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PHOSPHATE STARVATION LINKED TO CITRUS GREENING

Zellwood, FL (Feb 26, 2013) -- A research article just published (2-14-13) in the journal *Molecular Plant*, reveals that "phosphate starvation", which in other crops can be caused by phosphite application to Phosphorus (P) deficient plants, has also been found to be a major factor that causes HLB, Citrus Greening Disease.

Dr. Hailing Jin, Molecular Microbiologist, University of California Riverside, combined her molecular and physiological laboratory research, with field research conducted by Dr Robert E. Rouse, Citrus Horticulturist, University of Florida Immokalee, FL. The three year field research study, and the inter-related microbiological research study verified each study's results reaching the same conclusion, which is considered rare by most researchers.

Dr. Jin's groundbreaking research discovered the small Ribonucleic acid (RNA) molecules that are responsible for HLB. Ten new microRNAs, 76 conserved microRNAs, and many small interfering RNAs were found, some of which induce HLB in citrus because of phosphate starvation.

HLB is one of the most destructive citrus diseases threatening the global citrus industry. This research shows that identified host small RNAs can potentially be used as early dignostic markers for HLB, which could be treated, presumably with oyyanion and Polyoxyanion P solutions, before any visual symptoms occur.

KPHITE® bactericide, and *ReNew®(3-18-20)*, manufactured by Plant Food Systems, Zellwood, FL, were the oxyanion and Polyoxyanion P solutions utilized in the research, which resulted in offsetting the effects of HLB. In the field study, yields doubled as the citrus trees recovered.

Paul E. Fabry, Vice President of Plant Food Systems, reported similar results. "We have analyzed thousands of citrus leaf tissue samples since the onset of HLB in Florida. We discovered that the large groves down South with the worst greening have the lowest Phosphorus levels, and we shared the samples with the researchers. We are gratified that the growers, who are beating HLB are using the same oxyanion and polyoxyanion P solutions as in the research."

The study entitled, "Small RNA Profiling Reveals Phosphorus Deficiency as a Contributing Factor in Symptom Expression for Citrus Huanglongbing Disease", the publisher's news release, and other phosphate starvation research can be accessed at www.kphite.com.

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Plant Food Systems is an innovative pioneer, leading manufacturer and international distributor of foliar macro and micro nutritional solutions for citrus, and crop health bactericides for all crops under environmental and pathological stress. www.plantfoodsystems.com