

Ministry of Foreign Affairs Danida

Northern Uganda Resilience Initiative-NURI  
2018-2022

NURI

Danida

## NURI OLD GROUPS AND ANIMAL TRACTION STUDY REPORT



*Prepared by: **Ibrahim M. Lutalo & Joseph Kiwanuka***

February 2021

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## ABBREVIATIONS

APM	Strategic Intervention for Agricultural Production and Marketing
AT	Animal Traction
CBO	Community Based Organization
CBT	Community Based Trainers
CF	Coordination Function
CSA	Climate Smart Agriculture
DAR	Brand name from previous phases used in West-Nile
FPO	Focal Point Officer
GoU	Government of Uganda
HH	Household
IP	Implementing Partner
M&E	Monitoring and Evaluation
NGO	Non-Government Organization
NURI	Norther Uganda Resilience Initiative
RALNUC	Brand name from previous phase used in Acholi Sub-region
RI	Rural Infrastructure
SPSS	Statistical Package for the Social Sciences
Ugx	Ugandan Shillings
UPSIDE	Uganda Programme on Sustainable and Inclusive Development of the Economy
VSLA	Village Saving and Loan Association
WRM	Water Resources Management

## **EXECUTIVE SUMMARY**

### **Introduction**

DANIDA has supported programmes in Northern Uganda under RDNUC directed towards improving agricultural livelihoods. Animal traction animal traction was one of the key activities implemented through provision of oxen and other accessories as grants with the objective of increasing acreages of land under production for supported farmer groups. In order to consolidate results of RDNUC, NURI programme continued to support 755 old farmer groups in post-harvest handling, bulking and marketing activities of the strategic crops based on an assessment of groups' progress and needs.

The animal traction model used Community Based Trainers (CBTs) to train the farmer groups in running the scheme as well as training ox-handlers and oxen. During the AT survey in 2018, a recommendation was made that farmers groups should be able and willing to contribute to the initial costs related to animals and equipment considering expected future income and ensuring ownership. Several groups that performed well under the animal traction scheme were among those selected for support in the NURI programme as old national farmers groups. Thus, a study was conducted in 5 districts; Nebbi and Pakwach in South West-Nile, Agago, Kitgum and Lamwo in Acholi sub-region. The objective was to examine the general success of the old farmers groups in terms of progress in production and marketing as well as determine the viability and impact of animal traction among farmer groups under RDNUC.

Using mixed method (qualitative and quantitative), a cross-sectional study was done where data was collected from farmer groups in the 5 districts, targeting 953 members from 82 farmer groups. 12% of the respondents were youth who participated in the animal traction programme under RDNUC and are now members of the old national farmer groups participating under NURI. Analysis was done and findings indicate that RDNUC achievements are being sustained through continuity under NURI programme, also animal traction activities were visible in the communities.

### **Findings**

#### **Socio-demographic characteristics of the respondent**

61% of the respondents were female and 39% male. In terms of age, 12% were youth aged 18-28 years while 88% were aged 29+ however within that 54% were aged 35-54 years. 59% attained primary education and 98% were engaged in farming as their main occupation.

#### **Old Groups**

#### **Strategic Crop Production**

52.4% of the respondents interviewed cultivated sunflower as their strategic crop during RDNUC however 48% changed to sesame as their strategic crop under NURI. Nearly 96% of the farmers registered a positive change in production under NURI programme in 2019. These positive changes were attributed to factors including training of farmers (88.3%), availability of the market for produce (49.9%), availability of machinery/animal traction (49.5%), labor (36.4%), and land fertility (24.5%) among others.

#### **Marketing of Produce among Old Groups**

The results showed that 65.4% of farmers were selling their produce through the “Bulk and Sell” approach. Furthermore, 24.4% of the farmers reported not selling produce collectively mainly due to the need to meet household demands and other factors included in the report. Over 54.1% of the farmers rated the progress made in production and marketing of produce as very good. 94% reported positive changes in quantity of produce marketed from RDNUC to NURI.

### **Group development and other activities after RALNUC/DAR Support**

**Leadership:** 10% of the group members reported receiving support from other organization after the closure of RDNUC. Most of the support came from other NGOs and government programmes within their communities. 97% of the groups have remained registered within their sub-counties, very few have kept their registration with the district. 95% of the leadership positions are occupied by adults, only 5% held by youths in the groups. Furthermore, the leadership in the groups was mainly dominated by males including chairpersons (68%), Secretary (85%), Marketing chairperson (61%) and Production chairperson (73%). The female leaders mostly dominated the position of treasurer (88%) and Vice chairperson (60%). 41% of the respondents reported that group membership did not change from the time RDNUC closed to when NURI rolled out its activities, 19.4% reported an increase and 39.5% reported a reduction.

### **Cost-Sharing**

Among the old groups, 43% of the groups chose Tarpaulins as their cost sharing project, 35% stores and 21% improved seeds. The groups that chose Tarpaulins were driven by the desire to improve the quality of produce while those that implemented the Stores mainly wanted to support collective marketing. In terms of funding of the projects, 76% of the respondents indicated they made cash payments of between Ugx 50,000 and Ugx100,000, mainly from their individual contributions (79.2%) and loans from VSLA (36.1%).

## **ANIMAL TRACTION**

### **Availability and Access to Animal Traction Services**

Land opening was mainly using animal traction and hand hoe, 87% of the respondents used both traction and hand hoe for first and second tillage. Over 76% of the farmers within community reported accessing Animal traction services through hire from Group animal traction groups supported under RDNUC. About 67% of the farmers felt, access of animal traction hire services in the community was quite easy through payment of cash.

### **Animal Traction Models in the Community**

Across the five districts, 78.6% of all respondents affirmed their groups still had oxen and ox-plough given by RDNUC. For those that did not have the animals, 52.1% reported the animals died and 33.9% had sold them and shared the money amongst themselves. 91% of the farmers indicated they hired out the AT services to group members at an average cost of Ugx 30,483 for first plough and Ugx 28,382 for second plough. Similarly, the AT services were hired to non-group members at an average cost of Ugx 53,612 for first plough and Ugx 53,963 for second plough.

### **Group Organization and Management Practices**

Across the five districts, 57.8% of the farmers reported rotational grazing as a method of management and maintenance of the oxen and ox-ploughs given by RDNUC. The other AT services management approaches used by the groups included pooling of funds to pay for maintenance costs (42.6%) and using funds generated from AT services hire (42.1%). 70% of the farmers rated the management practices of the ox traction services as being satisfactory. It was also noted that, 92.9% the groups did not receive additional support from other partners or government.

## **Conclusion**

Generally, results show that the achievements of RDNUC are being sustained through support of farmer groups that formerly benefited and now participating as old national groups. Although in terms of membership, the groups seem to have remained with the same membership, majority report improvement in their production and marketing activities. Animal traction activities were also visible although only 10% reported having received support from other development partners after closure of RDNUC programme. However, a significant proportion of farmers were not marketing their produce collectively which deprived them the benefits of collectively marketing. NURI needs to further support members of the farmers' groups to effectively improve the production and marketing of their produce.

# **1.0 BACKGROUND AND METHODOLOGY**

## **1.1 Background to the study**

Northern Uganda Resilience Initiative (NURI) is one of the development engagements under the Denmark-Uganda Country programmes that aims to contribute to poverty reduction through inclusive and sustainable economic growth. The main objective of the programme is to enhance resilience and equitable economic development in supported areas of Northern Uganda, including for refugees and refugee-hosting communities.

To realize this objective, NURI supports climate smart agriculture, rural infrastructure, and water resources management activities in support of agriculture. Under climate smart agriculture, the program focuses on improving farmers' knowledge on climate-smart production methods, as well as their understanding and ability to engage bulking and marketing and services while using the VSLA as a platform for financial inclusion. The program started in 2018-2022 with a target of 4000 farmer groups from Acholi, West Nile region and three refugee settlements. These include Agago, Kitgum and Lamwo districts in Acholi, Arua, Pakwach, Nebbi, Zombo, Moyo and Adjumani districts in West Nile and Rhino Camp (Arua), Palorinya (Moyo), Palabek Ogili (Lamwo) settlements.

DANIDA has implemented programmes in Northern Uganda under RDNUC directed towards improving agricultural livelihoods. To consolidate results and ensure sustainability NURI programme continued to support 755 old farmer groups in post-harvest handling, bulking and marketing activities of the strategic crops based on an assessment of groups' progress and needs. Under this support, groups are being linked to markets, supported in the construction of storage facilities and post-harvest handling equipment using a 50% cost sharing model.

Given the limited number of tractors in the rural areas, animal traction (AT) provides the most appropriate and viable option to open land which quickens production activities and maintains soil fertility hence increased production. In RDNUC animal traction was implemented through provision of oxen, ox-ploughs and other accessories as grants with the objective of increasing farmers' production and income through increasing acreage and yields of strategic and other crops. This model used Community Based Trainers (CBTs) to train the farmer groups in running the scheme as well as training ox-handlers and oxen. During the AT survey in 2018, a recommendation was made that farmer groups should be able and willing to contribute to the initial costs related to animals and equipment considering expected future income and ensuring ownership.

## **1.2 Objectives of the study**

Generally, the study intended to assess the extent to which RDNUC results have been sustained through continued support to the selected old national farmer groups under NURI programme. Specifically, the study sought to.

### **Old groups.**

1. Determine the viability of selected projects by the old national farmer groups.
2. Understand the groups fund mobilization strategies and capacities regarding the design of the intervention model.



3. Ascertain factors that influence improvements in production levels based on the PMP model.
4. Assess the uptake of marketing model used in the program for bulking and marketing activities.
5. Identify other activities and collaborations that groups have been engaged in since the end of RDNUC.
6. Examine group organizational capacity and how it influences performance generally. (leadership structure, members' participation, conflict management and governance)

### **Animal Traction**

1. Ascertain the availability and access of animal traction services within the community.
2. Assess the animal traction models that have worked sustainably within the communities.
3. Understand management practices exhibited by group members around animal traction services or schemes including veterinary services.
4. Establish how groups have used animal traction schemes as business entities or income generating venture, business model.
5. Ascertain the level of external support received from other partners or government for the sustainability of AT services.

## **1.3 Methodology**

### **1.3.1 Overall Design**

The study employed a cross-sectional survey design using both quantitative and qualitative methods of data collection. The individual interviews targeted members of the old farmers' groups formed during the RDNUC Programme and leaders within the programme area.

### **1.3.2 Study Sites and Population**

#### **Scope of Study**

The study was conducted in 5 districts of Nebbi, and Pakwach districts in West Nile and Kitgum, Lamwo and Agago districts in Acholi sub-regions. The population for the study comprised of groups that participated in RDNUC animal traction activities and have been selected for continuation in the NURI programme. The 5 districts were considered for the study due to the differences in production related characteristics, ecological zones, and performance in animal traction.

