



Republic of the Philippines
Department of Agriculture

Upland Development Programme in
Southern Mindanao (UDP)

**A MARKETING EFFICIENCY STUDY
ON**

SWINE

**IN SITIO UPPER BALISAN, PALO 19,
TAMPAKAN, SOUTH COTABATO**

MAY 2001

PREFACE

This report is one of a series of market efficiency studies conducted in the UDP-covered areas for selected commodities. The marketing efficiency of swine in Sitio Upper Balisan, Palo 19, Tampakan, South Cotabato was evaluated through the deconstruction of existing marketing margins. Recommendations to improve marketing efficiency are herein offered.

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Swine raisers:

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DEFINITION OF TERMS

Cash costs	-	costs where actual money is involved.
Cash returns	-	the earnings, where actual money is involved, from the sale of the farm produce.
Depreciation	-	the expense brought about by the wear and tear of a piece of equipment, building or tool used in an enterprise for a given period of time.
Economies of scale	-	the economic concept wherein production at a larger scale (more output) can be achieved at a lower cost.
Exchange labor	-	the value, non-monetary in nature, of the work (in man-days) put in by neighbors, friends or other laborers in exchange for the farmers help with similar farm activities in their respective farms.
Given away	-	the value, non-monetary in nature, of the farm produce given out by the farmer to others without any monetary payment.
Hired labor	-	the cash expense for engaging the services of farm laborers.
Home consumption	-	the value, non-monetary in nature, of the farm produce consumed by the farmer and his family.
Losses/shrinkage of produce	-	the value, non-monetary in nature, of the damages and spoilage sustained by the produce.
Market information	-	basic information on prices and quantities traded of major commodities, from all markets—assembly, wholesale and retail.
Marketing channel	-	the inter-organizational system composed of interdependent institutions tasked in moving the product from production to consumption.
Marketing efficiency	-	the maximization of the input-output relationship where inputs refer to resources (land, labor, capital) used in moving the products from point of consumption to the

		point of production and output referring to consumer satisfaction on goods and services made available in the market.
Marketing margin	-	the difference in prices between the different levels of the marketing system.
Marketing	-	series of services performed in moving the product from the point of production to the point of consumption.
Net farm income	-	returns of the use of capital and labor. The overall profit of the farm after all the expenses, cash and non-cash, have been paid off.
Non-cash costs	-	costs items used in the production process wherein no direct outlays occurred or the costs incurred are not monetary in nature.
Non-cash returns	-	the value, non-monetary in nature, of the farm produce consumed by the farmer and his family or those given away.
Opportunity cost of capital	-	the price of foregone opportunity in the use of the capital invested in the enterprise. It is usually pegged at the current savings interest rate.
Point of consumption	-	last sale of the product.
Point of production	-	point of first sale.
Profit margin	-	the return to the middlemen for their entrepreneurship, the risks and the cost of money.
Return on investment	-	measures the amount of cash that the entrepreneur gets from the capital investment after first paying the opportunity expenses on the value of family labor and management. It also determines how much money the producer got in return for every one peso invested.
Unpaid family labor	-	also called own labor. The value, non-monetary in nature, of work (valued in man-days) by the farmer and his family.

SWINE

INTRODUCTION

1. Swine (*Sus scrofa*) production plays an important role in the Philippine livestock industry since 60% of meat consumption in the Philippines is attributed to pork (Rivera, 1992).
2. Sitio Upper Balisan, Palo 19, Tampakan in South Cotabato was chosen as the area for market study in swine because it had the most identified swine raisers in the UDP areas of South Cotabato. The average annual commercial production is 2 heads of swine per farmer or 76 kilograms live-weight for the two heads of swine.
3. All swine raised in Sitio Upper Balisan are of the Native breed. This choice of breed is due to the relative cheapness in production since there is minimal production costs such as acquisition of the animal stock (piglets) and veterinary supplies.
4. Other major costs in production and marketing of swine in Sitio Upper Balisan are the non-cash costs such as the unpaid family and exchange labor and feeds (such as the corn and root crops planted by the farmers for home consumption).
5. There are no fixed investments whatsoever because the swine in Upper Balisan are raised in the backyard, usually tied to a tree near the house or let loose to roam around.
6. The marketing efficiency study for swine in Sitio Upper Balisan, Palo 19 was conducted last March 5, 2001.

