

# A diagnostic survey of the present state of the pig industry in the Greater Accra Region of Ghana

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## SUMMARY

A diagnostic survey was carried out among pig farmers in the Greater Accra Region to gain some understanding about the pig industry and its associated problems as well as how best these problems can be addressed. In all, there were 48 respondents. Most of the farmers (84 per cent) had between 11 and 150 animals of various sexes and age groups. Many dispose of boar (53 per cent) and sows (43 per cent) after 2 years of use. Most farmers (98 per cent) mix their own ration to feed their animals, albeit poor in quantity or quality or both. The major constraints identified were non-availability of feed or high-priced feed, water problem especially in the dry season, and financial problems due to non-availability of credit facility.

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## Introduction

Pig production is an important aspect of livestock production within the Greater Accra Region of Ghana. The population of pigs in this region is only 19 471, representing only 4.8 per cent of the national pig herd (NLPIU, 1994). Pig production in the country has not received much attention. A survey of some farms on the Accra Plains by Okine (1987) and Ofori-Teiko (1982) indicated a wide variation in nutrient composition of diets with crude protein ranging between 5.2 and 19.6 per cent. Attempts were made to educate pig farmers on how to improve pig production systems in Ghana (Buadu, 1974; Barnes, 1991). An economic analysis of the pig enterprise was even carried out to identify the areas of potential weakness

## RÉSUMÉ

FLEISCHER, J. E. & BARNES, A. R.: *Un sondage diagnostique de l'état contemporain de l'industrie porcine dans la Grande Région d'Accra du Ghana.* Un sondage diagnostique s'est déroulé parmi les éleveurs porcins dans la Grande Région d'Accra afin d'acquies de compréhension à propos de l'industrie porcine et ses problèmes alliés, ainsi que comment ces problèmes pourraient être abordés. En tout, il y avaient quarante-huit personnes intergées. La plupart d'éleveur (84 pour cent) avaient entre 11 et 150 animaux de sexes et de groupes d'âge divers. Beaucoup se dispose de verrats (53 pour cent) et de truies (43 pour cent) après 2 ans d'emploi. La majorité (98 pour cent) d'éleveurs préparent leurs propres régimes pour nourrir leurs animaux bien qu'ils soient pauvres en quantité ou en qualité ou en tous les deux. Les contraintes majeures identifiées étaient la non-disponibilité de régime, coûteux, le problème d'eau surtout dans la saison sèche et les problèmes financiers dû à la non-disponibilité de ligne de crédit.

(Amonoo, 1974).

A diagnostic survey was therefore done to find out major problems facing producers so as to gain some understanding of the present state of their production systems, and also to suggest ways by which the problems could be addressed.

## Materials and methods

Open-ended questions were used to elicit information. A three and a half page questionnaire was administered to the farmers. Pig farmers with at least two sows that had had at least two farrowings were selected. Eighty-four questionnaires sent out broadly covered the following areas:

(i) Demographic characteristics of the farmer.

- (ii) Livestock types, stock population, ages, and sex.
- (iii) Breeding programmes.
- (iv) Routine management practices and constraints of the production system.

The questionnaires were pre-tested before being administered. There were 48 respondents.

### Results

Table 1 shows the demographic characteristics of the respondent farmers. Of all the respondent farmers, 12.5 per cent were females. Most respondents (90 per cent) were between 31 and 60 years, while the remaining 10 per cent were between 21 and 30 years. None of the farmers was either below 20 or above 60 years of age.

Fourteen per cent of the respondents had been in the business for more than 15 years, 7 per cent between 11 and 15 years, 72 per cent between 2 and 10 years, while about 7 per cent had been in for less than 2 years. Many of the respondents (80 per cent) used family labour while only 20 per cent actually hired labour.

#### Stock population

Table 2 shows the types of poultry raised by the pig farmers in the Greater Accra Region. In

TABLE 1

*Demographic Characteristics of Pig Farmers in Greater Accra Region*

<i>Characteristics</i>	<i>Number of respondents</i>	<i>Percentage</i>
<i>Farm owners</i>		
Male	42	87.5
Female	6	12.5
<i>Age group (yrs)</i>		
< 20	-	-
21 - 30	5	10
31 - 60	43	90
60 <	-	-
<i>How long in business</i>		
< 2	3	7
2 - 10	34	71
11 - 15	3	7
15 <	9	14

Number of respondent farmers was 48

TABLE 2

*Livestock and Poultry Raised by Pig Farmers in the Greater Accra Region*

<i>Livestock characteristics</i>	<i>Number of respondents</i>	<i>Percentage</i>
<i>Livestock type raised in addition to pigs</i>		
Cattle	24	50
Sheep	31	65
Goats	24	50
Poultry	34	71
Others	3	7
<i>Pig numbers</i>		
11 - 30	18	38
31 - 50	22	46
150 <	8	16

Number of respondent farmers was 48

addition to pigs, 50 per cent of the respondents raised cattle, 65 per cent raised sheep, 50 per cent raised goats, 71 per cent raised, poultry, and 7 per cent other animals. Thirty-eight per cent of the respondents had between 11 and 30 pigs, 47 per cent had between 31 and 150 pigs, while 16 per cent had over 151 pigs. These animals were made up of different age groups. Seventy per cent of the respondents started with 2 to 5 animals, 15 per cent with 11 to 5 animals, and the remaining 15 per cent with more than 15 animals. Sixty-seven per cent of the respondents started with animals that were between 1 and 6 months old, while 13 and 20 per cent started with animals that were 9 and 12 months old, respectively.