### **1.3.3 Sample Size and Sampling Procedure**

Sampling was done across 3 projects that included stores, tarpaulins and improved seeds which fall in the 3 different tiers (high, medium, and low) respectively. The study employed sampling procedures including purposive sampling for sub counties, groups, and key informants to factor in the varied performance, knowledge, and participation in animal traction. Systematic sampling was used for the individual household interviews at a sampling interval of 3 members. This sample was calculated at a 90% confidence interval with error margin of 10%.

#### **Sample size for old farmer groups projects and animal traction**

<b>Districts</b>	<b>Stores</b>		<b>Improved Seed</b>		<b>Tarpaulins</b>	
	<b>Groups</b>	<b>Households</b>	<b>Groups</b>	<b>Households</b>	<b>Groups</b>	<b>Households</b>
Agago	7	70	8	77	10	95
Kitgum	7	65	4	38	10	95
Lamwo	8	76	8	76	9	92

Nebbi	6	59			8	72
Pakwach	4	36			7	64
<b>Total</b>	<b>32</b>	<b>306</b>	<b>20</b>	<b>191</b>	<b>44</b>	<b>418</b>

Ten members were selected per group however where the remaining sample was less than 5 respondents, it was obtained from within the selected groups and if more than 5 an additional group was selected.

### Summary of total number of interviews to be conducted.

District	Agago	Kitgum	Lamwo	Nebbi	Pakwach	Total
Household	242	197	243	171	100	<b>953</b>
No of FGD	3	2	3	3	2	<b>16</b>
No. of KII	5	5	5	5	5	<b>30</b>

**Table 1: Districts and Sub-counties covered during the study**

KITGUM		AGAGO		LAMWO		NEBBI		PAKWACH	
Sub-	HHs	Sub-	HHs	Sub-	HHs	Sub-	HHs	Sub-	HHs
Orom	45	Omot	54	Padibe East	58	Kucwiny	45	Alwi	20
Kitgum-	44	Patongo	52	Madi Opei	48	Erussi	40	Pakwach	25
Amida	28	Lira	42	Agoro	46	Nyaravur	36	Panyimur	25
Labongoya	13	Arum	31	Palabek	22	Nebbi	30	Wadelai	30
Mucwini	13	Lukole	20	Paloga	21	Akworo	15		
Akwang	12	Parabon	12	Palabek	20	Ndhew	5		
Lagoro	12	Adilang	11	Lukung	10				
Labongo	10	Paimol	10	Palabek Kal	10				
Namokora	10	Wol	10	Palabek	8				
Omiya-	10								
<b>Total HHs</b>	<b>197</b>		<b>242</b>		<b>243</b>		<b>171</b>		<b>100</b>

### 1.3.4 Data Collection strategy

The interviewers were trained for 5 days on administering the questionnaire, deployed, and supervised during data collection by the Team leaders, NURI M&E Coordinator and the VSLA Coordinator. The training included pre-testing of tools in the districts of Kitgum and Nebbi where one farmer group consisting of 27 members each was involved. Appropriate improvements and/or adjustments to the data collection tools were made after the training and pre-test.

Data collection field activities were conducted by 8 interviewers with one supervisor per district from 6<sup>th</sup> to 29<sup>th</sup> October 2020 in the 5 districts of Nebbi, Pakwach, Agago, Kitgum and Lamwo. Each interviewer conducted interviews in 5 household per day on average. Field data editing was carried as much as possible before the interviewer left the household to address any errors immediately. The team leaders further reviewed the completed tools at the end of each day to ensure consistency among the response and refer any errors to the responsible interviewer for correction. Besides, team leaders conducted all the key informant interviews and quality assurance together with the CF M&E Coordinator and VSLA Coordinator.

### 1.3.5 Data Processing and Analysis

All dully filled questionnaires were verified, edited in office, and electronically captured using a statistical package known as EpiData, a suitable software enriched with data validation instruments to ensure minimal data entry errors. Double data entry system was used to ensure a high degree of accuracy of captured data. After data entry, data were cleaned and exported to SPSS software (Statistical Package for Social Scientists) for processing and analysis. Both univariate and bivariate analysis were performed to produce statistics disaggregated by district.

### **1.3.6 Limitations of the study.**

- Purposive sampling used in the study to select sub counties and farmers' groups limits equal chances of participation.
- Sampling of groups in relation to their previous performance might have created a bias and unequal chances of selection.
- The resource constraint (time and money) limited the sample size for the study.

## **2.0 STUDY FINDINGS**

### **2.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS**

#### **2.1.1 Gender of the respondents**

For the individual household interviews, majority of participants were female comprising 61% of the sample while males were 39%. Across the five districts, only Pakwach had more males in the sample at 53.0% compared to females (47.0%), in the rest of the districts, more than half of the participants were female.

#### **2.1.2 Age of the respondents**

Only 12% of the respondents were young people aged between 18 to 28 years. Thus, 88% are adults (aged at least 29+ years) of whom 33.2% are aged above 49 years. This age distribution of participants was almost similar to the one observed across all districts; proportion of respondents who were youth (aged 18-28 years) varied between 8.0% and 16% across the districts. (See Table 2).

#### **2.1.3 Highest level of education attained.**

Overall, 18% of the respondents had no formal education and 82% had formal education. Slightly over half (59.1%) had Primary level education, 17.8% Secondary School level while those with post-secondary were only 5% in the sample. Across the 5 districts, the highest level of education attended by the respondents was Upper-level primary education that is P.5 – P.7, reported by 35.8% of all respondents. Study respondents with no formal education were mostly drawn from Agago (27.3%), Nebbi (11.1%), Pakwach (8%), Kitgum (16.3%) and Lamwo (18.9%). (See Table 2 below)

#### **2.1.4 Main occupation for the respondent**

98% of the respondents involved in the study were involved in farming as their main occupation and 2.1% were engaged in other sectors including petty trade, carpentry, mechanics, and civil service.

**Table 2: Socio-demographic Characteristics of Respondents**

		AGAGO		KITGUM		LAMWO		NEBBI		PAKWACH		Total	
		HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)
Sex of the respondent	Male	76	31.3	87	44.4	74	30.5	81	47.4	53	53.0	371	38.9
	Female	167	68.7	109	55.6	169	69.5	90	52.6	47	47.0	582	61.1
Age of the respondent	18-28	28	11.5	32	16.3	24	9.9	22	12.9	8	8.0	114	12.0
	29-38	63	25.9	57	29.1	54	22.2	38	22.4	25	25.0	237	24.9
	39-48	69	28.4	58	29.6	78	32.1	47	27.6	33	33.0	285	29.9
	49+	83	34.2	49	25.0	87	35.8	63	37.1	34	34.0	316	33.2
Highest level of education for the respondent	No formal education	66	27.3	32	16.3	46	18.9	19	11.1	8	8.0	171	18.0
	Lower-level primary education (P.1 – P.4)	48	19.8	41	20.9	68	28.0	33	19.3	32	32.0	222	23.3
	Upper-level primary education (P.5 – P.7)	79	32.6	65	33.2	83	34.2	77	45.0	37	37.0	341	35.8
	Attended A&O-level	41	16.9	40	20.4	32	13.2	35	20.5	21	21.0	169	17.8
	Post-secondary	8	3.3	18	9.2	14	5.8	7	4.1	2	2.0	49	5.1
Main occupation for the respondent	Farming	241	99.1	189	96.9	234	96.7	165	97.6	100	100	929	97.9
	Others	2	0.8	6	3.1	8	3.3	4	2.4	0	0.0	20	2.1
Household Category	Male adult headed	203	83.5	176	89.8	204	84.0	132	77.2	85	85.0	800	83.9
	Female adult headed or managed	40	16.5	20	10.2	39	16.0	39	22.8	15	15.0	153	16.1
<b>Household size</b>													
Total	1-2	5	2.1	1	0.5	4	1.6	6	3.6	1	1.0	17	1.8
	3-4	26	10.7	18	9.2	23	9.5	24	14.3	5	5.0	96	10.1
	5+	212	87.2	177	90.3	216	88.9	138	82.1	94	94.0	837	88.1
	Average	7		8		8		7		8		8	
Male	1-2	59	24.6	45	23.6	43	18.2	50	29.8	14	14.0	211	22.6
	3-4	105	43.8	69	36.1	118	50.0	58	34.5	44	44.0	394	42.1
	5+	76	31.7	77	40.3	75	31.8	60	35.7	42	42.0	330	35.3
	Average	4		4		4		4		4		4	
Female	1-2	72	29.9	56	29.0	59	24.6	54	32.5	23	23.2	264	28.1
	3-4	115	47.7	78	40.4	109	45.4	70	42.2	41	41.4	413	44.0
	5+	54	22.4	59	30.6	72	30.0	42	25.3	35	35.4	262	27.9
	Average	3		4		4		4		4		4	

## **2.2 OLD GROUPS**

### **2.2.1 Production, Marketing and Group Development after RDNUC**

#### **2.2.1.1 Crop Production by Old Groups**

The strategic crops cultivated by the respondents under the RDNUC programme were cassava, Beans, Sesame, Sunflower, Maize, Soybeans, and Rice but in varied proportions. In West-Nile, the predominant crops reported were beans (34.6%) and sesame (42.8%) while in Acholi sub-region 73.0% of the farmers reported sunflower. Results show that Agago had the highest percentage of farmers who cultivated sunflower as their strategic crop (80.2%) followed by Kitgum and Lamwo. Cassava, Rice and Beans were reported in Nebbi and Pakwach although even in these two, the number of households (HHs) that reported planting especially Cassava and Rice were few. Beans were majorly reported in Nebbi.

Under NURI, generally 45.8% of the group members changed the strategic crop they were cultivating under RDNUC. Apart from Agago and Pakwach district, majority of participants in the other districts, acknowledged that their groups changed the strategic crop produced when they joined NURI. For instance, 70% in Kitgum acknowledged changing, with majority (78.3%) taking on production of Sesame which previously/under RDNUC was only produced by 21.4% of Households. About a tenth (11.6%) ventured into production of Soybeans, 8.7% Beans and 0.7% Cassava. In Nebbi, reports of change of strategic crop were made by 71.3% of the participants, with majority (74.6%) joining the growing of Soybeans. Those that changed crops grown in Lamwo, majority (77.5%) started growing Sesame, while the few that changed in Agago and Pakwach ventured mostly into Soybeans and Cassava respectively (See Table 3). Various reasons were given by farmers that changed enterprise/strategic crops grown ranging from expectations of better returns due to reported high yields and market price from crops like Soybeans to adopting the promoted strategic crops.

