

Sub-Sahara Africa's survival on low phosphorus agriculture

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Sustainable Food Systems



Sub-Saharan Africa's survival on low phosphorus agriculture: The irony

- Africa has the necessary natural resources for direct application or local manufacture of some nutrients, including P



BUT Africa hardly uses these resources; mining is at $2.5\text{kg P ha}^{-1}\text{yr}^{-1}$:

- Costly processing into fertiliser locally
- Most are not soluble for direct application
- Direct use requires high application rates

- Of the 15-20Mt projected increase in PR supply between 2010 – 2015, half of it is from Africa (IFA, 2011)



Smallholder technological choices

Increasing efficiency of (the limited) external P inputs	Decreasing P output	Better use of on-farm sources
<ul style="list-style-type: none"> - Input placement - Input combinations - Target fields that give largest yields - Target systems that maximise residual effects 	<ul style="list-style-type: none"> - Erosion control - Reduce leaching 	<ul style="list-style-type: none"> - Residue recycling - Human manure use - Cropping choice - Water management - Biological access

