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FARMER REGISTRATION REPORT
NTUNGAMO DISTRICT

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CHAPTER ONE: BACKGROUND

1.0 Introduction

This report presents findings of the farmer registration pilot exercise that was conducted by the statistics division team of the ministry of agriculture animal industry and fisheries in collaboration with the agriculture cluster development project (ACDP) coordination unit team that provided technical guidance. The first chapter presents the objectives as well as the methodology that forms the basis of presentation of the survey findings, it also presents the scope and field organization as well as a brief on the data cleaning and analysis. The second chapter presents the findings from the activities that were implemented. Chapter three presents the achievements realized to date while chapter four presents the challenges and recommendations for the next phase of implementation.

1.1 Background

Over the years, the agricultural sector has suffered from lack of reliable, accurate and timely data to inform decision making. Agricultural data are required by a broad spectrum of stakeholders including; government; the private sector; the NGOs; academia; the donor community and the wider public including the farmers for a variety of purposes. Although there are many producers of agricultural data in the country, they are not coordinated and the agricultural statistics system remains fragile, vulnerable and not fully developed. This is reflected in the lack of consistent, reliable and data from the several players in the agricultural sector. This prompted government to establish a one stop center for agriculture data in the ministry of agriculture, animal industry and fisheries under the national food and agricultural statistical system (NFASS) project.

The ministry's ASSP 2015/16-2019/20 identified setting up an efficient national food and agricultural statistics system as one of the sector priorities if the sector is to provide timely and accurate data for policy and decision making. The overall goal of the NFASS is to ensure that data related to the agricultural sector is accurate, timely, consistent, disaggregated and accessible so as to facilitate planning, and decision making. The NFASS focuses on; utilizing the data collected optimally so as to reduce the cost of data collection; harmonizing data collection protocols across MDAs and institutional partners; and, establishing a permanent field data collection system. The NFASS is implemented in 3 components namely; the institutional component, the data center which houses the database; and, the routine agriculture administrative data system. The ministry started implementing the NFASS project in FY

2015/16 which was mainly government funded and with the help of USAID-EEA was able to set up a state-of-the-art data center at MAAIF headquarters and also set up a MAAIF data base.

The ministry in collaboration with the world bank started implementing the agriculture cluster development project (ACDP) in 2016 to support activities that will raise both productivity and production of maize, beans, cassava, rice, and coffee in 57 districts clustered into 12 high-potential agricultural areas. The project is implemented through four components namely; (i) support for intensification of on-farm production; (ii) value addition and market access; (iii) policy, regulatory and institutional support; (iv) project coordination and ICT platform.

In 2018, the ACDP project was restructured and added a subcomponent 3.3 to support the implementation of the national food and agricultural statistics system. Under this sub-component, all administrative data; surveys including systematic surveys of the number and capacity of inputs producers and producer organizations and systematic monitoring and transparent reporting on farmers and efforts to bulk their demand for inputs; sector studies; pest and diseases surveillance data; and any other sector data were to be undertaken.

Implementation of subcomponent 3.3 began in 2019 with all efforts focused on setting up the routine agricultural administrative data system (RAADS) and in order to set up the RAADS, there was need to have a sampling frame from which sample households for data collection will be drawn. The need for the sampling frame together with the national requirement to register farmers prompted the development of the national farmers register which was to be administered to all farming households in the country. After registration of farmers is completed, data collection using the already developed tools can then commence in the districts.

The statistics division with assistance from the ACDP-PCU started piloting the farmer register in 5 pilot districts to draw lessons that can be used in the roll out to the rest of the districts in the country.

1.2 Objectives

The primary purpose of this activity was to register and have a central database in the ministry data centre of all farmers in the country who practice agriculture for planning purposes.

Specifically, the farmers' registration exercise will provide;

1. Government with an estimate of the number of farmers in the country engaged in different agricultural enterprises or value chains relevant for planning purposes and making investment decisions;
2. A sample frame for the routine data collection
3. A detailed understanding of the agricultural technology adoption in Uganda.
4. Provision of background information about the farmers (i.e. Name, location, farm size, enterprise involved in, etc.)

1.3 Methodology, scope and field organization

The exercise started with the training of the parish chiefs and extension staff which was conducted in each of the 5 ACDP pilot districts of Iganga, Amuru, Nebbi, Kalungu and Ntungamo. During the training, emphasis was put on articulating instructions regarding interviewing techniques and field procedures and a detailed review of the farmers register. The trainings mainly used English but translations were constantly done to ensure accurate re-translation and adequate understanding in order to assist in application during translation to local languages in the farmer registration exercise.

The training also involved use of visuals and power point presentations. The parish chiefs and extension staff were also taken through an illustration that they used as a field scenario example. At the end of the trainings, the parish chiefs and extension officers were dispersed to their respective parishes/sub counties to start the actual farmer registration. The registration exercise utilised the paper assisted personal interviewer (PAPI) where by the farmers' register books were printed and distributed across parishes.

During the actual data collection, teams consisting of cluster supervisors from the ministry headquarters were routinely dispatched to the field after having been trained in data quality control procedures and field work coordination. They were also provided with a supervisor's manual to assist in carrying out their duties. At district level, supervision was also carried out by the district production & marketing officers and the district agricultural officer (ACDP focal persons)

The procedures for supervision and communications between the statistics division and the interviewing teams during data collection were specified in the manuals and discussed during

training for the farmer registration exercise. Close communication was maintained at all times between the statistics division and ACDP- PCU.

The registration covered all farmers in all villages to enable construction of the sampling frame for use in subsequent routine data collection.

The completed farmer registration books were assembled at the subcounty headquarters and the extension staff entered the data in tabs using the computer assisted personal interviewer (CAPI). The data was subsequently sent to the ministry headquarters for cleaning and analysis

1.4 Data cleaning and analysis

After data collection, the statisticians extracted and merged all data from the different pilot districts and exported to Stata. Cleaning was done to check out for inconsistencies and outliers. Data was analysed using Stata to obtain statistical outputs including frequencies and percentages in tabular and graphical forms. The statistical outputs were later extracted and presented in more acceptable tables ready for interpretation

CHAPTER TWO: SOCIO ECONOMIC CHARACTERISTICS

2.0 Introduction

This chapter presents information on; the distribution of Administrative units registered; distribution of Agriculture households by Sub County; the classification of Agriculture households by sex and age of household heads by Sub County; and type of farming activity involved in and main purpose.

2.1 Distribution of Administrative Units registered

The Pilot exercise was able to list 56,148 farming households from 1,239 Villages, 99 Parishes and 22 Sub Counties in Ntungamo district.

Table 1: Number of administration units registered

District	Sub-county	Parish	Village
Ntungamo	22	99	1,239

2.2 Gender disaggregation of Farming households

Overall 55.4% of farming households were male headed and 44.6% were female headed. All sub counties had a higher proportion of male headed households except for Rwashamaire Town Council, Western Division, Central Division and Kafunjo-Mirama Town Council where there were a higher proportion of female headed households.

Table 2: Number of farming households by sub-county and sex of household head

Sub County	Male	Female	Total
Bwongyera	1,073	985	2,058
Ihunga	983	975	1,958
Kibatsi	1,574	1,350	2,924
Nyabihoko	1,337	993	2,330
Rwashamaire Town Council	369	452	821
Kagarama Town Council	672	672	1,344
Nyamunuka Town Council	1,665	1,577	3,242
Central Division	232	253	485
Eastern Division	203	183	386
Western Division	174	240	414
Itojo	2,005	1,097	3,102
Kitwe Town Council	1,144	932	2,076
Ntungamo	1,669	1,276	2,945

Nyakyera	2,432	2,153	4,585
Ruhaama	1,832	1,564	3,396
Rukoni East	1,602	1,263	2,865
Rukoni West	927	710	1,637
Rweikiniro	1,825	1,539	3,364
Kafunjo-Mirama Town C	837	849	1,686
Kayonza	1,925	1,547	3,472
Ngoma	2,197	1,066	3,263
Rubaare	1,573	1,448	3,021
Rubaare Town Council	535	359	894
Rugarama	2,179	1,437	3,616
Total	31,100	25,048	56,148

2.3 Disaggregation of Farming households by age of household head

A total of 7,867 farming households were headed by youths (18-30years). Majority of farming households (26,297) were headed by people aged between 31 and 50 years. Crop cultivation was the most common type of farming activity across all age groups followed by livestock rearing.

Table 3: Number of farming households by Sub County and age of household head

Sub-Ccounty	5-17	18-30	31-50	51-70	70 & above
Bwongyera	1	279	1,003	560	195
Ihunga	1	257	884	600	187
Kibatsi	1	389	1,350	859	311
Nyabihoko	1	272	1,023	734	268
Rwashamaire T/C	0	102	378	225	101
Kagarama T/C	0	177	626	405	129
Nyamunuka T/C	2	412	1,360	1,103	365
Central Division	0	71	250	119	34
Eastern Division	0	72	189	103	22
Western Division	0	78	207	86	22
Itojo	0	438	1,410	885	262
Kitwe T/C	0	316	988	587	171
Ntungamo	1	393	1,381	877	260
Nyakyera	1	686	2,215	1,319	342

Ruhaama	0	464	1,623	973	286
Rukoni East	0	448	1,377	856	175
Rukoni West	0	221	771	508	134
Rweikiniro	1	446	1,621	962	223
Kafunjo-Mirama T/C	0	270	847	466	100
Kayonza	2	511	1,621	1,029	296
Ngoma	0	406	1,562	1,049	211
Rubaare	2	481	1,440	879	200
Rubaare T/C	1	73	389	244	63
Rugarama	0	555	1,663	1,060	287
Total	14	7,867	26,297	16,565	4,662

2.4 Disaggregation by Farming activity

Findings revealed that a higher proportion of households were involved in crop cultivation, on average 99.11% as shown in figure 1. Bwongyera had the highest proportion of households involved in crop cultivation at 99.9% while Ngoma had the lowest proportion of households involved in crop cultivation at 96.97%. Overall, farmer registration pilot findings revealed that 58.2% of the households reported to keeping livestock. Bwongyera had the highest proportion of households rearing livestock at 77.03% while Rubaare Town Council had the lowest proportion rearing livestock at 42.57%. Overall, the number of aquaculture households was less than 1% with Eastern Division having the highest percentage of aquaculture households at 0.7%. On average, 1.6% of households practiced apiculture in the district with Rukoni West having the highest proportion keeping bees at 5.3%.

Table 4: Proportion of households practising each farming activity by sub-county

Sub-County	Crop	Livestock	Aquaculture	Apiculture
Bwongyera	99.9	77.0	0.1	0.7
Ihunga	99.4	66.2	0.1	1.8
Kibatsi	99.7	63.1	0.1	2.1
Nyabihoko	99.4	64.9	0.1	1.7
Rwashamaire T/C	99.8	72.2	0.7	3.1
Kagarama T/C	99.7	61.5	0.1	0.7
Nyamunuka T/C	99.9	54.3	0.2	1.5
Central Division	98.8	58.9		3.1

Eastern Division	97.2	60.6	0.5	0.5
Western Division	99.3	68.1		0.2
Itojo	99.9	53.2	0.1	0.5
Kitwe T/C	99.6	47.9		0.1
Ntungamo	99.1	55.1	0.0	1.0
Nyakyera	99.7	59.4	0.0	2.4
Ruhaama	98.9	56.3	0.2	2.1
Rukoni East	99.1	47.7	0.1	2.8
Rukoni West	99.3	64.8	0.2	5.9
Rweikiniro	97.1	55.0	0.1	1.0
Kafunjo-Mirama T/C	98.6	65.9		4.7
Kayonza	98.6	59.1	0.1	2.0
Ngoma	97.0	59.2	0.1	1.2
Rubaare	99.7	53.8	0.2	1.2
Rubaare T/C	99.1	42.6	0.3	1.0
Rugarama	99.6	54.7		0.3
Total	99.1	58.2	0.1	1.7

2.5 Main purpose of the farming activity

Table 5 reveals that fifty nine percent of farming households are involved in agriculture activities with the main purpose of acquiring food (subsistence farming). Most (86.6%) of the farming household that grew crops mentioned food as the main purpose of the farming activity while the main purpose of livestock farming is sale at 86.7%. A higher proportion of apiculture and aquaculture households reported the main purpose of the farming activity as sale.