While comparing levels of production between RDNUC and NURI, majority of participants across the five districts generally reported observing positive changes with the introduction of NURI. Overall, 96% acknowledged seeing positive changes in their production levels. Slight variations were recorded across the five districts; for instance, all participants in Pakwach (100%), Agago (98.8%), Nebbi (98.2%), Kitgum (96.9%) and 89.3% in Lamwo affirmed seeing positive changes. It was only in Lamwo where slightly over a tenth (10.7%) reported seeing no positive change in production from RDNUC through up to NURI. These positive changes are attributed to various factors including but not limited to training of farmers, availability of the market for produce, availability of machinery/animal traction and labor, as well as land fertility, and planning for production among others. Majority of participants i.e., 92% in Pakwach, 91.2% in Agago, 89.3% in Nebbi, 85.7% in Lamwo and 84.7% in Kitgum attributed the positive changes in production to the trainings that have been provided by the Programme to the farmers. Availability of machinery/animal traction featured significantly in Pakwach cited by 78% of participants and 57.5% in Agago but least in Kitgum (37.9%). See Table 3 for a detailed presentation of the results.

Positive changes have also been reported on the quantity of produce put on the market. Results show that overall, 93.7% of all participants acknowledge positive changes in the quantity of produce marketed since RDNUC up to NURI. As was reported with increase in production, nearly all participants from Pakwach (98%), 97.1% in Agago, 95.4% in Kitgum and 94.7% in Nebbi affirmed the positive changes in quantity of produce marketed compared to Lamwo's 86.4%. More than a tenth (13.6%) of participants in

Lamwo reported seeing no positive change in the quantity of produce they put on the market. These farmers in Lamwo district cited low yields (66.7%) and low prices (45.5%) as the main factors for no/negative change in produce marketed. The increase in quantity of produce put on the market was mostly attributed to availability of the market (73.8%) and to some extent participation in group marketing (51.4%), household demands (40.5%). Refer to table 3 below.

Sesame was the most sold crop by farmers in Acholi sub-region while Nebbi and Pakwach districts most farmers sold maize from the 2019 season. Results show that of the 196 farmers surveyed in Kitgum, 164 sold part of the Sesame they harvested estimated to be worth Ugx 786,942/= (mean value). In Lamwo the mean value of Sesame sold was Ugx 1,160,700/= by 184 farmers that participated in the survey. Results further show that although most farmers grew and sold Sesame, it was not the crop that generated the highest revenue. Each district had a different crop that generated the highest revenue, for instance, in Agago, it was rice (the mean value sold was 1,732,800/= by 16 farmers), Irish potatoes in Nebbi and rice in Pakwach. Overall, 564 HHs of the 953 surveyed produced Sesame worth, on average, Ugx 1,190,400/=, consumed a portion worth Ugx 378,101/= and sold Sesame worth, on average, Ugx 847,058/=. See Tables 4 & 5 below for quantities produced per crop, consumed, and marketed.

**Table 3: Trends in Crop Production Across the five Districts from RDNUC to NURI**

		AGAGO		KITGUM		LAMWO		NEBBI		PAKWACH		Total	
		HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)
Strategic Crops that were produced by Old Groups under RDNUC	Cassava	0	0.0	0	0.0	0	0.0	5	3.0	4	4.0	9	0.9
	Beans	0	0.0	0	0.0	0	0.0	93	55.0	0	0.0	93	9.8
	Sesame	19	7.8	42	21.4	67	27.6	39	23.1	76	76.0	243	25.6
	Sun flower	195	80.2	142	72.4	161	66.3	0	0.0	0	0.0	498	52.4
	Maize	23	9.5	12	6.1	10	4.1	1	0.6	0	0.0	46	4.8
	Soybeans	6	2.5	0	0.0	5	2.1	2	1.2	0	0.0	13	1.4
	Rice	0	0.0	0	0.0	0	0.0	29	17.2	20	20.0	49	5.2
Proportion of Old Groups that changed the strategic crop in NURI	Yes	33	13.6	138	70.4	111	45.7	122	71.3	32	32.0	436	45.8
	No	210	86.4	58	29.6	132	54.3	49	28.7	68	68.0	517	54.2
The strategic crops that Old Groups changed to under NURI	Cassava	0	0.0	1	0.7	3	2.7	1	0.8	17	53.1	22	5.0
	Beans	0	0.0	12	8.7	2	1.8	2	1.6	0	0.0	16	3.7
	Sesame	5	15.2	108	78.3	86	77.5	0	0.0	10	31.2	209	47.9
	Sun flower	9	27.3	1	0.7	13	11.7	0	0.0	0	0.0	23	5.3
	Irish potatoes	0	0.0	0	0.0	0	0.0	10	8.2	0	0.0	10	2.3
	Maize	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Soybeans	19	57.6	16	11.6	6	5.4	91	74.6	0	0.0	132	30.3
	Onions	0	0.0	0	0.0	0	0.0	10	8.2	0	0.0	10	2.3
Rice	0	0.0	0	0.0	1	0.9	8	6.6	5	15.6	14	3.2	
Proportion that reported positive changes in production from RDNUC through up to NURI	Yes	240	98.8	190	96.9	217	89.3	168	98.2	100	100.0	915	96.0
	No	3	1.2	6	3.1	26	10.7	3	1.8	0	0.0	38	4.0
<b>Factors that caused the change in production</b>													
Trainings provided		219	91.2	161	84.7	186	85.7	150	89.3	92	92.0	808	88.3
Planning my production		42	17.5	30	15.8	34	15.7	50	29.8	42	42.0	198	21.6
Availability of the market		136	56.7	104	54.7	117	53.9	64	38.1	36	36.0	457	49.9
Availability of labour		100	41.7	89	46.8	106	48.8	28	16.7	10	10.0	333	36.4
Land fertility		85	35.4	60	31.6	60	27.6	13	7.7	6	6.0	224	24.5
Reliable weather		50	20.8	35	18.4	38	17.5	11	6.5	4	4.0	138	15.1
Availability of machinery/animal traction		138	57.5	72	37.9	99	45.6	66	39.3	78	78.0	453	49.5
Availability of cash to hire services		26	10.8	10	5.3	7	3.2	15	8.9	10	10.0	68	7.4
Household investment plans developed		50	20.8	29	15.3	25	11.5	26	15.5	24	24.0	154	16.8



		AGAGO		KITGUM		LAMWO		NEBBI		PAKWACH		Total		
		HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	
Others		3	1.2	5	2.6	4	1.8	12	7.1	0	0.0	24	2.6	
Proportion that reported positive changes in quantity of produce marketed from RDNUC to NURI		Yes	236	97.1	187	95.4	210	86.4	162	94.7	98	98.0	893	93.7
		No	7	2.9	9	4.6	33	13.6	9	5.3	2	2.0	60	6.3
<b>Reported causes of the positive changes in the quantity marketed</b>														
Availability of the market		174	73.7	134	71.7	192	91.4	99	61.1	60	61.2	659	73.8	
Participation in group marketing		121	51.3	97	51.9	121	57.6	60	37.0	60	61.2	459	51.4	
Drive to achieve the household investment plans		85	36.0	81	43.3	54	25.7	45	27.8	40	40.8	305	34.2	
Drive to save in the VSLA		122	51.7	54	28.9	74	35.2	20	12.3	34	34.7	304	34.0	
Household demands		88	37.3	81	43.3	65	31.0	77	47.5	51	52.0	362	40.5	
<b>Reported causes of NO positive changes in the quantity marketed</b>		0	0.0	1	0.5	3	1.4	30	18.5	3	3.1	37	4.1	
Other														
No availability of the market		2	28.6	2	22.2	5	15.2	2	22.2	1	50.0	12	20.0	
Low yields		1	14.3	4	44.4	22	66.7	4	44.4	1	50.0	32	53.3	
Increased household consumption demand		0	0.0	1	11.1	1	3.0	2	22.2	2	100.0	6	10.0	
Low Prices		5	71.4	7	77.8	15	45.5	2	22.2	1	50.0	30	50.0	
Other		2	28.6	1	11.1	6	18.2	1	11.1	0	0.0	10	16.7	

**Table 4: Trends in Crop Production Across age of the respondents and regions from RDNUC to NURI**

		Age of the respondent				Region				Total	
		18-28		29+		Acholi		West Nile			
		HHs	%	HHs	%	HHs	%	HHs	%	HHs	%
Strategic crop produced under RDNUC for the market	Cassava	1	0.9	8	1.0	0	0.0	9	3.3	9	0.9
	Beans	13	11.5	79	9.4	0	0.0	93	34.6	93	9.8
	Sesame	23	20.4	220	26.3	128	18.8	115	42.8	243	25.6
	Sunflower	62	54.9	436	52.1	498	73.0	0	0.0	498	52.4
	Maize	6	5.3	40	4.8	45	6.6	1	0.4	46	4.8
	Soybeans	2	1.8	11	1.3	11	1.6	2	0.7	13	1.4
	Rice	6	5.3	43	5.1	0	0.0	49	18.2	49	5.2
Group changed the strategic group in NURI	Yes	50	44.2	334	40.3	256	37.9	128	47.9	384	40.7
	No	63	55.8	495	59.7	420	62.1	139	52.1	559	59.3

