Republic of Rwanda

NISR
NATIONAL INSTITUTE OF STATISTICS OF RWANDA

AGRICULTURAL HOUSEHOLD SURVEY

2024

Cover Photo: MINAGRI

The Agricultural Household Survey 2024 (Rwanda AHS 2024) report is available online at: www.statistics.gov.rw

Additional information not available in the Agricultural Household Survey 2024 report may be obtained from the NISR office in the Economic statistics unit.

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ACRONYMS AND ABBREVIATIONS

%:	Percentage
EAs:	Enumeration Areas
AHS:	Agriculture Household Survey
CAPI:	Computer-Assisted Personal Interviewing
CSPro:	Census and Survey Processing System
FAO:	Food and Agriculture Organization
EICV7:	Seventh Integrated Household Living Conditions Survey
GIS:	Geographical Information System
HH:	Household
HHH:	Household Head
Kg:	Kilograms
LSF:	Large Scale Farmers
MINAGRI:	Ministry of Agriculture and Animal Resources
NAEB:	National Agriculture Export Board
NGO:	Non-Government Organization
NISR:	National Institute of Statistics of Rwanda
PPS:	Probability Proportional to Size
RAB:	Rwanda Agriculture Board
RPHC5:	5th Rwanda Population and Housing Census
SACCO:	Savings and Credit Cooperative Organization.
SAS:	Seasonal Agriculture Survey
VUP:	Vision Umurenge Program

FOREWORD

The National Institute of Statistics of Rwanda (NISR) has conducted the Agricultural Household Survey (AHS) to provide timely and accurate estimates on national crop farmer's profile, access and use of land, crop production, agricultural inputs and practices, use of production, fruits production, agricultural tools, livestock numbers and products, extension services and agricultural programs. These data are crucial for monitoring the progress of agricultural policies and programs in Rwanda. The survey is carried out in close collaboration with the Ministry of Agriculture and Animal Resources (MINAGRI)and the Rwanda Agriculture and Animal Resources Development Board (RAB).

This report highlights the significance of the Agricultural Household Survey as a vital tool for monitoring national agricultural programs. By providing crucial data, the AHS enables policymakers and stakeholders to identify priority intervention areas and address critical agricultural challenges effectively.

The National Institute of Statistics of Rwanda (NISR) values the feedback from all data users of this publication, and NISR remains committed to continuously enhancing the variety of our analyses and the presentation of results to better support the effective use of our findings. NISR congratulates all contributors who played a role in this exercise.

NISR expresses its gratitude to the survey coordinators, supervisors, analysts, team leaders, interviewers, drivers, and respondents whose dedication were essential in the successful execution of this survey.

NISR further encourages stakeholders, government agencies, researchers, partners, and the general public to leverage the findings of this report for evidence-based decision-making and to drive the development of Rwanda's agricultural sector.

For MWIZERWA Jean Claude
Deputy Director General

MURENZI Ivan

Director General, NISR

EXECUTIVE SUMMARY

Background

This report presents the results of the Agricultural Household Survey carried out during the main agricultural seasons of 2024. The survey covered 600 enumeration areas (villages), across 30 districts of Rwanda. It presents data on agricultural activities done in the 2023/2024 agricultural year. The sample for the 2024 Agricultural Household Survey (AHS) was a subsample of the Seventh Integrated Household Living Conditions Survey (EICV7).

This survey collected information at the household level on key agricultural indicators related to demographic household characteristics, farm characteristics, livelihood activities, crop information, crop production and productivity, livestock production, inputs use, agricultural practices, extension services, implementation of agricultural programs, the financial aspect of agricultural households, and other agriculture-related indicators.

This report presents results of AHS 2024, highlighting patterns across provinces of Rwanda. In addition, the results are disaggregated by gender (male -headed and female-headed households) to assess gender-related aspects in key social and economic characteristics of agricultural households in Rwanda.

Agricultural households' figures

The AHS 2024 findings estimate number of agricultural households at 2.2 million, representing 65.3% of all households nationwide. This proportion is based on the total number of households reported in the Seventh Integrated Household Living Conditions Survey (EICV7). Results further show that 88.4% of agricultural households practice agriculture as the main livelihood activity, while the rest rely mostly on non- agricultural activities but performed crop/livestock production as supplementary income- generating activity.

Demographic characteristics of agricultural households

The AHS 2024 results reveal that 74.3% of agricultural households are headed by men, while 25.7% are headed by women. Among female-headed households, 62.3% are led by widows. With regard to marital status, 73% of agricultural household heads are married, 17.2% are widowed, 6% are divorced, and the remainder are single.

During 2023/2024 agricultural year, the average household size is 4.4 persons. The total population living in agricultural households was estimated at 9.6 million, of whom 48.3% were males and 51.7% were females.

Farmer's profile

The results indicated that 3.6 million adults were engaged in agricultural activities, including crop cultivation and/or livestock rearing. Youth (16-30 years) participation in agriculture remains low at 30.7% of farmers.

Access and use of land

The 2024 AHS results show that 92.4% of agricultural households own land for cultivation. Although the majority of agricultural households has their own land, 50.6% rent agricultural land. Out of those who rented land, 43% rented agricultural land for the purpose of complementing their own land.

In regard to land use, 99.7% of agricultural households used the land for crop production, while 6.6% used the land for pasture (fodder crop cultivation or grazing). Besides, 30.6% of agricultural households have land used for forest plantation.

Farm structure

The survey results show that 71.8% of agricultural households operate on farm smaller than 0.5 hectares of size, 20.5% cultivate farms ranging from 0.5 to 1 hectare(excl.) of size, 7.6% manage farm ranging from 1 to 5 hectares (excl.) of size, while 0.1% operate on farm with size equivalent to five hectares and above.

Crops grown

In the 2023/2024 agricultural year, legumes and pulses were grown by 91.6% of agricultural households in Season A, 87.2% in Season B, and 22.4% in Season C. Cereals were grown by 82.4% in Season A and 62.5% in Season B. Tubers and roots were grown by 77% in Season A, 80.9% in Season B, and 70.5% in Season C. Bananas were grown by 70.6% in Season A and 73.9% in Season B, while vegetables were grown by 15.5% in Season A, 12.5% in Season B, and 41.7% in Season C.

Use of agricultural inputs

AHS 2024 indicate that 64.6% of agricultural households used improved seeds, 94% employed organic fertilizers, 66.5% utilized inorganic fertilizers while 42.1% used pesticides. Notably, the majority of the agricultural households used inorganic fertilizers sourced from Agro-dealers.

Agricultural practices

The findings show that 90.2% of agricultural households protected their land against erosion and 67% planted agroforestry trees in their plots. Only 14.1% of agricultural households practiced irrigation. Mechanical equipment was used by 0.1% of agricultural households.

Agriculture extension services

According to the results from the 2023/2024 agricultural year, 67.1% of agricultural households received extension services.

In regard to extension services provided, 39.3% of agricultural households received information on agricultural practice, followed by 26.5% who received guidance on fertilizer application. Erosion control measures were learned by 23.6% of agricultural households, financial literacy was obtained by 19.1% and nutrition & food security was received by 17.7 %. In addition, 16.6% of extension receivers gained knowledge of using the Smart Nkunganire System (SNS). Regarding the community membership, 11.8% of households were members of agricultural cooperatives.

Access to finance

Access to savings, credit and funds plays a crucial role in the development of agricultural household, particularly in getting agricultural inputs that boost production. Countrywide, 62.7% of all agricultural households have a bank account.

Furthermore, 72.9% of agricultural households are members of Savings &credits cooperatives credits cooperatives. In 2023/2024, 71.1% of all agricultural households applied for a loan, with 58.1% of those applications directed toward tontines. Regarding agricultural funds and support, among those who received assistance, 5.7% received cash, 69.9% received agricultural materials or tools, and 7.1% were provided with post-harvest equipment

Environmental protection

The most prevalent threat to soil degradation is the decline in soil fertility with 25.7%, followed by soil erosion at 23.0%. Landslide's impact 15.3%, while water logging is experienced by 9.8 %.

Additionally, 34.8% of agricultural households recognize of the environmental risks associated with the excessive or improper use of inorganic fertilizers, while 24.3% are aware of the risks related to the misuse of pesticides.

Livestock

The results show that, 1.6 million agricultural households were reported to raise livestock. In regards to livestock distribution, 65.4% of households reared cattle, 50.2% reared goats, 45.7% reared chickens, 43.5% reared pigs, 15.3% reared rabbits and 13.4% reared sheep.

In terms of total livestock population, including the livestock reared by households and large-scale farmers (individuals, cooperatives/associations, companies, and institutions), the estimated livestock numbers are as follows: 1.6 million cattle, 1.8 million goats, 0.4 million sheep, 1 million pigs, 3.9 million chickens, and 0.8 million rabbits.

Table 1: Summary of AHS 2024 results

No	Agricultural Households Survey (AHS) Indicator	2017	2020	2024
1	Estimated number of agricultural households in millions	2.1	2.3	2.2
2	Percentage of agricultural households headed by females	27.8	28.2	25.7
3	Percentage of agricultural households headed by males	72.2	71.8	74.3
4	Estimated number of farmers in millions	3.8	3.8	3.6
5	Percentage of male farmers	40.2	43.4	42.9
6	Percentage of female farmers	59.8	56.6	57.1
7	Average agricultural household size	4.5	4.5	4.4
8	Average farm size in hectares		0.4	0.4
9	Percentage of agricultural households below 0.5ha		77.2	71.8
10	Percentage of agricultural households who used their own land for cultivation		87.6	92.4
11	Percentage of agricultural households who used rented land for cultivation		49.5	50.6
	Use of inputs			
12	Percentage of agricultural households who used improved seeds	43.8	44.6	64.6
13	Percentage of agricultural households who used organic fertilizer	81	83.7	94.0
14	Percentage of agricultural households who used inorganic fertilizer	36.6	39.1	66.5
15	Percentage of agricultural households who used pesticides	25.3	26.8	42.1
	Agricultural practices			
16	Percentage of agricultural households who practice irrigation	10.1	14.6	14.1
17	Percentage of agricultural households who practice erosion control measures	65.7	83.8	90.2
18	Percentage of agricultural households who planted agroforestry trees in their plots		46.2	67.0
19	Percentage of households who used mechanical equipment used in cultivation		0.1	0.1
	Agriculture policies/programs			
20	Percentage of agricultural households with at least one member belongs to agricultural cooperative or association	12.5	12.5	11.8
21	Percentage of agricultural households with at least one member received an agricultural extension		65	67.1
22	Percentage of agricultural households who had a kitchen garden	44.4	36.3	50.0
	Environmental protection			
23	Percentage of agricultural households that are aware of environmental risks associated with the excessive use or misuse of inorganic fertilizers.			34.8
24	Percentage of agricultural households that are aware of the environmental and health risks associated with the use of pesticides			24.3
	Livestock reared			
25	Percentage of cattle owners out of total households rearing livestock	61	53.4	65.4
26	Percentage of goat owners out of total households rearing livestock	53.6	37.6	50.2
27	Percentage of sheep owners out of total households rearing livestock	18.1	9.9	13.4
28	Percentage of pig owners out of total households rearing livestock	30.6	33.7	43.5
29	Percentage of chicken owners out of total households rearing livestock	33.7	31.3	45.7
30	Percentage of rabbit owners out of total households rearing livestock	15	8.6	15.3
31	Percentage of agricultural households who did bee keeping		2.6	4.8

Source: NISR, AHS 2024

Chapter 1

DEMOGRAPHICS AND LIVELIHOOD STRATEGIES

This section presents thoroughly the findings of the 2024 Agricultural Household Survey. It examines the demographic characteristics of agricultural households, livelihood activities, major crops grown, including vegetables and fruits, as well as their production and use. The survey provides data on livestock numbers, changes in inventory, and livestock products. Additionally, it provides the status on the level of inputs use, agricultural practices, extension services, the implementation level of agricultural programs, and the financial aspect of agricultural households, and other agriculture-related indicators.

1.1. Poverty status among agricultural households

Table 2 shows that 74.1% of agricultural households in Rwanda are non-poor, while 25.9% are classified as poor. This distribution highlights that despite a majority being above the poverty line, a significant share (about one in four) remains impoverished. This underscored the continued need for policy interventions designed to improve livelihoods and resilience in the agricultural sector.

Table 2: Poverty status among agricultural households

	Poor	Non poor	Total
Rwanda	25.9	74.1	100
Urban	27.0	73.1	100
Rural	25.7	74.3	100
Province			
Kigali city	22.2	77.8	100
Southern Province	29.3	70.8	100
Western Province	36.1	63.9	100
Northern province	18.7	81.3	100
Eastern province	20.4	79.6	100
HH head sex			
Male Headed	25.2	74.8	100
Female Headed	28.7	71.3	100
No education	37.2	62.8	100
Primary	25.7	74.3	100
Secondary	10.2	89.8	100
University	0.0	100.0	100
Agricultural land size			
less than 0.5	30.7	69.3	100
Between 0.5 and 1ha	19.0	81.1	100
Between 1 ha and 5ha	9.0	91.0	100
5ha and above	0.0	100.0	100

Source: NISR, AHS 2024

1.2. Agricultural households' livelihood activities

Table 3 indicates that during the 2023/2024 agricultural year, 88.4% of agricultural households were engaged in agriculture as their main livelihood activity, while 11.6% relied on other activities.

Regarding the household head, the survey results reveal that 87.9% of male-headed agricultural households relied on agriculture as their main livelihood activity, compared to 12.1% who were engaged in other livelihood activities. Conversely, 89.5% of female-headed households depended on agriculture as their main livelihood activity, while 10.4% were engaged in other livelihood activities.

