

Everyone has a right to lead a healthy and productive life



# “If you care about the poor, you care about agriculture”

Bill Gates

# 75%

of world's the poor live in rural areas and the majority depend on agriculture for their livelihoods

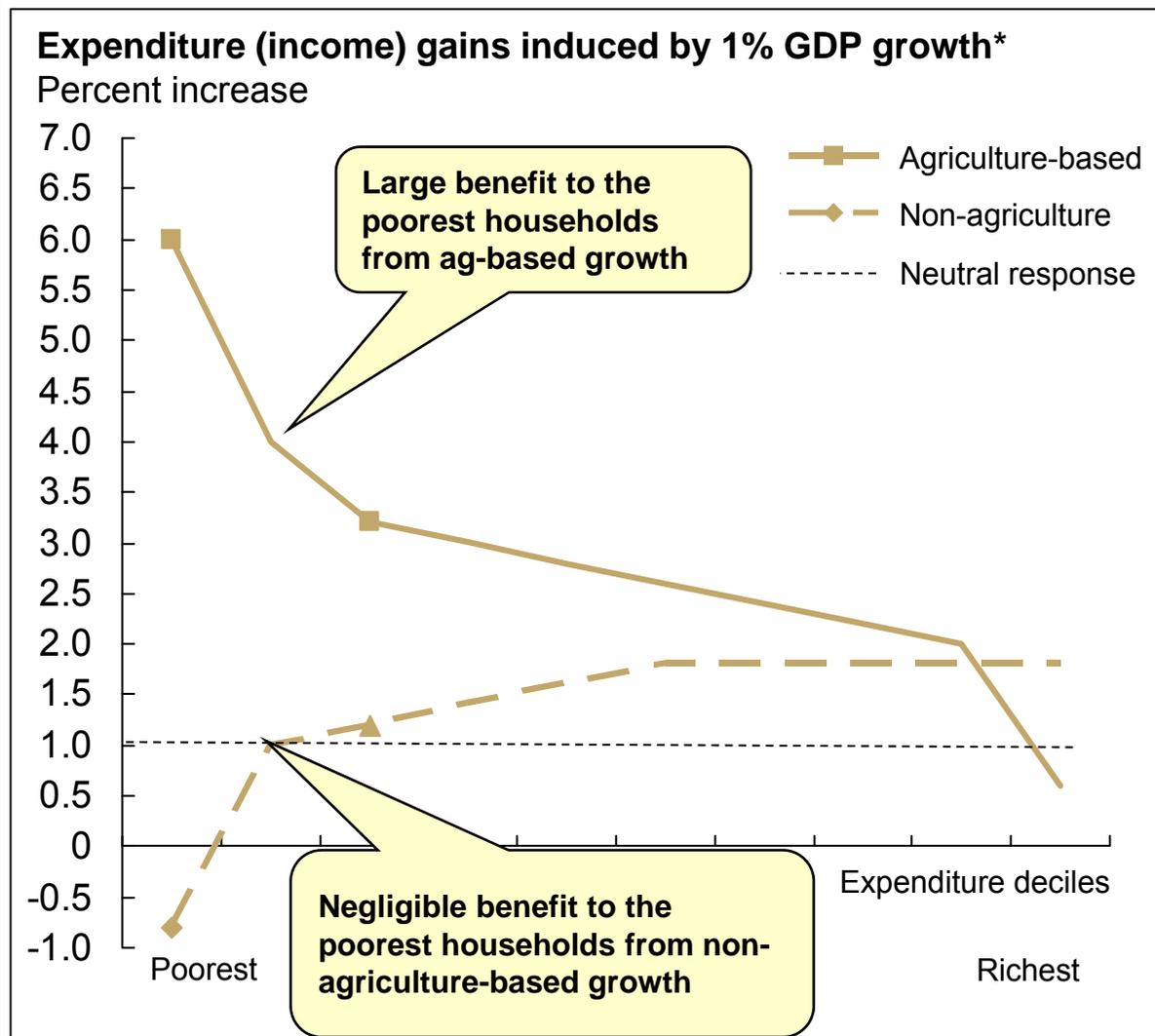


Agricultural growth **builds self sufficiency** for individuals and communities



Agricultural productivity growth is the most direct and efficient lever to **reduce rural poverty.**

# Agricultural development is an economic growth strategy that specifically addresses the needs of the rural poor



- On average in Sub-Saharan Africa and South Asia, a 1% increase in agricultural GDP induces a 6% expenditure gain for the poorest 10% of the population
- The large spillover benefits (a 2-4x multiplier) are due to the poorest being most reliant on agriculture for survival

\* Based on data from 42 countries during the period 1981–2003; Expenditure is equivalent to income in growth accounting

We focus on smallholder farmers in sub-Saharan Africa and South Asia



# Christina Mwinjipe



- Limited access to mechanization
- Reuse old seeds
- Little fertilizers
- Depend on rainfall
- Scarce agronomic information
- Lack of access to markets
- If production fails, no safety net

# Family dependent on cassava in Tanzania



Courtesy of J. Ndunguru



If you were in a situation like Christina, how would you choose to invest any income earned from farming?



