

Livestock and ILRI in the CGIAR's Challenge Program on Water and Food

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The CPWF was formed in the early 2000's with a programmatic focus on water scarcity, food security and poverty. It finished its first research phase in 2009 and is now in the middle of its second phase. In both phases, livestock issues were critically important in a wide range of environments, and in many instances ILRI played a central role in raising the profile of these issues and helping address them.

One important topic of the CPWF is water scarcity. Because it is often scarce, it must be used efficiently. That is, 'water productivity' must be raised. ILRI led a project that developed a conceptual framework for the study of livestock water productivity and how it can be improved. The study found that there are four basic strategies for increasing livestock water productivity: sourcing feeds that require relatively little additional water (such as crop residues); integrated improvements in overall animal husbandry (feeding, breed and health) to increase the benefits people derive from multiple animal products; better management of animal watering sites and vegetation on crop and pasture lands, and strategically optimal spatial allocation of watering sites accompanied by limits on animal densities. ILRI also led a related project on strategies for rangeland rehabilitation.

Another important topic of the CPWF is sustainable intensification for productivity, ecosystem services and resilience. Different projects have found different roads to intensification and diversification, involving shrimp, fisheries, fruits and vegetables, groundnuts, dry season irrigated grain cropping – or animal products. Livestock-related strategies for intensification may take the form of intensified dairy production, or improved smallholder participation in market value chains for animal products. In the Andes, investments in improved fodder and dairy market infrastructure allowed smallholders to cease overgrazing fragile highland wetlands (parramos). This has benefited all water users in the basin. In the Nile and Volta, ILRI has been a leader in CPWF work on intensification through livestock.

Opportunities for intensification are influenced by the location of a country or a basin along a 'development trajectory.' With higher incomes, the structure of demand changes, with greater demand for fruits, vegetables and animal products in rapidly growing urban markets. Taking advantage of these opportunities sometimes means resolving water-related conflicts (often having to do with water quality), or developing institutional mechanisms for water- or benefit-sharing.

At the other end of the development trajectory range, where incomes are low and marketing margins are high, intensification is less of an option. Assuring food security from local production becomes more important. Integrated crop-livestock systems are not uncommon, with livestock performing multiple functions in livelihood strategies.

As the CPWF is transformed into an important component of the new, emerging CGIAR Research Program on Land, Water and Ecosystems, we will seek ILRI's continued participation and partnership, playing a leading role in our research program.

Contributed by Larry Harrington, Research Director at the CGIAR Challenge Program on Water and Food (CPWF).

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.

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