



RESEARCH PROGRAM ON  
Climate Change,  
Agriculture and  
Food Security



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Example of N science relevant for 'Towards INMS': :

## Improving estimates of nitrous oxide emissions from wheat- and maize-based systems

*Clare Stirling*

*CIMMYT*

*(International Maize and Wheat Improvement Center),*

*Lisbon, 27<sup>th</sup> April 2015*



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## What CIMMYT may offer 'Towards INMS':

- Improved datasets for tropics on N<sub>2</sub>O emissions and nitrogen use efficiency
- Improved model(s) for estimating N<sub>2</sub>O emissions from agricultural soils.
- Links to CCAFS and national partners in Asia, Africa and Central America

## Improving estimates of nitrous oxide emissions from wheat- and maize-based systems

**Funded by:** CCAFS (CGIAR - Climate Change Agriculture and Food Security Programme)

**Duration:** 2015-2018

**Project team:**

### CIMMYT

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### YARA

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# Fertiliser - 30% GHG emissions from agriculture



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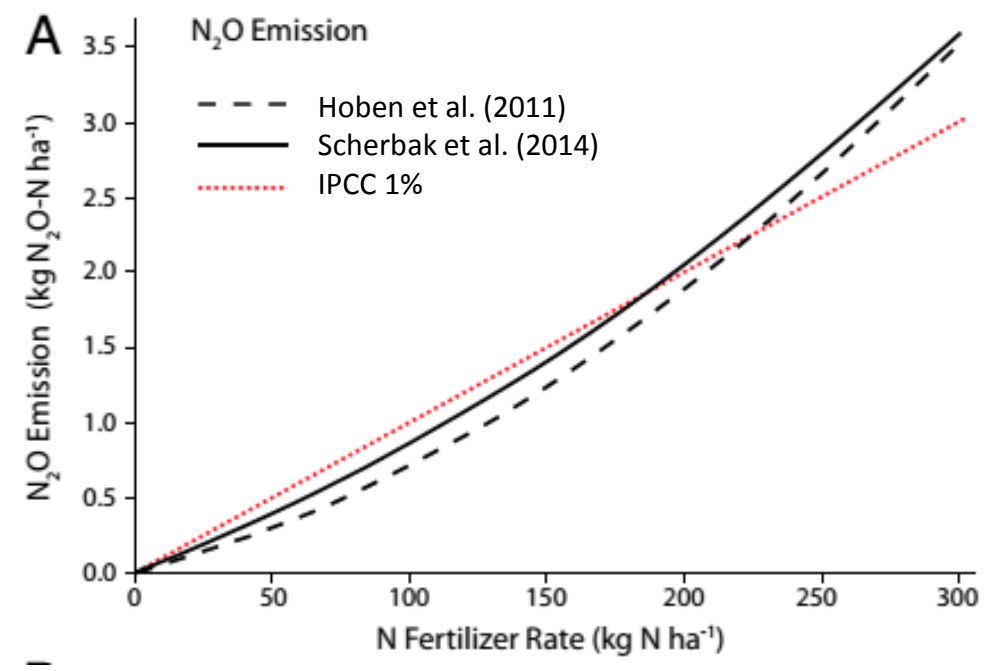
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- Address the data 'gap' that exists for the tropics and sub-tropics



