

REPUBLIC OF RWANDA



NATIONAL INSTITUTE OF STATISTICS OF RWANDA

# EICV<sub>3</sub> THEMATIC REPORT

## Agriculture

August 2012

## Foreword

The 2010/11 Integrated Household Living Conditions Survey, EICV3 (Enquête Intégrale sur les Conditions de Vie des Ménages), is the third in the series of surveys which started in 2000/01 and is designed to monitor poverty and living conditions. The survey fieldwork commenced in November 2010 and continued for one full year. In 2010/11, for the first time the achieved sample size of 14,308 households in the EICV3 was sufficient to provide estimates which are reliable at the level of the district.

To date, two publications have been issued by the National Institute of Statistics of Rwanda (NISR) using EICV3 data: a report with an overview of main indicators and a poverty profile. The present report is one of a series of 10 further documents that each explores in depth a theme from the Economic Development and Poverty Reduction Strategy (EDPRS) using data from EICV3 and a limited number of other sources. The objective is to provide analysis that will contribute to the understanding of the sector and to support the elaboration of Rwanda's Second EDPRS.

The 10 thematic reports in this series are: (i) Economic Activity; (ii) Utilities and Amenities (water/sanitation/energy/housing/transport/ICT); (iii) Social Protection; (iv) Environment and Natural Resources; (v) Consumption; (vi) Gender; (vii) Youth; (viii) Education; (ix) Agriculture; and (x) Income.

This report also draws on information contained in the Labour Market and Economic Trends in Rwanda report from August 2007, which reported on the EICV2 survey, and the Establishment Census of 2011. The report also includes some text from the Main Indicators Report of the EICV3 and makes some revisions to the data published there as a result of deeper analysis of the data.



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We appreciate the valuable support provided by administrative and financial departments of the NISR. Their interventions allowed this survey data analysis to be carried out smoothly and under good conditions.

## Methodological notes for readers

### Urban and rural classification in the EICV3 data

Although the sampling frame for the EICV3 was based on an updated frame of villages, the urban and rural classification of the villages in the EICV3 data is based on the corresponding geographic designations from the 2002 Rwanda Census of Population and Housing. Since the EICV2 sample design was based on the sampling frame from the 2002 census, this urban/rural classification in the EICV3 data makes it possible to directly compare the urban and rural results from the EICV2 and EICV3 data. However, the urban/rural codes in the EICV3 data do not represent the current status of these villages, so it is important that users understand how to interpret the urban and rural results from the data. For example, since the urban classification was mapped directly from the 2002 geographic structure of Rwanda, the estimated total urban population from the survey data will not represent the expected urban expansion of the population. It is even possible that the estimate of the percentage of the population that is urban from the EICV3 data is slightly less than that from the EICV2 data because of sampling variability.

The initial urban/rural classification of the villages in the EICV3 sampling frame was determined at the level of the old sectors. In the 2002 Rwanda census frame, 1,545 sectors were defined for Rwanda. Under the new geographic structure these were reconfigured into 416 new sectors. Each of the 2002 sectors was classified as either urban or rural, and all the zones de dénombrement within the sector were given the corresponding urban/rural code. A spreadsheet was compiled showing the geographic correspondence between the 2002 sectors and the current sectors. When all the old sectors corresponding to a new sector were either urban or rural, the corresponding classification was assigned to all the villages in this sector. However, in the case of new sectors that are composed of both urban and rural old sectors, the villages were assigned a code of 3 for 'mixed'. The EICV3 sampling frame of villages for each district was ordered by urban, mixed and rural classifications in order to provide implicit stratification and a proportional allocation of the sample to each of these groups. For EICV3, there were 106 sample villages in new sectors classified as mixed, for which it was necessary to have a special cartographic operation to determine the urban/rural classification. The file with the GPS coordinates of each EICV3 sample village was used to pinpoint the exact old sector where the village was located. In this way it was possible to obtain the 2002 urban/rural classification for all the villages in the EICV3 sample.

The NISR is currently updating the urban and rural classification of all villages in preparation for the 2012 Rwanda census. Once these urban/rural codes have been finalised, it will be possible to merge these codes into the EICV3 data file so that the sample can be post-stratified and tabulated by the current urban and rural classification. This will not affect the weights in the survey data, which are based on the probabilities of selection. It is important to tabulate the urban and rural results using the new codes in order to represent the current distribution of the population and their characteristics (for the reference period of EICV3). However, the 2002 urban/rural codes should also be kept in the EICV3 data file for comparing the results to EICV2.

## Confidence intervals at the provincial urban/rural level

Readers should be aware that the urban component of the rural provinces is very small, as is the rural component of Kigali City. Estimates presented for these urban and rural domains are consequentially affected by large sampling errors.

Readers are recommended to check carefully the sampling errors presented in the annexes.

The tables below show the unweighted sample sizes at provincial level for urban and rural domains.

EICV3	Urban/rural 2002		Total (000s)
	Urban (000s)	Rural (000s)	
Kigali City	1,177	171	1,348
Southern Province	492	3,348	3,840
Western Province	204	3,156	3,360
Northern Province	132	2,268	2,400
Eastern Province	144	3,216	3,360
Total	2,149	12,159	14,308

EICV2	Urban/rural 2002		Total (000s)
	Urban (000s)	Rural (000s)	
Kigali City	954	72	1,026
Southern Province	279	1,428	1,707
Western Province	153	1,500	1,653
Northern Province	135	924	1,059
Eastern Province	99	1,356	1,455
Total	1,620	5,280	6,900

## Quintiles and poverty classifications

The results are presented by quintile. Quintiles are developed by sorting the sample of households by annual consumption values, and then dividing the population into five equal shares. The 20% of individuals with the highest annual consumption are allocated to quintile 5, and the 20% of individuals with the lowest levels of annual consumption are allocated to quintile 1. The poorest households and their members are found in quintile 1 and the richest are found in quintile 5. Those around the poverty line are found in quintile 3.

Consumption is used as a proxy for income, as is usual when estimating poverty. The reader should refer to the report on the Evolution of Poverty in Rwanda from 2000 to 2011 for further information on this topic.

## Executive summary

Agriculture is currently the backbone of Rwanda's economy. The EICV provides detailed information on agricultural activity. However, it is important to note that the EICV is not a specialised agricultural survey, and both agricultural production and land data are based only on respondents' recollection.

### Land

One of the major inputs in agricultural production is land. Rwanda is a small country with total arable land of about 1.4 million hectares; given a growing population combined with strong reliance on agriculture, it is clear that land is one of the scarcest resources in Rwanda.

The percentage of Rwandese households cultivating at least one parcel of land has remained at just over 90%, increasing only marginally from EICV2 to EICV3. However, the percentage of small cultivators which rely on wage labour has increased over this time, from 22% in EICV2 to 35% in EICV3.

On a national level, 84% of cultivating households cultivate less than 0.9 ha of land; this percentage has increased from 75% in EICV2.

EICV3 data allow us to estimate that the overall percentage of cultivated land affected by land-use consolidation over the 12 months preceding the survey was 11.5% of cultivated land, corresponding to approximately 141,000 ha. The percentage of land protected from soil erosion is estimated at 78%, coinciding with the Vision 2020 goal of 80%. Irrigation does not appear to be a widespread practice; only around 3% of cultivated land is irrigated on a national level.

8% of land-owning households nationally had applied for a loan to make agricultural improvements in the 12 months prior to EICV3. The main purpose of the agricultural loans applied for was the purchase of seeds and fertiliser, followed by the purchase of animals and land.

### Crops

Crop production constitutes the major part of agricultural production for the majority of Rwandese households, with households producing a wide diversity of crops. Nearly all cultivating households produce at least one staple crop and the majority also produce a range of fruit and vegetables.

An increasing percentage of cultivating households harvest maize, Irish potatoes and taro, while the percentage cultivating sweet potatoes, beer bananas and sorghum has decreased between surveys; correspondingly, the quantity produced for these crops has fallen with the exception of sorghum, which has remained at a similar level. The quantity produced for other main staple crops has increased over time.

The overall percentage of cultivating households producing coffee and tea has remained relatively stable between both surveys, with the quantity produced having increased.

Commercialisation of crop production overall, as measured by the share of harvest sold, has increased from 16% in EICV2 to 21% in EICV3; for Crop Intensification Programme (CIP) crops, this has increased from 13% to 15%. Rice, beer bananas and sorghum have relatively high shares sold, at 47%, 39% and 32% respectively. The overall selling ratio for all staple crops increased over time with the exception of Irish potatoes, cassava and cassava leaves. Cultivating households

affected by land-use consolidation or which have at least one parcel of land which is irrigated or protected against soil erosion tend to have higher degrees of commercialisation.

The EICV3 data suggest that, for all types of crops, 'traders in the market' are the most likely to buy the crops, especially staple crops. 'Purchases in the field' tend to occur more often for fruit and vegetables, while commercial companies and cooperatives are notable for buying export crops.

The percentage of cultivating households incurring expenditure on sacks and packing increased from 37% to 48% between surveys. This is another indicator of commercialisation of production, since sacks and packaging are purchased primarily if selling is intended.

A high increase over time can be observed for the percentage of cultivating households purchasing chemical fertilisers (11% to 29% of households). The percentage of cultivating households incurring expense on insecticides has also increased; 31% of cultivating households purchased them compared to 24% in EICV2.

55% and 59% of all households were engaged in some sort of processing activity in EICV2 and EICV3 respectively.

## **Livestock**

In addition to crops, livestock is another important source of income and food for agricultural households; 68% of all households in Rwanda raise some type of livestock, which is a slight decline since EICV2 when 71% of households raised livestock.

Goats, cattle and chicken are the most commonly raised types of livestock in both surveys. The raising of cattle increased across all provinces over time with notable increases in the Western, Northern and Eastern provinces. The percentage of households raising sheep and goats has decreased between surveys.

There has been a notable increase in the percentage of livestock-raising households stabling their livestock, from 61% in EICV2 to 79% in EICV3. The overall percentage using a maintained pasture is very small.

The percentage of livestock-raising households selling any livestock product has increased from 23% to 30% over time. Eggs are more likely to be sold than other products and there has been a large increase in the percentage of Kigali-based livestock-raising households selling fresh milk, from 8% in EICV2 to 15% in EICV3.

The percentage of households raising livestock which have incurred expenditure on their livestock during the survey period has increased from 55% in EICV2 to 69% in EICV3; the poorest households have experienced the largest overall increase over time (from 33% to 54%).

The EICV3 data reveal that Eastern Province had the highest percentage of households benefitting from the Girinka 'One Cow per Poor Family' policy (7%). Households in the bottom three consumption quintiles are more likely to have received a cow than those in the highest two quintiles.



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## Abbreviations

CIP	Crop Intensification Programme
EDPRS	Economic Development and Poverty Reduction Strategy
EICV	Enquête Intégrale sur les Conditions de Vie des Ménages (Integrated Household Living Conditions Survey)
HH	Household
MINAGRI	Ministry of Agriculture and Animal Resources
NISR	National Institute of Statistics Rwanda
OPM	Oxford Policy Management
RWF	Rwandan Franc

# 1 Introduction

On 7 February 2012, the President of Rwanda officially launched the design of the second phase of the Economic Development and Poverty Reduction Strategy (EDPRS2). At the same time, the first EDPRS entered its final year of implementation 2012–13.

A key input into the elaboration of the EDPRS2 is the evidence collected through the EICV3, fieldwork for which was carried out by the NISR between October 2010 and November 2011. Two reports based on EICV3 data were released by the NISR in early 2011: a main indicators report and a report on poverty evolution in Rwanda. Following on from these initial publications, the NISR will release a series of 10 further reports that explore indepth 10 different topics that are of high importance to the elaboration of EDPRS2.

This report is one of these 10 thematic reports that seek to inform and support the development of the EDPRS2 with data from the EICV3. It focuses on the agriculture sector and provides detailed insights into the living conditions of the Rwandan population with regard to agricultural production. Agriculture is the backbone of Rwanda's economy and the majority of households in Rwanda are currently engaged in some sort of crop or livestock production activity.

In recent years, the Government of Rwanda has implemented several ambitious programmes to increase the productivity of the agriculture sector. The motivation behind these actions is reflected in the Ministry of Agriculture and Animal Resources' (MINAGRI) vision: 'Our Vision is to modernise Agriculture and Livestock to achieve food security. One of the key pillars of this vision is the transformation of Agriculture from subsistence to a productive high-value, market-oriented farming that is environmentally friendly and has an impact on other sectors of the economy.'<sup>1</sup>

This report explores a wealth of evidence on agricultural production collected through the EICV3 and complements it with further data sources (e.g. EICV2 and sector documents) in order to put this new evidence into a meaningful context. It also makes use of the fact that the EICV in its third round achieved for the first time a sample size that is sufficient to provide estimates that are reliable at the level of the district.<sup>2</sup>

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<sup>1</sup> <http://www.minagri.gov.rw>, "About the Ministry".

<sup>2</sup> Sample size of EICV3: 14,308 households. District-level estimates for selected indicators can be found in Annex B.

## 2 Land

One of the major inputs in agricultural production is land. Rwanda is a small country with total arable land of about 1.4 million hectares.<sup>3</sup>

Given a growing population combined with strong reliance on agriculture, it is clear that land is one of the scarcest resources in Rwanda. The EICV collects detailed data on land use and the agricultural activities of Rwandan households. It is, however, important to underline that the EICV is not in itself a specialised agricultural survey, and both agricultural production and land data are based only on respondents' recollection.

### 2.1 Cultivated land

The percentage of Rwandese households cultivating at least one parcel of land has remained at just over 90%, increasing only marginally from EICV2 to EICV3. Therefore, despite notable increases in economic activity over time in industries such as trade and construction, the majority of Rwandese work in their main job on their own farm.<sup>4</sup>

The importance of land cultivation among rural households is clear from the following table; in both surveys around 98% of rural households cultivate at least one parcel of land. The percentage of urban households cultivating at least one parcel has increased from 57% to 66% over time.

**Table 2.1 Percentage of households cultivating at least one parcel of land for crop production, by urban/rural, province and quintile**

	EICV2		EICV3	
	% of HHs cultivating land for crop production	Total no. of HHs (000s)	% of HHs cultivating land for crop production	Total no. of HHs (000s)
All Rwanda	91.5	1,892	93.0	2,253
Urban	55.6	311	66.2	331
Rural	98.6	1,581	97.6	1,922
Kigali City	42.4	177	55.6	223
Southern Province	96.1	499	97.1	549
Western Province	96.4	448	96.3	528
Northern Province	96.1	347	98.3	411
Eastern Province	97.8	421	96.9	542
Q1	97.2	329	98.7	381
Q2	97.3	353	97.7	415
Q3	97.5	368	97.9	448
Q4	94.5	398	95.2	490
Q5	75.1	444	78.8	519

Base: Total number of households. Source: EICV2 and EICV3

<sup>3</sup> Rwanda State of Environment and Outlook, REMA/UNEP, 2009.

<sup>4</sup> EICV3 Thematic Report on Economic Activity, 2012.

Since the EICV does not require that the plot sizes of a household are measured, it is possible that estimates of land size are not as reliable as those that would be obtained by a specialist agricultural survey, nor are issues of land quality addressed.<sup>5</sup> Here we classify households which cultivate land into the following categories; very small cultivators (less than 0.3 ha), small cultivators (0.3 to 0.9 ha), medium cultivators (0.9 to 3 ha) and large cultivators (more than 3 ha).

The following table shows that, overall, 84% of cultivating households cultivate less than 0.9 ha of land;<sup>6</sup> this percentage has increased from 75% in EICV2. However, in Southern and Western provinces the percentage of cultivating households which cultivate less than 0.9 ha has not increased much over time. Indeed, in Southern Province the average size of cultivated land per household did not vary notably between survey rounds (0.58 ha in EICV2 and 0.55 ha in EICV3). This could suggest that Southern Province has already reached the point at which no further land sharing is possible.<sup>7</sup> These trends are also illustrated in Figure 2.1 below.

**Table 2.2 Distribution of cultivated land size, by urban/rural, province and quintile**

EICV3	Mean size of cultivated land (ha)	Median size of cultivated land (ha)	Size of cultivated land				Total	No. of HHs cultivating land for crop production (000s)
			<0.3 ha	0.3-0.9 ha	0.9-3 ha	>=3 ha		
All Rwanda	0.59	0.33	45.8	37.6	14.7	1.9	100.0	2,095
Urban	0.46	0.15	67.3	21.1	9.0	2.6	100.0	219
Rural	0.60	0.35	43.3	39.5	15.4	1.8	100.0	1,875
Kigali City	0.58	0.10	70.3	19.4	7.7	2.6	100.0	124
Southern Province	0.55	0.29	51.2	36.4	10.5	2.0	100.0	533
Western Province	0.48	0.28	52.1	35.9	10.5	1.5	100.0	508
Northern Province	0.52	0.33	46.0	39.7	13.5	0.8	100.0	404
Eastern Province	0.78	0.51	28.3	43.1	25.8	2.8	100.0	525
Q1	0.37	0.23	61.6	31.1	6.6	0.6	100.0	376
Q2	0.49	0.33	45.5	41.6	12.4	0.5	100.0	405
Q3	0.54	0.36	42.1	41.6	15.2	1.0	100.0	438
Q4	0.67	0.41	38.6	40.5	18.3	2.6	100.0	467
Q5	0.83	0.38	43.5	32.0	20.0	4.5	100.0	409

Base: Households cultivating land for crop production. Source: EICV3

<sup>5</sup> The CFSVA 2009 survey estimates that, nationally, 19% cultivated less than 0.1 ha, 37% less than 0.2 ha, and 59% less than 0.5 ha. EICV3 estimates that 16% cultivated less than 0.1 ha, 32% less than 0.2 ha, and 66% less than 0.5 ha.

<sup>6</sup> The Food and Agriculture Organisation estimates that, on average, a Rwandan household requires at least 0.9ha to conduct sustainable agriculture (National Land Policy Report).

<sup>7</sup> EICV3 Thematic Report on Environment and Natural Resources, 2012.

EICV2	Mean size of cultivated land (ha)	Median size of cultivated land (ha)	Size of cultivated land				Total	No. of HHs cultivating land for crop production (000s)
			<0.3 ha	0.3-0.9 ha	0.9-3 ha	>=3 ha		
All Rwanda	0.75	0.38	42.0	32.7	21.7	3.6	100.0	1,732
Urban	0.63	0.23	57.6	24.4	14.6	3.4	100.0	173
Rural	0.77	0.40	40.3	33.7	22.4	3.6	100.0	1,559
Kigali City	0.85	0.33	47.2	28.6	18.7	5.5	100.0	75
Southern Province	0.58	0.28	51.9	31.7	14.2	2.1	100.0	480
Western Province	0.60	0.28	52.4	29.1	15.8	2.7	100.0	432
Northern Province	0.90	0.49	35.2	36.9	22.5	5.4	100.0	334
Eastern Province	0.97	0.67	24.3	35.1	36.2	4.4	100.0	412
Q1	0.46	0.25	55.1	31.0	12.9	1.0	100.0	320
Q2	0.65	0.34	45.2	32.5	19.8	2.4	100.0	343
Q3	0.71	0.41	39.7	35.2	22.7	2.4	100.0	358
Q4	0.87	0.47	36.9	33.7	24.7	4.6	100.0	376
Q5	1.05	0.52	34.5	30.9	27.4	7.3	100.0	333

Base: Households cultivating land for crop production. Source: EICV2

**Figure 2.1 Changes in mean size of cultivated land per household (ha)**

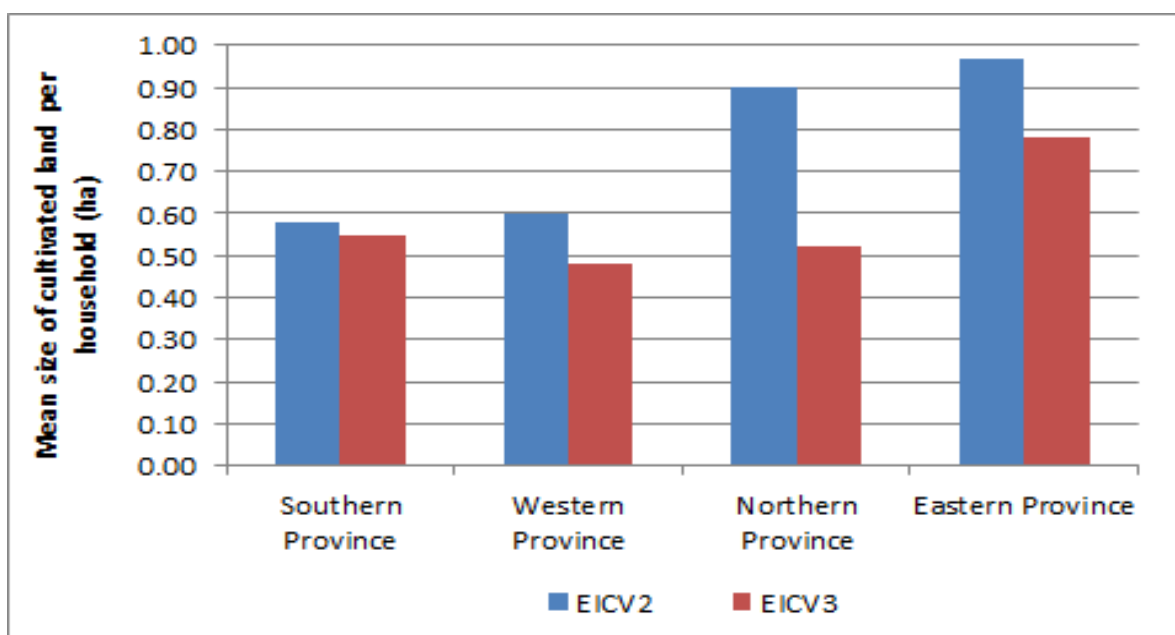




Table 2.3 presents the main economic activity of cultivating households by size of cultivated land;<sup>8</sup> independent farming is the predominant household activity for all land sizes, although households cultivating less than 0.3 ha of land are more likely to rely on wage labour.

