

Winners Announced in IPNI 2008 Nutrient Deficiency Photo Contest

The scope and diversity of this annual contest continues to grow as the 2008 version has assembled a number of outstanding examples of nutrient deficiency in the field and lab. Our judges have selected three prize winners for each category which are highlighted here. Entries were evaluated on the overall quality of the image as well as the supporting data provided by entrants. All entries will be posted for viewing on the IPNI website at www.ipni.net/2008photocontest. Congratulations to these winners and sincere thanks to everyone who participated.

We encourage readers to watch for other opportunities to capture digital photos and document crop nutrient deficiencies in 2009. Also, further details of the 2009 IPNI contest will appear in upcoming issues of *Better Crops with Plant Food* and at the website.

Nitrogen

1st Prize: Chris Gunter, José Garzón, and Brian Whipker of North Carolina State University, Raleigh, North Carolina, USA, are credited with entering this example of N deficiency in immature lettuce. As part of their background description, they state: "These two plants are the same age, planted on the same day. Nutrient deficiency was induced by withholding nitrogen during growth. The other plant received complete nutrition."

2nd Prize: Muthukumar Bagavathiannan, Department of Plant Science, University of Manitoba, Winnipeg, Canada; **3rd Prize:** Cacciavillani Juan Ignacio, Demeter Laboratorio, Ordoñez, Cordoba, Argentina.



Nitrogen Category...N-Deficient Lettuce

Phosphorus

1st Prize: Tiequan Zhang, Agriculture & Agri-Food Canada, Harrow, Ontario, Canada, captured this dramatic case of P deficiency in a mid-summer corn crop. Soil test P (Olsen) at the site was 5.2 mg P/kg. The crop is obviously stunted and displaying the characteristic purplish-colored lower leaf edges.

2nd Prize: S. Srinivasan, Agricultural College, Tamil Nadu Agricultural University, Killikulam, Vallanad, India; **3rd Prize:** Ch. Srinivasarao, Central Research Institute for Dry Land Agriculture, Hyderabad, Andhra Pradesh, India.



Phosphorus Category...P-Deficient Corn

Potassium

1st Prize: Terry Wyciskalla, Wyciskalla Consulting, Inc., Nashville, Illinois, USA, submitted this example which contrasts side-by-side rows of soybean with adequate and deficient soil K supply. According to Mr. Wyciskalla, "Poor" areas had 89 lb/A (44.5 ppm) and "Good" areas had 281 lb/A (140.5 ppm). Whole-plant tissue analysis from the poor area equaled 0.58 ppm and 1.19 ppm in the good area. "According to the *Plant Analysis Handbook II* by Mills and Jones, critical K level in soybean is 1.70 to 2.50 ppm K. Results show a definite deficiency in the poor area, while results from the good area are borderline deficient, but may be adequate enough to not show deficiency symptoms."


2nd Prize: S. Srinivasan, Agricultural College, Tamil Nadu Agricultural University, Killikulam, Vallanad, India; **3rd Prize:** Nolver Atanacio Arias, Cenipalma, Barranca-bermeja, Santander, Colombia.



Potassium Category...K-Deficient Soybeans

Other Category

1st Prize: Shahar Dayan, Haifa Chemicals Ltd., Yoqneam Elit, Israel, shot this close-up view of Zn deficiency in 2-month old cassava (tapioca) planted in Thailand. "It's a common phenomenon (for the region); this appearance is a typical zinc shortage, causing leaf curling, interveinal chlorosis, and auxin hormone flux disruptions."

2nd Prize: Leandro Marciano Marra, Universidade Federal De Lavras, Minas Gerais, Brazil; **3rd Prize:** S. Srinivasan, Agricultural College, Tamil Nadu Agricultural University, Killikulam, Vallanad, India. 



Other Category...Zn-Deficient Cassava

Abbreviations and notes: N = nitrogen; P = phosphorus; K = potassium; ppm = parts per million.