Table 3: Percentage of agricultural households, by province and livelihood activity (gender-disaggregated)

Province	Percentage of agricultural households who did		Total estimated number of households (,000)
	agriculture as main livelihood activity	other activities as main livelihood activity	
Rwanda	88.4	11.6	2,164
Kigali	94.9	5.1	37
South	91.1	8.9	590
West	86.1	13.9	454
North	80.2	19.8	400
East	91.9	8.1	682
By HHH sex			
Male-headed HHs	87.97	12.06	1,607
Female-headed HHs	89.5	10.4	556

Source: NISR, AHS 2024

In addition to farming, agricultural households engage in various complementary activities to diversify their livelihoods. During the agricultural year 2023/2024, daily labor was the leading supplementary activity, undertaken by 55.6 % of agricultural households. This was followed by salaried employment with 11.8% and informal trade with 8% of agricultural households. (Further details are provided in Table 4)

Table 4: Percentage of agricultural households practicing other livelihood activities that complement agriculture, by province

Livelihood activity	Province					Rwanda
	Kigali	South	West	North	East	
Daily Labour	36.8	58.1	57.7	61.0	45.8	55.6
Fishing, hunting, gathering	0.0	0.0	1.3	0.0	0.9	0.5
Skilled labour	8.1	2.0	2.3	2.7	2.1	2.5
Purchase and Sale of agricultural products	0.0	4.6	3.3	1.9	0.8	2.5
Purchase and sale of livestock	0.0	0.0	0.0	0.0	2.6	0.6
Informal sale	18.6	7.1	10.2	5.9	8.0	8.0
Handicrafts	0.0	4.5	4.2	1.8	2.3	3.0
Transport	0.0	0.9	11.1	2.3	1.2	3.9
Salaried work	25.1	6.0	7.7	10.1	22.9	11.8
Pension	0.0	1.9	0.0	0.7	0.0	0.6
Own Business/Self employed	11.4	6.2	0.0	5.6	3.6	4.1
VUP Public works	0.0	0.6	0.0	1.5	3.2	1.2
VUP Direct Transfers & other social transfer	0.0	8.2	2.3	5.2	2.1	4.3
Remittances from friends and relatives	0.0	0.0	0.0	1.4	4.7	1.4
Total	100	100	100	100	100	100

Source: NISR, AHS 2024

1.3. Agricultural households' profile

Table 5 shows that a majority of agricultural household heads in Rwanda are married, representing 73%. This category is followed by 17.2% who are widowed, 6% who are divorced, and 3.8% who are single. A gender-disaggregated analysis reveals pronounced disparities: 95.3% of male household heads are married, compared to only 8.4% of their female counterparts. Conversely, 62.3% of female household heads are widowed and 18.6% are divorced, highlighting the disproportionate vulnerability of women to marital dissolution.

Table 5: Table 5: Percentage of agricultural-household heads by marital status and province (gender-disaggregated)

	Marital status				Total
	Single	Married	Widowed	Divorced	
Rwanda	3.8	73.0	17.2	6.0	100
By Province					
Kigali	3.3	64.1	15.1	17.5	100
South	5.7	68.9	18.7	6.7	100
West	2.7	72.0	20.5	4.8	100
North	4.2	73.4	17.4	5.0	100
East	2.8	77.5	13.7	6.1	100
By HHH sex					
Male heads	1.5	95.3	1.6	1.6	100
Female heads	10.7	8.4	62.3	18.6	100

Source: NISR, AHS 2024

Table 6 indicates that Rwanda's agricultural household population is predominantly young, with 65.5% of individuals aged 30 years and below, 40.1% under 16 years and 25.4% between 16–30 years. Adults aged 31 to 64 account for 29.0%, while only 5.6% are 65 years and above. This youthful structure presents a potential future workforce, however, it also reflects a high dependency ratio, placing a burden on the working-age members.

Table 6: Agricultural households' population by age group and province in 2024

	Province (,000)					Rwanda (,000)	
Age group	Kigali	South	West	North	East	Number	Percent
People below 16 years	70	1,005	857	667	1,231	3,830	40.1
People from 16 to 30 years	38	631	502	429	825	2,424	25.4
People from 31 to 64 years	53	768	584	490	881	2,776	29.0
People from 65 years & above	11	154	122	112	133	532	5.6
Rwanda	172	2,558	2,065	1,698	3,070	9,562	100

Source: NISR, AHS 2024

Table 7 presents the educational attainment of Rwanda's agricultural population aged 16 years and above, highlighting a predominance of primary-level education. Nationally, 61.7% of this working-age members have completed primary education, followed by 23.9% with secondary education, 12.5% with no formal education, and only 1.9% with university-level education. Disaggregated by sex, a higher proportion of males have attained primary education (64.8%) compared to their female counterparts (59.0%). In contrast, females slightly outnumber males at the secondary education level (24.5% vs 23.2%). The share of individuals with no formal education is notably higher among females (14.8%) than males (9.8%). Attainment at the university level remains low for both sexes standing at (2.2% for males and 1.6% for females).

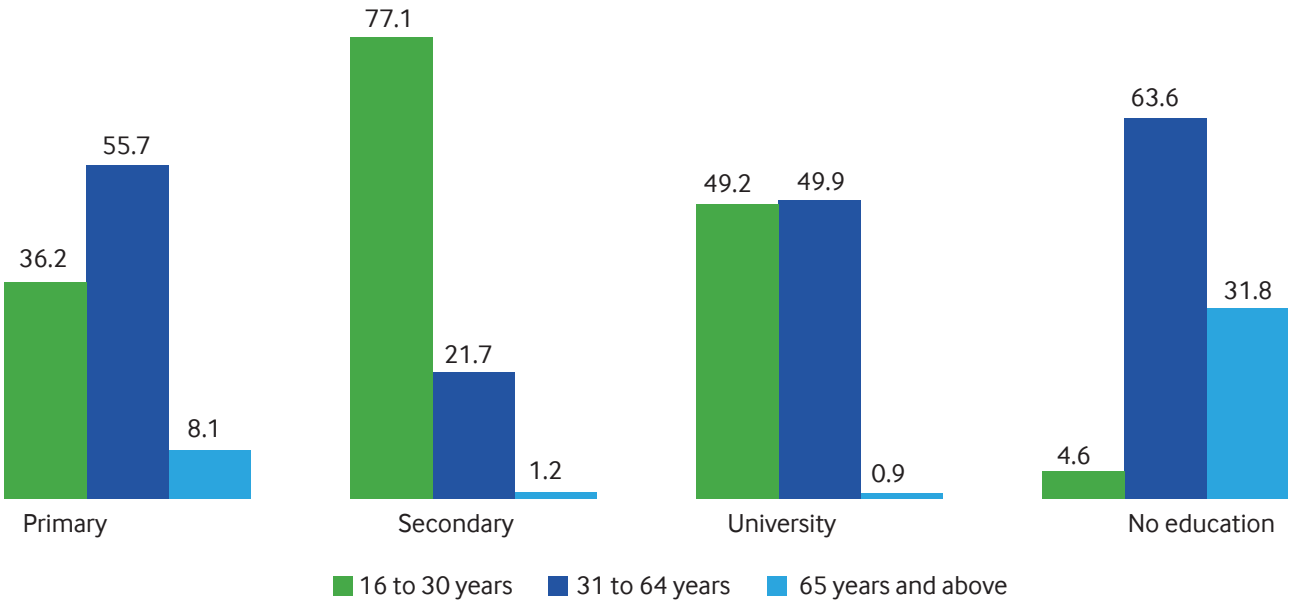
Table 7: Percentage of agricultural households' population aged 16 and above by sex, education level and province

Province		Kigali	South	West	North	East	Rwanda
Male	Primary	74.1	65.4	66.3	64.8	62.8	64.8
	Secondary	21.4	22.1	23.3	22.3	24.5	23.2
	University	0.0	1.8	1.8	3.7	2.2	2.2
	No education	4.5	10.7	8.5	9.2	10.5	9.8
Female	Primary	67.1	60.2	59.1	58.9	57.6	59.0
	Secondary	17.9	24.1	23.3	25.2	25.8	24.5
	University	3.6	1.2	2.3	1.3	1.7	1.6
	No education	11.5	14.6	15.3	14.6	14.9	14.8
Both males and females	Primary	70.5	62.6	62.3	61.7	60.1	61.7
	Secondary	19.6	23.2	23.3	23.9	25.2	23.9
	University	1.9	1.4	2.1	2.4	1.9	1.9
	No education	8.0	12.8	12.3	12.1	12.8	12.5
Number of agricultural households' population aged 16 years and above (,000)		102	1,553	1,208	1,030	1,839	5,732

Source: NISR, AHS 2024

Figure 1 presents the educational attainment of the agricultural household population, disaggregated by age group. Among working-age individuals with primary education, the largest share (55.7%) belongs to the 31-64 age group. Conversely those with a secondary education are predominantly younger, with 77.1% being aged 16-30 years. University-level education is most represented within the 31-64 age group, accounting for 49.9% of individuals. In contrast, the majority of individuals with no formal education (63.6%) are concentrated within the 16-30 age group.

Figure 1: Percentage of agricultural household population by age-group (from 16 years and above) per education attainment level

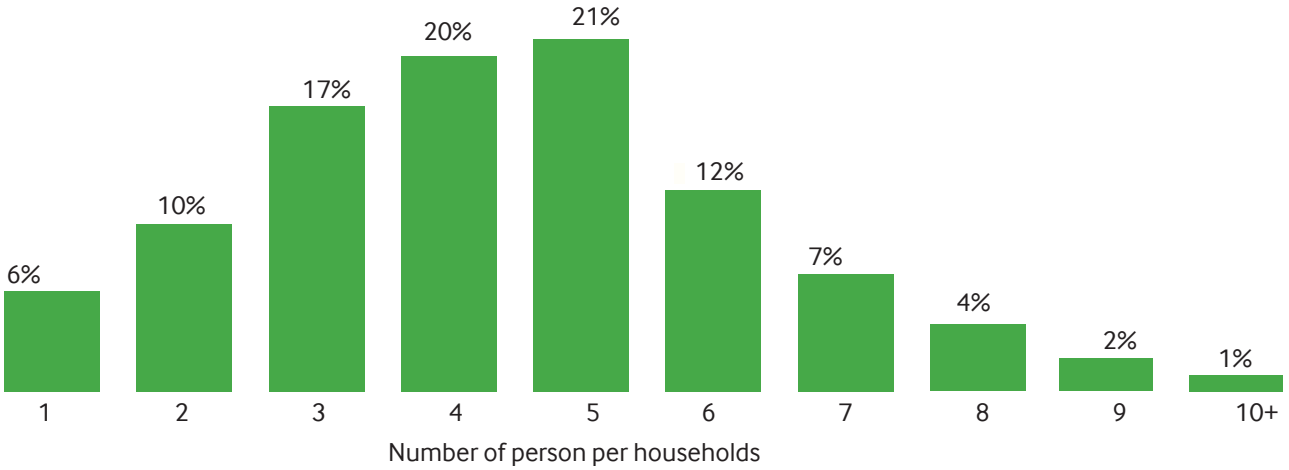


Source: NISR, AHS 2024

Table 8 shows that the average agricultural household in Rwanda comprises 4.4 members. Figure 2 illustrates the distribution of household sizes, revealing that a majority of agricultural households (58%) consist of three to five members. Smaller households of one to two members account for 16% of households, while larger households with six or more members represent 26%. However, households with ten or more members

are uncommon, constituting only (1%). This distribution indicates that most agricultural households are of moderate size, which has implications for labor availability, resource allocation, and household welfare within the agricultural sector.

Figure 2: Distribution of agricultural households' members by size



Source: NISR, AHS 2024

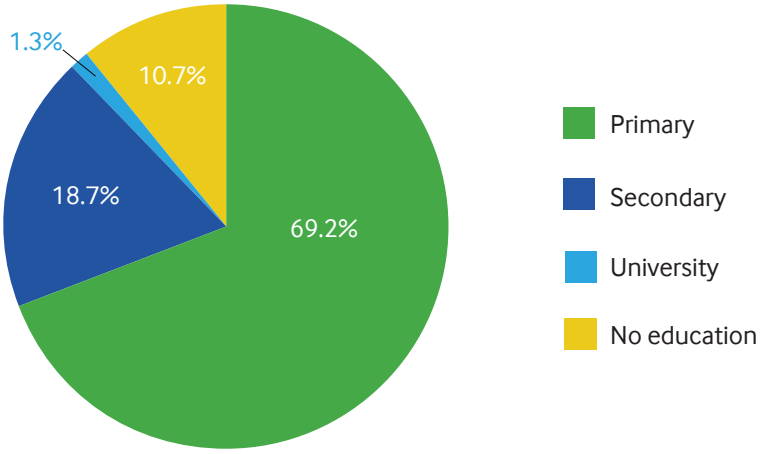
Additionally, Table 8 and Figure 3 provide a comprehensive overview of the demographic and educational profile of agricultural household members in Rwanda. The population is slightly female dominated, with women comprising 51.7% of all household members. Regarding age distribution, 40.1% of members are under 16 years of age, 25.4% are between 16 and 30 years, 29.0% fall within the 31-64 age group, and 5.6% are aged 65 years and above. Concerning educational attainment, a majority of members (69.2%) have completed primary education. This is followed by 18.7% who have attained secondary education, 10.7% with no formal education, and only 1.3% who have achieved university-level education.

Table 8: Demographic characteristics of Agricultural household members

Characteristic	By province					Rwanda
	Kigali	South	West	North	East	
Average agricultural household size	4.6	4.3	4.5	4.2	4.5	4.4
Household heads by sex (%)						
Male-headed households	62.4	72.7	72.2	74.8	77.4	74.3
Female-headed households	37.6	27.3	27.8	25.2	22.7	25.7
Agricultural household members by sex (%)						
Male	48.5	47.4	46.8	48.0	50.2	48.3
Female	51.5	52.6	53.2	52.0	49.8	51.7
Agricultural household members by age group (%)						
Below 16 years	40.8	39.3	41.5	39.3	40.1	40.1
16 to 30 years	22.1	24.7	24.3	25.3	26.9	25.4
31 to 64 years	30.8	30.0	28.3	28.9	28.7	29.0
65 years and above	6.4	6.0	5.9	6.6	4.3	5.6
Agricultural households' members' Education attained (%)						
No education	8.4	11.1	10.6	10.0	11.0	10.7
Primary	73.5	69.8	69.2	69.5	68.4	69.2
Secondary	16.9	18.2	18.7	18.8	19.2	18.7
University	1.3	1.0	1.4	1.7	1.3	1.3

Source: NISR, AHS 2024

Figure 3: Percentage of agricultural households' population by level of education



Source: NISR, AHS 2024

1.4. Farmer's profile

Table 9 outlines the demographic and educational characteristics of farmers in Rwanda. Female farmers constitute a higher proportion of the agricultural workforce at 57.1%, compared to 42.9% for male farmers. In terms of age distribution, the majority of farmers (58.4%) are within the 31-64 age group. This group is followed by those aged 16-30 years (30.7%), and individuals aged 65 years and above (10.9%). This distribution indicates that farming is largely undertaken by the economically active population.

Table 9: Farmers demographic characteristics (in percentage)

	By province					Rwanda
Characteristic	**Kigali**	**South**	**West**	**North**	**East**	
% of farmers out of total agricultural working population	56.0	62.5	64.6	67.0	59.5	62.7
Percentage of farmers by sex						
Male	48.2	41.7	40.0	39.7	47.9	42.9
Female	51.8	58.3	60.0	60.3	52.1	57.1
Percentage of farmers by age group						
16 to 30 years	17.4	27.8	30.8	32.9	32.3	30.7
31 to 64 years	67.4	60.7	57.7	54.0	59.3	58.4
65 years and above	15.2	11.5	11.5	13.1	8.4	10.9
Percentage of farmers by education						
No education	9.9	15.0	13.7	14.5	15.0	14.6
Primary	72.7	68.6	68.4	67.2	67.7	68.1
Secondary	17.4	16.0	16.6	17.4	16.5	16.6
University	0.0	0.5	1.3	0.9	0.7	0.8

Source: NISR, AHS 2024

Table 10 shows that farming in Rwanda is largely carried out by the working-age population (31-64 years), Conversely younger farmers (16-30 years) constitute a more prominent proportion of the workforce in the Northern and Eastern provinces. Nationally, older farmers (65 years and above) represent the smallest share. Slight gender differences are also observed. A higher proportion of farmers in the 31-64 age group are female, whereas males are more prevalent among younger farmers. These figures highlight regional variations in the age and sex distribution of the agricultural workforce.

