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INTERNATIONAL
FERTILIZER ASSOCIATION

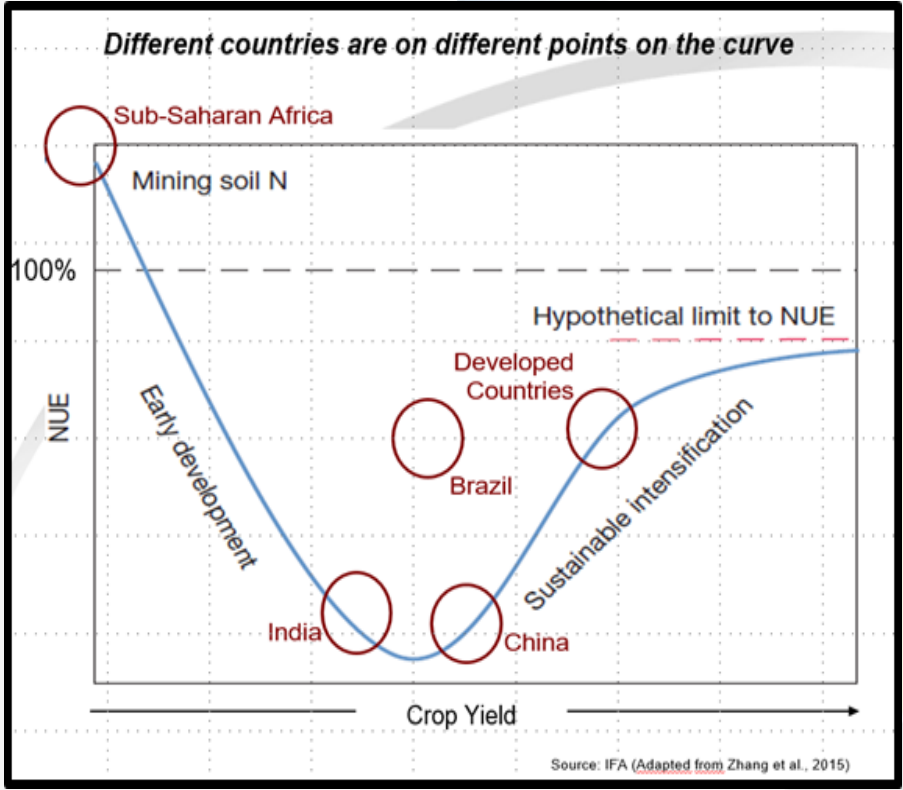
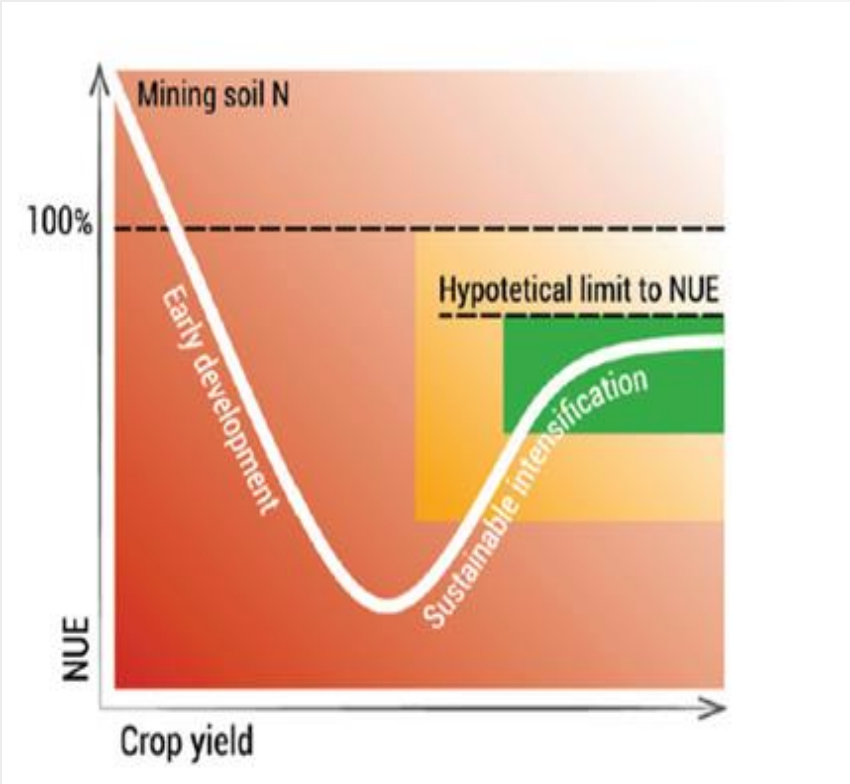
Improving nutrient use efficiency for sustainable agricultural systems

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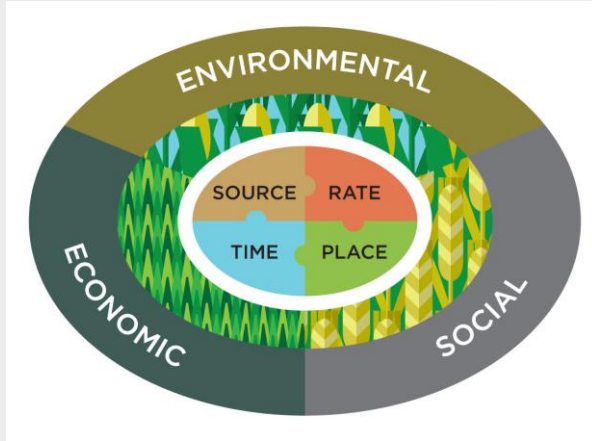


Crucial to improve fertilizer use efficiency (NUE) worldwide

$NUE = N \text{ input} / N \text{ output}$



Fertilizer Best Management Practices: 4Rs



Right fertilizer Source, at the Right Rate, at the Right time and in the Right Place

4R Plus



Fertilizer Best Management Practices

Also part of the 4R toolbox:

- **Integrated Plant Nutrient Management (IPNM)**: applying on-farm **organic** fertilizers and supplementing them with **mineral** fertilizers
- **Balanced fertilization**, i.e. assuring a proper supply of all macronutrients and micronutrients in a balanced ration;
- **Site-specific nutrient management (SSNM)**, i.e. supplying plants with nutrients to optimally match their needs for nutrients;
- **Fertigation**, entails combining fertilizers with irrigation water.