

Reflections on Bean/Cowpea and Pulses CRSP Achievements in Socio-Economic Research and Wisdom For the Future

Rick Bernsten,
Michigan State University

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Outline

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I. INTRODUCTION

Challenging assignment!!!

Reflection OK, Wisdom problematic!!

Prepared for this assignment by cleaning my office (now "officially" retired)

Sorted out document from as long ago as 1968:

- 25 filing cabinet drawers
- 30 feet of bookshelves
- 30 years of documents
- Saw my career fly by

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Evolving Agricultural Development Paradigms/ Research Technology Transfer Models: 1950s to Present

- **Struck by dramatic shifts!**
Community/rural development, build land-grant type universities, cropping/farming systems, integrated rural development, T&V, privatize extension, "get prices right", structural adjustment, NGOs can do it better, agriculture isn't important (environment, governance), target the "poorest of the poor", target the "emerging commercial farmer", farmer field schools, sustainable development, high-value export crops, value chain, food & nutritional security, sustainable intensification
- **What's next?**

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II. What's the Role of an Ag Economist in a Biological Science-Focused Research Program?

Beginning of Career (1974/IRRI)

Asked Peter Jennings (co-“father”, IR 8) “What is the role of an economist in a plant breeding programs?”

Jennings' response: _____?

More Recent Assessments of Colleague's Expectations

- **Magician**—all of the problems with non-adoption are socioeconomic, so we need you to solve them
- **Irrelevant**—economists don't understand “hard” science, so their assessments/insights are irrelevant

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- **Conveyor of Good News**--We need you to show that our research is good/had an impact (DR, disappointed friends)
- **Appreciative Collaborator**--We welcome collaborating with you as our collaboration will help to identify constraints and opportunities for fine tuning research priorities to increase impact (**Rosas, grain color=price discount**)

Have spent the past 38 years working to refute Jennings' assertion.

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III. Experiences that Shape My Perspective

Early Years

- Peace Corps Volunteer, chiefdom agricultural extension agent, Sierra Leone (1967-70)
- Instilled a healthy skepticism of new technologies, constraint & risks farmers face, complexity & diversity of farming systems
 - ✓ Anathoda--upland rice HYV, susceptible to blast
 - ✓ Broilers—imported, vaccine not available, died
 - ✓ TSP—apply as topdressing, washed away

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Professional Career

- IRRI (Phil, 1974-76—GR, seminars; Indo, 1979-81--national program, FSR, representative sites); Winrock (1981-84), MSU (since 1985, 1987-89, UZ-FSP)
- Have primarily worked with biological scientists (e.g., breeders, agronomists, entomologists, animal scientists) to implement multidisciplinary research designed to complement their technical research

Involved with the CRSP since 1990

- MO—Socioeconomist, evaluate & comment on PI's workplans & annual reports (1991-96)—**Tony Hall!**
- Regional Facilitator, LAC (1997-2002)--**do something**
- PI, focusing on LAC (1997-2012)
- TMAC (2005-07; Chair, 2006 & 2007)

Key Biological Science Collaborators Have Included:

- **Jim Beaver**—met Jim & Linda in graduate school at UI-CU (**term paper: E x G interaction**), collaborated on studies in Central America, DR, Haiti
- **Juan Carlos Rosas**—collaborated on studies in Honduras & other Central American countries (**If Hindu....**)
- **Jim Kelly**—collaborated on studies in Mexico & Michigan, many graduate student committees, introduced me to **M&T!!!; lab training in on molecular markers**

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IV. Studies Implemented with w/Other CRSP PI's, Graduate Students (mostly from LDCs)

Guiding Research Questions

- **What are the subsector's priority constraints?**
Subsector Analysis (VC?): rapid appraisal of subsector to describe structure, prioritize constraints, & guide future socioeconomic research
Countries: Ghana, Cameroon, Honduras, Haiti, DR, Mexico, Guatemala, Central American Region
- **How profitable is the new technology?**
Farm recordkeeping: data collected to analyze cost of production, profitability of new technologies
Countries: Honduras (few adopted package)