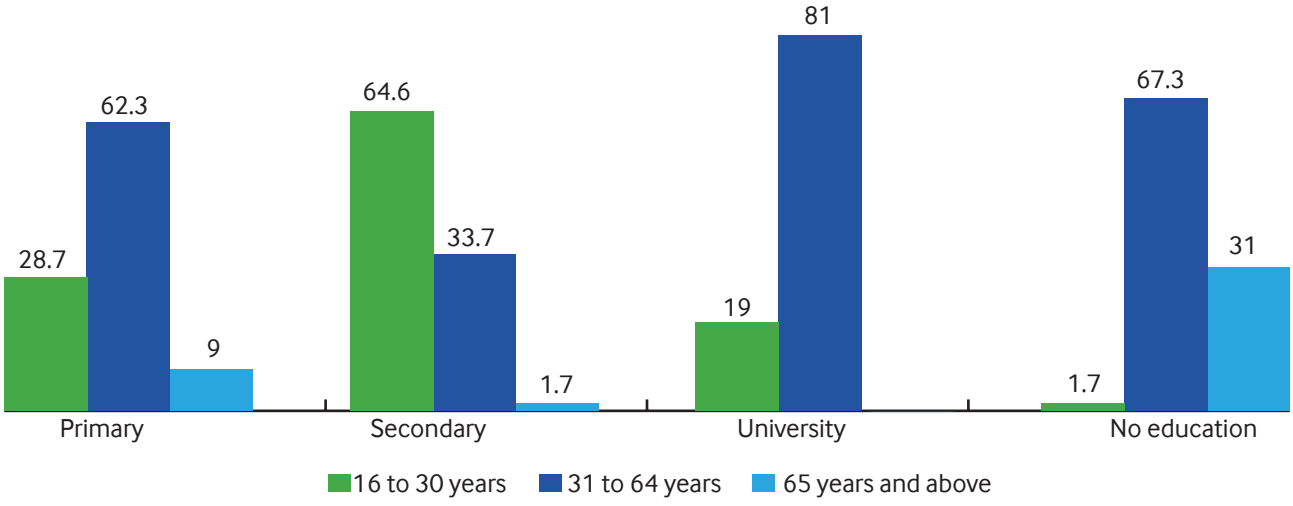
Table 10: Distribution of farmers by sex, age group and province (in percentage)

Province		Kigali	South	West	North	East	Rwanda
Males	16 to 30 years	22.8	28.7	33.3	36.2	35.4	33.2
	31 to 64 years	62.9	59.6	55.3	50.0	56.2	55.9
	65 years and above	14.3	11.7	11.3	13.8	8.4	10.9
	Total	100	100	100	100	100	100
Females	16 to 30 years	12.4	27.1	29.2	30.8	29.5	28.8
	31 to 64 years	71.6	61.5	59.3	56.6	62.2	60.3
	65 years and above	16.1	11.4	11.5	12.6	8.4	10.9
	Total	100	100	100	100	100	100
Both males and females	16 to 30 years	17.4	27.8	30.8	32.9	32.3	30.7
	31 to 64 years	67.4	60.7	57.7	54.0	59.3	58.4
	65 years and above	15.2	11.5	11.5	13.1	8.4	10.9
	Total	100	100	100	100	100	100
Total number of farmers (,000)		57	971	780	690	1,094	3,592

Source: NISR, AHS 2024

Figure 4 illustrates the distribution of educational attainment among farmers, disaggregated by age group. Among working-age farmers with primary education, 62.3% are aged 31-64 years. The majority of those with secondary education (64.6%) fall within the 16-30 age group. Conversely, farmers with university-level education are largely concentrated in the 31-64 age group, representing 81%. Similarly, a significant share of farmers w ith no formal education (67.3%) are also within the 31-64 age group. Further details regarding the educational attainment among farmers are presented in Table 11.

Figure 4: Percentage of farmers by age-group (from 16 years and above) per education attainment level



Source: NISR AHS 2024

Table 11 shows that a majority of farmers (68.1%) have completed primary education. This is followed by 16.6% who have attained secondary education, 14.6% with no formal education, and only 0.8% who have completed university-level education. These figures indicate that while basic education is common among farmers, higher education remains limited, which could constrain the adoption of modern farming practices and overall agricultural productivity.

Table 11: Distribution of farmers by sex, education level and province (in percentage)

Sex	Level of education	Provinces					Rwanda
		Kigali	South	West	North	East	
Males	Primary	70.5	71.0	72.4	72.1	69.6	71.0
	Secondary	24.6	15.0	17.6	14.5	17.4	16.4
	University	-	1.1	1.2	1.6	0.9	1.1
	No education	4.9	12.9	8.9	11.8	12.1	11.5
	Total	100	100	100	100	100	100
Females	Primary	74.9	66.9	65.8	64.0	66.1	65.9
	Secondary	10.7	16.6	15.9	19.3	15.7	16.7
	University	-	-	1.4	0.5	0.5	0.6
	No education	14.5	16.5	17.0	16.3	17.7	16.9
	Total	100	100	100	100	100	100
Both males and females	Primary	72.7	68.6	68.4	67.2	67.7	68.1
	Secondary	17.4	16.0	16.6	17.4	16.5	16.6
	University	-	0.46	1.3	0.9	0.7	0.8
	No education	9.9	15.0	13.7	14.5	15.0	14.6
	Total	100	100	100	100	100	100
Total number of farmers (,000)		57	971	780	690	1094	3,592

Source: NISR, AHS 2024

Chapter

2 AGRICULTURAL LAND ACQUISITION

2.1. Access to agricultural land

Access to agricultural land refers to the right of households to acquire land, whether through ownership or rental arrangements. Agricultural land includes areas under cultivation, fallow land, pasture, and land used for forest cultivation.

As presented in Table 12, 92.4% of agricultural households possess their own agricultural land. However, the findings indicate that 50.6% of agricultural households access land through rental arrangements. Although a large share of agricultural households cultivate their own land, 43% also rent additional land to complement their own land. In terms of gender and land ownership, the results reveal no gap between men and women since the figures are closely equal. However, there is a considerable difference between men and women when it comes to access land through renting.

Table 12: Percentage of agricultural households who accessed agricultural land by land ownership and province.

	Ownership type			Households who accessed agricultural land (,000)
	Own land	Rented land	Complemented own land with rented land	
Rwanda	92.4	50.6	43.0	2,159
By province				
Kigali	88.4	66.7	55.1	37
South	93.3	55.8	49.1	590
West	95.9	46.4	42.3	452
North	96.5	42.5	39.0	400
East	87.0	52.8	39.8	680
By HHH sex				
Male	92.5	53.2	45.8	1,603
Female	92.0	42.9	34.9	556
Wealth Quintile				
Q1	90.2	47.5	37.7	327
Q2	92.1	53.3	45.5	453
Q3	93.0	52.3	45.3	524
Q4	93.2	51.2	44.4	570
Q5	92.7	45.3	38.0	285

Source: NISR, AHS 2024

Table 13 presents the land use patterns among agricultural households in Rwanda. In 2024, nearly all households (99.7%) used their land for cropping, while 6.6% allocated land for fodder cultivation. Forest plantations accounted for 30.6% of household land, while 11% of households left a portion of their land fallow. Male-headed and female-headed households exhibited similar patterns in cropping and fodder cultivation. However, slight disparities were observed, male-headed households reported marginally higher shares of land under forest (31.8% vs 26.9%) and fallow (11.5% vs 9.6%). These results indicate that cropping remains the dominant land use activity. Meanwhile, forest plantations, fodder production, and fallowing constitute smaller, yet important, components of agricultural land management.

Table 13: Percentage of agricultural households by land use type and province

	Agricultural households with at least land used for				Number of agricultural households (,000)
	Cropping	Fodder cultivation	Forest plantation	Fallow land	
Rwanda	99.7	6.6	30.6	11.0	2,164
By Province					
Kigali	100.0	2.8	30.1	6.6	37
South	99.9	10.5	36.6	19.0	590
West	99.3	6.1	38.5	11.4	454
North	99.9	5.9	43.2	10.2	400
East	99.7	4.1	12.6	4.5	682
By HHH sex					
Male-headed	99.6	6.6	31.8	11.5	1,607
Female-headed	99.9	6.6	26.9	9.6	557

Source: NISR, AHS 2024

2.2. Farm size

A household farm, also referred to as a land holding, comprises a collection of all parcels operated by a household, including both owned and rented land. The results indicate that the national average farm size is 0.4 hectare. As presented in Table 15, 71.8% of agricultural households operate on farms smaller than 0.5 hectares, while fewer than 10% of agricultural households manage one hectare and above. Across all provinces, households operate on smaller farm sizes except in the Eastern province, where 15.1% of households operate on farms of one hectare and above.

Table 14: Size of total land cultivated by Household according to province, urban/rural, quintile and sex of household head

Province	Average farm size (in ha)	Farm structure					Number of agricultural HHs with access to agricultural land (,000)
		Less than 0.5 ha	0.5 to 1 ha (exc.)	1 to 5 Ha (exc.)	5 ha and above	Total	
All Rwanda	0.4	71.8	20.5	7.6	0.1	100	2,159
Urban/Rural							
Urban	0.4	75.4	14.8	9.8	0.0	100	244
Rural	0.4	71.4	21.2	7.3	0.1	100	1,914
Province							
Kigali	0.4	67.8	30.3	1.9	0.0	100	37
South	0.4	75.5	18.7	5.7	0.1	100	590
West	0.3	81.8	15.4	2.9	0.0	100	452
North	0.3	82.6	13.9	3.5	0.0	100	400
East	0.6	55.8	28.8	15.1	0.3	100	680
Sex of head of household							
Male	0.5	68.7	22.4	8.8	0.2	100	1,603
Female	0.3	80.9	15.0	4.2	0.0	100	556
Quintile							
Q1	0.3	82.9	14.1	3.0	0.0	100	327
Q2	0.3	78.4	18.2	3.4	0.0	100	453
Q3	0.4	68.4	24.6	7.1	0.0	100	524
Q4	0.4	70.4	21.2	8.4	0.0	100	570
Q5	0.7	57.8	22.6	18.7	0.9	100	285

Source: NISR, AHS 2024

2.3. Right to land

As reported in Table 15, 81.2% of households have access to agricultural land for cultivation. Among these, 70.4 % of farmers reported having the right to sell the land or use it as a guarantee for a loan, while 68.9% hold the right to bequeath it. The findings indicate that rights to access land, as well as decision-making authority over land resources, are nearly equal between male and female farmers.

Table 15: Percentage of farmers with right to land

	Percentage			Number of farmers
	Access to use land	Right to sell/use the land as a guarantee for a loan	Right to bequeath land	(,000)
Rwanda	81.2	70.4	68.9	3,592
By Province				
Kigali	82.9	71.5	67.8	57
South	81.1	71.4	70.8	971
West	79.3	71.0	69.4	780
North	82.3	75.0	73.2	690
East	81.7	66.1	64.3	1,094
By Farmers sex				
Male	79.2	68.8	69.3	1,540
Female	82.7	71.5	68.7	2,052

Source: NISR, AHS 2024

Chapter

3

CROPS AND FARMING PRACTICES

3.1. Crop produced in 2023/2024 agricultural year

This section summarizes the distribution of major crops cultivated during the 2023/2024 agricultural year. Table 16 presents that beans were the most widely grown crop, cultivated by 89.8% of households in Season A, 83.3% in Season B, and 19.3% in Season C. Maize was grown by 80.8% of households in Season A and 42.4% in Season B. Cassava and sweet potatoes were cultivated by 49.6%-52.8% and 45.9%-55.4% of households across seasons, respectively. Bananas were grown by 70.6%-73.9% of households across seasons. Other crops, including sorghum, Irish potatoes, vegetables, taro, soybean, groundnut, pea, wheat, and paddy rice, were cultivated by smaller shares, reflecting the dominance of staple crops in Rwanda's agricultural sector.

Table 16: Percentage of households growing staple crops by crop type and season.

	Seasons		
Crop name	**A**	**B**	**C**
Cereals	82.4	62.5	na
Maize	80.8	42.4	na
Paddy rice	3.7	5.6	na
Sorghum	7.8	29.3	na
Wheat	2.0	3.9	na
Tubers and Roots	77.0	80.9	70.5
Irish potato	15.1	13.8	17.2
Sweet potato	45.9	52.3	55.4
Taro	23.1	21.1	na
Yams	0.5	0.5	na
Cassava	49.6	52.8	na
Legumes and pulses	91.6	87.2	22.4
Bean	89.8	83.3	19.3
Bush bean	58.2	48.9	18.1
Climbing bean	47.1	46.3	1.6
Pea	6.2	6.0	2.8
Soybean	17.8	16.7	2.0
Groundnut	6.1	11.2	na
Banana	70.6	73.9	na
Cooking banana	58.6	63.1	na
Dessert banana	52.4	57.2	na
Banana for beer	50.0	52.0	na
Vegetables	15.5	12.5	41.7
Other crops	26.1	25.6	0.3
Number of Crop growing households (,000)	2,147	2,134	518

Source: NISR, AHS 2024

Among vegetable growers, eggplant was the leading vegetable type cultivated during Seasons A (39.8%) and B (30.6%), followed by tomato and cabbage. In season C, tomato emerged as the top vegetable type produced by 41.8% of agricultural households. This was followed by amaranth, cabbage and eggplant at (20.8%, 19.2% and 16.6%) respectively.

