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Assessment of the potential productivity of pigs in the Teso and Lango farming systems, Uganda: A case study

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Abstract

In 1998, a needs assessment conducted in the Teso farming system identified the pig as one of the researchable issues. However, it was observed that pigs were poorly managed because the owners seemed not to fully appreciate the potential role the pigs played in their agricultural set up. Thus, this study was instituted to assess the potential of the pig as a commercial and researchable commodity with a view of promoting and improving pig production in the Teso and Lango farming systems. The study was to produce information on pig breeds/types, production constraints, enterprise comparative advantage and envisaged role of pigs with a view of developing an intervention concept note. Meetings/interviews were held separately with district leaders, district veterinary extension staff, NGO field extension workers, women, youth and farmers groups both in Katakwi (Teso) and Lira (Lango) districts. A checklist was used to capture the necessary information. Individual farmers keeping pigs were also interviewed to cross-reference their information with that given by the groups. The assessment revealed that poorly managed and highly inbred Hampshire, Large White and Landrace were the main pig breeds in the area. Most people kept 1 -15 pigs for cash, food, marriage, financial security. Most pigs had an average litter of 7 piglets and would farrow twice a year. Pigs were mainly acquired through purchases from neighbours, mainly fed on kitchen leftovers, looked after by the whole family and were hardly ever housed. Market for pigs and pork was available and pork was a hot cake, being the cheapest source of meat in the region. Lack on knowledge in good management and lack of record keeping were the major production constraints. At a household level, the pig was a major source of meat and income. Pork was the cheapest of all available meats in the two districts. At a municipality level, the pig was a source of revenue for the municipality since pig traders and butchers paid market dues to the municipality. At a district level the pig was envisaged as a financial resource. From a socio – cultural point of view, the pig also played various roles. For peri-urban areas, where there is no much land, pig farming was a good enterprise to engage in. An enterprise comparative advantage analysis across species ranked the pig as number 1 in Katakwi district and as number 2 in Lira district. This observation re-emphasized the potential pig farming had in the two districts. In conclusion, the study revealed that (i) there was need to introduce new and better pig breeds and improve pig management in the study areas; (ii) pig farming was a viable and lucrative enterprise and should therefore be promoted in order to uplift the household incomes and nutrition status of the people in the region; (iii) the pig was generally a more advantageous animal than cattle, goats and chickens when a number of production and economic parameters are considered.

Key words: Pig, potential, management, comparative advantage

Introduction

In 1994, NARO set its research priorities. The priorities were set on a commodity basis and the national agricultural development objectives were used to set the prioritisation criteria (Esele, 1997). The set priority commodities excluded the pig. In 1998 and 1999, needs assessments conducted in the Teso and Lango farming systems identified the pig as one of the researchable issues (Akwang *et al.*, 1998;1999). However, it was observed that pigs were poorly managed because the owners seemed not to fully appreciate the potential role the pigs played in their agricultural set up simply because they destroyed the crops.

Thus, this study aimed at assessing the potential of the pig as a commercial and researchable commodity with a view of promoting and improving pig production in the Teso and Lango farming systems, particularly bearing in mind that pigs cannot be rustled like cattle and can assume an important status in the future.

Materials and Methods

In the main, the study was to produce information on pig breeds/types, comparative enterprise advantage, production constraints and envisaged role of pigs with a view of developing an intervention concept note. In order to capture the above, a series of meetings/interviews were held separately with the following stakeholders: district leaders, district veterinary extension staff, NGO field extension workers, women, youths and farmers groups both in

Katakwi and Lira districts. During the meetings/interviews, information on the pig was captured using a checklist. The range of the sample size for any particular stakeholders group was 8 - 46, i.e. the smallest group of stakeholders met/interviewed consisted of 8 people and the largest group had 46 people.

Individual farmers keeping pigs were also visited to capture the same information on the checklist. The information from individual farmers was cross-referenced against that from the various stakeholder groups cited above. This was necessary in order to get a consensus on the overall picture in a district. For enterprise comparative advantage, a special matrix given was developed with key parameters to be considered in the analysis across cattle, goats, pigs and chickens.