Table 5: Main purpose of the farming activity

Main purpose	Food	Sale	Other
Crop cultivation	86.6	13.1	0.3
Livestock rearing	12.8	86.7	0.5
Aquaculture	13.8	85.1	1.1
Apiculture/apiary	13.1	86.2	0.7
Total	58.7	41.0	0.3

CHAPTER THREE: CROP CULTIVATION

3.0 Introduction

According to the study results in figure 2 below, on average, plantains were most commonly grown crop category by households at 93.3%, while leguminous crops were the second most commonly grown at 92.2%.

At the Sub County level, leguminous crops were most commonly grown in Rwashamaire Town Council, Bwongyera and Kafunjo-Mirama Town Council. Oil seeds were most commonly grown in Eastern division, Kitwe Town Council, Rukoni West, Rweikiniro, Kayonza and Ngoma. Plantains were most commonly grown in Ihunga, Kibatsi, Nyabihoko and Kagarama Town Council while Tree Crops were most commonly grown in Nyamunuka Town Council, Central Division, Western Division, Itojo, Ntungamo, Nyakyera, Ruhaama, Rukoni East, Rubaare, Rubaare Town Council and Rugarama.

Bwongyera Sub County had the highest proportion of households growing Tree crops, Root tubers and Oilseeds & palm oil at 92.3%, 96.6% and 82.3% respectively. Kibatsi had the highest proportion growing plantains at 98.1% while Central Division had the highest proportion growing fruits at 91.4%. Itojo had the highest proportion growing Plantains at 98.5%. Over 60% of the households in Western division and Rwashamaire Town Council grew Vegetables.

Fruits were least commonly grown in Bwongyera, Ihunga, Kibatsi, Nyabihoko, Rwashamaire Town Council, Kagarama Town Council while Plantains were least commonly grown in Nyamunuka Town Council, Central Division, Eastern Division, Western Division, Kitwe Town Council, Ntungamo, Nyakyera, Rukoni East, Rukoni West, Rweikiniro, Rugarama, Kayonza, Ngoma and Rubaare. Root tubers were the least commonly grown crop category in Kafunjo-Mirama Town Council and Rubaare Town Council while Vegetables were the least commonly grown crop category in Itojo and Ruhaama.

Table 6: Proportion of households growing the different crop categories

Sub county	Cereals	Legume	Oil seeds & Palm	Vegetables	Root tubers	Fruits	Plantains	Tree crops
Bwongyera	91.6	96.6	82.8	25.3	96.6	21.3	96.1	92.3
Ihunga	76.7	91.4	65.6	42.4	89.5	40.2	97.9	89.4
Kibatsi	78.5	93.7	79.6	39.5	92.9	18.9	98.1	86.5
Nyabihoko	81.1	91.8	60.5	35.4	86.4	29.0	93.6	81.1
Rwashamaire	88.3	96.7	73.3	69.2	94.2	44.5	93.1	84.2
Kagarama T/C	83.0	93.5	60.4	42.0	87.2	31.8	96.8	83.4
Nyamunuka T/C	59.2	93.8	58.8	12.2	88.0	5.4	95.0	89.8
Central division	89.3	91.2	58.9	57.6	91.4	57.0	95.1	66.9
Eastern division	83.2	87.1	49.0	41.2	66.1	34.5	76.7	45.9
Western division	85.8	85.3	47.6	62.6	66.9	8.5	88.2	60.6
Itojo	65.9	92.4	39.2	49.6	84.9	51.3	98.5	77.8
Kitwe T/C	89.6	92.9	69.0	9.2	49.1	5.5	90.8	31.7
Ntungamo	78.9	89.9	40.5	18.4	80.1	12.4	93.5	64.3
Nyakyera	76.6	91.4	51.7	32.4	82.2	21.4	95.9	84.5
Ruhaama	79.0	92.0	32.4	52.9	77.3	50.9	94.4	72.1
Rukoni east	79.3	90.0	53.2	44.5	81.7	42.7	94.5	79.3
Rukoni west	91.6	94.6	73.4	10.7	80.7	3.1	94.3	62.6
Rweikiniro	68.8	90.1	34.0	19.8	60.0	16.5	89.4	58.8
Kafunjo-Mirama T/C	96.1	95.2	57.2	35.5	71.6	41.2	88.5	43.4
Kayonza	79.5	92.3	44.9	41.9	83.0	8.3	90.4	41
Ngoma	88.4	90.7	50.8	19.8	61.5	4.4	78.7	9.8
Rubaare	85.0	91.3	51.3	29.3	70.5	24.6	95.2	47.2
Rubaare T/C	78.9	88.6	40.8	16.1	63.4	23.2	92.4	22.1
Rugarama	88.1	94.6	51.9	24.7	78.9	18.3	96.3	55.4
Total	79.9	92.2	53.4	32.0	78.7	23.7	93.3	64.9

3.1 Households involved in Crop Production

3.1.1 Cereals

The study results in table 7 below revealed that maize was the most commonly grown cereal in all Sub Counties except for Ihunga where Finger Millet was most commonly grown.

Eastern Division had the highest proportion of households growing wheat and rice at 0.27% for both crops. Kafunjo-Mirama Town Council had the highest proportion of households growing maize and sorghum at 95.97% and 48.16% respectively while Bwongyera had the highest proportion growing Finger Millet at 74.48%.

Wheat was least commonly grown in all Sub Counties except for Itojo, Kitwe Town Council, Kayonza, and Ngoma where rice was least commonly grown.

Table 7: Proportion of households growing cereals by sub-county

Sub county	Wheat	Rice	Maize	Finger millet	Sorghum
Bwongyera	0.2	0.2	84.4	74.5	4.3
Ihunga	0.1	0.1	60.7	61.1	8.5
Kibatsi	0.0	0.1	62.1	52.7	6.6
Nyabihoko	0.0	0.3	76.3	51.0	5.6
Rwashamaire T/C	0.0	0.0	85.1	42.7	5.5
Kagarama T/C	0.1	0.1	77.6	46.9	7.6
Nyamunuka T/C	0.0	0.0	54.8	29.4	0.4
Central division	0.0	0.2	88.3	43.1	2.5
Eastern division	0.3	0.3	81.3	40.0	5.1
Western division	0.0	0.0	84.7	33.5	5.3
Itojo	0.1	0.0	53.9	35.8	2.8
Kitwe T/C	0.0	0.0	88.8	20.4	10.2
Ntungamo	0.1	0.1	67.8	46.9	4.4
Nyakyera	0.1	0.2	73.4	28.3	8.1
Ruhaama	0.1	0.1	75.7	21.8	31.5
Rukoni east	0.1	0.2	75.2	40.8	43.5
Rukoni west	0.0	0.0	90.9	46.8	14.3
Rweikiniro	0.0	0.2	68.7	21.5	7.2
Kafunjo-Mirama TC	0.0	0.1	96.0	35.3	48.2
Kayonza	0.1	0.0	77.5	14.3	9.3
Ngoma	0.2	0.2	89.9	15.9	8.6
Rubaare	0.0	0.1	81.6	39.2	7.7
Rubaare T/C	0.0	0.1	78.4	30.0	1.9
Rugarama	0.1	0.2	84.2	50.0	11.3
Total	0.1	0.1	75.1	36.6	11.7

3.1.2 Legumes

Beans were the most commonly grown legumes in all Sub Counties. Rwashamaire town council had the highest proportion of households growing beans at 96.7% while Rukoni East had the highest proportion growing Field peas at 17.51%. Rwashamaire town council had the highest proportion growing Cowpeas at 9.77% while Eastern Division had the highest proportion growing Pigeon peas at 0.8%.

Pigeon peas were least commonly grown in Bwongyera, Ihunga, Kibatsi, Nyabihoko, Rwashamaire Town Council, Central Division, Eastern Division, Western Division, Itojo,

Nyakyera, Ruhaama, Rukoni East, Kafunjo-Mirama Town Council, Kayonza, Rubaare and Rugarama. Cow peas were least commonly grown in Kagarama Town Council, Nyamunuka Town Council, Kitwe Town Council Ntungamo, Rukoni West, Rweikiniro, Ngoma, and Rubaare Town Council.

Table 8: Proportion of households growing legumes by sub-county

Sub county	Beans	Field peas	Cowpeas	Pigeon peas
Bwongyera	96.5	1.1	0.2	0.2
Ihunga	91.1	5.3	0.9	0.7
Kibatsi	93.8	8.8	1.2	0.6
Nyabihoko	92.1	2.1	0.3	0.2
Rwashamaire TC	96.7	5.0	9.8	0.1
Kagarama TC	93.4	14.0	0.4	0.7
Nyamunuka TC	93.7	1.2	0.0	0.1
Central division	92.3	1.0	1.5	0.2
Eastern division	89.3	3.5	1.9	0.8
Western division	85.2	1.9	6.8	0.2
Itojo	92.1	1.3	0.9	0.0
Kitwe TC	92.8	5.2	0.1	0.2
Ntungamo	90.4	0.8	0.5	0.7
Nyakyera	91.5	2.5	0.5	0.2
Ruhaama	92.6	6.8	0.2	0.2
Rukoni east	90.5	17.5	1.5	0.7
Rukoni west	95.2	1.6	0.0	0.2
Rweikiniro	92.7	1.7	0.1	0.3
Kafunjo-Mirama TC	96.2	1.7	7.3	0.6
Kayonza	93.6	3.4	0.2	0.0
Ngoma	93.1	1.2	0.2	0.3
Rubaare	91.4	1.3	0.7	0.2
Rubaare TC	89.2	0.8	0.1	0.2
Rugarama	94.8	1.1	0.3	0.1

3.1.3 Oil seeds

According to the study results in the table below, ground nuts were the most commonly grown oil seeds in all Sub Counties in the district.

Rwashamaire Town Council had the highest proportion of households growing Groundnuts in the district at 73.69% while Nyamunuka Town Council had the highest proportion growing Soya beans, Sunflower and Sim sim at 9.63%, 3.07% and 0.48% respectively.

Oil palm and simsim was the least commonly grown oil seeds in all Sub counties.

Ground nuts were most commonly grown in Rwashamaire TC and Rukoni west and least grown in Kibatsi and Ruhaama.

Table 9: Proportion of households growing oil seeds by sub-county

Sub county	Groundnuts	Soya beans	Sunflower	Sim-sim	Oil palm
Bwongyera	40.2	1.2	0.6	0.0	0.0
Ihunga	51.2	1.7	0.6	0.2	0.1
Kibatsi	31.2	5.5	0.3	0.1	0.0
Nyabihoko	52.9	2.5	1.0	0.4	0.1
Rwashamaire TC	73.7	0.6	0.1	0.0	0.0
Kagarama TC	34.4	1.3	0.3	0.0	0.0
Nyamunuka TC	55.1	9.6	3.1	0.5	0.0
Central Div	44.7	1.8	0.6	0.0	0.0
Eastern Div	51.8	1.9	0.5	0.1	0.0
Western Div	50.7	3.6	0.3	0.3	0.0
Itojo	40.6	0.5	0.1	0.0	0.0
Kitwe TC	51.6	1.9	0.2	0.0	0.0
Ntungamo	40.2	1.2	0.6	0.0	0.0
Nyakyera	51.2	1.7	0.6	0.2	0.0
Ruhaama	31.2	5.5	0.3	0.1	0.0
Rukoni east	52.9	2.5	1.0	0.4	0.2
Rukoni west	73.7	0.6	0.1	0.0	0.1
Rweikiniro	34.4	1.3	0.3	0.0	0.0
Kafunjo-Mirama TC	55.1	9.6	3.1	0.5	0.0
Kayonza	44.7	1.8	0.6	0.0	0.0
Ngoma	51.8	1.9	0.5	0.1	0.0
Rubaare	50.7	3.6	0.3	0.3	0.0
Rubaare TC	40.6	0.5	0.1	0.0	0.0
Rugarama	51.6	1.9	0.2	0.0	0.0

3.1.4 Vegetables

The analysis in table 10 below shows that pumpkins were the most commonly grown vegetables in Bwongyera, Kibatsi, Nyabihoko, Rwashamaire Town Council, Nyamunuka Town Council, Central Division, Eastern Division, Western Division, Kitwe Town Council, Ntungamo, Nyakyera, Ruhaama, Rukoni East, Rweikiniro, Kafunjo-Mirama Town Council, NgomaRubaare and Rugarama. Egg plants were most commonly grown in Ihunga, Kagarama

Town Council, Itojo, and Rubaare Town Council. Onions were most commonly grown in Rukoni West and Kayonza.