Table 17: Percentage of households producing major vegetables crops by season and vegetable types

	Seasons		
Crop name	**A**	**B**	**C**
Tomato	21.0	24.9	41.8
Cabbage	20.6	20.1	19.2
Onion	6.8	7.7	7.5
Carrot	9.8	11.4	9.4
Eggplant	39.8	30.6	16.6
Sweet pepper	5.1	2.8	3.2
Amaranth	9.1	9.8	20.8
Sugar beet	1.5	0.6	2.7
Garlic	1.9	2.9	1.2
French beans	2.7	2.6	3.6
Pepper	1.9	4.5	2.2

Source: NISR, AHS 2024

As detailed in Table 18, the most important fruits types cultivated by agricultural households, are avocado grown by (79.3%) of households, followed by mango (42.7 %), and papaya (29.3 %). These are followed by guava (23.8 %), tree tomato (17.4 %), lemon (10.7 %), orange (7.5 %), jackfruits (6.1 %), Mandarin (1 %), pineapple (0.7 %) and passion fruits grown by 0.5% of households

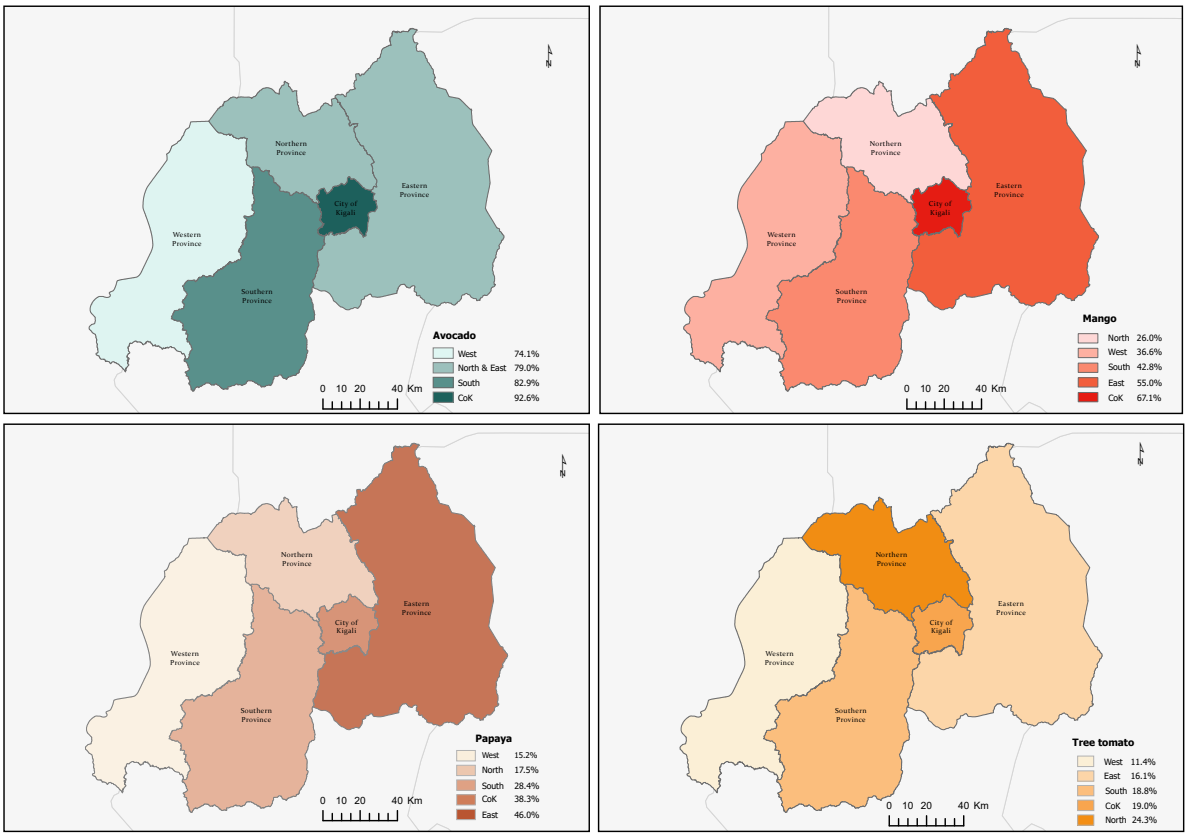
Table 18: Percentage of agricultural households per types of fruits produced by province.

	Provinces					Rwanda
	Kigali	**South**	**West**	**North**	**East**	
Tree tomato	19.0	18.8	11.4	24.3	16.1	17.4
Pineapple	10.3	0.6	0.6	0.3	0.6	0.7
Avocado	92.7	83.0	74.1	79.0	79.0	79.3
Passion fruits	-	0.4	1.0	0.5	0.4	0.5
Mango	67.1	42.8	36.6	26.0	55.0	42.7
Papaya	38.3	28.4	15.2	17.5	46.0	29.3
Orange	11.4	9.7	8.0	5.1	6.4	7.5
Lemon	11.4	11.0	14.7	9.2	8.5	10.7
Guava	15.4	32.6	27.2	29.3	11.2	23.8
Mandarin	5.0	1.6	1.0	0.4	0.7	1.0
Jackfruits	3.5	4.1	1.2	2.8	13.1	6.1
% of Agr.HHs have at least one fruit tree	97.7	90.6	83.2	88.9	90.1	88.7

Source: NISR, AHS 2024

Map 1 highlights provincial disparities in fruit cultivation. Avocado dominates across all provinces, with the highest shares in Kigali (92.7%) and the South (83.0%). Furthermore, mango is widely grown, especially in Kigali (67.1%) and the East (55.0%), while the North has the lowest share (26.0%). Papaya is concentrated in the East (46.0%) and Kigali (38.3%) but remains limited in the West (15.2%). Tree tomato is particularly prominent in the North (24.3%) and Kigali (19.0%), compared to 11.4% in the West.

Map 1: Proportion of Agricultural Households Growing Major Fruits



Source: NISR, AHS 2024

3.2 Use of agricultural inputs

Results presented in Tables 19, 20 & 21 indicate that 64.6% of agricultural households used improved seeds. Regarding type of crops, improved seeds were predominantly used for maize (70.4 %), paddy rice (58.5%, vegetables (37.6 %), wheat (9.9%). and Irish potatoes (3.7 %). Additionally, 94% of agricultural households applied organic fertilizers, 66.5% used inorganic fertilizers, and 42.1% employed pesticides. Among those using inorganic fertilizer, a large percentage of households (49.7%) sourced them from agro-dealers, NGOs (38.4%), market (7.8%), and agriculture cooperative (6.7%).

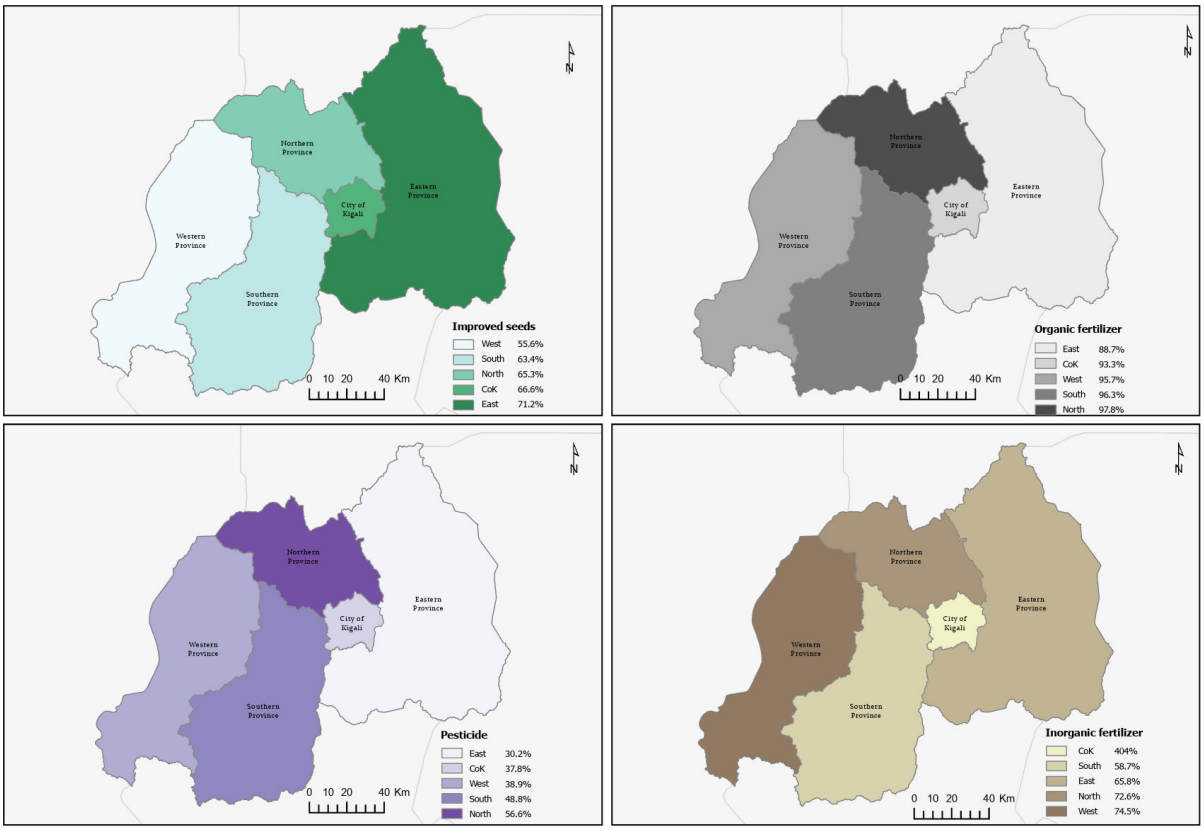
Table 19: Percentage of agricultural households who use inputs by province, rural/urban, and sex of HH head

	Improved seeds	Organic fertilizer	Inorganic fertilizer	Pesticide	Number of hhs producing crops (,000) -All seasons combined
Rwanda	64.6	94.0	66.5	42.1	2,158
Urban	66.2	89.0	65.1	41.5	244
Rural	64.4	94.7	66.7	42.2	1,914
Province					
Kigali	66.6	93.3	40.4	37.8	37
South	63.4	96.3	58.7	48.8	590
West	55.6	95.7	74.5	38.9	452
North	65.3	97.8	72.6	56.6	400
East	71.2	88.7	65.8	30.2	680
By HHH Sex					
Male headed	69.7	94.8	72.0	46.7	1,603
Female-headed	50.1	91.7	50.7	28.9	556
Q1	55.6	92.3	61.0	30.8	327
Q2	62.7	92.6	61.8	41.4	453
Q3	67.2	95.2	66.9	40.4	524
Q4	67.3	95.2	70.7	46.4	570
Q5	68.1	93.7	71.2	50.9	285

Source: NISR, AHS 2024

Map 2 illustrates significant provincial variation in the use of agricultural inputs. The use of improved seeds is highest in the Eastern Province (71.2%) and lowest in the Western Province (55.6%). The application of organic fertilizer is nearly universal, with the Northern Province leading at 97.8%. In contrast, inorganic fertilizers are most widely applied in the Western (74.5%) and Northern (72.6%) provinces, while the lowest usage is reported in Kigali (40.4%). Pesticide application was particularly high in the North (56.6%) and South (48.8%) provinces, compared to a significantly lower rate of only 30.2% in the East. Overall, these results highlight a strong nationwide uptake of organic fertilizers. However, regional disparities persist in the adoption of improved seeds, inorganic fertilizers, and pesticides.

Map 2: Proportion of Agricultural Households Using Agricultural Inputs



Source: NISR, AHS 2024

Table 20: Percentage of crop growing households using Improved seeds by crop and province

			Province			
	Kigali	South	West	North	East	Rwanda
Maize	63.3	73.9	60.6	65.0	75.1	70.4
Paddy rice	100.0	48.7	86.9	-	63.5	58.5
Wheat	-	9.3	17.4	7.0	-	9.9
Beans	0.4	0.7	0.8	-	0.3	0.5
Irish potato	-	7.8	6.1	1.6	-	3.7
Soybean	-	0.2	0.2	-	6.4	1.0
Vegetables	31.4	37.9	33.9	41.9	37.0	37.6
Other crops	-	1.0	0.7	0.9	0.9	0.9

Source: NISR, AHS 2024

Table 21: Percentage of agricultural households who use inorganic fertilizer by province and source of fertilizer

	Source of inorganic fertilizer						No. of HHs who used Inorganic fertilizer (,000)-All seasons
	Government (MINAGRI/RAB/ District)	Agro-dealers	NGOs	Market	Agriculture cooperatives	Others sources	
Rwanda	6.0	49.7	38.4	7.8	6.7	1.5	2,485
By province							
Kigali	-	88.3	-	8.9	2.8	-	25
South	5.9	44.0	41.8	9.5	8.9	1.5	598
West	6.5	51.0	38.6	9.4	2.9	1.7	592
North	7.6	52.7	33.9	9.8	1.6	2.0	522
East	4.8	49.9	40.0	3.8	11.6	1.0	747
by HHH Sex							
Male	5.7	49.5	39.7	7.6	7.0	1.4	2,032
Female	7.4	50.9	32.7	8.9	5.2	1.8	453

Source: NISR, AHS 2024

3.3. Agricultural practices

Table 22 indicates that 90.2% of agricultural households practiced erosion control measures. Table 24 shows that among these measures cover plants/grasses and water channel were the most frequently applied anti-erosion control measures by 85.5 and 23.4% respectively. Furthermore, 67% planted agroforestry trees in their farms while 0.1% of agricultural households used mechanical equipment for erosion control.

In regards to irrigation, 14.1% of agricultural households practiced irrigation. 60.1% of those who practice irrigation use the traditional irrigation technique. The traditional methods are mostly used by rural small farmers and it is done by using small equipment like watering canes, Jerry can/bassin/bucket, and other locally available materials to draw water. Furthermore, water from streams or lakes was the main source of water for irrigation that served 53.8% of agricultural households. (Table 23,24,25 and 26).