Objectives

7. The main objective of the study is to assess the impact of existing marketing systems of swine vis-à-vis income of the farmers.
8. Specifically, the study aims to determine the levels of participants in the marketing chain of swine;
9. Determine the marketing practices involved in terms of storage, handling, pricing, delivery systems and terms of payment;
10. Determine the percentage of consumer price that the producer receives, exclusive of production costs through the deconstruction of marketing margins of swine at each level in the system;
11. Identify strengths and weaknesses of the existing marketing system of swine; and
12. Determine appropriate marketing interventions needed to improve economic efficiency of swine in the identified area.

Methodology

13. From the initial agribusiness profile of UDP, Sitio Glandang was identified as having the most number of swine-raisers among the UDP areas in South Cotabato.
14. Purposive sampling was done and of the 11 identified swine raisers in the area; five (5) were interviewed for the study. The farmers were asked about their production and marketing practices, sales, production and marketing costs of swine. They were also asked on available market information with emphasis on what they need to know to improve their production and marketing practices, thereby increasing the farmers' income.
15. The respective buyers of swine from each farmer were then traced accordingly.
16. The traders were, in turn, asked about their marketing, costs, volume, value of sales and the problems and constraints they have encountered in the marketing of swine.
17. The marketing margins were then deconstructed and the profitability of each marketing participant was also analysed. In the case of the farmers, the Net Farm Income (NFI) was determined. An NFI greater than zero (0) would mean that the swine raising and marketing are profitable, whereas an NFI less than zero (0) would mean that the activities in swine raising and marketing are at a loss.
18. On the part of the trader, the Return on Investment (ROI) was compared with the opportunity cost of capital, pegged at the existing current savings interest rate of eight percent (8%) per annum. An ROI higher than the opportunity cost of capital would mean that marketing swine is more profitable than just saving the trader's money in a bank, while an ROI less than the opportunity cost of capital would mean that it would be more profitable for the trader to invest his money in a bank rather than spend it on marketing swine.
19. The percent share to the consumer peso of each marketing participant was also determined by getting the percentage of the marketing participant's selling price (in the case of traders, less their buying price) relative to the final buying price of the consumer. This indicates the proportion of the final buying price that goes to each marketing participant in swine.
20. Moreover, focused group discussions (FGDs) with key informants and selected farmers were conducted to probe into the importance and the demand for market information in each province. This provided rapid feedback on the available market information and the information dissemination strategies existing in the area.
21. Also, key informants such as the Municipal Agriculturists and the Agricultural Technicians were interviewed to obtain an overview of the local agriculture industry.

Limitations and Constraints

22. During the interviews, it was observed that the producers relied on their memories in recalling their past production level, income, tools and equipment. There were no record-keeping practices. Thus the cost and return that were analysed were only estimates. The Return on Investment (ROI) was excluded on the analysis of the farmer income due to the ambiguity of the values arrived at. This is mainly due to the fact that some factors on capital investment were not properly quantified in the study. For instance, land valuation was excluded because none of the farmers hold titles to the land that they cultivate. Land, therefore, was not considered a fixed investment in this enterprise and was merely considered as an expense through the credit of land cost (land tax if owned, rent if tenanted).

23. In the marketing aspect, the respondents interviewed were the middlemen named by the producers. Most of the respondents interviewed also based their answers on their memories since they do not keep records regarding their marketing operations.

24. On the analysis of the marketing efficiency on the part of the farmers, only the Net Farm Income (NFI) analysis was utilized since the available data only allow for this kind of analysis and not the more complicated input-output efficiency analyses.

25. Lastly, the size of the swine market, specifically, the estimation of demand was not included in the study.

Margin of Error

26. Using the population size of 11 swine-raisers in the area, the margin of error was established at 33.95% at a 95% confidence level. This means that there is a 95% confidence that the real values of the parameters used in this study are within 33.95% of the computed values (using the data from the respondents' interviews).