**Table 2.3 Main economic activity of household, by size of cultivated land**

EICV3	Main economic activity of household				Total
	Wage farm	Wage non-farm	Independent farmer	Independent non-farm, unpaid non-farm, other and n.i	
All Rwanda	9.7	15.1	65.3	9.9	100.0
<0.3 ha	15.0	19.9	54.2	10.9	100.0
0.3-0.9 ha	6.5	10.9	74.1	8.5	100.0
0.9-3 ha	2.6	10.6	76.6	10.3	100.0
>=3 ha	1.5	15.7	70.8	12.0	100.0

Base: Households cultivating land for crop production. Source: EICV3

EICV2	Main economic activity of household				Total
	Wage farm	Wage non-farm	Independent farmer	Independent non-farm, unpaid non-farm, other and n.i	
All Rwanda	8.9	7.4	74.8	8.9	100.0
<0.3 ha	13.7	8.7	67.8	9.8	100.0
0.3-0.9 ha	6.6	6.4	79.1	7.8	100.0
0.9-3 ha	3.8	5.6	82.0	8.6	100.0
>=3 ha	3.6	11.8	75.2	9.5	100.0

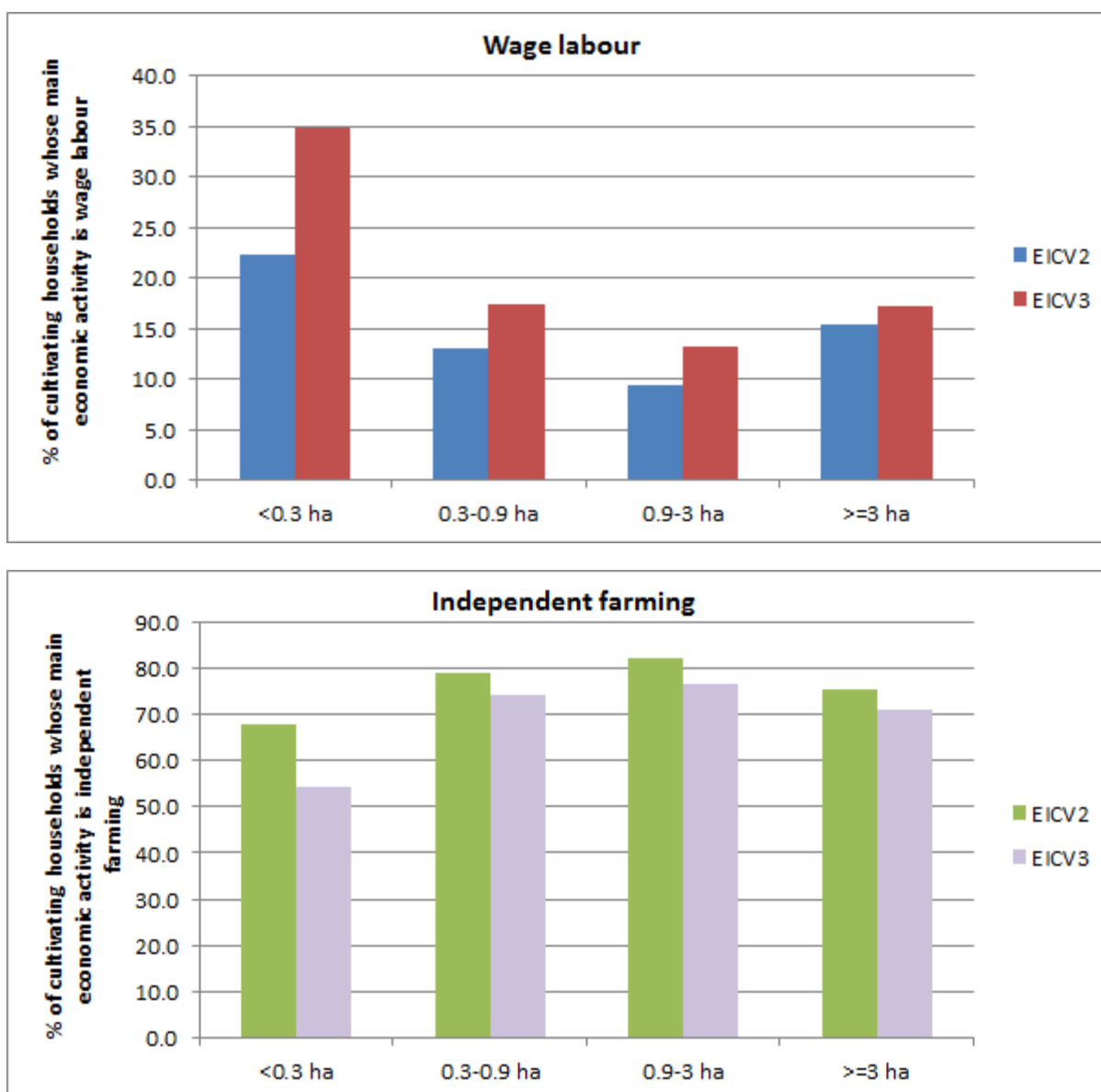
Base: Households cultivating land for crop production. Source: EICV2

Over time, the percentage of small cultivators which rely on wage labour has increased from 22% in EICV2 to 35% in EICV3; there has been a corresponding decrease in the percentage of independent farmers, from 68% to 54%.<sup>9</sup> This has also been the case for other land size categories, but to a smaller extent.

<sup>8</sup> The main economic activity of a household is the main activity undertaken by the majority of the household; where this is not possible to establish, the main economic activity of the household head is assumed.

<sup>9</sup> A similar pattern was also reported when comparing EICV1 to EICV2 (see McKay A, (2007) EICV Poverty Analysis for Rwanda's Economic Development and Poverty Reduction Strategy).

**Figure 2.2** Changes in main economic activity of household, by size of cultivated land



## 2.2 Land policies/programmes

Table 2.4 presents the percentage of cultivated land which has been affected by land-use consolidation, which is irrigated and which is protected from erosion. Again, however, we stress that the EICV3 is not a specialised agricultural survey and land-area estimates should be interpreted with caution.

The total area under land-use consolidation in 2010 was estimated by MINAGRI to be 254,000 ha in season A and 43,000 ha in season B.<sup>10</sup> EICV3 estimates that the percentage of cultivated land affected by this policy in the time preceding the survey was 11.5%, corresponding to approximately 141,000 ha.<sup>11</sup>

Northern Province has the highest percentage of cultivated land affected by land-use consolidation (20% of cultivated land), as well as the highest percentage of households which have been affected (40% of cultivating households).<sup>12</sup> The Southern, Western and Eastern provinces all have around the same percentage of cultivating households which have been affected (around 20% of cultivating households), although in terms of land affected, Southern Province has a lower percentage than the Western and Eastern provinces, at 6%, 12% and 12% of cultivated land respectively. Cultivating households in the lowest consumption quintile have the lowest percentage of land affected by land-use consolidation.

One of the national 2010 goals for Rwanda Vision 2020 was to have 80% of land protected against soil erosion.<sup>13</sup> EICV3 data indicate that this goal has been achieved; around 78% of cultivated land nationally is reported as being protected against erosion, with Kigali City having the lowest percentage and Southern Province having the highest.

The percentage of cultivated land which is irrigated is very low, at around 3% on a national level; the Western and Northern provinces have the lowest percentages.

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<sup>10</sup> MINAGRI (2012) Farm Land Use Consolidation in Rwanda: Assessment from the perspectives of agriculture sector.

<sup>11</sup> The EICV does not differentiate by seasons, which (in the light of a 12-month data collection period) might explain why the EICV3 estimate lies between the MINAGRI estimates for the two seasons.

<sup>12</sup> EICV3 Thematic Report on Environment and Natural Resources, 2012.

<sup>13</sup> Ministry of Finance and Economic Planning: Rwanda Vision 2010.

**Table 2.4 Percentage of cultivated land affected by land-use consolidation, which is irrigated and which is protected against erosion**

	EICV3			Total cultivated land area (000 ha)
	% land affected by land-use consolidation	% land irrigated	% land protected against erosion	
All Rwanda	11.5	3.0	78.1	1,228
Urban	9.2	3.3	73.4	101
Rural	11.7	3.0	78.5	1,128
Kigali City	2.7	4.2	74.6	72
Southern Province	6.1	3.1	84.9	292
Western Province	12.0	1.3	80.3	244
Northern Province	20.3	1.9	81.0	209
Eastern Province	12.1	4.4	71.1	411
Q1	8.6	2.1	78.6	141
Q2	9.1	2.4	75.7	200
Q3	11.3	2.8	78.3	237
Q4	12.0	3.8	77.2	312
Q5	13.8	3.2	80.1	339

Base: Households cultivating land for crop production. Source: EICV3. Note: This table is based on all land parcels reported in EICV3. EICV3 is not a specialised agricultural survey and more reliable land-area estimates should be obtained from the forthcoming agriculture survey carried out by NISR. However, it is important to note that the total land-area estimate obtained from EICV3 (1.23 million ha) is relatively close to the 2009 REMA estimate of 1.4 million ha of arable land in Rwanda.

## 2.3 Land and agricultural improvements

EICV3 asked households owning land about agricultural improvements made in the last 12 months. The survey showed that 8% of land-owning households nationally had applied for a loan to make such improvements, with the Western and Northern provinces having the highest percentages. Households in these provinces were also more likely to have had the loan approved.

**Table 2.5 Percentage of households applying for a loan to make agricultural improvements over the last 12 months, by urban/rural, province and quintile**

EICV3	% of HHs applying for loan	No. of HHs owning land (000s)	% of HHs with loan approved	No. of HHs applying for loan (000s)
All Rwanda	7.9	2,106	90.5	166
Urban	3.6	247	90.5	9
Rural	8.4	1,859	90.5	157
Kigali City	1.8	154	77.7	3
Southern Province	8.2	532	87.9	44
Western Province	10.5	505	93.0	53
Northern Province	10.3	403	93.4	41
Eastern Province	4.9	514	86.7	25
Q1	6.2	372	83.1	23
Q2	7.9	399	92.6	32
Q3	7.8	434	92.1	34
Q4	9.0	464	91.7	42
Q5	8.1	437	90.7	35

Base: Households currently owning or which have owned agricultural land over last 12 months. Source: EICV3.

The main purpose of the agricultural loans applied for was the purchase of seeds and fertiliser, followed by the purchase of animals and land.

**Table 2.6 Purpose of agricultural loan, by urban/rural, province and quintile**

EICV3	Purpose of agricultural loan								Total	No. of HHs applying for loan (000s)
	Terracing	Irrigation	Animal purchase	Equipment	Seeds and fertiliser	Purchase of land	Farm buildings	Other		
All Rwanda	0.3	0.4	14.1	8.9	49.5	13.6	1.1	12.0	100.0	166
Urban	0.0	0.0	12.2	11.9	36.4	12.9	6.9	19.7	100.0	9
Rural	0.4	0.4	14.2	8.8	50.2	13.6	0.8	11.5	100.0	157
Kigali City	0.0	0.0	38.1	4.8	22.7	18.0	10.7	5.7	100.0	3
Southern Province	0.4	0.0	17.9	12.3	41.3	12.1	1.5	14.5	100.0	44
Western Province	0.5	0.4	10.2	6.9	57.6	16.1	1.2	7.0	100.0	53
Northern Province	0.3	0.3	13.1	6.5	56.6	12.7	0.0	10.4	100.0	41
Eastern Province	0.0	1.2	14.7	11.7	38.1	11.6	1.4	21.4	100.0	25
Q1	0.0	0.0	19.0	9.1	52.3	10.1	0.7	8.8	100.0	23
Q2	0.0	0.5	12.9	8.9	55.4	8.0	0.5	13.8	100.0	32
Q3	0.9	0.8	13.5	8.1	49.4	13.0	1.4	13.0	100.0	34
Q4	0.3	0.6	12.5	6.6	53.4	15.2	1.2	10.1	100.0	42

Q5	0.4	0.0	14.6	12.3	37.9	19.4	1.7	13.6	100.0	35
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Base: Households which applied for agricultural loan over last 12 months. Source: EICV3.

### 3 Crops

Crop production constitutes the major part of agricultural production for the majority of Rwandese households, with the previous chapter showing just over 90% of households cultivating at least one parcel of land for crop production and producing a wide diversity of crops.

#### 3.1 Crop production

Nearly all cultivating households produce at least one staple crop<sup>14</sup> and the majority also produce a wide range of fruit and vegetables.<sup>15</sup> The percentage of cultivating households producing *only* staple crops has dropped nationally from 19% to 6% from EICV2 to EICV3. As seen in Figure 3.1, this can be explained by an increase in the percentage of cultivating households producing fruit and vegetables.

**Figure 3.1 Type of crop produced, by consumption quintile**

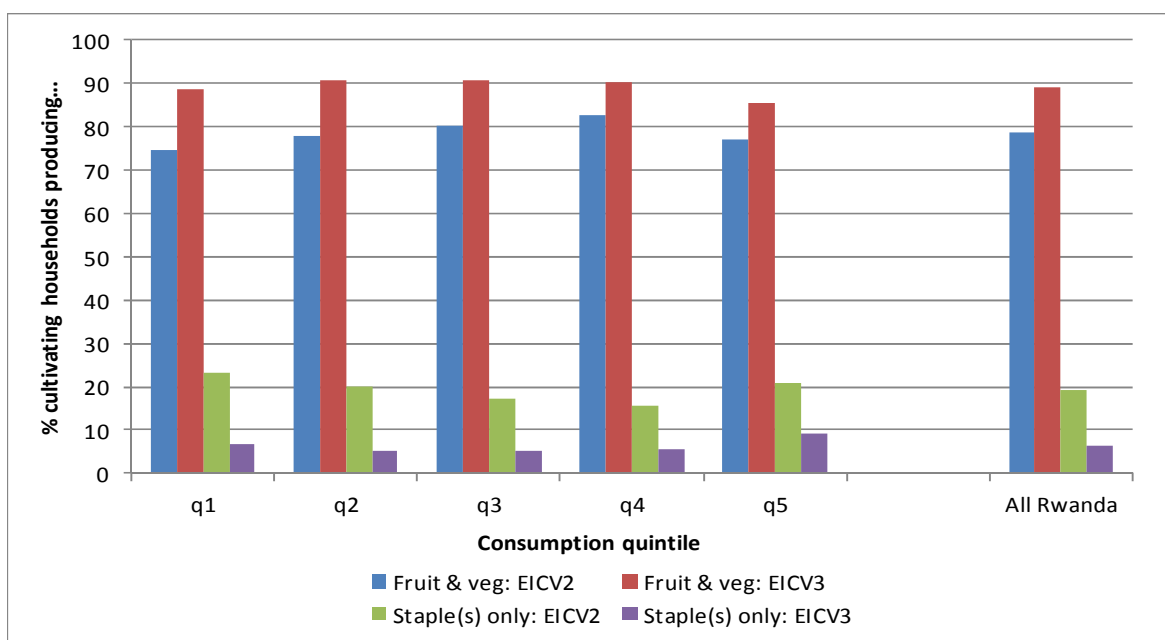


Table 3.1 presents the percentage of cultivating households producing specific staple crops, illustrating the cultivation decisions made by households across different provinces, consumption quintiles and size of cultivated land. An increasing percentage of cultivating households harvest maize, Irish potatoes, cassava leaves and taro; the percentage cultivating sweet potato, beer bananas and sorghum has decreased between surveys.

<sup>14</sup> Staple crops include rice, maize, sorghum, wheat, other grains, cassava for cooking, cassava leaves, yam, sweet potato, Irish potato, taro, soy, peanuts, dry beans, peas, banana fruits, cooking bananas, beer bananas, fresh peas, cabbage, imbwiya and inyabutongo (rengarenga in EICV2).

<sup>15</sup> Fruit and vegetables include mangos, papaya, avocados, pineapples, guava, oranges, tangerines/mandarins, lemons, grapefruits, maracouja, plums, strawberries, fresh beans, green beans, tomatoes, onions, garlic, peppers, squash, zucchini, eggplants, carrots, leeks, lettuce, parsley and mushrooms.



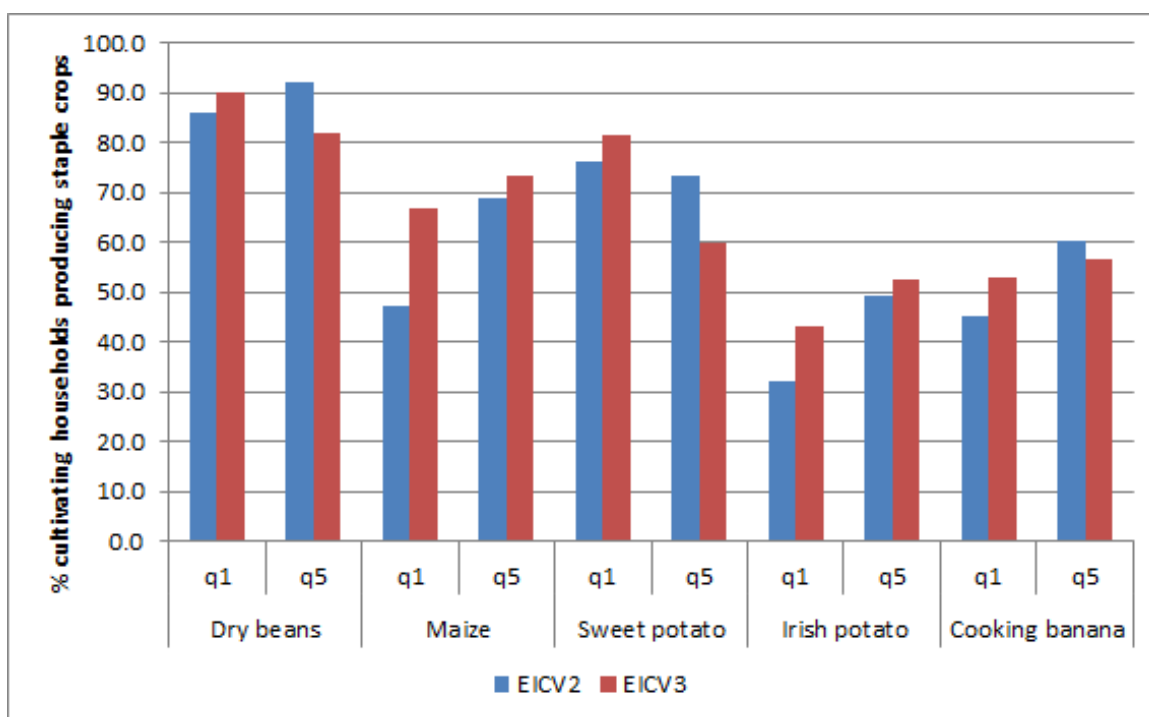
**Table 3.1 Percentage of households cultivating staple crops, by urban/rural, province, quintile and land size**

EICV3	% of cultivating HHsproducing staple crops																						No.of HHs cultivating land for crop production (000s)
	Dry beans	Maize	Inyabutongo	Sweet potato	Irish potato	Cooking banana	Beer banana	Banana fruit	Cassava leaves	Cassava	Sorghum	Taro	Soy	Peas	Peanut	Fresh peas	Cabbage	Imbwija	Wheat	Rice	Yam	Other grains	
All Rwanda	90.3	75.4	78.8	76.3	52.9	59.3	47.9	38.8	55.2	52.3	42.5	41.2	24.5	18.2	16.6	20.6	14.3	13.5	5.7	4.5	4.4	0.8	2,095
Urban	75.3	65.5	78.0	51.5	32.9	51.2	30.3	34.2	53.2	37.4	26.9	29.1	19.8	10.3	8.6	16.8	10.9	13.2	1.1	1.0	1.3	0.0	219
Rural	92.0	76.6	78.9	79.2	55.3	60.3	50.0	39.3	55.4	54.0	44.3	42.6	25.1	19.1	17.5	21.1	14.7	13.6	6.2	4.9	4.8	0.9	1,875
Kigali City	65.4	61.7	77.8	40.7	20.9	53.5	27.9	36.2	47.4	38.2	28.3	30.5	19.3	7.5	10.4	12.2	8.4	3.6	0.4	1.9	0.6	0.0	124
Southern Province	93.1	69.7	69.3	88.0	58.3	58.8	56.4	41.3	57.9	65.7	52.2	53.5	41.3	24.1	17.2	27.3	17.6	27.4	6.6	9.8	5.3	0.4	533
Western Province	85.2	71.6	73.5	73.3	46.5	48.1	49.6	33.1	58.6	36.4	10.3	41.2	20.4	16.3	1.7	19.9	18.1	17.0	6.6	2.5	5.8	0.3	508
Northern Province	95.1	73.0	81.3	77.3	58.1	52.6	41.3	38.6	53.3	33.2	44.1	34.1	7.6	23.1	2.8	20.7	17.0	5.6	12.0	0.8	0.3	1.9	404
Eastern Province	94.3	90.1	91.7	75.1	57.3	77.2	47.7	42.6	52.4	71.9	65.9	36.5	25.8	13.0	42.5	16.4	6.6	4.4	0.2	4.5	6.1	1.0	525
Q1	90.2	66.8	76.1	81.5	43.3	53.0	49.2	31.0	59.9	50.1	40.1	36.3	24.2	13.9	9.1	15.7	11.3	14.9	6.1	3.3	3.9	0.5	376
Q2	92.6	77.0	80.2	81.7	52.5	61.6	51.8	39.6	59.8	56.3	43.7	44.9	27.2	17.1	15.2	19.6	15.0	15.1	6.3	4.6	5.8	0.8	405
Q3	92.8	77.6	79.9	80.8	56.6	62.2	50.8	40.5	56.6	56.2	45.7	45.0	27.6	18.6	18.6	21.3	14.8	13.7	5.6	5.7	4.9	1.1	438
Q4	93.1	81.0	80.5	77.8	58.0	62.0	50.3	44.0	54.6	55.0	46.1	43.8	25.1	20.5	21.2	21.9	15.0	12.8	5.3	5.3	4.6	1.0	467
Q5	82.0	73.2	76.6	59.8	52.5	56.7	37.3	37.5	45.4	42.9	36.0	34.9	18.4	20.2	17.3	24.0	15.1	11.3	5.1	3.2	2.8	0.5	409
<0.3ha	84.3	65.2	74.8	66.7	44.0	47.6	37.7	27.8	51.0	39.1	30.9	32.7	19.8	12.9	8.4	17.4	11.1	15.1	4.6	2.6	2.5	0.4	958
<0.9ha	95.2	82.9	81.7	84.4	58.7	66.6	54.8	45.8	59.7	60.5	49.0	47.1	27.3	21.6	19.9	23.3	16.2	12.6	7.0	5.5	5.5	0.9	787
<3ha	95.4	87.3	83.6	84.1	64.5	74.9	59.8	52.4	56.4	68.9	60.7	50.2	30.9	24.8	30.8	23.2	18.7	11.2	5.9	7.4	6.6	1.9	309
>=3ha	95.5	85.5	79.7	87.5	62.8	76.9	67.1	61.2	57.5	76.1	54.2	56.3	35.7	30.3	37.2	27.3	19.7	13.6	5.4	6.9	11.8	0.5	39

Base: Households cultivating land for crop production. Source: EICV3.