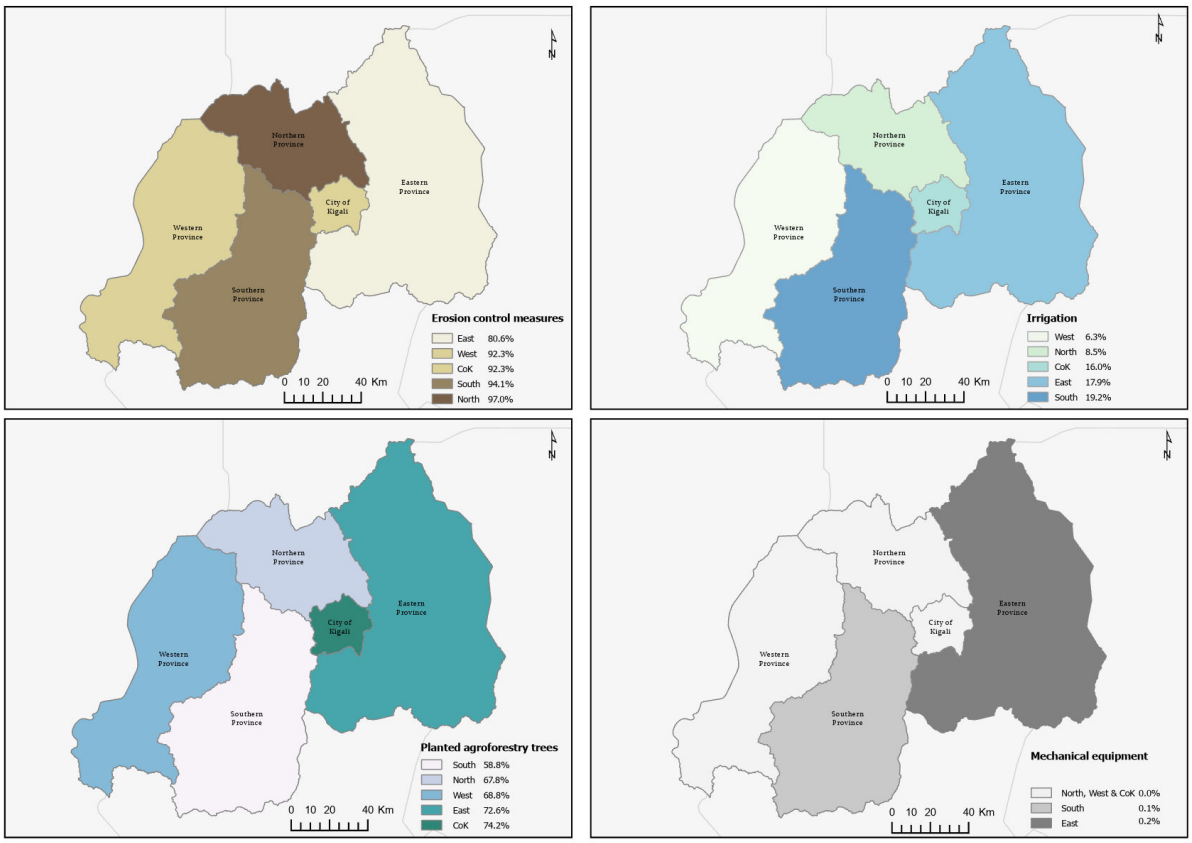
Table 22: Percentage of agricultural households by type of agricultural practice used

	Erosion control measures	Planted agroforestry trees	Irrigation	Mechanical equipment	Number of hhs producing crops (,000) -All seasons combined
Rwanda	90.2	67.0	14.1	0.1	4,800
By province					
Kigali	92.3	74.3	16.0	0.0	83
South	94.1	58.9	19.2	0.1	1,400
West	92.3	68.8	6.4	0.0	990
North	97.0	67.9	8.6	0.0	893
East	80.6	72.7	17.9	0.2	1,434
By HHH sex					
Male	92.5	68.5	16.1	0.1	3,583
Female	86.9	62.5	8.4	0.0	1,217

Source: NISR, AHS 2024

Map 3 illustrates that erosion control is a dominant agricultural practice across all provinces. Adoption rates are highest in the North (97.0% of households) and lowest in the East (80.6%). Agroforestry through tree planting is also widespread, especially in Kigali (74.3%) and the East (72.7%). This practice is less common in the South (58.9%). In contrast irrigation remains limited overall (14.1%). However, it is more prevalent in the South (19.2%) and East (17.9%) provinces compared to only 6.4% in the West. The use of mechanical equipment is negligible nationwide. These findings demonstrate strong adoption of soil and water conservation practices, while highlighting a persistent gap in agricultural mechanization.

Map 3: Proportion of Agricultural Households Using Farming Practices



Source: NISR, AHS 2024

Table 23: Percentage of agricultural households by types of erosion control measures

Types of erosion controls	by province				By HH head sex			
	Kigali	South	West	North	East	Male	Female	Rwanda
Ditches	8.5	21.0	8.8	4.4	11.4	12.9	10.6	12.3
Trees/Windbreak/Shelt	19.5	24.9	19.4	21.9	8.3	19.2	16.7	18.6
Bench (radical) terraces	2.4	7.2	14.6	14.2	5.0	9.9	8.2	9.5
Progressive terraces	11.7	14.7	12.3	39.7	11.1	18.9	16.1	18.2
Cover plants/Grasses	74.9	84.2	87.3	89.0	83.7	85.4	85.9	85.5
Water drainage	3.8	3.5	1.0	0.9	7.9	4.2	1.7	3.6
Mulching	7.5	7.0	12.9	3.8	13.4	10.3	6.4	9.3
Beds/Ridges	1.8	13.1	9.2	20.2	7.2	12.0	11.7	11.9
Water channel	14.6	42.8	17.0	15.0	13.2	24.5	19.9	23.4
Others	2.9	0.1	0.2	0.2	0.6	0.4	0.2	0.3
Number of HHs who practices erosion control (,000)	76	1,318	913	866	1,155	3,267	1,062	4,329

Source: NISR, AHS 2024

Table 24: Percentage of agricultural households who irrigated land by irrigation techniques and province

			Modern irrigation techiques				Number of Households who practiced irrigation (,000)-All seasons
Province	Traditional irrigation[1]	Surface irrigation	Flood irrigation	Drip irrigation	Sprinkler irrigation	Pivot irrigation	
Kigali	83.5	21.1	-	-	-	-	13.3
South	72.5	16.6	14.1	-	-	-	268.6
West	64.8	27.5	5.1	3.4	-	-	63.2
North	75.8	24.0	1.4	-	-	0.3	76.3
East	40.0	15.0	45.1	0.6	0.4	2.4	256.8
Rwanda	60.1	17.9	23.3	0.6	0.1	0.9	678.1

Source: NISR, AHS 2024

Table 25: Source of water used for irrigation (percentage) by province

	Rainwater harvesting	Water treatment plant	Underground water	Lake/stream water	Water from dams	Other sources	Number of Households who practiced irrigation (,000)-All seasons
Kigali	7.3	0.0	53.4	43.3	0.0	0.0	13
South	2.4	1.2	49.2	56.9	1.3	0.5	269
West	1.8	0.0	37.7	59.6	5.5	0.4	63
North	0.0	3.6	39.3	49.4	9.0	1.3	76
East	1.5	1.0	44.1	50.9	6.1	0.4	257
Rwanda	1.8	1.2	45.2	53.8	4.4	0.5	678

Source: NISR, AHS 2024

As presented in Table 26, irrigation is employed on only 5.6% of plots. The primary reason for not irrigating cited by an average of 63.6% of non-irrigated farms, is the perception that it is unnecessary. Lack of water availability is the second major reason, affecting 25.5% of non-irrigated farms, while financial constraints represent the least cited reason at 5.3%.

Table 26: Percentage of irrigated plots and reasons for not irrigated by province

		Not irrigated farms			
Province	Irrigated	Not needed	Cannot Afford	No water available	Total
Kigali	6.0	47.8	10.0	36.3	100
South	7.1	73.5	4.8	14.6	100
West	2.2	71.7	4.1	22.1	100
North	3.0	71.4	4.2	21.4	100
East	8.4	37.4	7.5	46.7	100
Rwanda	5.6	63.6	5.3	25.5	100

Source: NISR, AHS 2024

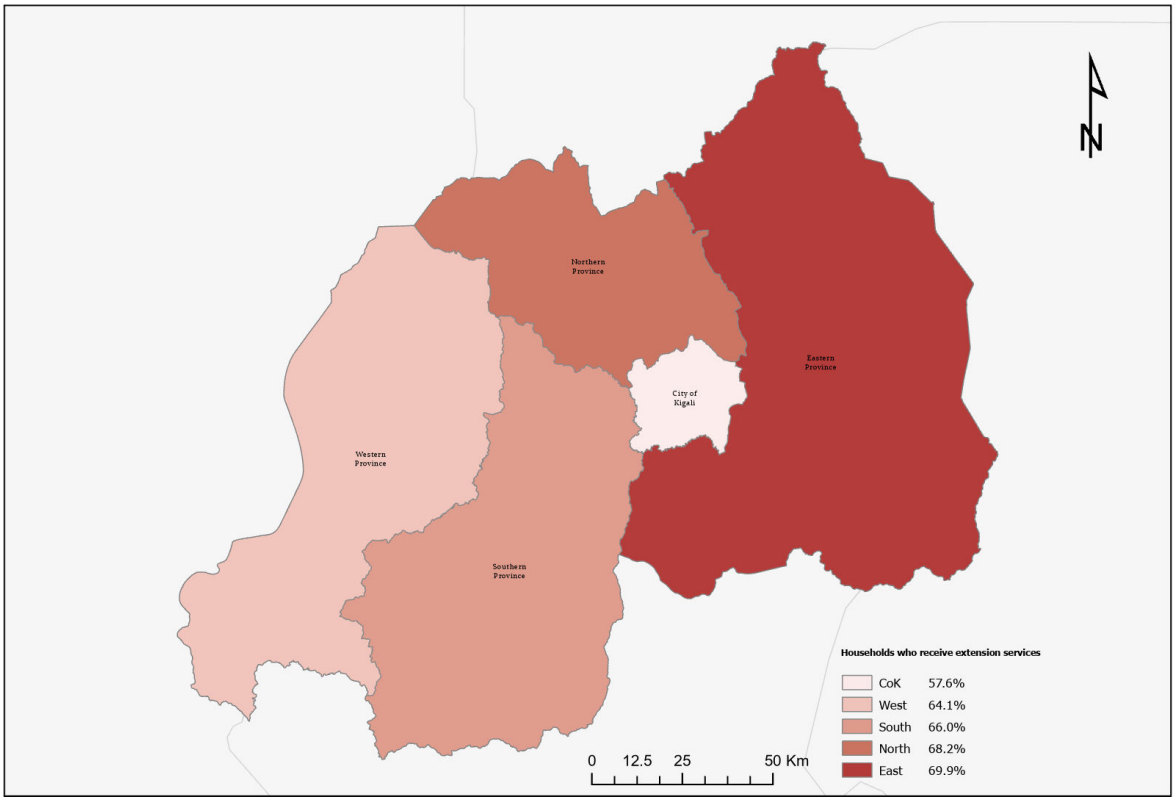
Chapter

4

AGRICULTURE EXTENSION SERVICES

Access to agricultural extension services is a key factor in enhancing farmers' knowledge, skills, thereby facilitating the adoption of improved technologies. Proximity to such services enables households to increase productivity, diversify production, and improve income and overall welfare.

Map 4: Proportion of Agricultural Households who received extension services



Source: NISR, AHS 2024

The results show that nationally, 67.1% of agricultural households had at least one member who received extension services, with notable provincial variations. Access was highest in the Eastern Province (69.9%), followed by the Northern (68.2%), Southern (66.0%), and Western (64.1%). In contrast, Kigali reported the lowest coverage at 57.6%. These findings indicate that while a majority of households in most provinces are reached by these services, Kigali lags considerably behind. This disparity suggest a need for strengthened efforts tailored to urbanized areas. (See details in map4 & Table27)

4.1. Access and Sources of Agricultural Extension Services

Information on agricultural practices was the most received service, reported by 39.3% of agricultural households. This was followed by guidance on fertilizer application obtained by 26.5%, knowledge of erosion control measures by 23.6% of extension receivers, financial literacy obtained by 19.1% and information on nutrition & food security received by 17.7%. In addition, 16.6% of extension receivers gained knowledge in using Smart Nkunganire System (SNS), a supply chain management system designed to digitize the end-to-end value chain of the Agro-Input Subsidy program in Rwanda. Among agricultural households that received extension services, 68.7% were male-headed and 62.4% were female-headed households.

Regarding household members who received extension services, 50.8% of Household members received these services. Male members benefited from extension services more than females with 52% and 49.7% respectively (Table 28).

As shown in Table 29, media and communication channels are the most prevalent source of agricultural technical information, utilized by 22.5% of agricultural households. This is closely followed by government officials representing 22.1%. Community meetings and group work also play a major role, serving as the third most common source at 19.8%. Other notable sources include farmer field schools (7.2%) and NGOs or private companies (6.9 %).

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Table 27: Percentage of agricultural households who received extension services

	% of HHs with at least one member who received extension service by province					Rwanda	% of HHs with at least one member who received extension service by gender of Household head	
	Kigali	South	West	North	East		Male	Female
Households who receive extension services (%)	57.6	66.0	64.1	68.2	69.9	67.1	68.7	62.4
Type of extension services received								
Improved cropping practices (spacing, intercropping, crop rotation, etc)	19.0	40.7	32.1	40.8	43.1	39.3	41.2	33.9
fertilizers application	48.8	31.1	24.0	29.3	21.4	26.5	27.5	23.7
Irrigation system	2.8	12.4	3.7	7.3	15.3	10.4	11.3	7.9
Post-harvest handling and storage	3.8	15.2	4.8	9.2	12.6	10.9	12.0	7.6
Erosion control measures	20.3	31.3	18.2	30.7	16.6	23.6	25.5	18.0
Horticulture skills	11.0	16.6	5.4	12.4	10.4	11.4	12.3	8.8
Animal health and feeding	1.5	12.9	3.6	8.8	10.0	9.1	10.1	6.1
Veterinary services	2.9	11.3	4.2	9.1	15.7	10.6	11.7	7.6
Agribusiness skills	1.5	11.8	2.8	7.5	10.1	8.4	9.5	5.1
Weather and climate information products/services	3.4	13.9	3.7	7.0	8.7	8.6	10.0	4.7
Financially literacy (Credit, Saving.....)	9.7	25.6	11.2	24.6	16.1	19.1	19.9	16.8
Integrated pest management	8.0	16.2	15.9	13.2	10.9	13.8	14.8	10.7
Nutrition and food security	6.2	24.6	8.4	26.5	13.3	17.7	19.0	13.8
Smart Nkunganire program	12.9	22.4	11.2	19.3	13.7	16.6	17.9	12.6
Number of agricultural households (,000)	37	590	454	400	682	2,164	1,607	556

Source: NISR, AHS 2024

Table 28: Percentage of Household members who received extension services

	% of HHs with at least one member who received extension service by province					Rwanda	% of HH members who received extension service by sex		Number of HH members who received extension services (,000)
	Kigali	South	West	North	East		Male	Female	
Members who receive extension services (%)	**36.7**	**58.1**	**35.8**	**55.0**	**50.0**	**50.8**	**52.0**	**49.7**	**7720**
Type of extension services received									
Improved cropping practices (spacing, intercropping, crop rotation, etc)	10.8	12.5	20.2	15.0	16.1	15.0	54.6	45.4	1,161
fertilizers application	28.1	10.4	15.5	11.5	9.4	11.2	48.6	51.4	861
Irrigation system	2.5	4.3	2.6	3.2	8.0	5.0	47.6	52.4	385
Post-harvest handling and storage	2.3	5.3	3.4	3.7	6.2	5.0	48.6	51.4	387
Erosion control measures	15.3	11.4	13.1	12.5	7.8	10.7	48.4	51.7	828
Horticulture skills	8.1	6.1	3.5	5.3	5.1	5.3	46.4	53.6	410
Animal health and feeding	1.3	4.8	2.5	3.7	4.9	4.3	53.1	46.9	329
Veterinary services	2.6	4.2	3.2	3.9	6.3	4.7	52.9	47.1	361
Agribusiness skills	1.3	4.2	2.0	3.1	4.8	3.9	50.8	49.3	298
Weather and climate information products/services	2.1	5.6	3.1	3.1	4.6	4.4	49.6	50.4	341
Financially literacy (Credit, Saving.....)	7.4	9.3	8.8	10.7	8.4	9.2	46.1	53.9	713
Integrated pest management	5.6	5.9	8.7	5.3	5.3	5.9	52.0	48.1	456
Nutrition and food security	4.5	8.9	5.7	11.2	6.7	8.2	44.2	55.8	634
Smart Nkunganire program	8.1	7.0	7.8	7.9	6.6	7.2	49.7	50.3	554

