

# The Challenge of World Food

## 20th Century

- Reduce hunger & poverty
- Grow more calories to feed a growing population
- Grow more food with more resources
- Focus on small-scale producers

## 21st Century

- End hunger & poverty
- Grow more diverse foods to feed a growing economy
- Grow as much food with less impact
- Small or large producers?

# How?

## 20th Century

- Public Research
- An “industrial” approach to agriculture
- Breed high yielding varieties of staple cereals
- Subsidize inputs (water, fertilizer)
- Focus on smallholders

## 21st Century

- Public/Private Research?
- An “ecological” approach to agriculture?
- Breed/Engineer (?) resilient+efficient varieties
- Price inputs/pollution?
- Focus on smallholders / commercial growers?

- New technologies/practices need not only perform well, they need to be adopted at scale.
- Economic, behavioral, institutional challenges.
- Especially so for small-scale producers in low and middle income countries.





Is an  
“Evergreen  
Revolution”  
Possible?

Burney et al (2016)





Leapfrogging  
the green  
revolution?



# Is our research system working?

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## Ending hunger: science must stop neglecting smallholder farmers

Policymakers urgently need ideas on ways to end hunger. But a global review of the literature finds that most researchers have had the wrong priorities.



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