Results

Major findings obtained through the checklist

The data from the various groups was collated and cross-referenced with that from the individual pig farmers to come up with means, ranges or frequencied information across the district. Table 1 presents the summary of the major findings obtained through the checklist. Poorly managed and highly inbred Hampshire, Large White and Landrace were the main pig breeds in the area. Most people kept 1-15 pigs and the main purposes for keeping pigs were: cash,

Table 1. Major findings obtained through the checklist in Katakwi and Lira districts

Parameter	District	
	Katakwi	Lira
Pig breeds	Hampshire, Large white	Hampshire, Landrace
Number of pigs on farm	2-6	1-27
Main purpose of keeping pigs	- other livestock were taken by Karimojong (pigs cannot be rustled). - multiplication for sale. - dowry during scarcity of cattle and goats (3 pigs needed).	- cash - food - marriage - living bank (financial security)
Litter size	7 piglets	7-12 piglets
Number of farrowings per year	2 times	1-2 times
Usual way of acquiring pigs	Buying from neighbours	- buying from neighbours. - females acquired on credit (payment made after farrowing).
Feeds for pigs	Kitchen leftovers	- Kitchen leftovers, cassava, brewers' mash, maize bran, rice bran, sunflower cakes, greens.
Housing for pigs	No house (just tethered)	- No house for adult pigs. - Piglets penned in open enclosure.
Treatment for pigs	Hitet, wormicid	Call veterinarians
Who looks after the pigs	Whole family	Whole family
Who sells the pigs	Husband	Husband
Who controls income from sale of pigs	Husband	- Husband and wife - Widows and elder children.
Is there ready market for pigs/pork in the area?	Yes (all carcasses eaten in a day. On market days, all pork is sold out by noon).	Yes
Estimated income (from one sow per year (non descript breed)	100,000 - 120,000/=	167,000 - 230,000/=
Estimated value of a porker at 6-8 months	40,000/=	45,000/=
Price of pork per kg	1500/= (compare 2000/= for beef and goats meat)	1,800/=
Any transport problems?	Yes	No problem
Who buys the pigs?	Local traders (>10 people/week)	Local traders
If new pigs have to be introduced, which breeds would you prefer?	Long and large breed e.g. Large white	Big breed which grows quickly

Table 2:Production constraints in pig farming in Katakwi and Lira districts ranked in descending order

Katakwi	Lira
1. Lack of knowledge in management. 2. Poor feeding. 3. Poor housing. 4. Pork measles. 5. Swine fever. 6. Dewormers are expensive.	1. Management problem (pigs are always tethered to prevent them from destroying crops). 2. Lack of knowledge in pig management. 3. Lack of housing (do not know which house to construct). 4. Poor feeding. 5. Lack of record keeping. 6. Waste disposal (no wheelbarrows). 7. Pork measles. 8. Diseases (general) other than worms.

Table 3. Envisaged roles of pigs in Katakwi and Lira districts

Katakwi	Lira
• Entry point to bigger livestock e.g cattle. • Can alleviate poverty because they are prolific and grow quickly (boost household income). • Can be used like chickens in exchange for labour e.g heaping potatoes. • Cheaper source of protein and they are on high demand. • Good enterprise for land-resource poor people. • Utilisation of crop residues e.g potato vines.	• Big and cheaper source of meat in the municipality (pork 1,800/=; beef/goat 2,200/=; chicken 3,500/=). • Source of revenue for the municipality (traders pay market dues to the municipality). • Increase in district trade as pigs will be “exported” to other areas, including Kampala. • Increase in household incomes. • Boost the district financial resources (more individuals will easily pay their graduated taxes). • Will provide employment for unemployed husbands. • Major source of meat in a household because it is the cheapest among the meats. • Increased involvement in marriage (in absence of cattle or goats).