Source: NISR, AHS 2024

Table 29: Percentage of agricultural households by type and source of extension services

Extension service	Source of extension														
	Government officials (District, Sector, Cell, village	Government extension workers (MINAGRI, NAEB, RAB	NGO/ Company	Farmer Field School facilitator	Farmer / Livestock promoters	Media communication with agriculture technical information	Telephone (Message)	Meeting/ Community work	Friend or family	School	Suppliers (agro-dealer, veterinarian)	Cooperative	Community health workers	Total	Number of Agricultural HH who received extension services
Improved cropping practices (spacing, intercropping, crop rotation, etc)	24.9	3.2	11.4	7.8	12.3	14.0	0.1	21.1	1.9	1.7	1.6	0.1	0.0	100	1,526
fertilizers application	19.3	2.8	9.1	7.0	15.3	19.3	0.2	19.4	2.9	2.4	2.1	0.1	0.0	100	1,102
Irrigation system	15.7	4.0	4.8	8.3	10.3	25.6	0.7	26.3	3.1	0.3	0.9	0.1	0.0	100	371
Post-harvest handling and storage	19.0	3.3	12.5	6.1	12.4	25.8	0.2	15.1	3.4	0.7	1.3	0.3	0.0	100	473
Erosion control measures	25.3	1.9	3.5	7.4	11.6	21.0	0.4	25.5	2.4	0.1	0.9	0.0	0.0	100	1,051
Horticulture skills	21.8	2.1	4.9	8.6	12.8	22.1	0.1	17.8	4.4	0.5	0.8	0.2	4.0	100	490
Animal health and feeding	22.5	3.2	3.2	5.9	11.9	29.3	0.5	16.0	6.7	0.2	0.6	0.0	0.0	100	348
Veterinary services	40.2	4.1	2.3	4.5	9.0	21.3	0.0	12.1	4.2	0.5	1.7	0.0	0.0	100	388
Agribusiness skills	22.7	4.5	5.7	5.2	12.5	28.5	0.2	15.9	3.2	0.2	1.3	0.2	0.0	100	327
Weather and climate information products/ services	11.3	3.4	2.1	2.5	4.8	52.4	0.9	16.1	5.3	0.7	0.7	0.0	0.0	100	303
Financially literacy (Credit, Saving.....)	24.1	1.7	4.3	5.8	4.7	23.6	0.4	27.7	6.0	0.2	0.8	0.7	0.0	100	841
Integrated pest management	14.8	3.0	4.5	10.7	12.8	30.7	0.0	17.4	4.2	0.1	1.7	0.2	0.0	100	585
Nutrition and food security	25.5	0.8	3.0	9.5	8.5	21.8	0.0	20.6	4.1	0.5	0.2	0.1	5.4	100	803
Smart Nkunganire program	14.3	2.5	14.9	5.7	12.2	18.7	0.4	11.2	1.7	0.0	18.3	0.2	0.1	100	659
Overall	22.1	2.7	6.9	7.2	11.1	22.5	0.2	19.8	3.5	0.8	2.4	0.2	0.7	100	9,267

Source: NISR, AHS 2024

4.2. Agricultural Households' Participation in Community Groups and Home Kitchen Gardens

In Rwanda, agricultural cooperatives are widely considered as a vital foundation for enabling smallholder farmers to overcome constraints that hinder them from taking advantages of their business. Participation in a cooperative or similar community group creates a platform for knowledge sharing among farmers, economically empowers smallholder by enhancing their collective bargaining power, thus reduce risks of market failure.

The findings show that 11.8% of agricultural households belong to an agricultural cooperative. Separately, 50% of agricultural households maintain a kitchen garden at their home.

Table 30: Percentage of agricultural households belonging to Agricultural cooperatives/ having a kitchen at home by province

	Agricultural households belonging to Agricultural cooperatives/Association	Agricultural HHs who have kitchen garden at their home	Total number of agricultural households (,000)
Rwanda	11.8	50.0	2,164
By Province			
Kigali	4.7	57.5	37
South	14.7	50.7	590
West	7.8	56.2	454
North	9.6	49.8	400
East	13.6	44.9	682
By HHH sex			
Male	3.8	52.3	1,608
Female	4.8	43.3	556

Source: NISR, AHS 2024

Crop producers' cooperatives accounted for the largest share of agricultural household membership at (87.1), while livestock cooperatives accounted for only 10.3%.

Table 31: Percentage of agricultural households by type of cooperatives

	Agricultural cooperative type					HHs with at least one member belonging to agriculture cooperative
	Crop producers	Livestock producers'	Water users'	Apiculture	Fishery	(,000)
Rwanda	87.1	10.3	0.6	1.2	0.8	261
Province						
Kigali	100.0	0.0	0.0	0.0	0.0	2
South	93.7	5.4	0.4	0.0	0.5	88
West	80.9	15.7	0.0	3.4	0.0	36
North	76.8	22.0	0.0	0.0	1.2	40
East	87.5	8.1	1.2	2.0	1.2	95
HHH sex						
Male	86.3	10.5	0.7	1.5	1.0	212
Female	90.5	9.5	0.0	0.0	0.0	49

Source: NISR, AHS 2024

Chapter 5

FINANCIAL SERVICES AND AGRICULTURAL SUPPORT

Nationally, 62.7% of agricultural households own a bank account. The majority of agricultural households (72.9%) have a bank account in savings & credits cooperatives, followed by commercial banks and microfinance with 18.2% and 9% respectively. Conversely, 46.3% of farmers have a bank account with more male farmers owning a bank account than female farmers (52.6% versus 41.3 %).

Table 32: Percentage of agricultural households/farmers having bank account by province

	Agricultural HHs with at least one member having a bank account		Farmers having a bank account	
	Percentage	Number (,000)	Percentage	Number (,000)
Rwanda	62.7	2,164	46.3	2,830
Province				
Kigali	56.9	37	46.0	49
South	63.3	590	50.2	748
West	65.1	454	45.8	615
North	67.5	400	48.3	548
East	58.1	682	42.2	871
Sex of HH/Farmer				
Male	64.9	1,607	52.6	1,259
Female	56.5	556	41.3	1,570

Source: NISR, AHS 2024

Table 33: Percentage of agricultural households by type of financial institutions in which they have a bank account and by province.

Province	Commercial banks	Savings &credits cooperatives	Microfinance	Total
Kigali	27.2	71.4	1.3	100
South	16.0	73.6	10.4	100
West	16.3	73.0	10.6	100
North	16.8	76.8	6.5	100
East	22.4	69.2	8.4	100
Rwanda	18.2	72.9	9.0	100

Source: NISR, AHS 2024

5.1. Access to loan

Table 34 shows that 71.1% of all agricultural households and 43% of individual farmers requested a loan. The share of female farmers who requested a loan is almost the same as that of male farmers (42.5% versus 43.8%).

Table 34: Percentage of agricultural households/farmers who requested loan by province

	Agricultural HHs with at least one member who requested for a loan		Farmers who requested a loan	
	Percentage	Number (,000)	Percentage	Number (,000)
Rwanda	71.1	2,164	43.0	3,592
Province				
Kigali	68.0	37	33.9	57
South	70.0	590	44.5	971
West	80.3	454	46.6	780
North	66.0	400	35.9	690
East	69.1	682	44.1	1,094
Sex of HH/Farmer				
Male	73.1	1,607	43.8	1,542
Female	65.4	557	42.5	2,050

Source: NISR, AHS 2024

Table 35 indicates that tontines were the most common source for loan inquiries among agricultural households at 58.1%. The following common sources of loan were relatives or friends (25.1%), commercial banks (6.4%), savings & credit cooperatives (6.0%), and VUP financial services (2.8%).

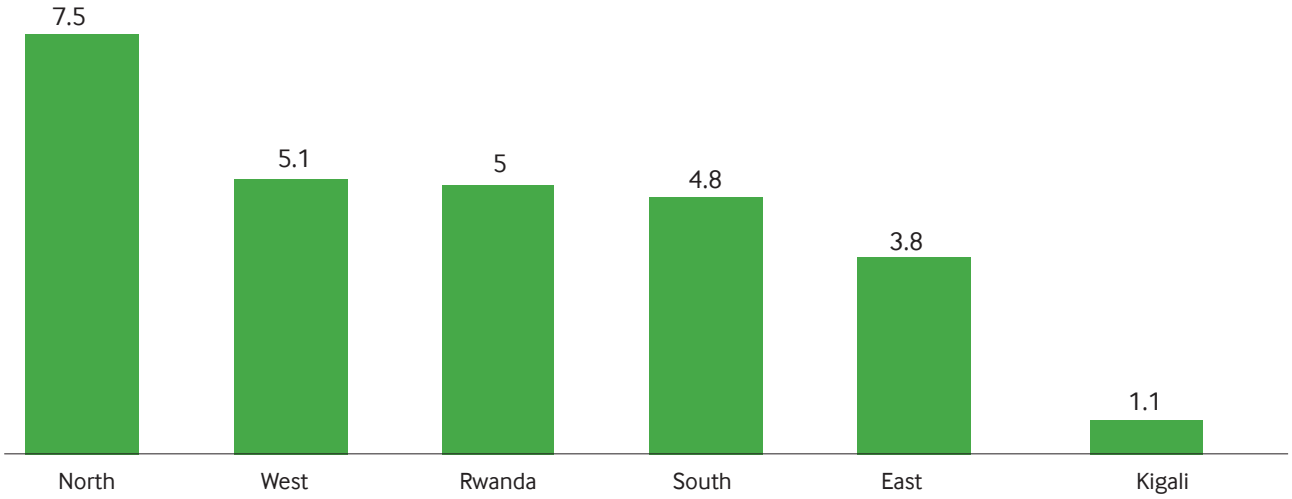
Table 35: Percentage of agricultural households by province and source of requested loan

	Provinces					Rwanda
	Kigali	South	West	North	East	
Commercial bank	-	5.4	10.7	4.8	4.9	6.4
Microfinance	-	2.1	2.0	0.7	1.0	1.5
Credit & saving cooperative	6.3	5.9	5.1	8.8	5.3	6.0
VUP financial services	-	3.3	3.4	4.3	1.4	2.8
Employer	-	0.1	0.2	0.1	0.2	0.1
Relative/friend	35.9	32.3	29.1	20.5	17.5	25.1
Tontine/Solidarity fund	57.8	51.0	49.5	60.7	69.8	58.1

Source: NISR, AHS 2024

5.2. Agricultural funds/support

Figure 5 shows the average percentage of agricultural households that received various funds or support, disaggregated by province. On average 5% of households received assistance



Source: NISR, AHS 2024

Table 36 indicates that, of the households that received funds, 5.7% received money, 69.9% received agricultural materials/tools, and 7.1% received post-harvest tools

Table 36: Percentage of agricultural households who received any support by support/fund type and province

Province	Type of support/fund				
	Money	Agriculture materials/ tools	Post-harvest tools	Other	Total
Kigali	-	-	-	62.9	100
South	4.8	77.6	4.1	13.6	100
West	10.4	52.7	18.8	18.1	100
North	5.4	69.9	5.5	19.2	100
East	2.9	77.8	1.9	17.3	100
Rwanda	5.7	69.9	7.1	17.4	100

Source: NISR, AHS 2024

According to Table 37, the government provided 77.1% of these funds/support, NGOs 17.1%, companies 3.0%, and friends /relatives 2.8%.

Table 37: Percentage of agricultural households who received any support by the source of support/fund and province.

Province	Source of fund				
	Government	NGOs	Friends & relatives	Company/ Association	Total
Kigali	100	-	-	-	100
South	71.19	24.3	2.0	2.6	100
West	79.01	15.4	2.4	3.1	100
North	78.24	11.3	4.7	5.8	100
East	80.41	18.0	1.6	0.0	100
Rwanda	77.1	17.1	2.8	3.0	100

Source: NISR, AHS 2024

Chapter 6

SUSTAINABLE AGRICULTURE FOR ENVIRONMENTAL PROTECTION

Sustainable agriculture integrates environmental, economic, and social considerations to ensure the long-term productivity and resilience of agricultural systems. This chapter presents key findings from AHS 2024 on the adoption of sustainable practices in Rwanda, focusing on soil health, fertilizer and pesticide management, and risk mitigation mechanisms designed to protect both human health and the environment. These practices are critical for advancing SDG Target 2.4, which promotes productive and sustainable agriculture.

6.1 Prevalence Soil Degradation

As highlighted in Table 38, soil degradation remains a concern for a substantial share of agricultural households. Nationally, the most common issue is reduced soil fertility (25.7%), followed by soil erosion (23.0%), landslides (15.3%), and waterlogging (9.8%). Salinization and other unspecified threats were minimal. Provincially, the reduction of soil fertility is most pronounced in Kigali (43.1%) and the South (34.0%), while soil erosion is highest in the South (36.2%) and Kigali (34.4%). Conversely, the Eastern province reported the highest share of households not facing any soil degradation threats (63.5%), in contrast to Kigali, which had the lowest (21.2%).

Table 38: Percentage of agricultural households who experienced soil degradation threats by province

	Province					
Threats types	**Kigali**	**South**	**West**	**North**	**East**	**Rwanda**
Soil erosion (loss of topsoil through wind or water erosion)	34.4	36.2	17.9	26.3	12.1	23.0
Reduction in soil fertility	43.1	34.0	25.2	17.9	22.3	25.7
Water logging	16.1	13.5	8.9	7.2	8.4	9.8
Salinization of irrigated land	0.0	0.8	0.5	0.2	4.4	1.7
Landslides	22.8	21.3	22.9	20.4	1.6	15.3
Other threats	10.0	5.7	6.4	3.2	3.4	4.7
No threats	21.2	36.7	47.3	52.2	63.5	50.0

Source: NISR, AHS 2024

6.2 Fertilizers management

According to the AHS 2024, 34.8% of agricultural households in Rwanda are aware of the environmental risks linked to the excessive or improper application of inorganic fertilizers. Awareness levels varied geographically, with the Southern province recording the highest rate (39.0%), while the Northern Province reported the lowest (27.8%). Additionally, a notable disparity was observed based on the gender of the household head. Awareness was reported by 38.0% of male-headed households, compared to 25.3% of female-headed households.

Table 39: Percentage of agricultural households that are aware of environmental risks associated with the excessive use or misuse of inorganic fertilizers.

