

Availability and accessibility of livestock related technology and inputs in Tanzania

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Apt provision of services determines the productivity of the herd. Availability of these services is one thing and accessibility and use of the same is another. Most often availability and accessibility of these services affect their use.

Bundling of these services improves their access. These services include animal health services, breeding and extension services. Other services that could be considered include animal feeds. This brief looks at the availability and accessibility of services supporting animal production at the farm level as viewed by farmers.

Study sites

The benchmark survey was conducted in Morogoro and Tanga Regions of Tanzania. The specific study sites (districts) were selected to represent a spectrum of cattle production and market systems, the aim being to explore the potential to extend commercial dairying to marginalised areas.

The sites range from extensive/pre-commercial rural producers who predominantly own Zebu cattle and sell milk to rural consumers (R-to-R) to relatively more intensive/more commercial rural producers who have relatively more improved dairy genes in their herds and predominantly sell milk to urban consumers (R-to-U), usually via bulk traders (Table 1).

These strata also represent a gradient of increasing intensification. Using replicate regions (Morogoro and Tanga), two districts were selected in each region, one R-to-R and the other R-to-U. The selected districts are: a) R-to-R: Kilosa and Handeni; b) R-to-U: Mvomero and Lushoto.

Data collection

A benchmark survey was conducted in October 2012-February 2013 to establish the situation on the ground and build a platform for project evaluation and measurement of project impact. Presented in this document are results of data from this survey and in particular availability and accessibility of the animal health services.

Table 1: Study sites in Morogoro and Tanga regions

Key: R-to-R: Rural production to rural consumption (pre-commercial); R-to-U: Rural production to urban consumption (more commercial)

Region	District	Market access classification	Dominant production system
Morogoro	Kilosa	R-to-R	Extensive/agro-pastoral (Zebu)
	Mvomero	R-to-U	Extensive/agro-pastoral (Zebu) with significant semi-intensive and intensive (improved)
Tanga	Handeni	R-to-R	Extensive/agro-pastoral & Extensive/Sedentary (all Zebu)
	Lushoto	R-to-U	Extensive/sedentary (Zebu) with significant semi-intensive and intensive (improved)

BDS services

Breeding services

Natural insemination is the service of choice by majority of households in Tanzania. This might be greatly influenced by the breed of cattle raised, mainly local, and the production systems in practice in these sites. Although Lushoto is a dairy zone with over 80% households raising improved breed of cattle, 64% of these households used bulls for insemination. Of the seven households which had used AI in the previous year, five had sourced from private providers while the other two obtained from government and a non-governmental organization. At this point one question comes to mind: does the preference of bull service influence the availability or 'has the unavailability of AI services led to the increased use of bull service in Tanzania?'

Animal health services

Availability of preventive measures against disease outbreak through vaccination was reported by less than half of the households interviewed in two of the sites (Mvomero and Kilosa). Treatment services were unavailable in Lushoto as reported by less than 50% of dairy households (Table 2). While the low use of treatment may be explained by use on need basis, it's important to understand the reason behind low participation in vaccination to further inform future intervention in disease control.

The statistics reveal that; except for vaccination of animals, farmers rarely seek professional intervention in administering animal health services (Table 3). Farmers administered treatment to animals on their own or used neighbors with or without professional advice. This points to a gap in delivery of animal health services especially in Handeni, Mvomero and Kilosa where 67%, 71%, 97% of the households respectively sought treatment from sources whose professionalism is not credited.

Figure 1: Percent of households reporting availability and use of breeding services.

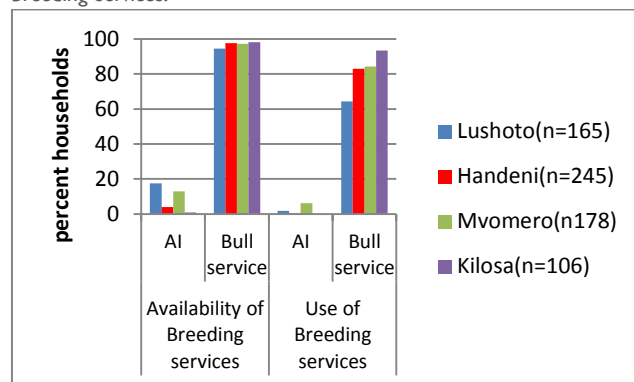


Table 2: Percent of dairy farmers reporting **availability** and **use** of animal health services in previous 12 months

District	Cattle keeping HHs	Anthelmintic	Tick control	Vaccination	Curative
Lushoto	165	86.7; 73.3	57.0; 46.1	57.0; 35.8	40.6; 18.8
Handeni	245	80.0; 69.0	93.1; 91.4	54.3; 34.7	51.0; 42.9
Mvomero	178	82.0; 75.8	94.4; 88.8	46.6; 26.4	63.5; 52.8
Kilosa	106	80.2; 73.6	93.4; 92.5	29.2; 26.4	70.8; 67.0
Total	694	82.1; 72.5	84.9; 80.1	49.1; 31.6	54.8; 43.4

Table 3: Percent of dairy farmers reporting using animal health services by district and type of service providers in the previous 12 months

