



RESEARCH
PROGRAM ON
Livestock

More meat, milk and eggs by and for the poor

Report of the Maziwa Zaidi Policy Forum on inclusive investment opportunities in Tanzania's dairy value chains: Exploiting the evidence



Dar es Salaam, 23-24 May 2017

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June 2017

MAZIWA
ZAIDI



CGIAR is a global partnership that unites organizations engaged in research for a food-secure future. The CGIAR Research Program on Livestock provides research-based solutions to help smallholder farmers, pastoralists and agro-pastoralists transition to sustainable, resilient livelihoods and to productive enterprises that will help feed future generations. It aims to increase the productivity and profitability of livestock agri-food systems in sustainable ways, making meat, milk and eggs more available and affordable across the developing world. The Program brings together five core partners: the International Livestock Research Institute (ILRI) with a mandate on livestock; the International Center for Tropical Agriculture (CIAT), which works on forages; the International Center for Research in the Dry Areas (ICARDA), which works on small ruminants and dryland systems; the Swedish University of Agricultural Sciences (SLU) with expertise particularly in animal health and genetics and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) which connects research into development and innovation and scaling processes.

The Program thanks all donors and organizations who globally supported its work through their contributions to the [CGIAR system](#)

Maziwa Zaidi acknowledges financial support from the Government of Ireland through the ILRI-led 'more milk in Tanzania' project

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Background

Maziwa Zaidi implementing partners led by the International Research Institute (ILRI) and the Agricultural Non State Actors Forum (ANSAF), held a policy forum from 23-24 April 2017 at the White Sands Hotel in Dar es Salaam. The forum examined inclusive investment opportunities in Tanzania's dairy value chains and ways to exploit evidence accumulated in the past five years.

The key objectives were to:

- Showcase institutional and technological innovations that can be taken to scale, now;
- Catalyse inclusive public and private co-investment in priority high social and economic return innovations;
- Formulate policy initiatives and interventions necessary to sustain large-scale dairy sector innovations; and
- Motivate deeper engagement in the Maziwa Zaidi program to strengthen its future contributions to evidence-based dairy development.

The forum attracted diverse participation across public, private and civil society representatives from the dairy sector (See appendix 3).

Day 1 – interventions to scale

Opening remarks from Irish Aid

Speaking on behalf of the Irish Embassy in Tanzania, Niall Morris, Deputy Head of Development Cooperation at Department of Foreign Affairs and Trade, Ireland – Embassy of Ireland, Tanzania said that the embassy was pleased to have been able to fund the MoreMilkiT project, some of whose findings were presented at the Annual Conference of Agricultural Economics Society in Dublin earlier this year. He emphasized the importance of research being taken up and the value of an event such as this that focused on taking the evidence into practice.

Evidence to scale poster session

The two-day interactive meeting included poster presentations and critique of innovations and interventions in the dairy value chain by research and academia and participants. Thirty-five posters were presented under one of six clusters below:

- a. Dairy production: feeds and forages technologies
- b. Dairy production: genetics, farm efficiency and sustainability
- c. Dairy markets and linkages
- d. Innovation platforms
- e. Dairy Policy
- f. Inclusive dairy development

See appendix 1 ([and this blogpost](#)) for a list of the posters.



Poster presentation and discussion (Photo: ILRI/Brian Kawuma)



Group work on dairy scenarios (Photo: ILRI/Brian Kawuma)

In this exercise where the research partners showcased their results and the potential for them to be taken up at wider scale, participants took on the perspectives of different stakeholders as milk traders and processors, public policy makers, public/private investors, private sector input providers, development workers and producer organisations. They were asked to question and critique the poster presenters using these specific roles to identify, and refine, suitable investment opportunities. The table below captures some of their insights.