#### Breeding programme

Most gilts were served when they were between 1 and 1.5 years old. A few gilts were served at about 2 years old. Most respondents had no idea about the ideal weight of animal at first service, as they did so by ocular inspection. A few of the respondents guessed that the ideal weight ranged between 35 and 150 kg liveweight. Fifty-three per cent of the respondents changed the boars biannually, 13 per cent did so annually, 7 per cent once every 3 years, while 27 per cent only changed the boar occasionally (Table 3). Forty-seven per cent of the respondents disposed of the females

TABLE 3

*Frequency of Replacement of Breeding Animals in the Greater Accra Region*

<i>Animal type</i>	<i>Period of use</i>	<i>Number of respondents</i>	<i>Percentage</i>
Boar	1	6	13
	2	25	53
	3	3	7
	3 <	13	27
Sows	1	2	6.5
	2	22	47
	3	20	40
	3 <	2	6.5

Number of respondent farmers was 48

after 2 years of use, while 6.5 per cent each did so after 1 or 4 years. The remaining 40 per cent disposed of the females after 3 years of use,

#### *Routine management*

Almost all the farmers weaned their animals between 6 and 8 weeks after birth. The piglets were given iron injection within the first 3 to 4 days of life. Fifty per cent castrated their animals between 2 and 4 months while 25 per cent each did so at 5 or 6 months of age. Many of the farmers (90 per cent) confined the animals all day. The housing was sand or landcrete but usually semi-thatched. None of the farm houses had guard rails or farrowing crates to safeguard the piglets. The farmers indicated that they were usually on hand to assist during farrowing. This had not always been successful. For example, in one farm where the attendants were not on hand, the farmer lost about 18 piglets from three sows.

Most of the farms were near the homesteads. About 67 per cent of the farmers had the farms within a distance of 500 m, 22 per cent within 500 to 1000 m, and 11 per cent more than 1 km from their homes.

Cleaning of the pens was generally done in the mornings. About 80 per cent of the respondents indicated that they used dung as the manure to some extent, while the remaining 21 per cent said they did not use it. Those who used it indicated that occasionally other people also collected some to use.

Farmers routinely fed the pigs pawpaw fruits to deworm them, and also rubbed the bodies with "used" engine oil to treat "managè" the commonest skin disease in the pig industry in Ghana.

Of the 48 respondents, only one farmer (2 per cent) indicated that the farm bought completely mixed feed for the animals. Most respondents bought the feed ingredients, usually from the open market, and compounded their own rations. Many of the farmers (92 per cent) complained that the completely mixed feed sold on the market was expensive. Table 4 shows the type of feed

TABLE 4

*Frequency of Incidence of Use of Ingredients by Farmers*

<i>Ingredients</i>	<i>Frequency (percent)</i>
Wheat bran	55
Common salt	33
Fish	31
Cassava peels	29
Palm kernel cake	29
Cassava	22
Rice bran	20
Maize	16
Brewer's	16
Grass and forbs	14
Maize chaff	14
Premix	12
Chop bar (restaurant) left over	10
Oyster shell	8
Copra cake	8
Soybean	6
Groundnut husk and ribs	6
Groundnut cake	6
Pineapples	4
Pawpaw	4
Maize bran	4
Concentrate	2
Corn polishing	2
Pito marsh	2
Yam pieces and peels	2
Plantain peels	2
Cotton seeds	2
Palm chaff	2
Blood meal	2
Unhatched egg	2
Dead chickens	2
Chicken intestines	2
Water lettuce	2

ingredients and the frequency of use. The major ingredients used apart from wheat bran were maize, rice bran, cassava and cassava peels, palm kernel cake, and fish. Many of the farmers who used fish were actually using herring and tuna heads. Also, very little of maize was used.

#### *Constraints in the industry*

Table 5 shows the problems of the pig industry as seen by the farmers. Feed availability and cost was the major problem followed by finance and water. Many of the farmers indicated that there were occasions, usually in the dry season, when they had to spend a lot of money on water for the running of the farm. Thirteen per cent of the respondents, however, did not think that there was any problem with the industry. Marketing, which was thought to be a big problem, was not seen as such by the farmers. Many farmers hoped that alternative feed sources that would be less expensive and affordable may be found to ease the problem. Forty-three per cent conceded that they disposed of animals to generate money to support the enterprise. About 6 per cent said they borrowed from friends to support the farm and paid later.

