

2016 was the year of change in the IPNI South Asia Program. Dr. Adrian M. Johnston, Vice President, Asia, Africa and Middle East, retired from IPNI after mentoring the South Asia Program for over ten years. There was also a change of guard as I moved into Dr. Johnston's position while Dr. Satyanarayana took over as the new Director of the Program. In the backdrop of these changes, IPNI remains steadfast in its commitment to the development process of South Asia through research and education on appropriate management of plant nutrients for food security and economic development of millions of smallholder farmers in an environmentally sustainable manner.



This year, **4R Nutrient Stewardship** for crops has been chosen as the theme of *Better Crops-South Asia*. The

4R concept, developed by the fertilizer industry, provides guidelines for the sustainable management of plant nutrients for improved crop productivity and farm profitability while minimizing the environmental footprint of nutrient use in agriculture. The concept uniquely connects plant nutrient management to broader social, economic, and environmental benefits and has been embraced by stakeholders in the fertilizer nutrient production-use-outcome chain. The dichotomy of the concept's apparent simplicity and the depth of details required to successfully implement it on-farm is fascinating to say the least. And its interpretation in space and time also needs to be unique to achieve the desired goals. Before they reach a final decision, every single farmer, whether smallholders in South Asia or large acreage farmers in North America or Australia, thinks about what fertilizer to apply, at what rate, at what time, and how best to apply them. It is how to connect those farm-level decisions to rigorous scientific principles so that the outcomes benefit the farmer, as well as society at large, that the principles of 4R Nutrient Stewardship aim at.

I strongly believe that the **role of fertilizer** has changed radically from a mere input to a critical component of several Sustainable Development Goals as we grapple with managing increased population demand in our changing climate. Food security, improving livelihood of farmers and ensuring a better environment for future generations has a common denominator in fertilizer, and its precise use is a win-win scenario for all stakeholders. IPNI has invested strongly on research, education, and extension of the 4R concept and has engaged with multiple stakeholders to ensure the right traction. Bringing conceptual clarity through peer-reviewed publications and book chapters for future agronomists, developing training materials and on-line support to ensure continued learning, and finally developing an easy-to-use tool that helps implement the 4R concept on-farm are some of the examples we are most proud of. This Issue of *Better Crops-South Asia* is an extension of that effort as local experts imbibe the subtle nuances of the 4R Nutrient Stewardship principles and articulate them for important crops and soils of the region. One thing, however, that is clear is the large knowledge gaps still exist as we deal with 4R for myriads of crops, cropping systems, and growing environments. Future investments in research, development, and extension will be critical to achieve the future goals and aspirations of the region.

BETTER CROPS

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