More investments: Feedback and insights from participants by stakeholder roles

Stakeholder category	Feedback and insights
Milk traders	<ul style="list-style-type: none"> • TAMPA and TAMPRODA should speak with one voice • Need for public investment in improving regulations • Public private partnerships are required to establish quality standards for milk that will create a level playing field • Processors should engage more with female farmers • Encourage investment in Ololilis (dry-season feeding mechanisms) • The focus on investments in Napier grass, feed quality and safety were good, but there needs to be more emphasis on water/seasonality • Hubs are useful but risky. Investment in hubs raises questions on their management and how to keep them going. Bundling of services appears to require more investments. Betters if the trader is also the input service provider. How to increase capacity utilization of chilling plants? • Liked solar/chilling tank because there is a gap that it can fill • High costs and taxes seems to be a major concern

	<ul style="list-style-type: none"> • Liked climate smart agriculture research and proposals for public investments in private investment. • Investment in AI needs public-private partnerships • Liked proposals for better connection for female farmers; problem is culture
Processors	<ul style="list-style-type: none"> • Need more investments in feeds and forages • Bundling of services is still lacking in hubs • Utilize processing capacity by increasing milk production • Invest in water • Invest in dairy farming as a business
Private sector input suppliers	<ul style="list-style-type: none"> • Need to target different segments of farmers (low-income, medium, high) • Engage in research with input providers • Opportunities for investment noted are in fodder production, seeds supply and PPPs but this should be demand driven • Mapping of the dairy sector is needed: who is where, doing what and what capacity • Conduct a comparative analysis of dairy policies, eg between Kenya and Tanzania • Invest in generic milk promotion • Linkage programs between livestock and crops are needed • Land use planning to include urban dairy farming • Feed centres and commercial feed farms can alleviate feed scarcity • Improved animal breed and AI provision is important • Extension services, training in husbandry, entrepreneurship and feed conservation skills are needed
Development workers	<ul style="list-style-type: none"> • Feed quality system is needed • Hubs are a good model • Public investment required to encourage producers to overcome cultural barriers • Bundle fodder marketing into the hubs
Policy makers	<ul style="list-style-type: none"> • Political initiative necessary for improved infrastructure: transport, cooling facilities and collection centres • Land tenure systems and land rights systems: use of commons, access and rights, sustainable land use practices • Levelling play field for milk production necessary to safeguard domestic milk industry
Producers	<ul style="list-style-type: none"> • Pasture management to mitigate challenges of seasonality • Training on dairy as a business • More market linkages for producers • Challenges: extensive pastoral systems remote from markets and inputs • Forage production/pasture/range management: improvement of pastures and policy intervention on land ownership-village land use plans • Dairy market hubs must help strengthen service provision and access to markets and inputs • Changing attitudes (quantity vs quality) with respect to matching numbers of animals to land resources and productivity • Water: invest in boreholes and valley dams

Synthesis from the investment marketplace

At the end of the day, the workshop conveners shared some observations and take home messages:

1. Vibrant participation in the forum is evidence of the strong Maziwa Zaidi partnerships created over the last 5 years and also potential for new ones
2. There was a lot of interest from the authors to work on the posters, but more so, there has been a lot of interest from the audience in general to study the information on the posters. This further highlights the good partnership we have had in this R4D program and the increasing appreciation for the need for evidence in this kind of work.
3. Feedback from the groups is consistent with the evidence generated and our own hypotheses about what needs to be done to drive the industry forward.
4. Regarding low capacity utilization in milk processing – supporting the growth of productivity in the informal value chain could help increase processing capacity utilization.
5. Need for a database and more communication

Key points from the poster sessions were:

1. Posters on Feeds and Forages: Posters were liked with seed systems supplying improved germplasm being identified as the main constraint that should be addressed through public private partnerships (PPPs). Need to overcome cultural barriers to encourage further adoption.
2. Posters on Market Linkages: Hubs is a good idea but need to invest in overcoming risks
3. Genetics, farm efficiency and sustainability: Solar cooling stood out as a good idea but there is need to look at other alternatives like biogas
4. Posters on Multi-stakeholder Processes (MSPs): These was liked for offering opportunities for stakeholders to speak with one voice
5. Posters on Policy: Investing in PPPs can address the identified constraints. Government should invest in growth of private businesses by for example, reducing multiple regulatory barriers
6. Posters on Inclusive Dairy Development: There is need to encourage better connections for female farmers given cultural barriers.

Key points across the scenario discussions were:

Across the three scenarios discussed by the groups, catalyzing businesses in feeds supply was identified as an important investment area by public investors. For example, through fodder conservation centers, land use planning/addressing land tenure problems, intensifying feed production, training in dairying as a business, pasture management, and investing in water supply (e.g., through dams). This confirms the validity of scarcity of feeds and strong effects of seasonality that was identified through value chain assessments as the most important constraint at the start of Maziwa Zaidi in 2012.

