

1. Introduction:

1.1 Background on Agricultural Statistics in Uganda:

Production of agricultural data started in Uganda way back during the colonial times when the Ministry responsible for agriculture established an Agricultural Reporting Service in which District Agricultural Officers (DAOs) collected and provided estimates of planted area and yield. The District Veterinary Officers (DVOs) collected and provided data on livestock numbers and products, while District Fisheries Officers (DFOs) collected and provided data on fisheries. It is useful to note that during colonial times, it was mandatory to count livestock in December of each year. This was done using a structured questionnaire that facilitated collection of inventory of livestock and record the numbers, type and productivity (production of meat, hides, milk skins, etc.).

Between 1963 and 1965, the Uganda Government was assisted by FAO and the Department of Technical Co-operation of the United Kingdom to conduct the first Census of Agriculture to collect the required benchmark data. In this census, objective methods were used to measure both crop area and yield and data on livestock inventory and poultry were obtained by farmer interviews.

After the Census, two follow-up annual agricultural sample surveys were carried out also using objective methods. However, not enough capacity was built to sustain the survey system and by mid-70s, there were no more survey field activities. In the meantime, the Agricultural Reporting Service continued to provide data for estimation of production and planning purposes, its weaknesses notwithstanding.

In 1986/87, the then Ministry of Animal Industry and Fisheries conducted an ad hoc Livestock Sector Survey, funded by the European Union, to up-date existing data on livestock inventory. This survey provided data on livestock and livestock products by district. In this survey, data was collected on all types of livestock. The main problem with this survey was that eight (8) districts were, for some reason, not covered and they included: Apac, Gulu, Kitgum, Kotido, Lira, Mbarara, Moroto and Soroti known for keeping a lot of livestock.

A National Census of Agriculture and Livestock (NCAL) was conducted during 1990/91 with funding from UNDP and technical support from FAO. However, the results from this census were contentious. There were two follow-up annual agricultural sample surveys in 1991/92 and 1992/93 agricultural years. Not only were the results from these surveys also withheld, but also once more, the Government could not periodically sustain the survey system when donor support ended.

The main source of base year estimates of food crop production has been the 1989/90 Household Budget Survey (HBS) conducted by the Uganda Bureau of Statistics (UBOS) (previously the Statistics Department under the Ministry of Finance, Planning and Economic Development). Seasonal production patterns are estimated on a crop-by-crop basis using some data and information provided by the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF). Base year livestock numbers are based on the HBS and movements in stock are based on data provided by the Veterinary Department of MAAIF. Base year fisheries estimates are also derived from the HBS and these are extrapolated using annual data on both catch levels and values provided by the Fisheries Department of MAAIF. Data on cash crops – mainly coffee, tea and cotton continue to be compiled by the statutory bodies established to handle the development and marketing of the crops. In 1983, Government also established the Agricultural Secretariat (AGSEC) originally at Bank of Uganda to carry out policy analysis on the agricultural sector. Wherever there were identifiable data gaps, the AGSEC put machinery in place to collect such data. In particular, the AGSEC was the main source of data on cost-of-production of various crops.

Apart from providing technical backup to the MAAIF at the time of agricultural census or annual sample surveys, (UBOS) has only recently been involved in collecting agricultural statistics directly from primary sources. However UBOS has been implementing a World Bank funded multi-round Uganda National Household Survey Project (UNHSP) since 1992-93 to collect data in an integrated manner and to provide estimates at national level on a number of socio-economic indicators. In the 1993-94 round, a diagnostic agricultural crop survey was carried out to establish the operational feasibility of obtaining reasonably reliable estimates of production of major food crops at national level through an Enquiry Method which was expected to be more cost-effective and less cumbersome than the objective method used in the censuses of agriculture and post-census agricultural surveys implemented by the MAAIF. Following the success of the Diagnostic Survey, it was decided to make a Crop Survey the core module of the 1995-96 UNHSP, which was implemented in collaboration with the MAAIF. This decision was made against the backdrop of general paucity of official agricultural data given that in the 1970s and 1980s, no agricultural surveys were carried out in the country and that the results of the 1990/91 National Census of Agriculture and Livestock (NCAL) remained contentious, therefore, not available for use. The Crop Survey module collected data on household characteristics; holding characteristics; planted area; and crop output, sales and prices. UBOS again made the Crop Survey the core module of the 1999/2000 Uganda National Household Survey Programme (UNHSP). Meanwhile, a plan was put in place to include an Agricultural Module (AM) in the then planned Population and Housing Census (PHC) 2002, to collect some agricultural and livestock data that would be important for future agricultural censuses/surveys.

The AM that was included in the PHC 2002, provided the first complete enumeration of household based agricultural activity ever taken in Uganda. In spite of some of its weaknesses, the AM forms a unique source of agricultural statistics that will contribute immensely to the already existing datasets collected in the long history of agricultural data in Uganda.

1.2 Purpose of the AM piggy-backed onto the PHC 2002:

The primary purpose of the AM was to provide a basis for constructing appropriate sampling frames to be utilized in a detailed Census of Agriculture in 2003; Census of Livestock in 2004 and for other agricultural surveys.

Accordingly, sampling frames to be used in sampling to collect information from small and medium scale household-based holdings in Agricultural Censuses/surveys have been produced. By July 2004, prospects for getting funding for the planned Uganda Census of Agriculture and Livestock (UCAL) 2004/05 were beginning to fade away due to lack of budgetary provisions. In the absence of conducting the planned UCAL, the AM data have proved to be a very useful resource in the provision of a sampling frame for the pilot Permanent Agricultural Statistics System (PASS) and other running surveys. The main objective of PASS is to provide high quality annual data/information on crop and livestock production both at national and district level.

The agricultural sector in Uganda is extremely dynamic with continuous changes in the holding sizes and activities to match the relatively high population growth. As a result, a few years from the time of PHC 2002 enumeration, the results from the AM will be less and less reliable to form good sampling frames. There is therefore a need to start thinking of an updating process of these frames..

As the AM data files were further processed in UBOS, it became clear that this was a unique source of agricultural data that could be put to further uses. Therefore, a secondary objective was to consider the possibility of linking the AM data set and that one of the Pilot Census of Agriculture (PCA) to provide useable information to policymakers, researchers and the general public on household based agricultural

activity as of November 2002. This was expected to contribute as a supplement to the existing agricultural statistics.

1.3 Scope and Design:

1.3.1 Scope and Coverage:

The AM covered all households that reported agricultural activity as of September 2002. All 56 districts at the time of enumeration during the PHC 2002 were covered.

The scope of the AM covered the following items reported:

- Number of households with activities related to one or more of the following activities: Crop production, livestock production, poultry keeping, and, fish farming.
- Total holding area.
- Number of crop plots by main crop grown and by pure or mixed stand during the first agricultural season 2002.
- Number and type of cattle.
- Number of goats, sheep, pigs and other domestic animals e.g. donkeys, camels, etc.
- Number and type of poultry.
- Number of fishponds (stocked and un-stocked) and for those stocked by type of fish.

1.3.2 Design:

The AM was designed as an attachment to the main questionnaire of the PHC 2002 (See Annex 2) as a complete count of households. The census taking was carried out using a large number of Enumerators (Over 45,000 Enumerators) who visited and interviewed all households in Uganda during the census week (i.e. 13th – 20th September 2002}.

1.4 Constraints and reliability of data:

1.4.1 Constraints linked to the questionnaire and manual design:

The AM was included with the overall objective of collecting data on limited key variables for purposes of constructing appropriate sampling frames for future agricultural censuses and surveys. The questionnaire design and therefore the variables to be included had to be limited to those to meet the objectives. Further, it was important to ensure that the PHC variables were not un-necessarily overloaded with more AM variables which could cause extra time use by the Enumerators during interviews thereby increasing costs, and respondent fatigue.

As a result, very important questions on agriculture had to be left out at design stage in order to keep the AM attachment short.

Seen in retrospective, it is clear that the question on *where* one or more household members were engaged in agricultural activity should have been addressed properly. Furthermore it is not clear if the household member was supposed to be a holder on his/her own holding or if he/she was an employee on another owner's holding. This missing information makes it difficult to determine the number of *household based holdings* and the distribution of the activity with high precision. To avoid misunderstandings of terms, the group of words "households with agricultural activity" or "agricultural households" for further use in this report are introduced.

An agricultural household is therefore defined as:

A household registered in the AM confirming that one or more of the household members were engaged in agricultural activity (A1=1) or that crops were grown (A3=1) or if any detailed information about area, crop plots, livestock, poultry or fish was filled in (A2 or A4-A6 > 0) (See Annex 2).

1.4.2 Constraints linked to the training and supervision of Enumerators:

The training of the Enumerators for the PHC staff was made in several phases ranging from training of headquarter staff, training of District Census Officers, Sub-County Supervisors and eventually the Enumerators/Parish Supervisors as indicated below:

- Phase I:** Census Management Team (CMT) and Census Technical and Advisory Committee members who constituted UBOS Supervisors (at least one per district);
- Phase II:** District Census Officers and their Assistant District Census Officers who became trainers of Sub-County Supervisors and Assistant Trainers;
- Phase III:** Sub-County Supervisors and Assistant Trainers who became trainers of Enumerators and Parish Supervisors; and finally,
- Phase IV:** Enumerators and Parish Supervisors.

Enumerators' Instructions Manual for the AM was provided as part of the Manual for the PHC 2002 (see Annex 3 for an extract specifically for the AM).

This type of training could easily have become less and less efficient, the more the training moved through the hierarchy down to the Enumerators. In addition, the training may have concentrated more on understanding of the main body of the PHC questionnaire, than on understanding the AM whose concepts could have required more time and therefore explanations. The mere fact that there were tens of thousands of Enumerators meant that effective training and supervision may not have been achieved to the required levels and this could have impacted on the quality of the AM data. Given the size of the Census questionnaire and the requirement of each Enumerator to cover 20 households per day during the Census Week, may not have left enough time to carry out proper probing in order to get and record accurate responses on the AM.

1.4.3 Reliability of data:

The data collection was done on a complete enumeration basis, and thus, no Sampling Errors (SEs) have to be considered. On the other hand, **Non Sampling Errors (NSEs)**, should have been there. Unfortunately, an assessment of the control process of the NSEs can not be made available due to the many Enumerators.

There are other considerations that could have impacted on the quality of data and the most obvious are:

a) Absence of verification:

During the post processing and cleaning of the AM dataset, it was not possible to do any callbacks to Enumerators or holders to verify strange findings. There are also few or no good sources available for comparison with the AM findings in order to evaluate the results in a broader context.

b) Possible misunderstanding of the concepts and measuring units:

For many districts, findings from post processing of the data reveal that the total area of holdings reported in a district exceeds the area of that district. This may have been due to misunderstanding of the different area measuring units used in different parts of the country as well as the inability by the respondents to conceive their holding sizes using the **eye estimation method**.

In light of this finding, it was therefore decided not to publish data for the sizes of holding from the AM.

c) Data disaggregated to lower levels of administrative units:

When the number of livestock and poultry are disaggregated to lower geographical levels like Sub-Counties, Parishes or even EAs, some obvious errors and misunderstandings are revealed and thus data at these levels should be used with caution. However, at national level, most livestock figures seem reasonable when compared with official annual statistics from MAAIF. A simple explanation may be that at higher levels say district errors on individual level balance out (i.e. underestimates and overestimates balance out), which is necessarily not the case at lower levels of administration.

d) Poultry numbers:

Unfortunately some abnormalities, which are difficult to clean, still exist in the AM poultry data, and thus should be used with utmost care. It is possible that the respondents may have provided the number of the hens and cocks leaving out small chicks usually regarded as unimportant given their high mortality rates. Correcting this misconception would have required more detailed interview, probing and observations.

2. Results:

2.1 Number of households for which members were engaged in agricultural activity:

There were a total of 3,833,485 households, or 73.9 percent of the 5,186,558 households from the PHC 2002 (Provisional Results, November 2002), that fulfilled the criteria of being engaged in agricultural activity as of September 2002. The largest number of agricultural households (180,390) was found in Mbarara district. The districts of Apac, Arua, Bushenyi, Iganga, Kamuli, Lira, Masaka, Mbale, Mubende and Mukono had all between 112,757 and 131,565 households reporting agricultural activity. All other districts each had less than 100,000 households with agricultural activity. (See Annex 1, Table 3.1).

Kalangala and Kampala districts were the two districts that reported the lowest number of households reporting on agricultural activity with a total of 3,508 and 17,560 agricultural households respectively. This can perhaps be explained by the fact that:

- Kalangala has the smallest population. This coupled with the fact that its main economic activity is fishing, explains the reason why the number of households reporting on agriculture was small.
- Kampala is mainly urban and it is not surprising that there is minimal agricultural activity. It is possible that part of the number of the household that reported operating of agriculture may have reported those operated far away in rural areas. It seems the instructions were not very clear on this issue.

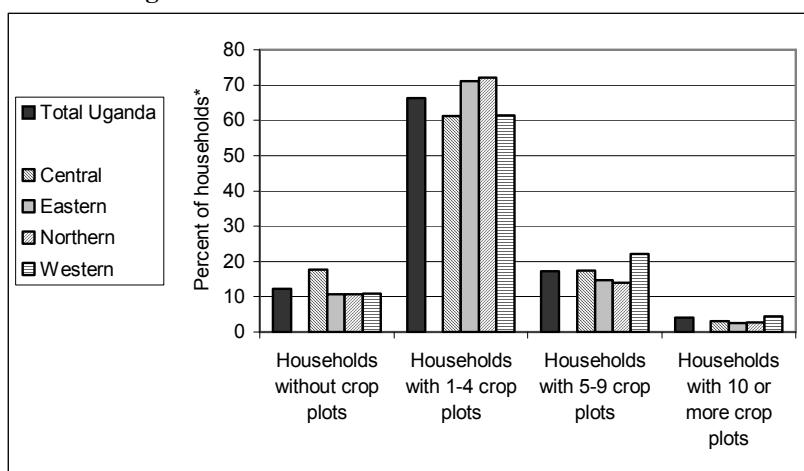
2.2 Agricultural households and Crop-Plots:

A total of 12,455,458 plots were reported planted by 3,359,516 agricultural households during the first agricultural season of 2002. The distribution on pure and mixed crop-stand was 7,050,830 (56.6 percent) and 5,281,755 (42.4 percent) respectively, whereas 0.9 percent of the plots were reported without specification of type of stand.

The largest number of crop plots (562,619) was found in Mbarara district. Mbarara district was closely followed by Arua, Iganga, Masaka and Kabale district with 508,659, 468,918, 442,650 and 434,872 plots planted respectively.

Approximately, twelve percent (12%) of all agricultural households did not have crop plots during the first agricultural season of 2002. The majority of the agricultural households in Uganda (66.4 percent) had between 1 and 4 plots. Only 4.1 percent of the agricultural households had 10 or more crop plots. The average number of crop plots per agricultural household was 3.25 plots per household (See Figure 2.2.1 and Annex 1, Table 3.2 - 3.3).

**Figure 2.2.1 Agricultural households distributed by number of crop plots per household.
PHC 2002 Agricultural Module: Percent**



2.3 Growing of Crops

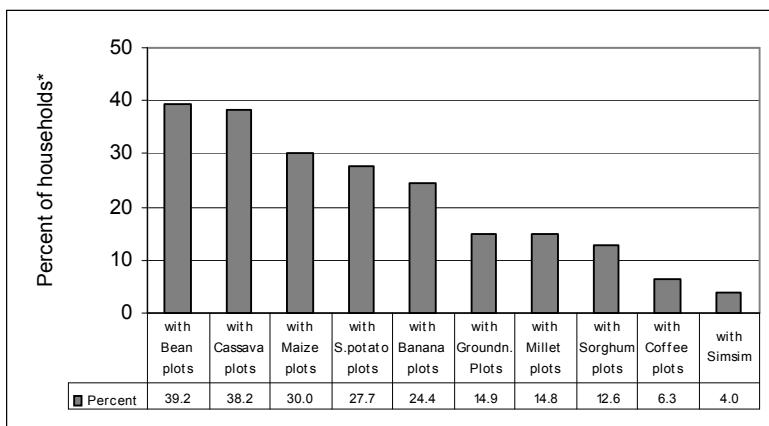
The most frequently grown crops measured as number of plots reported by the ten most frequently grown crops based on the number of plots reported after planting in the 1st agricultural season of 2002. The households for the first season 2002 are: Bananas, Beans, Cassava, Sweet Potatoes, Coffee, Groundnuts, Maize, Finger Millet, Sorghum and Simsim. The total number of plots reported for these ten crops (mixed and pure stand) is 11,482,566 out of 12,455,458 plots for all the crops covered. This is 93.7 percent of all crop plots reported by the agricultural households during the first season 2002. This means that all the other crops share only 6.3% of the number of plots.