EICV2	% of cultivating households producing staple crops																					No.of HHs cultivating land for crop production (000s)	
	Dry beans	Maize	Rengarenga	Sweet potato	Irish potato	Cooking banana	Beer banana	Banana fruit	Cassava leaves	Cassava	Sorghum	Taro	Soy	Peas	Peanut	Fresh peas	Cabbage	Imbwija	Wheat	Rice	Yam		Other grains
All Rwanda	91.9	61.2	39.7	79.3	44.1	56.4	58.0	34.4	33.9	54.0	53.8	27.1	27.9	18.6	13.5	16.6	9.9	14.7	5.9	3.7	2.5	1.3	1,732
Urban	88.5	53.3	42.4	62.7	27.4	52.3	40.8	28.5	34.0	43.6	47.4	18.3	21.5	9.6	8.1	6.2	7.1	10.2	0.8	0.3	1.2	0.0	173
Rural	92.2	62.0	39.4	81.2	46.0	56.9	59.9	35.0	33.8	55.2	54.5	28.1	28.6	19.6	14.1	17.8	10.2	15.2	6.5	4.0	2.7	1.5	1,559
Kigali City	88.4	65.0	59.9	70.9	21.4	55.2	44.8	36.2	51.3	53.8	54.0	29.6	30.5	10.9	25.4	16.4	5.9	3.8	0.0	1.4	4.9	0.0	75
Southern Province	90.9	42.4	23.8	90.0	38.2	48.9	59.4	22.5	26.3	65.5	57.2	29.5	43.1	20.4	13.6	13.3	11.8	18.9	6.1	6.2	3.2	0.6	480
Western Province	85.8	59.5	24.6	72.5	36.6	44.3	57.5	31.3	31.3	47.1	17.2	24.4	20.9	11.8	2.0	7.9	10.3	14.1	5.5	1.8	3.6	0.9	432
Northern Province	95.8	68.9	54.8	74.7	57.7	57.6	58.8	43.3	39.8	36.5	65.8	26.2	13.6	26.9	2.6	26.6	13.5	10.7	14.4	1.5	0.1	3.9	334
Eastern Province	96.7	77.8	58.4	79.4	52.0	77.1	58.5	43.8	37.4	62.1	78.4	27.3	28.6	18.5	32.3	21.6	5.0	15.8	0.4	4.9	2.1	0.9	412
Q1	86.1	47.3	33.9	76.2	32.3	45.2	54.8	22.4	30.0	44.0	50.2	18.6	24.2	11.8	5.7	11.3	6.1	16.8	6.0	2.5	1.5	1.4	320
Q2	93.7	57.5	37.2	81.4	43.4	54.9	57.3	29.6	31.0	53.1	55.2	23.6	28.2	18.4	12.1	17.1	8.7	14.7	8.3	2.5	2.3	1.3	343
Q3	93.3	63.6	41.2	82.8	47.4	58.0	60.1	36.7	36.2	56.1	54.2	28.6	28.5	20.4	13.0	17.1	10.5	12.9	6.2	3.8	2.7	0.8	358
Q4	93.4	67.1	45.3	82.0	47.3	62.3	61.9	40.9	36.9	59.0	57.3	31.7	33.1	20.4	17.4	18.8	11.4	15.3	5.3	3.7	2.9	1.7	376
Q5	92.2	69.0	40.1	73.5	49.1	60.3	55.1	40.8	34.5	56.7	51.2	32.1	24.8	21.5	18.7	18.4	12.3	14.0	3.8	5.6	3.1	1.5	333
<0.3ha	88.0	50.7	33.1	73.5	35.1	45.7	50.8	25.0	29.5	46.1	40.7	21.0	24.9	13.6	7.0	10.1	7.7	12.8	4.4	2.2	1.7	0.9	722
<0.9ha	93.8	64.9	42.2	83.9	46.4	60.8	61.0	37.1	36.0	59.4	59.8	29.4	29.5	19.3	15.5	19.1	10.3	15.1	6.7	4.2	2.8	1.4	563
<3ha	95.9	73.7	47.5	83.1	56.0	68.6	66.0	45.5	38.0	61.1	67.9	34.2	31.8	25.8	22.7	24.2	13.0	18.0	7.1	5.5	3.5	2.0	372
>=3ha	98.3	74.5	50.5	84.6	58.2	72.3	65.4	52.0	42.3	61.8	69.0	34.7	29.3	29.2	18.8	25.9	12.7	14.3	8.7	5.0	4.6	1.7	62

Base: Households cultivating land for crop production. Source: EICV2.

**Figure 3.2 Selected staple crops, by consumption quintile**

It was estimated that, in EICV2, a far higher percentage of households in the highest consumption quintiles produced maize and Irish potatoes than in the lowest quintile; the above figure suggests that this gap in terms of percentages has decreased over time. Sweet potatoes appear to be preferred by poorer households in both survey rounds, more notably in EICV3.<sup>16</sup>

For popular fruit and vegetables (in terms of the percentage of cultivating households producing them), there appears to be no prominent difference across quintiles; however, households with larger cultivated land sizes may be far more likely to produce certain fruit and vegetables such as avocados. This is also the case for coffee, Rwanda's main export crop.

The overall percentage of cultivating households producing coffee and tea has remained relatively stable between both surveys.

<sup>16</sup> This must be interpreted with caution as it does not say anything about the amount of crop produced.

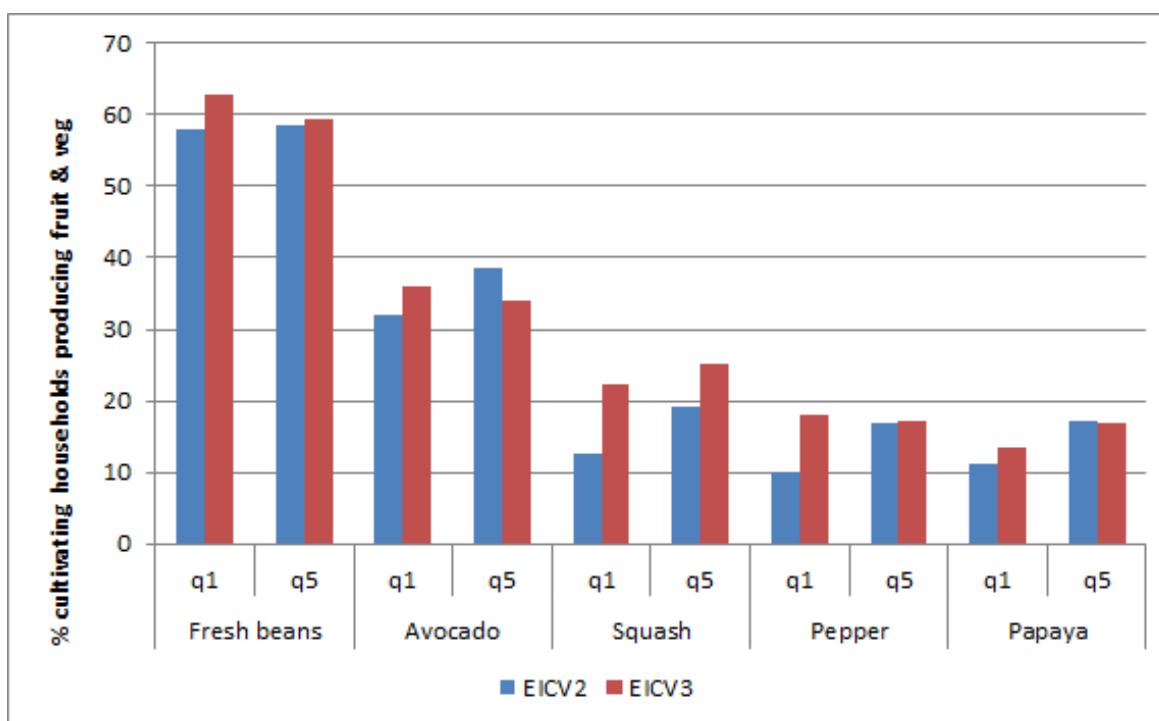
**Table 3.2 Percentage of households cultivating selected fruit and vegetables and export crops, by urban/rural, province, quintile and land size**

EICV3	% of HHs producing selected fruit andveg					% of HHs producing export crops				No. of HHs cultivating land for crop production (000s)
	Fresh beans	Avocado	Squash	Pepper	Papaya	Coffee	Tea	Cane sugar	Sunflower	
All Rwanda	65.8	37.4	26.2	19.4	16.8	10.8	0.9	10.9	6.8	2,095
Urban	55.5	36.1	21.5	18.4	16.3	7.1	0.1	9.5	2.6	219
Rural	67.0	37.6	26.7	19.6	16.8	11.2	1.0	11.1	7.3	1,875
Kigali City	36.6	38.1	19.1	22.6	21.7	2.3	0.0	6.1	0.9	124
Southern Province	60.3	47.1	28.4	19.5	11.9	16.4	1.4	9.2	9.9	533
Western Province	69.8	30.3	24.2	14.6	10.4	14.4	1.8	12.2	0.3	508
Northern Province	70.2	34.0	20.5	11.5	13.6	3.6	0.5	13.4	0.5	404
Eastern Province	71.1	37.1	31.8	29.4	29.1	9.3	0.0	10.7	16.2	525
Q1	62.7	36.1	22.3	17.9	13.4	9.4	0.7	9.9	6.7	376
Q2	68.3	39.2	26.7	21.1	17.0	11.2	1.0	11.5	8.2	405
Q3	68.9	39.2	28.4	21.4	16.9	12.0	1.2	10.9	8.6	438
Q4	68.9	38.4	27.6	19.5	19.2	12.5	0.6	11.8	6.7	467
Q5	59.4	34.0	25.1	17.2	16.9	8.6	1.0	10.2	3.7	409
<0.3ha	63.0	28.1	20.4	15.4	11.0	7.3	0.4	8.5	4.7	958
<0.9ha	68.2	42.2	29.6	22.2	19.6	12.7	1.2	12.8	8.1	787
<3ha	68.9	51.3	33.8	24.0	26.7	15.7	1.5	13.2	9.9	309
>=3ha	65.9	60.4	38.4	28.2	23.8	21.5	2.5	15.1	7.6	39

Base: Households cultivating land for crop production. Source: EICV3

EICV2	% of HHs producing selected fruit andveg					% of HHs producing export crops		No. of HHs cultivating land for crop production (000s)
	Fresh beans	Avocado	Squash	Pepper	Papaya	Coffee	Tea	
All Rwanda	61.6	37.3	17.6	16.0	14.7	11.1	0.7	1,732
Urban	50.5	29.0	9.0	11.6	12.3	9.3	0.1	173
Rural	62.8	38.2	18.5	16.5	15.0	11.3	0.7	1,559
Kigali City	58.8	39.3	18.8	23.2	18.4	6.3	0.0	75
Southern Province	58.6	40.8	10.4	4.3	10.7	13.6	1.1	480
Western Province	39.0	21.9	12.9	7.8	5.3	15.9	1.0	432
Northern Province	67.4	39.4	22.5	15.0	11.8	7.0	0.6	334
Eastern Province	84.6	47.1	26.7	37.9	30.8	7.4	0.1	412
Q1	57.9	32.0	12.6	10.0	11.3	8.6	0.4	320
Q2	60.6	36.1	16.1	14.3	12.7	10.7	0.6	343
Q3	64.7	38.7	19.2	18.2	16.2	11.9	1.0	358
Q4	65.6	40.3	20.2	19.8	15.8	12.9	0.7	376
Q5	58.4	38.6	19.2	16.9	17.2	11.1	0.8	333
<0.3ha	52.6	27.4	11.9	10.7	8.7	9.6	0.5	722
<0.9ha	65.8	40.5	18.2	16.6	15.7	12.4	0.5	563
<3ha	71.9	48.8	26.1	24.5	24.0	11.4	1.3	372
>=3ha	67.4	55.9	28.1	23.8	19.9	17.7	0.3	62

Base: Households cultivating land for crop production. Source: EICV2

**Figure 3.3 Selected fruit and vegetables, by consumption quintile**

The following table presents estimated EICV3 and EICV2 production quantities for staple crops, selected fruit and vegetables, coffee and tea, corresponding to the 12-month period prior to the survey (EICV does not ask for this information on a seasonal basis). It is possible that errors can occur in the estimation of production values and prices in contrast to specialist agricultural surveys, due to the long recall period of the survey.<sup>17</sup>

With the exception of sweet potatoes and beer bananas, the data suggest that the quantities produced of all main staple crops have increased between survey rounds; this trend is roughly in line with that evidenced in MINAGRI data<sup>18</sup> (see Annex A). In addition, the estimated production quantities of the export crops coffee and tea have increased substantially over time.

<sup>17</sup> Loveridge S, Orr A, Murekezi A (2007) Agriculture and Poverty in Rwanda: A Comparative Analysis of the EICV1, EICV2, and LRSS Surveys. In this report it is also recommended that future EICV efforts should place more emphasis on methods to obtain accurate quantity estimates.

<sup>18</sup> MINAGRI Crop Assessment (2011) 2011A Season and 2011B Season.

**Table 3.3 Estimated production values in metric tonnes (MT) 000s**

Crop	EICV3		EICV2	
	Estimated quantity of harvest (MT, 000s)	No. of HHs producing crop (000s)	Estimated quantity of harvest (MT, 000s)	No. of HHs producing crop (000s)
Dry beans	268	1,891	208	1,591
Maize	294	1,580	94	1,059
Sweet potato	1,005	1,599	1,287	1,374
Irish potato	463	1,109	227	764
Cooking cassava	220	1,095	445	977
Cassava for flour	226	873	-	-
Cassava leaves	26	1,156	26	586
Sorghum	167	891	159	931
Wheat	8	119	7	103
Rice	35	94	19	63
Soybeans	13	514	12	483
Peanut	11	347	8	234
Peas	9	382	7	323
Fresh peas	8	440	7	288
Cooking banana	500	1,243	445	977
Beer banana	537	1,004	855	1,004
Banana fruits	117	813	116	595
Colocasia (taro)	95	862	85	469
Yam	7	92	7	44
Cabbage	71	300	63	171
Fresh beans	49	1,379	49	1,066
Avocado	154	784	598	645
Squash	33	548	35	304
Papaya	18	352	25	255
Eggplant (aubergine)	30	349	30	224
Mango	94	295	59	193
Onions	11	253	6	135
Tomato	57	239	66	183
Guava	21	217	12	130
Coffee	25	227	14	193
Tea	33	19	11	12

### 3.2 Crop sales

Commercialisation of crop production overall, as measured by the share of harvest sold, is the highest in Eastern Province (24%) and around 20% in all other provinces outside Kigali City. The overall mean share of harvest sold has increased notably in Northern Province, from 15% in EICV2 to 20% in EICV3. In this province, the mean share of harvest sold for CIP crops has increased from 11% to 16%.<sup>19</sup>

The mean share of harvest sold for fruit and vegetables is a little lower than that of staple crops, and unsurprisingly high for coffee, Rwanda's main export crop. Commercialisation tends to

<sup>19</sup> CIP crops: Maize, wheat, rice, Irish potato, dry beans and cassava.

increase with consumption quintile and land size, though this pattern is more pronounced for staple and CIP crops than for fruit, vegetables and coffee.

**Table 3.4 Mean share of total harvest sold, by urban/rural, province, quintile and land size**

EICV3	Mean share of harvest sold				
	Overall	Staple crops	CIP crops	Fruit andveg	Coffee
All Rwanda	20.9	18.6	14.9	14.9	97.0
Urban	16.2	14.6	10.8	12.9	98.4
Rural	21.5	19.0	15.3	15.1	96.9
Kigali City	16.2	14.8	10.3	15.2	-
Southern Province	20.3	15.9	12.8	19.3	96.4
Western Province	20.0	16.4	13.3	12.2	96.8
Northern Province	20.1	19.0	15.5	17.6	97.7
Eastern Province	24.4	23.9	19.0	11.0	98.0
Q1	14.5	12.4	8.1	11.4	98.1
Q2	18.8	16.2	12.4	15.0	96.3
Q3	21.8	19.0	15.0	16.3	97.4
Q4	24.3	21.6	17.9	16.9	97.0
Q5	24.5	22.9	20.7	13.8	96.4
<0.3ha	15.8	14.0	10.0	11.7	96.9
<0.9ha	23.5	20.6	16.7	16.5	96.9
<3ha	30.0	27.2	23.5	19.4	97.3
>=3ha	31.7	26.9	23.5	18.1	97.4

Note: Mean share is calculated as total sales value over total harvest value for each household. It includes households selling zero crops. Base: Households cultivating land for crop production. Source: EICV3.

EICV2	Mean share of harvest sold				
	Overall	Staple crops	CIP crops	Fruit andveg	Coffee
All Rwanda	16.0	14.2	12.6	14.8	91.2
Urban	14.2	12.9	9.4	17.8	91.4
Rural	16.2	14.3	13.0	14.5	91.2
Kigali City	13.1	11.3	8.3	20.5	86.0
Southern Province	14.9	12.9	12.7	16.7	92.6
Western Province	16.9	13.6	12.7	15.9	91.3
Northern Province	14.5	13.2	10.9	15.8	81.9
Eastern Province	18.2	17.8	14.7	10.8	95.7
Q1	10.7	9.0	6.6	11.4	91.4
Q2	13.7	12.2	10.1	13.2	91.0
Q3	16.6	14.8	13.3	14.1	91.8
Q4	18.2	16.1	14.6	16.8	88.7
Q5	20.9	18.8	18.3	18.1	94.1
<0.3ha	13.5	11.6	9.7	13.8	89.8
<0.9ha	16.9	15.1	13.9	15.4	91.9
<3ha	19.3	17.3	15.7	15.4	92.3
>=3ha	19.7	18.1	17.4	17.2	90.9



Note: Mean share is calculated as total sales value over total harvest value for each household. It includes households selling zero crops. Due to further data cleaning and the subsequent removal of 15 outliers, the estimates for EICV2 have been adjusted relative to those reported in the EICV3 Main Indicators Report. Base: Households cultivating land for crop production. Source: EICV2.

The following table provides more detail on the commercialisation of specific staple crops; rice, beer bananas and sorghum have relatively high shares sold, at 47%, 39% and 32% respectively. The overall selling ratio for all staple crops increased over time with the exception of Irish potatoes, cassava and cassava leaves.