This exercise asked groups to start from an assigned scenario, to identify their investment target, and to prioritize the best-fit interventions. An example was:

Scenario: Extensive pastoral system close to markets and inputs: many animals, feed shortages part of the year

Target: farmers who want to invest in dairy as a business

Priority interventions:

1. *Forage production/pasture/range management: improvement of pastures and policy intervention on land ownership-village land use plans*
2. *dairy market hubs-strengthening service provision- access to markets and inputs*
3. *building capacity on pasture management*
4. *changing attitudes (quantity vs quality) with respect to matching numbers of animals to land resources and productivity*
5. *water: investing in boreholes and check dams*

Day 2 – Future priorities

After a recap of the previous day's activities, participants discussed five priority areas based on short presentations. The notes from the groups are in the table below.

Topic	Feedback from group discussions
<p>Formalisation of the DDF <i>Lusato Kurwijila, Sokoine University of Agriculture</i></p>	<p>How to make DDF more effective:</p> <ul style="list-style-type: none"> • Formalize the DDF forum • Find out more sustainable funding mechanism • Having programs as research work to find solutions for technical problems (government funding e.g commercializing feed markets) • If DDF is formalized, do we dissolve TAMPA/TAMPRODA? • There is need to look for separation of some TDB non-regulatory roles • Define the extent of public involvement (representation in formal DDF) • Define/widen membership for DDF to be more inclusive of financial institutions and representation of consumers in DDF • Capacity building to formalize DDF (HR, lobbying and advocacy) • Important to establish formal linkages with similar private sector institutions (TNBC, TCCIA, TPSF, ACT and ANSAF)
<p>Exploiting the evidence: what next for advocacy? <i>Audax Rukonge, ANSAF</i></p>	<p>Priorities for advocacy:</p> <ul style="list-style-type: none"> • Review the 2006 livestock policy to include new/current issues • Strengthen the voice of shareholders • Converge all the evidence into a particular story • Budget guided by priorities • Review and merge functions of regulators to reduce duplication • Review the tax regimes (multiple taxes) • Prepare a dairy sector policy draft • Revisit the political economy of agricultural policy • Increase farmer visibility and create space for them • Link with political leaders • Access to finance for smallholder farmers (group collaterals)
<p>Enabling business environment <i>Charles Tumaini, Tanga Fresh</i></p>	<p>Notes by the presenter 1: Modern milk collection centres need:</p> <ul style="list-style-type: none"> - Modern and simplified milk reception system - Quality chilling and support equipment including milk tanks, generators, - Veterinary services: Veterinary drugs, consultation, etc.: Make it available under one roof. Farmers to access the services on credit. - All necessary cattle feeds: Launch demo farms in every districts - Financial services: advances, soft loans, purchasing a new heifer, renovation of cow shelter, feeds investments-establish a strong financial credit facility to farmers <p>Notes by the presenter 2: Business needs an advocacy mechanism:</p> <ul style="list-style-type: none"> • Lobbying and advocacy to reduce multiple regulations (taxes and policy issues)

	<ul style="list-style-type: none"> • Facilitate Private Public Partnerships in ensuring commercial feeds production and regular water supply for enhancing high production and regular milk supply. • Revive national and regional vaccination and disease control --- key example: issues like FMD should not remain as a challenge to individual farmers but rather a sector challenge for farmers, the government and other key stakeholder like development partners • Collaborate with Tanzania DDF team on policy issues to lobby for harmonized regulatory system, eg campaign for zero rate tax system for milk and milk products which are made of 100% locally produced milk <p>Feedback and notes from the discussion:</p> <ul style="list-style-type: none"> • The Dairy Development Forum should be formalised • Develop evidence/study to support the justification of P&R • Seek support from World Bank/IMF • Seek VAT exemption on dairy and agricultural inputs • Seek to rationalize and streamline regulations • Government subsidy on AI, cattle feeds-establish national forage seed system function • Government support on infrastructure (production, marketing) • Facilitate and build capacity of production groups (cooperatives) • Private sector should facilitate the research study agenda • Dairy sector to team up with other strong sectoral bodies e.g. the meat board • Government intervention in pests and diseases control program (brucellosis. ECF vaccination routine program) • Reinforcing land for dairy livestock • TDB to go to grassroots instead of focusing on the centre (national level) • Regulate the informal milk business/trade to create a better fair competition
<p>Tanzania Livestock Master Plan: Milk results for the Sector Analysis (2016-2031) Barry Shapiro, ILRI</p>	<p>The LMP and dairy/milk:</p> <ul style="list-style-type: none"> • 93% of farmers have no land titles hence no collateral for loans • There is need to register farmer groups to get loans to grow feeds • Government needs to subsidize AI to increase number of crossbred cows- subsidies need to disappear over time (subsidize training of farmers on heat detection, feeding pregnant cows etc). • IFAD project loan needs to be signed and implemented • Concentrate investment in single milk shed- need to develop investment implementation action plan • Need to focus on institutional development • Local dairy industry protection by tax on imported milk • Govt. subsidizing production of liquid nitrogen to avail farmers at cheapest possible price • Pasture seed certification and their availability to farmers • Strengthening the forage seed systems in the country (production, breeding, multiplication, marketing etc) <ul style="list-style-type: none"> ○ Are development partners likely to fund majority of LMP?