Table 2.3.1 Frequency of crop plots by dominant crop grown during first season 2002. PHC 2002 Agricultural Module

Crop type	Percent of all plots
All	100.0
Beans	17.4
Cassava	17.1
Maize	14.0
Sweet Potatoes	11.7
Banana	10.8
Sorghum	6.2
Groundnuts	6.1
Millet	6.1
Coffee	2.7
Simsim	1.6
Irish Potatoes	1.2
Cotton	0.9
Rice	0.7
Cowpeas	0.5
Pigeonpeas	0.3
Onions	0.2
Fieldpeas	0.2
Tobacco	0.2
Cocoa	0.1
Vanilla	0.1
Other crops	1.8

Of the ten crops mentioned above, Beans and Cassava are the crops grown by most households, reported by 39.2 percent and 38.2 percent respectively of all agricultural households. (See Figure 2.3.1 and Annex 1, Tables 3.2 - 3.13).

Figure 2.3.1 Agricultural households with selected crops grown during first season 2002. PHC 2002 Agricultural Module: Percent



For Banana, Coffee and Sorghum the production was reported to be concentrated in specific regions in Uganda. Clearly visible patterns appear for banana growing from the South and up along the Central part of Uganda "the banana belt". The concentration of households based on coffee growing follows the same pattern, then has an extra concentration in the Eastern districts around Mount Elgon at the Kenyan border but less intensive also in Nebbi district in the North West. The growing of Sorghum is mostly concentrated in the North – Eastern

districts as well as in Kabale district in the extreme South West probably due to weather conditions and soil types. The growing of Cassava, Groundnuts, Sweet potatoes and Beans is more evenly distributed throughout the country however with less intensity in the North-East. Simsim is mostly grown in the North of Uganda. Further examination of the data may reveal other interesting patterns for future investigations

Figures 2.3.2 - 2.3.11 show rate of number of plots with a specific crop over total agricultural households within each of the 56 districts in Uganda for the first season 2002.

Figure 2.3.2 Number of Banana Plots per Agricultural Household by district. PHC 2002 Agricultural Module:

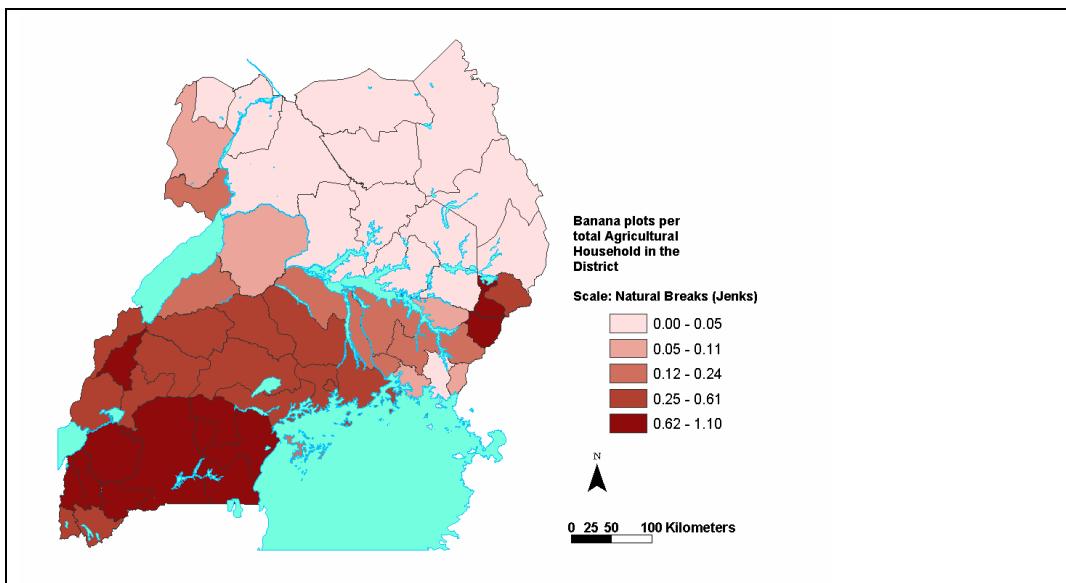


Figure 2.3.3 Number of Bean Plots per Agricultural Households by district. PHC 2002 Agricultural Module:

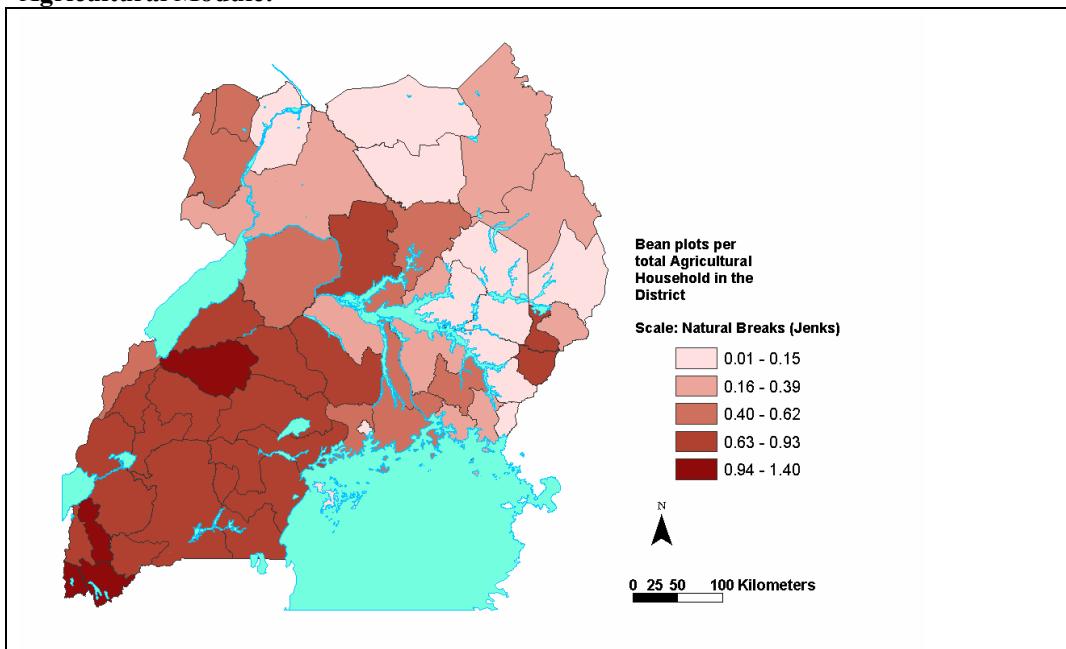


Figure 2.3.4 Number of Cassava Plots per Agricultural Household by district. PHC 2002 Agricultural Module:

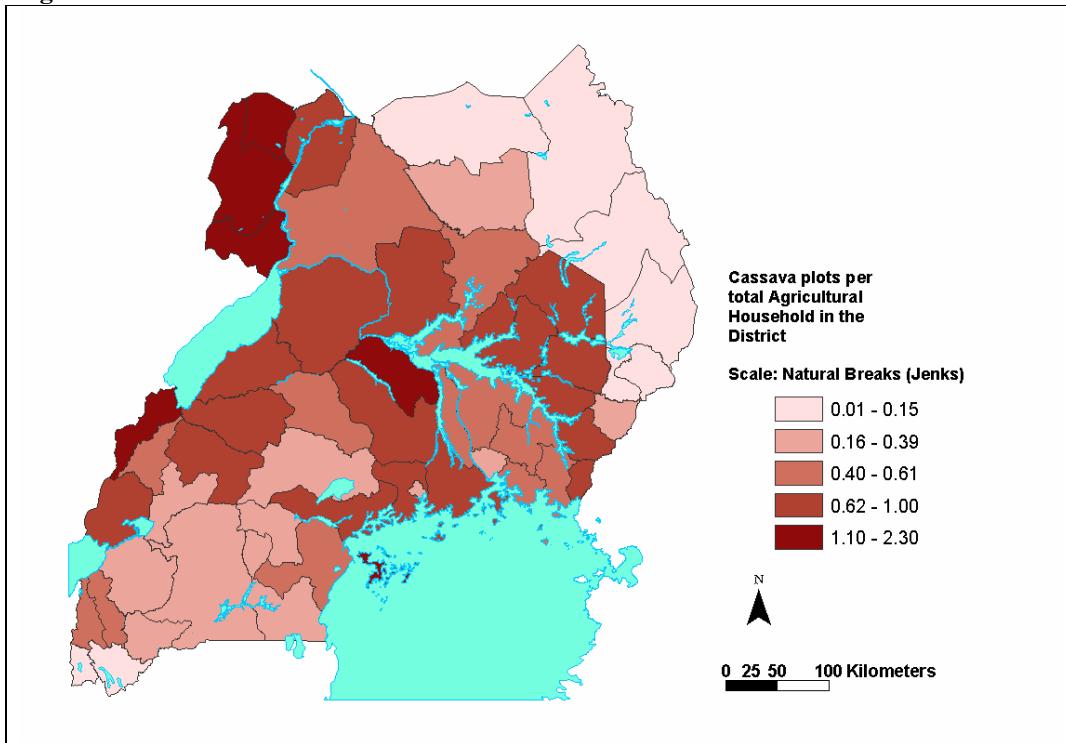


Figure 2.3.5 Number of Coffee Plots per Agricultural Households by district. PHC 2002 Agricultural Module:

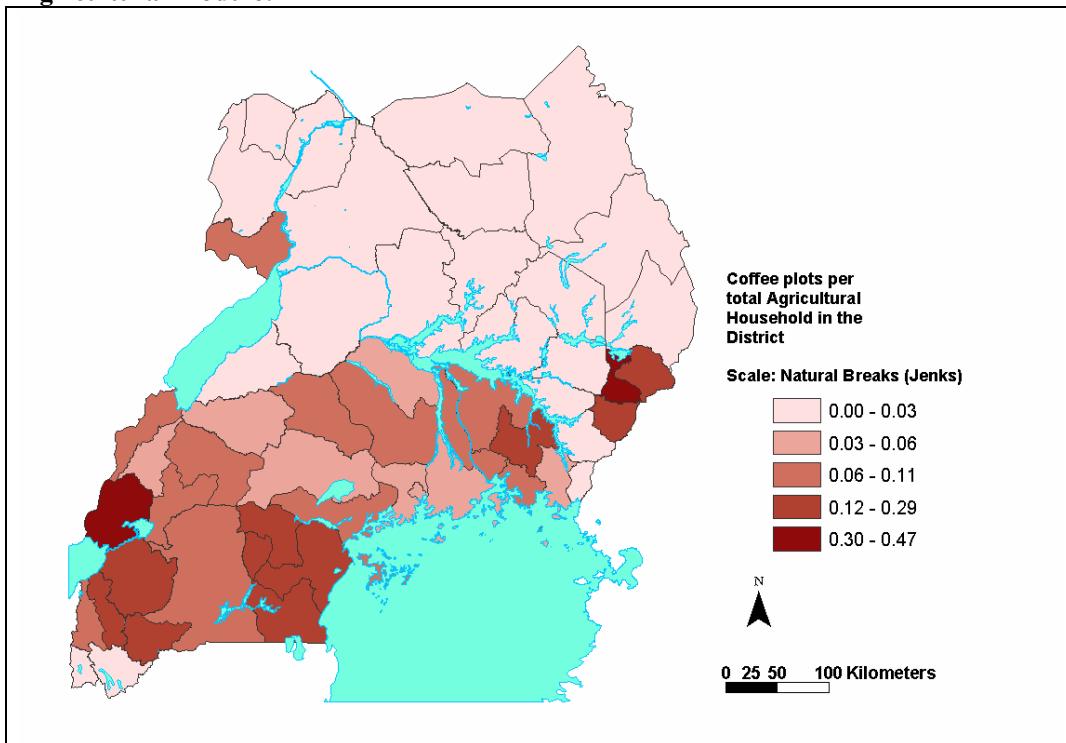


Figure 2.3.6 Number of Groundnut Plots per Agricultural Household by district. PHC 2002 Agricultural Module:

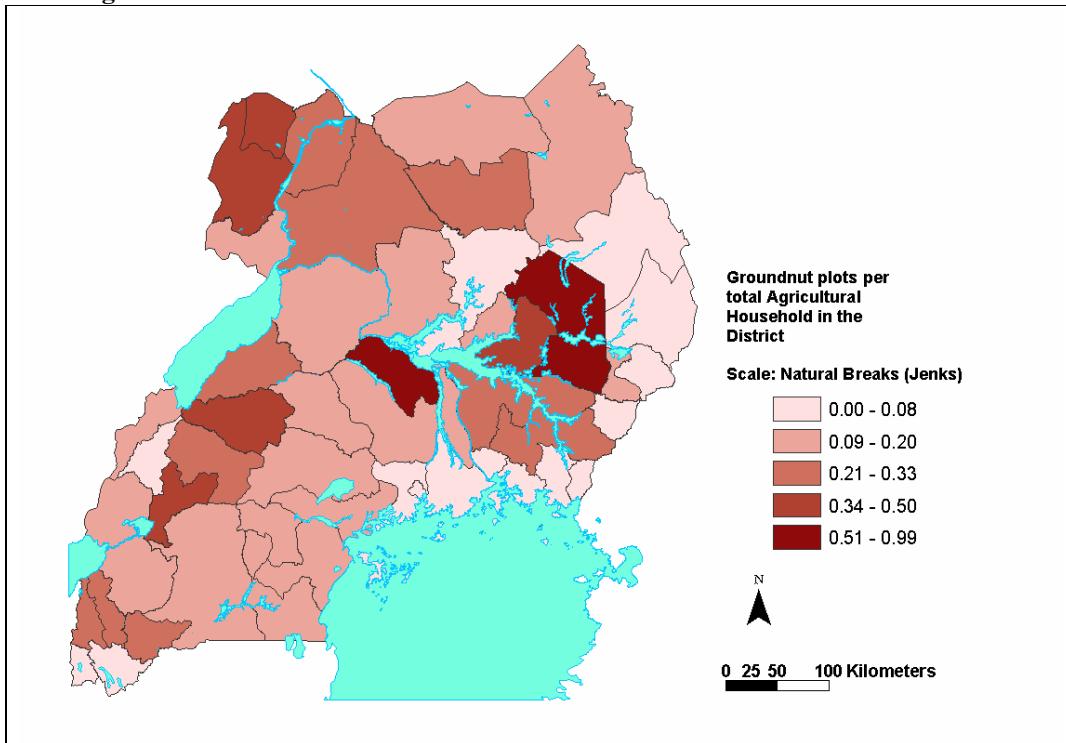


Figure 2.3.7 Number of Maize Plots per Agricultural Household by district. PHC 2002 Agricultural Module:

