

livestock *x*change

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ILRI

Outcomes and impacts of ILRI research 2005-2010

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From 2005-2010, the CGIAR compiled evidence on outcomes and impacts¹ from center research as part of the annual Performance Measurement System. While the compilers often struggled and complained², the result is a data base that we can use to look at outcomes and impacts of specific pieces of research and at institute-wide patterns over time and across themes and locations.

In Tables 1 and 2, I have organized ILRI's submissions³ by the topics of the sessions in the LiveStock Exchange. This document provides background information on outcomes and impacts. I make a few observations about the patterns I see, about gaps, priorities towards the future, and challenges we are likely to face in the new CGIAR.

Two caveats: First, the outcomes and impacts reported here do not cover all the outcomes and impacts that ILRI has had, however they do provide a sample of the nature and distribution of outcomes and impacts. Second, I made no attempt to summarize or evaluate the importance of the outcomes, nor the size of the impacts. This

would be a very interesting exercise⁴, and might be worth doing as a follow up to the LiveStock Exchange.

Outcomes

ILRI reported 28 outcomes over the period. The largest number (14) fall under the systems thematic area followed by animal health and genetics (7), markets (4) and human health (3). Within the systems and animal health/genetics areas, most of the sub-themes (breeds, feeds, drugs; water, pastoralism, residue tradeoffs, climate) are covered with the exception of BecA.

The small number of outcomes under markets and human health reflects the newness of these areas for ILRI. Most are from policy work done under the smallholder dairy project whose results about informal markets and food safety contributed both to a markets focus and to the emergence of the human health thematic area.

In addition to being spread across thematic areas, outcomes occurred among different types of next-users—local, regional and national policy makers, researchers and research managers, donors, and development practitioners. The geographical distribution is less diverse, with

1 Submissions covered the previous year. Outcome stories (<http://tinyurl.com/ilrioutcomes>) are cases where research results from ILRI and partners were taken up by 'next-users' and contributed to a change in policy or practice. Impact studies attempt to link use of research outputs to changes in agricultural productivity and poverty using rigorous evaluation methods.

2 Many scientists contributed to this process but Leah Ndungu and John McDermott deserve special recognition.

3 I also include planned future contributions.

4 See Thornton, P. and Otero, A.N. 1998. A compendium of ILRI impact and adoption 1975-1998. Nairobi: ILRI.

most happening in East Africa and a few in South Asia.

While writing up the stories was often a challenge, having the material and generally scoring well among CGIAR centers suggests that ILRI's past investment in better understanding and articulating linkages between research outputs and outcomes, for example the establishment of the Innovation Works unit, has paid off. ILRI is well positioned to deliver outcomes in the CRPs. Documenting these outcomes is likely to fall to the CRPs, where capacity and interest in livestock-related outcomes may depend on lead center.

Some outcome stories have subsequently been the subject of impact studies; some are being explored for potential future studies. To date, value chain outcomes were more likely to have led to impact studies than outcome stories from other thematic areas, however this could change as there are quite a few planned studies in the Systems and the Animal health/genetics areas.

Impacts

Impact studies are distributed as follows: 5 in animal health/genetics, 9 in systems, 5 in markets, and 4 in human health. Within the markets area, completed studies relate to dairy policy work which has arguably been ILRI's biggest success in terms of outcomes and impacts.

The planned study on traditional market hubs in EADD is the first that would look at a value chain interventions. Though not described in an ILRI outcome story, the study measures the impact of a change in project implementation that came about as a result of ILRI research, namely the inclusion of traditional as well as informal hubs. This is important because in our research on what works in livestock-related interventions, we often do evaluations of projects implemented by others⁵. For such assessments to be of ILRI as well as by ILRI, we need to be clear about how they link to ILRI research outputs.

A broader range of research outcomes have been or are being covered by the impact studies in animal health/genetics. Three relate to animal health, one to an institutional innovation, and one is a sectoral study covering all areas. Two are in Asia and one in West Africa. The main gap would appear to be in the area of genetic resources and breeding. There were several outcomes related to this but no impact studies as yet.

Several research areas within Systems have been or are being the subject of impact studies—three in residue trade-offs, three relate to feeds, one on a plow, one on land management, and one on index based livestock insurance. Comparing the topics of the impact studies to those of the outcome stories reveals a gap in the area of land use and climate change that has generated outcomes but not yet had its impact assessed. One reason for this could be the lack of established research methodologies to assess impacts of these types of research outputs and outcomes as compared to assessing farm level technology adoption and impact.

ILRI has sometimes struggled to generate impact studies meeting the CGIAR criteria, and studies that were submitted often didn't score as highly for quality as did the outcome stories. Some possible reasons for this could include: fewer livestock technologies generated due to longer research lags as compared to crops research; productivity indicators (inputs and outputs) are more difficult to observe and measure in livestock than in crops; the multiple roles of livestock in livelihoods make it is difficult to identify and include all relevant benefits and costs of a livestock intervention; the dissemination of livestock-related outputs has been less successful than crops. ILRI is working to address some of these issues, especially related to methodology, measurement, and dissemination. An Impact Assessment CCER conducted in 2009 (<http://mahider.ilri.org/handle/10568/10583>) provided useful guidance.

Some thoughts going forward

Due to its commitment to and investment in making research relevant to development, ILRI is well placed to face the challenge of being accountable for outcomes as well as outputs under CRPs. A challenge will be to ensure that CGIAR objectives of greater accountability and impacts is matched with a research design and implementation process that incorporates lessons on how to work with partners to increase the probability that knowledge generation will be linked to action on the ground (Kristjanson et al, 2009 <http://www.pnas.org/content/106/13/5047.full.pdf>).

