

Nutrient Expert™ for Hybrid Maize – South Asia (India)

Developed by

International Plant Nutrition Institute (IPNI)

in collaboration with

International Maize and Wheat Improvement Center (CIMMYT)

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Nutrient Expert™ for Hybrid Maize is a user-friendly nutrient decision support tool that enables researchers, extension experts and industry agronomists to quickly develop field specific fertilizer recommendations for hybrid maize.

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The **Nutrient Expert™ for Hybrid Maize** is a new, computer-based decision support tool developed to assist local experts to quickly formulate fertilizer guidelines for hybrid maize grown in India. The software is based on the principles of site-specific nutrient management (SSNM) and allows scientists and extension experts to jointly develop novel nutrient management strategies that are expected to help farmers increase their yield and profit from maize production.

The software utilizes information provided by a farmer or a local expert to suggest a meaningful yield goal for his location and formulates a fertilizer management strategy required to attain the yield goal. The required information about the production system is gathered through a set of simple, easily answerable questions that analyses the current nutrient management practices and develops guidelines on fertilizer management (and more) that are tailored for a particular location (i.e. maize environment). The software also does a simple profit analysis comparing costs and benefits between the farmer's current practice and the recommended alternative improved practice

The **Nutrient Expert™ for Hybrid Maize** was designed in a way that it can be used as a learning tool—providing quick helps, instant summary tables and graphs, plus allowing a great amount of flexibility in navigating through the modules in the software.

In conclusion, the **Nutrient Expert™ for Hybrid Maize** for India helps to:

- develop an optimal planting density for a location
- evaluate current nutrient management practices
- determine a meaningful yield goal based on attainable yield
- estimate fertilizer NPK rates required for the selected yield goal
- translate fertilizer NPK rates into fertilizer sources
- develop an application strategy for fertilizers (right rate, right source, right location, right time)
- compare the expected or actual benefit of current and improved practices

Assumptions and Conditions

The guidelines provided by this software assume the following conditions:

- no serious limitation of water (i.e. drought) throughout the growing period
- any problem on acidity and/or micronutrients are properly addressed
- use of high-yielding maize varieties
- no major damage caused by pests and diseases
- proper placement of fertilizer is practiced



The **Nutrient Expert™ for Hybrid Maize** works best for hybrid maize in favorable environments with yield potential of 8 to 15 t/ha. Users are advised to exercise caution when using the software with non-hybrid varieties.

Inquiry and Software Updates

For further information about this software, please contact:

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For the most recent version and future updates on the software, please visit:

><http://sap.ipni.net><

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