It can be seen that, for the crops just mentioned, the share of harvest sold increases with consumption quintile, although this pattern is not as pronounced for beer bananas. In the lowest consumption quintile, many crops which are grown by a high percentage of cultivating households are hardly being sold at all, such as dry beans and sweet potatoes.

**Table 3.5 Mean share of total harvest sold for staple crops, by urban/rural, province, quintile and land size**

EICV3	Mean share of harvest sold																					
	Dry beans	Maize	Inyabutongo	Sweet potato	Irish potato	Cooking banana	Beer banana	Banana fruit	Cassava leaves	Cassava	Sorghum	Taro	Soy	Peas	Peanut	Fresh peas	Cabbage	Imbwija	Wheat	Rice	Yam	Other grains
All Rwanda	11.4	11.4	1.1	10.2	11.5	12.8	38.8	25.8	1.5	9.0	32.1	7.6	8.6	9.3	18.4	5.8	28.7	2.6	24.9	46.6	5.4	11.1
Urban	8.2	11.0	1.9	14.2	6.5	13.3	41.5	30.9	3.9	10.6	30.3	9.9	9.5	12.2	8.6	7.0	25.4	1.4	36.2	53.5	6.4	
Rural	11.7	11.5	1.0	9.9	11.8	12.7	38.6	25.3	1.3	8.9	32.2	7.4	8.6	9.1	18.9	5.6	29.0	2.7	24.6	46.4	5.4	11.1
Kigali City	7.3	8.2	2.0	16.5	9.1	9.8	41.5	30.9	6.0	11.9	28.9	10.0	7.1	5.2	10.1	12.0	25.9	0.0	24.4	51.4	0.0	
Southern Province	8.3	11.2	1.2	9.8	7.0	12.6	37.0	27.2	0.7	8.0	20.2	7.8	9.1	7.8	17.9	6.3	28.7	3.1	19.3	44.8	6.0	14.9
Western Province	6.4	9.2	1.1	12.3	17.6	12.6	29.4	19.3	1.1	8.5	16.4	6.6	7.3	5.0	23.4	3.0	23.5	2.8	19.6	58.0	3.6	6.9
Northern Province	12.1	8.3	1.8	9.3	16.5	13.0	40.6	30.4	3.9	10.7	29.3	6.0	5.0	17.5	7.7	11.1	36.0	2.2	33.0	17.4	0.0	11.1
Eastern Province	19.0	15.8	0.4	8.8	7.5	13.4	49.2	25.2	0.1	9.2	45.9	9.0	10.0	6.6	19.4	1.7	29.4	0.0	10.1	47.8	6.8	10.9
Q1	7.0	5.8	0.7	3.8	4.8	8.3	37.7	24.2	1.0	4.3	27.6	2.7	5.7	7.0	19.6	7.1	23.3	1.9	15.9	33.8	2.4	10.2
Q2	9.9	8.8	1.3	7.4	8.0	10.6	38.3	26.4	1.2	6.1	29.9	5.1	7.6	8.3	16.3	4.7	28.4	2.8	30.1	49.4	5.0	12.9
Q3	11.4	11.5	1.2	10.2	11.0	13.2	38.0	26.5	1.8	8.4	33.2	6.9	9.2	9.4	16.9	7.1	31.3	3.0	25.3	47.6	5.8	11.3
Q4	13.5	13.7	1.2	12.9	12.7	14.4	38.1	25.8	2.0	12.1	32.3	10.0	10.0	10.7	19.8	5.4	33.5	2.7	24.9	45.7	6.8	9.5
Q5	14.7	16.1	1.0	18.4	18.9	16.5	43.3	25.8	1.6	14.3	37.6	13.1	10.9	9.9	19.4	4.9	24.5	2.6	28.1	54.5	6.7	12.1
<0.3ha	7.6	7.3	1.0	8.2	8.7	10.7	40.9	27.4	1.7	6.5	27.1	5.4	6.8	7.2	16.6	5.5	25.8	2.0	19.3	39.9	3.4	8.5
<0.9ha	12.6	12.0	1.4	10.3	11.8	12.1	38.7	26.2	1.5	9.0	32.6	7.7	9.2	10.0	17.0	6.3	31.1	3.2	28.7	48.5	5.4	11.4
<3ha	17.7	18.5	0.8	14.1	15.7	17.1	35.9	22.8	1.4	12.6	38.8	11.1	10.1	11.2	20.9	5.3	30.2	3.4	26.7	51.4	7.7	12.7
>=3ha	18.2	22.7	0.1	17.9	18.3	22.5	32.6	24.4	0.0	16.0	34.3	13.9	15.0	7.2	26.4	3.1	19.7	4.5	27.3	38.2	5.7	0.0

Note: Mean share is calculated as total sales value over total harvest value for each household cultivating a specific crop. It includes households selling zero crops.

Base: Households cultivating land for crop production. Source: EICV3.

EICV2	Mean share of harvest sold																					
	Dry beans	Maize	Rengarenga	Sweet potato	Irish potato	Cooking banana	Beer banana	Banana fruit	Cassava leaves	Cassava	Sorghum	Taro	Soy	Peas	Peanut	Fresh peas	Cabbage	Imbwija	Wheat	Rice	Yam	Other grains
All Rwanda	7.8	8.0	1.3	7.4	11.5	8.3	19.9	16.9	1.5	12.8	24.0	5.5	7.1	5.3	14.3	3.2	34.3	1.9	20.3	39.5	4.0	5.2
Urban	5.7	9.7	4.0	9.6	7.0	9.3	32.6	26.7	7.7	16.0	18.0	6.4	9.4	4.1	8.1	4.5	45.7	3.2	0.0	38.2	10.3	
Rural	8.0	7.8	1.0	7.2	11.8	8.2	19.0	16.0	0.8	12.5	24.5	5.5	6.9	5.4	14.7	3.2	33.4	1.8	20.6	39.6	3.6	5.2
Kigali City	5.6	7.1	5.2	9.0	7.3	6.2	25.8	19.5	8.6	10.4	18.6	4.7	5.3	4.9	3.4	4.3	33.1	13.6		60.8	0.0	
Southern Province	5.6	9.9	0.8	8.0	8.6	10.3	17.8	21.6	0.9	15.7	15.8	7.6	7.4	4.0	17.7	5.7	35.2	2.5	14.8	39.3	5.2	4.6
Western Province	4.9	9.2	0.9	8.6	21.2	8.8	18.6	13.4	0.6	12.8	14.4	7.0	6.0	4.3	16.6	1.2	30.2	2.8	14.9	73.0	3.2	2.1
Northern Province	5.8	4.7	1.9	6.5	12.3	7.0	18.1	12.8	2.7	10.9	24.4	2.4	4.5	8.4	11.1	3.6	36.0	1.1	26.8	25.4	0.0	5.8
Eastern Province	15.2	8.3	0.5	6.0	6.6	7.5	24.5	19.5	0.1	10.6	34.0	4.2	8.5	4.2	14.2	1.7	37.5	0.0	2.5	30.0	5.0	7.0
Q1	3.4	5.2	0.7	2.9	6.7	7.5	18.8	18.9	1.0	7.4	21.1	3.7	4.0	4.3	18.5	4.3	30.7	0.9	16.4	32.8	1.0	2.9
Q2	5.9	5.9	0.6	5.4	10.5	7.9	22.7	17.8	1.7	9.6	22.4	3.2	6.2	4.6	13.1	3.0	35.7	1.8	22.0	31.8	2.0	5.2
Q3	8.9	8.2	1.7	7.2	11.8	7.3	18.4	15.0	1.2	12.6	25.4	6.1	7.6	3.9	16.4	1.6	35.9	3.0	15.1	40.1	6.1	9.6
Q4	8.9	8.8	0.9	8.9	11.9	8.5	20.4	16.5	1.5	14.7	24.2	6.6	7.9	6.7	14.7	3.0	34.5	2.1	23.9	37.2	3.5	8.0
Q5	11.6	10.7	2.5	12.6	14.9	10.0	19.3	17.4	2.2	17.9	26.6	6.6	8.9	6.6	11.9	4.7	33.3	1.7	25.4	47.8	5.4	0.4
<0.3ha	5.4	7.6	1.1	6.6	10.3	8.1	22.4	17.9	2.5	10.8	21.8	4.1	4.6	6.2	15.1	5.1	31.0	2.6	22.4	40.4	4.3	13.7
<0.9ha	8.4	8.1	1.3	7.8	12.0	7.8	18.6	16.9	1.0	13.5	24.1	5.8	9.1	3.6	15.3	2.7	36.4	1.7	17.3	38.7	3.6	1.8
<3ha	10.8	8.6	1.4	8.0	11.6	8.7	18.4	15.5	0.5	14.0	26.2	6.2	7.4	5.0	13.2	1.6	36.9	1.3	21.1	38.1	4.3	1.6
>=3ha	11.6	7.1	2.0	9.0	16.2	9.7	17.6	17.6	3.6	17.4	25.5	9.3	11.4	13.5	10.6	7.7	26.9	0.0	26.1	46.2	3.2	0.0

Note: Mean share is calculated as total sales value over total harvest value for each household cultivating a specific crop. It includes households selling zero crops.

Base: Households cultivating land for crop production. Source: EICV2.

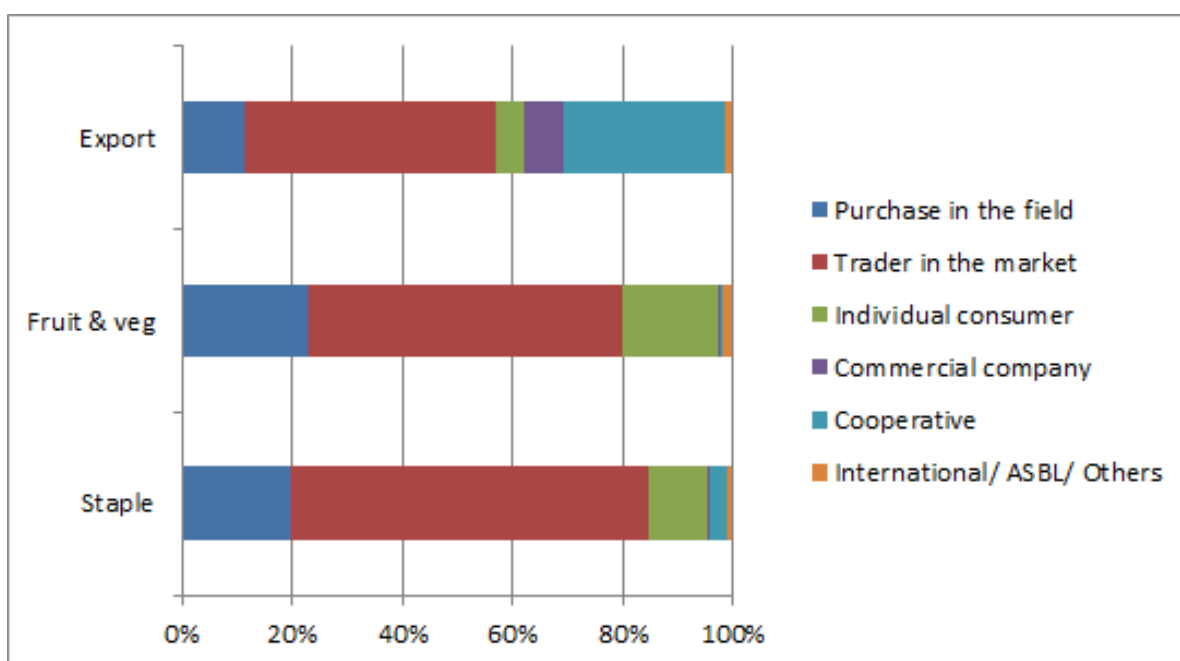
For both small- and large-scale crops, the EICV3 survey asked cultivating households to state the principal markets for the crops they sold over the last 12 months; the data suggest that, for all types of crops, 'traders in the market' are the most likely to buy the crops, especially staple crops. 'Purchases in the field' tend to occur most often for fruit and vegetables, while commercial companies and cooperatives are notable for buying export crops.

**Table 3.6 Principal market for sold crops, by crop type**

EICV3	Principal market						Total	No. of HHs selling crop(s) (000s)
	Purchase in the field	Trader in the market	Individual consumer	Commercial company	Cooperative	International/ ASBL/ Others		
Staple	19.7	65.3	10.6	0.3	3.1	1.1	100.0	1,650
Fruit and veg	23.0	56.9	17.6	0.4	0.3	1.8	100.0	756
Export	11.3	45.7	5.1	7.3	29.4	1.2	100.0	299

Note: Export crops include coffee, tea, cane sugar and sunflowers.  
Base: Households selling crops. Source: EICV3.

**Figure 3.4 Principal market for sold crops, by crop type**



Looking at staple and export crops on an individual basis, individual consumers are notable for buying sweet potatoes, cooking bananas and cassava for cooking, whilst rice and coffee are popular with cooperatives.

**Table 3.7 Principal market for sold crops, staple and export crops**

EICV3	Principal market						Total	No. of HHs selling crop type (000s)
	Purchase in the field	Trader in the market	Individual consumer	Commercial company	Cooperative	International/ ASBL/ Others		
Dry beans	2.9	85.0	11.4	0.2	0.1	0.4	100.0	648
Maize	13.9	65.2	15.3	0.3	4.7	0.6	100.0	421
Inyabutongo	20.3	52.7	23.5	0.0	0.0	3.5	100.0	42
Sweet potato	14.0	56.1	28.8	0.1	0.1	1.0	100.0	553
Irish potato	17.6	62.4	18.7	0.1	0.6	0.7	100.0	295
Cooking banana	32.4	44.8	20.5	0.1	0.4	1.7	100.0	380
Beer banana	59.6	29.4	3.0	0.4	5.6	1.9	100.0	521
Banana fruit	33.6	50.8	12.9	0.3	1.5	1.0	100.0	351
Cassava leaves	33.4	46.3	16.0	0.3	0.0	4.0	100.0	39
Cassava	18.0	53.1	27.7	0.0	0.1	1.3	100.0	264
Sorghum	3.8	90.2	5.2	0.4	0.1	0.3	100.0	513
Taro	12.6	55.1	31.3	0.1	0.0	1.0	100.0	151
Soy	2.2	75.4	19.5	0.0	2.3	0.6	100.0	107
Peas	2.6	78.5	18.0	0.3	0.4	0.2	100.0	72
Peanut	2.7	85.9	10.1	0.2	0.0	1.1	100.0	132
Fresh peas	5.5	74.8	15.7	0.9	0.0	3.1	100.0	36
Cabbage	23.3	54.8	19.0	0.1	0.2	2.7	100.0	142
Imbwija	16.5	42.7	39.7	0.0	0.0	1.2	100.0	14
Wheat	1.0	86.9	8.9	0.0	0.5	2.7	100.0	56
Rice	3.7	41.3	10.2	1.4	43.4	0.0	100.0	73
Yam	23.9	39.8	36.3	0.0	0.0	0.0	100.0	12
Coffee	7.5	49.2	0.2	6.7	35.1	1.2	100.0	224
Tea	0.0	4.5	0.0	38.7	56.0	0.8	100.0	18
Cane sugar	36.4	39.2	21.5	0.9	0.0	2.0	100.0	53
Ibihwagari (sunflower)	2.8	61.3	34.9	0.0	1.1	0.0	100.0	14

Base: Households selling crops. Source: EICV3.

The following table looks at the mean share of harvest sold for CIP crops where cultivating households have been affected by land-use consolidation or have at least one parcel of land which has been irrigated or protected against erosion. The data suggest that, overall, cultivating households affected by these policies/practices have higher mean shares of harvest sold.

This also seems to be the case for most CIP crops, although estimates for wheat and rice should be treated with caution due to the small sample sizes (only 6% and 4.5% of cultivating households harvest these crops respectively).

**Table 3.8 Mean share of total harvest sold, by whether cultivated land has been affected by land-use consolidation, irrigated or protected against soil erosion**

EICV3		Mean share of harvest sold							
		Overall	CIP crops	Maize	Wheat	Rice	Irish potato	Dry beans	Cassava
All Rwanda		20.9	14.9	11.4	24.9	46.6	11.5	11.4	9.0
At least one cultivated land parcel affected by land-use consolidation	No	19.8	13.2	9.6	24.3	45.1	10.1	10.7	8.9
	Yes	24.9	20.8	16.7	26.0	47.5	15.8	13.5	9.6
At least one cultivated land parcel irrigated	No	20.2	14.1	10.7	*	42.2	11.6	11.3	9.0
	Yes	27.8	22.4	17.4	*	48.9	9.9	11.8	9.1
At least one cultivated land parcel protected against soil erosion	No	16.6	12.7	10.3	*	*	12.1	11.0	7.0
	Yes	21.8	15.3	11.6	*	*	11.4	11.4	9.2

Note: Mean share is calculated as total sales value over total harvest value for each household cultivating a specific crop. It includes households selling zero crops. \* indicates that sample size is too small for reliable estimate. Base: Households cultivating land for crop production. Source: EICV3.

Table 3.9 provides a breakdown of the mean share of harvest sold by access to nearest services; it appears that there are no noteworthy differences between households which are remote in terms of time taken to walk to the nearest market/shop or all-weather road and those living closer.

**Table 3.9 Mean share of total harvest sold, by walking distance to services<sup>20</sup>**

EICV3	Nearest market/shop	Nearest all-weather road
0–14 min	22.4	21.4
15–29 min	21.4	19.3
30–59 min	20.8	20.1
60–119 min	21.0	19.9
>=120 min	19.7	23.1

Note: Mean share is calculated as total sales value over total harvest value for each household cultivating a specific crop. It includes households selling zero crops. Base: Households cultivating land for crop production. Source: EICV3.

<sup>20</sup> One-way trip.

### 3.3 Expenditure on inputs for crop production

Table 3.10 shows the proportion of cultivating households which purchased agricultural inputs. It should be noted that EICV does not collect data on usage; therefore, the purchase of inputs may not necessarily reflect usage as households may have used an input and not paid for it. For example, the CIP or other government programmes which distributed any fertiliser free of charge will not count in the data presented below. In addition, EICV does not collect data on the fertiliser *quantities* used or on mechanisation.

The percentage of cultivating households incurring expenditure on sacks and packing increased from 37% to 48% between surveys. This is an indicator of commercialisation of production, since sacks and packaging are purchased primarily if selling is intended.

A high increase over time can be observed for the percentage of cultivating households purchasing chemical fertilisers (11% to 29% of households). The percentage of cultivating households incurring expense on insecticides has also increased; 31% of cultivating households purchased them compared to 24% in EICV2.

The purchase of irrigation systems/drainage is low in both survey rounds; EICV3 estimates that only 3% of cultivated land on a national level is irrigated (see Table 2.4).

**Table 3.10 Percentage of households purchasing agricultural inputs, by urban/rural, province, quintile and land size**

EICV3	Inputs for agricultural production						No. of HHs cultivating land for crop production (000s)
	Improved seeds	Sacks and packing	Organic fertilisers	Chemical fertilisers	Insecticides	Irrigation/drainage fees	
All Rwanda	18.8	48.2	9.3	28.9	30.5	0.7	2,095
Urban	15.9	25.8	7.0	16.2	18.5	0.4	219
Rural	19.1	50.8	9.6	30.4	31.9	0.8	1,875
Kigali City	10.1	17.6	5.1	10.7	19.3	0.8	124
Southern Province	22.7	39.1	9.7	26.2	25.2	0.6	533
Western Province	18.6	37.4	10.4	37.3	28.4	0.4	508
Northern Province	26.4	49.2	14.8	39.0	36.5	0.4	404
Eastern Province	11.1	74.4	4.7	20.2	36.0	1.5	525
Q1	14.7	34.4	5.9	18.8	15.6	0.1	376
Q2	17.6	48.2	6.5	27.6	26.2	0.6	405
Q3	17.8	52.4	9.4	31.1	33.1	0.6	438
Q4	20.7	55.5	11.1	33.9	37.9	1.1	467
Q5	22.5	48.0	13.2	31.5	37.2	1.1	409
<0.3ha	15.9	33.0	7.8	21.7	19.9	0.2	958
<0.9ha	20.6	57.2	9.9	33.5	35.4	0.9	787
<3ha	22.1	70.0	12.1	38.3	48.0	1.8	309
>=3ha	26.5	67.6	13.8	41.5	53.3	0.3	39

Base: Households cultivating land for crop production. Source: EICV3.



EICV2	Inputs for agricultural production					No. of HHs cultivating land for crop production (000s)
	Sacks and packing	Organic fertilisers	Chemical fertilisers	Insecticides	Irrigation/ drainage fees	
All Rwanda	36.5	7.0	11.0	24.4	1.6	1,732
Urban	16.9	5.4	5.1	17.5	0.6	173
Rural	38.7	7.2	11.7	25.2	1.7	1,559
Kigali City	28.9	5.8	7.6	23.2	1.4	75
Southern Province	27.9	8.4	12.1	20.6	0.8	480
Western Province	23.7	7.2	14.1	22.8	1.4	432
Northern Province	42.5	9.2	12.9	27.2	2.3	334
Eastern Province	56.7	3.6	5.6	28.7	2.2	412
Q1	21.0	2.9	6.2	9.7	0.9	320
Q2	32.0	7.0	7.9	18.4	0.3	343
Q3	39.8	6.6	10.6	25.7	1.8	358
Q4	43.8	7.9	12.7	29.0	1.7	376
Q5	44.5	10.3	17.3	38.3	3.2	333
<0.3ha	24.9	6.7	10.0	17.7	0.9	722
<0.9ha	41.1	7.9	11.1	27.3	1.7	563
<3ha	49.8	6.2	12.3	31.8	2.2	372
>=3ha	51.7	8.4	13.8	32.3	4.9	62

Base: Households cultivating land for crop production. Source: EICV2.

