

# Eddy-covariance and chamber measured greenhouse gas emissions from a commercial corn field

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# Introduction

- The general goal of the project is to:  
Develop an online tool to schedule irrigation and fertilization to optimize yields and mitigate  $\text{N}_2\text{O}$  emissions
- Only recently has a high-frequency  $\text{N}_2\text{O}$  sensor (10 Hz) become available that makes it possible to use Eddy Covariance technique.

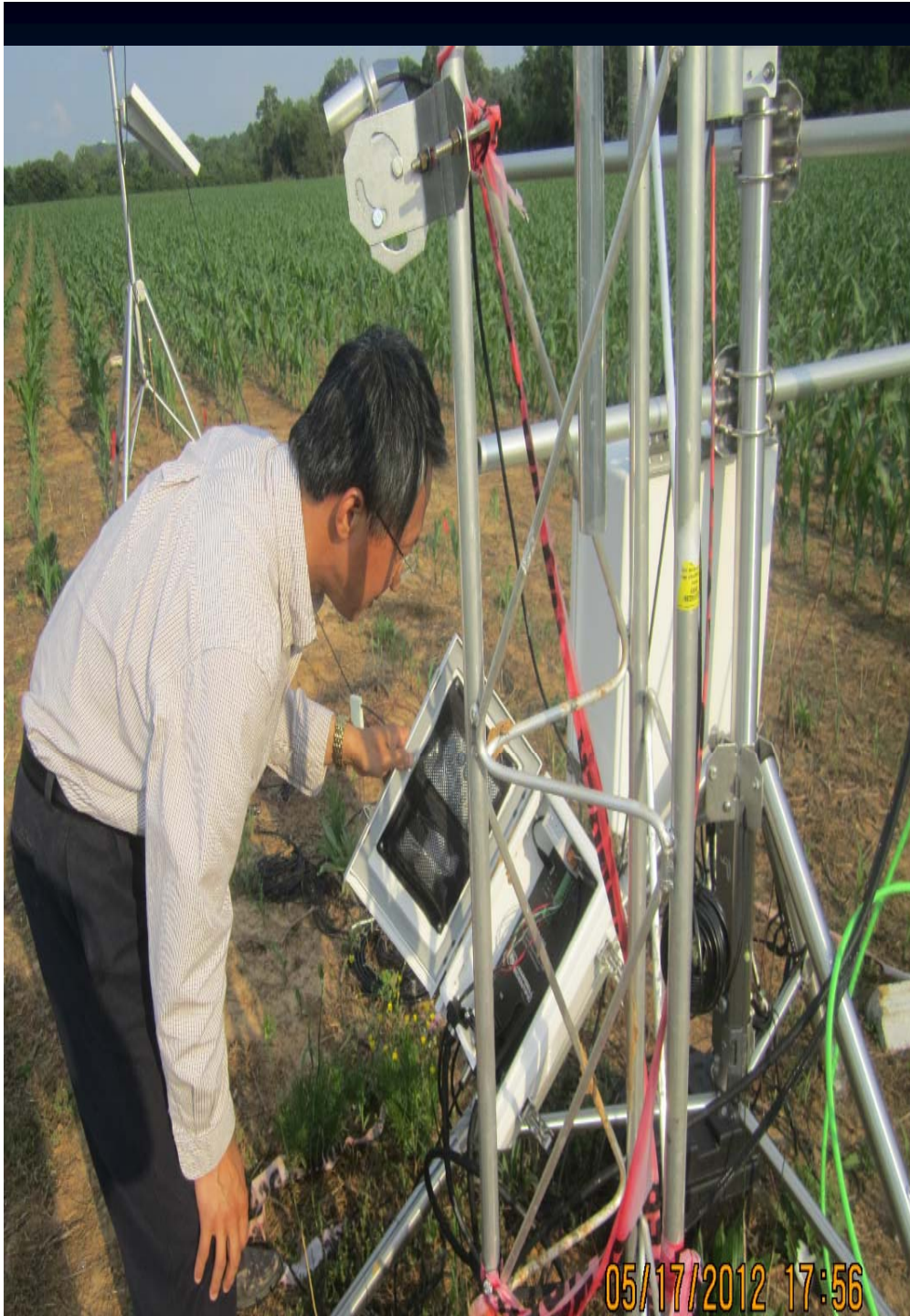
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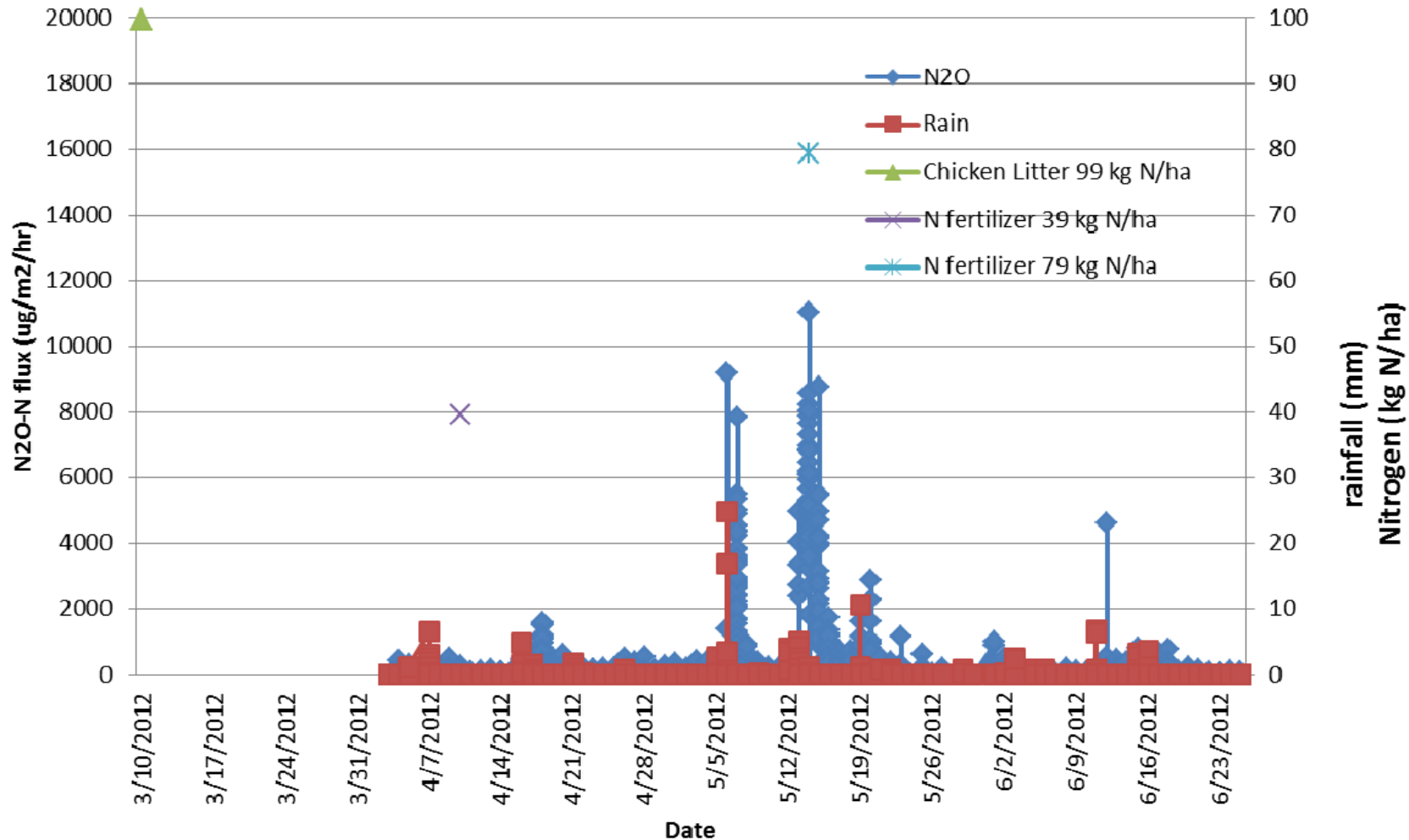
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# N<sub>2</sub>O-N flux affected by rainfall and fertilization



# Summary

- Field-scale  $\text{N}_2\text{O}$  flux measurements using EC are reasonable compared with chamber measurements
- $\text{N}_2\text{O}$ -N emission from corn field:  
29 g/ha/day (3.5 kg/ha/120 days)