Western Division had the highest proportion of households growing Tomatoes and Dodo at 9.47% and 3.88% respectively. Rwashamaire town Council had the highest proportion of households growing cabbages and pumpkins at 8.3% and 53.36% respectively. Eastern Division had the highest proportion of households growing Carrots at 2.93%. Kayonza had the highest proportion growing onions at 27% while Central Division had the highest proportion of households growing Egg plants at 45.42%

Dodo was least commonly grown in Bwongyera, Ihunga, Kibatsi, Rwashamaire Town Council, Kagarama Town Council, Nyamunuka Town Council, Central Division, Eastern Division, Itojo, Nyakyera, Rukoni East, Rukoni West, Rweikiniro, Kayonza, Ngoma, Rubaare, Rubaare Town Council and Rugarama while Carrots were least commonly grown in Nyabihoko, Western Division, Kitwe Town Council, Ntungamo, Ruhaama, and Kafunjo-Mirama Town Council.

The results further revealed that less than 5% of farmers grow tomatoes, onions and cabbage.

Table 10: Proportion of households growing vegetables

Sub county	Cabbages	Tomatoes	Carrots	Onions	Pumpkins	Egg - plants	Dodo
Bwongyera	3.1	4.7	0.1	0.7	16.8	7.7	0.0
Ihunga	3.2	5.2	0.7	1.2	31.5	33.9	0.2
Kibatsi	4.0	5.0	0.7	2.0	32.5	26.8	0.1
Nyabihoko	1.6	2.4	0.3	1.6	24.5	23.2	2.4
Rwashamaire TC	8.3	8.9	2.8	5.3	53.4	45.2	1.1
Kagarama TC	3.6	4.9	0.5	1.5	32.9	34.3	0.2
Nyamunuka TC	1.3	2.8	0.2	0.5	6.3	4.8	0.0
Central Div	1.9	3.5	1.7	3.1	45.8	45.4	0.0
Eastern Div	6.1	6.7	2.9	4.0	26.7	25.1	1.9
Western Div	4.4	9.5	2.2	4.1	44.4	39.1	3.9
Itojo	1.9	4.2	0.2	0.2	32.1	41.3	0.0
Kitwe TC	0.6	1.5	0.1	0.4	5.0	4.1	0.2
Ntungamo	0.9	1.7	0.2	1.0	13.2	10.1	0.2
Nyakyera	1.2	2.8	0.2	1.6	26.6	14.0	0.0
Ruhaama	2.6	5.6	0.2	3.1	42.3	24.1	1.7
Rukoni east	3.7	5.3	1.0	1.9	37.6	23.4	0.0
Rukoni west	1.7	3.0	0.1	5.5	2.0	0.9	0.0
Rweikiniro	1.4	3.3	0.1	1.6	10.8	8.7	0.1
Kafunjo-Mirama	5.7	5.7	0.7	4.3	23.7	16.6	1.0

Kayonza	2.1	5.4	0.4	27.0	17.8	11.6	0.0
Ngoma	0.9	2.2	0.4	7.4	10.5	5.3	0.0
Rubaare	1.9	5.6	0.2	2.9	17.7	16.6	0.2
Rubaare T/C	1.8	5.6	0.3	0.0	7.3	7.8	0.0
Rugarama	1.2	3.1	0.2	6.0	14.0	12.6	0.0
Total	2.2	4.0	0.4	4.0	21.9	17.2	0.3

3.1.5 Tree crops

Findings in the table 11 below, reveal that coffee was the most commonly grown tree crop in all Sub Counties in the district. Bwongyera Sub County had the highest proportion of households growing Coffee at 92.42% while Rukoni East had the highest proportion of households growing Cashew nuts at 1.2%. On average however, less than 1% of households grow cashew nuts, cocoa and tea.

Table 11: Proportion of households growing tree crops by sub-county

Sub county	Cashew nuts	Coffee	Cocoa	Tea
Bwongyera	0.1	92.4	0.1	0.0
Ihunga	0.2	89.7	0.2	0.1
Kibatsi	0.2	86.7	0.2	0.0
Nyabihoko	0.1	81.4	0.2	0.4
Rwashamaire TC	0.0	84.3	0.0	0.1
Kagarama TC	0.0	83.5	0.2	0.1
Nyamunuka TC	0.0	89.8	0.1	0.0
Central Div	0.2	67.5	0.2	0.2
Eastern Div	0.0	46.7	0.5	0.0
Western Div	0.0	60.9	0.0	0.5
Itojo	0.1	77.8	0.1	0.0
Kitwe TC	0.1	31.8	0.1	0.0
Ntungamo	0.0	64.8	0.0	0.0
Nyakyera	0.2	84.6	0.2	0.1
Ruhaama	0.2	72.6	0.2	0.2
Rukoni east	1.2	79.6	0.5	0.3
Rukoni west	0.0	62.9	0.2	0.1
Rweikiniro	0.2	60.4	0.2	0.1
Kafunjo-Mirama TC	0.2	43.7	0.4	0.0
Kayonza	0.0	41.5	0.2	0.0

Ngoma	0.1	10.1	0.0	0.0
Rubaare	0.3	47.2	0.2	0.1
Rubaare town council	0.0	22.3	0.0	0.0
Rugarama	0.0	55.5	0.2	0.0
Total	0.2	65.3	0.2	0.1

3.1.6 Root crops

Sweet potatoes were the most commonly grown root crops in Bwongyera, Ihunga, Kibatsi, Nyabihoko, Rwashamaire, Town Council, Kagarama, Town Council, Nyamunuka Town Council, Itojo, Ntungamo, Nyakyera, Rukoni East, Rukoni West, Rweikiniro, Kayonza, Rubaare, Rubaare Town Council and Rugarama while Cassava was most commonly grown in Central Division, Eastern Division, Western Division, Kitwe Town Council, Ruhaama, Kafunjo-Mirama TC and Ngoma Sub Counties.

Rukoni East had the highest proportion of households growing Irish potatoes and Yams in the district at 48.18% and 45.08% respectively. Central Division had the highest proportion growing Cassava at 86.04% while Bwongyera had the highest proportion growing Sweet potatoes at 94.99%.

Yams were least commonly grown in Bwongyera, Nyamunuka, Eastern Division, Kitwe Town Council, Rukoni East, Rukoni West, Kafunjo-Mirama, Town Council, Kayonza, Ngoma, Rubaare Town Council and Rugarama. Irish potatoes were the least commonly grown crop in Ihunga, Kibatsi, Nyabihoko, Rwashamaire Town Council, Kagarama Town Council, Central Division, Western Division, Itojo, Ntungamo, Nyakyera, Ruhaama, Rweikiniro and Rubaare.

Table 12: Proportion of households growing root crops by sub county

Sub County	Irish Potatoes	Sweet Potatoes	Cassava	Yam
Bwongyera	5.2	95.0	84.1	4.9
Ihunga	4.5	85.7	61.0	25.4
Kibatsi	3.5	90.7	57.3	31.5
Nyabihoko	9.7	80.0	66.8	15.4

Rwashamaire TC	22.1	88.8	82.2	35.5
Kagarama TC	7.5	84.0	59.7	31.7
Nyamunuka TC	6.1	82.5	59.6	3.2
Central Div	7.1	78.5	86.0	28.1
Eastern Div	18.7	52.0	56.0	13.3
Western Div	10.7	49.3	49.5	12.4
Itojo	5.7	75.5	44.6	33.7
Kitwe TC	11.9	30.0	40.2	2.8
Ntungamo	6.8	72.9	50.8	8.4
Nyakyera	12.1	69.4	54.3	21.1
Ruhaama	32.6	56.8	57.2	42.2
Rukoni East	48.2	69.9	65.9	45.1
Rukoni West	21.8	66.4	57.9	0.9
Rweikiniro	8.4	55.1	46.1	14.9
Kafunjo-Mirama	33.0	34.0	58.9	18.5
Kayonza	46.8	71.9	54.0	5.4
Ngoma	12.1	41.9	50.6	5.1
Rubaare	8.5	61.1	56.9	11.4
Rubaare TC	5.5	54.1	46.8	2.3
Rugarama	16.4	74.6	44.6	4.1

3.1.7 Fruits

Table 13 below shows that Avocados were the most commonly grown fruits in all Sub counties except for Nyamunuka Town Council, Eastern Division, Western Division and Rukoni West. Mangoes were most commonly grown in Eastern Division, Western Division and Rukoni West while apples were most commonly grown in Nyamunuka Town Council.

Central Division had the highest proportion of households growing Oranges, Pawpaw, Mango, Avocado and Guava. Itojo sub county had the highest proportion of households growing pineapples in the district at 17.2% while Ihunga had the highest proportion growing passion fruit at 14.4%.

Findings further revealed that less than one percent of households in Ntungamo grew Apples.

Table 13: Proportion of households growing fruits by Sub County

Sub County	Orange	Pawpaw	Pineapple	Mango	Avocado	Guava	Apples	Passion
Bwongyera	1.0	4.0	1.7	10.8	17.2	2.0	0.0	2.8
Ihunga	5.6	20.5	4.6	24.4	31.5	15.8	0.4	14.4
Kibatsi	0.4	2.4	0.8	7.9	16.5	7.5	0.2	2.7

Nyabihoko	3.8	11.1	2.3	16.8	23.3	8.7	0.4	6.0
Rwashamaire TC	4.2	19.8	1.5	26.0	32.6	12.6	0.4	10.9
Kagarama TC	3.7	15.5	1.0	18.3	24.6	9.0	0.1	12.6
Nyamunuka TC	0.1	0.3	0.4	1.1	2.4	0.2	0.0	2.5
Central Div	19.2	38.5	3.8	36.0	43.3	18.3	0.6	13.1
Eastern Div	8.8	11.7	5.9	22.7	21.9	8.8	1.1	9.1
Western Div	0.7	0.5	1.7	3.6	2.2	0.2	0.0	2.7
Itojo	2.9	18.5	17.7	17.8	19.3	7.7	0.1	5.2
Kitwe TC	0.6	0.9	0.3	3.6	4.0	0.5	0.1	0.6
Ntungamo	1.7	5.2	1.5	6.7	8.6	2.3	0.1	2.7
Nyakyera	2.5	8.9	1.7	14.6	17.3	4.1	0.2	2.3
Ruhaama	4.3	24.5	3.2	33.6	38.7	15.0	0.3	4.6
Rukoni East	6.3	19.6	5.1	30.3	34.0	16.5	1.1	9.7
Rukoni West	0.4	1.2	0.2	2.2	1.4	0.0	0.0	0.5
Rweikiniro	1.9	6.8	1.4	10.5	12.8	2.0	0.1	1.9
Kafunjo-Mirama	6.0	19.7	3.2	29.4	31.1	11.3	0.3	4.1
Kayonza	0.7	0.9	1.7	2.7	3.9	1.3	0.0	2.8
Ngoma	0.8	0.6	0.6	2.6	2.8	0.3	0.0	0.3
Rubaare	4.1	10.7	2.5	15.1	16.6	6.3	0.4	3.8
Rubaare TC	2.5	6.3	1.1	19.2	20.0	4.2	0.3	1.0
Rugarama	2.0	8.2	1.0	8.9	14.8	7.2	0.1	2.4
Total	2.7	9.5	2.8	13.7	16.9	6.2	0.2	4.1

3.1.8 Plantains

The results from Table 14 below reveal that banana food was the most commonly grown plantains in all Sub Counties.