MARKETING SYSTEM OF SWINE

Marketing channels

27. The marketing participants involved in the swine marketing system in Sitio Upper Balisan, Palo 19 are as follows:

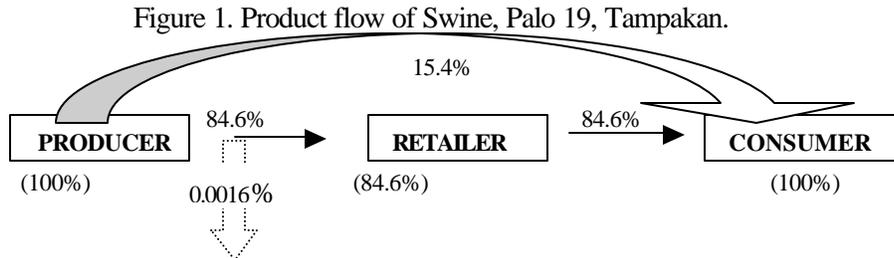
a. Farmer-retailer

A person engaged in swine raising for sustenance or commercial purposes. He sells bulk (91.7%) of his produce to retailers and retail an average of 8.3% of the swine themselves; and

b. Retailer

A trader, usually based in the Tampakan and Koronadal Public Market, who buys live swine from the farmers, butchers the animals and sells them to the consumers.

28. Shown below is the product flow of swine from Sitio Upper Balisan, Palo 19, Tampakan.



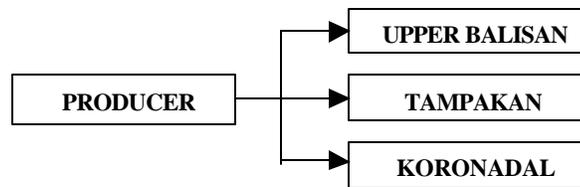
Selling price (P/kg):

Farmer	Retailer
Case 1= 55.00	<i>na</i>
Case 2= 40.00	44.00

29. Out of the total 13 heads (total live-weight of 494 kilograms) sold in Sitio Upper Balisan, only two (2) or 15.4% were slaughtered before sale and retailed by the farmers. The other 11 (418 kilograms live-weight) heads of swine were brought by the retailers to the Tampakan and Koronadal Public Markets for slaughtering and eventual sale to consumers.

30. Similarly, Figure 2 illustrates the geographic flow of the swine from the farm to the end marketing channel.

Figure 2. Geographical flow of Swine, Upper Balisan, Palo19, Tampakan,



Marketing Practices and Costs

31. The two heads of swine were sold, per kilogram, within the neighborhood of Sitio Upper Balisan at P55.00.

32. On some occasions, usually when farmers are in immediate need of money and there are no impending visits from buyers, the farmers opt to bring the live swine to Tampakan and sell it to the retailers. The swine is tied by the neck and led on foot to the barangay center where it is loaded onto the regular Palo-Tampakan public jeepney. Transportation cost from Palo 19 to Tampakan proper is P1 per kilogram live-weight. It is also important to note the great stress the animal undergoes during the walk from the sitio, which is four kilometres from the barangay, and the jeepney

ride. This may cause a significant, but undetermined, decrease in the weight of the animal. The decrease in weight brought about by stress in transportation is undetermined because the animal is only weighed at the point of sale, which is after transportation. No comparison, therefore can be made with the weight of the animal before its transport

33. Most retailers generally visit Upper Balisan on the peak buying months. A few, however, visit the area once every two months to chance upon farmers willing to sell swine.

34. Visits of buyers bring about spot markets wherein farmers bring their mature swine to the sitio proper. Buyers use a weighing device called “espada” to get the live-weight of the swine.

35. Table 1 shows the per kilogram marketing costs for the farmers and the retailers.

Table 1. Marketing costs for different marketing levels of swine (P/kg).

ACTIVITY	CASE 1*		CASE 2*	
	Farmer	Farmer	Farmer	Retailer
Slaughtering	0.65	0		<i>na</i>
Transportation	0.12	0		1.59
Labor	<i>na</i>	<i>na</i>		0.02
Supplies and materials	<i>na</i>	<i>na</i>		0.04
Fees and payments	<i>na</i>	<i>na</i>		0.02
Non-cash costs	<i>na</i>	<i>na</i>		1.46
TOTAL	0.77	0		3.13

*Case 1- swine is slaughtered by the farmers and retailed within Sitio Upper Balisan. Case 2-swine is bought by the retailers and brought to Tampakan and Koronadal for retail.

