



International Conference on the Frontiers of Potassium Science January 25-27, 2017 – Sheraton Roma in Rome, Italy

IPNI is pleased to invite you to participate in the upcoming international conference designed to exchange information on how to improve potassium plant nutrition and soil management to better the health of soils, plants, animals, and humans. The 4R Nutrient Stewardship framework is integrated into the conference structure to keep the discussions anchored to the information needs of farmers and those who provide nutrient management guidance.

Sign up to get regular updates, including when and how to submit your abstract, at <http://KFrontiers.org>. Submissions addressing the questions below will be given priority and will be considered for inclusion in a special peer-reviewed publication following the conference. We look forward to seeing you in Rome!

Potassium in Sustainable Intensification of Cropping Systems

- How do potassium inputs and outputs compare for different cropping systems and geopolitical boundaries?
- How and to what extent does potassium affect use efficiency of water, energy, and other nutrients?
- How and to what extent does potassium mitigate biotic and abiotic stresses on plants?
- What conditions favor loss of bioavailable potassium and how much is lost?
- What can long-term research experiments teach us about potassium management?
- What are the current, key issues in human and animal potassium nutrition?

4R Source: Improving decisions about the source of potassium to apply

- What are the lifetimes of the various global reserves of potassium?
- How are crops impacted (positively/negatively) by the choice of potassium source?
- How does the source of potassium fertilizer affect its proper placement in the soil?
- To what extent does potassium source impact plant recovery efficiency of potassium?

4R Rate: Improving the accuracy of potassium rate recommendations

- How can we improve the quantification of plant-available potassium in the soil?
- How can we improve approaches to making potassium rate recommendations?
- How can cycling of potassium from crop and other organic residues be integrated into potassium rate recommendations?
- How closely is potassium mass balance related to soil test changes?
- Why and to what extent do various crops differ in their recovery efficiency of potassium?

4R Time: Improving decisions about when to apply potassium

- What are the genetic effects on potassium accumulation rates, partitioning, and plant metabolism?
- How can potassium be managed to improve the synchrony of soil supply and plant demand?
- What is the potassium recovery efficiency of the cropping system as a whole, considering the crops grown and when applications are made?

4R Place: Improving potassium placement decisions

- What plant characteristics (rhizosphere biology and chemistry, root architecture, etc.) most influence potassium placement decisions?
- What soil characteristics (physical, chemical, biological) most influence potassium placement decisions?
- To what extent does nutrient placement impact plant recovery efficiency of potassium?

Connecting Frontier Science to Frontier Practice

How do we increase the impact of scientific findings on soil and crop management of potassium in the field?