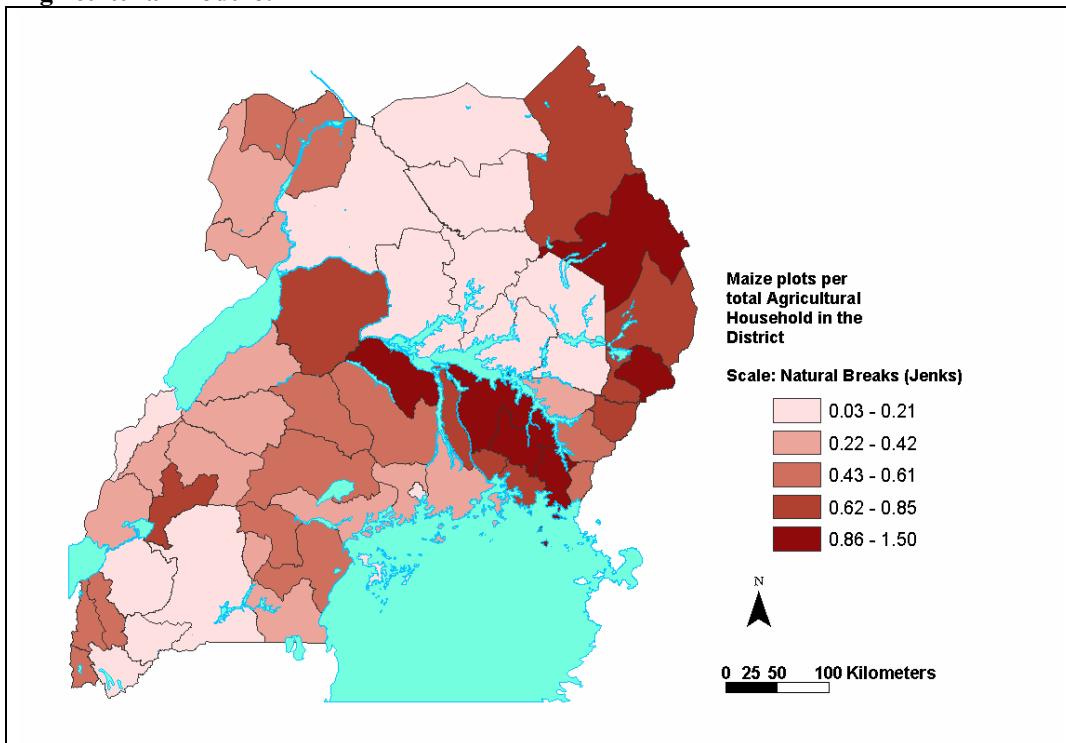


Figure 2.3.8 Number of Finger Millet Plots per Agricultural Household by district. PHC 2002 Agricultural Module:

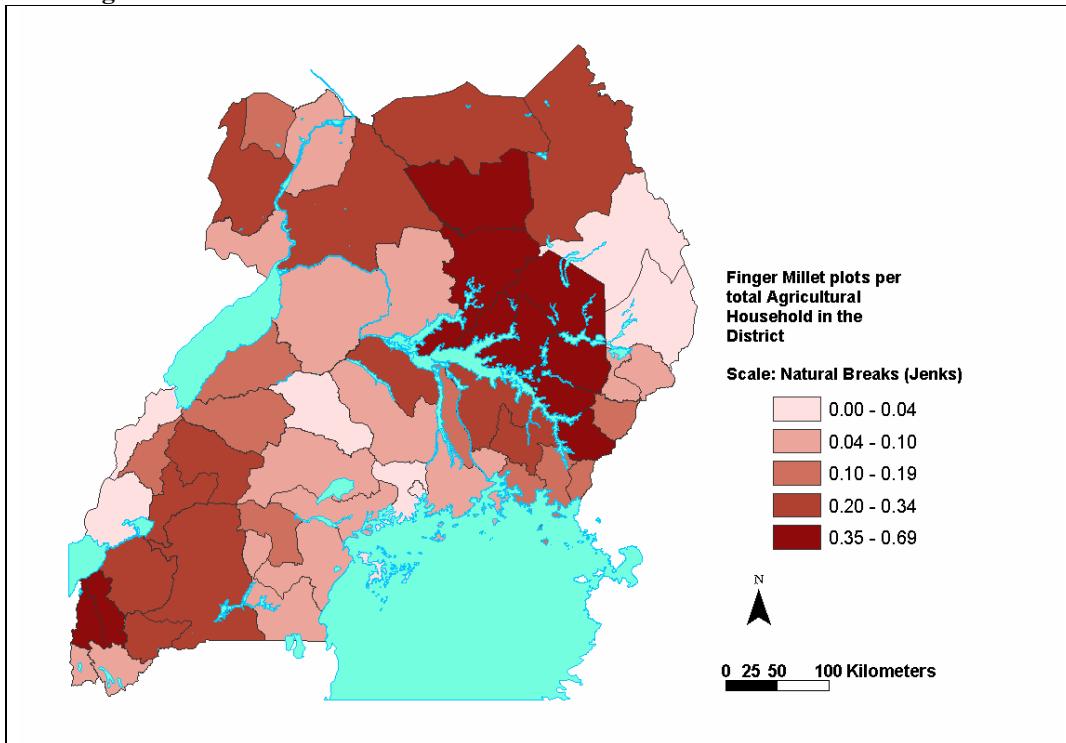
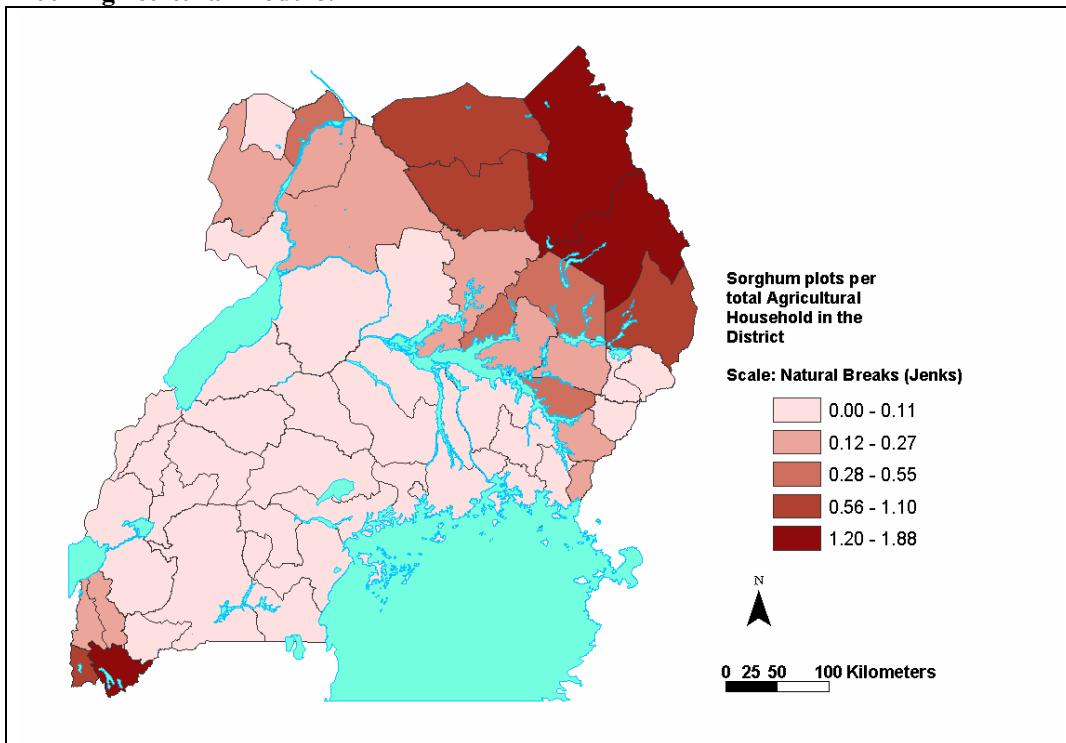


Figure 2.3.9 Number of Sorghum Plots per Agricultural Household by district. PHC 2002 Agricultural Module:



**Figure 2.3.10 Number of Sweet Potato Plots per Agricultural Household by district.
PHC 2002 Agricultural Module:**

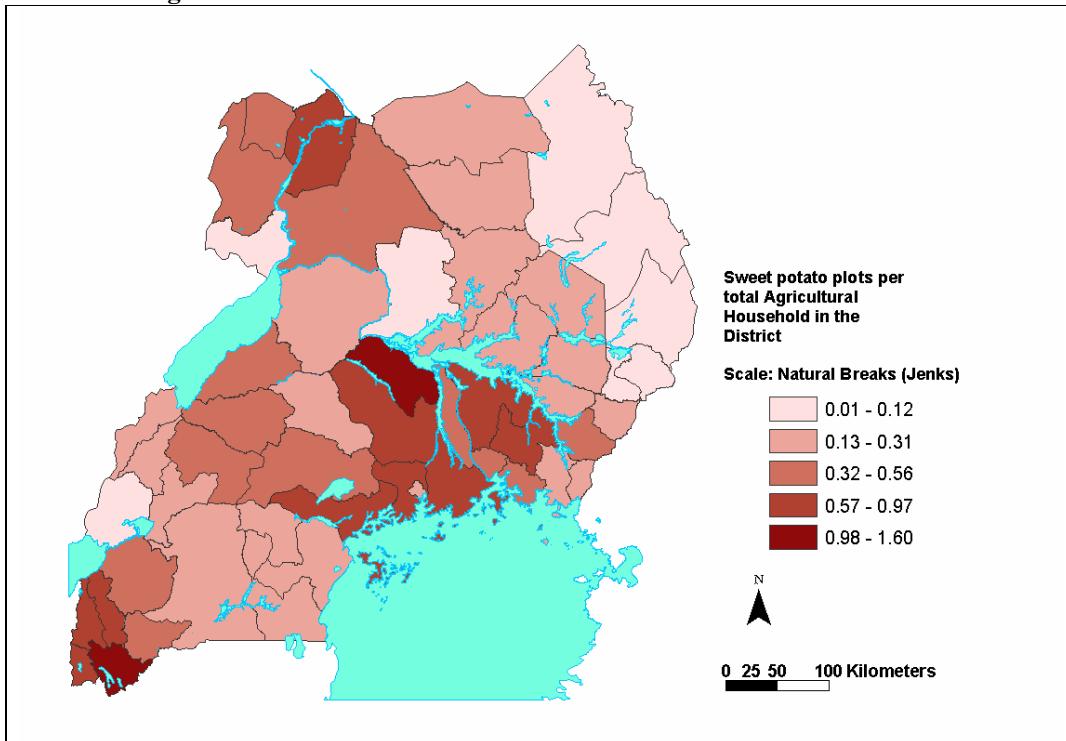
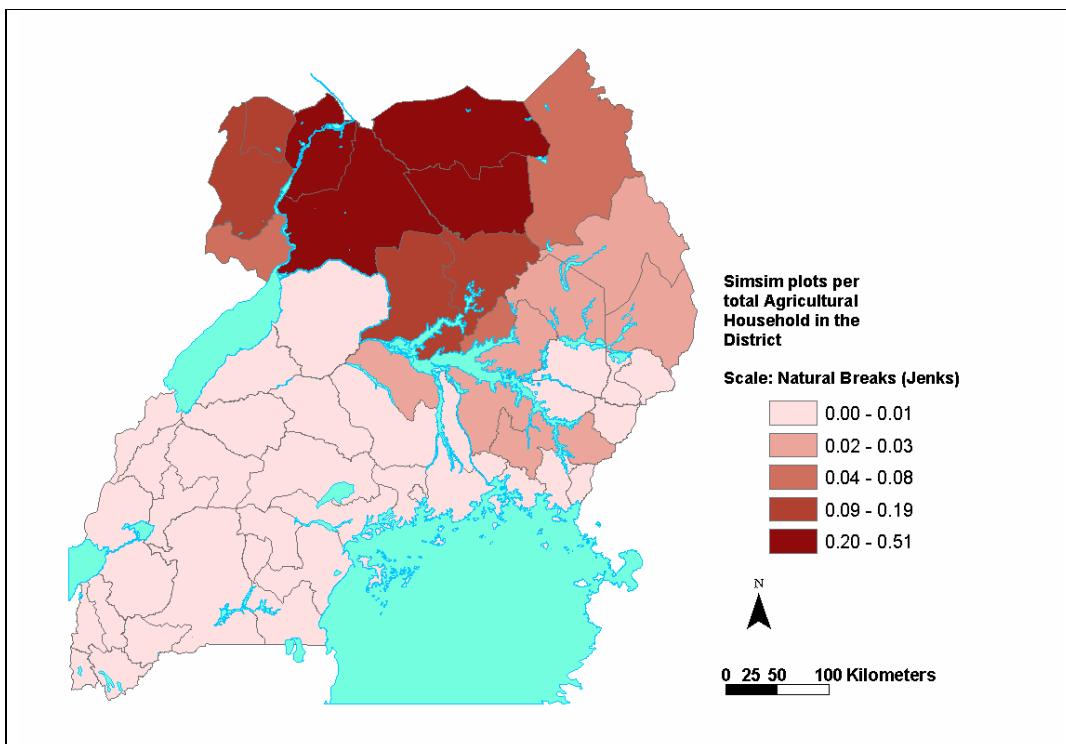


Figure 2.3.11 Number of Simsim Plots per Agricultural Household by district. PHC 2002 Agricultural Module:



2.4 Livestock, Poultry and Fishponds:

2.4.1 Cattle:

At national level, there were 77,009 households who reported rearing of exotic/cross cattle (or 2%) out of the 3,833,485 agricultural households (see Annex 1, Table 3.13).

The majority of households rearing Exotic/Crossbreed Cattle had one animal and these constituted 35.5 percent (See Annex 1, Table 3.15) of the agricultural households. However, there were also households with large numbers of cattle and those units had an impact on the statistics; for example the average was 6.9 number of Exotic/Crossbreed cattle per agricultural household that reported on that type of cattle.

Indigenous cattle were clearly dominating the cattle rearing in Uganda with a total of 752,195 households or 19.6 percent of all Agricultural households reporting for rearing of 5,749,412 heads of Indigenous cattle. (See Annex 1, Table 3.14)

On average there were 7.6 heads of indigenous cattle per household for those that reported on this type of cattle. This was clearly more than the average for Exotic/Crossbreed cattle. Still the majority of households rearing Indigenous cattle was dominated by small holders. A share of 27.3 percent of all the households reporting on indigenous cattle had only one head of cattle and as much as 70.8 percent of the actual households had less than five heads of indigenous cattle (See Figure 2.4.1.1 – 2.4.1.2 and Annex 1, Table 3.14 - 3.16).

