



**2nd Biennial Africa
Climate-Smart Agriculture Stakeholder Conference**

**Thematic Paper Presentation on
Compatibility assessment of
agroecology and CSA practices**

14th September 2022



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Agroecological Differentials in Crop Production: Evidence from Smallholder Rice Producers in Nigeria

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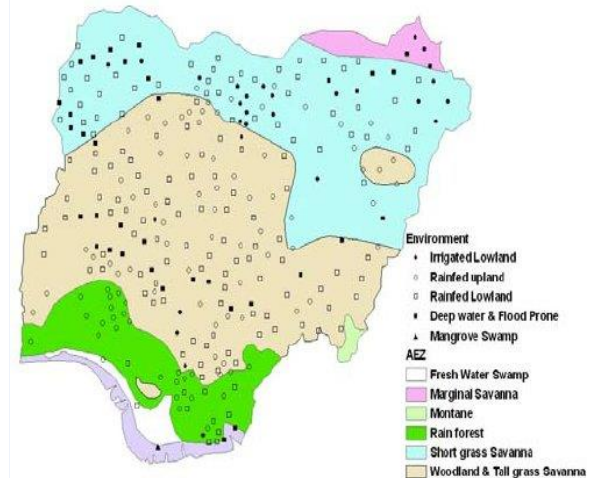
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Background

- Nigeria's drive for food self sufficiency
 - Rice sector focus
- Mainly rainfed rice farming.
 - Pockets of irrigated systems
- Agroecological practices may have significant impact on output.



<https://punchng.com/ebonyi-targets-n48-4bn-annually-from-rice-production/>



Otakeye, A. O., Ogunkunle, A. O., Singh, B. N., Akinbota, G. E., & Oluh, J. (2009). Morphology, organic carbon and dissolved nutrients in groundwater table in two benchmark wetlands sites in Nigeria. *Agriculturae Conspectus Scientificus*, 74(1), 31-37.

Methodology

a) Scope

- Smallholder rice farming systems (<5ha farmsize)

b) Data

- LSMS/ISA (2017/2018 wave)

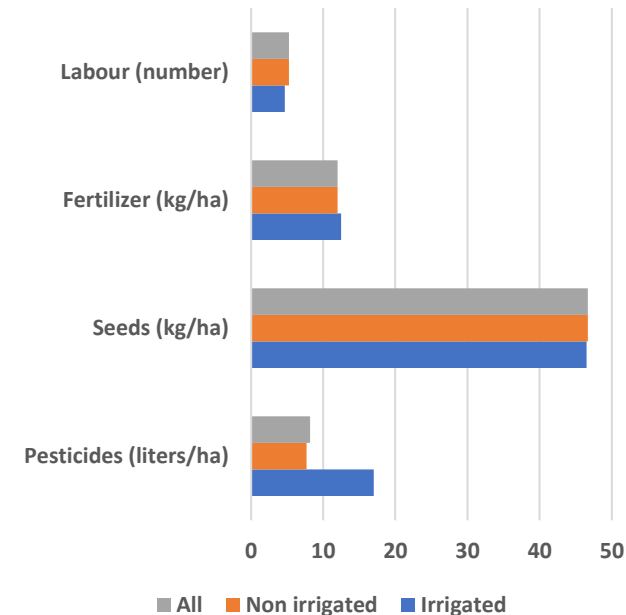
c) Methodology

a) Cobb douglas production function

- Overall
- Rainfed
- Irrigated

Key findings

- Low irrigation use (<5%)
- Improved input use > in irrigated farming
- Harvest(kg) and value (N) higher in irrigated agroecology
 - (p<0.05 in cobb-douglas model).
- Seed use increased output(p<0.01) in irrigated agroecology
- Labour use is output decreasing (p<0.05)



| Production output/System | Irrigated | Rainfed | T Test |
|--------------------------|-----------|----------|---------|
| Quantity (kg) | 868.23 | 463.24 | 4.83*** |
| Value (Naira) | 78,189.89 | 62,202.3 | 1.55** |

Key Recommendations & Conclusion

- Provide irrigation technology within local context
 - ease of management
 - sustainability
- Improve access to critical inputs
 - Input interaction with irrigation
- Irrigated rice farming is output increasing
 - With complementary variables



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Thank you



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