Strategic crop changed to under NURI	Cassava	4	7.3	18	4.7	4	1.4	18	11.7	22	5.0
	Beans	1	1.8	15	3.9	14	5.0	2	1.3	16	3.7
	Sesame	25	45.5	184	48.3	199	70.6	10	6.5	209	47.9
	Sunflower	2	3.6	21	5.5	23	8.2	0	0.0	23	5.3
	Irish	1	1.8	9	2.4	0	0.0	10	6.5	10	2.3
	Maize	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Soybeans	19	34.5	113	29.7	41	14.5	91	59.1	132	30.3
	Onions	1	1.8	9	2.4	0	0.0	10	6.5	10	2.3
	Rice	2	3.6	12	3.1	1	0.4	13	8.4	14	3.2
Saw positive changes in production from RDNUC through up	Yes	110	96.5	804	95.9	647	94.9	268	98.9	915	96.0
	No	4	3.5	34	4.1	35	5.1	3	1.1	38	4.0
<b>Caused the change in production</b>											
Trainings provided		95	86.4	712	88.6	566	87.5	242	90.3	808	88.3
Planning my production		21	19.1	176	21.9	106	16.4	92	34.3	198	21.6
Availability of the market		54	49.1	402	50.0	357	55.2	100	37.3	457	49.9
Availability of labour		38	34.5	295	36.7	295	45.6	38	14.2	333	36.4
Land fertility		33	30.0	191	23.8	205	31.7	19	7.1	224	24.5
Reliable weather		21	19.1	117	14.6	123	19.0	15	5.6	138	15.1
Availability of machinery/animal traction		46	41.8	407	50.6	309	47.8	144	53.7	453	49.5
Availability of cash to hire services		9	8.2	59	7.3	43	6.6	25	9.3	68	7.4
Household investment plans developed		11	10.0	143	17.8	104	16.1	50	18.7	154	16.8
Others		3	2.7	21	2.6	12	1.9	12	4.5	24	2.6
<b>Caused the negative changes in production</b>											
Poor /irrelevant trainings provided		0	0.0	1	2.9	1	2.9	0	0.0	1	2.6
Poor planning of my production		0	0.0	3	8.8	3	8.6	0	0.0	3	7.9
No availability of the market		1	25.0	1	2.9	2	5.7	0	0.0	2	5.3
No availability of timely labour		0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Low land fertility		1	25.0	6	17.6	7	20.0	0	0.0	7	18.4
Unreliable weather		3	75.0	24	70.6	27	77.1	0	0.0	27	71.1
None avail of machinery/animal traction services		0	0.0	2	5.9	1	2.9	1	33.3	2	5.3
Presence of pests and diseases		0	0.0	1	2.9	1	2.9	0	0.0	1	2.6
Others		1	25.0	4	11.8	5	14.3	0	0.0	5	13.2
Saw positive changes in quantity of produce you market since DAR/RALNUC	Yes	109	95.6	783	93.4	633	92.8	260	95.9	893	93.7
	No	5	4.4	55	6.6	49	7.2	11	4.1	60	6.3
<b>Caused the changes in the quantity marketed</b>											
Availability of the market		79	72.5	579	73.9	500	79.0	159	61.2	659	73.8
Participation in group marketing		58	53.2	401	51.2	339	53.6	120	46.2	459	51.4
Drive to achieve the household investment plans		30	27.5	275	35.1	220	34.8	85	32.7	305	34.2
Drive to save in the VSLA		32	29.4	272	34.7	250	39.5	54	20.8	304	34.0
Household demands		37	33.9	324	41.4	234	37.0	128	49.2	362	40.5
Other		7	6.4	30	3.8	4	0.6	33	12.7	37	4.1

Caused the negative changes in the quantity you										
No availability of the market	1	20.0	11	20.0	9	18.4	3	27.3	12	20.0
Low yields	4	80.0	28	50.9	27	55.1	5	45.5	32	53.3
Increased household consumption demand	0	0.0	6	10.9	2	4.1	4	36.4	6	10.0
Low Prices	3	60.0	27	49.1	27	55.1	3	27.3	30	50.0
Other	1	20.0	9	16.4	9	18.4	1	9.1	10	16.7

**Table 5: Mean value of crops produced, consumed, and sold from the 2019 season in Acholi subregion.**

	AGAGO						KITGUM						LAMWO					
	Produced		Consumed		Marketed		Consumed		Marketed		Consumed		Marketed					
	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)		
Sesame	130	982,534	128	335,470	130	648,833	164	1,134,400	159	406,350	164	786,942	184	1,575,000	174	472,374	184	1,160,700
Beans	32	524,313	31	230,419	32	318,094	28	563,400	28	217,539	28	344,700	21	544,000	20	161,900	21	389,810
Maize	115	656,735	113	258,418	115	427,855	80	474,465	78	212,527	80	267,016	40	388,800	38	198,553	40	199,275
Soybeans	70	511,257	31	96,082	70	476,129	20	327,700	5	104,000	20	301,700	6	190,000	2	74,000	6	165,333
Sunflower	185	656,579	39	102,019	185	635,342	29	408,655	13	97,308	29	365,034	51	311,539	13	88,846	51	292,186
Rice	16	2,155,300	14	418,914	16	1,732,800			0	0	0	0	2	1,080,000	2	210,000	2	780,000
Cassava	8	620,329	8	385,025	8	647,163	10	1,143,200	9	145,096	10	463,552	15	553,832	12	285,571	15	423,280
Irish Potatoes			0	0	0	0	5	949,180	5	551,820	5	392,240	4	796,800	4	120,800	4	676,000
Onions	7	1,932,400	7	1,315,300	7	617,143	4	711,000	3	324,000	4	603,000	4	4,948,000	4	213,000	4	4,735,000
Others	146	772,721	124	358,833	146	497,917	112	713,472	92	277,676	112	486,788	114	988,909	90	447,360	113	613,546
Total	242	2,244,100	222	670,671	242	1,671,600	191	1,869,700	188	636,415	191	1,257,700	221	2,171,900	211	662,197	221	1,558,900

**Table 6: Mean value of crops produced, consumed and sold from the 2019 season in Nebbi and Pakwach**

	NEBBI						PAKWACH						Total					
	Produced		Consumed		Marketed		Produced		Consumed		Marketed		Produced		Consumed		Marketed	
	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)	HHs	Mean value (Ugx)
Sesame	9	208,409	9	66,384	9	136,024	77	856,338	74	207,385	77	643,279	564	1,190,400	544	378,101	564	847,058
Beans	66	289,171	65	112,240	59	148,695	8	376,250	7	165,714	8	216,250	155	426,274	151	165,084	148	260,268
Maize	76	281,697	67	100,418	74	192,351	58	419,764	55	159,845	54	297,562	369	473,683	351	196,133	363	299,829
Soybeans	50	321,963	45	94,601	49	229,512	7	786,429	5	267,000	7	589,286	153	425,393	88	104,984	152	366,619
Sunflower	1	27,000	1	12,000	1	15,000	1	90,000	0	0	1	90,000	267	559,264	66	97,133	267	536,070

Rice	28	805,125	25	223,600	28	559,196	21	2,102,800	20	560,720	21	1,658,200	67	1,542,500	61	378,511	67	1,190,500
Cassava	28	1,502,900	25	1,525,000	27	741,376	28	2,864,900	31	1,454,900	31	1,050,600	89	1,651,700	85	1,071,100	91	755,479
Irish Potatoes	12	2,016,400	10	343,400	12	1,419,500			0	0	0	0	21	1,530,000	19	351,384	21	1,033,300
Onions	15	367,780	12	61,167	15	304,080			0	0	0	0	30	1,389,300	26	452,500	30	1,007,800
Others	72	1,773,500	56	281,361	69	1,548,500	35	422,311	21	168,055	34	319,755	479	935,152	383	338,353	474	663,008
Total	130	2,157,900	126	655,001	130	1,535,500	98	2,429,000	97	891,537	98	1,528,700	882	2,152,800	844	683,966	882	1,517,800

### 2.2.1.2 Marketing of Produce among Old Groups

Members of the Old Groups have been selling their produce in one of three ways i.e., bulk and sell, bulk/store and sell, or sell individually. 65.4% of participants reported to have been selling their produce through the "Bulk and Sell" approach while 24.4% sold individually and 10.2% through the "bulk/store and sell" respectively. Pakwach and Kitgum had over 70% of the farmers doing bulk and sell with Pakwach having 72% and Kitgum 70.4%. Farmers who reported to have sold their produce individually rather than collectively alluded it to urgent needs to fund household demands (75.2%), absence of storage/facilities to support bulking (68.7%) and delay in finding markets (43%). (see Table 7 below).

In the survey, farmers indicated varying responses across districts in relation to how groups find a buyer for their produce. The commonly cited ways include making phone calls (53%) AEOs/Marketing Coordinators (43.4%), through friends (39.7%) and the Marketing Committee (37.3%). The approach varied across districts with results showing Agago, Kitgum and Lamwo making calls whereas in Nebbi and Pakwach use AEOs/Marketing Coordinators. Negotiation of the price at which produce is sold depended on kind of method farmers used to sell. Figure 1 below shows that the farmers who sold their produce collectively, negotiation for price was reportedly done mostly by group members, group chairperson, or by a marketing committee. The farmers who sold their produce individually negotiated their selling price.

Various factors were reported to determine the price at which farmer groups sold their produce. Majority of participants (82.9%) across the five districts agreed that the prevailing price in the market greatly influenced the price. Cost of production and the profit margin analysis were also considered in the determination of price at which to sell their produce. However, only 5% relied on the PMP review to determine the price at which they sell their produce.

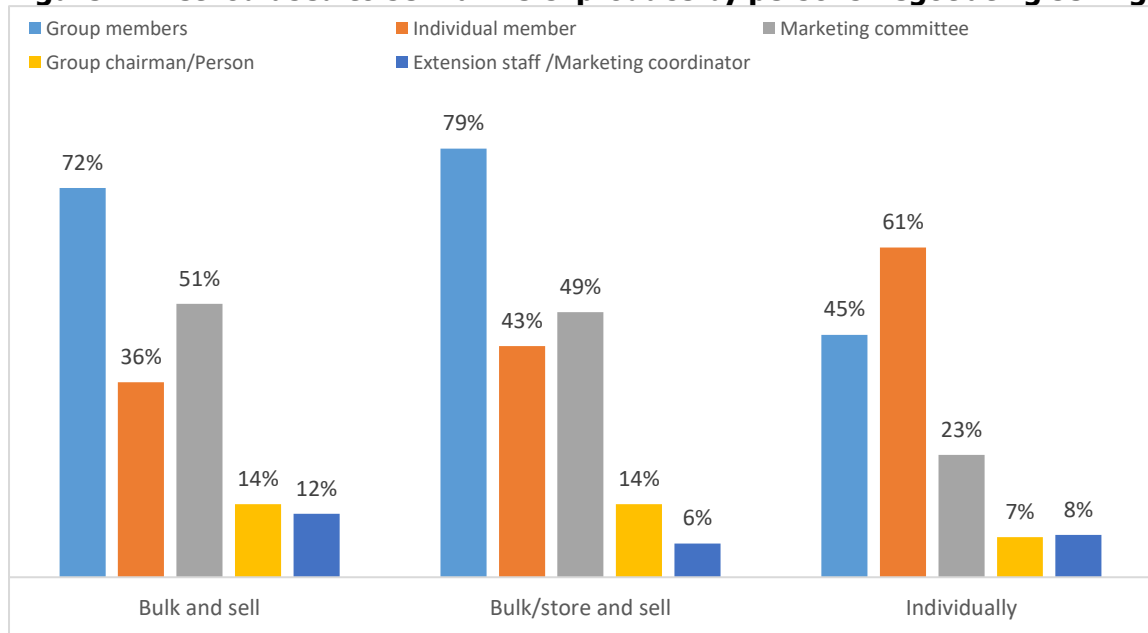
Generally, participation in RDNUC and the NURI programme are credited for the positive changes that farmers' groups have witnessed in the production and marketing of their produce over the years. Over 90% of participants in Agago, Nebbi and Pakwach and nearly equal proportions in Kitgum and Lamwo rated the progress made in production and marketing of produce as "Good" and "Very Good". Very few participants felt that the contribution in production and marketing was not good rating it as either poor (2.1%) or just fair (7.8%). These farmers attributed their rating to the bad weather experienced leading to low production and limited buyers that manipulate the selling prices. In Nebbi and Pakwach, no participant rated the progress as poor, but rather 58.2% and 60.6% rated it as "Very Good" while those who said it was "Good" were 37.1% and 30.3% in Nebbi and Pakwach respectively. See Table 6 for the detailed results.