### 3.4 Processing of crops

55% and 59% of all households were engaged in some sort of processing activity in EICV2 and EICV3 respectively.

Table 3.11 presents the different types of agricultural processing activities that households are engaged in. Maize flour processing increased from 31% to 46% of households engaged in processing. In contrast, sorghum flour processing decreased from 58% to 47% of processing households. Production of beers decreased between surveys from 62% to 49% of households engaged in processing.

**Table 3.11 Percentage of households engaged in different types of processing, by urban/rural and province**

EICV3	% of HHs engaged in different processing activities				No. of HHs engaged in processing (000s)
	Maize flour	Sorghum flour	Banana juice	Beer (local or sorghum)	
All Rwanda	45.6	47.3	30.9	48.5	1,317
Urban	27.1	31.9	21.0	31.9	115
Rural	47.4	48.8	31.9	50.1	1,201
Kigali City	20.4	39.9	22.2	40.3	72
Southern Province	21.2	51.0	35.3	59.0	338
Western Province	37.4	18.3	37.6	35.8	294
Northern Province	50.4	53.8	25.3	48.0	210
Eastern Province	74.1	63.5	26.9	50.7	401

Base: Households engaged in processing. Source: EICV3.

EICV2	% of HHs engaged in different processing activities				No. of HHs engaged in processing (000s)
	Maize flour	Sorghum flour	Banana juice	Beer (banana or sorghum)	
All Rwanda	31.2	57.5	34.2	62.1	1,045
Urban	27.2	49.5	19.8	38.3	101
Rural	31.6	58.3	35.7	64.7	944
Kigali City	19.2	69.2	34.9	58.0	47
Southern Province	11.1	50.1	29.5	64.9	298
Western Province	29.1	20.5	37.0	49.0	203
Northern Province	27.7	69.3	30.9	64.9	169
Eastern Province	54.6	79.5	38.3	66.9	325

Base: Households engaged in processing. Source: EICV2.

## 4 Livestock

In addition to crops, livestock is another important source of income and food for agricultural households.

### 4.1 Raising/owning livestock

68% of all households in Rwanda raise some type of livestock, which is a slight decline since EICV2 when 71% of households raised livestock.

In both EICV2 and EICV3, consumption quintiles 2 to 4 have the highest percentage of households raising livestock; for consumption quintiles 4 and 5, the percentage raising livestock has dropped notably over time.

**Table 4.1 Percentage of households raising livestock over the last 12 months, by urban/rural, province and quintile**

	EICV2			EICV3		
	% of HHs raising livestock	No. of HHs raising livestock (000s)	Total no. of HHs (000s)	% of HHs raising livestock	No. of HHs raising livestock (000s)	Total no. of HHs (000s)
All Rwanda	71.3	1,349	1,892	68.2	1,536	2,253
Urban	47.2	146	311	41.2	136	331
Rural	76.1	1,203	1,581	72.8	1,399	1,922
Kigali City	40.6	72	177	34.5	77	223
Southern Province	75.3	376	499	73.1	401	549
Western Province	73.2	327	448	69.2	365	528
Northern Province	73.7	255	347	76.1	312	411
Eastern Province	75.6	318	421	70.1	379	542
Q1	63.6	209	329	65.8	251	381
Q2	73.8	261	353	72.4	300	415
Q3	77.9	286	368	75.4	337	448
Q4	78.2	311	398	72.9	357	490
Q5	63.5	282	444	56.0	290	519

Base: Total number of households. Source: EICV2 and EICV3.

Goats, cattle and chickens are the most commonly raised types of livestock in both surveys. In EICV3, Northern Province had the highest percentage of households raising cattle and sheep while Southern Province had the highest percentage of households raising goats.

The raising of cattle increased across all provinces over time, with notable increases in the Western, Northern and Eastern provinces, while in Southern Province the percentage increased only a little.

The percentage of households raising sheep and goats has decreased between surveys.

**Table 4.2 Percentage of households raising different types of livestock over the last 12 months, by urban/rural, province and quintile**

EICV3	% of HHs raising livestock, by type							No. of HHs raising livestock (000s)
	Cattle	Sheep	Goats	Pigs	Rabbits	Chickens	Other livestock and poultry	
All Rwanda	47.3	15.7	53.0	24.1	22.9	45.5	10.2	1,536
Urban	40.0	5.3	47.4	14.8	18.4	50.2	6.8	136
Rural	48.0	16.7	53.5	25.0	23.3	45.0	10.5	1,399
Kigali City	41.2	5.4	46.2	4.5	17.2	53.4	4.9	77
Southern Province	47.1	7.2	56.4	37.6	29.7	45.6	10.8	401
Western Province	42.5	19.9	50.4	25.1	23.2	36.5	15.5	365
Northern Province	57.8	35.8	39.3	20.3	25.9	39.7	10.6	312
Eastern Province	44.6	6.2	64.5	15.8	14.1	57.3	5.1	379
Q1	32.5	13.1	47.2	22.9	25.8	37.4	14.6	251
Q2	41.4	15.4	55.4	27.6	25.5	44.1	11.7	300
Q3	47.3	16.4	54.7	25.5	22.1	46.8	9.8	337
Q4	54.4	16.9	56.1	24.3	22.7	47.6	9.4	357
Q5	57.6	16.0	49.6	19.5	18.7	49.9	6.1	290

Base: Households raising livestock. Source: EICV3.

EICV2	% of HHs raising livestock, by type							No. of HHs raising livestock (000s)
	Cattle	Sheep	Goats	Pigs	Rabbits	Chickens	Other livestock and poultry	
All Rwanda	34.4	19.1	64.5	22.9	14.5	48.0	7.9	1,349
Urban	34.1	8.8	62.5	15.6	10.8	47.8	6.9	146
Rural	34.4	20.3	64.8	23.7	14.9	48.0	8.0	1,203
Kigali City	36.4	7.9	65.5	7.5	7.6	50.0	7.6	72
Southern Province	42.6	12.8	61.8	41.2	21.7	50.9	5.2	376
Western Province	28.8	23.1	62.6	24.0	16.4	45.9	11.0	327
Northern Province	37.8	40.2	54.0	13.8	14.3	38.1	7.7	255
Eastern Province	27.2	7.8	78.0	10.7	5.7	54.3	8.3	318
Q1	16.9	16.2	57.5	24.1	16.4	39.3	8.5	209
Q2	27.7	19.9	65.6	24.6	16.4	44.4	7.7	261
Q3	34.0	20.6	66.5	24.4	15.3	46.9	7.8	286
Q4	39.3	19.4	67.4	22.7	14.5	52.3	8.2	311
Q5	48.5	18.3	63.6	18.9	10.5	54.1	7.5	282

Base: Households raising livestock. Source: EICV2.

Since the possibility exists that a household may not actually own the livestock which it raises (i.e. it may raise livestock for another household), EICV also collects data on ownership.

In both surveys, the percentage of households actually owning some/all of the livestock which they raise is very high (94% in EICV2 and 91% in EICV3), but it has declined slightly over time; this could suggest that there is a slow trend for households to raise livestock for other households.

**Table 4.3 Percentage of households currently owning any of the livestock which they raised over the last 12 months, by urban/rural, province and quintile**

EICV3	% of HHs owning livestock, by type						Overall %*	No. of HHs raising livestock (000s)
	Cattle	Sheep	Goats	Pigs	Rabbits	Chickens		
All Rwanda	92.1	82.7	85.8	78.4	66.2	80.1	91.4	1,536
Urban	92.9	70.7	88.4	85.4	65.1	78.0	87.8	136
Rural	92.1	83.1	85.6	78.0	66.3	80.4	91.7	1,399
Kigali City	95.8	74.3	92.1	91.3	75.7	76.8	87.0	77
Southern Province	94.0	82.1	85.2	79.4	65.2	82.2	92.5	401
Western Province	90.7	82.7	85.1	83.1	64.9	82.2	91.9	365
Northern Province	92.3	82.5	88.5	76.6	67.6	82.6	92.2	312
Eastern Province	90.6	86.1	84.6	69.9	66.0	76.4	89.9	379
Q1	92.3	82.4	84.9	79.2	65.7	77.7	89.6	251
Q2	92.4	83.6	84.6	80.1	65.3	82.2	90.6	300
Q3	90.9	80.5	85.1	76.2	67.5	80.2	91.1	337
Q4	92.1	83.2	86.4	77.9	65.4	79.8	92.8	357
Q5	93.1	84.2	87.9	79.4	67.4	80.1	92.3	290

Base: Households raising livestock. Source: EICV3.\* Overall includes other livestock/poultry.

EICV2	% of HHs owning livestock, by type						Overall %	No. of HHs raising livestock (000s)
	Cattle	Sheep	Goats	Pigs	Rabbits	Chickens		
All Rwanda	95.0	90.4	90.3	84.7	77.7	87.7	93.6	1,349
Urban	98.3	85.9	92.1	92.3	81.0	88.4	93.6	146
Rural	94.6	90.6	90.0	84.1	77.4	87.7	93.7	1,203
Kigali City	97.3	84.3	93.2	78.8	80.0	90.4	93.9	72
Southern Province	96.0	88.4	92.5	86.3	76.8	90.7	94.9	376
Western Province	95.3	93.0	89.0	85.4	77.4	86.9	93.2	327
Northern Province	95.5	90.4	92.5	87.3	77.7	90.9	96.4	255
Eastern Province	91.4	87.3	87.4	74.1	81.5	82.9	90.5	318
Q1	91.3	90.6	90.6	86.7	76.9	88.9	92.8	209
Q2	94.9	91.4	89.9	86.4	82.5	87.1	93.4	261
Q3	94.6	89.9	92.2	81.3	73.8	89.8	94.1	286
Q4	97.0	89.9	89.1	86.0	74.9	85.6	93.6	311
Q5	94.4	90.2	89.7	83.5	81.4	88.1	94.1	282

Base: Households raising livestock. Source: EICV2.\* Overall includes other livestock/poultry.

The surveys asked only households which own livestock if they stable all/some of their livestock. Eastern Province has experienced a notable overall increase in stabling livestock; the largest increases over time are for households in consumption quintiles 1 and 2, which are stabling their cattle.

**Table 4.4 Percentage of households stabling livestock, by urban/rural, province and quintile**

EICV3	% of HHs stabling livestock, by type				Overall %	No. of HHs owning cattle/sheep/goats/pigs (000s)
	Cattle	Sheep	Goats	Pigs		
All Rwanda	91.9	67.1	48.8	94.2	78.6	1,210
Urban	93.6	58.8	44.8	92.9	76.6	95
Rural	91.7	67.4	49.1	94.3	78.8	1,116
Kigali City	94.1	46.2	40.6	-	74.2	52
Southern Province	96.4	57.1	34.0	94.5	80.3	320
Western Province	89.3	55.7	51.7	97.9	77.1	285
Northern Province	95.1	80.9	79.4	99.1	90.2	262
Eastern Province	85.0	53.0	45.6	81.1	68.7	292
Q1	93.5	71.1	44.3	93.0	75.0	176
Q2	94.5	59.6	41.5	94.1	75.6	234
Q3	92.6	67.0	49.4	94.7	79.2	270
Q4	91.7	69.1	51.7	94.3	80.6	297
Q5	88.7	69.5	55.8	94.7	81.3	234

Base: Households owning cattle, sheep, goats or pigs. Source: EICV3.

EICV2	% of HHs stabling livestock, by type				Overall %	No. of HHs owning cattle/sheep/goats/pigs (000s)
	Cattle	Sheep	Goats	Pigs		
All Rwanda	74.2	52.4	35.3	87.6	60.7	1,119
Urban	77.3	58.6	34.2	92.8	57.4	118
Rural	73.8	52.1	35.4	87.2	61.0	1,001
Kigali City	83.9	60.3	46.7	-	64.9	58
Southern Province	65.7	34.1	24.4	83.1	62.5	318
Western Province	84.7	51.3	44.6	95.3	67.1	264
Northern Province	90.0	64.5	49.5	96.4	71.2	226
Eastern Province	57.4	37.9	27.5	78.1	41.1	253
Q1	70.9	58.5	30.4	78.9	54.1	158
Q2	67.9	53.9	33.4	85.9	57.6	216
Q3	78.7	47.5	36.0	91.3	61.6	244
Q4	74.7	49.1	34.2	90.8	61.1	267
Q5	74.9	56.2	40.8	89.4	66.4	234

Base: Households owning cattle, sheep, goats or pigs. Source: EICV2.

The overall percentage of livestock-raising households which use a maintained pasture is very small in both surveys but has doubled over time, from 1% in EICV2 to 2% in EICV3. This increase appears to have been driven by richer households (in consumption quintiles 4 and 5).

**Table 4.5 Percentage of households using a maintained pasture, by urban/rural, province and quintile**

	EICV2		EICV3	
	% of HHs using maintained pasture	No. of HHs raising livestock (000s)	% of HHs using maintained pasture	No. of HHs raising livestock (000s)
All Rwanda	0.9	1,349	1.8	1,536
Urban	2.8	146	3.5	136
Rural	0.6	1,203	1.6	1,399
Kigali City	3.4	72	4.8	77
Southern Province	0.3	376	0.3	401
Western Province	0.9	327	1.7	365
Northern Province	0.9	255	0.5	312
Eastern Province	0.9	318	3.9	379
Q1	0.4	209	0.2	251
Q2	0.5	261	0.3	300
Q3	0.2	286	0.7	337
Q4	0.7	311	1.5	357
Q5	2.4	282	6.3	290

Base: Households raising livestock. Source: EICV2 and EICV3.

## 4.2 Sale of livestock products

The percentage of livestock-raising households selling any livestock product has increased from 23% to 30% over time. Eggs are more likely to be sold than other products; this has been the case in both survey rounds. The overall percentage of livestock-raising households selling this product has remained at a similar level over time (16% in EICV2 and 18% in EICV3), although with a notable increase in Eastern Province.

Richer livestock-raising households are more likely to sell dairy products, in particular fresh milk. There has been a large increase in the percentage of Kigali households selling this product, from 7.5% in EICV2 to 15% in EICV3.

The percentage of households selling animal meat is very low in EICV3, estimated at around 3% of livestock-raising households nationally.

**Table 4.6 Percentage of households selling livestock products, by urban/rural, province and quintile**

EICV3	Livestock product								% of HHs producing any livestock product	No. of HHs raising livestock (000s)
	Fresh milk	Curdled/sour milk	Butter	Cheese	Eggs	Manure	Hides and skins	Meat from animals <sup>21</sup>		
All Rwanda	9.4	2.0	0.3	0.0	18.3	4.1	1.0	2.8	30.6	1,536
Urban	13.5	1.5	0.0	-	15.4	3.9	0.5	1.5	29.0	136
Rural	9.0	2.1	0.4	-	18.6	4.1	1.0	3.0	30.8	1,399
Kigali City	15.1	0.9	0.0	-	16.7	5.1	0.0	2.0	31.3	77
Southern Province	8.8	2.4	0.2	-	21.7	3.3	1.0	3.7	33.5	401
Western Province	6.8	2.6	0.0	-	14.6	3.6	0.9	3.6	26.1	365
Northern Province	10.7	1.4	0.1	-	16.8	7.4	0.5	1.9	31.3	312
Eastern Province	10.2	1.9	1.1	-	20.0	2.6	1.5	2.2	31.3	379
Q1	4.1	0.8	0.2	-	14.8	3.5	0.3	1.8	22.4	251
Q2	5.9	2.0	0.1	-	19.2	3.7	0.9	2.4	28.6	300
Q3	7.9	1.9	0.2	-	20.8	4.3	0.9	2.5	31.7	337
Q4	11.8	2.9	0.2	-	20.8	4.5	1.1	3.3	34.7	357
Q5	16.1	2.3	1.0	-	14.6	4.3	1.4	4.0	33.7	290

Base: Households raising livestock. Source: EICV3.

EICV2	Livestock product								% of HHs producing any livestock product	No. of HHs raising livestock (000s)
	Fresh milk	Curdled/sour milk	Butter	Cheese	Eggs	Manure	Hides and skins			
All Rwanda	5.6	1.1	0.3	0.0	16.3	1.7	2.5		23.0	1,349
Urban	7.6	0.6	0.5	-	16.8	2.3	1.6		25.7	146
Rural	5.3	1.2	0.3	-	16.3	1.7	2.6		22.7	1,203
Kigali City	7.5	1.9	0.2	-	18.6	0.9	1.4		24.6	72
Southern Province	8.0	1.4	0.1	-	20.6	1.5	0.8		27.0	376
Western Province	2.8	1.3	0.1	-	12.2	1.6	2.5		17.7	327
Northern Province	4.1	0.7	0.7	-	16.4	3.5	2.7		22.8	255
Eastern Province	6.4	0.9	0.5	-	14.9	0.9	4.5		23.8	318
Q1	1.5	0.2	0.2	-	10.7	0.9	0.6		12.8	209
Q2	3.3	0.4	0.1	-	13.6	1.6	1.5		17.6	261
Q3	4.3	1.5	0.4	-	18.2	1.6	2.5		24.9	286
Q4	7.3	0.9	0.4	-	21.0	2.5	3.1		29.5	311
Q5	10.0	2.4	0.6	-	15.8	1.8	4.0		26.7	282

Base: Households raising livestock. Source: EICV2.

<sup>21</sup> This category does not include the sale of live animals which are sold for the purpose of eventual meat production.



A small proportion of households stated that they sold 'other' agricultural products, at 8% and 14% of all households in EICV2 and EICV3, respectively.<sup>22</sup> The following table presents the percentage of those households which sold honey and fish; the percentage selling honey dropped from 21% to 7% of those households obtaining other agricultural income, while the percentage selling fish has remained at the same level.

**Table 4.7 Percentage of households selling honey and fish, by urban/rural, province and quintile**

	EICV2			EICV3		
	% of HHs selling honey	% of HHs selling fish	No. of HHs obtaining other agricultural income (000s)	% of HHs selling honey	% of HHs selling fish	No. of HHs obtaining other agricultural income (000s)
All Rwanda	20.6	3.7	143	7.1	3.7	314
Urban	9.0	1.3	12	5.2	1.7	26
Rural	21.7	3.9	131	7.3	3.9	288
Kigali City	19.8	2.2	7	4.2	3.4	15
Southern Province	20.7	3.0	42	6.8	2.1	95
Western Province	24.5	3.2	31	6.9	2.2	72
Northern Province	19.2	2.1	21	5.1	0.6	54
Eastern Province	18.6	5.8	42	9.7	9.3	78
Q1	16.9	1.6	14	7.6	6.7	42
Q2	32.2	4.0	23	9.0	3.7	57
Q3	21.4	1.4	32	8.1	3.1	67
Q4	24.1	7.1	36	6.6	3.6	80
Q5	11.1	2.9	38	5.0	2.5	67

Base: Households obtaining other agricultural income. Source: EICV2 and EICV3.

### 4.3 Expenditure on livestock services/products

The percentage of households raising livestock which have incurred expenditure on their livestock during the survey period has increased from 55% in EICV2 to 69% in EICV3; the poorest households have experienced the largest overall increase over time (from 33% to 54%). The type of expenditure which has seen the biggest increase is 'other'; unfortunately, the respondent is not asked what 'other' expenditure constitutes and future surveys may find it useful to specify this.

<sup>22</sup> 'Other' agricultural products include mushrooms, honey/wax, fish, firewood, charcoal, wooden planks and construction timber.



**Table 4.8 Percentage of households incurring livestock expenditure over the last 12 months, by urban/rural, province and quintile**

EICV3	Expenditure type										% of HHs incurring any livestock expenditure	No. of HHs raising livestock (000s)
	Salt	Veterinary services	Traditional care	Safekeeping (paid guards)	Maintenance of enclosure or stables	Transport of animals or poultry	Other expenditure	Tax on animals	Animal feed and delivery	Artificial insemination		
All Rwanda	36.4	46.9	5.1	6.4	10.9	1.0	30.8	2.0	21.7	14.3	69.3	1,536
Urban	28.7	43.2	5.2	12.1	9.7	0.9	26.3	1.5	26.0	9.3	64.2	136
Rural	37.1	47.3	5.0	5.8	11.0	1.0	31.3	2.0	21.3	14.8	69.8	1,399
Kigali City	32.9	36.3	2.6	15.5	8.1	0.6	21.5	1.5	25.6	12.5	61.2	77
Southern Province	26.6	45.6	4.8	3.9	10.6	1.1	31.8	3.6	23.9	8.6	65.4	401
Western Province	32.5	43.6	5.7	5.9	9.8	0.6	23.5	1.9	20.0	7.1	65.0	365
Northern Province	45.9	47.0	6.4	5.1	11.7	1.2	36.0	1.2	18.6	9.1	74.0	312
Eastern Province	43.3	53.7	4.0	8.6	12.1	1.3	34.4	1.0	22.6	31.8	75.3	379
Q1	22.9	33.6	3.4	0.4	5.4	0.5	22.5	1.9	10.3	9.6	54.2	251
Q2	30.1	41.3	4.1	0.7	7.4	0.7	29.1	1.7	17.0	13.4	65.8	300
Q3	35.7	46.6	5.2	2.3	9.6	0.6	32.9	2.1	21.8	14.9	70.7	337
Q4	42.0	53.9	5.4	6.0	13.2	1.4	32.9	1.8	24.5	16.8	75.3	357
Q5	48.5	56.2	6.9	22.5	18.0	1.7	34.6	2.4	32.7	15.4	77.0	290

Base: Households raising livestock. Source: EICV3.