	<ul style="list-style-type: none"> ○ Government needs to approach the World Bank for a soft loan ○ Government needs to demonstrate commitment to implement LMP through ASDP2
<p>Future research directions for Maziwa Zaidi <i>Amos Omoro, ILRI</i></p>	<p>Areas to address in new research:</p> <ul style="list-style-type: none"> ● Climate smart agriculture (biogas and other energy sources) ● Skills training and value addition ● Address risk ● Insurance ● Rangelands development/pastoralism ● More collective action ● Complementary dairy institutions ● Underfeeding/seasonality ● Cultural attitudes/ barriers leading to undernutrition ● Risk of losing focus in agri-food systems approach ● Focus on improved dairy breeds ● Farming as a business ● Breeders associations ● Involve private sector from the beginning ● Focus on weakness and evidence on blockages and latent opportunities ● Ideal dairy models ● Researchers want research questions from the industry

Appendix 1: Resources and posters

Read more about the forum here:

<https://livestock.cgiar.org/2017/06/01/maziwa-zaidi-policy-forum/>

<https://livestock.cgiar.org/2017/06/14/tanzania-investment-opportunities/>

<https://livestock.cgiar.org/2017/06/26/maziwa-zaidi-past-present-future/>

Posters presented

Cluster theme	Poster Number
A. Dairy production: feeds and forages technologies	18. Improved forages can boost milk production in Tanzania's Highlands
	20. Irrigated Improved forages for smallholder dairy in Kilosa, Mvomero and Babati Districts, Tanzania
	14. Enhancing investment in the compounded feeds subsector in Tanzania
	15. Towards solutions for year round feed availability: Experiences on Innovation platform and value chain approaches in Lushoto District, Tanzania
	2. Feed quality and safety measures to improve the smallholder dairy value chain in Tanzania
	24. Improved forages in Lushoto have wide adoption potential
	25. Increased Napier cultivation in Lushoto could increase milk production 103%
	19. Adopting improved forage grasses and legumes for semi-arid zones in Tanzania
B. Dairy production: genetics, farm efficiency and sustainability	5. Establishing a national dairy performance recording centre to enhance dairy recording for more milk in Tanzania
	6. How to upgrade the smallholder dairy value chain in Tanzania's Kilosa district
	7. Off-grid solar milk cooling systems offer technical and market opportunities for remote dairy producers
	11. The 'Mazzican' improves the bacteriological quality of milk and contributes to higher profits
	17. Assessing sustainability of milk production farm in Tanzania
	26. Determinants of technical efficiency among smallholder dairy farmers in Tanzania
	31. Cost of milk production in EADD Tanzanian dairy hubs
C. Dairy markets and linkages	1. The potential of Dairy Market Hubs to improve smallholder farmers' income in Tanzania
	3. Collective action in Tanzania's dairy value chains
	16. Fodder market opportunities for smallholder dairying in Tanzania
	27. Extending credit to dairy producers through collective action in Tanzania
	35. Developing a mixed method approach to assess sustainability of pre-commercial producer groups in dairy systems in Tanzania
	32. Strengthening business linkages in dairy value chains
D. Innovation platforms	8. Innovation platforms for information sharing, market access and nurturing of smaller innovation platforms

