There was a significant negative exponential relationship between yield response and soil indigenous nutrient supply, and a significant negative linear correlation between yield response and relative yield. A quadratic equation described the relationship between yield response and AE. Based on the above analysis, the principles of nutrient recommendations were formed and incorporated as part of the NE decision support system. Field validation, based on yield response and AE, showed an increase in both grain yield and gross profits, and  $AE_N$ ,  $RE_N$  and  $PFP_N$  were all improved in most sites. It was concluded that NE could be used as an alternative method to soil testing when making fertilizer recommendations for wheat in China.

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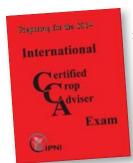
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