EICV2	Expenditure type									% of HHs incurring any livestock expenditure	No. of HHs raising livestock (000s)
	Salt	Veterinary services	Traditional care	Safekeeping (paid guards)	Maintenance of enclosure or stables	Transport of feed for livestock	Other expenditure	Tax on animals	Animal feed		
All Rwanda	28.2	37.2	3.7	8.3	8.7	1.2	11.2	2.4	14.0	55.0	1,349
Urban	24.0	38.8	3.9	12.9	7.5	2.1	8.4	1.1	20.9	58.5	146
Rural	28.7	37.0	3.7	7.7	8.8	1.1	11.5	2.5	13.1	54.5	1,203
Kigali City	26.0	39.9	1.5	12.9	9.1	2.3	10.9	0.5	15.7	55.7	72
Southern Province	24.6	39.8	2.6	9.6	10.4	0.8	8.0	2.0	22.9	56.7	376
Western Province	24.7	36.7	5.4	6.7	6.0	1.2	5.3	2.5	12.8	49.8	327
Northern Province	33.0	30.9	5.3	5.3	10.1	1.1	5.0	1.2	10.4	51.7	255
Eastern Province	32.9	38.9	2.4	9.7	8.1	1.5	26.0	4.1	7.1	60.8	318
Q1	14.0	19.4	2.2	1.0	3.9	0.0	5.6	0.7	4.1	33.1	209
Q2	24.8	32.5	2.1	2.6	6.5	0.5	9.4	1.7	11.5	50.8	261
Q3	28.3	37.3	4.3	4.7	7.1	0.7	10.7	2.3	13.2	55.3	286
Q4	31.1	40.4	3.8	7.8	10.0	0.8	12.4	2.7	15.6	60.8	311
Q5	38.7	50.9	5.6	23.1	14.3	3.6	16.1	3.9	22.6	68.3	282

Base: Households raising livestock. Source: EICV2.

Where comparisons can be made between surveys, it appears that the unavailability of certain types of livestock products/services has remained at similar levels over time; generally, the levels are low but the product/service which seems to be most likely to be unavailable are paid guards for the animals. However, only a low percentage of livestock-raising households actually incur expenditure on this service, at 8% in EICV2 and 6% in EICV3.

**Table 4.9 Percentage of households stating that livestock products/services were unavailable over the last 12 months, by expenditure type**

EICV3	% of HHs stating that product/ service was unavailable	No. of HHs incurring type of livestock expenditure (000s)
Salt	7.1	559
Veterinary services	4.2	721
Traditional care	5.4	78
Safekeeping (paid guards)	17.4	98
Maintenance of enclosure or stables	4.6	167
Transport of animals or poultry	3.0	15
Other expenditure on livestock or poultry	6.0	473
Animal feed and delivery	16.6	333
Artificial insemination	2.0	219

Base: Households incurring livestock expenditure. Source: EICV3.

EICV2	% of HHs stating that product/ service was unavailable	No. of HHs incurring type of livestock expenditure (000s)
Salt	7.5	381
Veterinary services	6.1	502
Traditional care	5.7	50
Safekeeping (paid guards)	15.0	112
Maintenance of enclosure or stables	3.6	117

Base: Households incurring livestock expenditure. Source: EICV2.

## 4.4 Livestock policies

The EICV3 data reveal that Eastern Province had the highest percentage of households benefitting from the Girinka 'One Cow per Poor Family' policy (7%).<sup>23</sup> Households in the bottom three consumption quintiles are more likely to have received a cow than those in the highest two quintiles.

Northern Province had the highest percentage of households receiving an animal from an NGO or from other social protection schemes (12%). Households in the highest quintile are less likely to have received an animal.

Looking at *any* livestock transfer, i.e. households benefitting from *either* the one-cow policy *or* another NGO/social protection scheme, there appears to be little overlap; around 15% of households in consumption quintile 1 and 2 benefited from some kind of livestock transfer.

**Table 4.10 Percentage of households benefitting from one-cow policy or other social protection schemes, by quintile**

EICV3	Social protection scheme			Total no. of HHs (000s)
	One-cow policy	Any animal from NGOs/social protection scheme	Any livestock transfer	
All Rwanda	3.9	9.4	12.8	2,253
Urban	1.6	4.9	6.2	331
Rural	4.3	10.2	13.9	1,922
Kigali City	0.9	3.8	4.6	223
Southern Province	3.3	10.1	13.0	549
Western Province	2.4	9.6	11.7	528
Northern Province	4.0	12.0	15.4	411
Eastern Province	7.1	8.8	15.1	542
Q1	4.5	11.1	15.0	381
Q2	4.5	12.0	15.7	415
Q3	4.9	9.4	13.8	448
Q4	3.7	10.0	13.1	490
Q5	2.3	5.6	7.6	519

Base: Total number of households. Source: EICV3.

<sup>23</sup> The 'One Cow per Poor Family' policy is discussed in more detail in the EICV3 Thematic Report on Social Protection, 2012.

The target of the 'One Cow Per Poor Family' policy is to reach 350,000 Rwandese families by 2015.<sup>24</sup> The following table presents the number of households which received a cow and the number of those which state in the survey that they still have the cow.

**Table 4.11 Number of households which have received a cow from 'One Cow per Poor Family' policy and still have it**

EICV3	No. of HHs which have received a cow (000s)	No. of HHs which still have cow (000s)
All Rwanda	88	72
Urban	5	4
Rural	82	67
Kigali City	2	2
Southern Province	18	14
Western Province	13	9
Northern Province	16	15
Eastern Province	39	31
Q1	17	15
Q2	19	16
Q3	22	18
Q4	18	14
Q5	12	9

Source: EICV3.

<sup>24</sup> [http://www.minagri.gov.rw/index.php?option=com\\_content&view=category&layout=blog&id=66&Itemid=43&lang=en](http://www.minagri.gov.rw/index.php?option=com_content&view=category&layout=blog&id=66&Itemid=43&lang=en)

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MINAGRI website

## Annex A MINAGRI crop production data

	2010	2005
Dry beans	327	200
Maize	432	97
Sweet potato	840	886
Irish potato	1,789	1,314
Cassava	2,377	782
Sorghum	161	228
Wheat	77	-
Rice	67	62
Soybeans	57	24
Peanut	14	-
Peas	38	-
Banana	2,869	2,593
Taro/Yam	186	137

Source: MINAGRI crop assessment reports (A and B seasons combined), data also accessible at <http://faostat.fao.org/site/339/default.aspx>

Although the EICV trends for the production of main staple crops are similar to those seen in the MINAGRI data, MINAGRI estimates are generally higher. The following comment taken from a recent NISR assessment may provide an explanation:

“The crop assessment estimates are forecasts and the survey focuses on food availability in a period of 6 months. As the total expected availability of food crops is measured in Crop Assessment Survey, regardless of whether or not the entire crop (e.g. cassava) is harvested, the estimated volume levels are assumed to be generally higher than actual harvest.”<sup>25</sup>

Nevertheless, as mentioned earlier, it is important to note that the EICV3 is not a specialised agricultural survey and quantity estimates are based on recall and might be prone to errors. The estimates presented in this report should therefore be interpreted with caution.

<sup>25</sup> NISR (2012) The System of Agricultural Statistics in Rwanda (Improvement Action Plan). Source: <http://statistics.gov.rw/publications/system-agricultural-statistics-rwanda-improvement-action-plan>



## Annex B District tables for selected indicators from EICV3

### B.1 Land area cultivated by agricultural households

EICV3	Mean size of cultivated land (ha)	Median size of cultivated land (ha)	Size of cultivated land				Total	No. of HHs cultivating land for crop production (000s)
			<0.3 ha	0.3-0.9 ha	0.9-3 ha	>=3 ha		
All Rwanda	0.59	0.33	45.8	37.6	14.7	1.9	100.0	2,095
Nyarugenge	0.26	0.05	73.8	18.9	6.8	0.5	100.0	25
Gasabo	0.80	0.15	66.5	21.7	8.1	3.8	100.0	68
Kicukiro	0.36	0.06	75.8	15.0	7.6	1.6	100.0	32
Nyanza	0.52	0.34	43.7	44.4	10.5	1.4	100.0	64
Gisagara	0.56	0.33	47.2	39.2	11.7	1.9	100.0	74
Nyaruguru	0.44	0.28	51.9	36.7	10.2	1.2	100.0	60
Huye	0.41	0.20	65.2	25.1	7.9	1.8	100.0	66
Nyamagabe	0.51	0.25	57.6	32.2	7.9	2.3	100.0	70
Ruhango	0.45	0.27	56.4	32.9	9.0	1.7	100.0	69
Muhanga	0.97	0.37	41.8	40.8	12.7	4.7	100.0	62
Kamonyi	0.53	0.34	44.8	40.2	14.1	0.9	100.0	68
Karongi	0.50	0.28	52.8	37.4	7.8	2.0	100.0	75
Rutsiro	0.57	0.29	51.7	32.7	12.8	2.9	100.0	68
Rubavu	0.26	0.13	74.3	21.4	4.1	0.2	100.0	71
Nyabihu	0.46	0.30	49.9	39.8	9.4	0.9	100.0	66
Ngororero	0.63	0.42	35.1	46.4	16.3	2.2	100.0	74
Rusizi	0.46	0.31	48.6	40.7	9.9	0.9	100.0	75
Nyamasheke	0.49	0.27	52.6	32.8	13.1	1.4	100.0	78
Rulindo	0.70	0.39	38.1	46.0	14.6	1.3	100.0	62
Gakenke	0.62	0.34	43.1	37.4	17.7	1.9	100.0	76
Musanze	0.45	0.30	49.9	37.1	12.4	0.5	100.0	85
Burera	0.39	0.28	53.7	37.6	8.7	0.0	100.0	70
Gicumbi	0.49	0.34	44.4	41.2	13.9	0.5	100.0	111
Rwamagana	0.70	0.36	41.7	35.9	19.1	3.4	100.0	64
Nyagatare	0.77	0.51	29.0	37.4	31.2	2.3	100.0	80
Gatsibo	0.76	0.49	27.8	47.5	22.5	2.3	100.0	99
Kayanza	0.82	0.56	22.0	46.4	29.1	2.5	100.0	66
Kirehe	0.73	0.56	24.2	45.5	29.2	1.1	100.0	70
Ngoma	0.83	0.56	23.9	47.4	25.4	3.2	100.0	67
Bugesera	0.88	0.52	30.3	40.6	24.2	4.9	100.0	78

## B.2 Land area affected by land-use consolidation, irrigation, and erosion protection

	EICV3			Total cultivated land area (000 ha)
	% land affected by land-use consolidation	% land irrigated	% land protected against erosion	
All Rwanda	11.5	3.0	78.1	1,228
Nyarugenge	8.7	1.7	68.6	6
Gasabo	0.7	5.1	73.2	54
Kicukiro	8.5	1.6	84.2	11
Nyanza	7.6	2.8	83.5	33
Gisagara	9.5	5.2	78.2	41
Nyaruguru	6.5	2.7	89.2	27
Huye	7.5	4.3	76.4	27
Nyamagabe	7.0	2.9	91.3	36
Ruhango	5.6	2.5	80.9	31
Muhanga	3.1	1.9	88.3	60
Kamonyi	4.4	2.7	88.5	36
Karongi	3.9	1.4	90.2	38
Rutsiro	28.4	0.4	90.1	39
Rubavu	42.5	0.1	47.6	18
Nyabihu	13.3	0.0	94.1	30
Ngororero	6.1	1.5	89.6	46
Rusizi	2.4	4.6	81.2	35
Nyamasheke	3.5	0.7	53.6	38
Rulindo	16.2	5.7	87.0	43
Gakenke	12.9	1.6	92.2	47
Musanze	31.3	0.3	53.3	38
Burera	23.5	0.8	73.4	27
Gicumbi	20.8	1.0	89.8	54
Rwamagana	7.4	6.1	86.3	45
Nyagatare	12.9	5.9	64.5	61
Gatsibo	4.6	5.7	76.4	75
Kayanza	3.7	3.3	51.6	54
Kirehe	37.8	3.6	79.2	51
Ngoma	16.5	2.1	63.6	56
Bugesera	6.3	3.7	76.4	68

### B.3 Percentage of cultivating households producing various staple crops

EICV3	% of HHsproducing staple crops																						No.of HHs cultivating land for crop production (000s)
	Dry beans	Maize	Inyabutongo	Sweet potato	Irish potato	Cooking banana	Beer banana	Banana fruit	Cassava leaves	Cassava	Sorghum	Taro	Soy	Peas	Peanut	Fresh peas	Cabbage	Imbwija	Wheat	Rice	Yam	Other grains	
All Rwanda	90.3	75.4	78.8	76.3	52.9	59.3	47.9	38.8	55.2	52.3	42.5	41.2	24.5	18.2	16.6	20.6	14.3	13.5	5.7	4.5	4.4	0.8	2,095
Nyarugenge	64.7	56.5	76.6	34.5	10.9	43.4	21.2	27.7	43.6	31.0	26.3	15.6	13.9	3.0	4.7	4.5	5.2	0.5	0.3	0.0	0.5	0.0	25
Gasabo	68.6	64.7	79.7	47.2	29.4	61.7	33.7	44.7	55.2	43.6	34.9	39.3	23.6	11.4	13.2	16.7	9.7	4.9	0.3	3.4	0.0	0.0	68
Kicukiro	59.0	59.6	74.9	31.8	10.7	43.9	20.8	25.1	33.8	32.3	15.7	23.3	14.4	2.7	8.7	8.8	8.3	3.3	0.5	0.3	1.9	0.0	32
Nyanza	93.1	79.1	90.3	88.9	60.5	56.4	35.6	42.3	65.6	78.7	60.6	45.1	28.6	16.9	24.3	25.8	13.2	12.8	0.3	11.4	7.6	0.3	64
Gisagara	98.1	75.8	74.1	91.5	54.6	69.8	69.8	49.6	57.9	66.8	79.3	64.4	46.1	20.5	24.9	11.4	6.5	45.3	0.0	29.6	9.0	0.0	74
Nyaruguru	95.5	70.8	35.4	96.0	58.2	67.3	68.8	26.0	63.9	42.7	56.2	58.0	29.0	45.1	1.7	55.0	37.5	64.5	25.0	0.0	1.6	0.2	60
Huye	96.6	66.8	62.1	87.2	78.6	69.6	51.4	52.5	66.5	65.2	72.7	62.4	40.4	22.8	10.3	24.0	14.8	50.1	0.2	14.7	4.0	0.0	66
Nyamagabe	91.7	71.2	62.2	92.3	72.0	51.4	49.3	30.1	40.9	52.8	46.2	43.7	27.9	49.1	0.7	28.4	27.2	35.8	27.9	0.0	5.7	1.6	70
Ruhango	93.9	73.6	84.6	81.0	64.0	48.3	46.6	40.8	59.0	79.7	47.6	41.5	46.6	17.0	30.2	38.3	9.0	7.6	0.0	6.7	6.4	0.0	69
Muhanga	83.4	62.2	87.2	94.0	34.6	67.9	83.3	69.5	86.7	70.7	3.4	81.0	58.2	9.7	3.4	31.1	26.1	3.4	0.6	11.7	3.6	1.0	62
Kamonyi	91.9	57.0	57.2	74.3	42.1	40.7	48.0	20.1	26.9	67.8	47.1	34.3	53.1	11.6	39.2	8.7	9.6	0.2	0.2	2.6	4.0	0.0	68
Karongi	93.8	76.3	83.0	95.7	52.7	54.6	71.9	42.9	69.7	66.2	35.8	62.4	25.3	38.2	0.4	29.0	21.2	9.4	7.5	0.0	2.9	0.4	75
Rutsiro	85.4	71.4	68.9	79.8	37.1	41.7	43.2	29.2	55.4	38.4	4.3	47.7	20.3	11.4	0.0	10.0	12.8	6.1	4.5	0.0	1.5	0.0	68
Rubavu	78.7	72.3	83.0	30.6	39.0	15.6	11.5	3.8	43.2	1.8	0.2	21.6	2.4	2.1	0.2	6.6	11.4	12.0	0.3	0.0	0.0	0.0	71
Nyabihu	71.9	74.3	84.7	46.3	83.7	17.0	14.2	13.7	15.0	9.0	20.2	10.3	0.2	23.6	0.0	46.1	21.8	5.3	21.3	0.3	0.0	0.0	66
Ngororero	93.1	67.7	81.5	92.4	55.1	60.4	71.4	59.5	65.3	59.0	6.0	67.0	31.8	29.7	0.2	37.0	33.5	8.4	14.3	3.5	0.9	0.4	74
Rusizi	89.6	81.9	54.5	72.1	35.0	69.9	59.9	42.7	77.7	22.6	2.7	40.2	24.3	2.2	4.9	3.2	11.5	47.0	0.0	9.0	19.9	0.4	75
Nyamasheke	82.5	58.6	60.6	90.5	27.3	70.9	67.7	35.9	76.6	52.0	3.3	35.5	34.4	6.8	5.3	9.8	14.8	28.0	0.2	4.0	13.8	1.1	78
Rulindo	96.4	69.1	72.6	95.6	61.4	71.9	72.0	71.2	83.6	67.5	65.3	44.2	26.2	27.9	3.3	24.0	24.3	4.9	7.8	0.2	0.4	0.0	62
Gakenke	96.0	84.3	82.8	96.3	24.6	77.5	73.7	71.9	82.1	67.9	1.8	70.9	12.4	15.3	4.2	16.4	14.4	1.0	1.2	3.7	1.5	8.5	76
Musanze	91.3	89.5	96.4	40.4	53.1	47.1	36.5	33.7	52.6	15.2	16.2	34.2	0.6	7.1	0.0	12.6	12.9	4.7	1.9	0.0	0.0	0.4	85
Burera	96.1	81.2	88.2	71.7	82.9	43.6	24.7	16.6	22.4	1.4	64.3	17.4	0.2	25.3	0.0	35.6	12.7	8.1	28.7	0.2	0.0	1.0	70
Gicumbi	96.1	49.7	69.2	85.6	67.2	34.9	16.3	15.3	36.9	24.3	69.6	14.0	4.1	36.5	5.3	18.6	20.6	8.2	18.7	0.0	0.0	0.0	111
Rwamagana	87.9	88.5	91.1	85.8	72.1	86.6	61.3	63.5	66.6	75.7	66.9	54.1	21.7	10.3	33.6	16.7	10.4	4.7	0.0	2.5	1.6	0.0	64
Nyagatare	96.7	95.0	83.1	65.3	50.1	57.8	28.3	20.9	52.5	68.9	58.6	14.3	32.7	12.1	58.9	3.3	5.0	0.4	0.0	5.3	0.2	4.2	80
Gatsibo	96.4	96.1	96.0	78.3	75.2	84.4	53.0	50.2	47.7	69.9	83.6	38.6	27.6	26.4	45.8	45.6	4.2	2.9	0.2	2.0	0.2	1.5	99
Kayanza	95.0	87.6	94.6	72.6	70.3	73.6	47.5	34.3	66.2	62.0	82.8	37.5	18.4	16.7	21.8	25.7	6.0	5.0	0.2	2.4	1.7	0.2	66
Kirehe	93.8	84.6	91.6	63.1	47.1	77.3	40.1	30.8	32.2	70.2	55.9	44.1	17.4	10.3	35.8	3.9	5.3	0.7	0.2	4.3	4.6	0.2	70
Ngoma	96.2	90.0	95.7	84.4	62.4	92.1	56.5	56.1	27.4	76.8	44.3	47.4	23.1	8.0	45.0	7.4	6.8	2.3	0.5	8.5	11.9	0.2	67
Bugesera	92.8	86.1	89.9	77.0	23.2	70.4	49.0	43.9	74.8	80.3	63.3	25.2	36.2	2.4	50.0	3.9	9.7	15.0	0.3	6.6	23.9	0.0	78