	10. Well-facilitated and inclusive multi-stakeholder processes contribute to more effective dairy value chain development in Tanzania
	23. Multi-stakeholder architecture to transform smallholder dairy value chains in Tanzania
	30. Dairy Development Forum—Quo Vadis?
E. Dairy Policy	4. Tanzania Livestock Master Plan: The Dairy Roadmap
	9. Do low-income households in Tanzania derive income and nutrition benefits from dairy innovations?
	12. Maziwa Zaidi—Lessons for ASDP-2 Component 3
	13. Maziwa Zaidi—Lessons for ASDP-2 Component 2
	29. Production and consumption responses to policy interventions in Tanzania’s dairy industry
	22. Towards climate-smart dairy development
F. Inclusive dairy development	28. Reducing risk and uncertainty in milk production by smallholders in Tanzania
	21. Reinforcing participation of women in dairy production and marketing in Tanzania
	31. Gender perceptions of livestock ownership and their implications for food security
	34. Getting by in the dry season—Ololilis in Tanzania

Appendix 2: Program

08:30	Registration	Beauty Liundi
08:55	Welcome	Lusato Kurwijila; Audax Rukonge
09:00	Participant introductions	All/Peter Ballantyne to facilitate
09:15	Forum objectives and program	Peter Ballantyne
09:30	Opening remarks	Ambassador of Ireland
09:45	Maziwa Zaidi program	Amos Omore
10:00	Maziwa Zaidi Vision of Success – translating the ToC into tangible benefits in the ‘pockets’	Michael Kidoido
10:20	Introduction to sessions/interest/investment group formation	Peter Ballantyne
10:30	Coffee break	
11:00	Investment showcase: poster presentations, questions and in-depth discussions - rotation format	
13:00	Lunch break	
14:00	Plenary discussions and interactions and feedback from the morning – innovations for scaling; investment opportunities to be exploited. Organized around priority interventions per scenario.	
15:30	Coffee break	
16:00	Wrap up of day 1	Amos, Edgar, Julius
	Informal/guided networking and ‘matchmaking’	
18:00	Conference dinner	
DAY TWO		
08:30	Recap of day 1 and program for day 2	Peter Ballantyne
09:00	Five presentations on dairy value chain priorities and directions for Tanzania Then group work on priorities	
12:00	Summary of key points	
12:30	Closing remarks	ANSAF, TDB, Lusato Kurwijila
13:00	Lunch & Departure	

Appendix 3: Participants

Name	Organization
Johannes Osarya	ILRI
Sirak Bahta	ILRI
Tony Rhodes	New Zealand
Angello Mwilawa	TALIRI
Mercy Becon	ILRI
Beauty Liundi	IITA
Julius Bwire	TALIRI
Roy Omulo	ASAS Dairies Ltd
Lusato Kurwijila	Sokoine University of Agriculture (SUA)
Laizer Mark	SUA
Celestin Munyaneza	SUA
Brian Kawuma	ILRI
Irene Bayiyana	University of Dar es Salaam / ILRI
Nisefori Mkwama	FAIDA MaLi
Audax Rukonge	ANSAF
Adolf Mushi	FAIDA MaLi
Eunice Mmbando	TADB
Uwe Ohmstedt	CIAT
Peter Tozer	Massey University, New Zealand
Josh Wheeler	QCONZ New Zealand
Deogratius Mlay	TDB
Walter Mangesho	TALIRI
Charles Ogutu	L-MIRA Project, World Bank
Catherine Kilelu	ACTS
Jessica Bensemann	Government of New Zealand
Chris Leach	QCONZ Quality Consultants, New Zealand
Birthe Paul	CIAT
Daniel Komwihangilo	TALIRI
Magembe Makoye	CCWT
Rehema Mmari	Shambani Graduates Processors Ltd
Kennedy Kago	ILRI
Alessandra Galie	ILRI
Barry Shapiro	ILRI
Bethule Nyamambi	Trust Africa
Tumaini Charles	Tanga Fresh Ltd
Hassan Swedi	ASAS Dairies Ltd
Edmund Mariki	TAMPA
Lucas Yamat	ANSAF
Kain Mvanda	Embassy of Ireland
Niall Morris	Embassy of Ireland
Sizya Lugeye	IFAD
Nasinyari Marko	Nasinya Dairy Ltd
Conrad Ndomba	MLDF Dodoma
Seif Makeha	TALIRI
Julius Githinji Mugwe	ILRI
Edgar Twine	ILRI
June Lukuyu	Loughborough University
Ben Lukuyu	ILRI
Margaret Lukuyu	ILRI
Michael Kidoido	ILRI
Peter Ballantyne	ILRI
Amos Omore	ILRI