Figure 2.4.1.1 Percent of Agricultural Households with Exotic/Crossbreed cattle distributed by number of cattle per household. PHC 2002 Agricultural Module:

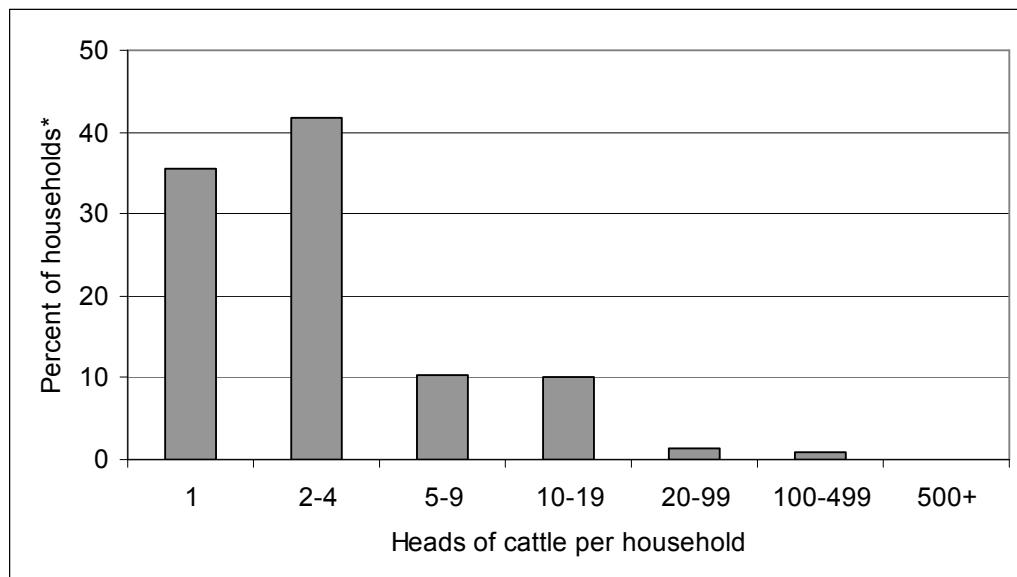
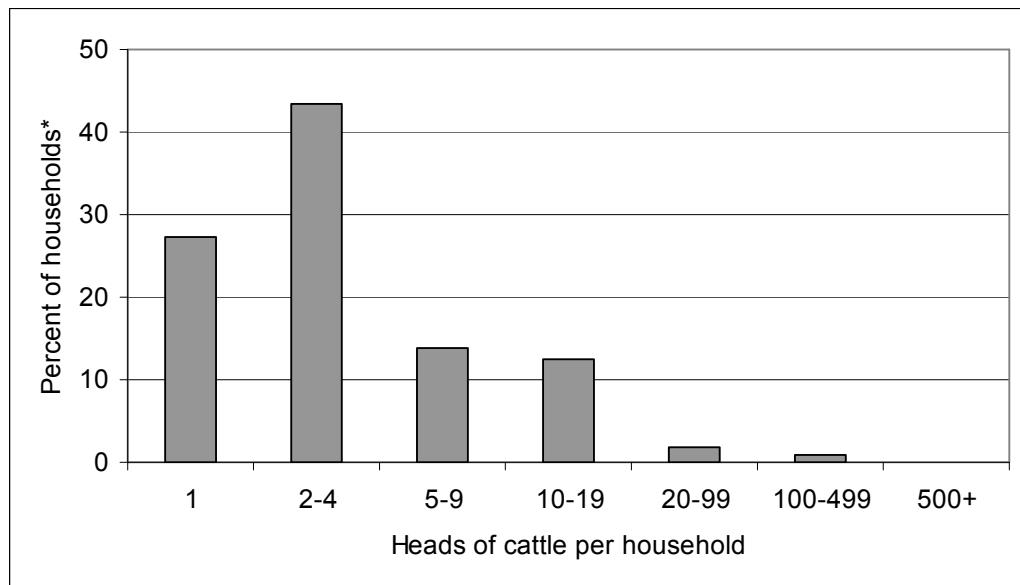


Figure 2.4.1.2 Percent of Agricultural Households with Indigenous cattle distributed by number of cattle per household. PHC 2002 Agricultural Module:



Mapping of Exotic cattle rearing, expressed as number of cattle per total Agricultural Household in the district, reveals a general pattern of higher concentration around major urban areas such as Kampala and Wakiso as well as in traditional cattle-rearing and milk producing areas such as Mbarara. However, the large number of cattle reported by households in Kampala, may not actually be located within the city, but possibly existing “in the villages” up country. This clearly illustrates the issue of misunderstanding the question by either Enumerators or respondents or both. The relatively high concentration of exotic/crossbreed cattle also in the typical pastoral areas in the North/East is also disturbing the main pattern of distribution. Possible misinterpretation of the concept “cross breed” during fieldwork and/or data entry errors could be part of the explanation for some of these unexpected results. Future surveys designs must take account of these findings to provide for suitable tools and procedures. Dis-aggregation of the dataset to lower geographical levels, further analyses and probing is needed before valid conclusions can be made.

Indigenous cattle are distributed over most of the 56 districts, with a clearly higher concentration in the pastoral areas in the North-East and along the cattle corridor stretching from the dry lands of North-East to the South of Uganda.

Figure 2.4.1.3 Number of Exotic/Crossbreed Cattle per Agricultural Household by district. PHC 2002 Agricultural Module:

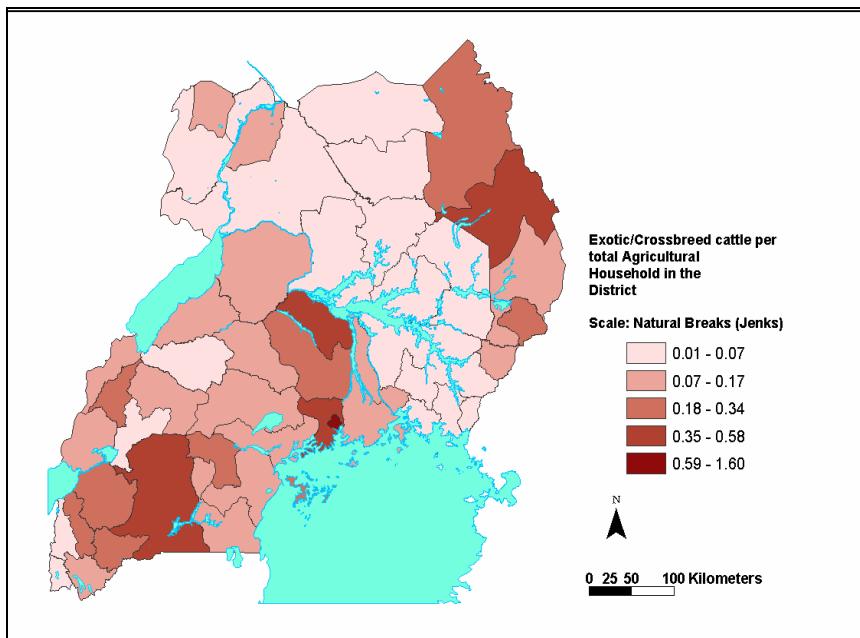
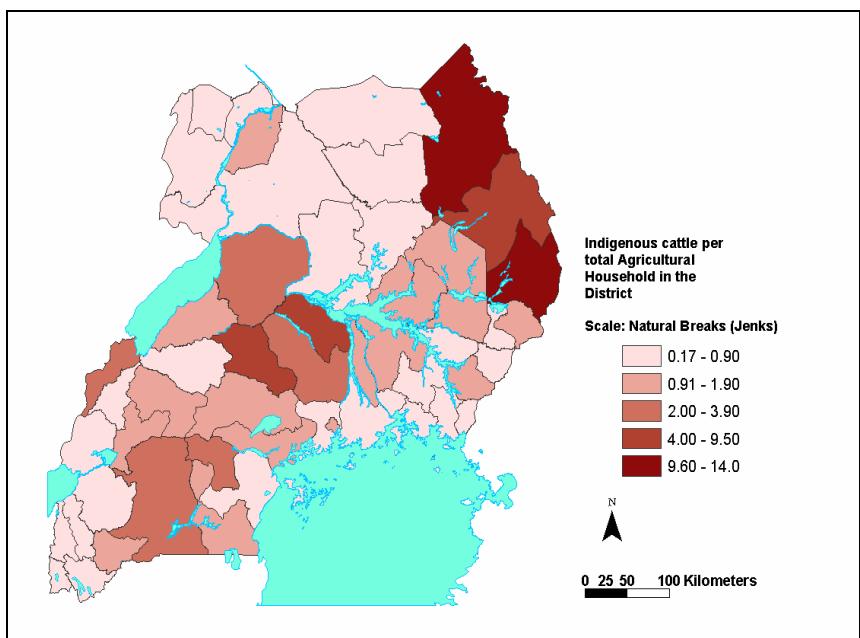


Figure 2.4.1.4 Number of Indigenous Cattle per Agricultural Household by district. PHC 2002 Agricultural Module:



2.4.2 Goats, Sheep and Pigs:

Rearing of Goats is common in most districts in Uganda and a total of 1,165,889 households, or 30.4 percent of all agricultural households were engaged in rearing of a total of 5,168,023 heads of goats according to the AM 2002 (See Figure 2.4.2.1 and Annex 1, Table 3.17 – 3.18).

About 37,095 households reared pigs while 233,750 households reared sheep or 9.7 percent and 6.1 percent of all agricultural households respectively.

Figure 2.4.2.1 Agricultural Households with goats distributed on number of animals per household. PHC 2002 Agricultural Module:

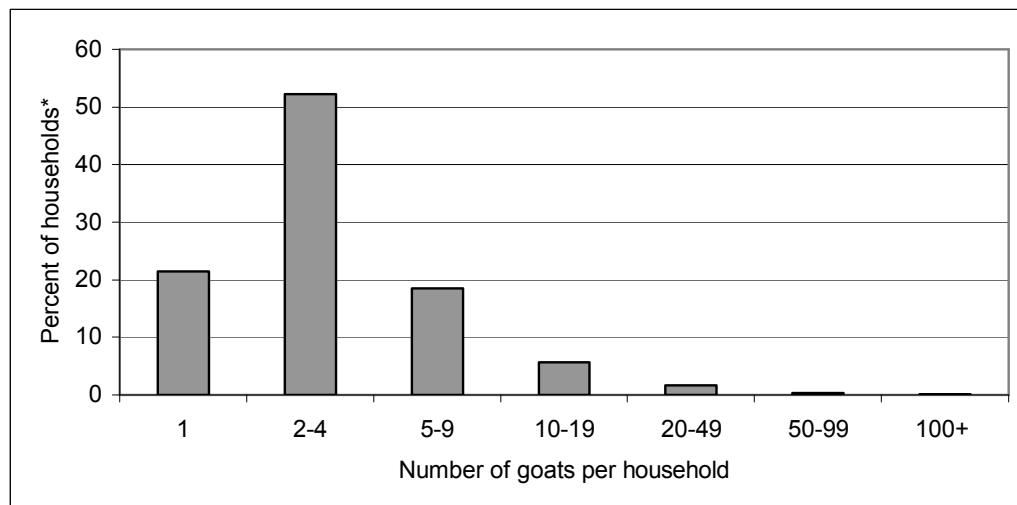


Figure 2.4.2.2 Agricultural Households with sheep distributed on number of animals per household. PHC 2002 Agricultural Module:

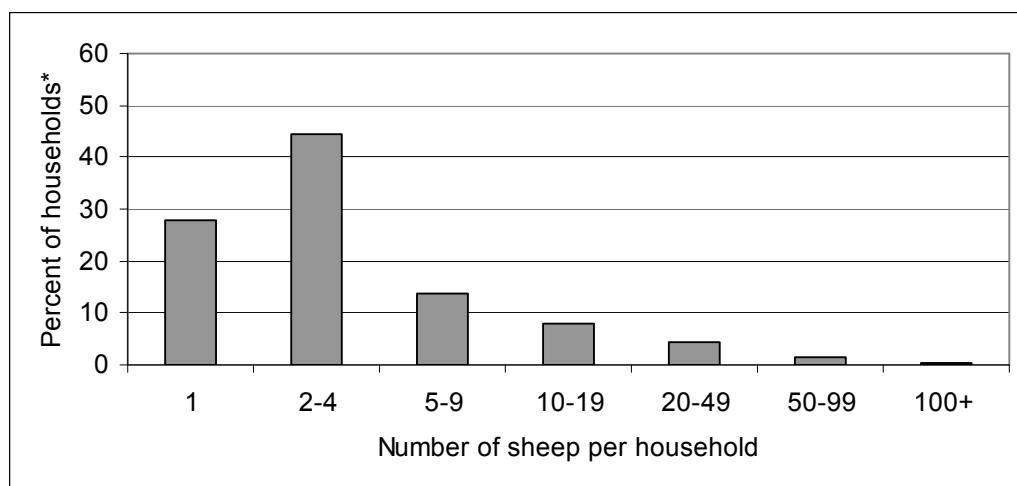
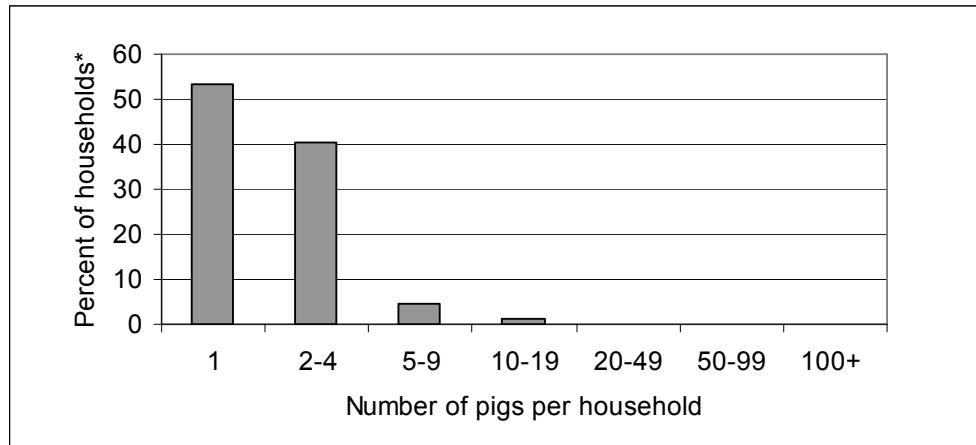


Figure 2.4.2.3 Agricultural Households with pigs distributed on number of animals per household. PHC 2002 Agricultural Module:



The distribution of number of goats per agricultural household when compared at regional and at district level has a distinct geographical pattern. Higher concentration of goat rearing is found in the extreme North-East and slightly less intensive to the extreme North-West of Uganda (See Figure 2.4.2.4). Also Sheep rearing and hence number of sheep have higher concentration in these areas (See Figure 2.4.2.5).

Rearing of Pigs was found more concentrated in the Central and Western Region of Uganda along Lake Victoria. However, there is also a high concentration of pigs rearing in Moyo district in the North and in Kumi district in the East (See Figure 2.4.2.6).

Figure 2.4.2.4 Number of Goats per Agricultural Household by district. PHC 2002 Agricultural Module:

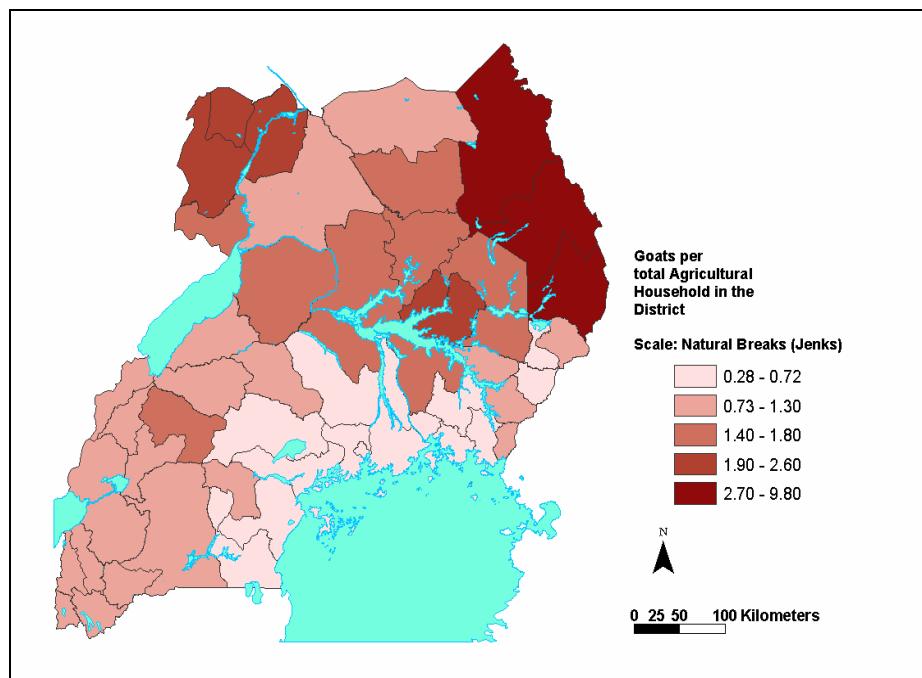


Figure 2.4.2.5 Number of Sheep per Agricultural Household by district. PHC 2002 Agricultural Module:

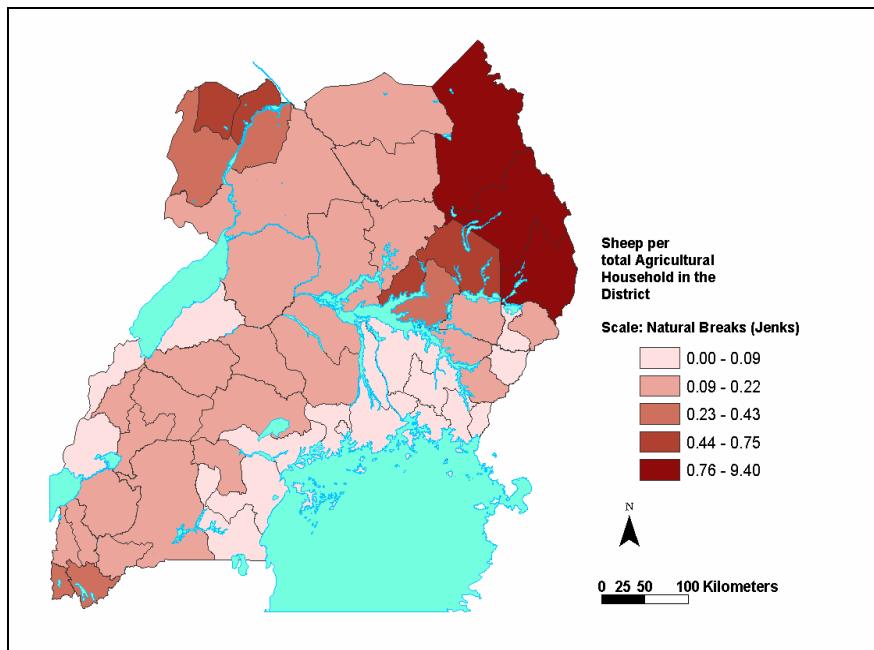
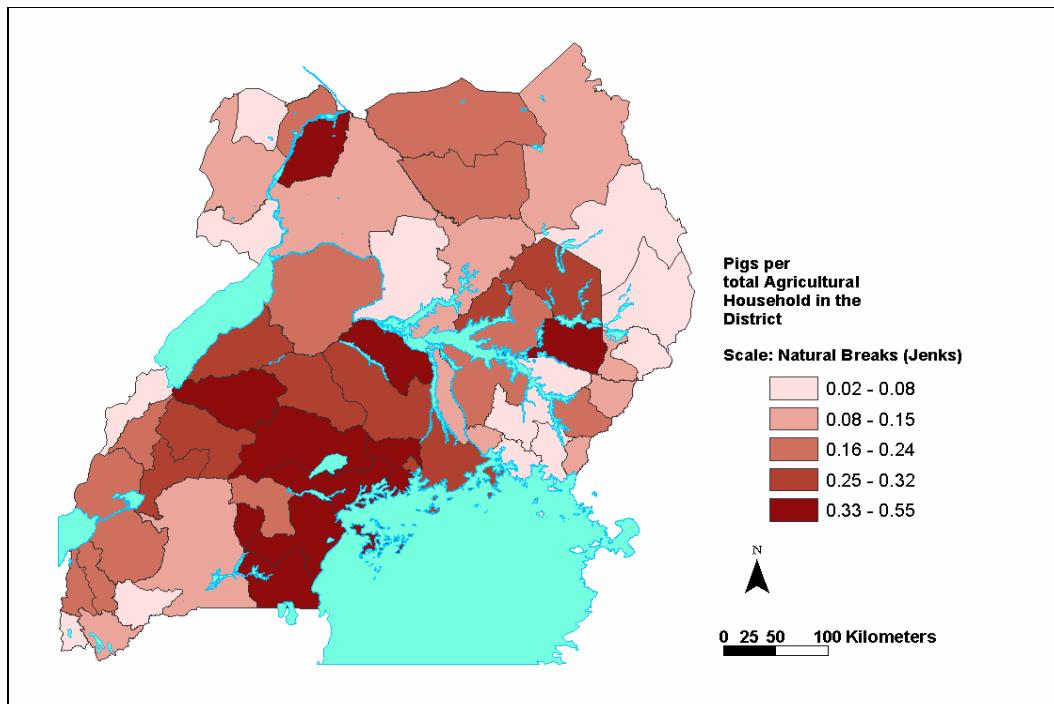


Figure 2.4.2.6 Number of Pigs per Agricultural Household by district. PHC 2002 Agricultural Module:



2.4.3 Poultry:

1,779,506 Agricultural households reported keeping of local chicken and 27,957 households were keeping exotic/crossbreed chicken which is 46.4 percent and 0.7 percent of total agricultural households respectively (See Annex 1, Table 3.23 – 3.25).

Most of the agricultural households with Exotic/Crossbreed chicken had few birds. Approximately 56 percent of them had less than 10 birds and 79.7 percent of the households had less than 100 birds. However there were also households that reported more than 5,000 birds and compared to agricultural households with local chicken there was a relatively larger proportion of large-scale producers of exotic/crossbreed birds. The average number of Exotic/Crossbreed chicken per household reporting was 65 birds per household (See Figure 2.4.3.1 – 2.4.3.2).

For households rearing local chicken, 80.3 percent of the households had less than 10 birds and 99.9 percent of the households had less than 100 birds. The average number of local chicken per household reporting birds was 6 birds per household.

The intention with the stock taking of poultry during the data collection for the PHC 2002 AM, was to report on average number of birds per month for the last three months regardless of age. There is a possibility of underreporting in the AM due to the fact that many of the young chicken may not have been included. The number of birds reported as ‘**other poultry**’ was rather too high. (Thorough analyses and possible probing is needed in order to get more robust figures for number of poultry.) Thorough probing and analysis were necessary to establish the correct picture of the number of poultry.

Figure 2.4.3.1 Agricultural Households with rearing of Exotic/Crossbreed Chicken distributed on number of birds per household. PHC 2002 Agricultural Module:

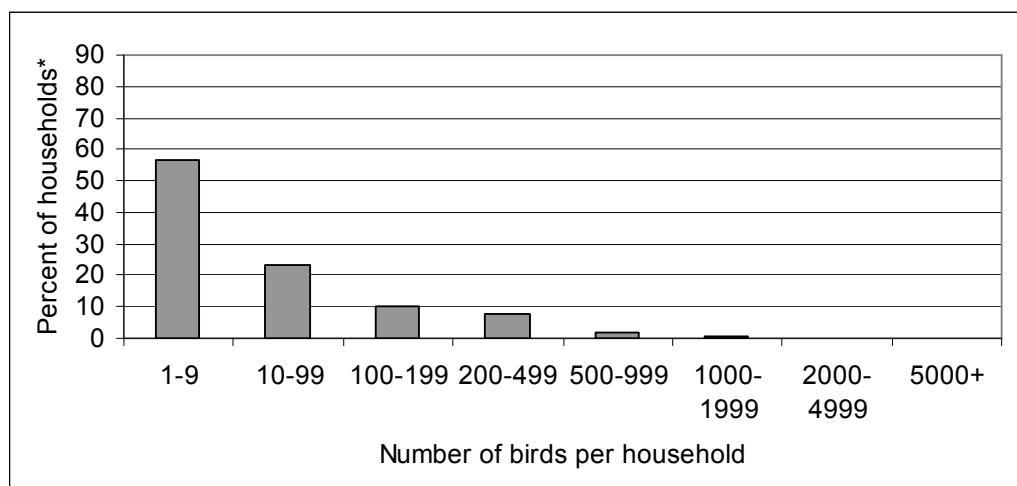
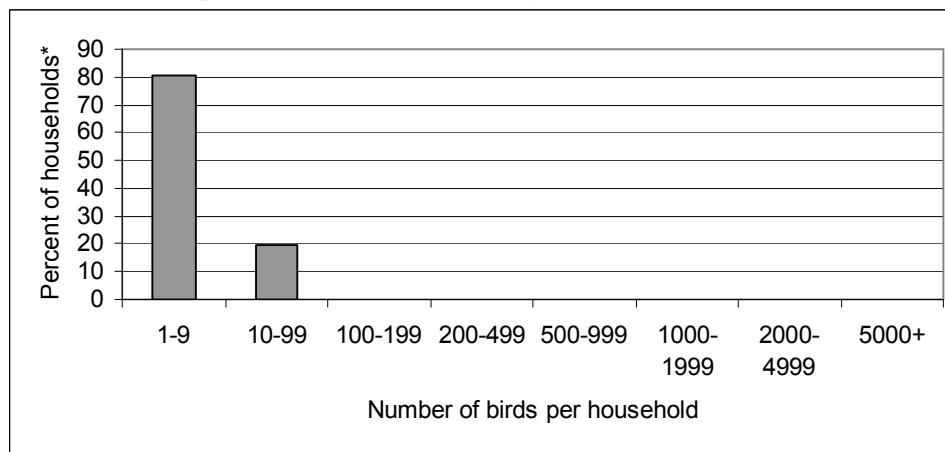


Figure 2.4.3.2 Agricultural Households with rearing of Local Chicken distributed on number of birds per household. PHC 2002 Agricultural Module:



There were 1,435,757 exotic/cross breed chicken in the Central region (78.5%) out of a total of 1,828,638. This is in conformity with the reality on the ground since a lot of effective demand for eggs and table birds is in the central districts particularly Kampala, Wakiso and Mukono with 345,705; 216,753 and 556,799 respectively.

The module revealed that, there were 11,030,699 local chicken in Uganda. Comparison of these figures with data from other sources indicates that this number is rather low. As mentioned before, this could have been due to an under-declaration originating from exclusion of chicks.

Like in the case of chicken, the Eastern and Northern regions led in the keeping of other types of poultry e.g. ducks, turkeys, guinea fowls, and geese. Figure 2.4.3.3– 2.4.3.8 show the geographical distribution of poultry rearing.

Figure 2.4.3.3 Number of Exotic/Crossbreed Chicken per Agricultural Household by district. PHC 2002 Agricultural Module:

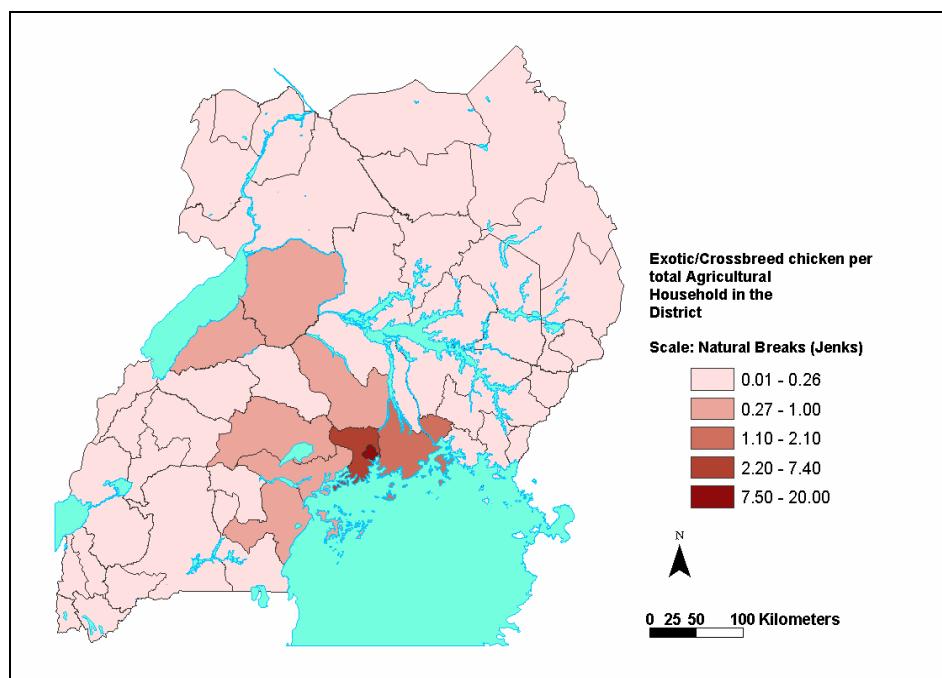


Figure 2.4.3.4 Number of Local Chicken per Agricultural Household by district. PHC 2002 Agricultural Module:

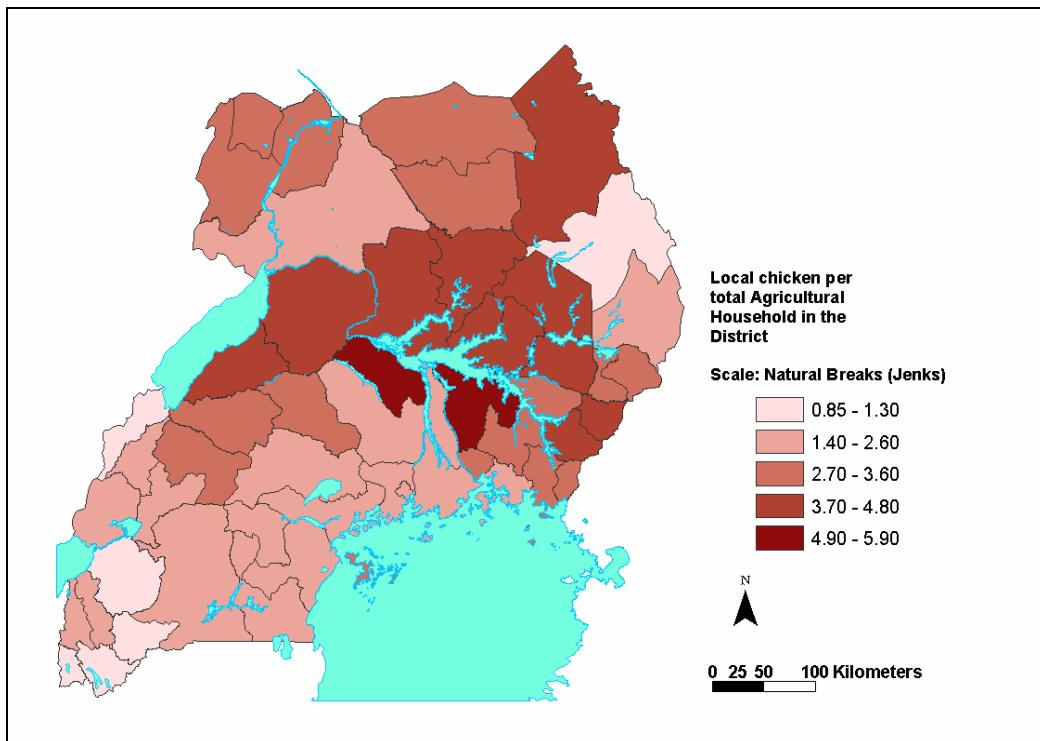


Figure 2.4.3.5 Number of Ducks per Agricultural Household by district. PHC 2002 Agricultural Module:

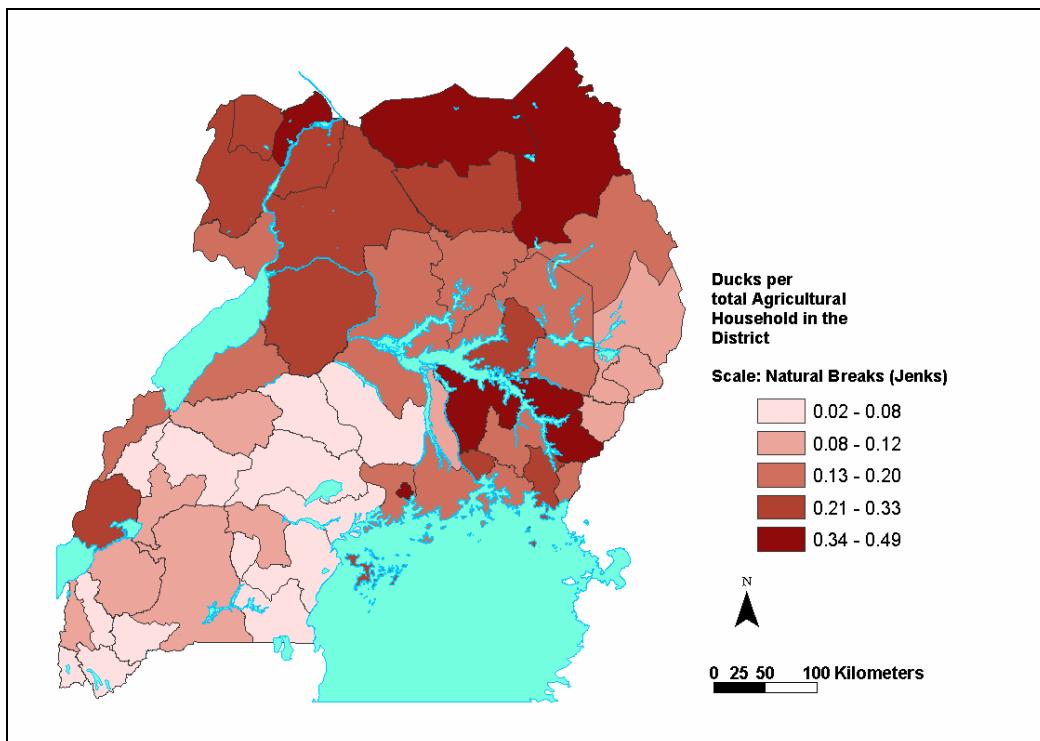


Figure 2.4.3.6 Number of Turkeys per Agricultural Household by district. PHC 2002 Agricultural Module:

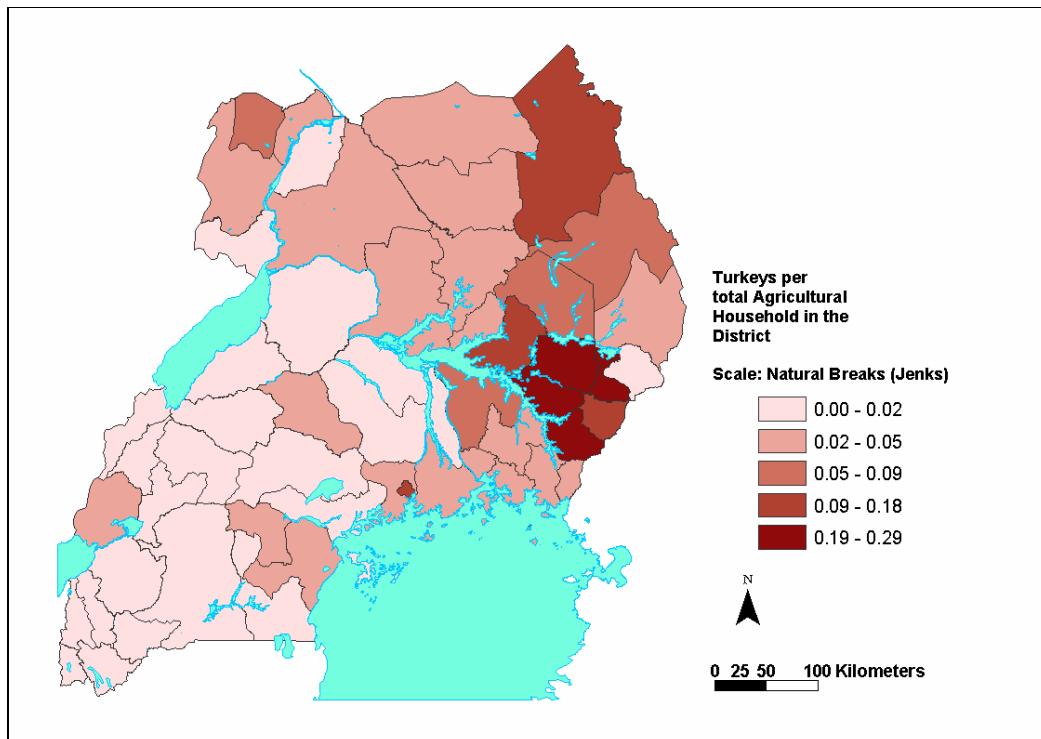


Figure 2.4.3.7 Number of Geese per Agricultural Household by district. PHC 2002 AM:

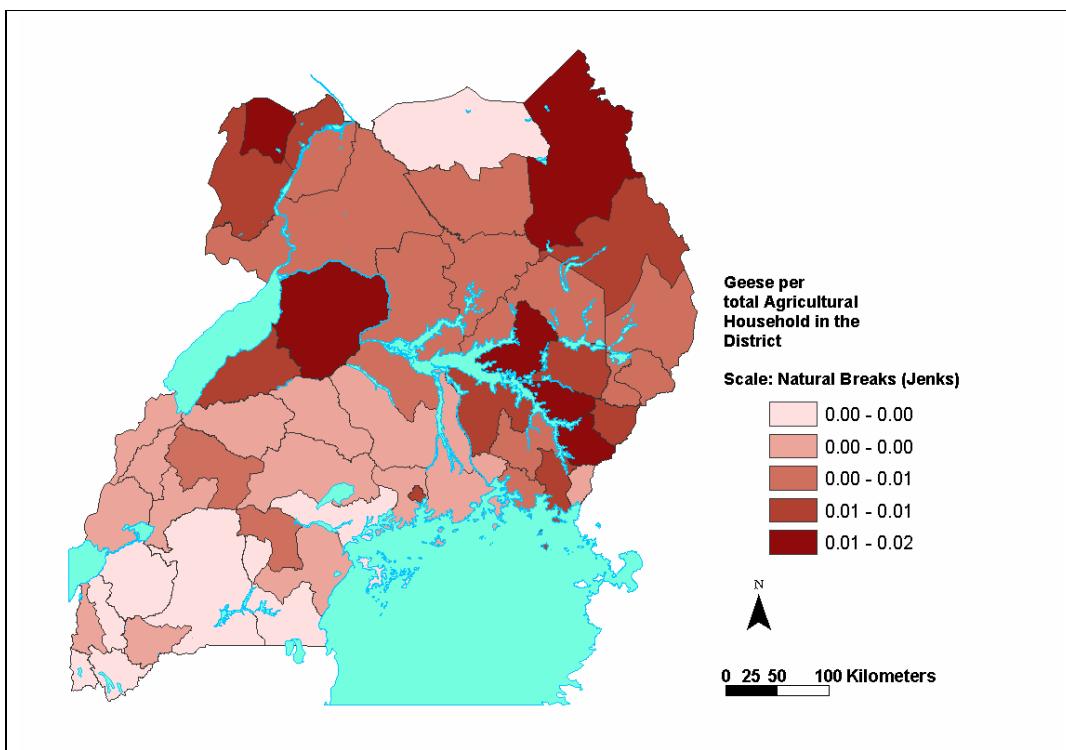
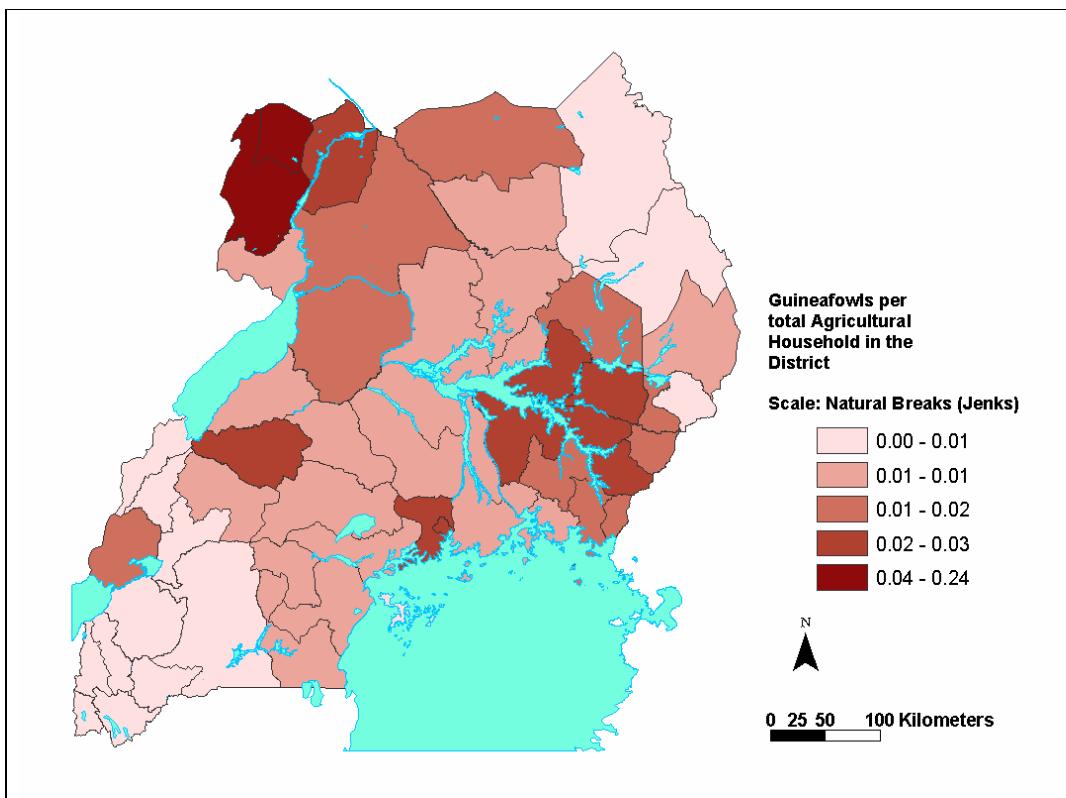


Figure 2.4.3.8 Number of Guinea Fowls per Agricultural Household by district. PHC 2002 Agricultural Module:



2.4.4 Fishponds:

There were 7,152 agricultural households or 0.2 percent of all agricultural households, that reported carrying out fish farming with a total of 29,999 ponds (See Figure 2.4.4.1 – 2.4.4.2 and Annex 1, Table 3.26).

Among the agricultural households reporting fish farming, the average number of fishponds per household was 4.2 ponds, with a high of 6.5 in the Central region and a low of 3.1 in the Eastern and Western regions. The average for Sembabule and Nakasongola at 13.1 and 14.9 ponds per household with fish farming respectively seem to be unreasonable thus requiring further investigations. This could have been a result of poor understanding by the respondents of the meaning of a fish pond. Rivers from which fishing took place or common natural water pools could have been regarded as fishponds.

Western Uganda having 2,311 (32.2%) of the households with fishponds and 7,198 (23.9%) of the ponds while Central had 1,954 (27.3%) of the households with fishponds and as much as 12,746 fishponds (42.5%).

Figure 2.4.4.1 Percent national distribution of Fishponds by type of fish. PHC 2002 AM:

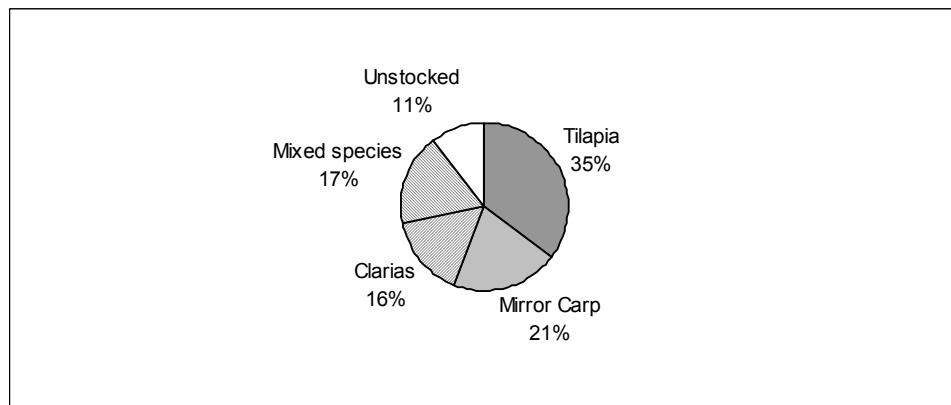
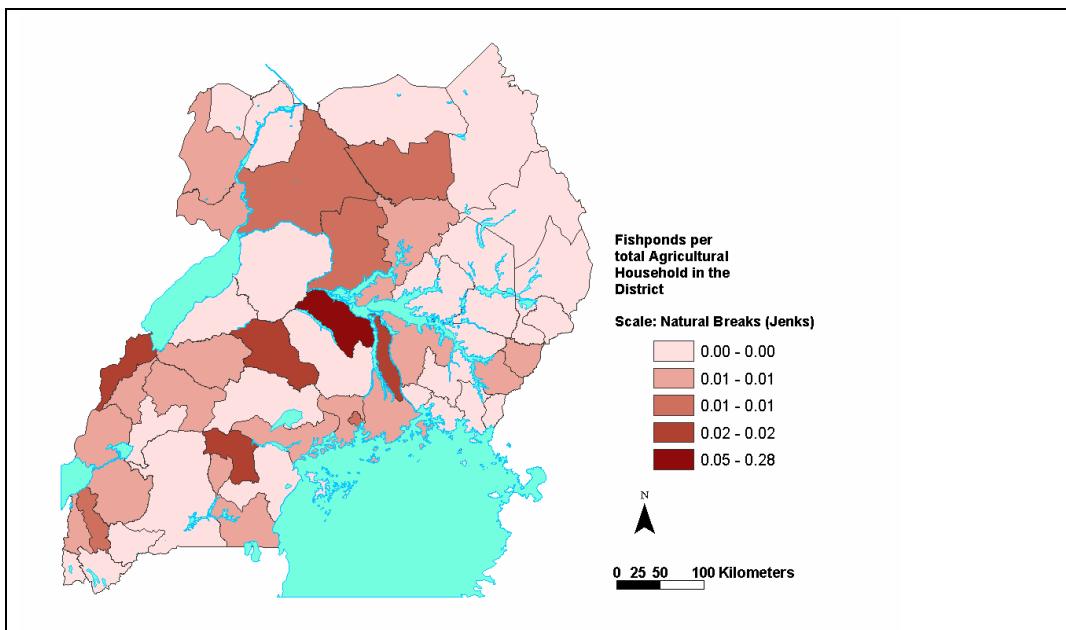


Figure 2.4.4.2 Number of Fishponds per Agricultural Household by district. PHC 2002 Agricultural Module:



Annex 1: Tables 3.1- 3.25

Table 3.1 Number of all households from the PHC 2002* and number of agricultural households by district. PHC 2002 Agricultural Module

#	Region	Total number of households from PHC 2002*	Of which agricultural households	
			Total	Percent
	Uganda total	5,186,558	3,833,485	73.9
	Uganda Central	1,551,224	835,209	53.8
101	Kalangala	12,669	3,508	27.7
102	Kampala	309,093	17,560	5.7
103	Kiboga	51,725	42,265	81.7
104	Luwero	106,050	82,491	77.8
105	Masaka	175,631	131,565	74.9
106	Mpigi	89,347	69,893	78.2
107	Mubende	160,491	123,265	76.8
108	Mukono	190,765	113,041	59.3
109	Nakasongola	24,898	22,000	88.4
110	Rakai	105,617	72,484	68.6
111	Sembabule	39,674	33,339	84.0
112	Kayunga	62,469	48,652	77.9
113	Wakiso	222,795	75,146	33.7
	Uganda Eastern	1,311,644	1,041,083	79.4
201	Bugiri	86,279	68,032	78.9
202	Busia	47,628	35,229	74.0
203	Iganga	153,103	112,757	73.6
204	Jinja	92,378	48,443	52.4
205	Kamuli	123,724	121,712	98.4
206	Kapchorwa	44,165	32,772	74.2
207	Katakwi	70,898	58,938	83.1
208	Kumi	82,641	72,795	88.1
209	Mbale	156,353	114,581	73.3
210	Pallisa	100,268	90,091	89.9
211	Soroti	72,138	57,481	79.7
212	Tororo	111,572	97,307	87.2
213	Kaberamaido	25,721	23,846	92.7
214	Mayuge	69,608	47,561	68.3
215	Sironko	75,168	59,538	79.2
	Uganda Northern	1,019,303	871,149	85.5
301	Adjumani	46,060	33,524	72.8
302	Apac	131,145	128,184	97.7
303	Arua	153,701	131,394	85.5
304	Gulu	98,059	72,014	73.4
305	Kitgum	67,040	40,530	60.5
306	Kotido	81,872	71,463	87.3
307	Lira	145,736	129,231	88.7
308	Moroto	38,900	30,363	78.1
309	Moyo	34,552	34,016	98.4
310	Nebbi	81,562	80,082	98.2
311	Nakapiripirit	65,075	23,339	35.9
312	Pader	32,225	57,865	179.6
313	Yumbe	43,376	39,144	90.2
	Uganda Western	1,304,387	1,086,044	83.3
401	Bundibugyo	40,296	37,144	92.2
402	Bushenyi	146,532	124,394	84.9
403	Hoima	69,743	55,905	80.2
404	Kabale	109,301	83,541	76.4
405	Kabarole	69,708	59,524	85.4
406	Kasese	103,060	78,285	76.0
407	Kibaale	80,717	75,737	93.8
408	Kisoro	64,713	42,090	65.0
409	Masindi	96,706	70,718	73.1
410	Mbarara	211,066	180,390	85.5
411	Ntungamo	90,996	67,442	74.1
412	Rukungiri	69,010	49,484	71.7
413	Kamwenge	45,885	52,108	113.6
414	Kanungu	41,651	38,911	93.4
415	Kyenjojo	65,003	70,371	108.3