## B.4 Percentage of cultivating households producing various fruit and vegetables and export crops

EICV3	% of HHs producing selected fruit andveg					% of HHs producing export crops				No. of HHs cultivating land for crop production (000s)
	Fresh beans	Avocado	Squash	Pepper	Papaya	Coffee	Tea	Cane sugar	Sunflower	
All Rwanda	65.8	37.4	26.2	19.4	16.8	10.8	0.9	10.9	6.8	2,095
Nyarugenge	19.3	32.8	12.0	14.6	27.0	1.2	0.0	5.2	0.0	25
Gasabo	36.1	42.9	24.9	26.2	21.1	2.8	0.0	5.0	1.4	68
Kicukiro	50.9	32.2	12.2	21.1	19.1	2.2	0.0	9.0	0.5	32
Nyanza	77.0	55.5	28.6	13.9	17.4	20.6	0.0	3.0	9.6	64
Gisagara	44.3	62.1	34.9	12.3	20.9	11.8	0.0	2.7	26.8	74
Nyaruguru	51.9	54.1	27.2	17.6	3.7	15.3	2.3	7.5	1.7	60
Huye	52.4	55.4	33.6	23.2	11.8	21.0	0.0	8.9	20.5	66
Nyamagabe	49.1	35.2	33.1	11.8	2.5	13.3	8.8	12.1	0.8	70
Ruhango	86.0	44.8	33.5	16.5	14.7	14.5	0.0	12.2	13.5	69
Muhanga	92.5	48.1	25.5	57.8	13.5	7.9	0.0	28.1	3.0	62
Kamonyi	33.1	22.2	9.2	6.3	10.1	26.5	0.0	0.4	1.2	68
Karongi	59.5	33.5	40.5	12.9	4.3	8.9	5.4	10.2	0.2	75
Rutsiro	76.1	22.7	22.2	9.5	7.7	17.7	0.9	13.7	0.0	68
Rubavu	83.0	16.4	30.9	7.5	11.0	4.1	0.5	7.2	0.3	71
Nyabihu	82.2	17.3	21.7	3.1	19.5	0.9	0.0	1.0	0.2	66
Ngororero	86.8	42.3	25.2	25.6	15.1	7.2	1.2	18.8	1.1	74
Rusizi	42.5	42.8	12.9	12.6	10.6	22.5	2.2	16.0	0.0	75
Nyamasheke	62.2	34.0	16.3	28.3	5.7	36.3	2.0	16.8	0.2	78
Rulindo	86.1	42.3	15.9	19.6	7.0	6.0	2.7	6.7	0.4	62
Gakenke	88.8	39.4	14.7	11.7	7.0	6.9	0.0	39.8	0.2	76
Musanze	93.7	29.9	29.1	11.0	26.9	0.0	0.0	10.3	0.0	85
Burera	87.2	43.5	21.0	5.3	18.2	0.4	0.0	5.6	0.0	70
Gicumbi	20.3	22.8	20.3	11.2	8.9	4.7	0.3	6.4	1.5	111
Rwamagana	82.0	42.5	45.4	35.9	28.9	7.8	0.2	15.3	7.7	64
Nyagatare	14.1	24.0	30.8	10.6	22.2	1.1	0.0	1.7	0.6	80
Gatsibo	94.2	31.7	48.8	52.9	21.2	19.7	0.0	19.1	26.8	99
Kayanza	90.8	27.3	26.1	41.8	32.7	2.6	0.0	7.1	28.4	66
Kirehe	90.7	39.4	17.8	8.1	40.4	6.4	0.0	6.0	7.5	70
Ngoma	92.2	53.7	25.3	12.6	41.3	18.3	0.0	24.6	28.1	67
Bugesera	38.6	44.8	23.1	36.8	22.9	6.4	0.0	0.9	13.1	78

## B.5 Mean share of harvest sold

EICV3	Mean share of harvest sold				
	Overall	Staple crops	CIP crops	Fruit andveg	Coffee
All Rwanda	20.9	18.6	14.9	14.9	97.0
Nyarugenge	10.8	9.7	4.9	13.0	100.0
Gasabo	19.6	18.1	12.5	18.4	100.0
Kicukiro	13.4	11.8	9.4	9.8	100.0
Nyanza	23.1	19.4	15.7	15.8	95.5
Gisagara	22.5	20.7	20.0	17.5	96.3
Nyaruguru	19.3	16.5	11.4	20.8	96.4
Huye	20.9	15.4	12.1	25.3	94.8
Nyamagabe	20.1	15.0	11.1	14.8	94.3
Ruhango	18.1	12.8	11.4	14.0	96.4
Muhanga	12.7	10.3	8.5	16.6	97.1
Kamonyi	24.9	16.9	11.3	36.2	99.2
Karongi	13.6	11.7	8.7	12.3	96.9
Rutsiro	18.3	13.4	9.2	14.3	99.1
Rubavu	21.1	19.4	19.0	9.1	100.0
Nyabihu	28.0	28.9	27.1	5.9	100.0
Ngororero	11.7	9.7	7.9	12.3	90.8
Rusizi	20.1	14.7	11.0	16.1	100.0
Nyamasheke	27.0	18.4	11.8	14.7	94.7
Rulindo	17.7	14.3	9.8	23.5	95.8
Gakenke	19.2	16.8	8.9	20.8	99.9
Musanze	21.4	21.8	19.5	11.0	
Burera	22.4	24.1	22.2	7.9	100.0
Gicumbi	19.5	17.8	16.1	26.1	96.7
Rwamagana	24.0	23.1	15.2	14.5	97.4
Nyagatare	26.7	26.8	22.7	8.7	85.7
Gatsibo	25.9	24.4	18.1	10.1	97.8
Kayonza	27.2	27.5	17.2	10.6	100.0
Kirehe	23.1	22.8	18.9	10.3	96.9
Ngoma	23.6	23.3	24.2	9.9	98.7
Bugesera	19.6	19.5	16.3	12.7	100.0

## B.6 Percentage of households raising livestock

	EICV3		
	% of HHs raising livestock	No. of HHs raising livestock (000s)	Total no. of HHs (000s)
All Rwanda	68.2	1,536	2,253
Nyarugenge	22.8	14	60
Gasabo	44.5	44	99
Kicukiro	30.0	19	64
Nyanza	69.0	46	67
Gisagara	83.1	61	74
Nyaruguru	82.8	50	61
Huye	69.3	48	70
Nyamagabe	77.6	55	71
Ruhango	60.6	43	71
Muhanga	76.9	48	63
Kamonyi	67.1	48	72
Karongi	80.9	62	77
Rutsiro	76.4	53	69
Rubavu	47.7	39	82
Nyabihu	64.1	44	68
Ngororero	83.1	62	74
Rusizi	62.8	49	78
Nyamasheke	71.7	58	80
Rulindo	78.8	49	63
Gakenke	84.5	65	76
Musanze	62.6	55	87
Burera	78.5	56	71
Gicumbi	77.8	88	113
Rwamagana	70.2	48	68
Nyagatare	64.0	54	84
Gatsibo	72.8	73	100
Kayonza	63.9	45	70
Kirehe	70.3	50	72
Ngoma	69.9	47	68
Bugesera	78.4	63	80

## B.7 Types of livestock raised (among those households raising livestock)

EICV3	% of HHs raising livestock, by type							No. of HHs raising livestock (000s)
	Cattle	Sheep	Goats	Pigs	Rabbits	Chickens	Other livestock and poultry	
All Rwanda	47.3	15.7	53.0	24.1	22.9	45.5	10.2	1,536
Nyarugenge	43.9	2.2	53.6	2.4	11.4	52.2	5.1	14
Gasabo	45.3	5.6	49.6	3.6	15.9	51.1	3.9	44
Kicukiro	29.7	7.2	32.8	8.2	24.5	59.5	7.1	19
Nyanza	46.0	1.5	57.6	9.1	11.5	66.4	3.3	46
Gisagara	23.6	1.5	67.3	39.1	37.2	58.5	14.9	61
Nyaruguru	43.8	14.9	58.6	48.7	37.7	27.0	18.8	50
Huye	38.2	2.8	57.8	55.3	28.3	42.3	4.4	48
Nyamagabe	47.4	15.3	53.1	52.6	32.5	22.3	17.3	55
Ruhango	59.8	3.9	60.0	22.1	22.0	61.0	2.7	43
Muhanga	64.4	14.5	43.3	49.6	38.0	40.0	12.1	48
Kamonyi	61.7	2.9	51.2	18.4	26.2	50.6	9.2	48
Karongi	60.9	13.5	66.5	21.7	23.8	35.5	12.9	62
Rutsiro	42.5	27.9	47.5	25.0	23.7	33.3	22.7	53
Rubavu	26.6	20.9	45.8	11.5	9.8	33.7	10.5	39
Nyabihu	45.4	46.2	38.4	6.3	16.2	34.6	3.2	44
Ngororero	50.6	24.6	43.9	37.8	41.6	29.7	12.0	62
Rusizi	28.7	3.7	54.1	34.5	10.8	51.8	21.5	49
Nyamasheke	34.5	7.5	51.8	30.9	27.2	38.2	23.3	58
Rulindo	57.2	28.8	46.5	14.9	27.9	33.1	20.6	49
Gakenke	65.9	28.6	39.1	34.0	34.3	39.7	25.7	65
Musanze	40.2	38.5	38.4	21.9	17.6	30.4	2.8	55
Burera	54.3	57.4	30.1	16.7	20.5	42.3	3.9	56
Gicumbi	65.4	29.6	41.8	14.7	27.1	47.4	3.0	88
Rwamagana	50.0	11.2	61.8	10.6	11.3	49.0	3.4	48
Nyagatare	39.8	9.0	51.3	4.9	13.4	65.0	4.4	54
Gatsibo	58.3	6.9	70.8	10.3	15.3	54.1	2.7	73
Kayonza	38.5	5.2	68.1	12.5	17.2	50.9	3.3	45
Kirehe	34.8	6.0	70.6	19.4	9.2	48.5	7.5	50
Ngoma	40.1	1.5	61.1	32.1	11.9	62.4	6.4	47
Bugesera	44.6	3.8	65.5	22.7	19.1	68.4	8.1	63

## Annex C Confidence intervals for selected indicators, EICV3

### C.1 Percentage of households cultivating land for crop production

EICV3	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	93.0	0.4	92.2	93.8	14,308
Urban	66.2	2.2	62.0	70.4	2,149
Rural	97.6	0.3	97.1	98.1	12,159
Kigali City	55.6	2.8	50.1	61.2	1,348
Southern Province	97.1	0.4	96.3	98.0	3,840
Western Province	96.3	0.7	94.9	97.6	3,360
Northern Province	98.3	0.4	97.6	99.0	2,400
Eastern Province	96.9	0.6	95.8	98.0	3,360
Q1	98.7	0.2	98.2	99.1	2,449
Q2	97.7	0.4	96.9	98.4	2,699
Q3	97.9	0.3	97.2	98.5	2,849
Q4	95.2	0.5	94.3	96.2	3,103
Q5	78.8	1.2	76.5	81.0	3,208
Nyarugenge	41.0	5.2	30.9	51.2	449
Gasabo	68.0	5.0	58.2	77.8	450
Kicukiro	50.2	4.2	42.0	58.3	449
Nyanza	96.1	0.9	94.3	97.8	480
Gisagara	99.8	0.2	99.3	100.2	480
Nyaruguru	98.9	0.5	98.0	99.8	480
Huye	94.9	1.5	92.1	97.8	480
Nyamagabe	98.6	0.6	97.4	99.8	480
Ruhango	96.5	1.0	94.5	98.5	480
Muhanga	98.6	0.8	97.0	100.2	480
Kamonyi	94.0	2.5	89.1	98.9	480
Karongi	98.6	0.8	97.1	100.1	480
Rutsiro	99.3	0.5	98.4	100.3	480
Rubavu	87.2	3.3	80.8	93.6	480
Nyabihu	96.4	1.5	93.6	99.3	480
Ngororero	99.6	0.3	99.0	100.2	480
Rusizi	96.1	1.8	92.6	99.6	480
Nyamasheke	97.5	1.9	93.8	101.1	480
Rulindo	98.9	0.5	98.0	99.8	480
Gakenke	99.0	0.4	98.1	99.8	480
Musanze	96.9	1.2	94.5	99.3	480
Burera	98.6	0.6	97.3	99.8	480
Gicumbi	98.4	0.8	96.8	100.1	480
Rwamagana	94.4	2.0	90.6	98.3	480
Nyagatare	95.4	2.3	90.9	99.9	480
Gatsibo	99.3	0.4	98.4	100.1	480
Kayanza	94.2	1.8	90.7	97.8	480
Kirehe	98.3	0.7	96.9	99.7	480
Ngoma	98.8	0.5	97.8	99.9	480
Bugesera	97.4	1.4	94.7	100.1	480



## C.2 Percentage of cultivating households cultivating less than 0.3ha

EICV3	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	45.8	0.6	44.7	46.9	13,290
Urban	67.3	2.0	63.4	71.2	1,416
Rural	43.3	0.6	42.1	44.4	11,874
Kigali City	70.3	2.4	65.6	75.1	707
Southern Province	51.2	1.0	49.1	53.2	3,728
Western Province	52.1	1.2	49.7	54.4	3,236
Northern Province	46.0	1.3	43.3	48.6	2,358
Eastern Province	28.3	1.0	26.4	30.3	3,261
Q1	61.6	1.1	59.5	63.8	2,415
Q2	45.5	1.2	43.1	47.9	2,640
Q3	42.1	1.2	39.9	44.4	2,789
Q4	38.6	1.0	36.6	40.6	2,960
Q5	43.5	1.2	41.2	45.9	2,486
Nyarugenge	73.8	5.7	62.6	85.0	182
Gasabo	66.5	3.5	59.7	73.2	309
Kicukiro	75.8	3.8	68.4	83.2	216
Nyanza	43.7	3.5	36.9	50.5	458
Gisagara	47.2	3.0	41.3	53.2	477
Nyaruguru	51.9	2.9	46.1	57.7	475
Huye	65.2	2.6	60.0	70.3	453
Nyamagabe	57.6	2.8	52.0	63.1	473
Ruhango	56.4	2.5	51.4	61.4	464
Muhanga	41.8	3.2	35.6	48.1	474
Kamonyi	44.8	2.9	39.0	50.6	454
Karongi	52.8	2.5	48.0	57.6	470
Rutsiro	51.7	3.1	45.6	57.8	476
Rubavu	74.3	4.6	65.3	83.3	412
Nyabihu	49.9	3.7	42.5	57.2	466
Ngororero	35.1	2.2	30.8	39.4	478
Rusizi	48.6	3.4	41.9	55.2	462
Nyamasheke	52.6	2.8	47.1	58.2	472
Rulindo	38.1	3.1	32.0	44.2	473
Gakenke	43.1	3.2	36.8	49.3	475
Musanze	49.9	3.5	43.1	56.8	464
Burera	53.7	3.2	47.4	60.0	473
Gicumbi	44.4	2.3	40.0	48.9	473
Rwamagana	41.7	3.0	35.7	47.6	460
Nyagatare	29.0	2.5	24.1	33.9	460
Gatsibo	27.8	2.1	23.5	32.0	475
Kayonza	22.0	2.8	16.6	27.5	455
Kirehe	24.2	2.2	19.8	28.5	471
Ngoma	23.9	2.5	19.1	28.7	471
Bugesera	30.3	3.0	24.4	36.2	469

### C.3 Percentage of cultivated land affected by land-use consolidation

EICV3	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	11.5	0.6	10.4	12.6	58,625
Urban	9.2	1.8	5.7	12.8	4,436
Rural	11.7	0.6	10.5	12.9	54,189
Kigali City	2.7	1.1	0.5	5.0	1,669
Southern Province	6.1	0.8	4.5	7.8	19,765
Western Province	12.0	1.3	9.5	14.5	13,919
Northern Province	20.3	1.5	17.4	23.3	11,103
Eastern Province	12.1	0.9	10.3	13.9	12,169
Q1	8.6	0.9	6.9	10.4	9,559
Q2	9.1	0.9	7.4	10.8	12,092
Q3	11.3	0.8	9.7	12.9	13,106
Q4	12.0	0.9	10.2	13.8	13,843
Q5	13.8	1.4	11.0	16.6	10,025
Nyarugenge	8.7	6.3	-3.7	21.1	343
Gasabo	0.7	0.4	-0.1	1.5	890
Kicukiro	8.5	5.0	-1.3	18.3	436
Nyanza	7.6	2.0	3.7	11.6	2,198
Gisagara	9.5	1.2	7.0	11.9	2,737
Nyaruguru	6.5	1.5	3.6	9.4	2,680
Huye	7.5	2.9	1.8	13.2	1,997
Nyamagabe	7.0	4.3	-1.5	15.5	2,225
Ruhango	5.6	3.1	-0.4	11.7	2,841
Muhanga	3.1	1.3	0.6	5.6	2,800
Kamonyi	4.4	0.9	2.7	6.1	2,287
Karongi	3.9	0.9	2.2	5.6	2,347
Rutsiro	28.4	4.8	18.9	37.8	2,160
Rubavu	42.5	6.0	30.6	54.4	1,311
Nyabihu	13.3	4.1	5.3	21.3	2,079
Ngororero	6.1	1.6	3.0	9.1	2,327
Rusizi	2.4	1.0	0.5	4.4	1,553
Nyamasheke	3.5	0.9	1.8	5.2	2,142
Rulindo	16.2	4.6	7.2	25.2	2,204
Gakenke	12.9	1.7	9.5	16.3	2,263
Musanze	31.3	4.2	23.1	39.5	2,136
Burera	23.5	2.5	18.6	28.4	2,494
Gicumbi	20.8	2.8	15.3	26.3	2,006
Rwamagana	7.4	2.6	2.2	12.6	1,397
Nyagatare	12.9	2.3	8.4	17.3	1,148
Gatsibo	4.6	1.2	2.2	7.1	2,017
Kayonza	3.7	0.9	1.9	5.6	2,073
Kirehe	37.8	3.0	32.0	43.7	1,688
Ngoma	16.5	2.9	10.8	22.3	2,072
Bugesera	6.3	1.9	2.5	10.1	1,774

## C.4 Percentage of cultivated land which is irrigated

EICV3	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	3.0	0.3	2.5	3.6	58,625
Urban	3.3	1.2	0.9	5.7	4,436
Rural	3.0	0.3	2.4	3.6	54,189
Kigali City	4.2	1.8	0.7	7.6	1,669
Southern Province	3.1	0.4	2.3	3.8	19,765
Western Province	1.3	0.3	0.8	1.8	13,919
Northern Province	1.9	0.3	1.3	2.6	11,103
Eastern Province	4.4	0.7	2.9	5.8	12,169
Q1	2.1	0.5	1.0	3.1	9,559
Q2	2.4	0.3	1.7	3.0	12,092
Q3	2.8	0.4	2.1	3.5	13,106
Q4	3.8	0.6	2.7	4.9	13,843
Q5	3.2	0.6	2.0	4.5	10,025
Nyarugenge	1.7	1.0	-0.2	3.5	343
Gasabo	5.1	2.3	0.4	9.7	890
Kicukiro	1.6	1.4	-1.2	4.3	436
Nyanza	2.8	0.9	1.0	4.5	2,198
Gisagara	5.2	1.0	3.2	7.2	2,737
Nyaruguru	2.7	0.6	1.6	3.7	2,680
Huye	4.3	1.0	2.4	6.3	1,997
Nyamagabe	2.9	1.8	-0.6	6.4	2,225
Ruhango	2.5	0.7	1.2	3.9	2,841
Muhanga	1.9	0.6	0.7	3.1	2,800
Kamonyi	2.7	0.5	1.7	3.7	2,287
Karongi	1.4	0.7	0.0	2.8	2,347
Rutsiro	0.4	0.3	-0.3	1.0	2,160
Rubavu	0.1	0.1	0.0	0.2	1,311
Nyabihu	0.0	0.0	0.0	0.1	2,079
Ngororero	1.5	0.4	0.6	2.3	2,327
Rusizi	4.6	1.6	1.6	7.7	1,553
Nyamasheke	0.7	0.3	0.1	1.2	2,142
Rulindo	5.7	1.6	2.5	8.9	2,204
Gakenke	1.6	0.8	0.0	3.1	2,263
Musanze	0.3	0.2	-0.1	0.8	2,136
Burera	0.8	0.3	0.2	1.4	2,494
Gicumbi	1.0	0.3	0.3	1.6	2,006
Rwamagana	6.1	1.7	2.8	9.4	1,397
Nyagatare	5.9	1.5	2.9	8.9	1,148
Gatsibo	5.7	3.0	-0.3	11.6	2,017
Kayonza	3.3	0.8	1.6	4.9	2,073
Kirehe	3.6	1.2	1.2	5.9	1,688
Ngoma	2.1	0.9	0.4	3.9	2,072
Bugesera	3.7	1.7	0.4	6.9	1,774