Ihunga had the highest proportion of households growing Banana food at 98.05%, Rukoni East had the highest proportion growing banana beer at 60.12% while Central Division had the highest proportion growing Banana sweet at 59.79%.

Banana beer was least commonly grown in Bwongyera, Ihunga, Rwashamaire Town Council, Kagarama Town Council, Nyamunuka Town Council, Central Division, Eastern Division, Kitwe Town Council, Rweikiniro, Kayonza, Rubaare And Rubaare Town Council. Banana Sweet Was Least Commonly Grown in Kibatsi, Nyabihoko, Western Division, Itojo,

Ntungamo, Nyakyera, Ruhaama, Rukoni East, Rukoni West, Kafunjo-Mirama Town Council, Ngoma and Rugarama.

Table 14: Proportion of households growing plantain by Sub County

Sub County	Banana food	Banana beer	Banana sweet
Bwongyera	95.7	25.9	26.1
Ihunga	98.1	27.8	36.1
Kibatsi	98.0	34.3	26.4
Nyabihoko	93.1	23.4	21.8
Rwashamaire TC	92.9	25.8	42.0
Kagarama TC	96.1	51.5	57.9
Nyamunuka TC	94.8	0.7	2.9
Central Division	96.3	34.4	59.8
Eastern Division	77.1	11.7	12.3
Western Division	87.9	1.5	0.7
Itojo	98.0	44.5	34.3
Kitwe TC	90.4	22.5	27.5
Ntungamo	93.7	17.8	17.2
Nyakyera	95.8	36.4	16.9
Ruhaama	94.8	55.0	37.5
Rukoni East	94.7	60.1	48.8
Rukoni West	94.5	27.4	13.6
Rweikiniro	91.4	17.2	17.9
Kafunjo-Mirama TC	89.4	34.6	29.4
Kayonza	91.1	20.9	21.5
Ngoma	80.4	30.6	27.0
Rubaare	94.5	9.1	13.9
Rubaare TC	92.5	5.1	28.5
Rugarama	96.3	23.0	18.9

3.1.9 Sugar cane, vanilla and cotton

According to the study results from the table below, sugar cane was the most commonly grown crop in all Sub Counties. Central division had the highest proportion of households growing Sugar cane at 20.21%, Rukoni East had the highest proportion of households growing Cotton at 0.75% while Rweikiniro had the highest proportion growing Cotton at 0.52%.

Vanilla was least commonly grown In Ihunga, Kibatsi, Nyabihoko, Rwashamaire Town Council, Kagarama Town Council, Eastern Division, Western Division, Itojo, Nyakyera, Ruhaama, Rukoni East, Kafunjo-Mirama Town Council, Kayonza and Ngoma. Cotton Was

Least Commonly Grown in Bwongyera, Nyamunuka Town Council, Central Division, Kitwe Town Council, Rukoni West Rweikiniro, Rubaare Rubaare Town Council and Rugarama.

Table 15: Proportion of households growing Sugar Cane, Vanilla and Cotton by Sub-County

Sub County	Sugarcane	Cotton	Vanilla
Bwongyera	2.4	0.1	0.1
Ihunga	19.8	0.4	0.2
Kibatsi	9.2	0.1	0.1
Nyabihoko	7.6	0.2	0.1
Rwashamaire TC	8.7	0.1	0.1
Kagarama TC	14.0	0.1	0.0
Nyamunuka TC	2.0	0.0	0.0
Central Div	20.2	0.0	0.0
Eastern Div	9.1	0.5	0.3
Western Div	10.9	0.0	0.0
Itojo	17.0	0.1	0.0
Kitwe TC	1.3	0.1	0.1
Ntungamo	4.3	0.2	0.4
Nyakyera	7.6	0.2	0.1
Ruhaama	6.2	0.2	0.2
Rukoni East	10.1	0.8	0.4
Rukoni West	0.8	0.0	0.1
Rweikiniro	2.1	0.1	0.5
Kafunjo-Mirama	4.3	0.4	0.2
Kayonza	2.0	0.0	0.0
Ngoma	3.3	0.1	0.1
Rubaare	3.4	0.1	0.2
Rubaare TC	2.4	0.0	0.0
Rugarama	5.2	0.0	0.1

3.2 Area under crops in acres.

According to the Agriculture Annual Survey (AAS) 2018, the National Mean Plot Size (MPS) was estimated to be 0.3 Ha amongst the 10 ZARDIs. Ntungamo belongs to the specific ZARDI of Mabarara and had an estimated MPS of 0.32 Ha.

3.2.1 Banana food

The area under banana food was estimated to be 24,633 ha. Table 15 shows that the estimated number of plots under banana food were 76,977. Out of these, 7,853 (36.2%) were under pure stand while 49,124 (63.8%) were under mixed stand.

3.2.2 Sweet potatoes

The area under sweet potatoes was estimated to be 14,296 ha. Table 16 shows that the estimated number of plots under sweet potatoes were 44,675. Out of these, 35,340 (79.1%) were under pure stand while 9,335 (20.9%) were under mixed stand.

3.2.3 Beans

The area under beans was estimated to be 24,154 ha. Table 16 shows that the estimated number of plots under beans were 75,480. Out of these, 21,297 (28.22%) were under pure stand while 54,183 (71.78%) were under mixed stand.

3.2.4 Rice

The area under rice was estimated to be 26.56 ha. Table 16 shows that the estimated number of plots under rice were 83. Out of these, 25 (30.1%) were under pure stand while 58 (69.9%) were under mixed stand.

3.2.5 Irish potatoes

The area under Irish potatoes was estimated to be 3220 ha. Table 16 shows that the estimated number of plots under Irish potatoes were 10,061. Out of these, 7,079 (70.4%) were under pure stand while 2,982 (29.6%) were under mixed stand.

3.2.6 Ground nuts

The area under Ground nuts was estimated to be 11,270 ha. Table 16 shows that the estimated number of plots under Irish potatoes were 35,220. Out of these, 24,825 (70.5%) were under pure stand while 10,395 (29.5%) were under mixed stand.

Table 16: Area under banana food

District	Pure	%pure	Mixed	%mixed	Total	Area(ha)	Mean plot size (MPS) AAS,2018
Banana food	7,853	36.2	49,124	63.8	76,977	24,633	0.32
Sweet Potato	35,340	79.1	9,335	20.9	44,675	14,296	0.32
Beans	21,297	28.22	54,183	71.78	75,480	24,154	0.32
Rice	25	30.1	58	69.9	83	26.56	0.32

Irish Potato	7,079	70.4	2,982	29.6	10,061	3220	0.32
Ground nuts	24,825	70.5	10,395	29.5	35,220	11,270	0.32

CHAPTER FOUR: AQUACULTURE

4.0 Introduction

There are 60 aquaculture households in Ntungamo District. 92.2% of fish ponds are stocked with tilapia and all tanks have only cat fish. 9.1% of fish ponds are stocked with mirror carp

4.1 Production Systems

4.1.1 Fish Ponds

Fish ponds were the most common type of fish production system (113 in number) in Ntungamo district with 96 of them stocked. Rwashamaire town council and Nyamunuka town council had the highest number of stocked fish ponds, each having 10 stocked ponds, while central division, eastern division and Ntungamo had the least number of fish ponds, each having one stocked fish pond.

Table 17: Number of fish ponds by sub-county

Sub County	Stocked	Un-Stocked	Total
Ihunga	4	0	4
Kibatsi	7	0	7
Nyabihoko	5	2	7
Rwashamaire TC	10	1	11
Kagarama TC	2	0	2
Nyamunuka TC	10	0	10
Eastern Division	1	2	3
Itojo	8	3	11
Ntungamo	1	0	1
Nyakyera	6	3	9
Ruhaama	8	0	8
Rukoni East	2	0	2
Rukoni West	9	0	9
Rweikiniro	4	0	4
Kayonza	6	4	10
Ngoma	4	0	4
Rubaare	7	2	9
Rubaare TC	2	0	2
Total	96	17	113

4.1.2 Fish Tanks and Cages

Fish tanks and cages were very rare among aquaculture households. There were only 4 Fish Tanks found (2 in Rukoni East and 2 in Rwekiniro) and 1 cage found in Rubaare. 3 of the tanks were stocked.

CHAPTER FIVE: LIVESTOCK REARING

5.0 Introduction

Results from the farmer registration revealed that 32,689 (58%) of the households reported to be keeping livestock which include Cattle, Goats, Pigs, Poultry, Rabbits and Dogs. Majority were keeping goats (66%) followed by poultry (52%). 33% of the households were keeping pigs and 27% keeping cattle. A low proportion of households kept sheep, rabbits and dogs

