Africa Research In Sustainable Intensification for the Next Generation
(Africa RISING)

Regis Chikowo (and many others)
International Institute of Tropical Agriculture
Michigan State University
University of Zimbabwe
Who are we?

Africa RISING program comprises three research for development projects supported by USAID as part of the Feed the Future initiative
How are we organized - three regional projects

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Tanzania</td>
<td>Mali</td>
<td>Ethiopian Highlands</td>
</tr>
<tr>
<td>Malawi</td>
<td>Ghana</td>
<td></td>
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<tr>
<td>Zambia</td>
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The International Food Policy Research Institute leads the program’s monitoring, evaluation and impact assessment.
Our philosophy

Through action research and development partnerships, Africa RISING is creating opportunities for smallholder farm households to move out of hunger and poverty through sustainably intensified farming systems that

ü improve food security,
ü nutrition security, and
ü income security,
Research outputs

Output 1: Situation analysis and program-wide synthesis.
Output 2: Integrated Systems Improvement
Output 3: Scaling and Delivery
Output 4: Monitoring and Evaluation
Africa RISING Malawi
Agro-ecological Intensification through action research with smallholder farmers in Malawi

Regis Chikowo, Sieg Snapp - MSU
Wezi Mhango – LUANAR Agronomy
Fanny Chigwa – LUANR Animal Science Department
Agness Mangwela – LUANAR Nutrition Department
Isaac Nyoka – ICRAF
Desta Lulseged, Rowland Chirwa – CIAT
Owen Kumwenda & Anilly Msukwa – DAES
WUR
IFPRI
The story is clear
Maybe clearer with this one...
Within farm Contrasts
## Alarming yield gaps

<table>
<thead>
<tr>
<th>Crop</th>
<th>Actual yields (t/ha)</th>
<th>Attainable yields (t/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>1</td>
<td>5+</td>
</tr>
<tr>
<td>Soyabean</td>
<td>0.6</td>
<td>1.8+</td>
</tr>
<tr>
<td>Groundnut</td>
<td>0.5</td>
<td>1.5+</td>
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Closing the yield gaps:

- Requires knowledge assimilation by farmers through simple pathways
- Plausible approaches include learning by doing – farmers empowered through experimentation
Harnessing nitrogen.....
Rhizobiology with farmers – the N factories
Introducing improved germplasm and appropriate management – the possibilities..
When land is too constraining..

§ Increasing land productivity is a must

ü We have to go an extra mile with our innovations

Ø Moving beyond picking the ‘low hanging fruits’
The doubled-up legume technology
Intercropping two grain legumes

§  Legume –legume intercrops (double legume) based on different crop growth habits /architecture

ü  one of the crops starts growth slowly

ü  Both crops planted at their optimum spacing (as in sole cropping – additive intercropping design)

Ø  two grain crops harvested

Ø  soil fertility benefits larger
Doubled-up legumes – intercropping 2 legumes that have little inter-specific competition for resources
When groundnut is almost mature, pigeonpea begins vigorous growth.
Understorey groundnut has since been harvested....!!!
What are the opportunities for this ?..
Establishing fodder trees around farm boundaries
Biochemistry with smallholder farmers in Malawi!

Production of soyabean flour for nutritious soya porridge! (mixture of soya, groundnut and maize)
Africa RISING Years 3-5

“R4D” Platforms
Transfer research outputs
Research refinement & expansion (e.g., IPM)
Technical support
Africa RISING Phase I – ends Sept 2016
Africa RISING Phase I – ends Sept 2016

But I think we have made a case for Phase II
Thank You

Africa Research in Sustainable Intensification for the Next Generation

africa-rising.net