The triple challenge facing livestock research for development in Africa

Tim Williams

Two key questions

Back in 2000, two key questions occupied the minds of those of us who worked on the development of the ILRI’s Strategy—Livestock: A Pathway out of Poverty: Where are poor livestock producers located and how can livestock research be applied to lift them out of poverty in an environmentally sustainable way? Ten years on, it is pertinent to review how ILRI has dealt with these two questions.

While the institute satisfactorily answered the first question, dealing with the second question remains a work in progress. To be sure, notable achievements have been recorded in linking livestock producers, particularly dairy producers to markets, in improving crop-livestock integration to increase food output and enhance soil fertility and in application of biotechnology and landscape genomics to improve livestock breeding

and vaccine production. Despite these achievements, food insecurity and poverty persist in many livestock producing areas in Africa. Today, and arguably with more pressing urgency, livestock research for development needs to contend with the triple challenge of improving food and nutrition security, reducing poverty and enhancing environmental sustainability.

A balancing act?

The increasing demand for meat and dairy products in emerging economies, the competition for land and water resources between human food, animal feed and energy and the adverse impact on the environment of intensive livestock production have all combined to give livestock a bad press in the West. The image portrayed in the news media is that of a grain munching, water gulping and gas belching pollutant. What this imagery misses is the role that livestock play in the existential battle of poor livestock producers against food insecurity and poverty in the face of climate variability and change. The balancing act for ILRI then is to use its scientific research to address the global concerns of greenhouse gas emissions, environmental pollution and spread of zoonotic diseases caused by livestock without losing track of the triple challenge faced by poor livestock producers in developing countries, particularly Africa.
What will it entail to walk this tight rope?

Research will be required to increase livestock productivity while using less arable land and water resources. Increase in productivity will come from the development of new technologies and better adoption and utilization of existing ones. Improvements in the quantity and quality of feed, in nutritional management and in the development of vaccines and other new drugs that target the animal health problems faced by livestock producers in Africa will be essential.

Establishment of innovation platforms that bring together livestock producers, researchers, private sector entrepreneurs, representatives of civil society and the government will help facilitate adoption of new technologies.

Enhancing the access of poor livestock producers to markets and creating the policy environment that will allow them to enter and move up viable livestock value chains will be equally important.

Producing more products from fewer animals will save land and water resources and will minimize adverse environmental impacts. This is a tall order, but it is a task that ILRI together with its partners must address in the coming years.

The dire consequences that followed the recent drought in the Horn of Africa demonstrate the vital importance of water to both human beings and livestock. For Africa, climate change predictions point to an era of lower water availability in the future. In the face of dwindling water resources, the water needs of livestock must be balanced with the needs of the other agricultural subsectors—crop, horticulture and fisheries—as well as the ecosystem. On-going work between ILRI, IWMI, and the CGIAR Challenge Programme on Water and Food on multiple uses of water resources, rainwater management in mixed crop-livestock systems and improved management of wetlands and rangeland must be continued and deepened.

Rebuild core competencies in Africa

To address the triple challenge, ILRI’s presence in Africa, especially outside the headquarters, needs to be strengthened. Core expertise in livestock production (i.e. animal nutritionists, forage agronomists, range ecologists) seems to have declined over the last ten years and the number of scientists in this category appears incongruent with the scale of the problem to be addressed. Going forward, ILRI needs to rebuild core competence in these areas and deploy them to critical sub-regions on the continent. The opportunity for closer collaboration and sharing of expertise across CGIAR centres in the context of the CGIAR Research Programs should be exploited.

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