On how to improve the situation, 33 per cent of the respondents hoped that some form of credit facility will be made available, 25 per cent thought they must be educated on improved production techniques so that they can be efficient, and 16.7 per cent suggested that input cost should be

subsidized. Seventeen per cent of the respondents hoped that research should come out with less expensive alternative feed ingredients, but 8.3 per cent intended to relocate the farms.

#### **Discussion**

It was observed that few females were owners of pig farms. This may be due to the societal understanding of the responsibility of man as the provider of the family, as well as to the female's inaccessibility to resources to start the enterprise. Most male farmers, however, used family labour of which the spouses played big roles, since the children did not do much.

Since many farmers started their businesses with two to five animals, heavy capital investment in the animals may not be required to start a piggery. It may be started in a very small way and then grow gradually so that the problem associated with expansion could easily be dealt with. Unfortunately, however, many of the farmers lacked understanding of the enterprise as indicated by the wide estimates given for the ideal weight of gilts at first service.

Krider & Carol (1971) indicated that litter size of pigs increased with age until the sow was about 2.5 to 3 years, and it remained constant until it was 5 years old after which it declined. Amonoo (1974) also emphasized the advantage in efficiently managing a higher size, since the overhead cost was spread over a greater number of pigs. Unfortunately, many of the farmers seemed not to consider this in their operations, though they replaced their breeding stock after 2 to 3 years of continuous use. This was an attempt to avoid problems of either excessive fattening in boars or reduced efficiency in the female breeding stock. However, both management of stock and physiological state of the animals must be duly considered to take advantage of the productive life of the animal and improve efficiency. It seems, therefore, that 2 to 3 years is too early to dispose of the animals unless there is a special reason for it.

The greatest problems facing the pig farmers were feed, finance, and water. It appears that these areas have not changed much over the last 2

TABLE 5

*Problem Facing Pig Farmers in the Greater Accra Region*

<i>Nature of problem</i>	<i>Incidence frequency among farmers</i>
Feed	27.9
Finance	18.1
Water	14.8
Labour	6.5
Drugs being expensive	6.5
Price fluctuation of input	4.9
Marketing	3.3
Diseases and mortality of weaners	3.3
Thieves	1.6

decades or so. Many workers have emphasized good feeding programmes for enhanced efficiency (Buadu, 1974; Andah, 1974; Amonoo, 1974; Barnes, 1991). Wide variation in nutrient composition and diets has been observed among farmers on the Accra plains (Okine, 1987; Ofori-Teiko, 1982). Barnes & Ekeki (1991) also conducted a survey among pig farmers in the Northern and Greater Accra Regions, and reported that high cost of feed and lack of finance limited the expansion of the pig enterprise in these areas.

Farmers are mainly using a single by-product, wheat bran, without knowing its nutritive value. Thus, such farmers are always caught up in problems whenever the supply is disrupted or prices increase. For such farmers with no alternatives to wheat bran, the only recourse is to dispose of stock. Farmers may find alternatives but lack the know-how for efficient feed formulation.

Above all, some farmers still hold on to the age-old notion that pigs eat anything, and hence do not pay much attention to what feed they offer. Thus, the animals grow very slowly and hence take a long time to reach maturity. In addition, the quality of meat produced is also greatly influenced largely by what the animal consumes (Fleischer, 1980). Many alternative feed ingredients have been studied with promising results (Fleischer, 1987). What remains to be done is how to communicate these results to the farmers.

The provision of abundant but good drinking water for the pigs not only ensures efficient production as well as cleaning of the sty (Buadu, 1974; Barnes, 1991) but also offers much needed relief in cooling the body. Unfortunately, many of the farms are sited in areas which lack portable water and dug-out wells. Hence, the farmers are forced to buy water at exorbitant fees, making their operation expensive.

Barnes & Ekeki (1991) observed that lack of marketing channels affect production levels. A similar observation was made in the Northern Region of Ghana. On the contrary, most of the respondents in this study thought otherwise. Most of the pig farmers actually had very few

animals which they regarded as live banks; they only disposed of one or two animals as the need arose. They did not, therefore, face the same problem as those who had to regularly sell many animals at once. For the latter type of farmers, not only are the marketing avenues limited at the moment, but also the prices offered are discouraging.

Clearly then, the major problem facing the pig farmer in the Greater Accra Region is that of feed and finance to purchase and store the feed. This has, therefore, forced many farmers out of production or reduced their stock numbers. If an inexpensive but good quality feed can be evolved through research and introduced to the farmers, it would not only increase their profit margins, but also offer the consumer a less expensive meat.

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