MINISTRY OF AGRICULTURE, ANIMAL INDUSTRY AND FISHERIES

Mapping a Better Future
Spatial Analysis and Pro-Poor Livestock Strategies in Uganda

FACT SHEET

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Introduction

Livestock represents an essential part of Uganda's agriculture, culture, and economy. While the growth of Uganda's total agricultural output has declined, livestock trends are up considerably. The total number of cattle, sheep, and goats more than doubled between 2002 and 2008, and the number of pigs and chickens grew by 88 and 59 percent, respectively. Beef and milk production both increased by 8 percent in 2008 alone.

Livestock are particularly important to the subsistence agriculture on which seven out of ten Ugandans rely for their livelihood. While income from livestock provides only one of many sources of income for rural households, people typically rank livestock as their second or third most important means of livelihood. It is not surprising then that over 70 percent of all households in Uganda owned livestock in 2008. Indeed, smallholders and pastoralists dominate the livestock sector. Farming households with mixed crop and livestock production and pastoralists together own 90 percent of Uganda's cattle and almost all of the country's poultry, pigs, sheep, and goats.

Uganda's policymakers have acknowledged the importance of livestock to household incomes, the achievement of national food security and the Millennium Development Goals, as well as to employment creation and poverty reduction. Thus, as part of its National Development Plan covering 2010/11-2014/15, the government intends to boost meat and dairy production by increasing its investments in improved breeds, water infrastructure for livestock, and better management of rangeland and forage resources.

Ensuring that government investments in the livestock sector benefit smallholders and high-poverty locations will require more evidence-based local planning supported by data, maps, and analyses. *Mapping a Better Future: Spatial Analysis and Pro-Poor Livestock Strategies in Uganda is* intended to address this need. To do so, it compares the latest 2005 poverty maps with maps of livestock data from the 2002 population and housing census and the 2008 national livestock census. Using these data, it examines the spatial relationships between poverty, livestock production systems, the location of livestock services such as dairy cooling plants, and livestock disease hotspots.

About the Publication

The report comprises five sections:

Introduction: Gives an overview of the importance of livestock in Uganda's agricultural economy and in the household economy of the poor; provides the rationale and policy context for the report; and describes the methods and datasets involved.

An Overview of Livestock and Poverty: Describes and depicts in maps Uganda's various livestock production systems, as well as the composition and distribution of the nation's livestock herd. Explores the connection between livestock and the livelihoods of the poor, and presents poverty maps for the country.

Dairy and Poverty: Considers the importance of dairy income to small-scale farmers. Maps areas of milk surplus and milk deficit (areas where production either exceeds or falls short of demand) and compares these to poverty maps and to areas where dairy development hubs are planned.

Livestock Diseases and Poverty: Examines the incidence of African animal trypanosomiasis (sleeping sickness) throughout Uganda and compares it to the distribution of livestock production systems, livestock densities, and poverty rates and densities. It considers the implications for investments in programs to control the tsetse fly (the insect vector of the disease in livestock and also in people).

Moving Forward: Conclusions and Recommendations: Summarizes observations from the map analyses presented in the report and makes recommendations on how to improve and expand upon these analyses and catalyze greater use of the resulting information in decision-making.

Key Findings

While the maps and analyses in this report are primarily designed to demonstrate the value to decision-makers of combining social and livestock-related information, they also support the following conclusions:

- *Maps showing milk surplus and deficit areas can highlight geographic differences in market opportunities for poor dairy farmers and help target knowledge dissemination, market infrastructure investments, and service delivery to dairy farmers.*
- *Maps showing animal (and human) disease risk by livestock production system can help target and prioritize areas for intervention. The impact of disease on livestock and their owners differs geographically because the role of livestock in peoples' livelihoods varies among production systems.*
- *Mapping poverty, livestock production systems, and distribution of disease vectors such as tsetse allows a better understanding of how the disease affects livestock owners in terms of livelihoods, welfare, and food security.*

Recommendations

Strengthening the supply of high-quality spatial data and analytical capacity will provide broad returns to future planning and prioritization of livestock sector and poverty reduction efforts. Priority actions to achieve this include:

- *Fill important livestock data gaps, regularly update data, and continue the supply of poverty data for small administrative areas.*
- *Strengthen data integration, mapping, and analysis through regular and focused training that promotes understanding of the whole livestock production system.*

Promoting the demand for such indicators and spatial analyses will require leadership from several government agencies, including the Ministry of Agriculture, Animal Industry and Fisheries, Ministry of Finance, Planning and Economic Development, Ministry of Local Government, and National Planning Authority. Actions in the following three areas carry the promise of linking the supply of new maps and analyses with specific decision-making opportunities:

- *Incorporate poverty information in livestock-related interventions and in regular performance reporting for the livestock sector.*
- *Incorporate livestock sector information into poverty reduction efforts.*
- *Incorporate poverty maps and maps of livestock production systems, disease risk, etc. into local decision-making.*

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What Others Say About The Publication

Finance, Planning and Economic Development Minister Syda N.M. Bbumba and Agriculture, Animal Industry and Fisheries Minister Hope R. Mwesigye jointly state their confidence that this publication will help Uganda refine its investment priorities so that the livestock sector acts as a sustainable engine of pro-poor agricultural growth.

Commissioner of the Livestock Health and Entomology Nicholas Kauta, UBOS Executive Director John B. Male-Mukasa, FAO Director of Animal Production and Health Division Samuel Jutzi, ILRI Director General Carlos Sere, and WRI President Jonathan Lash recognize that this report explores a topic of critical importance at the interface of environment and development. They point out that the innovative spatial analysis presented provides valuable insights that will help decision-makers to better target efforts to increase livestock production while reducing poverty.

Audience and Aims

This report is intended for a variety of audiences, including analysts and decision-makers in the livestock and dairy sectors, personnel involved in livestock research and advisory services, officials involved in national planning and budgeting, and civil society and nongovernmental organizations. It is motivated by the fact that, while there is a growing body of knowledge about Uganda's livestock sector, comparatively little is known about the interrelationship between livestock and poverty. Two factors have contributed to this knowledge gap: (1) Household surveys undertaken to date in Uganda have not managed to break down household income into its various components so that an explicit link can be made between welfare and the role of livestock at the household level; (2) Subnational poverty and livestock data for small administrative areas have only recently become available.

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This Publication is a product of the Ministry of Agriculture, Animal Industry and Fisheries, Uganda; Uganda Bureau of Statistics; Food and Agriculture Organization of the United Nations; International Livestock Research Institute; and World Resources Institute. You can find the publication, maps and spatial data at http://www.wri.org/publication/mapping-a-better-future-livestock.