- Determine if N<sub>2</sub>O emissions are linear or exponential



# Improved estimates of N<sub>2</sub>O emissions



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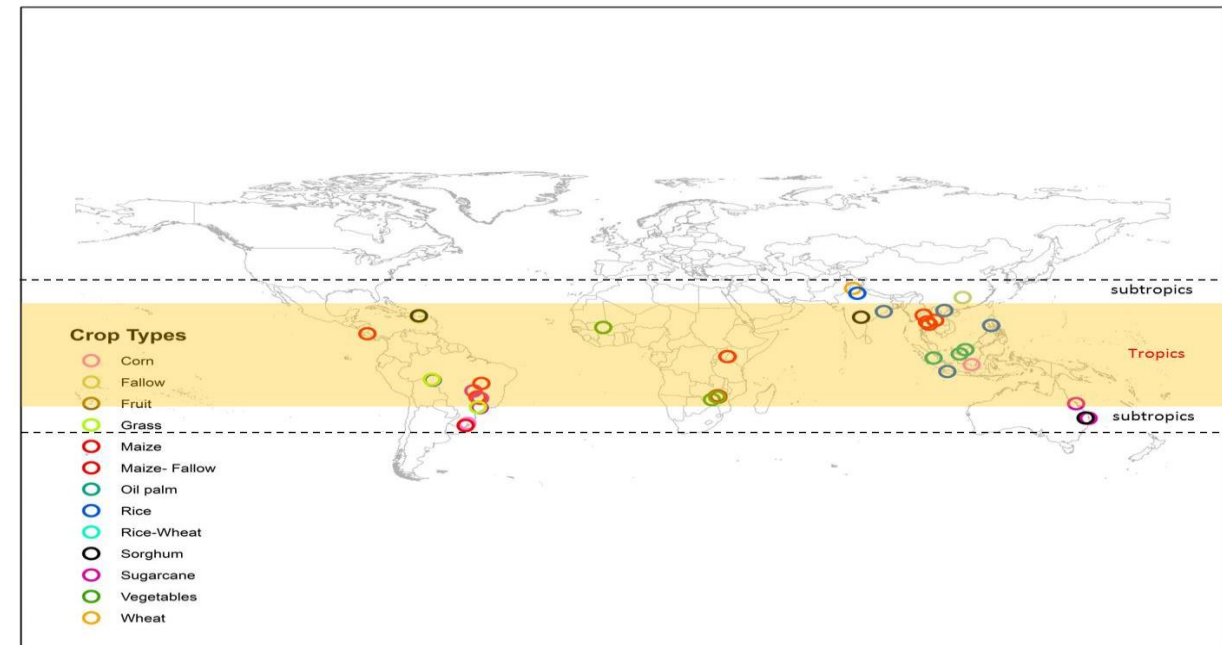
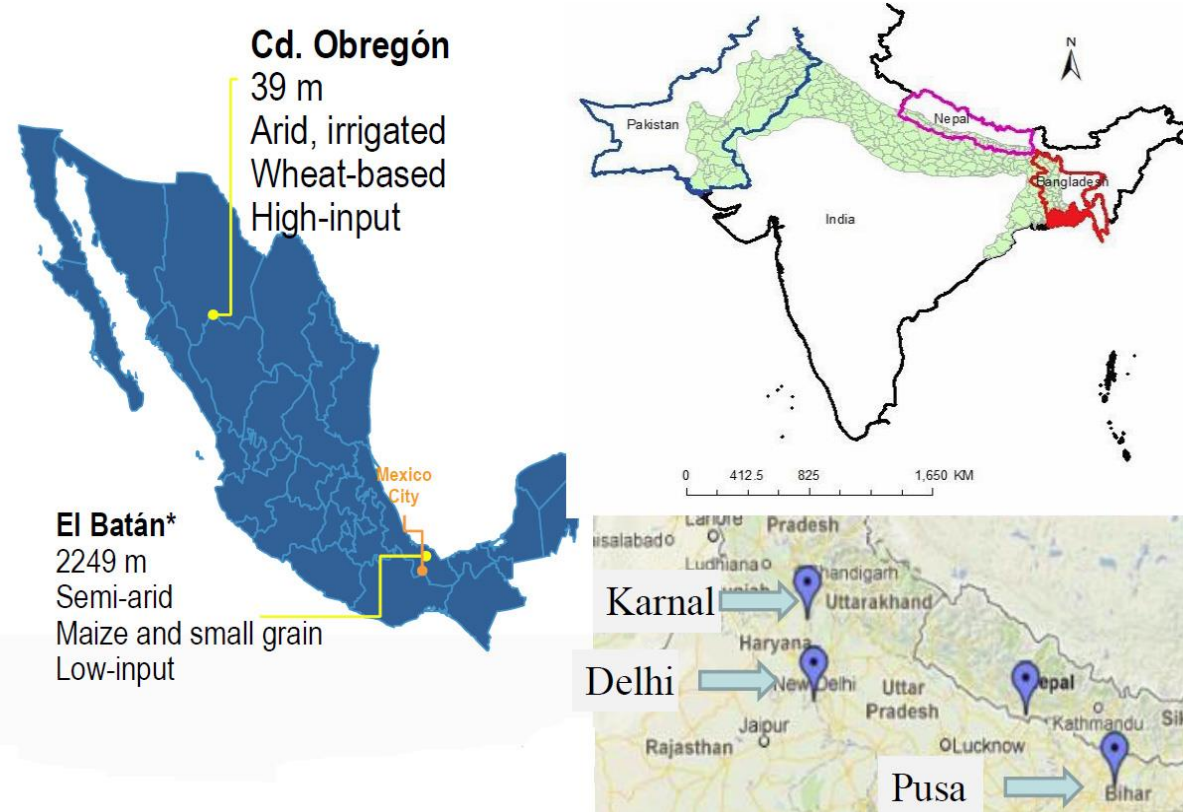


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- Generate more data from tropics  
- N management and N<sub>2</sub>O emissions measurements

- Review all data & develop an improved empirical model of N<sub>2</sub>O emissions from soils





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**Thank you**