

IPNI - Vietnamese Nutrient Knowledge Alliance

Agriculture remains an important sector for Vietnam where 34.8% of its land is agricultural land. 17% of Vietnam's GDP of US\$202.6 billion in 2016 came from agriculture and 48% of its labor force is involved in agriculture (Data from World Factbook and The World Bank). Over the last few decades, Vietnam has developed into one of the most important markets for fertilizers. However, often the existing plant nutrient management practices do not appear to match nutrient supply to crop demands. As a result, nutritional imbalances are common in a number of key crops, such as coffee. Current nutrient use is broad-based with minimal details on soil nutrient balance.

The current situation of a strong market coupled with under-developed nutrient management is an opportunity for IPNI and its industry partners to re-engage in Vietnam's thrust to advance its agronomic development. As a first step to fill some existing gaps in nutrient management, IPNI is collaborating with Soil and Fertilizer Research Institute (SFRI) to disseminate knowledge by translating selected IPNI publications into Vietnamese for distribution. Based on this initiative, IPNI envisions building networks of organizations that share similar interests in plant nutrient management to serve as a foundation for future work in the fields of farmers.

SFRI is a scientific unit, established by the Vietnamese Ministry of Agriculture, under the Vietnam Academy of Agricultural Science. It conducts scientific research, technology transfers in the field of soil, fertilizer and agricultural environment as well as producing and trading agricultural products in Vietnam, and is well placed to address issues of nutrient management in Vietnamese agriculture.

The IPNI publications identified to spearhead the IPNI-SFRI collaboration include two series of plant nutrient factsheets called Nutri-Facts and Nutrient Source Specifics:

- **NUTRI-FACTS** is a series of 17 agronomic factsheets on crop nutrients: nitrogen, phosphorus, potassium, sulfur, calcium, magnesium, boron, zinc, manganese, copper, chloride, iron, molybdenum, silicon, cobalt, nickel and selenium. These 2-pagers describe each nutrient's occurrence in plants and in soils; deficiency symptoms; usage as fertilizer; and crop response.

- **NUTRIENT SOURCE SPECIFICS** is a series of 27 brief, condensed factsheets highlighting common fertilizers and nutrient sources in modern agriculture. One-page brochures list the chemical properties, production, agricultural use, management practices, and non-agricultural use of urea, polyphosphate, potassium chloride, compound fertilizer, potassium sulfate, potassium magnesium sulfate (langbeinite), urea-ammonium nitrate, thiosulfate, monoammonium phosphate, ammonia, potassium nitrate, ammonium sulfate, sulfur, triple superphosphate, nitrophosphate, gypsum, diammonium phosphate, calcium carbonate (limestone), phosphate rock, coated fertilizer, single superphosphate, ammonium nitrate, kieserite, sodium nitrate, nitrification inhibitors, and calcium nitrate.

In addition, two **BOOKS** have been made available in Vietnamese:

- “4R Plant Nutrition: A Manual for Improving the Management of Plant Nutrition” introduces best fertilizer management practices based on the concept of 4R Nutrient Stewardship - applying the right source of nutrient, at the right rate, at the right time, and in the right place; and
- “Specialty Coffee: Managing Quality” shares ideas to stimulate innovative management of processes in the specialty coffee supply chain to produce a multitude of coffees with distinctive traits from a diverse range of origins.

References:

The World Bank. 2016. Accessed 31 August 2017. <http://data.worldbank.org/country>

World Factbook. 2016. Accessed 31 August 2017. www.cia.gov