



From research to agricultural transformation The role of smallholder producers

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Investing in rural people

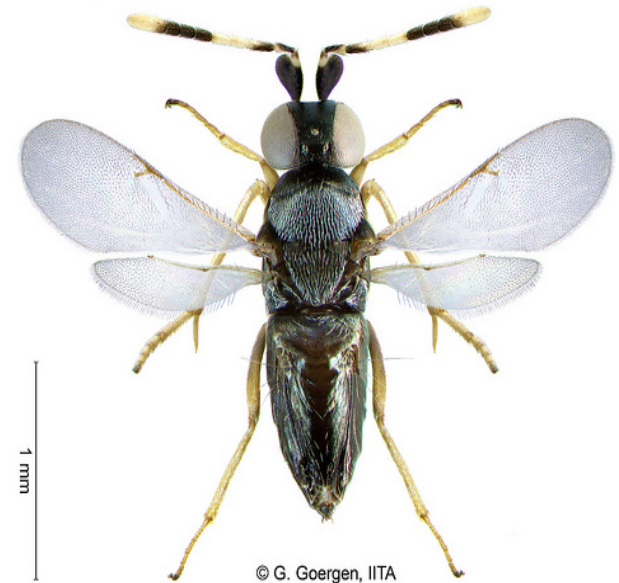
The power of agricultural research

- One person lifted out of poverty for every \$109 spent in China
- One person lifted out of poverty for every \$16 spent in Uganda
- \$9 of additional food for every \$1 spent



Biological Control Programme

- Africa-wide programme
- \$20 million spent
- \$2.2 billion in production saved
- 20 million lives saved



Anagyrus lopezi wasp
used to control cassava
mealybug

NERICA (New Rice for Africa)

- Coconut oil made NERICA possible
- Matures quickly
- Drought-tolerant
- Less labour
- Yields 25 to 250 per cent higher



Nutrient-dense fish

- Small fish for household consumption
- Large fish for commercial use
- Families educated on importance of nutrition
- Undernutrition fell 9 percentage points
- Stunting considerably reduced



Quality Protein Maize (QPM)

- Biofortification
- Twice as much lysine and tryptophan as conventional maize
- Lower rates of malnutrition for adults and babies
- Contributes to economic growth

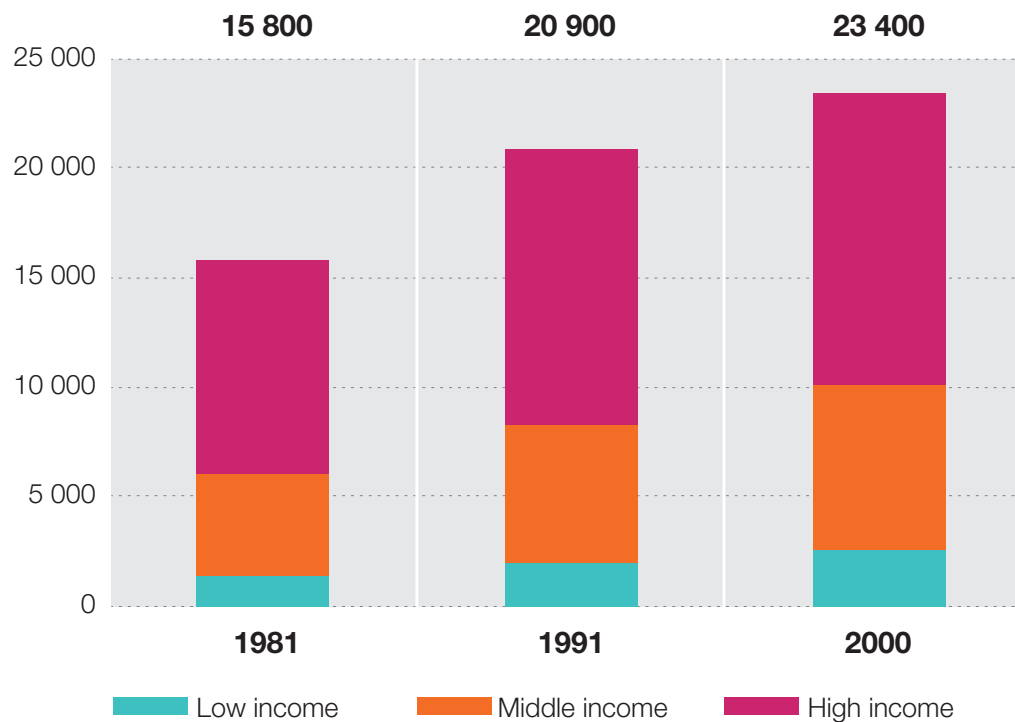


Public expenditure on agricultural R&D

Country grouping by income class

Public agricultural R&D spending

(Million 2005 PPP dollars)



Smallholders matter

- 500 million small farms
- Support 2.5 billion people
- Biggest group of private investors in agriculture



Understanding the social dimensions

- Know the environment where discoveries are used
- Focus on best practices
- Value local knowledge
- Understand local conditions and customs
- Work with farmers' organizations



Fostering greater equality

- Women, indigenous people and youth face greater obstacles
- They have less access to services, markets and assets
- They are often excluded from decision-making
- Women work more hours than men
- Fewer children go hungry when women are empowered



Novel applications of established technologies

- A bottle cap for micro-dosing
- A box instead of a basket for crop transport
- A solar dish from broken mirrors
- A mobile phone for market information and banking



Using local knowledge

- Improving a traditional method is a form of innovation
- 20 years after the project closed, farmers still use the improved half-moons and planting pits
- Soil is more fertile
- Trees provide fodder for livestock



Water harvesting recharges local groundwater

Well water levels

- 1994: -18 metres
- 2004: 4 metres
- 2012: 4 metres

Vegetable gardens

- 1994: 0
- 2004: 4
- 2012: 10

Result

Vegetables to sell and consume,
even during drought years



Thank you