* Provisional Results, November 2002

Table 3.10 Number of Agricultural households with sorghum by number of sorghum plots operated by type of stand by district: January to June 2002. PHC 2002 Agricultural Module

#	Region	Agricultural households total	Of which with sorghum plots Total	Percent	Total number of sorghum plots*	Of which plots with sorghum		
						Pure stand	Mixed stand	Not specified (difference)
	Uganda total	3,833,485	482,645	12.6	767,603	506,622	257,728	3,253
	Uganda Central	835,209	5,911	0.7	7,828	5,481	2,287	60
101	Kalangala	3,508	7	0.2	7	6	1	0
102	Kampala	17,560	35	0.2	77	52	25	0
103	Kiboga	42,265	196	0.5	246	172	54	20
104	Luwero	82,491	183	0.2	235	185	50	0
105	Masaka	131,565	1,024	0.8	1,309	967	342	0
106	Mpigi	69,893	696	1.0	1,012	651	341	20
107	Mubende	123,265	1,194	1.0	1,406	1,075	331	0
108	Mukono	113,041	224	0.2	285	183	102	0
109	Nakasongola	22,000	157	0.7	705	257	448	0
110	Rakai	72,484	1,714	2.4	1,906	1,546	360	0
111	Sembabule	33,339	203	0.6	245	169	76	0
112	Kayunga	48,652	160	0.3	205	102	103	0
113	Wakiso	75,146	118	0.2	190	116	54	20
	Uganda Eastern	1,041,083	114,794	11.0	132,483	103,212	29,102	169
201	Bugiri	68,032	2,092	3.1	2,625	1,842	743	40
202	Busia	35,229	4,225	12.0	5,040	3,396	1,644	0
203	Iganga	112,757	543	0.5	751	386	345	20
204	Jinja	48,443	111	0.2	122	61	61	0
205	Kamuli	121,712	1,402	1.2	1,740	1,088	641	11
206	Kapchorwa	32,772	59	0.2	70	47	23	0
207	Katakwi	58,938	21,828	37.0	26,039	20,936	5,063	40
208	Kumi	72,795	15,425	21.2	17,563	14,498	3,065	0
209	Mbale	114,581	1,344	1.2	1,502	978	524	0
210	Pallisa	90,091	24,901	27.6	29,255	20,762	8,454	39
211	Soroti	57,481	12,603	21.9	14,191	12,571	1,620	0
212	Tororo	97,307	22,756	23.4	25,388	19,428	5,941	19
213	Kaberamaido	23,846	7,155	30.0	7,737	6,985	752	0
214	Mayuge	47,561	232	0.5	332	144	188	0
215	Sironko	59,538	118	0.2	128	90	38	0
	Uganda Northern	871,149	231,552	26.6	380,020	213,112	164,256	2,652
301	Adjumani	33,524	7,016	20.9	8,577	6,314	2,193	70
302	Apac	128,184	1,984	1.5	2,437	992	1,445	0
303	Arua	131,394	26,200	19.9	35,011	18,019	16,993	-1
304	Gulu	72,014	12,721	17.7	15,130	7,724	7,366	40
305	Kitgum	40,530	24,849	61.3	33,281	19,074	14,047	160
306	Kotido	71,463	45,307	63.4	110,525	50,264	58,118	2,143
307	Lira	129,231	20,381	15.8	24,125	11,670	12,436	19
308	Moroto	30,363	24,154	79.6	55,137	37,589	17,328	220
309	Moyo	34,016	14,238	41.9	18,820	12,342	6,467	11
310	Nebbi	80,082	2,969	3.7	3,763	2,629	1,134	0
311	Nakapiripirit	23,339	12,542	53.7	24,033	16,663	7,371	-1
312	Pader	57,865	35,713	61.7	44,773	27,241	17,541	-9
313	Yumbe	39,144	3,478	8.9	4,408	2,591	1,817	0
	Uganda Western	1,086,044	130,388	12.0	247,272	184,817	62,083	372
401	Bundibugyo	37,144	10	0.0	35	21	14	0
402	Bushenyi	124,394	2,206	1.8	2,715	2,102	593	20
403	Hoima	55,905	288	0.5	368	239	129	0
404	Kabale	83,541	68,976	82.6	150,860	119,855	30,881	124
405	Kabarole	59,524	1,074	1.8	1,301	955	346	0
406	Kasese	78,285	121	0.2	158	105	53	0
407	Kibaale	75,737	1,836	2.4	2,256	1,381	875	0
408	Kisoro	42,090	26,040	61.9	47,312	30,380	16,884	48
409	Masindi	70,718	362	0.5	469	364	105	0
410	Mbarara	180,390	10,014	5.6	13,253	9,603	3,650	0
411	Ntungamo	67,442	3,065	4.5	4,063	2,880	1,183	0
412	Rukungiri	49,484	5,423	11.0	8,967	5,601	3,366	0
413	Kamwenge	52,108	3,539	6.8	4,961	3,557	1,224	180
414	Kanungu	38,911	4,925	12.7	7,463	5,399	2,064	0
415	Kyenjojo	70,371	2,509	3.6	3,091	2,375	716	0

Table 3.19 Number and percent of Households rearing Sheep by number by district: PHC 2002 Agricultural Module

#	Region	Agricultural households total	Of which rearing Sheep		Number of Sheep
			Total	Percent	
	Uganda total	3,833,485	233,750	6.1	1,555,431
	Uganda Central	835,209	24,059	2.9	70,446
101	Kalangala	3,508	5	0.1	9
102	Kampala	17,560	232	1.3	1,561
103	Kiboga	42,265	2,202	5.2	6,641
104	Luwero	82,491	3,088	3.7	10,307
105	Masaka	131,565	2,483	1.9	6,293
106	Mpigi	69,893	2,020	2.9	4,530
107	Mubende	123,265	5,594	4.5	14,412
108	Mukono	113,041	2,838	2.5	6,553
109	Nakasongola	22,000	518	2.4	4,601
110	Rakai	72,484	1,433	2.0	4,541
111	Sembabule	33,339	864	2.6	3,382
112	Kayunga	48,652	952	2.0	2,729
113	Wakiso	75,146	1,830	2.4	4,887
	Uganda Eastern	1,041,083	44,866	4.3	122,803
201	Bugiri	68,032	988	1.5	2,972
202	Busia	35,229	486	1.4	1,420
203	Iganga	112,757	1,222	1.1	3,847
204	Jinja	48,443	264	0.5	762
205	Kamuli	121,712	1,306	1.1	6,005
206	Kapchorwa	32,772	1,349	4.1	3,304
207	Katakwi	58,938	9,353	15.9	28,143
208	Kumi	72,795	4,656	6.4	12,688
209	Mbale	114,581	2,509	2.2	5,160
210	Pallisa	90,091	4,753	5.3	10,967
211	Soroti	57,481	6,787	11.8	17,241
212	Tororo	97,307	4,904	5.0	12,868
213	Kaberamaido	23,846	4,036	16.9	12,595
214	Mayuge	47,561	322	0.7	899
215	Sironko	59,538	1,931	3.2	3,932
	Uganda Northern	871,149	96,993	11.1	1,181,362
301	Adjumani	33,524	2,726	8.1	14,405
302	Apac	128,184	6,072	4.7	21,206
303	Arua	131,394	14,447	11.0	48,270
304	Gulu	72,014	1,758	2.4	7,784
305	Kitgum	40,530	1,091	2.7	6,077
306	Kotido	71,463	29,562	41.4	673,628
307	Lira	129,231	7,750	6.0	21,434
308	Moroto	30,363	9,823	32.4	211,886
309	Moyo	34,016	3,096	9.1	16,881
310	Nebbi	80,082	4,150	5.2	12,846
311	Nakapiripirit	23,339	8,221	35.2	108,421
312	Pader	57,865	1,509	2.6	9,360
313	Yumbe	39,144	6,788	17.3	29,164
	Uganda Western	1,086,044	67,832	6.2	180,820
401	Bundibugyo	37,144	724	1.9	3,439
402	Bushenyi	124,394	11,024	8.9	27,033
403	Hoima	55,905	1,503	2.7	5,178
404	Kabale	83,541	14,430	17.3	34,787
405	Kabarole	59,524	2,139	3.6	6,442
406	Kasese	78,285	1,826	2.3	4,455
407	Kibaale	75,737	2,981	3.9	8,773
408	Kisoro	42,090	6,360	15.1	13,449
409	Masindi	70,718	1,350	1.9	7,041
410	Mbarara	180,390	8,539	4.7	25,254
411	Ntungamo	67,442	3,403	5.0	9,276
412	Rukungiri	49,484	3,574	7.2	8,126
413	Kamwenge	52,108	2,865	5.5	7,173
414	Kanungu	38,911	2,906	7.5	6,407
415	Kyenjojo	70,371	4,208	6.0	13,987

Table 3.21 Number and percent of Households rearing Pigs by number by district: PHC 2002 Agricultural Module

#	Region	Agricultural households total	Of which rearing Pigs		Number of Pigs
			Total	Percent	
	Uganda total	3,833,485	370,905	9.7	773,386
	Uganda Central	835,209	143,888	17.2	309,981
101	Kalangala	3,508	728	20.8	1,338
102	Kampala	17,560	807	4.6	4,761
103	Kiboga	42,265	5,608	13.3	13,318
104	Luwero	82,491	12,159	14.7	26,248
105	Masaka	131,565	32,757	24.9	63,787
106	Mpigi	69,893	13,514	19.3	27,773
107	Mubende	123,265	24,147	19.6	48,254
108	Mukono	113,041	14,444	12.8	31,473
109	Nakasongola	22,000	4,153	18.9	9,472
110	Rakai	72,484	16,043	22.1	28,757
111	Sembabule	33,339	3,749	11.2	6,739
112	Kayunga	48,652	2,903	6.0	6,779
113	Wakiso	75,146	12,876	17.1	41,282
	Uganda Eastern	1,041,083	78,815	7.6	155,890
201	Bugiri	68,032	1,575	2.3	3,274
202	Busia	35,229	2,914	8.3	5,290
203	Iganga	112,757	2,978	2.6	8,118
204	Jinja	48,443	1,534	3.2	5,678
205	Kamuli	121,712	7,357	6.0	19,122
206	Kapchorwa	32,772	1,131	3.5	2,126
207	Katakwi	58,938	8,183	13.9	14,562
208	Kumi	72,795	15,364	21.1	28,971
209	Mbale	114,581	9,560	8.3	16,575
210	Pallisa	90,091	2,762	3.1	6,304
211	Soroti	57,481	7,947	13.8	13,170
212	Tororo	97,307	9,205	9.5	17,900
213	Kaberamaido	23,846	4,352	18.3	6,911
214	Mayuge	47,561	521	1.1	1,508
215	Sironko	59,538	3,432	5.8	6,381
	Uganda Northern	871,149	38,781	4.5	104,640
301	Adjumani	33,524	5,428	16.2	18,195
302	Apac	128,184	4,493	3.5	8,719
303	Arua	131,394	6,629	5.0	12,978
304	Gulu	72,014	1,640	2.3	8,595
305	Kitgum	40,530	2,674	6.6	8,445
306	Kotido	71,463	1,982	2.8	9,563
307	Lira	129,231	6,336	4.9	11,514
308	Moroto	30,363	108	0.4	1,494
309	Moyo	34,016	3,662	10.8	7,933
310	Nebbi	80,082	2,998	3.7	6,130
311	Nakapiripirit	23,339	69	0.3	978
312	Pader	57,865	2,549	4.4	9,195
313	Yumbe	39,144	213	0.5	901
	Uganda Western	1,086,044	109,421	10.1	202,875
401	Bundibugyo	37,144	1,033	2.8	2,982
402	Bushenyi	124,394	14,848	11.9	25,476
403	Hoima	55,905	8,639	15.5	16,851
404	Kabale	83,541	4,378	5.2	7,410
405	Kabarole	59,524	6,392	10.7	12,162
406	Kasese	78,285	7,413	9.5	13,668
407	Kibaale	75,737	17,989	23.8	37,792
408	Kisoro	42,090	1,377	3.3	1,928
409	Masindi	70,718	6,189	8.8	13,183
410	Mbarara	180,390	9,093	5.0	15,804
411	Ntungamo	67,442	2,118	3.1	3,346
412	Rukungiri	49,484	7,613	15.4	11,783
413	Kamwenge	52,108	7,200	13.8	12,909
414	Canunyu	38,911	4,864	12.5	7,398
415	Kyenjojo	70,371	10,275	14.6	20,183

**Table 3.26 Number of Households with Fishponds by number of ponds by species of fish by district.
PHC 2002 Agricultural Module**

#	Region	Agricultural households total	Of which with fishponds		Total number of ponds	Of which stocked with				Of which Unstocked
			Total	Percent		Tilapia	Mirror carp	Clarias	Mixed species	
	Uganda total	3,833,485	7,152	0.19	29,999	10,556	6,220	4,771	5,248	3,204
	Uganda Central	835,209	1,954	0.23	12,746	3,734	2,531	2,794	2,875 0	812
101	Kalangala	3,508	2	0.06	6	2	2	2
102	Kampala	17,560	171	0.97	224	37	19	11	40	117
103	Kiboga	42,265	147	0.35	967	286	214	215	231	21
104	Luwero	82,491	76	0.09	148	35	45	15	12	41
105	Masaka	131,565	193	0.15	509	195	109	46	59	100
106	Mpigi	69,893	142	0.20	396	137	99	56	74	30
107	Mubende	123,265	105	0.09	339	152	59	31	33	64
108	Mukono	113,041	223	0.20	955	284	259	181	165	66
109	Nakasongola	22,000	413	1.88	6,174	1,784	1,104	1,649	1,629	8
110	Rakai	72,484	117	0.16	492	176	87	88	103	38
111	Sembabule	33,339	72	0.22	940	235	228	223	236	18
112	Kayunga	48,652	140	0.29	1,192	279	227	243	220	223
113	Wakiso	75,146	153	0.20	404	132	79	36	73	84
	Uganda Eastern	1,041,083	1,270	0.12	3,886	1,569	993	352	412 0	560
201	Bugiri	68,032	93	0.14	239	111	68	13	16	31
202	Busia	35,229	51	0.14	119	50	25	12	10	22
203	Iganga	112,757	134	0.12	294	98	102	9	9	76
204	Jinja	48,443	73	0.15	177	79	39	12	19	28
205	Kamuli	121,712	175	0.14	630	199	239	83	74	35
206	Kapchorwa	32,772	29	0.09	91	40	16	10	11	14
207	Katakwi	58,938	62	0.11	182	99	42	13	12	16
208	Kumi	72,795	118	0.16	324	114	98	24	46	42
209	Mbale	114,581	177	0.15	568	236	167	40	37	88
210	Pallisa	90,091	77	0.09	247	143	28	20	32	24
211	Soroti	57,481	35	0.06	124	78	14	1	8	23
212	Tororo	97,307	123	0.13	580	206	91	100	93	90
213	Kaberamaido	23,846	28	0.12	63	19	2	1	21	20
214	Mayuge	47,561	41	0.09	116	32	30	12	20	22
215	Sironko	59,538	54	0.09	132	65	32	2	4	29
	Uganda Northern	871,149	1,617	0.19	6,169	2,219	1,468	786	878 0	818
301	Adjumani	33,524	42	0.13	138	48	42	41	5	2
302	Apac	128,184	199	0.16	1,277	388	225	206	220	238
303	Arua	131,394	259	0.20	785	331	218	62	110	64
304	Gulu	72,014	217	0.30	688	338	106	51	88	105
305	Kitgum	40,530	72	0.18	182	68	44	15	23	32
306	Kotido	71,463	65	0.09	285	107	81	38	46	13
307	Lira	129,231	312	0.24	998	347	344	95	95	117
308	Moroto	30,363	13	0.04	18	..	1	0	13	4
309	Moyo	34,016	42	0.12	124	38	65	..	8	13
310	Nebbi	80,082	195	0.24	631	235	137	94	105	60
311	Nakapiripirit	23,339	16	0.07	29	18	4	7
312	Pader	57,865	130	0.22	832	241	143	160	145	143
313	Yumbe	39,144	55	0.14	182	60	58	24	20	20
	Uganda Western	1,086,044	2,311	0.21	7,198	3,034	1,228	839	1,083 0	1,014
401	Bundibugyo	37,144	216	0.58	1,765	603	265	377	450	70
402	Bushenyi	124,394	379	0.30	828	456	62	52	96	162
403	Hoima	55,905	60	0.11	208	96	29	27	14	42
404	Kabale	83,541	130	0.16	262	85	52	35	41	49
405	Kabarole	59,524	99	0.17	308	128	50	34	41	55
406	Kasese	78,285	192	0.25	479	222	115	19	32	91
407	Kibaale	75,737	173	0.23	389	190	89	17	19	74
408	Kisoro	42,090	44	0.10	116	41	29	3	18	25
409	Masindi	70,718	77	0.11	259	100	44	47	49	19
410	Mbarara	180,390	250	0.14	630	225	133	49	91	132
411	Ntungamo	67,442	107	0.16	258	106	63	19	30	40
412	Rukungiri	49,484	200	0.40	703	260	163	103	113	64
413	Kamwenge	52,108	98	0.19	197	85	25	15	23	49
414	Kanungu	38,911	116	0.30	299	203	6	5	10	75
415	Kyenjojo	70,371	170	0.24	497	234	103	37	56	67

