



# IPNI REGIONAL REVIEW

## North America Program

### Key Issues & Needs

- **Providing regional and global leadership** in advancing 4R Nutrient Stewardship and the essential role of precision agriculture in its implementation.
- **Official fertilizer recommendations** that fully meet the nutrient needs of modern cropping systems.
- **Building and maintaining** a productive soil fertility collaborative of university, government, and industry scientists and agronomists.
- **Solutions** for nutrient loss reduction to key waters that enable continued intensification of crop production.
- **Enabling continued intensification** of crop production by reducing nutrient losses.
- **Incorporation of 4R Nutrient Stewardship** into university curriculums and training programs for the 13,000 Certified Crop Advisers (CCAs) and other agronomists across North America.
- **Facilitating data stewardship** and evidence-based approaches in soil fertility and nutrient management.
- **Scientific support** for industry trade associations in North America and globally.

### TACTICAL PLAN highlights & priorities IPNI

#### 4R Stewardship

Increase adoption of 4R Nutrient Stewardship and precision agriculture and improve understanding of how they are connected.

#### Nutrient Education

Localize the global concept of 4R Nutrient Stewardship and improve understanding of environmental impacts.

#### Improved Fertilizer Recommendations

Support research and collaborative efforts to refine crop fertilizer recommendations and improve understanding of recommendation and decision support systems.

#### Closing Yield Gaps

Identify and quantify yield gaps for maize and soybeans in priority regions. IPNI's NuGAPs database tracks fertilizer use by crop, and estimates gaps in yield, fertilizer use, and nutrient performance.

#### Enhancing Sustainability

Develop, refine, and promote nutrient data systems and metrics that reflect system sustainability and performance as tools for guiding practices.



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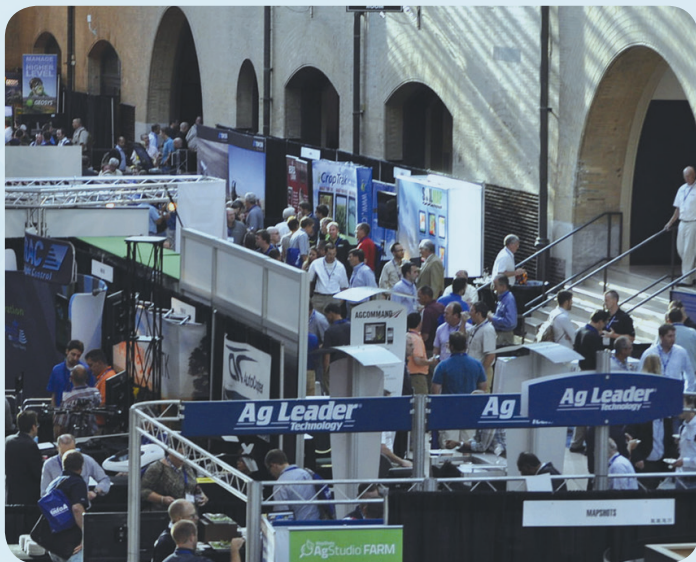


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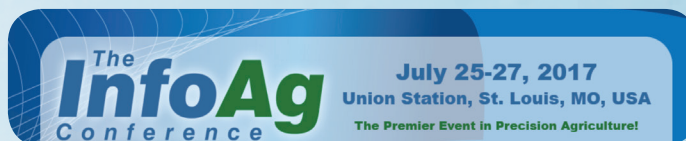
## examples of IPNI LEADERSHIP



### Conferences



- IPNI's leadership in communication to soil fertility practitioners was demonstrated at the March **2018 Great Plains Soil Fertility Conference** held in Denver. The organizing committee presented its Leadership Award, to Mike Stewart, recently retired IPNI director, for his role in organizing numerous past conferences. Tom Jensen and Tai Maaz continue involvement in the planning process for the next conference in 2020.



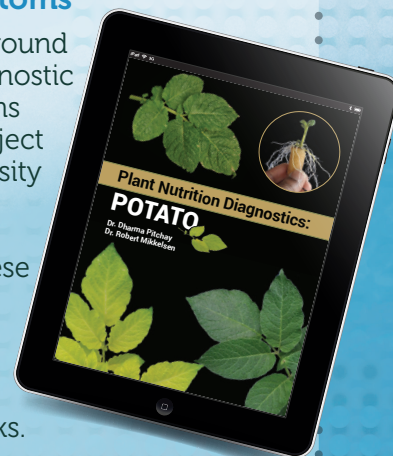
- InfoAg 2017**, the annual precision agriculture conference started by IPNI over 20 years ago, attracted nearly 1,400 attendees and featured 104 exhibitors and 98 speakers. Dr. Steve Phillips, IPNI director and InfoAg conference chair said, "Through the InfoAg conference, IPNI can promote messages of 4R stewardship and balanced fertilization to the digital ag community and ensure that credible science remains the foundation of the technical revolution in agriculture."

## 47<sup>th</sup> North Central Extension-Industry SOIL FERTILITY CONFERENCE

- At the **47th annual North Central Extension-Industry Soil Fertility Conference**, held in November 2017 in Des Moines, Iowa, a new dimension was added to the graduate student poster session. Called "Fertility in a Flash," each student had precisely one minute to present to the full audience. They demonstrated some very creative uses of that minute to convey their research. IPNI's Americas & Research VP Tom Bruulsema and Nitrogen Program Director Tai McClellan Maaz coordinated the session and led the evaluation committee. Five winners were selected from among 22 excellent poster contributions.

### Nutrient Deficiency Symptoms

- Little work has been done around the world to document diagnostic nutrient deficiency symptoms for horticultural crops. A project with Tennessee State University is producing high resolution photographs of nutrient deficiency symptoms for these crops. A series of e-books is being developed for each specific crop ...the latest e-book focuses on potato. See <http://info.ipni.net/ebooks>.



### Industry 4R Research

- The 4R Research Fund was established by the members of The Fertilizer Institute and Fertilizer Canada to generate data on the economic, environmental, and social impacts of 4R Nutrient Stewardship. IPNI leads the Technical Advisory Group responsible for soliciting proposals and oversees funded projects and reporting. The industry has committed to continue the fund for another five years, starting 2018, expanding to new geography and cropping systems.



**IPNI**  
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PLANT NUTRITION  
INSTITUTE

### North American Program

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