Figure 1: Showing number of households keeping livestock

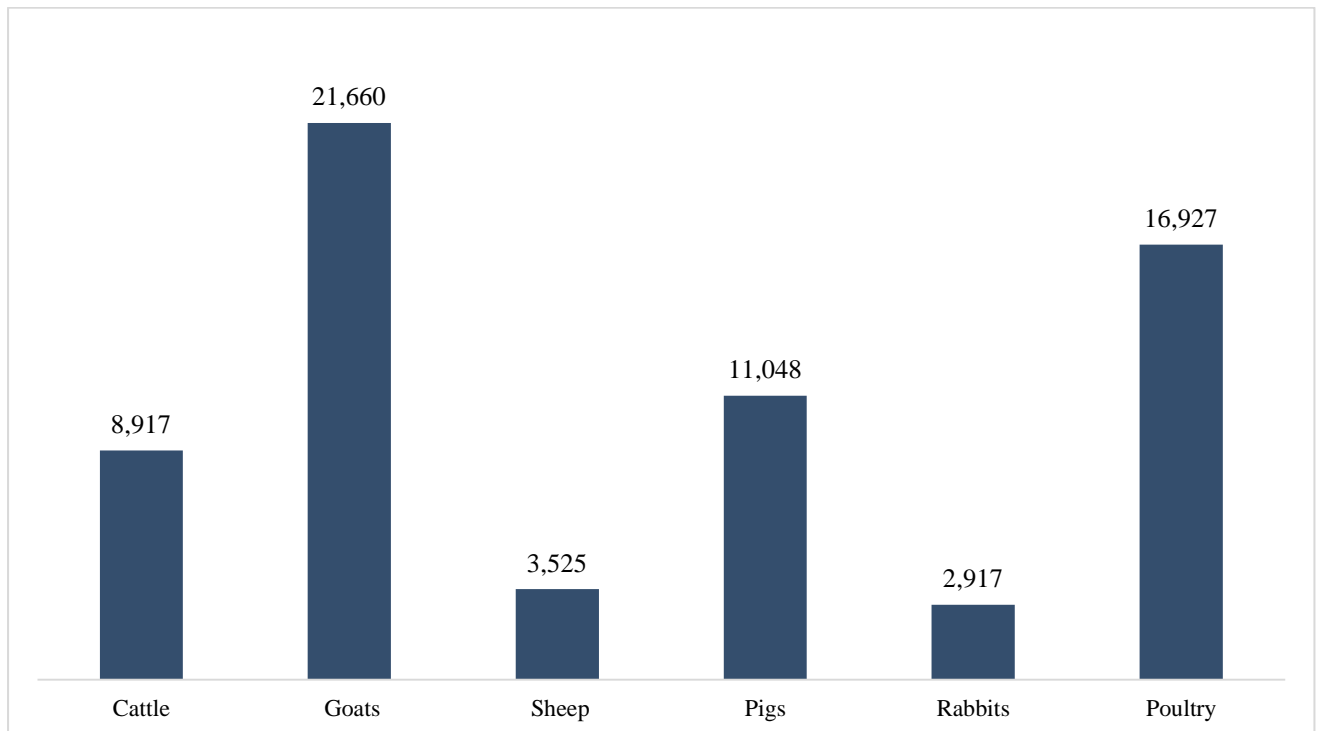


Figure 2: Showing population of livestock in the district

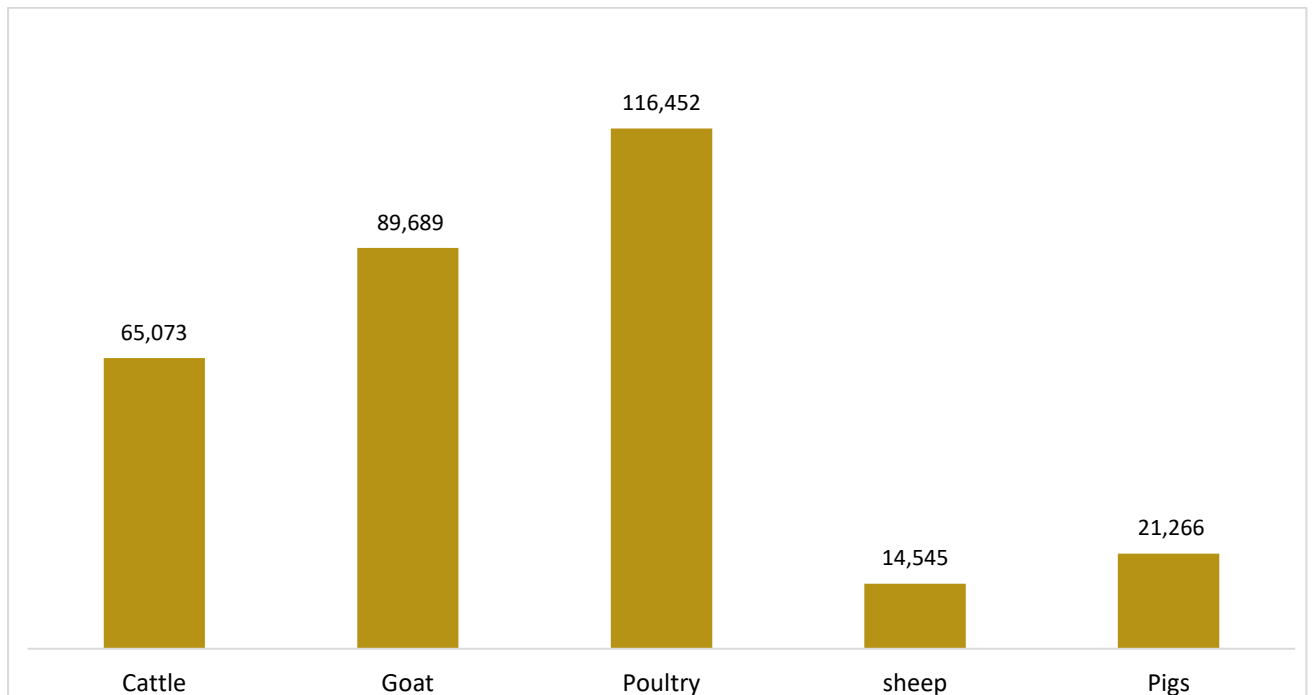


Table 18: Number of households keeping livestock by sub-county

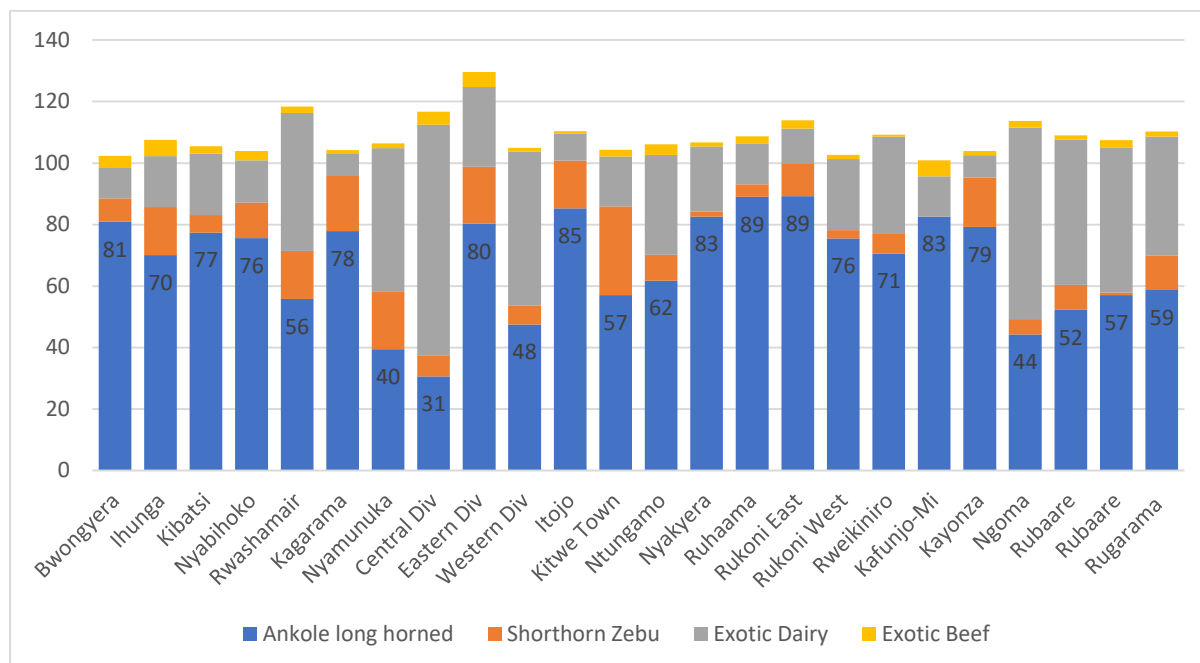
Livestock	Cattle	Goats	Sheep	Pigs	Rabbits	Dogs	Poultry
Bwongyera	304	928	160	921	121	109	631
Ihunga	224	782	161	669	94	226	557
Kibatsi	460	1,247	191	1,163	143	250	621
Nyabihoko	434	1,009	125	464	54	386	868
Rwashamaire	147	411	44	209	46	118	361
Kagarama	167	505	77	466	66	155	470
Nyamunuka	453	1,249	104	508	128	216	1,034
Central Div	144	203	26	75	36	127	147
Eastern Div	81	142	31	67	19	57	136
Western Div	80	159	12	68	17	91	161

Itojo	666	1,234	291	447	112	502	911
Kitwe TC	184	629	74	231	52	233	602
Ntungamo	557	1,149	201	476	136	458	787
Nyakyera	896	1,847	385	930	140	636	1,380
Ruhaama	173	1,209	120	910	319	291	958
Rukoni East	259	909	124	560	116	373	966
Rukoni West	151	559	79	465	91	163	606
Rweikiniro	456	1,311	121	541	166	329	927
Kafunjo-Mi	115	714	95	297	142	192	759
Kayonza	510	1,466	242	547	362	515	1,101
Ngoma	1,143	1,245	395	114	107	419	957
Rubaare	576	1,067	250	346	232	429	879
Rubaare	121	243	27	58	36	85	140
Rugarama	616	1,443	190	516	182	594	968
Total	8,917	21,660	3,525	11,048	2,917	6,954	16,927

5.1 Cattle Keeping

According to farmer registration results, on average 76% of households in the district keep indigenous cattle while on average 32% of households in the district keep Exotic cattle. Majority of the households keeping indigenous cattle keep Ankole long horned cattle with Ruhama and Rukoni East having the highest proportion at 89%. Findings further revealed that a higher proportion of households in Kitwe TC keep Short horned zebu (29%) than the other Sub Counties. A higher proportion of households reported to keeping More Exotic Dairy than Exotic beef with central division having the highest proportion (75%) followed by Ngoma sub county with 62%.

Figure 3: Proportion of households keeping Cattle



5.2 Cattle population by breed

Findings reveal that Farmers keep more numbers of indigenous cattle than exotic cattle. According to pilot study findings in Table 24 below, there were more numbers of Ankole long horned cattle than Short Horned Zebu in all the Sub Counties except Kitwe TC where there were more numbers of Short horn zebu. Nyakyera Sub County had the highest number of Ankole Long Horned Cattle with each household keeping on average 5 cattle while Kitwe TC had the highest number of Short Horned Zebu: each household keeping on average 20 cattle. In the case of Exotic cattle, there were more numbers of exotic dairy cattle kept in all Sub Counties than exotic beef. The highest numbers of Improved Dairy breeds were reported in Ngoma Sub County each household keeping on average 15 cattle while the highest numbers of Improved Beef breeds were found in Rubaare Sub County: each household keeping on average 35 cattle.

Table 19: Cattle population by sub-county

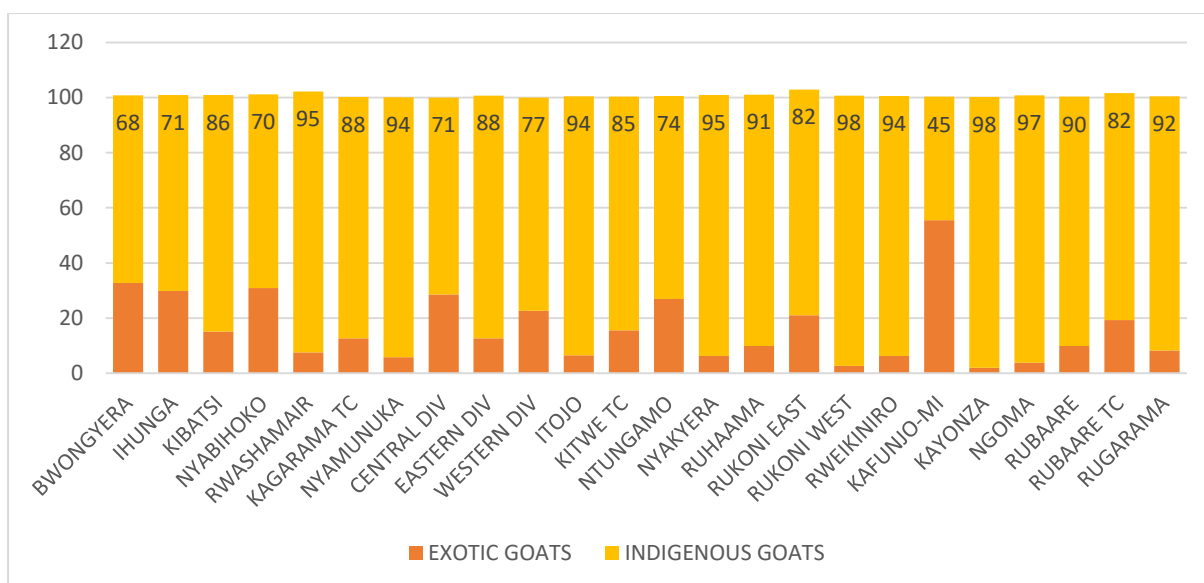
Sub County	Ankole Long Horned	Short Horn Zebu	Exotic/Improved – Dairy	Exotic/Improved – Beef	Total
Bwongyera	583	56	74	25	738

Ihunga	407	92	136	14	649
Kibatsi	901	62	325	42	1,330
Nyabihoko	1,536	184	445	50	2,215
Rwashamaire	308	110	350	5	773
Kagarama TC	360	100	40	6	506
Nyamunuka	731	444	1,241	20	2,436
Central Division	460	39	403	21	923
Eastern Division	611	69	207	67	954
Western Division	205	28	251	2	486
Itojo	2,733	460	369	23	3,585
Kitwe TC	497	1,042	305	7	1,851
Ntungamo	1,853	229	1,408	84	3,574
Nyakyera	4,061	81	1,798	39	5,979
Ruhaama	626	60	68	43	797
Rukoni East	958	97	177	14	1,246
Rukoni West	623	18	276	7	924
Rweikiniro	1,522	264	2,109	16	3,911
Kafunjo-Mirama	319		227	16	562
Kayonza	1,815	342	605	13	2,775
Ngoma	3,563	522	10,886	227	15,198
Rubaare	1,678	294	5,183	283	74,38
Rubaare TC	340	30	779	70	1,219
Rugarama	1,644	355	2,940	65	5,004
Total	28,334	4,978	30,602	1,159	65,073

5.3 Goats

Farmer Registration results indicate that majority of the households with Goats in all Sub Counties reported to keeping indigenous breeds of goats at an average of 84%. Kayonza Sub County had the highest number of households keeping indigenous goats at a proportion of 98% followed by Rwashamaire and Nyakyera. Kafunjo- Mirama reported the highest number of households keeping Exotic goats at a proportion of 55% .

