

After being introduced to the methodology of RAAKS, the authors describe their experience applying it to extensionists and development workers in Northern Ghana to identify the constraints and opportunities for pig and poultry production. The exercise was limited to analysing actors, knowledge networks and communication, but it yielded valuable information.



Looking at pigs and poultry through RAAKS windows

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Traditionally, extension has been concerned with the interaction between researchers and farmers, with extensionists as an intermediary between the two. Realisation that technology adoption among farmers is low under this traditional system has led to the introduction of farmer participatory research methods. In March 1996, the Northern Ghana LEISA Working Group, consisting of NGOs, researchers, staff of the Ministry of Food and Agriculture (MOFA) together with some farmers, was introduced to the Rapid Appraisal of Agricultural Knowledge Systems (RAAKS) methodology (Engel, 1995).

Early in May 1996, the authors were invited to teach at a training programme for subject matter specialists of the extension department of the MOFA. The workshop was to run over a period of five days and was to deal with pig and poultry production in the Upper East and Upper West Regions of Ghana. Animal production as a whole, and pig and poultry production in particular, had been neglected in the zone for a long time, despite the presence of large numbers of pigs and poultry. How then to raise the awareness of participants on the potentials for pig and poultry production? A field trip was chosen, during which parts of the RAAKS methodology could be applied.

For the purposes of the exercise, the problem statement was given beforehand to the participants as: *'How can farmers, development workers, extensionists and researchers work together to bring about increased pig and poultry production in*

the zone? Participants were asked to do a constraint and opportunity analysis of the problem so identified. The participating researchers, development workers and extensionists were divided in six groups in which each category was represented. They then planned the field trip, addressing questions such as: how to approach farm families? who would do the interviewing? what should be on the checklist so as to ensure that relevant information was obtained? Each group was to select and visit two households during one day. The findings were to be presented in the plenary session late in the afternoon of the same day.

Initial resistance

There was a lot of initial resistance to the method, due to attitude problems, scepticism and lack of understanding. Some participants expected lectures, to put down notes and leave. Others felt that they were already acquainted with the field and did not need to have direct farmer contact to be able to understand constraints and opportunities for pigs and poultry. A few had already been exposed to other techniques of information gathering such as Participatory Rural Appraisal (PRA) and could not see what added value RAAKS could have. Again others felt they could gain information from the field without preparation.

Actor Analysis

The Actor Analysis was to identify the actors in the pig and poultry industry and understand their different roles. It was not possible in the context of the workshop for all actors identified to be interviewed, but an attempt was made to identify them as

indicated by the farmers interviewed. Five groups of actors were identified: Other farmers, MOFA staff, traders and butchers, input suppliers and the banks.

Other farmers were important as a source of breeding stock, sharing of experiences and as a source of labour. Many farmers did not own their own boars and were dependent on fellow farmers for the servicing of their sows. MOFA extension staff provided technical advice, while poultry farmers indicated that veterinary officers administered vaccines. There were, however, several complaints about the infrequency of visits of both categories of MOFA staff and that veterinary officers did not always respond to calls for help. Traders and butchers bought live animals from the farmers and this was looked at by most farmers as a vital link. Poultry were sometimes taken to Kumasi (approx. 400 kms distance) by farmers for selling, but transportation was also provided by some traders from Southern Ghana who drive to the north to buy off pigs. The butchers also served as a vital link to the Veterinary Sanity Department as they informed the vets on the state of the carcass. Carcasses showing the cysts of the tape worm were condemned and the farmers earn nothing and also had to dig the pit into which the carcass was buried. Input suppliers were the feed mill operators and 'pito' (local beer) brewers, who supplied the two main ingredients for pig feeding in the zone: mill flour and 'pito' mash. This group was particularly powerful because all the by-products of their trade were in short supply. A NGO was mentioned as providing salt licks to interested farmers. Although banks were mentioned by farmers, it was often linked

Philip Atson, an extension worker of Garu Agricultural Station, explains in a meeting of male and female pig farmers possible ingredients, like 'pito' mash, of good pig feed.

to their inability to obtain credit facilities. The banks were an important but absent actor (see also box).

Knowledge Network Analysis

The 'Knowledge Network Analysis' is to provide insight into which actors generate, exchange and utilize knowledge. This exercise was carried out with farmers only in order to identify whom they consider relevant sources of information, and to investigate if there had been any introduction of improved technology into the pig and poultry industry. The interviews showed that the main source of information to the farmer was other farmers. They exchanged information freely between themselves. Little information was available from extension and veterinary staff. A training workshop was held in 1977 to educate farmers interested in pig raising, but since that time nothing else had occurred. Although vets vaccinated poultry and condemned pig carcasses when necessary, there was no information to educate farmers on what to do and the best time to vaccinate.