# THEORY OF INCLUSIVE AGRICULTURAL TRANSFORMATION



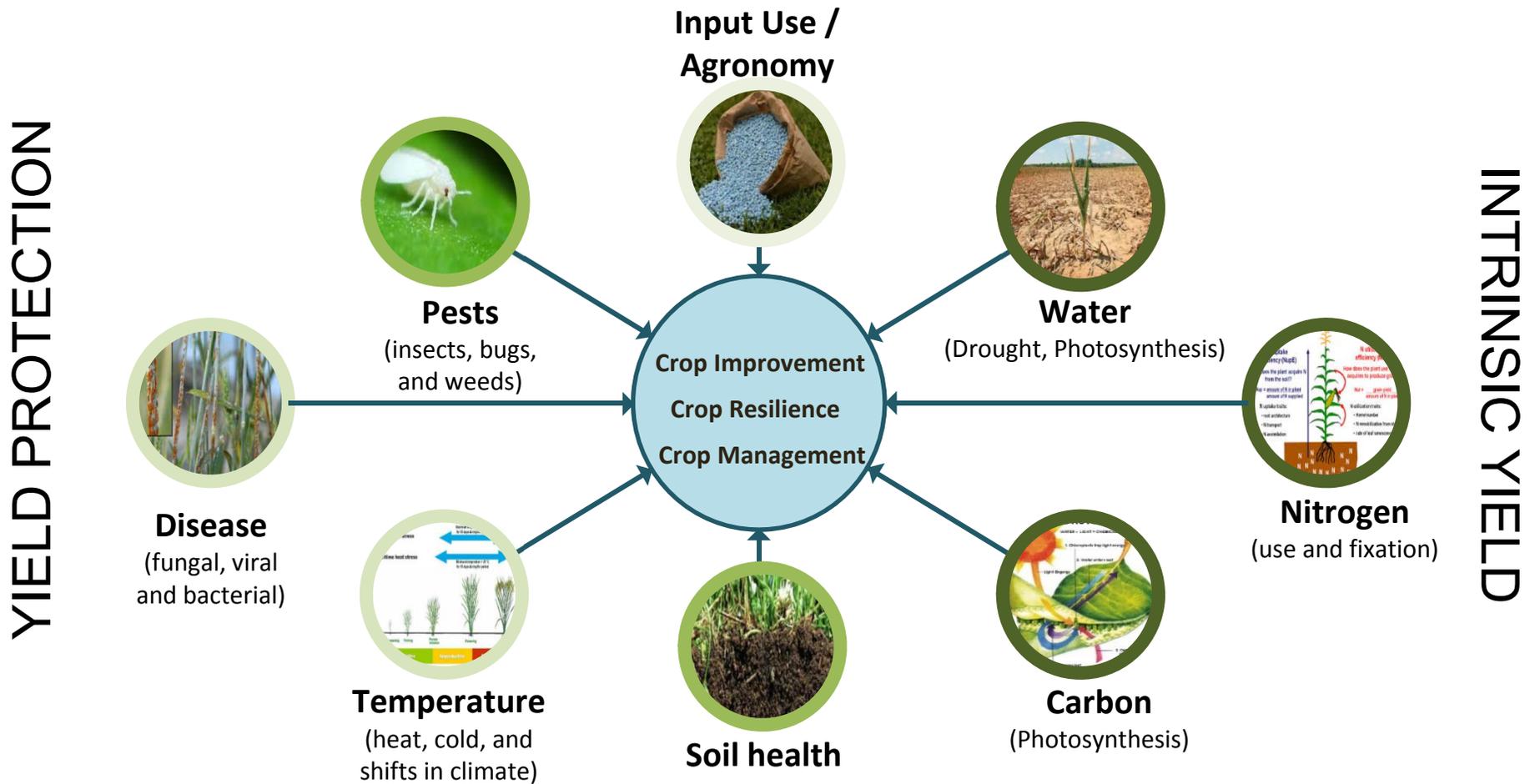
We see our role primarily as catalyzing country-led inclusive agricultural transformation in stages 1 through 2, and ensuring that this transformation is inclusive in that it benefits the poor and women