Price Formation

36. Since swine production is not greatly affected by seasonal changes and production cycles are short, there are no pronounced peak and lean production months. Price, therefore, is demand driven. December is the peak buying season for swine. This is due to the increase in demand for food during the holidays. Aside from December, the months of May to June, the months for fiesta celebrations, are also periods of high farm-gate swine price. Prices at these periods increase up to as much as P 38 per kilogram live-weight of native swine, as opposed to the ordinary, P30-35 per kilogram live-weight price.

Marketing Margins

37. Table 2 presents the marketing margin of the retailer and the Net Farm Income (NFI) of the swine raiser (as established in Appendix A) in Sitio Upper Balisan.

Table 2. Marketing margins and income for swine at different marketing levels.

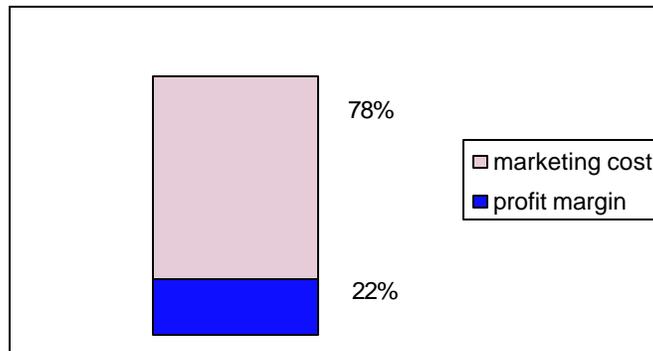
ITEM	CASE 1	CASE 2	
	Farmer	Farmer	Retailer
Selling Price (P/kg)	55.00	40.00	44.00
Buying Price (P/kg)	<i>na</i>	<i>na</i>	40.00
Marketing Margin (P/kg)	<i>na</i>	<i>na</i>	4.00
Marketing Cost (P/kg)	0.77	0	3.13
Profit Margin (P/kg)	<i>na</i>	<i>na</i>	0.87
Net Farm Income (NFI) (P/kg)	28.44	14.21	<i>na</i>
MC as % of MM	<i>na</i>	<i>na</i>	78%
PM as % of MM	<i>na</i>	<i>na</i>	22%
%ROI	<i>nil</i>	<i>nil</i>	3.45%
Opportunity Cost of Capital	<i>na</i>	<i>na</i>	8%

38. A comparison between the Net Farm Income (NFI) of the farmers for the two cases show that the profit or income of the farmer is higher when swine is directly retailed to the consumers (Table 2). However, it is important to note that the volume sold directly to the consumers is considerably less than the volume sold to the retailers.

39. In this case, there is only one marketing channel after the swine leaves the raiser. The retailer marks up the swine by 10%. So, at a buying price of P40.00/kg, the swine is retailed at P44.00/kg (Table 2). The marketing margin of P4.00 covers the marketing costs of P3.13 and a profit margin of P0.87 per kilogram. The ROI, determined to be 3.45%, means that for every peso invested by the retailer on the marketing of durian, he gets P0.0345 back. This low ROI can be explained by the low profit of the retailer compounded by the fact that his buying activities are expansive or covers a large area thereby increasing the retailer's costs. Marketing of swine for the retailer, therefore, is inefficient.

40. Shown in Figure 3 is the graphical presentation of the percentage of the marketing cost and the profit margin relative to the marketing margin.

Figure 3. Marketing margin of a swine retailer, Sitio Upper Balisan, Palo 19.

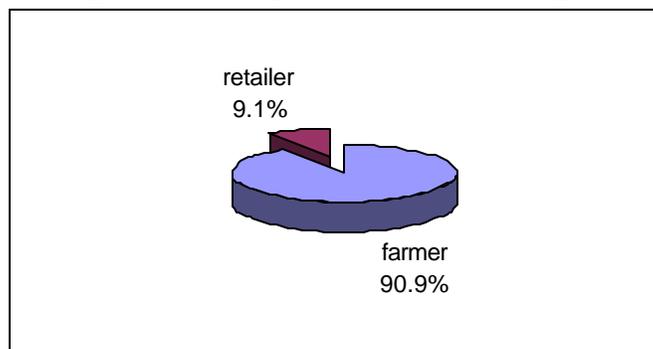


41. Table 3 and Figure 4 present the percentage breakdown of the consumer peso for swine in Sitio Upper Balisan.

Table 3. Percentage share to the consumer peso.