While ILRI's past performance in terms of documenting impact has not been so strong, there are several reasons to be optimistic in this area. The outcome/impact-focus of the CRPs should generate increased demand for impact studies. The types of impacts that will be assessed will include all 4 CGIAR system-level outcomes (poverty, food security, nutrition/health, and environment). This should lead not only to more studies but also to methodological

⁵ Examples include evaluations of the Arid Lands Resource Management Project, the EU/FAO drought interventions, the assessments of livestock projects under the 'gender, assets and agricultural productivity' project and possibly also EADD.

development to better assess different types of impact as well as impact at different scales (eg system, value chain). All of this will be good for assessing livestock research impact. To date, only a handful of ILRI studies have looked beyond productivity and income impacts or at gender/equity issues related to how costs and benefits are distributed. A major challenge is staffing, as recruiting impact assessment specialists is difficult.

Priority areas to generate and document outcomes fall under the markets thematic area. Work is already under-

way on innovation platforms and an evaluation framework for CRP3.7. Priority areas for impact assessment are breeding, land use change, and climate change. There should be opportunities to look at breeding in CRP 3.7. Land use and climate change might better be assessed in CRPs 1, 5 and 7 so we need to make sure that any studies conducted are relevant to the livestock agenda.

Finally, there are likely to be opportunities with BecA as it develops its own agenda to generate and document outcomes and impacts.

Table 1 Outcome Stories by Session Topic. (see also: <http://tinyurl.com/ilrioutcomes>)

	Markets	Systems	Animal health and genetics	Human health	Other
2004	Smallholder dairy project, Kenya	Influencing sorghum breeding programmes Forage collection serves East African Farmers (Napier variety)	Impact of animal health research on poverty reduction		Poverty mapping in Kenya
2005	ILRI research helps targeting IFAD dairy investment in Kenya	CASREN in China (sweet potato feed technologies)	Research project leads to Ethiopia's first community-managed animal health services		Targeting for SSA challenge Programme Poverty and livestock dynamics analysis methods used in Kenya and Peru.
2006	Pro-poor dairy development takes regional hold in Eastern Africa	Climate vulnerability and poverty in Africa Policy and management options for pastoral lands in East Africa (Kitengela) Land use change impacts and dynamics	Live vaccine safely deployed in pastoral areas of East Africa		
2007		Kenya adaptation to climate change in the arid lands Smallholder Pig Systems in North East India	ILRI-SLU capacity building Research methodologies for identifying gene function		Designing livestock interventions for emergency situations in Southern Africa.
2008	Responding to rising food prices, East Africa	Livestock water productivity influences local development in Uganda through global research Using African climate vulnerability and poverty maps to inform national, regional and global R&D priorities and efforts aimed at sustainable poverty reduction	GALVmed is establishing the commercial distribution and delivery of the infection and treatment vaccine for East Coast fever	African veterinary services are implementing new diagnostic and risk assessment skills in improved surveillance and risk mitigation measures against highly pathogenic avian influenza Response planning and capacity enhancement of veterinary services for controlling and mitigating the impact of Rift Valley fever outbreaks in East Africa	
2009		Conservancies established for ecosystem management at the boundaries of wildlife and pastoral systems in Kenya Adoption of a new approach crop breeding to benefit crop livestock farmers in India New emission factors for African livestock improve greenhouse gas inventories of African countries Production and distribution networks now avail forage planting materials to smallholder dairy producers in East Africa	Framework and guidelines for assessing environmental and socio-economic impacts of tsetse and trypanosomiasis interventions in sub Saharan Africa	An action plan improves the policy environment for smallholder dairy farmers in (East Africa and India)	

Table 2 Impact Studies (*italics =planned or ongoing; see also: <http://tinyurl.com/ilrimpacts>*)

	Markets	Systems	Animal health and genetics	Human health	Other
2004		Assessing the impact of the SASA/ CASREN technology interventions in the sweet potato-pig production systems in Zitong County (Sichuan, China) Genetically improved dual-purpose cowpea: Assessment of adoption and impact in the dry savannah of West Africa			
2005	Pro-poor policy change, Kenya		Returns to investments in smallholder dairy research in Kenya		
2006	Influence pathways and economic impacts of policy change in the Kenyan dairy sector		Farmer field schools for smallholder dairy	Informal traders lock horns with the formal milk industry: the role of research in pro-poor dairy policy shift in Kenya	
2007					Championing urban farmers in Kampala. Influences on local policy change in Uganda.
2008	Kenyan dairy policy change	Broad bed maker technology package innovations in Ethiopian farming systems: An ex post impact assessment	Management of internal parasites in goats in the Philippines		
2009			Impact assessment of agricultural research in West Africa: An application of the propensity score matching methodology	Collective livestock research for sustainable disease management in Mali and Burkina Faso	
2010 -	<i>Dairy Development, Assam</i>	An impact evaluation of technology adoption by smallholders in Sichuan, China: The case of sweet potato-pig systems	<i>ITM in smallholder dairy systems in East Africa</i>	Evaluating a group based intervention to improve the safety of meat in Bodija Market, Ibadan, Nigeria	
	<i>Traditional marketing hubs in EADD, Uganda</i>	The adoption and impact of an improved drought-tolerant, dual-purpose groundnut variety in Southern India The impact of fodder trees on milk production and income among smallholder dairy farmers in East Africa and the role of research <i>Napier Grass, East Africa</i> <i>Osano, Land Lease in Kitengela, Kenya</i> <i>Index based livestock insurance in Kenya</i>		<i>Impact of PE training on surveillance and response capacity for AI and other EIDs</i>	

On 9 and 10 November 2011, the ILRI Board of Trustees hosted a 2-day 'live-STOCK Exchange' to discuss and reflect on livestock research for development.

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