**Table 7: Marketing of Produce and Determining Selling Prices**

		AGAGO		KITGUM		LAMWO		NEBBI		PAKWACH		Total	
		HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)
<b>Ways members in the Old Groups have been selling their produce</b>	Bulk and sell	168	69.4	138	70.4	143	60.9	95	56.2	72	72.0	616	65.4
	Bulk/store and sell	23	9.5	0	0.0	28	11.9	22	13.0	23	23.0	96	10.2
	Individually	51	21.1	58	29.6	64	27.2	52	30.8	5	5.0	230	24.4
<b>Factors that hindered farmers from selling the same produce collectively</b>													
	Management of the group	0	0.0	2	3.4	0	0.0	1	1.9	0	0.0	3	1.3
	Lack of trust among members	0	0.0	5	8.6	0	0.0	1	1.9	1	20.0	7	3.0
	Delay in finding market	9	17.6	25	43.1	32	50.0	30	57.7	3	60.0	99	43.0
	Lack of storage space	46	90.2	48	82.8	42	65.6	20	38.5	2	40.0	158	68.7
	Need to fund household demands	34	66.7	50	86.2	53	82.8	32	61.5	4	80.0	173	75.2
	Others	4	7.8	1	1.7	7	10.9	15	28.8	1	20.0	28	12.2
<b>Reported ways of finding a buyer for group's produce</b>													
	Make calls	183	75.3	127	64.8	134	55.1	38	22.2	23	23.0	505	53.0
	Survey the market	46	18.9	52	26.5	40	16.5	33	19.3	23	23.0	194	20.4
	Receive price alerts	1	0.4	1	0.5	3	1.2	13	7.6	13	13.0	31	3.3
	Radios	59	24.3	40	20.4	48	19.8	10	5.8	1	1.0	158	16.6
	AEOs/ Marketing Coordinators	105	43.2	78	39.8	131	53.9	64	37.4	36	36.0	414	43.4
	Sub-county notice boards	8	3.3	12	6.1	4	1.6	4	2.3	2	2.0	30	3.1
	Through friends	126	51.9	103	52.6	109	44.9	26	15.2	14	14.0	378	39.7
	Farmer associations	4	1.6	2	1.0	11	4.5	3	1.8	4	4.0	24	2.5
	Company agents	63	25.9	30	15.3	58	23.9	3	1.8	12	12.0	166	17.4
	Marketing committee	100	41.2	81	41.3	57	23.5	70	40.9	47	47.0	355	37.3
	Group leaders	34	14.0	34	17.3	71	29.2	49	28.7	27	27.0	215	22.6
	Others	11	4.5	0	0.0	8	3.3	7	4.1	3	3.0	29	3.0
<b>Negotiates the price for the sale of produce</b>													
	Group members	168	69.1	138	70.4	174	71.6	90	52.6	57	57.0	627	65.8
	Individual member	140	57.6	82	41.8	136	56.0	31	18.1	15	15.0	404	42.4
	Marketing committee	139	57.2	67	34.2	67	27.6	83	48.5	58	58.0	414	43.4
	Group chairman/Person	13	5.3	25	12.8	40	16.5	23	13.5	14	14.0	115	12.1
	Extension staff /Marketing coordinator	20	8.2	16	8.2	48	19.8	6	3.5	7	7.0	97	10.2
	Others	1	0.4	8	4.1	11	4.5	4	2.3	2	2.0	26	2.7
<b>The guide used to determine price of produce at the time of selling</b>													
	Prevailing price in the market	194	79.8	160	81.6	210	86.4	146	85.4	80	80.0	790	82.9

	AGAGO		KITGUM		LAMWO		NEBBI		PAKWACH		Total		
	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	
Profit margin analysis	36	14.8	43	21.9	47	19.3	56	32.7	34	34.0	216	22.7	
PMP review	1	0.4	2	1.0	5	2.1	29	17.0	11	11.0	48	5.0	
Cost of production	58	23.9	43	21.9	46	18.9	60	35.1	51	51.0	258	27.1	
Other	6	2.5	7	3.6	2	0.8	11	6.4	1	1.0	27	2.8	
<b>Rating of progress members of old groups have made towards production and marketing because of participating in DAR/RALNUC and NURI programme</b>	Very good	85	35.6	53	27.2	42	17.5	99	58.2	60	60.6	339	35.9
	Good	139	58.2	120	61.5	158	65.8	63	37.1	30	30.3	510	54.1
	Fair	10	4.2	17	8.7	30	12.5	8	4.7	9	9.1	74	7.8
	Poor	5	2.1	5	2.6	10	4.2	0	0.0	0	0.0	20	2.1

**Figure 1: Method used to sell farmers' produce by persons negotiating selling price.**



## **2.2.2 Group development and other activities after end of RDNUC.**

This section sought to establish whether the old farmers' groups continued being functional after the close of the RDNUC Programme, this ascertained if they continued holding group meetings and whether members participated in group decision-making. Results show that most groups and the members remained active even after closure of RDNUC. When the RDNUC closed, support to most farmers' groups ended not until NURI programme started however, this did not stop farmer groups from holding weekly meetings. Only 9.5% of participants reported belonging to groups that continued to receive support from other organizations with 68.1% receiving from NGOs. Majority of the groups never received any support from organization with Lamwo having 97.1%, 94.4% in Kitgum, 93.8% in Agago, 87% in Pakwach and 73.7% in Nebbi.

Group members' participation in decision-making was reported nearly universal; 98.5% of respondents across the five districts affirmed being involved in the group decision making. All respondents in Agago and Pakwach (100%) said they were involved in their Group's decision making. Equally large proportions in Kitgum (99%), Lamwo (98.4%) and Nebbi (95.3%) also reported being involved in their Groups' decision making. Overall, 16 respondents reported not being involved in decision making; 8 on fund utilization, 7 choice of projects and only 1 on election of leaders. This was recording from the districts of Kitgum, Lamwo and Nebbi.

On gender distribution between positions of leadership, results show a fair distribution; both male and female members of groups held leadership position. The variation was on positions held, for instance, position of Group Chairperson was mostly occupied by men; 68.3% reported that their group chairperson was male. On the other hand, position of Treasurer was nearly a preserve for women; 88.2% of all respondents reported having a female Treasurer. Group Secretaries were mostly men (85.5%), chairpersons–marketing, production were also men while for groups that had position of Vice Chairperson, the bearers were mostly females. With regard to age of the leaders, results show that in nearly all groups, persons elected into leadership positions were 29 years and above, few very people (<5%) reported having Group Chairpersons, Treasurers, Secretaries etc. aged 18-28. See Table 7 below for details.

About membership, although the overall average number of group members (29 members per group) did not change between RDNUC and NURI programme, results show variations across groups during the implementation of both programmes. 41% of the farmers reported that the membership of the groups did not change between the two programmes (RDNUC and NURI). While 19.4% of the farmers highlighted an increase of 28% in their group membership in the transition to NURI programme, 39.5% reported a reduction of 15% of membership in the groups. During RDNUC, groups with 30 members were the most common, reported by 64.3% of the respondents. Other groups had membership categories including <25, 25-29 and 31+ reported by 11.5%, 9.4% and 14.8% of the respondents. However, with the start of NURI, groups were encouraged to have as many members as possible, and farmers complied. Results show that group size under NURI fell into three major categories those with 25-29 members, 30 members and 31+ members, reported by 27.4%, 35.9% and 22.1% of farmers surveyed, respectively. Drop out of members was common in groups under RDNUC and even those currently under NURI reported losing members through dropouts but replacing them with other interested persons (see Table 9).



**Table 8: Group Development and Functionality after the Close of RDNUC**

		AGAGO		KITGUM		LAMWO		NEBBI		PAKWACH		Total	
		HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)
Group members that reported receiving support from other organization after the end of RDNUC	Yes	15	6.2	11	5.6	7	2.9	45	26.3	13	13.0	91	9.5
	No	228	93.8	185	94.4	236	97.1	126	73.7	87	87.0	862	90.5
<b>Reported source of support after the end of RDNUC</b>													
	NGO	10	66.7	8	72.7	6	85.7	29	64.4	9	69.2	62	68.1
	Government	4	26.7	2	18.2	1	14.3	18	40.0	5	38.5	30	33.0
	Community Based Organization (CBO)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Others	4	26.7	2	18.2	2	28.6	8	17.8	0	0.0	16	17.6
<b>Place where Farmers' Groups are registered</b>													
	Sub county	238	97.9	184	93.9	239	98.4	166	97.1	99	99.0	926	97.2
	District	114	46.9	105	53.6	114	46.9	50	29.2	42	42.0	425	44.6
	Ministry of trade, industry and Cooperatives	0	0.0	0	0.0	1	0.4	4	2.3	5	5.0	10	1.0
	Others	0	0.0	1	0.5	0	0.0	3	1.8	0	0.0	4	0.4
<b>Leadership positions reported functional and active by Gender</b>													
Chairperson	Male	117	48.1	149	76.0	158	65.3	128	74.9	98	98.0	650	68.3
	Female	126	51.9	47	24.0	84	34.7	43	25.1	2	2.0	302	31.7
Treasurer	Male	21	8.7	38	19.5	9	3.8	33	19.9	10	10.1	111	11.8
	Female	221	91.3	157	80.5	231	96.2	133	80.1	89	89.9	831	88.2
Secretary	Male	194	79.8	176	90.7	189	79.1	147	90.7	96	96.0	802	85.5
	Female	49	20.2	18	9.3	50	20.9	15	9.3	4	4.0	136	14.5
Marketing chairperson	Male	90	61.2	64	59.3	73	72.3	32	44.4	27	62.8	286	60.7
	Female	57	38.8	44	40.7	28	27.7	40	55.6	16	37.2	185	39.3
Production chairperson	Male	82	66.1	59	72.8	64	80.0	40	66.7	34	85.0	279	72.5
	Female	42	33.9	22	27.2	16	20.0	20	33.3	6	15.0	106	27.5
Vice chairperson	Male	75	34.6	72	41.9	80	38.6	54	41.5	38	47.5	319	39.6
	Female	142	65.4	100	58.1	127	61.4	76	58.5	42	52.5	487	60.4
Others	Male	48	43.6	39	39.8	50	34.5	30	49.2	24	75.0	191	42.8
	Female	62	56.4	59	60.2	95	65.5	31	50.8	8	25.0	255	57.2
<b>Leadership positions reported functional and active by Age</b>													
Chairperson	18-28 years	0	0.0	3	1.5	12	5.0	9	5.4	0	0.0	24	2.5
	29+ years	241	100.0	193	98.5	230	95.0	159	94.6	100	100.0	923	97.5
Treasurer	18-28 years	4	1.7	6	3.1	17	7.1	3	1.8	2	2.0	32	3.4
	29+ years	236	98.3	189	96.9	223	92.9	162	98.2	97	98.0	907	96.6
Secretary	18-28 years	11	4.6	18	9.3	39	16.3	23	14.5	12	12.0	103	11.1

