Ceres2030
Sustainable Solutions to End Hunger
New research

Sustainable Solutions to End Hunger

http://ceres2030.org
Joined by 84 researchers from 25 countries
A new generation committed to ending hunger through evidence-informed decisions

Dr. Saweda Liverpool-Tasie
Market links for farmers

Dr. Maricelis Acevedo
Climate resilient crops

Dr. Livia Bizikova
Farmers organizations

Dr. Isabelle Baltenweck
Livestock feed interventions

Dr. Tanya Stathers
Post harvest loss

Dr. Isabelle Baltenweck
Livestock feed interventions

Dr. Eugenie Maiga
Youth employment

Dr. Valeria Piñeiro
Policy incentives for sustainable practices

Dr. Leslie Lipper
Understanding tradeoffs for SDG2

Jaron Porciello
Synthesis and AI

Dr. David Laborde Debucquet
Economic modeling

Carin Smaller
Policy relevancy
A portfolio of interventions designed to achieve multiple outcomes

**ON THE FARM**
Interventions provided directly to farmers, including farm inputs, R&D, improved livestock feed, and irrigation infrastructure.

**FOOD ON THE MOVE**
Interventions to reduce post-harvest losses, including storage, to improve returns from sales, and to support the mix of services provided by SMEs, such as cooperatives, traders, and processors.

**EMPOWER THE EXCLUDED**
Interventions related to social protection, institutions such as farmers' organizations, and education through vocational training.
Accelerating the evidence process using machine learning

Our model evaluated more than 500,000 articles

Researchers evaluated more than 100,000 articles

Researchers evaluated 2,000 articles
**Findings: On the Farm**

**DONOR CONTRIBUTION: USD 9 BILLION PER YEAR**

<table>
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<tr>
<th>FINDINGS FROM NATURE RESEARCH</th>
<th>MODEL INTERVENTIONS</th>
<th>RECOMMENDATIONS</th>
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<td>The most important determinants of adoption of climate-resilient crops were the availability and effectiveness of extension services.</td>
<td>Extension services</td>
<td>4. Investment in extension services, particularly for women, must accompany research and development (R&amp;D) programs.</td>
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<tr>
<td>Market and non-market regulations and cost-compliance incentives that include short-term extensions.</td>
<td>Agroforestry subsidy Capital endowment Extension services Investment subsidy</td>
<td>5. Agricultural interventions to support</td>
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Successful adoption is positively correlated with inclusive extension services, access to inputs, and crop varieties that are commercially viable.

Extension services combined with input, production, and investment subsidies

R&D National Agricultural Systems (NARS) & CGIAR

- Capital endowment
- Extension services
- Rural infrastructure (irrigation)
- Water-scarce regions to scale up effective farm-level interventions to assist small-scale producers.

Obvious and useful options to improve the quantity and quality of livestock feed are being overlooked, such as better support for the use of crop residues.

- Capital endowment
- Extension services
- Improved forage subsidy
- Production subsidy
- R&D National Agricultural Systems (NARS & CGIAR)

8. Improve the quantity and quality of livestock feed, especially for small and medium-scale commercial farms.
Findings: **Food on the Move**

**DONOR CONTRIBUTION: USD 2 BILLION PER YEAR**

### FINDINGS FROM NATURE RESEARCH

- Storage interventions are effective, but other interventions are also needed, such as better handling, improved packaging, and careful timing of the harvest.

### MODEL INTERVENTIONS

- Extension services
- Storage (post-harvest losses)

### RECOMMENDATIONS

9. Reduce post-harvest losses by expanding the focus of interventions beyond the storage of cereals, to include more links in the value chain.

10. Invest in the infrastructure, regulations, services and technical assistance needed to support SMEs in the value chain.

- SMEs are successfully serving farmers in low and middle-income countries, particularly in Africa, and are correlated with technology adoption and higher productivity.

- Rural infrastructure (roads)
- Storage (post-harvest losses)
Findings: Empower the Excluded

DONOR CONTRIBUTION: USD 3 BILLION PER YEAR

- **FINDINGS FROM NATURE RESEARCH**
  - Membership in a farmers’ organization was associated with positive effects on income in 57% of the cases reviewed.
  - Programs that offer training in multiple skills to rural youth show promise in increasing employment levels and wages.
  - Social protection programs work best when they create a bridge to productive employment and remove barriers in accessing markets, education, and credit.