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- **Why do farmers adopt/not adopt new technologies?**
Adoption Studies: farmer surveys w/ data analyzed to identify factors associated w/ adoption & non-adoption
Countries: Honduras, Costa Rica, El Salvador, Mexico, DR, Mozambique
- **Have research investments been profitable?**
Impact/Rate of Return (IRR) Studies: adoption data plus financial (farmers) & economic analysis (economy)
Countries: Honduras, Mexico, DR, Cameroon, CRSP Graduate Training, Michigan, CA Bean Research Network

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- **How can bean seed systems be improved?**
Seed Subsector Studies: describe seed system & evaluate options for improvement
Countries: Honduras, Haiti
- **How can bean marketing/trade be expanded?**
Trade Studies: current status, future prospects, and option for increasing trade
Countries: US—imports/exports, US-ethnic bean market, Guatemala (*paloy*), Honduras (fair trade)

Additional studies evaluated:

- **Crop insurance** to reduce production risk (Honduras)
- Profitability of **value added products** (Ghana, Guatemala)
- Benefits of **participatory plant breeding** (Honduras)
- **Constraints** to higher yields (Honduras)

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Some Key Impacts of Socioeconomic Studies

- Documented impact of research--IVs widely adopted in C. America, Mexico, w/ high ROR, regional seed system (CA)
- Documented CRSP trainees' return to their home country/region (85%)
- Provided PIs with better understanding of the subsector, socioeconomic constraints
- Provided decision making input to MO's & IADB loan to the DR—DR project ended (**financial ROR good, economic ROR positive--less negative!!!=positive**)

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Challenge to Social Scientists

We need to identify socioeconomic issues/priority information needs for which socioeconomic research has a potential to generate insights/interventions to relax binding constraints

Must Ask Ourselves:

- Is there a “demand” for our research results (other than a journal)?
- Is the proposed research just interesting or also important?

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V. WISDOM FOR THE FUTURE?

Suggestions for the Extension Period

- Big increase in social science participation, but little multidisciplinary research. **Consider** funding a few “regional projects” with multidisciplinary teams who focus on system of constraints (e.g., varietal improvement, seed multiplication/distribution, credit access, extension, monitoring) in a key country plus a few smaller “satellite” sites/initiatives in the region.
- Breeding will produce varieties with desirable traits. **Consider** impact pathway analysis for how the genes will be pyramided into varieties for specific countries.

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- Disciplinary-focused research may fail to consider potential interventions like terracing to reduce water stress. Projects should **consider** including options as vegetative terracing as part of their research agenda.
- **A significant evolution.** PIs are taking responsible for assisting to strengthen seed multiplication/distribution systems. Project need to **maintain** a focus on cost recovery (no free seed) to insure the development of sustainable seed systems--consider utilizing CIAT's small packet seed distribution strategy.
- Some donors are funding initiatives similar to CRSP initiatives (e.g., rhizobium). **Consider** developing a data base of similar research initiatives.

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- While the proposed CRSP research agenda is well thought out, it doesn't set priorities. Given limited funding, project for future funding **must** be selected based on their potential for impact.
- To avoid “convenience sampling”, **consider** using GIS-based data to classify a country/region into relatively homogeneous agro-climatic areas and select field sites that represent the most import areas (**IRRI, upland rice drought screening**).

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Observations/Opinions

- Adoption of new technologies is primarily determined by: a) the advantage of a specific trait (**Jumbo Jet**), compared to other options, and b) its profitability (**Belize**). Really good technology sells itself!!!
- Increasing productivity should be the CRSP's priority goal. Higher yields reduce farmers production costs, increase profits/income, and reduce consumer prices. The Green Revolution **mainly** benefitted the “poor” by reducing rice & wheat prices,.

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- Farming system are very variable/complex. We must be **cautious** in extrapolating research/extension recommendations result beyond the research domain (**Religions of Java**)
- Sustainable productivity growth depends on many factors. In the **short run** the constraints limiting higher productivity may not be the constraints being researched. Even if the research is successful, other factor may limit adoption (e.g., lack of access to credit, extension support, market information). Thus, research won't have its full impact until these bottlenecks are relaxed.
Paradox—potential for success vs. need

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VI. Concluding Remarks

CRSP Management

- Fantastic leadership/support—Irv & Ben—incredibly competent & helpful colleagues.

USAID

- Have had great, highly supportive project managers

Colleagues and former Graduate Students

- It's been a pleasure working with you!!

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