		AGAGO		KITGUM		LAMWO		NEBBI		PAKWACH		Total	
		HHS	(%)	HHS	(%)	HHS	(%)	HHS	(%)	HHS	(%)	HHS	(%)
Marketing chairperson	29+ years	227	95.4	176	90.7	200	83.7	136	85.5	88	88.0	827	88.9
	18-28 years	0	0.0	5	4.6	6	5.6	2	2.8	4	9.3	17	3.6
	29+ years	145	100.0	103	95.4	101	94.4	70	97.2	39	90.7	458	96.4
Production chairperson	18-28 years	0	0.0	1	1.2	3	3.6	4	6.7	1	2.6	9	2.3
	29+ years	123	100.0	82	98.8	81	96.4	56	93.3	38	97.4	380	97.7
Vice chairperson	18-28 years	5	2.3	2	1.2	13	6.3	12	9.2	7	8.8	39	4.9
	29+ years	208	97.7	170	98.8	193	93.7	118	90.8	73	91.2	762	95.1
Others	18-28 years	13	12.1	10	10.2	20	13.9	7	11.7	9	28.1	59	13.4
	29+ years	94	87.9	88	89.8	124	86.1	53	88.3	23	71.9	382	86.6
Reported frequency of holding group meetings	Weekly	194	80.5	148	77.1	203	84.9	128	75.7	87	88.8	760	80.9
	Monthly	46	19.1	37	19.3	33	13.8	35	20.7	11	11.2	162	17.3
	Quarterly	1	0.4	7	3.6	3	1.3	6	3.6	0	0.0	17	1.8
	Bi-annually	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Annually	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Proportion involved in Decision-Making in the Group	Yes	243	100.0	194	99.0	239	98.4	163	95.3	100	100.0	939	98.5
	No	0	0.0	2	1.0	4	1.6	8	4.7	0	0.0	14	1.5
	Sometimes	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Proportion of respondents who reported not being involved in decision making													
Utilization of the funds		0	0.0	2	100.0	4	100.0	2	25.0	0	0.0	8	57.1
Choice of projects to be implemented		0	0.0	1	50.0	1	25.0	5	62.5	0	0.0	7	50.0
Election of leaders		0	0.0	0	0.0	0	0.0	1	12.5	0	0.0	1	7.1
Other		0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

**Table 9: Membership in farmers groups during RDNUC and NURI**

	No. of members	AGAGO		KITGUM		LAMWO		NEBBI		PAKWACH		Total	
		HHS	%	HHS	%	HHS	%	HHS	%	HHS	%	HHS	%
<b>Membership in RDNUC group</b>													
Total Membership	<25	12	5.0	28	14.3	33	13.7	27	16.5	8	8.0	108	11.5
	25-29	20	8.3	27	13.8	26	10.8	12	7.3	4	4.0	89	9.4
	30	173	71.5	125	63.8	120	49.8	106	64.6	82	82.0	606	64.3
	31+	37	15.3	16	8.2	62	25.7	19	11.6	6	6.0	140	14.8

	Mean no. of	30		28		30		30		29		29	
Dropout	<5	64	61.0	47	54.7	107	73.3	79	59.0	48	60.0	345	62.6
	5-9	32	30.5	23	26.7	27	18.5	42	31.3	21	26.2	145	26.3
	10+	9	8.6	16	18.6	12	8.2	13	9.7	11	13.8	61	11.1
Replacement	<5	33	75.0	16	55.2	51	76.1	48	58.5	28	80.0	176	68.5
	5-9	10	22.7	7	24.1	14	20.9	24	29.3	3	8.6	58	22.6
	10+	1	2.3	6	20.7	2	3.0	10	12.2	4	11.4	23	8.9
<b>Membership in NURI group</b>													
Total Membership	<25	16	6.6	30	15.3	40	16.7	26	15.3	26	26.0	138	14.5
	25-29	66	27.2	54	27.6	58	24.2	53	31.2	29	29.0	260	27.4
	30	82	33.7	90	45.9	61	25.4	65	38.2	43	43.0	341	35.9
	31+	79	32.5	22	11.2	81	33.8	26	15.3	2	2.0	210	22.1
	Mean no. of	31		28		29		28		27		29	
Dropout	<5	25	80.6	12	48.0	30	83.3	6	85.7	13	86.7	86	75.4
	5-9	6	19.4	11	44.0	4	11.1	1	14.3	1	6.7	23	20.2
	10+	0	0.0	2	8.0	2	5.6	0	0.0	1	6.7	5	4.4
Replacement	<5	2	100.0	0	0.0	6	60.0	1	100.0	8	100.0	17	77.3
	5-9	0	0.0	0	0.0	2	20.0	0	0.0	0	0.0	2	9.1
	10+	0	0.0	1	100.0	2	20.0	0	0.0	0	0.0	3	13.6

### 2.2.3 Cost-Sharing

Under the NURI programme, the farmer groups supported as old national farmers were required to identify special projects that would address their production needs for support through a 50% cost sharing model. The projects identified were Tarpaulins, Improved seeds, Stores and Mini stores, Apiary, tree seedlings, Grinding mills, oil pressers, cassava chippers. Not all the projects could be assessed as some were yet at take of stage. The projects assessed were therefore stores, improved seeds and tarpaulins. Tarpaulins was by far the most adopted project implemented using the cost sharing model particularly in Pakwach and Nebbi. Results show that 63.4% of respondents in Pakwach and 54.4% in Nebbi affirmed "Tarpaulins" as the project their groups chose to implement using the cost sharing model. Notable proportions of participants in Agago, Kitgum and Lamwo also reported to have chosen Tarpaulins, although equally big proportions reported choosing the "Stores" and "Improved Seeds" projects. In Agago, for instance, respondents who reported that their groups chose Improved Seeds were 37.9%, Tarpaulins (30.9%) and Stores (31.3%). A similar distribution in projects chosen to fund using the cost sharing model was also reported by participants from Lamwo. Groups that chose "Tarpaulins" were driven by the desire to improve the quality of produce while those that implemented the "Stores" project wanted to support collective marketing.

The funds to implement the projects were mostly through cash contributions by group members. When asked how funds were contributed, 75.9% indicated that it was through cash contributions, only 13.2% made in-kind contributions while only 10.9% made both cash and in-kind contributions. Among those who made cash contributions, the amounts contributed varied ranging either between UGx 10,000-50,000/= or UGx 50,000-100,000/=. Across the five districts, slightly over half (55.3%) reported contributing between UGx 50,000-100,000/= with the highest proportion found in Pakwach, Nebbi and Lamwo. Slightly over a third of the respondents (36.7%) that made cash contributions reported contributing between UGx 10,000-50,000/= towards funding of their Group's Project. Those that contributed more than UGx 100,000/= were very few constituting only 8% of all respondents that reported making cash contributions towards funding of the Group's Project.

The money contributed towards funding of the Groups' Projects was mostly raised from the individual members' personal savings. Results show that majority of participants when asked how they got the money they contributed, they mentioned using individual sources. In some groups, members borrowed from the group's VSLA while others used what members paid as membership fees to fund the Group's Project.

The Old Farmers' Groups are engaged in a wide range of other activities besides the cost-shared NURI Project. The other activities reported by members include VSLA, Group Farming, provision of animal traction hire services, collective marketing of produce, construction of stores, value addition and tree planting, with the most dominant being VSLA. VSLA was cited by 89% of the respondents followed by Group Farming (67.4%) and animal traction hire services (53.6%). Provision of animal traction hire services was mostly cited by participants from Agago (72.4%) and Pakwach (79%) compared to those in Kitgum (36.7%), Lamwo (47.3%) and Nebbi (40.4%). In the latter three districts, VSLA and Group Farming were, the dominantly cited activities Farmer Group members are engaged in besides the cost-shared NURI Project.

The long-term goals of the Old Farmers' Groups in reference to the projects selected (i.e., Tarpaulins, Improved Seeds and Stores) include but not limited to "diversifying income sources, becoming

cooperatives, expanding the Groups' access to land and value addition". By far, diversifying the group's income sources was the most cited long-term goal by respondents from all the five districts. See Table 10 for the detailed results.

**Table 10: Projects implemented through the cost-sharing model, sources of funds and groups' long-term goals**

		AGAGO		KITGUM		LAMWO		NEBBI		PAKWAC H		Total	
		HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	H Hs	(%)	HHs	(%)
<b>Projects implemented using the cost sharing model</b>	Stores	76	31.3	75	38.3	75	31.0	76	45.0	25	35.2	327	35.5
	Improved seed	92	37.9	25	12.8	74	30.6	1	0.6	1	1.4	193	21.0
	Tarpaulins	75	30.9	96	49.0	93	38.4	92	54.4	45	63.4	401	43.5
<b>Reasons for the Group's choice of project to undertake under the cost sharing model</b>													
To support collective marketing		97	39.9	107	54.6	116	47.7	73	42.7	40	40.0	433	45.4
To improve on our yields /access improved seeds		100	41.2	55	28.1	76	31.3	30	17.5	11	11.0	272	28.5
To improve on the quality of produce for members		116	47.7	123	62.8	137	56.4	105	61.4	55	55.0	536	56.2
To do value addition		3	1.2	17	8.7	37	15.2	49	28.7	22	22.0	128	13.4
To earn fast and better incomes		64	26.3	47	24.0	62	25.5	30	17.5	9	9.0	212	22.2
Others		11	4.5	19	9.7	28	11.5	19	11.1	23	23.0	100	10.5
Form of contribution towards funding of the project engaged in	Cash	204	85.4	145	76.3	197	81.4	91	56.9	45	66.2	682	75.9
	In kind	18	7.5	16	8.4	9	3.7	64	40.0	12	17.6	119	13.2
	Both	17	7.1	29	15.3	36	14.9	5	3.1	11	16.2	98	10.9
Amount of money contributed by each Group member to fund project	10,000-50,000	104	48.1	47	26.9	115	51.1	10	10.5	7	11.5	283	36.7
	50,000- 100,000	98	45.4	115	65.7	109	48.4	64	67.4	41	67.2	427	55.3
	Above 100,000	14	6.5	13	7.4	1	0.4	21	22.1	13	21.3	62	8.0
Number of members that contributed towards funding this project	All	208	86.3	104	54.7	191	78.9	61	40.9	36	54.5	600	67.6
	Less than 10	1	0.4	14	7.4	6	2.5	8	5.4	0	0.0	29	3.3
	10- 20	7	2.9	35	18.4	14	5.8	38	25.5	6	9.1	100	11.3
	More than 20	19	7.9	32	16.8	30	12.4	42	28.2	24	36.4	147	16.6
	None	6	2.5	5	2.6	1	0.4	0	0.0	0	0.0	12	1.4
<b>Ways money contributed towards funding the group project was obtained</b>													
Borrowed from the VSLA group		97	39.9	41	20.9	81	33.3	20	11.7	14	14.0	253	26.5
Group membership fee		28	11.5	22	11.2	7	2.9	13	7.6	5	5.0	75	7.9
Members contributed individually		185	76.1	153	78.1	194	79.8	99	57.9	29	29.0	660	69.3