Figure 4: Proportion of households keeping goats by Sub County



5.4 Goat Population by breed

Generally, farmers keep high numbers of indigenous goats compared to exotic breeds were kept across all Sub Counties. Kafunjo Mirama had the highest number of exotic breeds (1,677) while Ngoma had the highest number of indigenous breeds (7,585).

Table 20: Goat population by breed

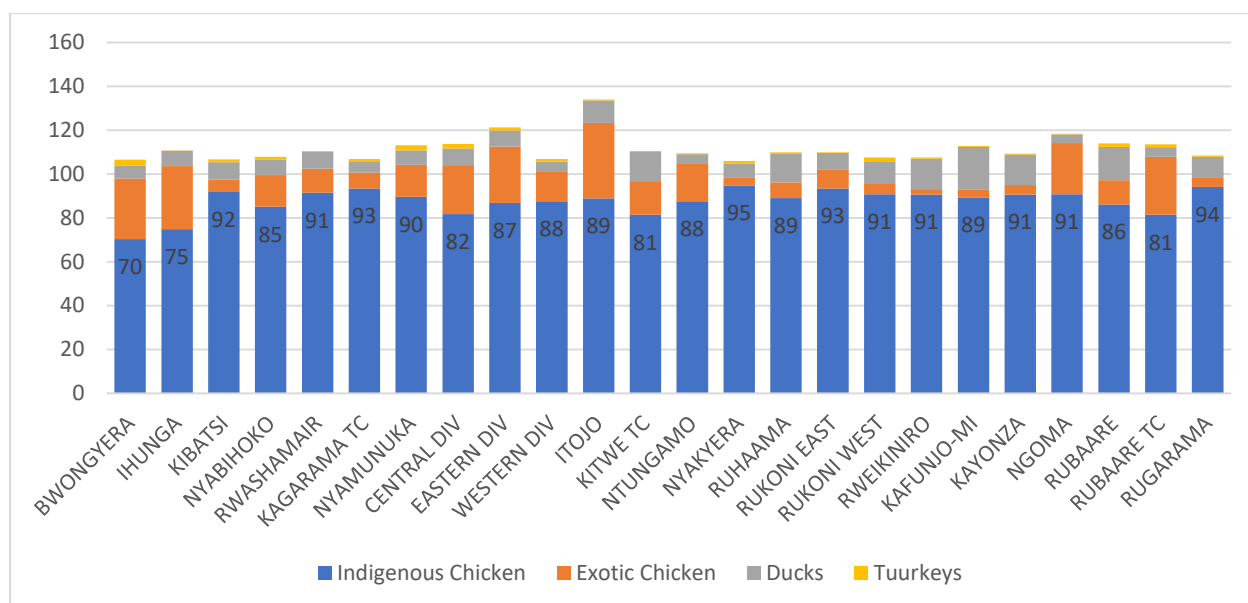
Sub-County	Goat Exotic/Improved	Goat Indigenous	Total
Bwongyera	640	1,720	2,360
Ihunga	588	1,419	2,007
Kibatsi	509	3,080	3,589
Nyabihoko	1,123	2,825	3,948
Rwashamaire	149	1,588	1,737
Kagarama Tc	178	1,413	1,591
Nyamunuka	230	3,918	4,148
Central Div	253	1,186	1,439
Eastern Div	140	700	840
Western Div	195	585	780
Itojo	409	5,123	5,532
Kitwe Tc	582	2,249	2,831
Ntungamo	1,314	3,618	4,932
Nyakyera	626	7,127	7,753
Ruhaama	411	3,611	4,022
Rukoni East	659	3,106	3,765
Rukoni West	107	1,647	1,754
Rweikiniro	361	5,455	5,816
Kafunjo-Mi	1,677	1,179	2,856

Kayonza	171	6,477	6,648
Ngoma	266	7,585	7,851
Rubaare	661	4,994	5,655
Rubaare Tc	221	1,261	1,482
Rugarama	515	5,838	6,353
Total	11,985	77,704	89,689

5.5 Poultry

It can be seen from the graph below a high number of households in all the Sub Counties keep indigenous chicken compared to other poultry breeds. Nyakyera had the highest number of households keeping indigenous poultry at 95%, Itojo had the highest number keeping Exotic chicken. Rubare and Kayonza had the highest number of households keeping duck at 15% and 14% respectively

Figure 5: Households keeping Poultry by sub-county



5.6 Poultry Population

There were higher numbers of indigenous poultry being kept in all Sub Counties except for Central Division, Eastern Division, Western Division and Rubaare TC where there were higher numbers of Exotic layers being kept. Nyakyera Sub County reported the highest numbers of indigenous poultry breeds; each Household on average keeping 5 birds. The highest number of Exotic Layers were reported to being kept in Central Division, each household keeping an average of 280 birds.

Kayonza Sub County had the highest number of ducks being kept while Nyamunuka had the highest number of turkeys in the district. Households with ducks and turkeys kept an average of 3 birds.

Table 21: Poultry Population by Sub County

Sub County	Indigenous	Exotic – Broilers	Exotic – Layers	Breeders- Broilers	Breeders – Layers	Ducks	Turkeys
Bwongyera	1563	523	230	55	48	82	34
Ihunga	1134	47	908	72	230	81	1
Kibatsi	2834	99	164	2	15	162	24
Nyabihoko	3175	804	265	25	167	140	29
Rwashamaire	2990	104	49	517	10	94	39
Kagarama TC	1680	50	128	19	26	73	
Nyamunuka	4864	2667	1738	346	116	407	94
Central Div	724	54	3361	216	40	32	14
Eastern Div	809	354	914	9	46	33	5
Western Div	830	365	1325	27	2	37	5
Itojo	3665	145	1552	29	59	254	3

Kitwe TC	2605	329	309	46	110	235	10
Ntungamo	3876	202	2674	34	101	92	4
Nyakyera	6028	69	471	53	306	209	43
Ruhaama	3460	449	731	77	65	339	15
Rukoni East	4152	160	217	23	23	186	4
Rukoni West	3187	134	1427			208	29
Rweikiniro	4312	49	26	15	89	399	38
Kafunjo-Mirama	4236	105	320	4	5	459	6
Kayonza	4869	534	115	84	54	495	12
Ngoma	5392	514	1176	13	18	130	5
Rubaare	4484	732	1214	132	144	426	37
Rubaare TC	905	938	1116	464	699	48	4
Rugarama	4559	139	128	36	4	234	10
Total	76,333	9,566	20,558	2,298	2,377	4,855	465

5.7 Other livestock

It was reported that there were higher numbers of pigs being kept than other livestock in Bwongyera, Ihunga, Kibatsi, Nyabihoko, Rwashamaire, Kagarama Tc, Eastern Division, Western Division, Kitwe Tc, Ntungamo, Rukoni East, Rukoni West, Rweikiniro and Bukulula. Furthermore, there were higher numbers of rabbits being kept than other livestock in Nyamunuka, Ruhaama, Kafunjo - Mirama, Kayonza, Rubaare and Rubaare TC. reported to keeping the highest numbers of all the livestock as shown in Table 26 below. There were more numbers of indigenous sheep kept in all Sub Counties than exotic sheep.

Furthermore, Ngoma Sub County reported to keeping the highest numbers of indigenous sheep; each household keeping an average of 6 animals. A high number of Pigs were kept in Kibatsi Sub County while Kayonza and Nyakyera Sub Counties kept the highest numbers of rabbits and dogs respectively. On average, households in Ntungamo keep 6 rabbits and 2 dogs. On average, a household with pigs had an average of 3 animals, a household with sheep reported 3 animals and those with rabbits had an average of 5 animals.

Table 22: Other livestock population

Sub County	Sheep – Exotic/Improved	Sheep – Indigenous	Pigs	Rabbits	Dogs
Bwongyera	123	232	1689	524	170
Ihunga	90	242	1044	372	326
Kibatsi	105	399	2228	784	354
Nyabihoko	165	338	964	259	572
Rwashamaire	18	118	506	251	175
Kagarama Tc	18	197	905	325	248
Nyamunuka	50	335	1072	1082	381
Central Div	52	36	238	218	245
Eastern Div	16	131	162	105	122
Western Div	25	41	362	142	190
Itojo	74	1079	779	774	758
Kitwe Tc	22	261	492	293	406
Ntungamo	303	474	1043	788	746
Nyakyera	189	1726	1623	764	983
Ruhaama	52	336	1545	1815	408
Rukoni East	120	339	930	631	589
Rukoni West	16	189	857	422	263
Rweikiniro	43	399	1031	991	493
Kafunjo-Mirama	188	117	614	835	299
Kayonza	21	1006	1011	2261	869
Ngoma	149	2247	291	554	690
Rubaare	130	1287	775	1453	757
Rubaare Tc	46	105	213	247	214
Rugarama	109	787	892	864	977
Total	2,124	12,421	21,266	16,754	11,235

CHAPTER SIX: APICULTURE FARMING

6.0 Introduction

There are 1,234 (2.2%) households practicing apiculture farming. Rukoni West had the highest proportion of households practicing apiculture at 6% while Rugarama had the lowest proportion at 0.6%.

6.1 Type of Beehives

6.1.1 Local beehive

This was the most common type of beehives in the district with a total of 9,399 local beehives. Rukoni East had the highest number of colonized local beehives at 778 followed by Rukoni West at 701 while Kitwe TC had the lowest number at 11. Nyakyera Sub-county had the highest number of un-colonized local beehives at 337 followed by Nyamunuka Sub-county at 330.

Table 23: Local beehives colonised

Sub-county	Colonized	Un-colonized	Proportion colonized
Bwongyera	80	25	76.2
Ihunga	377	173	68.5
Kibatsi	302	128	70.2
Nyabihoko	265	71	78.9
Rwashamaire TC	95	29	76.6
Kagarama TC	28	26	51.9
Nyamunuka TC	456	330	58
Central Div	14	71	16.5
Eastern Div	26	22	54.2
Itojo	117	247	32.1
Kitwe TC	11	7	61.1
Ntungamo	126	32	79.7
Nyakyera	660	337	66.2
Ruhaama	554	109	83.6
Rukoni East	778	222	77.8
Rukoni West	701	324	68.4
Rweikiniro	134	48	73.6
Kafunjo-Mirama TC	678	249	73.1
Kayonza	445	185	70.6
Ngoma	145	22	86.8
Rubaare	210	41	83.7
Rubaare TC	182	224	44.8
Rugarama	81	12	87.1

6.1.2 Kenya Top Bar Bee hive

Kenya top bar was the second most common beehive in Ntungamo, with Rukoni-East having the highest number (94) of beehives followed by Nyamunuka sub-county at 51. Rukoni East had a total of 10 un-colonized beehives which was the highest.