.. = Nil

Annex 2

PHC 2002 Agricultural Module Questionnaire

HOLDING/FARM

A1: Does any member of this Household engage in the following? Yes=1, No=2

Enter the appropriate codes

Crop Growing (1)	Livestock rearing (2)	Poultry keeping (3)	Fish farming (4)

If No to ALL the 4, skip to D1

If Yes to any of the 4, go to question A2

A2: What is the size of the holding? Acres=1, Hectares=2, Stick (Mwigo)=3

Unit code Size

CROPS

A3: Did this Household grow crops during the last season (January-June 2002) ?

Yes=1, No=2

If No, go to A4 if household is engaged in livestock rearing

If Yes, enter the appropriate crop code with the number of plots under which it was grown

Crop code	Number of Plots		
	Pure	Mixed	Total
(1)	(2)	(3)	(4)

LIVESTOCK

A4: If household is engaged in livestock rearing, enter the appropriate livestock code with the number of livestock as of the enumeration day.

Livestock code	Number
(5)	(6)

POULTRY

A5: If household is engaged in poultry keeping, enter the appropriate poultry code

with the average number of poultry reared per month in the last three months

Poultry code	Number
(7)	(8)

FISH FARMING

A6: If this household is engaged in fish farming enter the number of fish ponds by type

Number of ponds stocking:				Number of ponds unstocked
Tilapia	Mirror Cap	Clarias	Mixed	(13)
(9)	(10)	(11)	(12)	

GO TO QUESTION D1

Annex 3

An extract of the PHC 2002 Agricultural Module Enumerator's Instructions Manual

1. The Census 2002 includes a Module on Agriculture. The main purpose of the Agricultural Module is to provide appropriate sampling frames for a detailed Census of Agriculture in 2003, and a Census of Livestock in 2004. Below are definitions of some of the terms/concepts that will be used to answer some of the questions IN THE module.

Holding/Farm

2. The term agriculture is used in a very broad sense to cover all the agricultural activities for example: crops, livestock, poultry, and fish farming.
3. In Uganda, the term *holding* is often used interchangeably with *farm*. Similarly, the term *holder* is used to mean *farmer*. This Agricultural Module will maintain this usage of the terms mentioned.
4. Due to the type of agriculture practiced in this country with many pieces of land, which may be operated by a Household for agricultural purposes, the concept of a *holding/farm* is fairly complicated. An agricultural *holding* is defined below.

Agricultural Holding

5. An agricultural holding is an economic unit of agricultural management comprising of all livestock kept and all land used wholly or partly for agricultural production purposes, without regard to title, legal form or size. A holding may consist of one or more parcels located in one or more separate areas provided the parcels share the same production means utilized by the holding such as labour, farm buildings, farm implements and machinery or drought animals. The requirements of sharing the same production means should be fulfilled to a great degree to justify the consideration of various parcels as components of one economic unit.
6. In trying to provide a definition for the term *holding*, another term namely *parcel* comes up and it is also defined below.

Parcel

7. A parcel is a piece of land entirely surrounded by other land, water, road, forest etc not forming part of this holding. This definition implies that a parcel is part of a holding, which is physically separate from the main holding.

Crop Plots:

8. A crop plot is defined as a piece of land within the holding on which a specific crop or crop mixture is cultivated. A parcel may be made up of one or more plots.

Question A1: Holding/Farm:

Ask, “*Does any member of this Household engage in any of the following: crop growing, livestock rearing, poultry keeping, fish farming?*”

9. This question seeks information about all the land operated by this Household for agricultural purposes. Remember that no minimum size of land is provided.

However, any agricultural activity (for example keeping of two indigenous chicken) requires some amount of land regardless of size.

10. Write '1' for Yes or '2' for No appropriately for **each of the four enterprises**. For each of the agricultural enterprises (i.e. crop growing, livestock rearing, poultry keeping and fish farming), be sure that none of the Household members is engaged in it before entering code 2.
11. If code 2 is entered for each of the four enterprises, the Household is regarded as not operating a holding and therefore the Enumerator should skip to Question D1.
12. On the other hand if code 1 is entered for any of the enterprises, the Enumerator should go to question A2.

Question A2: Size of the holding:

Ask '*What is the size of the holding?*'

13. It is assumed that a substantial proportion of the respondents in Uganda have a fairly rough idea about the sizes of their holdings. However, what is not common is the unit of measurement. In some cases the respondents will be familiar with **Acres**, others with **Hectares** while others will be familiar with a local unit like **Stick (Mwiigo)**. Aware of this reality on the ground, the Census office has given provision for three units and below are their codes:

<u>Measurement unit:</u>	<u>Code</u>
Acre	1
Hectare	2
Stick (<i>Mwiigo</i>)	3

14. The Enumerator will enter the appropriate code depending on the unit stated by the respondent. This will be followed by recording the actual size of the holding (i.e. Number of acres or Number of Hectares or the product of the length and width of the holding in Sticks (*Mwiigo*)).
 - If the holding size is stated in acres or hectares, the enumerator will write the Unit Code and holding size in the respective boxes. For small holdings which are less than an acre, regard them as one acre and write '1' in both the boxes Unit Code and Size.
 - If the holding size is stated using the Stick (*Mwiigo*), the enumerator should record the product of the length and width of the holding. However, if the holding is constituted by more than one parcel, the enumerator should get the product of the width and length of each parcel, add them together and record the sum in the box for Size.
15. It should be noted that the sizes of holdings/farms will be extremely important in enabling better planning for future agricultural/ livestock censuses.
16. There may be cases whereby respondents may have no idea at all about the size of their holdings or an acre. In such cases it may be absolutely necessary to assist them by giving them an idea of an acre as a starting point.

Units of Area Measurement

17. An acre is a measure of the surface area of land. On the ground it is approximately half a standard football field.
18. A **hectare** is approximately 2.5 acres (or one and a half standard football fields).

19. In estimating the size of holding/farm, a respondent is expected to do the following:

If and only if the holding is composed of one parcel:

20. Using eye-estimation, the respondent should try and estimate the number of standard football fields (knowing that each standard football field is composed of approximately two acres), which can be got from the parcel (in this case holding).

If on the other hand the holding is composed of more than one parcel:

21. For each of the parcels, the respondent should try as much as possible to make a comparison between the parcel on which the interview will be taking place and the other parcel or each of the parcels.
22. From the comparison, the respondent should be in position to estimate roughly. It may be possible that the other parcel is a fraction e.g. a third, a half or a quarter etc. of the size of the parcel on which the interview will be taking place. Alternatively, the other parcel may be several times e.g. two, five, fifteen times etc. the size of the parcel on which the interview will be taking place. If this is done for each of the parcels, the respondent (possibly with the assistance of the Enumerator **in case it is absolutely necessary**) will obtain a sum of standard football fields, which constitute the holding.
23. The doubling of the sum of standard football fields, which constitute the holding, will provide its estimated size (in acres). As mentioned earlier, the interviewer will record the **actual size in the units stated by the respondent without any attempt to convert from one unit to another**. A exception to the rule is given below.

If the respondent knows the size of the holding but in units other than Acres/Hectares/Mwiigo:

24. There may be cases whereby the respondent may state the holding/farm size in square miles for example. It is the duty of the Enumerator to convert the square miles into acres. The conversion of square miles into acres is done by **multiplying the number of square miles by 640** (because there are 640 acres in a one square mile).
25. Great care should be taken to ensure that the area of the holding/farm is not restricted to mean area under crops. The holding area includes the area under: crops, pasture for livestock, planted forests, and area under fallow as well as area covered by fishponds.

Question A3: Crops:

Ask, “Did any member of this Household grow any crops last season?”

26. Find out if any member of this Household grew any crop(s) during the last season. Enter either 1 for “Yes” or 2 for “No” in the box. If the response is “No”, proceed to Question A4. If on the other hand the response is “Yes”, find out which crops were grown. And for each of the crops grown during the last season, enter the appropriate code as well as the number of plots either in pure or in mixed stand.

Column (1): Crop Code:

27. For purposes of this Agricultural Module, only seventeen (17) main crops have been identified and are indicated in the code list. Having received a response from the respondent about the crops grown during the last season (January – June 2002), the Enumerator will check in the code list for the appropriate crop codes and enter them

under column (1).

Column (2): Number of Plots under Pure Crop Stand:

28. *A crop is said to have been grown in pure stand if it was grown alone in a plot.* For each of the crops grown by the members of the Household, find out the number of plots on which a given crop was grown in pure stand and record appropriately.
29. If the crop was not grown in pure stand but was grown in mixed stand, then fill a dash (-) in the space under this column.

Column (3): Number of Crop Plots in Mixed Stand

30. *A crop is said to have been grown in mixed stand if there were more than one crop grown in a plot.* For each of the crops grown, after obtaining the number of plots in pure stand, find out from the respondent if the crop was grown in mixed stand and if so, record the number of plots appropriately. Only plots of the dominant crop and **not** of the less dominant crop will be recorded.
31. A crop plot to be considered and recorded as of mixed crop stand, it should **either** be predominant in terms of its plant density **or** be the one considered as most important by the respondent. If there was no plot grown in mixed stand, record a dash (-).

Question A4: Livestock:

32. This question seeks information on different types of livestock regardless of Age. From question A1, the Enumerator will have established whether the Household rears livestock or not. If the response was affirmative, then the Enumerator will proceed with getting responses from the respondent.
33. Some few definitions particularly on cattle are deemed necessary and are provided below for purposes of achieving further clarity.
34. Exotic cattle: this refers to the cattle breeds introduced in the country from abroad e.g. Holstein Friesians, Jersey and Guernsey.
35. Cross breed cattle: these are cattle, which are crosses of exotic and indigenous breeds.
36. Indigenous cattle: these are cattle of the local types like the Ankole long horned cattle and African Zebu e.g. Karamoja short horned cattle.

Column (5): Livestock Code:

37. The Enumerator will establish the livestock types reared. For each type, and enter appropriate codes. Livestock codes are provided in the Code List.

Column (6): Number of Livestock by Type

38. For each type of livestock reared on the holding, a number will be obtained from the respondent and recorded in the appropriate space. The livestock numbers will be as of the day of enumeration, **regardless of ownership**. Livestock temporarily absent for a day grazing away from the holding should be included.

Question A5: Poultry :

39. This question seeks information on different types of poultry. From question A1, the Enumerator will have established whether the Household keeps poultry or not. If the response was affirmative, then responses will be obtained from the respondent.
40. The term poultry refers to rearing of domestic birds commonly kept by farmers for agricultural purposes.

41. For purposes of the Agricultural Module, the domestic birds to be covered will include: exotic chicken, local chicken, ducks, turkeys, guinea fowls and geese. A few definitions, which are deemed necessary, are given below:
 1. Exotic chicken: this refers to chicken breeds introduced in the country from abroad e.g. White Leg Horn.
 2. Cross breed chicken: this refers to chicken, which are crosses between exotic chicken and local chicken.
 3. Local chicken: this refers to chicken breeds of the local type.
42. Due to the complexity of differentiating exotic chicken from cross breed chicken, both types will be described as ‘exotic/cross’ chicken.

Column (7): Poultry Code:

43. Codes for each type of poultry are provided in the Code List. Having established the types of poultry kept by the Household, the Enumerator will enter the appropriate codes.

Column (8): Number of Poultry by type

44. For each type of poultry, the respondent should state the average number of birds reared per month in the last three months. An average is resorted to and not the number of enumeration day, because poultry can be very vulnerable to some diseases or sold enmass when mature. If not taken care of, this vulnerability potential may give a wrong impression that there were no poultry in a given locality. The Enumerator will enter the average in the space.

Question A6: Fish Farming:

45. From question A1, it will have been known whether the Household is engaged in fish farming or not.
46. Fish farming is an economic activity in which farmers construct fishponds usually on their holdings and introduce young fish (fish fry). Fish fry is commonly obtained from fish breeders like, the Fisheries Research Institute (FIRI) of the National Agricultural Research Organization (NARO). This agricultural enterprise is an extremely important economic activity especially in areas without fresh water bodies like lakes and rivers.
47. There are two types of fishponds namely those, which are stocked (i.e. with fish), and the ones which are not stocked (i.e. without fish).
48. The status of a fishpond being stocked or un-stocked will be as of the day of enumeration.

Column (9): Number of Fishponds stocked with only Tilapia:

49. The Interviewer should obtain from the respondent, number of fishponds which are stocked with only Tilapia and record appropriately.

Column (10): Number of Fishponds stocked with only MirrorCap:

50. The Interviewer should obtain from the respondent, number of fishponds which are stocked with only Mirror Cap and record appropriately.

Column (11): Number of Fishponds stocked with only Clarias:

51. The Interviewer should find out from the respondent the number of fishponds which are stocked with only Clarias and record it.

Column (12): Number of Fishponds stocked with mixed species:

52. After establishing that there are fishponds which are stocked with more than one type

of species e.g Tilapia and Clarias, the number of such fishponds shall be recorded.

Column (13): Number of un-stocked Fishponds:

53. The Enumerator should obtain the number of stocked or/and un-stocked fishponds from the respondent, and record it.

General remarks on livestock / poultry

54. Numbers for both livestock and poultry (regardless of age) should be provided by the respondents
55. The Enumerator should note that quite a number of respondents are suspicious about revealing the exact numbers of each type. More often than not, the tendency is to understate the number. The reason behind this is that respondents usually tend to think that numbers of livestock will be used as a basis for assessing them for tax payment.
56. In view of this, you are therefore requested to explain briefly and clearly to the respondents that data will be used as a basis of making development plans aimed at emancipating the local communities from poverty. The Enumerator should hasten to add that data will be kept strictly confidential and that only totals for administrative areas will be computed.