	AGAGO		KITGUM		LAMWO		NEBBI		PAKWAC H		Total	
	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	Hs	(%)	HHs	(%)
Others	20	8.2	18	9.2	27	11.1	25	14.6	28	28.0	118	12.4
<b>Activities Group members are engaged in besides the cost-shared NURI project</b>												
Construction of a store	1	0.4	21	10.7	14	5.8	23	13.5	6	6.0	65	6.8
Value addition	0	0.0	0	0.0	1	0.4	11	6.4	11	11.0	23	2.4
Tree planting	0	0.0	0	0.0	1	0.4	1	0.6	6	6.0	8	0.8
VSLA	237	97.5	164	83.7	231	95.1	124	72.5	92	92.0	848	89.0
Collective marketing	85	35.0	59	30.1	79	32.5	66	38.6	50	50.0	339	35.6
Group farming	147	60.5	126	64.3	169	69.5	126	73.7	74	74.0	642	67.4
Animal traction hire	176	72.4	72	36.7	115	47.3	69	40.4	79	79.0	511	53.6
Others	2	0.8	11	5.6	2	0.8	14	8.2	3	3.0	32	3.4
<b>Long term goal for the group in reference to the project selected</b>												
Become a cooperative	53	21.8	40	20.4	52	21.4	51	29.8	20	20.0	216	22.7
Expand group access to land	61	25.1	31	15.8	58	23.9	40	23.4	15	15.0	205	21.5
Do value addition of the enterprise produced by group	30	12.3	32	16.3	67	27.6	44	25.7	12	12.0	185	19.4
Diversify income sources	113	46.5	95	48.5	130	53.5	95	55.6	57	57.0	490	51.4
Others	72	29.6	51	26.0	55	22.6	48	28.1	39	39.0	265	27.8

## **2.3 ANIMAL TRACTION**

### **2.3.1 Use of Animal Traction and Group Management after DAR/RALNUC**

#### **2.3.1.1 Availability and Access to Animal Traction Services**

Use of the ox-plough and hand hoe were found to be the most dominant tool used to open land for production in the five NURI programme districts of Agago, Kitgum, Lamwo, Nebbi and Pakwach. On average over 75% of the land was opened for production during the first and/or second tillage using an ox-plough and hand hoe. Other land opening methods such as tractors was reported about by only 10% of the respondents (see table 11). Access to animal traction services was made possible mostly because of availability of "Group AT from the RDNUC Programme". Members of the Old Groups either used animal traction services owned by the Group under RDNUC, hired them or used their own/family-owned AT. In some of the districts, i.e., Agago, Kitgum and Lamwo, members used all AT sources available; results show that for instance, in Agago, respondents who said they used animal traction services owned by the groups under RDNUC were 80.2%. But equally large proportions (in the same district) used own AT services (74.4%) and also hired AT services (62.3%).

Outside the groups, the most common garden tools used to open land for production include oxen and the hand-hoe. When asked to reveal how most people in their communities plough their land, most members of the Old Groups mentioned oxen (83.9%) and the hand-hoe (81.4%). Both personally owned and hired AT services are reported used depending on the acreage of land to be cultivated. It was reported common to find someone who uses both the personally owned AT and hired AT services to open land for production. This explains why in Agago, for instance, 98.8% of respondents said that people in their communities used personally owned oxen and at the same time 92.2% acknowledged that many people in their communities, use hired AT services to plough their land. See Table 12 below for a detailed presentation of the results on access to AT services.



**Table 11: Access to animal traction services in Agago, Kitgum, Lamwo, Nebbi and Pakwach Districts**

		AGAGO		KITGUM		LAMWO		NEBBI		PAKWACH		Total			
		HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)		
<b>Ways through which animal traction services (oxen) were accessed from community or groups</b>															
Group AT from RALNUC		194	80.2	95	54.6	163	71.5	85	93.4	97	100.0	634	76.2		
Hire cash/kind		142	62.3	120	66.7	156	68.7	7	7.8	3	3.1	428	52.1		
Own AT/Free from family		177	74.4	106	60.9	126	55.8	0	0.0	0	0.0	409	49.6		
<b>Ways/mode used by most members in the community to plough their land</b>															
Using the hand hoe		204	84.0	168	85.7	191	78.6	126	73.7	87	87.0	776	81.4		
Tractors		0	0.0	6	3.1	6	2.5	2	1.2	13	13.0	27	2.8		
Using oxen		241	99.2	187	95.4	234	96.3	64	37.4	74	74.0	800	83.9		
Others		0	0.0	1	0.5	2	0.8	0	0.0	0	0.0	3	0.3		
<b>Ways through which most members in the community access oxen to plough their land</b>															
Personally owned (purchased)		239	98.8	183	94.3	234	97.5	0	0.0	3	3.1	659	76.4		
Hire		212	92.2	174	91.1	214	88.4	57	60.0	72	72.7	729	85.1		
Given by a programme/project		38	17.0	21	12.6	39	17.6	22	24.2	14	14.6	134	16.8		
Others		2	0.9	0	0.0	1	0.5	2	2.2	0	0.0	5	0.6		
Level of ease to hire animal traction services in the community		Very easy		77	34.4	46	24.5	60	25.0	36	58.1	41	54.7	260	33.0
		Moderately easy		65	29.0	50	26.6	99	41.2	22	35.5	31	41.3	267	33.8
		Hard		82	36.6	92	48.9	81	33.8	4	6.5	3	4.0	262	33.2
<b>Mode of payment for animal traction hire services in your community</b>															
Cash		228	93.8	194	99.0	240	98.8	92	53.8	94	94.0	848	89.0		
Credit		72	29.6	31	15.8	74	30.5	52	30.4	57	57.0	286	30.0		
In kind		32	13.2	33	16.8	72	29.6	8	4.7	3	3.0	148	15.5		
Others		0	0.0	1	0.5	1	0.4	1	0.6	0	0.0	3	0.3		
Period taken to make the payment for the credit		After a week		29	40.3	21	63.6	42	59.2	30	62.5	35	62.5	157	56.1
		After a month		14	19.4	10	30.3	24	33.8	13	27.1	13	23.2	74	26.4
		After three months		10	13.9	1	3.0	4	5.6	5	10.4	8	14.3	28	10.0
		After 6 months		19	26.4	1	3.0	0	0.0	0	0.0	0	0.0	20	7.1
		Not at all		0	0.0	0	0.0	1	1.4	0	0.0	0	0.0	1	0.4

### 2.3.1.2 Animal Traction Models in the Community

Majority of the Old Groups have safely kept the oxen and ox-ploughs given to them during the RDNUC Programme. Across the five districts, 78.6% of all respondents affirmed that their Groups still had the oxen and ox-plough that were given by RDNUC by the time of the study. About a quarter (21.4%) reported their groups no longer had the oxen and ox-plough given by RDNUC most of whom were from Kitgum (36.2%) and Nebbi (29.1%). When asked what happened to the oxen and the ox-ploughs, 52.1% said they had died while 33.9% indicated that the members had sold them and shared the money amongst themselves (i.e., the members). Reports of death of the oxen were mostly made by participants from Lamwo (80.4%), Kitgum and Pakwach while sale of the oxen and ox-plough were more from Agago (54.5%) and Lamwo (41.3%) see Table 12.

In Pakwach, 92% still had the oxen and ox-plough. Nearly all groups that still have the oxen and ox-ploughs that were given under RDNUC programme, they use them to offer animal traction services at a fee. Results show that all participants from Pakwach and Nebbi as well as 99.5% from Agago acknowledged that their groups offer animal traction services to other community members at a fee. The amount of money charged to farmers who hire the AT services varies, dependent on whether one is a member of the farmers' group or not. Ploughing a group member's field is charged at Ugx 30,483/= mean average per acre for the first plough while a non-group member is charged Ugx 58,612/= mean average per acre. Groups in Agago charged the least amount for AT services to both group and non-group members compared to other districts due to the prevalence of the services in the communities (see Table 13). Income reported earned from hire of AT services was as high as (Av) Ugx 1,322,800/=, (Av) Ugx 941,070/= in Agago, (Av) 567,170/= in Kitgum and (Av) Ugx 568,330/= in Lamwo.

In terms of knowledge of how much income is earned from the hire of the oxen and ox-ploughs owned by the respective groups, findings indicate that not many group members could tell. With the exception of participants from Pakwach and Nebbi, more than half the respondents from Agago (57.8%), Kitgum (63.4%) and Lamwo (62.9%) reported not knowing the amount of money earned by their group from AT hire services. It is mostly the leadership of the groups that keep track of how much money is generated through hire of AT services. Similarly, knowledge on how the money generated is spent is not universal to all group members. But some of the areas in which the net income earned from AT hire in 2019 has been invested include purchase of additional oxen and additional ox-ploughs. Others have put the money into VSLAs for members of the Group to borrow, built stores, paid for veterinary services and the handlers of the oxen.

RDNUCs support has greatly influenced cultivation practices especially in Agago, Kitgum and Lamwo. Findings of this study reveal that many farmers and groups have personally bought their own oxen and ox-ploughs. Other than RDNUC, 97.5% of all participants from Agago, 98% from Kitgum and 96.7% from Lamwo affirmed that groups and individuals in their communities have bought oxen and ox-ploughs using personal resources. Extremely very few cited "Other organizations, Loans and/or Government Programmes" as the other means besides RDNUC through which groups and individuals acquire oxen and ox-ploughs in the five NURI Programme districts. See Table 13 below for more details of the findings.