MARKETING LEVEL	SELLING PRICE (P/piece)	% SHARE
Farmer	40.00	90.9
Retailer	44.00	9.1

Figure 4. Percentage share of the consumer peso.



42. The percentage of the consumer peso, as indicated on Table 3 and Figure 4, means that of the for every peso paid by the consumer for swine 90.9% or P0.909 goes to the farmer and 9.1% or P0.091 to the retailer.

WEAKNESS

43. A weakness in the swine marketing system in Sitio Upper Balisan is the infrequent buying activities of the retailers in the area caused by the relative inaccessibility of the Sitio.
44. This problem is compounded by the competition with the swine raisers from the lower Tampakan sitios.

OTHER KEY FINDINGS

45. Based on farmer interviews and cost and returns analysis of swine raising in Sitio Upper Balisan, it was determined that swine raising in the area is profitable despite low investments and maintenance by the farmers.
46. Also, interviews with the Agricultural Technicians reveal that the quality of the native swine's meat (in terms of percent marbled fat and the like) is better than that of the existing hybrids in the area.
47. It was also determined that there is low demand for the meat of native swine which causes the buying price to be lower than that of hybrids.

CONCLUSION

44. Based on the Net Farm Income analysis on the part of the swine raisers, it can be concluded that swine raising in Sitio Upper Balisan, despite its weaknesses, is profitable (as indicated by the positive NFI).
45. The marketing of swine for retailers, however, is inefficient, as established in the ROI analysis.

RECOMMENDATIONS

46. Based on the weaknesses and other key findings on the marketing of swine in Sitio Upper Balisan, the following recommendations are offered:
 - ?? Improve the Sitio Upper Balisan-Palo 19 and the Palo 19-Tampakan roads to facilitate and broaden the marketing activities of the farmers themselves;
 - ?? Establish a "market day" when swine from all Palo 19 sitios would be brought to the barangay proper and auctioned to buyers;

- ?? Encourage farmers to time their harvests during the months of December, May and June by giving them the buying prices of the traders during these months and comparing them with the buying prices during off-peak months; and
- ?? Study the feasibility of upgrading the stocks of native swine to improve the consumer acceptability and demand of the animal's meat.

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APPENDIX A. Cost and returns per unit of swine in Sitio Upper Balisan, Palo 19.

ITEM	P/kg
RETURNS	
Cash	
Sold slaughtered	8.46
Sold live	22.87
Total Cash Returns (A)	31.33
Non-cash	
Home consumption	3.30
Total Non-cash Returns (B)	3.30
TOTAL RETURNS (C)	34.63
COSTS	
Cash	
Animal stocks	11.74
Veterinary supplies	0.06
Transportation	0.06
Total Cash Costs (D)	11.86
Non-cash	
Unpaid family and/or exchange labor	2.19
Losses/Shrinkage of produce	0.47
Opportunity cost of capital	3.62
Improvised feeds	8.42
Total Non-cash Costs (E)	14.70
TOTAL COSTS (F)	26.56
Net Returns Above Cash Costs (C-D)	22.77
Net Farm Income	8.07

APPENDIX B. Breakdown of costs per unit of swine in Sitio Upper Balisan, Palo 19.

ITEM	P/kg
I. Production Cost	
Animal stocks	11.74
Improvised feeds	8.42
Veterinary supplies	0.06
Own labor	1.95
Total Production Cost	22.17
II. Marketing Cost	
A. Slaughtering	
Own labor	0.24
Losses/shrinkage	0.41
Sub-Total	0.65
B. Transportation Cost	
Transportation	0.06
Losses/shrinkage	0.06
Sub-Total	0.12
Total Marketing Cost	0.77
III. Opportunity cost of capital	3.62
TOTAL COSTS	26.56