Table 24: Kenya Top Bar Beehives colonized

Sub-county	Colonized	Un-colonized	Total
Bwongyera	2	8	10
Ihunga	6	1	7
Kibatsi	16	6	22
Nyabihoko	5	3	8
Rwashamaire TC	31	0	1
Nyamunuka TC	43	8	51
Central Division	4	4	8
Western Division	2	0	2
Ntungamo	3	0	3
Nyakyera	2	0	2
Ruhaama	2	1	3
Rukoni East	84	10	94
Rukoni West	9	0	9
Kafunjo-Mirama TC	22	0	22
Rubaare	1	0	1

6.1.3 Langstroth Beehive

Langstroth beehives were found in 5 of the sub counties with Nyamunuka TC having the highest number (20) of beehives. Ntungamo sub-county had the highest number (5) of un-colonized beehives.

Table 25: Langstroth beehives

Sub-county	Colonized	Un-colonized	Total
Ihunga	2	1	3
Nyamunuka Town Council	20	0	20
Ntungamo	5	5	10

Ruhaama	4	0	4
Rweikiniro	9	0	9

CHAPTER SEVEN: ADOPTION OF AGRICULTURAL TECHNOLOGY AND SUPPORT SERVICES

7.1 Adoption of improved technologies

From the farmer registration pilot study, results revealed that on average 15% of the farming households accessed critical farm inputs (fertilizer, seed and pesticides). Of the households that accessed critical farm inputs, most of them were using organic fertilizers (over 31%). At sub-county level, Kayonza had the highest proportion of households with access to critical farm inputs (58.5%).

On average, less than 1% of households used labor saving technologies (tractor and ox-plough). Ngoma sub-county and Rwashamaire TC had the highest proportion with access to tractors (0.6%) while Kibatsi Sub County had the highest proportion with access to ox ploughs (0.9%).

Overall, there was low adoption of artificial insemination in the district at only 0.6%. Western Division had the highest proportion with access to artificial insemination at 3.6% while the rest of the sub-counties had less than 1% of households accessing the service.

Results also showed that there was low adoption of irrigation technology at an average of 3.4%. Western Division had the highest proportion of households with access at 68% while only 1% of households in Kitwe TC and Rukoni, East had access to the technology.

Figure 6: Showing Adoption of improved technologies

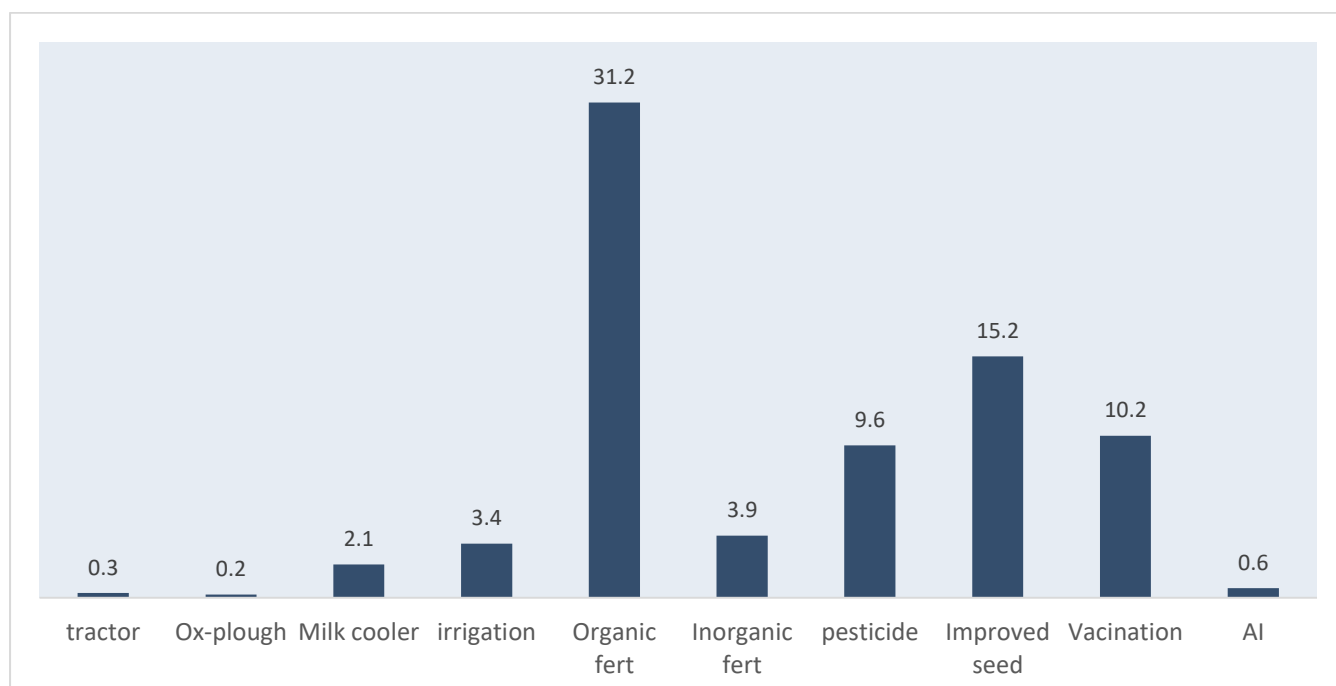


Table 26: Adoption of improved technologies by sub-county

Sub-county	Ox		Milk	Irriga	Org	Inorgan	Pesti	Improved		AI
	Tractor	Plough	Cooler	tion	Fert	Fertilize	cide	Seed	Vaccine	
Bwongyera	0.5	0.2	0.5	1.9	22	8.9	4.3	8	21	0.4
Ihunga	0.3	0	0.2	1.6	41.5	16	12.2	39.9	7.4	0.7
Kibatsi	0.3	0.9	0.7	1.2	32.9	5.5	7.3	20.6	4.3	0.5
Nyabihoko	0.3	0.2	1.3	2.2	28.6	2.4	5.5	5.5	7.1	0.7
Rwashamaire	0.6	0.1	1.7	12.2	53.5	7.9	16	15.2	12.3	1.3
Kagarama Tc	0.5	0.2	0.6	1	22.6	1.6	4.5	15.8	1.5	0.3
Nyamunuka	0.4	0.3	0.5	0.7	17.2	3.4	9.5	5.6	10.1	0.5
Central Div	0.2	0	0	2.3	58.6	3.5	7.6	52.7	29.1	1
Eastern Div	1.3	0.3	0.3	2.9	65	5.4	6	3.9	9.1	0.8
Western Di	0.7	0.5	3.2	68.4	84.8	7.3	11.1	28.4	11.2	3.9
Itojo	0.1	0.2	0.3	2.5	75.8	1.6	10.2	4.6	25.6	0.5
Kitwe Tc	0.2	0.1	0.3	1	14.8	0.4	4.7	7.2	3.7	0.6
Ntungamo	0.3	0.2	0.5	1.6	34.1	3.2	3.4	11	11.9	0.9
Nyakyera	0.1	0.2	1.2	1.5	31.6	4.4	8.1	9.9	13.9	0.7
Ruhaama	0.2	0.2	0.1	1.9	9.8	0.9	3	4	3	0.4
Rukoni East	0.1	0.2	0.4	1	14.5	1.6	11	5.4	1.7	0.3
Rukoni West	0.1	0.1	0.3	1.8	55.4	1.9	6.5	17.6	5.1	0.5
Rweikiniro	0.2	0.1	1.5	1.3	23.9	2.4	3.1	3.5	3.6	0.2
Kafunjo-Mirama	0.1	0.4	0.2	3.6	4.2	0.8	1.4	14	3.8	0.1
Kayonza	0.1	0.2	0.6	15.1	34.9	6.4	35.6	58.5	14.7	0.9
Ngoma	0.6	0.4	19.9	4.7	35.8	4	14.4	25.4	23	0.8
Rubaare	0.3	0.3	4	3.7	45.5	3	11.8	10.9	12.2	0.7
Rubaare Tc	0.1	0.3	1.5	1.8	21	12.9	5.6	3.7	6	0.2
Rugarama	0.3	0.2	2.6	2.1	23.3	2.5	13	20	5.7	0.4
Total	0.3	0.2	2.1	3.4	31.2	3.9	9.6	15.2	10.2	0.6

7.2 Access to agricultural support services

13% of the farming households mentioned that they belonged to a farmer group. Nyabihoko sub-county had the highest proportion (34.2%) of farming households belonging to farmer groups followed by Rwashamaire TC at 32.9% and Ngoma sub-county at 32.3% while Kagarama TC had the lowest proportion of 0.75%.

5% of farming households mentioned that they accessed agricultural credit. Rukoni West sub-county had the highest proportion (18%) of the farming households that accessed agricultural credit followed by Ngoma at 13.8% and Ihunga sub-county at 13%. Central Division, Ruhama sub-county and Rubaare TC all had less than 1% of farming households accessing agricultural credit.

26% of farming household mentioned that they accessed agricultural extension services with Western Division having the highest proportion (65%) of farming households accessing extension services and Eastern Division having the lowest of 3%.

Table 27: Access to agricultural support services and Farmer Organization development

Sub-county	Farmer Group	Agric credit	Extension services
Bwongyera	15.3	1.1	28.6
Ihunga	26.3	13.1	43.7
Kibatsi	13.1	3.2	30.0
Nyabihoko	34.3	8.9	24.9
Rwashamaire Tc	32.9	10.4	29.1
Kagarama Tc	0.8	1.1	36.0
Nyamunuka Tc	16.4	1.5	31.1
Central Division	20.6	0.4	65.0
Eastern Division	3.9	1.3	3.1
Western Division	27.9	7.5	68.8
Itojo	12.6	4.0	10.6
Kitwe Tc	7.7	1.2	11.6
Ntungamo	5.8	2.9	19.5
Nyakyera	11.4	9.3	13.3
Ruhaama	11.2	1.0	43.3
Rukoni East	2.7	1.6	27.1
Rukoni West	4.8	18.1	25.2
Rweikiniro	4.7	6.5	33.4
Kafunjo-Mirama Tc	1.1	3.7	36.8
Kayonza	25.4	9.3	20.0
Ngoma	32.4	13.9	20.0
Rubaare	16.8	9.7	30.3
Rubaare Tc	3.0	0.9	5.9
Rugarama	5.8	1.0	29.5
Total	13.7	5.7	26.4

7.3 Access and source of free/subsidized inputs

Results in table 35 revealed that a higher percentage (76.4%) of the households in Ntungamo district reported to not receiving free inputs.

Overall, 21% of households reported to receiving free inputs, Kafunjo Mirama reporting the highest proportion of households who received free inputs at 95.5%. Of the households who received free inputs, 80% received them from NAADS or OWC. 99.7% of households in Kayonza reported to receiving inputs from NAADS while only 33% of households in Eastern Division reported NAADS or OWC as the source of inputs.

The findings also revealed that a high proportion of households in Kitwe TC (72%) reported shops as the source of their inputs. Furthermore, 52% of farmers in Eastern Division received inputs from politicians. Further analysis on whether farmers used the free inputs showed that 97% of households used them fully. Less than 1% of households in the district reported to not having used the inputs.