**Table 12: Proportion of Old Groups that still have AT given by RDNUC and how it is used.**

		AGAGO		KITGUM		LAMWO		NEBBI		PAKWACH		Total		
		HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	
Group still have the oxen and ox-plough given by RDNUC	Yes	210	86.4	125	63.8	196	81.0	83	70.9	92	92.0	706	78.6	
	No	33	13.6	71	36.2	46	19.0	34	29.1	8	8.0	192	21.4	
Groups that offer AT services at a fee using oxen & ox-plough from RDNUC	Yes	206	99.5	90	70.3	170	87.6	81	100.0	92	100.0	639	91.0	
	No	1	0.5	38	29.7	24	12.4	0	0.0	0	0.0	63	9.0	
% that knew how much the group earned from animal traction hire services	Yes	86	42.2	34	36.6	65	37.1	41	52.6	57	68.7	283	44.7	
	No	118	57.8	59	63.4	110	62.9	37	47.4	26	31.3	350	55.3	
Rates for ploughing the same for all farmer groups hiring AT services	Yes	148	76.3	54	61.4	81	50.3	51	78.5	42	68.9	376	66.1	
	No	46	23.7	34	38.6	80	49.7	14	21.5	19	31.1	193	33.9	
<b>Happened to missing oxen provided by RALNUC to the groups</b>														
		Died	14	42.4	44	62.0	37	80.4	0	0.0	5	62.5	100	52.1
		Sold and divided the money among members	18	54.5	23	32.4	19	41.3	5	14.7	0	0.0	65	33.9
		Leaders took them	0	0.0	0	0.0	1	2.2	0	0.0	0	0.0	1	0.5
		Others	4	12.1	18	25.4	8	17.4	31	91.2	5	62.5	66	34.4
<b>Other than RALNUC, ways that the groups acquired oxen and ox-ploughs in your community</b>														
		Personal purchase	237	97.5	192	98.0	235	96.7	10	5.8	20	20.0	694	72.8
		Other Organizations	14	5.8	0	0.0	5	2.1	14	8.2	4	4.0	37	3.9
		Through loans	1	0.4	5	2.6	11	4.5	0	0.0	0	0.0	17	1.8
		Govt Programs	15	6.2	5	2.6	14	5.8	3	1.8	0	0.0	37	3.9
		Others	3	1.2	1	0.5	2	0.8	25	14.6	18	18.0	49	5.1
<b>Ways that the groups have been accessing this support through organizations and government,</b>														
		Grants	24	9.9	4	2.0	16	6.6	23	13.5	10	10.0	77	8.1
		Cost sharing	0	0.0	0	0.0	0	0.0	1	0.6	0	0.0	1	0.1
		Others	0	0.0	0	0.0	0	0.0	1	0.6	2	2.0	3	0.3

**Table 13: Amount charged by groups with AT for ploughing fields**

		AGAGO		KITGUM		LAMWO		NEBBI		PAKWACH		Total	
		HHs	Mean	HHs	Mean	HHs	Mean	HHs	Mean	HHs	Mean	HHs	Mean
Group member fields	First plough	40	26,250	24	29,250	46	31,804	32	33,281	3	46,667	145	30,483
	Second plough	40	26,250	24	29,250	48	32,771	29	23,172	3	30,000	144	28,382
Non-group member fields	First plough	44	41,364	25	51,120	34	75,706	33	67,727	3	80,000	139	58,612
	Second plough	44	41,364	24	50,125	35	75,257	30	50,733	3	53,333	136	53,963

### **2.3.2. Group Organization and Management Practices**

The supported groups adopted a number of approaches to manage and maintain the oxen and ox-ploughs that were given to them by RDNUC. Some of the ways to manage them include “rotational grazing of the oxen, pooling of funds to pay for maintenance costs, using funds generated from AT hire” among others. Rotational grazing of the oxen was the commonest, cited by 57.8% of all respondents from the five districts followed by pooling of funds to pay for maintenance costs (42.6%) and using funds generated from AT hire (42.1%). Rotational grazing of the oxen was nearly universal in Pakwach, cited by 90% of all respondents. Access to free oxen maintenance services from other partners or Government was nearly non-existent, cited by only 4 people in Lamwo and 2 people in Pakwach and Nebbi respectively.

With regard to quality of management of the oxen and ox-ploughs, majority of the respondents expressed satisfaction with the practices adopted. Over 80% of respondents from Agago, Pakwach and Nebbi rated their level of satisfaction with the management practices as high. Only 6.4% across the five districts expressed dissatisfaction with the management practices for the oxen and ox-ploughs given to groups during the RDNUC Programme.

Veterinary services for the oxen are sourced from various people and actors including Government Extension workers, Para-vets and ordinary community people who double as owners of the oxen. 56.7% of the respondents reported obtaining veterinary services from Para-vets within their communities while 30.5% said they personally administered the treatment to their oxen. Use of Government Extension workers was only very pronounced in Pakwach, cited by 60% of the respondents but in the other districts, only about 20% reported using them. For instance, in Agago, Para-vets were mentioned by 63.4% of respondents, personal administration of treatment by 43.2% while use of Government Extension workers was mentioned by only 19.3%. Similar reports were made by respondents from Kitgum and Lamwo which denotes over reliance on Para-vets and untrained owners of the oxen. See Table 15 for details.

**Table 14: Group organization and management practices for Oxen and Ox-ploughs given during RDNUC**

	AGAGO		KITGUM		LAMWO		NEBBI		PAKWACH		Total		
	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	HHs	(%)	
<b>Different ways groups managed to maintain the oxen and ox-plough given during RDNUC programme</b>													
Contribute towards the costs involved:	142	58.4	77	39.3	155	63.8	12	7.0	20	20.0	406	42.6	
Rotational grazing of the oxen:	127	52.3	89	45.4	158	65.0	87	50.9	90	90.0	551	57.8	
Pay the person grazing the oxen:	34	14.0	19	9.7	39	16.0	16	9.4	8	8.0	116	12.2	
Use the money generated from hire services:	142	58.4	61	31.1	105	43.2	44	25.7	49	49.0	401	42.1	
Get free services from other partners/ Government:	0	0.0	0	0.0	4	1.6	2	1.2	2	2.0	8	0.8	
Others:	9	3.7	10	5.1	15	6.2	8	4.7	10	10.0	52	5.5	
Rating level of satisfaction with the management practices of the ox traction services	High	171	80.3	85	62.0	118	52.0	78	82.1	84	89.4	536	70.0
	Medium	38	17.8	37	27.0	84	37.0	14	14.7	8	8.5	181	23.6
	Low	4	1.9	15	10.9	25	11.0	3	3.2	2	2.1	49	6.4
The group received additional support from other partners or government	Yes	8	3.3	5	2.6	2	0.9	22	21.4	24	24.7	61	7.1
	No	231	96.7	186	97.4	233	99.1	81	78.6	73	75.3	804	92.9
<b>Kind of support received from other partners</b>													
Veterinary services:	8	100.0	3	60.0	2	100.0	4	18.2	13	54.2	30	49.2%	
Additional animals:	8	100.0	0	0.0	1	50.0	19	86.4	10	41.7	38	62.3%	
Training in ox-handling:	4	50.0	3	60.0	1	50.0	5	22.7	1	4.2	14	23.0	
Others:	0	0.0	0	0.0	0	0.0	1	4.5	5	20.8	6	9.8	
<b>Management practices for additional oxen received</b>													
Organization provides for maintenance of the animals:	2	25.0	0	0.0	2	100.0	0	0.0	0	0.0	4	6.6	
Members contribute to the maintenance costs:	7	87.5	0	0.0	1	50.0	13	59.1	6	25.0	27	44.3	
Others:	2	25.0	0	0.0	0	0.0	8	36.4	2	8.3	12	19.7	
<b>Access to veterinary services for farmer's oxen</b>													
Government worker:	47	19.3	36	18.4	41	16.9	42	24.6	60	60.0	226	23.7	
Local person from community/Para-vet:	154	63.4	119	60.7	186	76.5	43	25.1	38	38.0	540	56.7	
Personally, administer treatment:	105	43.2	45	23.0	102	42.0	18	10.5	21	21.0	291	30.5	
Others:	1	0.4	2	1.0	3	1.2	32	18.7	15	15.0	53	5.6	

## **3.0 CONCLUSION AND RECOMMENDATION**

### **3.1 Conclusion**

Implementation of the NURI Old Groups support is generally on track to achieve the set objectives. There is evidence of increased agricultural productivity and increase in quantities of produce marketed. The training of group members conducted by NURI and availability of affordable AT services contributed significantly to the increased production and consequently the quantity marketed. Increase in quantity marketed was also attributed to notable adoption of collective marketing and planting of crops with high demand. The challenge however, was that finding buyers still relied a lot on individual members' connections, hence the dominance of personal phone calls in search for buyers. Performance of marketing coordinators and marketing committees for most groups was still low contributing just about 50% in the search and identification of buyers for the groups' produce. No doubt, results reveal tremendous progress made on increasing the groups' production and marketing potential but more efforts are needed to raise it beyond the current levels.

Results of this study have also showed that promotion of use of AT services right from RDNUC through up to NURI has yielded positive results. AT has taken root, many farmers both members of the Old Groups and general community people use AT to plough their fields. Great opportunities exist in hire of AT services, even farmers that own oxen and ox-ploughs, they also use AT hire services offered by the groups. However, management practices of particularly oxen can be improved to reduce cases of death through provision of early and appropriate care and treatment. Further, management of returns/revenue from provision of AT hire services can be improved; study results show that many members of the various groups, except the leaders, had no knowledge of the amount of money generated from their groups' AT hire services and how it was spent. This has potential of eroding members' confidence.

### **3.2 Recommendations**

Based on the findings and issues emerging, the following suggestions are made:

- Progress made towards increased quantity of produce marketed collectively is notable from the time of DAR/RALNUC through up to NURI but collective marketing is not yet universal among members of the Old Groups. NURI needs to support members of the groups to embrace collective marketing through devising measures to address barriers to collective marketing. Groups could be supported to have an emergency fund where members with urgent needs for money can draw some advances while they wait for their crop to be sold. Absence of storage was the other cited barrier to collective marketing could also be resolved through construction of stores in locations convenient to members of the group.
- NURI should help empower the various groups' marketing coordinators and committees through additional trainings, refreshers, exchange learning visits and introduction to bulk buyers within the region and beyond.
- Concerted efforts should be made to further raise and sustain high and consistent production and hence marketing of produce. This could be attained through encouraging groups to grow a common strategic crop with production quotas for each member based on their capacity.
- Opportunities in AT hire services exist in all communities where the groups have been formed. Members should be encouraged and supported to invest more in acquisition and management of oxen and ox-ploughs.

- NURI should support empowerment of locals working as Para-vets and the owners of oxen to gain more skills to provide better care and treatment for oxen. Groups with AT should be linked to their respective District Veterinary Extension staff to ensure access to skilled and professional care and treatment of their oxen in order to reduce cases of death of oxen.
- Promote increased transparency by group leadership with regard to revenues generated from provision of AT hire services.