Agricultural HHs with at least one member who is aware of environmental risks associated with the excessive use or misuse of inorganic fertilizers		
	Percentage	Number of agricultural households (,000)
Rwanda	34.8	2,164
Province		
Kigali	31.1	37
South	39.0	590
West	36.3	454
North	27.8	400
East	34.3	682
Sex of HH/Farmer		
Male	38.0	1,607
Female	25.3	556

Source: NISR, AHS 2024

6.3 Pesticides management

Table 40 presents that 24.3% of households are aware of the environmental and health risks associated with pesticide misuse. This awareness is highest in the South (27.8%) and East (24.8%), while the lowest levels were observed in Kigali (18.6%) and the North (19.4%). Furthermore, male-headed households reported a higher level of awareness (27.5%) compared to their female-headed counterparts (14.8%). This gap underscores the need for improved training and outreach to enhance safe pesticide use among farmers.

Table 40: Percentage of agricultural households that are aware of the environmental and health risks associated with the use of pesticides

Agricultural HHs with at least one member who is aware of the environmental and health risks associated with the use of pesticides		
	Percentage	Number of agricultural households (,000)
Rwanda	24.3	2,164
Province		
Kigali	18.6	590
South	27.8	454
West	23.6	400
North	19.4	682
East	24.8	1,065
Sex of HH/Farmer		
Male	27.5	1,607
Female	14.8	556

Source: NISR, AHS 2024

6.4 Mechanisms for safeguarding human health and mitigating environmental risks

Households rely primarily on basic preventive measures to reduce risks from fertilizers and pesticides. About 42.4% follow recommended fertilizer application protocols, and 39.6% use organic nutrient sources like manure. Adoption of advanced practices, such as legume integration, precision farming, or soil testing, remains very low (≤3.1%).

Regarding pesticide management, 51.2% of households adhere to label directions and utilize protective equipment. A similar share (52%) adopts practices designed to minimize environmental impact. Provincial disparities in adherence to label directions for environmental protection is highest in the West (71.7%), while adherence focused on human health protection is most prevalent in Kigali (56.9%). More technical practices, such as biological pest control or systematic pasture rotation, are minimally applied. This indicates an opportunity to strengthen ecological pest management strategies. (for detailed data, please refer to Tables 41, 42 and 43)

Table 41: Percentage of agricultural households by specific mechanisms to mitigate environmental risks related to inorganic fertilizers use

Mechanisms to mitigate environmental risks related to inorganic fertilizers use	Provinces					Rwanda
	Kigali	South	West	North	East	
Follow protocols as per extension service or retail outlet directions or local regulations, not exceeding recommended doses	35.0	39.6	46.6	39.6	44.0	42.4
Use organic source of nutrients (including manure or composting residues) alone, or in combination with inorganic fertilizers	47.5	39.2	36.8	41.7	40.8	39.6
Use legumes as a cover crop, or component of a multi/crop or pasture system to reduce fertilizer inputs	0.0	0.8	1.2	1.2	1.5	1.1
Distribute synthetic or mineral fertilizer application over the growing period	9.4	8.5	6.8	9.9	6.4	7.7
Consider soil type and climate in deciding fertilizer application doses and frequencies	0.0	1.6	2.5	1.0	1.3	1.6
Use soil sampling at least every 5 years to perform nutrient budget calculations	0.0	0.2	0.4	0.0	0.4	0.3
Perform site-specific nutrient management or precision farming	0.0	2.2	2.6	1.8	3.1	2.5
Use buffer strips along water courses	0.0	7.3	2.9	4.6	2.5	4.4
Other measure	8.1	0.7	0.2	0.4	0.1	0.4

Source: NISR, AHS 2024

Table 42: Percentage of Agricultural households by specific mechanisms adopted to protect people from health-related risks associated with use of pesticides

mechanisms adopted to protect people from health-related risks associated with use of pesticides	Provinces					Rwanda
	Kigali	South	West	North	East	
Adherence to label directions for pesticide use (including use of protection equipment)	56.9	46.0	59.2	41.7	55.3	51.2
Maintenance and cleansing of protection equipment after use	17.9	23.2	25.8	23.1	17.8	21.9
Safe disposal of waste (cartons, bottles, and bags)	19.5	30.1	14.4	31.2	26.8	25.8
Other measure	5.7	0.8	0.7	4.1	0.2	1.1

Source: NISR, AHS 2024

Table 43: Percentage of Agricultural households by specific mechanisms adopted to avoid environment-related risks associated with use of pesticides

Mechanisms adopted to avoid environment-related risks associated with use of pesticides	Provinces					Rwanda
	Kigali	South	West	North	East	
Adherence to label directions for pesticide application	45.0	51.1	71.7	40.9	46.7	52.0
Adopt any of the Good Agricultural Practices (GAPs): adjust planting time, apply crop spacing, crop rotation, mixed cropping or inter-cropping Application of crop spacing	0.0	9.8	6.9	10.8	7.4	8.5
Perform biological pest control or use bio pesticides	0.0	0.3	0.0	1.5	1.2	0.7
Adopting pasture rotation to suppress livestock pest population	0.0	0.4	0.8	2.3	3.5	1.8
Systematic removal of plant parts attacked by pest	19.3	11.9	4.4	13.8	21.9	14.0
Maintenance and cleansing of spray equipment after us	35.8	20.4	13.2	22.1	14.5	17.6
Use one pesticide no more than two times or in mixture in a season to avoid pesticide resistance	0.0	5.6	2.2	8.1	4.5	4.9
Other measure	0.0	0.4	0.8	0.5	0.3	0.5

Source: NISR, AHS 2024

Chapter

7

LIVESTOCK

Livestock production plays a critical role in Rwanda's agricultural sector, contributing to household income generation, nutrition, and employment. This chapter presents the findings from AHS 2024 on livestock ownership, population, breed composition, and the distribution of livestock products such as milk, eggs, and honey.

7.1. Livestock numbers and Household Ownership

As presented in Table 44, 1.6 million agricultural households rear livestock. Cattle represent the most commonly reared species, kept by (65.4%) of livestock-keeping households. This is followed by goats (50.2%), chickens (45.7%), pigs (43.5%), rabbits (15.3%), and sheep (13.4%). Provincially, cattle rearing are most prevalent in the North (74.3%) and South (74.2%), while the East has the lowest share (47.3%). Goats are most prevalent in the East (63.5%), and chickens are predominantly found in the East (53.2%) and South (47.7%). Furthermore, male-headed households generally demonstrate higher livestock ownership rates compared to female-headed households, particularly for cattle (68.4% vs 53.9%) and pigs (45.0% vs 37.7%).

Table 44: Percentage of households raising different types of livestock by province and sex of household head

	Provinces					Rwanda	By HHH Sex	
	Kigali	South	West	North	East		Male-headed	Female-headed
Cattle	55.6	74.2	66.3	74.3	47.3	65.4	68.4	53.9
Goats	48.6	54.9	37.1	36.9	63.5	50.2	49.5	53.2
Sheep	2.2	11.1	17.8	22.2	7.5	13.4	14.6	8.8
Pig	10.9	57.1	47.1	37.6	28.7	43.5	45.0	37.7
Chicken	37.4	47.7	40.1	38.0	53.2	45.7	48.3	36.0
Rabbit	14.3	18.6	11.1	16.4	13.4	15.3	15.5	14.6
Other Poultry	7.8	2.4	0.8	3.6	10.8	4.6	5.5	1.3
Other Animal	0	2.86	2.61	1.56	1.22	2.1	2.3	1.3
Bee keeping	3.5	5.3	3.6	4.7	5.2	4.8	5.8	1.8
Households raised livestock (,000)	25	477	332	305	467	1,607	1,211	396

Source: NISR, AHS 2024

7.2. Livestock Population and Breed Composition

The AHS 2024 estimates the national livestock population at 1.6 million cattle, 1.8 million goats, 0.4 million sheep, 1.0 million pigs, 3.8 million chickens, and 0.7 million rabbits. Cattle are largely crossbred (70.8%), whereas goats, sheep, and pigs are mostly local breeds, comprising (99%, 77%, and 55% respectively). Provincial distribution varies significantly. The East maintains the largest cattle population (547,885), while Kigali has the smallest (21,644). Similarly, goat populations are highest in the East (776,969) and South (538,552), while chicken populations are concentrated in the East (1,567,341) and South (1,028,339).

Table 45: Number of livestock raised, by type and province.

Types of livestock		Provinces					Rwanda
		Kigali	South	West	North	East	
Cattle	Total	21,644	476,740	296,607	292,048	547,885	1,634,924
	Exotic	1,526	27,091	11,157	15,185	13,846	68,805
	Cross	19,274	343,798	204,212	245,632	345,882	1,158,799
	Local	845	105,851	81,238	31,230	188,157	407,320
Goats	Total	33,843	538,552	235,632	198,832	776,969	1,783,829
	Exotic	-	751	-	1,006	606	2,363
	Cross	149	4,354	2,198	1,753	1,720	10,174
	Local	33,694	533,448	233,434	196,072	774,643	1,771,291
Sheep	Total	527	63,582	147,558	146,043	82,015	439,725
	Exotic	-	-	7,695.9	10,496	473	18,665
	Cross	-	514	38,493	37,908	17,131	94,047
	Local	527	63,068	101,369	97,639	64,410	327,013
Pig	Total	5,663	406,934	237,411	169,615	187,266	1,006,890
	Exotic	761.0	36,137	39,369.0	26,038	31,705	134,009
	Cross	195	118,528	73,008	85,475	34,006	311,213
	Local	4,707	252,269	125,033	58,103	121,555	561,668
Chicken	Total	201,513	1,028,339	438,023	626,018	1,567,341	3,861,233
	Broiler	4,516.0	61,409	38,744.9	84,295	51,746	240,711
	Layers	149,021	344,680	102,084	259,816	417,183	1,272,783
	Dual purpose	37,634	137,399	66,696	111,008	332,125	684,862
	Local	10,341	484,851	230,498	170,898	766,288	1,662,877
Rabbit	Total	17,766	303,890	92,941	158,189	212,889	785,675
	Cross	-	8,266	2,983.5	7,214	2,748	21,211
	Cross	-	10,492	5,065	23,332	8,760	47,648
	Local	17,766	285,132	84,893	127,644	201,381	716,815
Duck		4,196	9,547	1,174	22,857	95,723	133,497
Turkey		-	19,516	9,415.9	1,663	2,300	32,895
Guinea pig		-	47,036	56,276	11,207	17,438	131,956
Other animal		-	-	445	-	2,463	2,908

Source: NISR, AHS 2024

7.3 Livestock by Age and Sex

Cattle populations are dominated by female animals, reflecting their role in milk production. Crossbred and exotic cattle are concentrated in the South and North, while local breeds are more common in the East. A similar gender disparity is evident in goat populations, which also show a higher proportion of females. This is particularly pronounced in the East and South, supporting activities centered on breeding and milk production. (See details in Table 46,47,48 and 49). Similar patterns are observed for sheep and pigs, with female animals predominating across most provinces, while young animals (calves, kids, lambs, piglets) constitute a significant share of the herd, indicating ongoing herd regeneration.

Table 46: Number of cattle that were reared by agricultural households on the day of the interview, by breeds, sex, age and province

Breed type	Gender	Age category	Provinces					Rwanda
			Kigali	South	West	North	East	
Exotic cattle	Male	Calves (<=12 months)	55	6,323	2,577	4,775	2,096	15,827
		Steers (13-24 months)	1	1,273	524	863	36	2,697
		Bulls (Above 24 months)	8	11	26	914	29	988
	Female	Calves(<=12 months)	686	4,913	3,009	2,298	3,031	13,937
		Heifers(13-24 months)	44	1,494	2,469	892	598	5,497
		Cows(Above 24 months)	732	13,077	2,552	5,443	8,056	29,859
Cross cattle	Male	Calves (<=12 months)	6,743	50,710	40,442	40,894	54,176	192,965
		Steers (13-24 months)	422	11,379	20,295	27,060	11,959	71,115
		Bulls (Above 24 months)	1	1,665	2,390	3,749	5,620	13,425
	Female	Calves(<=12 months)	4,837	77,955	42,840	44,588	63,425	233,644
		Heifers(13-24 months)	548	52,404	36,890	30,866	60,996	181,704
		Cows(Above 24 months)	6,723	149,685	61,356	98,475	149,706	465,945
Local cattle	Male	Calves (<=12 months)	-	16,944	11,195	6,100	35,445	69,683
		Steers (13-24 months)	-	9,020	4,030	4,209	10,103	27,362
		Bulls (Above 24 months)	-	1,318	439	406	1,613	3,774
	Female	Calves(<=12 months)	422	21,725	17,704	5,215	35,040	80,107
		Heifers(13-24 months)	-	15,808	18,713	2,720	19,726	56,968
		Cows(Above 24 months)	422	41,035	29,158	12,580	86,229	169,425
All breeds	Male		7,230	98,643	81,916	88,970	121,078	397,837
	Female		14,414	378,097	214,691	203,078	426,807	1,237,087

Source: NISR, AHS 2024

Table 47: Number of goats that were reared by agricultural households on the day of the interview, by sex, age and province

Gender	Age category	Provinces					Rwanda
		Kigali	South	West	North	East	
Male	Kids	7,777	81,345	42,878	38,211	132,725	302,937
	Buck/bulls	47	14,787	4,320	5,321	10,512	34,987
	Total	7,824	96,132	47,197	43,533	143,237	337,924
Female	Kids	18,257	179,752	80,964	56,034	266,206	601,214
	Does/namies	7,762	262,668	107,470	99,266	367,526	844,692
	Total	26,019	442,420	188,435	155,299	633,732	1,445,905

Source: NISR, AHS 2024

Table 48: Number of sheep that were reared by agricultural households on the day of the interview, by sex, age and province

Gender	Age	Provinces					Rwanda
	category	Kigali	South	West	North	East	
Male	Ram/lamb	-	13,789	30,053	26,272	19,577	89,691
	Ram/tup	-	818	6,834	3,395	6,003	17,051
	Total	-	14,607	36,887	29,667	25,581	106,741
Female	Lam	-	16,749	39,725	33,975	24,556	115,006
	Ewe	527	32,226	70,947	82,400	31,878	217,978
	Total	527	48,975	110,672	116,375	56,434	332,983

Source: NISR, AHS 2024

Table 49: Number of pigs that were reared by agricultural households on the day of the interview, by sex, age and province

Gender	Age category	Provinces					Rwanda
		Kigali	South	West	North	East	
Male	Kids	3,715	96,540	62,259	35,932	55,218	253,664
	Buck/bulls	145	53,464	42,057	30,358	21,115	147,139
	Total	3,860	150,004	104,316	66,290	76,334	400,803
Female	Kids	1,526	107,083	55,597	43,605	61,425	269,237
	Does/namies	277	149,847	77,498	59,720	49,507	336,849
	Total	1,803	256,930	133,095	103,326	110,932	606,087

Source: NISR, AHS 2024

7.4 Livestock products

Livestock products constitute a vital component of household livelihoods, providing both food security and income. This section presents data on the production, utilization, and market orientation of key livestock products, including milk, eggs, and honey, as captured by the 2024 Agricultural Household Survey (AHS). The analysis covers production volumes, household consumption, sales, and other uses, as well as price trends and provincial variations.