Animal health service/ service provider	Percentage of dairy farmers by district			
	Lushoto (n=121)	Handeni (n=169)	Mvomero (n=135)	Kilosa (n=78)
Antihelmintics				
Self/neighbor with/no professional advice	53.7	79.3	88.9	100.0
Expertise*	46.3	20.7	11.1	0.0
Tick control	(n=76)	(n=224)	(n=157)	(n=98)
Self/neighbour with/no professional advice	59.2	46.9	94.9	99.0
Expertise*	40.8	52.7	4.5	1.0
Vaccination	(n=59)	(n=85)	(n=46)	(n=28)
Self/neighbour with/no professional advice	8.5	10.6	23.9	53.6
Expertise*	91.5	89.4	76.1	46.4
Curative	(n=31)	(n=105)	(n=94)	(n=69)
Self/neighbour with/no professional advice	19.4	66.7	71.3	97.1
Expertise*	80.6	33.3	28.7	2.9

* Expertise includes either government veterinarian, CAHSP, project/NGO staff or coop/project vet

Extension services

Extension visits and training services were unavailable as reported by majority of the households (Table 4).

Lushoto, however, had more extension visits on cattle issues. Easy access to information is a step towards better management and overall improvement on productivity.

Table 4: Percent of dairy farmers reporting availability of extension and other services by district

Type of services	Proportion of farmers reporting availability of services			
	Lushoto (n=165)	Handeni (n=250)	Mvomero (n=173)	Kilosa (n=106)
Extension visits				
Livestock general	41.2	29.2	49.1	23.6
Cattle	54.5	31.2	42.8	19.8
Crop	16.4	2.8	12.7	7.5
Training				
Livestock general	18.8	9.6	16.2	7.5
Cattle	17.0	7.2	15.6	5.7
Crop	10.3	1.2	5.8	2.8
Other*	0.6	0.0	0.6	0.0
Other type of information	10.9	12.0	9.2	11.3

*other

Table 5: Percent of dairy farmers using different cattle feeding system

* With or without stall feeding; **some/all animals

Season/Feeding system	All (n=511)	Local breeds				All (n=214)	Improved breeds			
		Lushoto (n=29)	Handeni (n=239)	Mvomero (n=144)	Kilosa (n=99)		Lushoto (n=146)	Handeni (n=12)	Mvomero (n=43)	Kilosa (n=13)
Dry season										
Grazing*	74.8	10.3	92.5	56.9	76.8	12.1	2.7	41.7	25.6	46.2
Mainly stall feeding	5.3	89.7	0	0.7	0	85	97.3	50	69.8	30.8
Transhumance**	20	0	7.5	42.4	23.2	2.8	0	8.3	4.7	23.1
Wet season										
Grazing*	93.2	3.4	98.3	97.9	100	14.5	4.1	41.7	25.6	69.2
Mainly stall feeding	5.9	96.6	0.4	0.7	0	85.5	95.9	58.3	74.4	30.8
Transhumance**	1	0	1.3	1.4	0	0	0	0	0	0

Table 6: Percent of land under fodder and count of farmers growing fodder

District	Cattle keeping households	% HH growing fodder/pasture	% land under fodder	Count of farmers growing fodder/pasture grasses					
				Napier grass	Planted grasses	Fodder shrubs	Other fodder legumes	Sugar cane grass	Fodder maize
Lushoto	165	83.0	22.2	98	59	5	3	2	2
Handeni	245	0.0	0.0	0	0	0	0	0	0
Mvomero	178	1.7	3.3	1	0	3	0	0	0
Kilosa	106	1.9	5.0	2	0	0	0	0	0
Total	694	20.5	21.6	101	59	8	3	2	2

Accessibility of feed

Most of the households surveyed, except Lushoto, grazed their herds (particularly the local breed) irrespective of the season. Farmers in Lushoto fed their cattle mainly on planted fodder/pasture and this was irrespective of the breed (Table 5). A small proportion of farmers were on transhumance with some or all of the cattle in the dry season especially during the dry season. Only 2% of farmers in Mvomero and Kilosa and none in Handeni planted fodder/pastures (Table 6).

Purchases of fodder were highest in Lushoto with 42% of the households doing so. The purchases were carried out in about 4 months in a year. Only in Lushoto where over 50% of the interviewed dairy households supplemented their herds with concentrate. These statistics reveal an existing gap in the source of feed. This is considering that the land under fodder accounts for about 22% of total land owned.

Conclusions

Utilisation of the natural service, especially in the intensive areas, could be greatly associated to either the unavailability of service providers or farmer preference of natural insemination.

In the extensive areas this predisposition could have been influenced by the type of breed kept, which is mainly the local breed, and the production system. These factors are important in determining the interventions in these sites.

Most farmers reported availability of animal health services especially deworming, tick control and treatment services. Of the animal health services surveyed vaccination was notably unavailable as only a few households reported its availability and utilisation.

Bundling of these services will improve availability and utilisation of these services. This would include feed which is another scarce resource given that majority of farmers relied on grazing pastures which is unavailable during the dry season; and less than 2% of the cattle keeping households grew fodder in Mvomero and Kilosa.



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