside-Out.”
- ✓ **Enhance Crop Production** and achieve higher yields. In replicated small plot trials, **ProAct™** has been shown to increase rice yield by 6 bushels per acre.

PROACT™ PACKAGING, FORMULATION, AND REGULATORY INFORMATION

- Available in a 20 ounce, foil bag. Formulated as a wettable dry granule with 1% harpin_{αβ} protein.
- Excellent safety profile, easy to use, and **not** a restricted use material; REI is 4 hours; PHI is 0 days.

ProAct™ Increases Rice Yield

Across Trial Summary, 6 locations, 2004 and 2005



Value based on \$3.375/bushel.

RAINFASTNESS:

ProAct is rain fast after 30 minutes or after spray residues dry.

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:** ½ oz per acre applied between two-leaf and 4-tiller growth stages.
- **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 1-800-421-9051

