



NEWSFLASH : Improving fertilizer efficiency and increasing farmer profits with the Nutrient Expert®

February 17, 2014. Penang, Malaysia – Nutrient Expert® (NE) tested in China has been shown to improve fertilizer use efficiency and farmers' profits in maize and wheat crops.

While farmers in China harvest high wheat and maize yields, their fertilizer application rates are extremely high and very often unbalanced. Over-fertilization is not only costly, it may also result in nutrient losses that have negative effects on the local environment.

IPNI China recently tested Nutrient Expert® for Maize and Nutrient Expert® for Wheat against existing fertilizer practices and local recommendation in several provinces in China. Between 2010 and 2012, spring/summer maize crops in 461 farms and winter wheat crops in 170 farms were given recommendations based on the 4R Nutrient Stewardship approach of applying the right source of nutrients, at the right rate, at the right time, and in the right place.

Nutrient Expert® for Maize reduced N application by 25-40% and balanced the application of K and P for maize crops over three years, thus improving fertilizer use efficiency while maintaining high yields, compared to farmers' practice. When compared to local recommendations based on soil tests, Nutrient Expert® was found to have reduced N application by 20-30%.

Similarly, Nutrient Expert® for Wheat recommended lower N (40-50% lower than farmers' practice and 25-35% lower than local recommendation), lower P (25-40% lower than farmers' practice and 15-45% lower than local recommendation) and balanced K application rates to wheat crops, resulting in high yields and improved profits.

The NE provided a balanced application of fertilizer nutrients guided by the 4R Nutrient Stewardship approach. In China, where farmers' yields are already high, this recalibration of fertilizer practices using NE for staple crops has been shown, for example, to improve fertilizer N use efficiency by 36% for maize, thus lowering fertilizer costs significantly by USD36/ha and increase gross profits by USD121/ha. It is an effective alternative to current soil testing practices, and likely to reduce potential environmental impacts from over-fertilization.

NE is now available in Chinese and English at the IPNI China Program. It is also available for download at software.ipni.net.

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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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