- **MODEL INTERVENTIONS**
  - Currently no modellable intervention
  - Vocational training
  - Income support through food subsidy

- **RECOMMENDATIONS**
  1. Enable participation in farmers’ organizations.
  2. Invest in vocational programs for rural youth that offer integrated training in multiple skills.
  3. Scale up social protection programs.
Nature Research hosts a conversation with the Ceres2030 authors

October 22, 2020
https://conferences.nature.com/d/v7qczl/
Findings: Major gaps in the evidence base

Persistent gaps in gender and costs of interventions

Limited data about gender and the costs of interventions

Data Scarcity By Regions

- Sub-Saharan Africa: 40,000
- East Asia and Pacific: 30,000
- South Asia: 25,000
- Latin America and the Caribbean: 20,000
- Middle East and North Africa: 15,000
A systematic review of youth skills training programmes in agriculture in low and middle-income countries

W.H. Eugenie Maïga, Mohamed Porgo, Pam Zahunogo, Cocou Jaurès Amegnaglo, Doubahan Adeline Coulibaly, Justin Flynn, Windinkonté Seogo, Salimata Traoré, Julia A. Kelly, Gracian Chimwaza
Introduction

• Lots of welcome attention on the issue of youth employment, but what does the evidence say?

• We reviewed skills-based training interventions which aim to increase youth engagement in agricultural employment in LMIC in order to better inform investment decisions made by donors and policy makers

• We define youth between the ages of 15 and 40
What outcomes and interventions did we investigate?

**Interventions of interest:**
- agriculture-related courses
- on the job training
- technical or vocational education and training
- general skills training (entrepreneurship and financial literacy)

**Outcomes of interest:**
- jobs created in the agricultural sector
- self-employment and entrepreneurship
- provision of extension services
- profit/income/earnings from an agricultural activity or job
- farm productivity
Vocational programs that teach multiple skills show promise.

A multi-country radio and interactive ICT campaign boosted adoption of orange-fleshed-sweet potatoes in Ghana, Tanzania, Uganda, and Burkina Faso.

One more detail about the program:

Overall, there was a 60% adoption of orange-fleshed sweet potato farming for listeners, versus 7% for non-listeners in Ghana.
In the Philippines, an infomediary campaign called Read, Surf and Text for Your Parents boosted youth interest in agriculture. 68% of participating students reported that they now want to be involved in farming as a future occupation. Vocational programs that teach multiple skills show promise.
Overall, we find major gaps in the evidence base

- A total of just sixteen studies presented qualitative, quantitative and mixed-methods evidence that could support our research
- **Chronic lack of evaluation** of effectiveness of interventions
- **Gender** disaggregation of outcomes is seldom done
- **Youth** are seldom targeted or evaluated as the target audience
Policy recommendations

• Invest in vocational programs for rural youth that offer training in multiple skills

• More rigorous evaluation of these programs is needed

• Estimate returns to investment of agricultural skills training
Y Baarka!
Anitche!
Thank you!
Ceres2030
Sustainable Solutions to End Hunger
Empowering the vulnerable in a sustainable way, by the numbers

Dr. David Laborde Debucquet
Ceres2030 Co-director
Research Theme leader and Senior Research Fellow at IFPRI
In addition of national efforts, we need to mobilize:

- Domestic Resources, 19 billions, 58%
- External Resources, 14 billions, 42%

Of external public or philanthropic resources, we need to mobilize $14 billion more, per year.
Who? The undernourished and the poor small-scale producers

Why? Because the world will improve, but not for everyone
How did we get these numbers?

A sophisticated model
What should we do with the money? A portfolio of interventions.
When should we be spending? *Invest without delay*

The funding gap over time and by category of intervention

- **Food on the Move**
- **On the Farm**
- **Empower the Excluded**

USD 26 billion
+ USD 14 billion

x2
Where should we prioritize spending? A Focus on Africa

Priority countries for donor investment based on their dependency on external resources until 2030

- High Priority
- Medium Priority
- Low Priority
- On Target
- Not Included in Assessment
If we mobilize
We will change the world:

$14B more, per year

- 490 million out of Hunger
- 160 million farmers out of Poverty
- Under Carbon Neutrality

Without additional spendings | With additional spendings
-------------------------------|-----------------------------
Undernourished (mio people)  | 600                         |
Small-Scale food producers in extreme poverty | 200                         |
Potential Agricultural Emissions (mio CO2eq) | 400                         |
Thank you

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