Adapted from P. Timmer

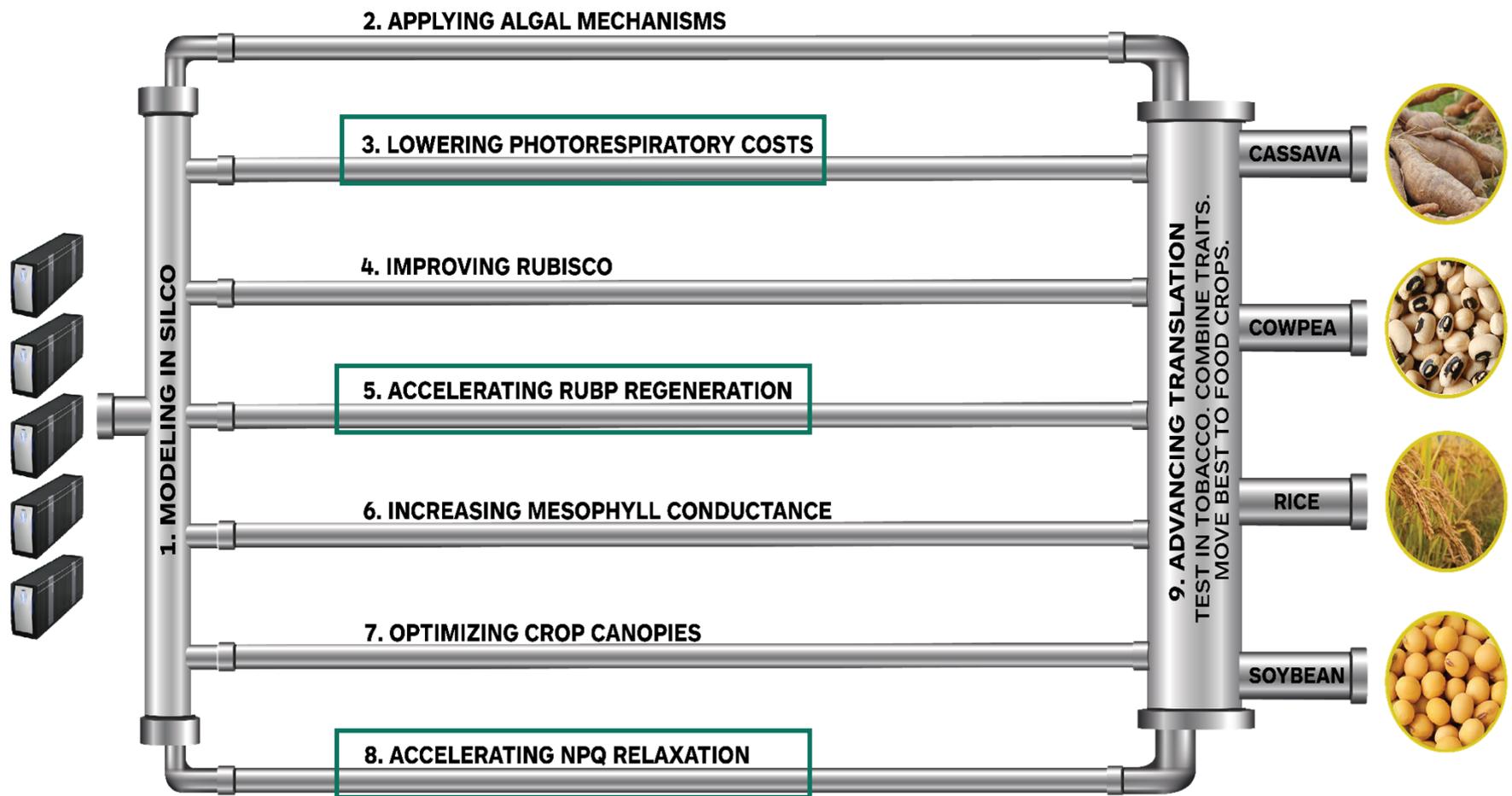
# Role of innovation in agricultural development

- **Increasing productivity**
  - Attained yields
  - Yield potential
  - Input use efficiency
- **Decreasing farmer risk/volatility**
  - Stress tolerance
  - Disease & pest resistance
  - Broad environmental adaptation
- **Enabling improved nutrition**
  - Micronutrients in staple crops
  - Farm crop diversity
  - Income/ affordability

Together, the pieces of our discovery portfolio deliver new avenues for crop improvement, resilience, and management









- Johannes Kromdijk, Katarzyna Głowacka, Lauriebeth Leonelli, Stéphane T. Gabilly, Masakazu Iwai, Krishna K. Niyogi, Stephen P. Long (2016) **Science** **354**, 857-861



**A big and difficult challenge.....**



**.....with ability and the will to solve it.**



# Thank you

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Workshop: The Next Green Revolution

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