



NEWSFLASH : Adapting *Nutrient Expert*[®] for maize in India: a success story

March 7, 2013. Penang, Malaysia – Maize is the third most important food crop in India, after rice and wheat. A high yielding crop that is well-adapted to varying seasons and ecologies, maize has gained significant popularity in Southern India, in the states of Tamil Nadu, Karnataka and Andhra Pradesh.

However, average maize yields are much lower than attainable yields due to inadequate and imbalanced fertilization. With nutrient requirements varying from field to field and escalating fertilizer prices, there is an urgent need to optimize the use of nutrients to enhance productivity and profitability.

Nutrient Expert[®] (NE) for maize, a computer-based decision support tool developed by the International Plant Nutrition Institute (IPNI) is able to assist extension agents and farmers in crop intensification. Using the principles of site-specific nutrient management, NE provides fertilizer recommendations tailored to specific growing environments.

A field evaluation of NE-maize was conducted in 82 maize growing sites in southern India during the monsoon and winter seasons of 2011-2012 by IPNI in collaboration with CIMMYT¹, DMR², state agricultural universities³, industry⁴ and farmers. Fertilizer recommendations from NE-maize, obtained from analysis of current maize yields, nutrient application rates and tillage practices (conservation/conventional) were put to the test against recommendations from the State (SR) and farmer practices (FP).

Across all sites, NE-maize recommendations were found to increase yield and economic benefit, out-performing FP and SR for both growing seasons. Gross returns above fertilizer costs increased 21% during the monsoon season and 18.2% during the winter season with NE compared to FP, in total for these sites in southern India.

One of the main reasons for improved yield was the balanced application of nutrients at the right rates, with NE helping to optimise N, P and K nutrient use by suggesting appropriate reductions in fertilizer application, which was highly skewed in southern India.

Easy-to-use and scientifically robust, the NE for maize shows great potential for assisting extension agents and the small holder farmers they work with, in the intensive maize cultivation areas in southern India.

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About IPNI

The International Plant Nutrition Institute (IPNI) is a not-for-profit, science-based organization dedicated to the responsible management of plant nutrition for the benefit of people. Through cooperation and partnerships with respected institutions around the world, IPNI adds its strength to agronomic research, education, demonstrations, training, and other endeavors. Best management practices for nutrient stewardship encourage the concept of 4Rs - applying the right nutrient source, at the right rate, at the right time, and in the right place. To learn more about IPNI, please visit: www.ipni.net

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