## C.5 Percentage of cultivated land which is protected against soil erosion

EICV3	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	78.1	0.8	76.5	79.7	58,625
Urban	73.4	4.9	63.8	83.0	4,436
Rural	78.5	0.7	77.1	80.0	54,189
Kigali City	74.6	8.1	58.6	90.6	1,669
Southern Province	84.9	0.8	83.3	86.5	19,765
Western Province	80.3	1.2	78.0	82.7	13,919
Northern Province	81.0	1.7	77.8	84.3	11,103
Eastern Province	71.1	1.4	68.3	73.9	12,169
Q1	78.6	1.5	75.6	81.5	9,559
Q2	75.7	1.2	73.4	78.0	12,092
Q3	78.3	1.0	76.3	80.3	13,106
Q4	77.2	1.5	74.2	80.1	13,843
Q5	80.1	1.7	76.8	83.3	10,025
Nyarugenge	68.6	7.9	53.1	84.1	343
Gasabo	73.2	10.8	52.0	94.4	890
Kicukiro	84.2	5.4	73.6	94.8	436
Nyanza	83.5	2.2	79.2	87.8	2,198
Gisagara	78.2	2.4	73.4	82.9	2,737
Nyaruguru	89.2	1.2	86.8	91.7	2,680
Huye	76.4	2.7	71.0	81.8	1,997
Nyamagabe	91.3	1.6	88.1	94.5	2,225
Ruhango	80.9	3.5	74.1	87.7	2,841
Muhanga	88.3	1.6	85.1	91.5	2,800
Kamonyi	88.5	1.8	84.9	92.0	2,287
Karongi	90.2	1.3	87.7	92.7	2,347
Rutsiro	90.1	1.6	86.9	93.2	2,160
Rubavu	47.6	5.7	36.4	58.9	1,311
Nyabihu	94.1	1.1	91.8	96.3	2,079
Ngororero	89.6	1.7	86.3	92.9	2,327
Rusizi	81.2	3.1	75.1	87.3	1,553
Nyamasheke	53.6	3.7	46.3	60.9	2,142
Rulindo	87.0	3.3	80.6	93.4	2,204
Gakenke	92.2	1.5	89.2	95.2	2,263
Musanze	53.3	5.4	42.6	64.0	2,136
Burera	73.4	3.7	66.1	80.6	2,494
Gicumbi	89.8	2.0	85.9	93.7	2,006
Rwamagana	86.3	2.1	82.2	90.5	1,397
Nyagatare	64.5	3.9	56.8	72.2	1,148
Gatsibo	76.4	4.5	67.6	85.1	2,017
Kayanza	51.6	3.4	45.0	58.2	2,073
Kirehe	79.2	1.7	75.9	82.6	1,688
Ngoma	63.6	3.3	57.1	70.1	2,072
Bugesera	76.4	3.1	70.3	82.6	1,774

## C.6 Mean share of harvest sold – all crops

EICV3	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	20.9	0.3	20.4	21.5	12,650
Urban	16.2	0.8	14.7	17.7	1,370
Rural	21.5	0.3	21.0	22.0	11,280
Kigali City	16.2	1.2	13.9	18.5	693
Southern Province	20.3	0.4	19.5	21.1	3,567
Western Province	20.0	0.6	18.8	21.2	3,099
Northern Province	20.1	0.6	18.9	21.3	2,224
Eastern Province	24.4	0.5	23.4	25.3	3,067
Q1	14.5	0.4	13.7	15.3	2,355
Q2	18.8	0.4	18.0	19.6	2,519
Q3	21.8	0.4	21.0	22.5	2,641
Q4	24.3	0.4	23.5	25.2	2,783
Q5	24.5	0.7	23.2	25.8	2,352
Nyarugenge	10.8	1.6	7.6	13.9	179
Gasabo	19.6	1.8	16.1	23.1	298
Kicukiro	13.4	2.1	9.3	17.5	216
Nyanza	23.1	1.3	20.5	25.6	427
Gisagara	22.5	1.0	20.6	24.4	459
Nyaruguru	19.3	1.0	17.4	21.3	435
Huye	20.9	1.0	19.0	22.9	444
Nyamagabe	20.1	1.3	17.5	22.6	456
Ruhango	18.1	1.1	15.9	20.3	443
Muhanga	12.7	0.9	10.9	14.5	457
Kamonyi	24.9	1.6	21.7	28.1	446
Karongi	13.6	0.7	12.2	15.0	445
Rutsiro	18.3	1.1	16.2	20.5	457
Rubavu	21.1	1.9	17.4	24.8	386
Nyabihu	28.0	2.4	23.3	32.6	458
Ngororero	11.7	0.7	10.4	13.0	449
Rusizi	20.1	1.6	17.0	23.2	444
Nyamasheke	27.0	1.6	23.9	30.1	460
Rulindo	17.7	0.9	16.0	19.4	441
Gakenke	19.2	0.8	17.7	20.8	440
Musanze	21.4	1.5	18.4	24.4	436
Burera	22.4	1.2	20.0	24.8	456
Gicumbi	19.5	1.4	16.7	22.3	451
Rwamagana	24.0	1.4	21.3	26.7	410
Nyagatare	26.7	1.2	24.4	29.0	450
Gatsibo	25.9	1.4	23.2	28.7	456
Kayanza	27.2	1.2	24.8	29.6	434
Kirehe	23.1	1.1	21.0	25.1	459
Ngoma	23.6	1.1	21.4	25.7	419
Bugesera	19.6	1.1	17.5	21.7	439

## C.7 Mean share of harvest sold – staple crops

EICV3	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	18.6	0.2	18.1	19.1	12,805
Urban	14.6	0.8	13.2	16.1	1,352
Rural	19.0	0.3	18.5	19.5	11,453
Kigali City	14.8	1.1	12.6	17.0	668
Southern Province	15.9	0.4	15.2	16.7	3,632
Western Province	16.4	0.6	15.3	17.6	3,145
Northern Province	19.0	0.6	17.9	20.2	2,259
Eastern Province	23.9	0.5	23.1	24.8	3,101
Q1	12.4	0.4	11.7	13.1	2,367
Q2	16.2	0.4	15.5	16.9	2,561
Q3	19.0	0.4	18.2	19.8	2,680
Q4	21.6	0.4	20.8	22.5	2,844
Q5	22.9	0.7	21.6	24.2	2,353
Nyarugenge	9.7	1.4	7.0	12.3	170
Gasabo	18.1	1.7	14.7	21.5	290
Kicukiro	11.8	2.0	8.0	15.7	208
Nyanza	19.4	1.2	17.0	21.9	443
Gisagara	20.7	1.0	18.7	22.8	468
Nyaruguru	16.5	1.1	14.4	18.6	449
Huye	15.4	0.9	13.7	17.1	445
Nyamagabe	15.0	1.1	12.9	17.1	463
Ruhango	12.8	0.9	11.1	14.5	453
Muhanga	10.3	0.9	8.5	12.0	461
Kamonyi	16.9	1.2	14.5	19.3	450
Karongi	11.7	0.8	10.2	13.2	457
Rutsiro	13.4	1.0	11.5	15.4	468
Rubavu	19.4	2.0	15.5	23.3	385
Nyabihu	28.9	2.4	24.2	33.6	460
Ngororero	9.7	0.6	8.4	10.9	457
Rusizi	14.7	1.5	11.8	17.7	453
Nyamasheke	18.4	1.1	16.2	20.6	465
Rulindo	14.3	0.7	12.8	15.7	451
Gakenke	16.8	0.7	15.4	18.2	446
Musanze	21.8	1.6	18.5	25.0	446
Burera	24.1	1.4	21.3	26.9	457
Gicumbi	17.8	1.2	15.5	20.1	459
Rwamagana	23.1	1.4	20.4	25.8	417
Nyagatare	26.8	1.2	24.5	29.2	452
Gatsibo	24.4	1.2	22.0	26.8	461
Kayanza	27.5	1.2	25.1	29.9	436
Kirehe	22.8	1.0	20.9	24.7	459
Ngoma	23.3	1.1	21.1	25.5	430
Bugesera	19.5	1.1	17.3	21.7	446

## C.8 Mean share of harvest sold – CIP crops

EICV3	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	14.9	0.3	14.4	15.5	12,657
Urban	10.8	0.7	9.4	12.3	1,173
Rural	15.3	0.3	14.8	15.9	11,484
Kigali City	10.3	1.3	7.9	12.8	514
Southern Province	12.8	0.5	11.9	13.8	3,625
Western Province	13.3	0.6	12.0	14.5	3,068
Northern Province	15.5	0.7	14.2	16.8	2,292
Eastern Province	19.0	0.5	18.0	19.9	3,158
Q1	8.1	0.3	7.4	8.7	2,317
Q2	12.4	0.5	11.4	13.5	2,586
Q3	15.0	0.5	14.1	15.9	2,701
Q4	17.9	0.5	16.9	18.9	2,858
Q5	20.7	0.7	19.4	22.0	2,195
Nyarugenge	4.9	1.2	2.5	7.3	122
Gasabo	12.5	1.9	8.7	16.3	236
Kicukiro	9.4	1.9	5.7	13.1	156
Nyanza	15.7	1.4	13.0	18.3	443
Gisagara	20.0	1.7	16.7	23.2	473
Nyaruguru	11.4	1.6	8.2	14.5	467
Huye	12.1	1.2	9.7	14.5	445
Nyamagabe	11.1	1.1	8.8	13.3	461
Ruhango	11.4	0.9	9.6	13.3	453
Muhanga	8.5	1.0	6.5	10.5	445
Kamonyi	11.3	1.6	8.2	14.5	438
Karongi	8.7	0.8	7.2	10.3	456
Rutsiro	9.2	1.0	7.2	11.2	456
Rubavu	19.0	2.1	14.9	23.2	359
Nyabihu	27.1	2.7	21.7	32.4	460
Ngororero	7.9	0.6	6.6	9.1	466
Rusizi	11.0	1.9	7.3	14.8	433
Nyamasheke	11.8	1.1	9.5	14.0	438
Rulindo	9.8	0.9	8.1	11.6	462
Gakenke	8.9	0.9	7.1	10.8	465
Musanze	19.5	2.0	15.7	23.4	439
Burera	22.2	1.3	19.5	24.8	461
Gicumbi	16.1	1.3	13.4	18.7	465
Rwamagana	15.2	1.3	12.7	17.6	430
Nyagatare	22.7	1.4	19.8	25.5	450
Gatsibo	18.1	0.9	16.3	19.8	463
Kayanza	17.2	1.3	14.6	19.9	442
Kirehe	18.9	1.4	16.1	21.8	461
Ngoma	24.2	1.4	21.5	26.9	458
Bugesera	16.3	1.2	14.0	18.7	454

## C.9 Percentage of households raising livestock

EICV3	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	68.2	0.6	67.0	69.4	14,308
Urban	41.2	1.9	37.6	44.9	2,149
Rural	72.8	0.6	71.7	74.0	12,159
Kigali City	34.5	2.5	29.6	39.4	1,348
Southern Province	73.1	0.9	71.4	74.9	3,840
Western Province	69.2	1.2	66.9	71.6	3,360
Northern Province	76.1	1.7	72.7	79.5	2,400
Eastern Province	70.1	1.1	68.0	72.2	3,360
Q1	65.8	1.1	63.6	68.1	2,449
Q2	72.4	1.0	70.3	74.5	2,699
Q3	75.4	0.9	73.6	77.2	2,849
Q4	72.9	1.0	70.9	74.9	3,103
Q5	56.0	1.2	53.5	58.4	3,208
Nyarugenge	22.8	3.7	15.5	30.2	449
Gasabo	44.5	4.7	35.2	53.7	450
Kicukiro	30.0	3.5	23.2	36.7	449
Nyanza	69.0	2.2	64.7	73.3	480
Gisagara	83.1	2.0	79.2	87.0	480
Nyaruguru	82.8	2.0	78.9	86.7	480
Huye	69.3	2.4	64.6	74.1	480
Nyamagabe	77.6	2.6	72.6	82.6	480
Ruhango	60.6	2.3	56.1	65.1	480
Muhanga	76.9	2.7	71.5	82.2	480
Kamonyi	67.1	3.1	61.0	73.2	480
Karongi	80.9	3.3	74.4	87.3	480
Rutsiro	76.4	2.4	71.6	81.2	480
Rubavu	47.7	3.2	41.4	53.9	480
Nyabihu	64.1	3.0	58.2	70.0	480
Ngororero	83.1	1.9	79.4	86.8	480
Rusizi	62.8	3.2	56.4	69.2	480
Nyamasheke	71.7	3.1	65.7	77.8	480
Rulindo	78.8	1.9	75.1	82.4	480
Gakenke	84.5	2.1	80.4	88.6	480
Musanze	62.6	4.4	54.0	71.2	480
Burera	78.5	2.2	74.1	82.8	480
Gicumbi	77.8	4.2	69.6	86.0	480
Rwamagana	70.2	3.3	63.6	76.8	480
Nyagatare	64.0	2.9	58.3	69.8	480
Gatsibo	72.8	2.7	67.4	78.1	480
Kayonza	63.9	3.0	58.1	69.7	480
Kirehe	70.3	2.4	65.6	75.1	480
Ngoma	69.9	2.3	65.4	74.4	480
Bugesera	78.4	3.1	72.3	84.6	480



## C.10 Percentage of livestock-raising households which raise cattle

EICV3	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	47.3	0.6	46.0	48.6	9,804
Urban	40.0	2.0	36.0	43.9	883
Rural	48.0	0.7	46.7	49.4	8,921
Kigali City	41.2	2.7	35.9	46.5	430
Southern Province	47.1	1.1	44.9	49.4	2,812
Western Province	42.5	1.2	40.3	44.8	2,325
Northern Province	57.8	1.7	54.6	61.1	1,867
Eastern Province	44.6	1.4	42.0	47.3	2,370
Q1	32.5	1.2	30.1	34.8	1,612
Q2	41.4	1.3	38.9	43.9	1,971
Q3	47.3	1.3	44.8	49.8	2,158
Q4	54.4	1.3	51.9	56.8	2,285
Q5	57.6	1.5	54.7	60.5	1,778
Nyarugenge	43.9	5.0	34.1	53.7	100
Gasabo	45.3	3.8	37.8	52.8	203
Kicukiro	29.7	4.0	21.9	37.5	127
Nyanza	46.0	3.1	40.0	52.0	325
Gisagara	23.6	1.9	19.8	27.3	398
Nyaruguru	43.8	2.9	38.1	49.6	396
Huye	38.2	3.1	32.2	44.2	328
Nyamagabe	47.4	3.3	40.8	53.9	375
Ruhango	59.8	3.7	52.4	67.1	294
Muhanga	64.4	3.0	58.4	70.3	372
Kamonyi	61.7	4.0	53.8	69.6	324
Karongi	60.9	4.0	53.1	68.8	375
Rutsiro	42.5	2.9	36.7	48.3	366
Rubavu	26.6	3.4	20.0	33.3	222
Nyabihu	45.4	4.2	37.2	53.7	313
Ngororero	50.6	2.9	44.9	56.4	398
Rusizi	28.7	3.2	22.3	35.1	302
Nyamasheke	34.5	2.6	29.5	39.5	349
Rulindo	57.2	2.7	51.9	62.5	378
Gakenke	65.9	3.0	60.0	71.8	406
Musanze	40.2	3.2	33.9	46.6	323
Burera	54.3	4.2	46.0	62.6	377
Gicumbi	65.4	4.2	57.1	73.7	383
Rwamagana	50.0	3.0	44.1	55.9	341
Nyagatare	39.8	3.9	32.1	47.6	313
Gatsibo	58.3	3.0	52.4	64.2	345
Kayonza	38.5	3.2	32.3	44.8	310
Kirehe	34.8	3.2	28.5	41.1	340
Ngoma	40.1	3.0	34.1	46.0	332
Bugesera	44.6	3.8	37.0	52.1	389

## Annex D Confidence intervals for selected indicators, EICV2

### D.1 Percentage of households cultivating land for crop production

EICV2	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	91.5	0.6	90.4	92.7	6,900
Urban	55.6	2.8	50.0	61.2	1,620
Rural	98.6	0.2	98.1	99.1	5,280
Kigali City	42.4	4.5	33.6	51.1	1,026
Southern Province	96.1	1.1	93.8	98.3	1,707
Western Province	96.4	0.7	95.0	97.8	1,653
Northern Province	96.1	1.7	92.8	99.5	1,059
Eastern Province	97.8	0.6	96.6	99.0	1,455
Q1	97.2	0.7	95.8	98.6	1,119
Q2	97.3	0.6	96.1	98.4	1,226
Q3	97.5	0.5	96.4	98.5	1,268
Q4	94.5	0.9	92.7	96.4	1,397
Q5	75.1	1.4	72.4	77.8	1,890

### D.2 Percentage of cultivating households cultivating less than 0.3ha

EICV2	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	42.0	0.9	40.3	43.8	5,956
Urban	57.6	3.0	51.7	63.6	802
Rural	40.3	0.9	38.5	42.1	5,154
Kigali City	47.2	5.0	37.3	57.0	346
Southern Province	51.9	1.8	48.5	55.4	1,622
Western Province	52.4	2.0	48.5	56.3	1,570
Northern Province	35.2	1.6	32.0	38.3	1,015
Eastern Province	24.3	1.5	21.3	27.3	1,403
Q1	55.1	1.8	51.6	58.6	1,068
Q2	45.2	1.7	42.0	48.5	1,173
Q3	39.7	1.6	36.5	42.9	1,221
Q4	36.9	1.5	33.9	39.9	1,288
Q5	34.5	1.7	31.1	37.9	1,206

### D.3 Mean share of harvest sold – all crops

EICV2	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	16.0	0.3	15.3	16.7	5,513
Urban	14.2	0.8	12.6	15.9	714
Rural	16.2	0.4	15.5	16.9	4,799
Kigali City	13.1	1.0	11.0	15.1	307
Southern Province	14.9	0.6	13.8	16.0	1,514
Western Province	16.9	0.9	15.1	18.6	1,454
Northern Province	14.5	0.8	12.8	16.1	956
Eastern Province	18.2	0.6	17.0	19.4	1,282
Q1	10.7	0.5	9.7	11.7	1,030
Q2	13.7	0.5	12.6	14.8	1,107
Q3	16.6	0.6	15.5	17.8	1,124
Q4	18.2	0.6	17.0	19.3	1,177
Q5	20.9	0.7	19.5	22.3	1,075

### D.4 Mean share of harvest sold – staple crops

EICV2	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	14.2	0.3	13.5	14.8	5,638
Urban	12.9	0.9	11.2	14.6	728
Rural	14.3	0.4	13.6	15.0	4,910
Kigali City	11.3	1.0	9.3	13.4	319
Southern Province	12.9	0.5	11.8	13.9	1,549
Western Province	13.6	0.8	12.0	15.2	1,487
Northern Province	13.2	0.8	11.6	14.7	975
Eastern Province	17.8	0.6	16.5	19.0	1,308
Q1	9.0	0.5	8.1	9.8	1,040
Q2	12.2	0.5	11.2	13.1	1,129
Q3	14.8	0.6	13.7	15.9	1,151
Q4	16.1	0.6	15.0	17.2	1,212
Q5	18.8	0.7	17.5	20.1	1,106

### D.5 Mean share of harvest sold – CIP crops

EICV2	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	12.6	0.4	11.9	13.4	5,684
Urban	9.4	0.9	7.6	11.1	730
Rural	13.0	0.4	12.2	13.8	4,954
Kigali City	8.3	1.0	6.3	10.4	307
Southern Province	12.7	0.7	11.4	14.0	1,566
Western Province	12.7	1.0	10.8	14.6	1,475
Northern Province	10.9	0.9	9.2	12.7	996
Eastern Province	14.7	0.7	13.3	16.2	1,340
Q1	6.6	0.5	5.6	7.6	1,020
Q2	10.1	0.6	9.0	11.2	1,142
Q3	13.3	0.6	12.1	14.6	1,169
Q4	14.6	0.6	13.3	15.8	1,229
Q5	18.3	0.8	16.7	19.9	1,124

## D.6 Percentage of households raising livestock

EICV2	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	71.3	0.8	69.8	72.9	6,900
Urban	47.2	2.1	43.0	51.4	1,620
Rural	76.1	0.8	74.6	77.6	5,280
Kigali City	40.6	3.6	33.6	47.7	1,026
Southern Province	75.3	1.5	72.3	78.4	1,707
Western Province	73.2	1.5	70.3	76.1	1,653
Northern Province	73.7	1.9	70.0	77.5	1,059
Eastern Province	75.6	1.7	72.3	78.8	1,455
Q1	63.6	1.5	60.7	66.5	1,119
Q2	73.8	1.5	70.8	76.8	1,226
Q3	77.9	1.2	75.5	80.3	1,268
Q4	78.2	1.3	75.7	80.8	1,397
Q5	63.5	1.5	60.6	66.4	1,890

## D.7 Percentage of livestock-raising households which raise cattle

EICV2	Estimate	Standard error	Lower	Upper	Unweighted count
All Rwanda	34.4	0.9	32.7	36.1	4,742
Urban	34.1	2.4	29.4	38.7	708
Rural	34.4	1.0	32.5	36.3	4,034
Kigali City	36.4	3.7	29.0	43.7	348
Southern Province	42.6	1.6	39.6	45.7	1,298
Western Province	28.8	1.7	25.5	32.1	1,211
Northern Province	37.8	2.2	33.5	42.2	782
Eastern Province	27.2	1.7	23.8	30.5	1,103
Q1	16.9	1.6	13.9	20.0	713
Q2	27.7	1.6	24.5	30.9	906
Q3	34.0	1.6	30.8	37.2	985
Q4	39.3	1.7	35.9	42.7	1,071
Q5	48.5	1.8	45.0	52.0	1,067