7.4.1 Milk Production and Utilization

The AHS 2024 estimated that the average daily milk production per cow was 3.6 liters. Nationally, households consumed slightly over half of the milk produced (51%), while 41.3% was sold, and 7.3% was shared with others. The average farm-gate price was 290 Rwandan francs per liter, though prices varied across provinces. Notably, Kigali households sold a larger share of milk (67.2%) compared to rural provinces, where household consumption was higher with 56.6% in the South and 53.5% in the East. These patterns suggest a combination of household nutritional use and income generation from milk sales, with urban areas more market-oriented and rural households balancing consumption and sale. (see details in Table 50, 51, 52 and 53).

Table 50: Monthly lactating cows per Province, 2023/24 Agricultural Year

Month	Kigali	South	West	North	East	Total
2023						
September	4,751	44,061	17,703	31,808	85,859	184,183
October	4,751	45,148	18,935	35,622	98,317	202,774
November	4,751	50,732	20,305	37,988	92,209	205,985
December	4,751	59,028	24,787	43,390	96,371	228,328
2024						
January	5,028	70,968	31,998	46,259	112,685	266,937
February	4,605	80,802	35,568	45,175	114,202	280,351
March	3,585	69,219	23,948	38,795	94,681	230,228
April	3,043	78,620	31,485	39,025	87,528	239,701
May	5,352	79,007	33,914	43,758	94,271	256,301
June	6,915	76,085	29,871	42,342	87,061	242,275
July	6,915	74,739	30,182	40,149	93,958	245,943
August	4,501	57,810	24,798	35,093	81,124	203,326

Source: NISR, AHS 2024

Table 51: Average milk production in litters per cow per day by province

	Kigali	South	West	North	East	Rwanda
2023						
September	4.0	3.7	3.6	4.0	4.0	3.9
October	3.9	3.9	3.6	3.9	4.0	3.9
November	4.3	3.6	3.6	3.7	4.0	3.8
December	4.0	3.4	3.3	3.6	3.9	3.6
2024						
January	3.5	2.9	3.3	3.5	3.7	3.3
February	3.9	2.7	3.0	3.2	3.4	3.1
March	3.7	3.3	4.0	4.0	4.0	3.7
April	3.8	3.3	3.9	3.7	5.2	4.0
May	5.0	3.5	4.1	3.5	4.5	3.9
June	4.5	3.1	3.8	3.3	4.6	3.7
July	4.0	2.9	3.2	3.4	3.9	3.4
August	3.3	2.5	2.5	2.9	3.2	2.8
Average	4.0	3.2	3.5	3.5	4.0	3.6

Source: NISR, AHS 2024

Table 52: Milk utilization (in %)

Province	Quantity consumed by HH	Quantity sold	Quantity given to others	Quantity used in other form
Kigali	32.0	67.2	0.8	0.0
South	56.6	33.7	9.4	0.3
West	52.3	39.6	7.9	0.2
North	40.0	53.5	6.2	0.2
East	53.5	39.9	5.8	0.8
Rwanda	51.0	41.3	7.3	0.4

Source: NISR, AHS 2024

Table 53: Average farm gate milk price, year 2023/24 (Frw/litre)

Month	Kigali	South	West	North	East	Total
2023						
September	308	278	245	266	306	280
October	308	277	246	267	305	280
November	308	494	253	267	311	341
December	308	279	236	267	305	277
2024						
January	317	278	240	267	302	277
February	320	281	247	264	305	278
March	310	293	232	268	308	280
April	310	300	247	268	306	283
May	325	299	250	268	309	284
June	325	293	248	268	316	284
July	329	294	263	290	342	299
August	320	309	280	344	348	324
Annual Average	316	304	249	275	313	290

Source: NISR, AHS 2024

7.4.2 Egg Production and Utilization

Total egg production for 2023/24 was estimated at 112.8 million eggs. Households consumed 30 million eggs, sold 76.6 million, allocated 3.4 million for hatching, and used 2.8 million for other purposes. The East produced the largest share of eggs (44 million). This reflects both household and commercial poultry activities. Nationally, the high proportion of eggs sold (68%) indicates that egg production constitutes a significant income source for farming households.

Table 54: Annual Egg production (number) per province, 2023/2024 Agricultural Year

Province	Total number of eggs produced	Number of eggs consumed by HH	Number of eggs sold	Number of eggs used in hatching	Number of eggs used in another way by the HH
Kigali	13,753,004	578,461	12,977,173	28,433	168,937
South	21,874,409	7,595,033	12,175,232	994,297	1,109,847
West	10,696,454	5,422,677	4,528,792	470,562	274,423
North	22,505,788	4,187,724	17,498,689	402,097	417,278
East	44,027,156	12,284,091	29,396,488	1,475,967	870,611
Rwanda	112,856,811	30,067,986	76,576,373	3,371,355	2,841,096

Source: NISR, AHS 2024

7.4.3 Honey Production and Utilization

Total annual honey production reached 581.3 tons, with 473.6 tons produced from traditional beehives and 107.7 tons from modern hives. Households consumed 183 tons (31.5%), sold 361.8 tons (62.3%), and used 36.5 tons (6.2%) for other purposes. The East recorded the highest production (267.7 tons), largely from traditional hives. In contrast production in Kigali was minimal. Honey production serves a dual purpose: it contributes to household nutrition but also represents a valuable source of cash income. This is particularly evident in provinces with well-established beekeeping practices

Table 55: Annual honey production [in Kg] and usage during 2023/2024 agricultural year

Province	Honey production		Total	Honey usage (Quantity in)		
	Traditional beehives	Modern beehives		Quantity Consumed	Quantity Sold	Quantity used in other ways
Kigali	419	420	839	67	760	12
South	79,350	35,636	114,986	37,549	73,457	3,979
West	94,845	48,769	143,614	38,671	79,538	25,405
North	41,272	12,862	54,134	15,425	36,391	2,319
East	257,711	10,017	267,728	91,318	171,670	4,740
Rwanda	473,597	107,704	581,302	183,031	361,816	36,455

Source: NISR, AHS 2024

7.5 Livestock Stock Changes

Livestock turnover, including births, purchases, sales, and household consumption, reflects active herd management and highlights the dual role of livestock in nutrition and income generation. According to AHS 2024, households recorded substantial movements across all major species. Cattle had 490,406 births and 252,479 purchases, with 437,051 sold and 22,829 consumed. Goats totaled 985,368 births, 285,409 purchases, 476,605 sales, and 43,511 consumed. Pigs, chickens, and rabbits also showed high turnover, while other livestock such as ducks, turkeys, and guinea pigs were actively traded or consumed in smaller numbers.

These data indicate that livestock supports both household nutrition and income generation. Births and purchases ensure herd replenishment and sales represent a critical contribution to household livelihoods (see details in Table 56).

Table 56: Number of animals born, purchased, sold or consumed by households

Animal Type		Number of animals			
		Born	Purchased	Sold	Consumed by Hhs owners
Cattle	Exotic	19,547	19,117	19,350	-
	Cross	331,642	184,796	314,849	17,539
	Local	139,216	48,566	102,852	5,290
	Subtotal	490,406	252,479	437,051	22,829
Goats	Exotic	3,600	-	1,948	-
	Cross	4,179	3,506	3,856	-
	Local	977,589	281,904	470,801	43,511
	Subtotal	985,368	285,409	476,605	43,511
Sheep	Exotic	8,717	6,748	10,841	492
	Cross	65,981	15,251	47,951	1,443
	Local	156,424	55,104	94,848	4,413
	Subtotal	231,123	77,103	153,640	6,348
Pigs	Exotic	185,697	63,569	124,464	735
	Cross	274,218	140,072	199,477	8,337
	Local	299,498	390,194	340,449	12,510
	Subtotal	759,413	593,835	664,391	21,582
Chicken	Broiler	51,179	347,348	318,039	28,734
	Layers	116,422	973,895	503,554	63,041
	Dual purpose	107,791	641,884	586,372	29,558
	Local	1,536,765	355,142	5,289,309	93,362
	Subtotal	1,812,157	2,318,269	6,697,274	214,695
Rabbits	Exotic	46,154	12,591	10,244	4,937
	Cross	43,365	22,221	13,558	17,531
	Local	1,059,678	290,765	384,449	127,170
	Subtotal	1,149,196	325,577	408,250	149,637
Others	Duck	112,800	48,854	11,172	10,128
	Turkey	41,672	11,362	22,675	1,358
	Guinea pig	95,369	18,366	21,475	26,450
	Other animal	2,908	445	-	-
	Subtotal	252,748	79,027	55,322	37,937

Source: NISR, AHS 2024

Annex

A KEY DEFINITIONS

- **A household farm,** also called land holding, comprises all parcels operated by a household, including both owned and rented land.
- **An agricultural household** is defined as a household with at least one member practicing agricultural activities (either crop or livestock production) that are taken as one of the sources of family income. In other words, it is a household that derives part of the income from agriculture, even when this is the smallest portion of the family earnings.
- **A farmer** is referred to any adult person aged 16 or above involved in his/her own or joint agricultural activity such as crop production or livestock rearing during 2023/2024 the agricultural year.
- **The traditional irrigation method** refers to the process of application of water to crops through artificial channels using small local receipt/ equipment like watering cane, jerrycans, bucket, bassin, and this process needs human or animal labour to function which make it not very efficient. It is not easy to control amount of water and sometimes can cause soil erosion. This irrigation system is mostly used by small rural farmers as it is not expensive as modern method.

Annex

B

IMPORTANT TECHNICAL NOTES FOR DATA USERS

B.1. Introduction

The National Institute of Statistics of Rwanda (NISR), in cooperation with the Ministry of Agriculture and Animal Resources (MINAGRI), conducted Agricultural Household Survey (AHS) for the third time. Data collection encompassed all three agricultural seasons of 2023/2024. For Season A, data were collected between December 3, 2023, and March 28, 2024. For Season B, the collection period spanning from April 21 to August 15, 2024. Additionally, data collection for Season C took place from September 8 to October 17, 2024.

This survey was designed to collect statistical data on the agriculture sector which is not fully covered in Seasonal Agricultural Survey. NISR has established a three-year cycle for conducting this survey.

The 2024 Agricultural Household Survey (AHS) utilized a subsample of the Integrated Household Living Conditions Survey 7 (EICV7) as its sampling frame.

B.2. Sampling process

The 2024 AHS employed a national representative subsample of 600 derived from the 1,674 EICV7 enumeration areas (EAs). The 600 EAs were allocated to districts proportionally to the total number of agricultural households in each district based on the Rwanda Population and Housing Census (RPHC-2022) data.

Within each district, the EICV7 urban and rural sample EAs were combined for the AHS sample selection to provide a corresponding implicit stratification. Then the number of samples EAs for each district was selected with probability proportional to size (PPS) from the EICV7 sample EAs for that district, where the measure of size was equal to the number of agricultural households in each sample EA from the 5th Rwanda Population and Housing Census,2022 (RPHC5) data. This approach ensured a higher sampling probability to the sample EAs with a higher number of agricultural households.

Following the selection of households for the EICV7, all of the EICV7 selected households within the AHS 2024 sampled clusters that were identified as agricultural households were included in the AHS 2024 sampled for the clusters. Therefore, the number of sample agricultural households interviewed for the AHS varied.

The subsampling probability was based on the PPS selection process wherein AHS enumeration areas (EAs) were subsampled from the EICV7 sample EAs within each district. The size measure was based on the number of agricultural households in the sample EA from the RPHC5 frame.

To ensure comprehensive coverage of livestock data, an additional list of large-scale livestock farmers (LSFs) was integrated into the sample. A large-scale farmer was defined as any individual, institution, company, association, or cooperative that met at least one of the following thresholds: rearing 20 or more cattle, 40 pigs, 100 goats or sheep, 500 chickens, or managing at least 10 beehives

B.3. Weights calculation

The subsampling probability was based on the PPS selection of the AHS sample EAs from the EICV7 sample EAs within each district, where the measure of size was based on the number of agricultural households in the sample EA from the RPHC5 frame. Therefore, the weight for the sample households in the AHS was calculated as follows:

$$W'_{Adi} = \frac{M_h}{n_h \times M_{hi}} \times \frac{\sum_{i\varepsilon d} M_{Adi}}{n_{Ad} \times M_{Adi}} \times \frac{M'_{Adi}}{m'_{Adi}}$$

where:

W'_{Ahi}= alternative weight for the sample agricultural households in the i-th sample EA of district d selected as a subsample of EICV7 for the AHS

M_h = total number of households in the 2022 Rwanda Census frame for EICV7 stratum h

n_h = number of sample EAs selected in stratum h for EICV7

M_{hi} = number of households in the i-th sample EA of stratum h, based on information in the 2022 Rwanda Census

M'_{Adi}= number of agricultural households listed in the i-th AHS 2024 sample cluster in district d, based on the EICV7 listing

m'_{Adi} = number of agricultural households interviewed for the AHS 2024 in the i-th sample cluster in district d

B.4. Data collection

Data collection encompassed all three agricultural seasons of 2023/2024. For Season A, data were collected between December 3, 2023, and March 28, 2024. For Season B, the collection period spanning from April 21 to August 15, 2024. Additionally, data collection for Season C took place from September 8 to October 17, 2024.

Data collection for agricultural household survey 2024 was conducted into two separate phases:

- The first phase consisted of listing all households in sampled enumeration areas. The listing exercise aims to identify households engaged in cropping or/and livestock activities during the 2023/2024 agricultural year. An agricultural household was defined as a household whose one of its sources of income is derived from agricultural production (crop production and/or livestock).
- The second phase was dedicated to interviewing the selected agricultural households. During this time, a well-structured household survey questionnaire was used to gather all information on agricultural activities done during the agricultural year 2023/2024 starting from December 2023 to October 2024. The questionnaire was administered to the most knowledgeable household member regarding agricultural activities, in most case this was the household head.

- The survey was conducted by a team of 184 experienced fieldworkers, including 155 enumerators and 29 team leaders, who carried out the data collection after receiving comprehensive refresher training. To ensure the highest quality of data, strict supervision was maintained throughout the entire data collection process.

B.5. Survey instruments.

The questionnaire was developed in CSPro software, and android tablets were used to facilitate electronic data collection. The survey questionnaire was designed with a common set of core modules covering household composition, household members' characteristics, land use and ownership, crops planted during the agricultural year 2023/2024, agriculture extension services, agricultural programs, access to savings and credits, access to inputs, livestock numbers, livestock production (milk, eggs and honey), and other agriculture related information. Moreover, ArcGIS Field Maps integrating GIS software with external GPS devices connected to tablets via Bluetooth was used to accurately measure crop areas, locate sampled households, and serve as a monitoring tool for field staff.

Annex

C

AGRICULTURAL HOUSEHOLD SURVEY 2024 CONTRIBUTORS

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