Participants felt that it was difficult to show which actors had links with each other and how significant those links were, especially since not all the relevant actors had been interviewed (see Table 1). Links between various departments within the MOFA were weak, whereas the introduction of the 'Research Extension Linkage' had resulted in strong relations between the ministry and researchers and between the researchers themselves.

Constraints and opportunities

Several constraints to increase pig and poultry production were identified during the workshop: lack of adequate feed, water and housing. Houses were poorly ventilated because of fear of animal thefts. Labour was a limiting factor in the rainy season

Pig farmers form new groups

Around Garu, a community in the Bawku East District of Upper East Region of Ghana, some pig farmers had formed a group, but failed to perform according to expectations: each farmer attempted to solve problems on his own. For getting assistance, they presumed that pigs had to be grouped together, in similar ways as Fulani herdsmen take care of farmers' cattle in a herd. Two major changes in the agricultural sector stimulated the authors to use RAAKS to revitalise the pig farmers' group. Firstly, relatively good loans to improve small scale farming were available, but no individual farmer or group was yet qualified to receive them. And secondly, there was a high potential for pig farming in the area as breeding animals and pork were in demand.

Three farms were visited to get acquainted with local management systems and the members of the defunct pig farmers group were invited to attend a meeting at Garu Agricultural Station (GAS), a church-based NGO (see photo). It was agreed that the first phase of RAAKS - Redefinition of the problems - should be carried out. Farmers introduced themselves and gave their reasons for going into pig production: it's lucrative and pigs are easy to rear. How then would an eventual group function? Would the farmers raise pigs as a group or as individual enterprises? Farmers agreed that the rearing of pigs should be an individual affair. Different farmers had different strategies and it would be impossible to group all their pigs together. This explained why the group became defunct. Once it was indicated that this was not a precondition to forming a group, farmers indicated their willingness to work together. They would come together to plan, receive advice and transact business with relevant actors such as banks, extension agents, researchers. In smaller groups of 5-10 members they would work on a regular basis and in future form an association comprising all the smaller groups. Farmers then went into a buzz session to come out with eight groups of pig farmers, with a total of 65 farmers.

During the discussion, problems were redefined. Feeding the pigs was named as the number one problem. 'Pito' mash forms the main basis of feeding. Farmers, however, complained that 'pito' brewers tended to favour farmers who gave them piglets in return for pito mash. It was pointed out that instead of receiving piglets, pito brewers would be entitled to help, in the form of labour from the group to rebuild or repair their piggeries. Housing was another problem, as constructing, expanding or repairing them with swish and thatch is expensive. Assistance to purchase improved breeds was required as the local Ashanti Black breed was found slow to mature, and did not show from observation if it was infested with tape worms. GAS could offer improved breeds. The lack of capital to solve some of these problems became apparent. Farmer groups with an active account were eligible to receive loans. It was decided, therefore, that each member of the group would contribute towards the opening of accounts with the Rural Bank, by selling one pig. GAS would help in marketing and assist in the formulation of an application for a loan when the time was ripe.

The enthusiasm of the farmers was clear. They could work together whilst individually keeping their pigs. In March 1997, a workshop with the revitalised pig farmers group will be organised to exchange experiences.

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because of work on crop farms and the simultaneous shortage of mill flour and 'pito' mash. The quantity of grain milled is relatively low during the rainy season. The housing provided was inadequate for the large numbers of animals kept by the farmers. The high cost of drugs and vaccines resulted in high disease level outbreak.

However, with the high stocking density in relation to housing, some participants believed that the sale of a few animals could help in the provision of small sums of capital.

A wealth of information

The RAAKS exercise provided the participants with valuable information on their knowledge system. They identified some new actors, they learned that other farmers were the most important sources of information, and gained some insight into strong and weak linkages. But they learned most from the mere fact of being exposed to farmers, to the realities of the field. After the use of the RAAKS exercise, several participants expressed surprise at the wealth of information gathered, particularly on the traditional practices used by farmers. They had obtained a fuller understanding of the situation and what could be done to improve it. Many of the seasoned extensionists indicated that the use of RAAKS had raised issues that they were unaware of.

Table 1. Types and strength of linkages between actors in the pig and poultry industry in Northern Ghana.

Actors	Farmers	MOFA	Traders/ Butchers	Input Suppliers	Banks	Researchers
Farmers	++	-	-	+		-
MOFA	-	-	-			++
Traders/Butchers	++		++			
Input Suppliers	++					
Banks						-
Researchers		++				+

++ Very Strong Links + Good Links - Weak Links --Very Weak Links

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