Table 4. Enterprise comparative advantage in Katakwi district (Score 1-4)

Parameters for consideration	Cattle	Goats	Pigs	Chickens
• Initial investment cost	1	3	2	4
• Rates of turn-over	1	2	4	3
• Marketability of products	2	3	4	1
• Products range	4	2	2	3
• Rearing/management portifolios	2	3	1	4
• Ease of disposal of emergencies	1	3	2	4
• Cultural limitations	4	4	4	4
• Input support for sustainability	1	3	2	4
• Disease/other production risks (production span-from young stage to market/adult stage), cannibalism, predated on by others , theft, rustling).	3	2	4	1
Total score	19	25	25	23
Rank	4	1	**1**	3

Table 5: Enterprise comparative advantage in Lira district (Scores 1-4)

Parameters for consideration	Cattle	Goats	Pigs	Chickens
• Initial investment costs	1	3	2	4
• Rates of turn-over	1	2	4	3
• Marketability of products	3	2	4	1
• Products range	4	2	2	3
• Rearing/management portifolios	3	2	1	4
• Ease of disposal of emergencies	1	4	2	3
• Cultural limitations	4	4	4	3
• Input support for sustainability	1	2	2	3
• Disease/other production risks (production span-from young stage to market/adult stage), cannibalism, predated on by others , theft, rustling).	3	2	3	1
Total score	21	23	24	25
Rank	4	3	**2**	1

food, marriage, financial security and the fact that pigs cannot be rustled like cattle or goats by the Karimojong. Most pigs produced an average of 7 piglets per farrowing and would farrow twice a year. Pigs were mainly acquired through purchases from neighbours, were mainly fed on kitchen leftovers, looked after by the whole family and were hardly ever housed. Market for pigs and pork is available and pork goes like a hot cake, being the cheapest source of meat in the region.

Production constraints

The various respondents were requested to rank, in a descending order, the major production constraints they faced in pig farming. Table 2 presents the summary of the production constraints in both Katakwi and Lira districts. In both districts, lack of knowledge in good management (breeding, feeding, housing and disease control) and lack of record keeping were the major production constraints.

Envisaged roles of pigs

Table 3 presents the envisaged roles of pigs in Katakwi and Lira districts. At a household level, the farmers envisaged the pig as a major source of meat and income. Pork was the cheapest of all available meats in the two districts. Because pigs are prolific and grow quickly, they are ideal for quick income generation and are a very good entry point for poverty alleviation. At a municipality level, the pigs were envisaged as a source of revenue for the municipality since pig traders and butchers pay market dues to the municipality. At a district level the pig was envisaged as a financial resource. If pig production were improved, more individuals in the district will easily pay their graduated taxes and this will boost district coffers. From a socio-cultural point of view, the people viewed the pig as one of the animals to be involved in marriages, particularly in absence of cattle or goats. For those people, especially in peri-urban areas, who do not have much land for grazing cattle and goats, pig farming was a good enterprise to engage in.

Enterprise comparative advantage

The respondents were requested to use a score of one to four to rank nine parameters across cattle, goats, pigs and chickens in the two districts. In Katakwi district the pig was ranked as number 1 and in Lira district it was ranked as number 2 (Tables 4 and 5). This observation re-emphasized the potential pig farming had in the two districts.

Conclusions/recommendations

The pigs available then in the Teso and Lango farming systems were non-descript, highly inbred and had arisen as a result of improper management of the exotic or crossbred pigs. It was only those which had survived the poor management practice that remained..It was highly recommended that new pig breeds be introduced and that pig management be improved in order to exploit fully the potential of pig farming in the region. Large White and Landrace breeds were recommended for introduction.

Pig farming was a viable and lucrative enterprise in the Teso and Lango farming systems given the prolific nature of pigs; the estimated income from piglets, sows, and porkers; the cheaper price of pork against other meats and the enterprise comparative advantage pigs had over other livestock enterprises in the region. Given those aspects, the pig had an enormous commercial potential and it was highly recommended that pig farming be promoted with a view of uplifting the household incomes and nutritional status.

All the production constraints cited in Table 2 were purely managerial problems, which could be addressed through training in modern pig husbandry, study tours and exchange visits. It was, therefore, recommended that

training, study tours and exchange visits be integral components of the Concept Note to be developed.

Given the various envisaged roles (Table 3) the pig had in the Teso and Lango farming systems, it was evident that pig farming would assume a pivotal role in the survival and livelihood of many households.

It was. therefore, recommended that rural households should be supported to carry out modern and commercial pig production.

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