Table 28: Access and Source of free/subsidized inputs

Sub county	Received free/ inputs		Source of inputs						Household use of inputs		
	Yes	No	NAADS/ OWC	Cooperatives	NGOs	Shops/ local	Politicians	Other	Used	Used some	Did not use
Bwongyera	52.1	47.9	93.6	0.3	0.4	5.4	0.2	0.0	99.3	0.7	0.1
Ihunga	53.1	46.9	85.2	2.9	0.4	11.1	0.5	0.0	99.5	0.2	0.3
Kibatsi	22.8	77.2	98.8	0.4	0.1	0.4	0.2	0.1	99.9	0.1	0.0
Nyabihoko	23.5	76.5	72.0	2.2	0.6	18.5	6.3	0.5	89.7	7.1	3.2
Rwashamaire	31.5	68.5	93.4	0.0	0.0	0.9	1.4	4.3	93.6	5.2	1.2
Kagarama	49.9	50.1	99.2	0.4	0.1	0.3	0.1	0.0	99.8	0.0	0.2
Nyamunuka	8.9	91.1	89.9	0.0	2.3	0.8	4.9	2.1	99.0	1.0	0.0
Central Div	74.5	25.5	29.8	1.8	0.1	65.9	2.5	0.0	100.0	0.0	0.0
Eastern Div	42.7	57.3	33.7	0.4	5.1	2.5	52.9	5.4	93.5	4.7	1.8
Western Div	58.0	42.0	52.4	1.0	0.2	12.1	23.1	11.3	97.6	2.1	0.3
Itojo	11.5	88.5	97.1	0.6	0.7	0.0	1.6	0.0	99.5	0.4	0.2
Kitwe TC	23.6	76.4	27.2	0.0	0.1	72.7	0.1	0.0	99.1	0.7	0.2
Ntungamo	26.7	73.3	76.7	6.9	1.6	10.4	4.2	0.3	97.5	2.3	0.3
Nyakyera	10.7	89.3	63.8	1.4	0.6	1.1	33.0	0.2	96.3	2.8	0.9
Ruhaama	12.1	87.9	85.4	7.0	3.3	1.4	2.7	0.2	96.2	1.9	1.9
Rukoni East	10.8	89.2	80.2	8.2	1.7	8.7	0.6	0.5	95.1	3.3	1.6
Rukoni West	21.4	78.6	99.5	0.5	0.0	0.0	0.0	0.0	100.0	0.0	0.0
Rweikiniro	11.5	88.5	91.0	3.0	1.8	2.2	1.5	0.6	97.4	2.6	0.0

Kafunjo-Mira	4.5	95.5	98.9	0.0	1.2	0.0	0.0	0.0	100.0	0.0	0.0
Kayonza	53.3	46.8	99.7	0.1	0.0	0.1	0.1	0.0	97.3	2.6	0.1
Ngoma	19.1	80.9	96.6	0.0	0.1	0.4	2.6	0.4	99.5	0.4	0.1
Rubaare	33.1	66.9	98.7	0.3	0.1	0.4	0.6	0.0	99.7	0.3	0.0
Rubaare TC	19.7	80.3	46.1	0.0	0.0	14.7	39.2	0.0	98.3	1.7	0.0
Rugarama	30.5	69.5	94.7	0.3	0.1	1.1	3.9	0.0	98.8	1.1	0.1
Total	23.6	76.4	80.3	1.3	1.5	13.0	2.8	1.2	97.7	1.8	0.5

7.4 Reason for non-use of inputs

The major reason cited for non-use of free inputs was lack of rainfall. 69% of the farmers cited this as the main reason for non-use. The second major reason was the poor quality of inputs supplied to the farmers. At sub county level, over 90% of households in Itojo and Nyakyera cited lack of rainfall as the main reason for non-use while 0% of farming households in Kibatsi reported this as the reason for non-use. Over 27% of households in Ihunga, Rwashamaire town council and eastern division reported that the quality of inputs supplied was poor. In Kibatsi Sub County all households reported lack of knowledge on how to use the inputs as the main reason for non-use of the inputs.

Table 29: Reason for non-use of Inputs

Sub-county	No knowledge	No rainfall	Poor quality	Not interested	Other
Bwongyera	9.5	71.4	14.3	4.8	0
Ihunga	23.1	46.2	30.8	0	0
Kibatsi	100	0	0	0	0
Nyabihoko	6.8	84.1	4.6	4.6	0
Rwashamaire TC	0	50.0	27.3	4.6	18.2
Kagarama TC	0	66.7	0	0	33.3
Nyamunuka TC	0	25.0	25.0	0	50.0
Eastern Div	0	38.9	27.8	5.6	27.8
Western Div	0	53.3	20.0	0	26.7
Itojo	0	100	0	0	0
Kitwe TC	18.2	54.6	18.2	0	9.1
Ntungamo	13.8	51.7	10.3	6.9	17.2
Nyakyera	0.0	91.3	4.4	0	4.4
Ruhaama	5.9	76.5	17.7	0	0
Rukoni east	38.7	48.4	9.7	3.2	0.0
Rweikiniro	0	64.3	7.1	0.0	28.6

Kayonza	1.3	85.0	11.3	2.5	0
Ngoma	0	75.0	0	25.0	0
Rubaare	25.0	75.0	0	0	0
Rubaare town council	75.0	25.0	0	0	0
Rugarama	13.3	60.0	20.0	6.7	0
Total	9.1	69.1	12.1	3.3	6.4

CHAPTER EIGHT: CHALLENGES, RECOMMENDATIONS, CONCLUSION

8.1 Challenges

a) It was observed that the entire exercise of farmer registration was too much workload in some parishes especially those that had more than 4 villages. Some villages had more than 150 farming households.

b)

c) Slow and incomplete data collection.

Most of the parish chiefs were not able to either complete the exercise in time or complete the registration at all. For some the exercise was not of interest to them while others were too busy. This was partly because the parish chiefs had other activities assigned to them and also the transfers of parish chiefs from one parish to another.

d) Slow and incomplete data entry

Most of the extension staff were not able to complete the data entry. This was also found to be caused by the busy schedules for these officers. Actually, all project activities at the district level target extension workers. Additionally, the officers were not facilitated in time to be able to deliver the assignment in time.

e) The exercise was conducted during planting season and coffee harvesting period, this greatly slowed down the exercise as farmers were only readily available in the afternoon hours.

- f) Some areas in the district are hard to reach, very hilly and farmers stay on the top of the hills. It would take a lot of time for parish chiefs to reach such farmers.
- g) NIN was making the interviews lengthy and tiresome as some farmers never had their IDs readily available.
- h) Some parish chiefs misplaced the books and some books were destroyed by rain.
- i) Lack of adequate equipment for data entry

The pilot was run with data collection being done through paper-based registers which were later on given to extension staff to enter. This was mainly due to the lack enough tablets which could only be given to sub county extension staff. Additionally, even those at the sub county were not enough to cover all staff in the district but had to be shared amongst the extension staff.

- j) Mandate crossovers

The mandate for deployment of parish chiefs falls under the purview of ministry of local government. The supervision of the parish chiefs by the production officers was very difficult since they report to the senior administrative secretary who directly reports to the chief administrative officer. The senior administrative secretaries were not involved from the start which made it difficult to supervise the parish chiefs.

8.2 Recommendations

- a) It has been identified that the workload for complete farmer registration is too much for the parish chiefs. The team proposes the use of enumerators to undertake the first complete enumeration of the farmer register. The annual updates thereafter can be done by the parish chiefs
- b) Purchase of more tablets to be used by the enumerators such that data entry is done at the point of data collection. This shall eliminate the duplication of effort and inefficiency that has been observed during the pilot.
- c) Review of guidelines for the extension grant to include data collection activities and facilitation for the parish chiefs to update the registers. The job descriptions for the extension staff already include the role for data collection and therefore just need an institutionalised form on facilitation to support sustainability of the process.
- d) Development of a standard operating procedures (sop) and memoranda of understanding (MOU) with the relevant stakeholders in complement to the extension grant guidelines, the team proposes a development of a sop that shall clearly stipulate

the roles and responsibilities of all authorities that have a role to play under RAADRS. This shall also be enforced with signing of MOUs with these relevant authorities to further strengthen the working relationships

8.3 Planned way forward

- Roll out the crop and livestock tools in the second season of 2020 in the 5 pilot districts. The tools are to be administered by the parish chief with support from extension workers and lc1 chairpersons
- A national stakeholder engagement to discuss implementation arrangements during roll out. The output will be an MOU between ministry of local government and MAAIF.
- Phased data collection to be rolled out starting with 15 districts. This will involve training parish chiefs, extension staff and deployment of parish chiefs and extension staff
- Implement the institutional data module

8.4 Conclusion

The design of RAADRS is a well thought put process that can solve the problem of regular data collection in the agricultural sector. However, the process needs to be incorporated not only the government structures but also in the “culture” of work within the LGs. This calls for a concerted effort from all relevant authorities right from the lowest level of administration up to MAAIF.

Annex

Average number of animals

Average number of animals	Kalung u	Iganga a	Nebbi i	Amuru u	Ntungamo o
Cattle - ankole long horned	3	3	3	3	5
Cattle - short horn zebu	2	3	4	4	6
Cattle exotic/improved - diary	3	4	2	5	11
Cattle exotic/improved - beef	4	4	4	3	6
Goat - exotic/improved	4	4	5	4	4
Goat - indigenous	3	4	4	5	4
Sheep - exotic/improved	3	9	4	4	4
Sheep - indigenous	3	5	3	4	4
Pigs - indigenous/exotic/improved	3	6	3	3	2
Rabbits	8	16	5	5	6
Dogs	2	3	2	2	2
Poultry - indigenous	9	12	6	11	5
Poultry exotic - broilers	66	70	7	11	13
Poultry exotic - layers	171	65	11	113	22
Poultry breeders- broilers	67	33	6	9	14
Poultry breeders - layers	476	27	14	5	9
Ducks	5	7	5	6	3
Turkeys	4	7	5	4	3

Average number of animals by sex of household head

Livestock type	Sex of HH head	Kalungu	Iganga	Nebbi	Amuru	Ntungamo
Cattle - ankole long horned	Male	3	3	4	3	5
	Female	3	3	3	3	5
Cattle - short horn zebu	Male	2	3	4	5	6
	Female	2	3	3	4	6
	Male	3	3	2	7	12

Cattle exotic/improved - diary	Female	3	4	3	3	10
Cattle exotic/improved beef	Male	4	4	4	4	7
	Female	3	4	3	2	5
Goat - exotic/improved	Male	4	4	5	4	4
	Female	3	4	6	4	3
Goat - indigenous	Male	3	4	4	6	4
	Female	3	4	4	4	4
Sheep - exotic/improved	Male	3	8	4	5	4
	Female	3	11	3	4	3
Sheep - indigenous	Male	3	4	3	4	4
	Female	2	5	3	3	4
Pigs	Male	3	6	3	4	2
	Female	3	7	3	3	2
Rabbits	Male	8	16	6	5	6
	Female	6	10	5	5	5
Dogs	Male	2	2	2	2	2
	Female	1	3	2	2	2
Poultry - indigenous	Male	9	12	6	13	5
	Female	8	12	6	10	5
Poultry exotic - broilers	Male	92	77	5	10	14
	Female	34	64	10	11	11
Poultry exotic - layers	Male	224	72	10	367	20
	Female	87	55	13	5	27
Poultry breeders- broilers	Male	82	28	3	14	15
	Female	45	41	8	6	12
Poultry breeders - layers	Male	756	25	10	5	12
	Female	52	31	21	6	6
Ducks	Male	5	7	6	6	3
	Female	5	8	5	6	3
Turkeys	Male	4	7	6	3	3
	Female	4	6	5	5	3

Number of farmers who received free/subsidized inputs in the last 12 months

Commodities	Kalungu	Iganga	Nebbi	Amuru	Ntungamo	Total
Pasture seed	82	81	7	14	97	281
Maize seed	4,972	2,882	2,796	787	11,068	22,505
Bean	3,081	1,395	1,786	396	6,845	13,503
Rice	22	138	23	161	37	381
Coffee	8,850	2,917	1,424	13	3,354	16,558
Tea	20	14	6	6	26	72
Mango	2,469	471	355	366	1,359	5,020
Orange	3,080	705	240	371	122	4,518
Apple	16	10	3	-	4	33
Cocoa	1	55	-	2	1	59
Passion fruits	61	31	3	10	97	202
Pineapples	4	10	1	2	49	66
Banana food	893	221	120	45	857	2,136
Cassava	1,091	517	603	296	635	3,142
Pesticides	861	544	206	125	141	1,877
Artificial fertilisers	559	252	8	55	73	947
Poultry	105	128	99	162	248	742
Veterinary services	377	217	62	259	222	1,137
Artificial insemination	23	12	1	2	6	44
Fish	6	6	2	6	7	27
Dairy cattle	90	46	8	13	167	324
Beef cattle	11	14	15	41	17	98
Goats	101	61	83	165	582	992
Pigs	197	21	15	69	220	522
Total	26,972	10,748	7,866	3,366	26,234	75,186