

BIBLIOGRAPHY

DE GUZMAN, DELFIN L. APRIL 2007. Profile of Bangus Processing in Pangasinan. Benguet State University, La Trinidad, Benguet.

Adviser: Jovita M. Sim, MSc

ABSTRACT

The study aimed to determine the demographic profile of the processors/respondents in six municipalities of Pangasinan; determine the processed bangus products produced; determine the market outlets of the processors by products; determine the packaging materials used by processors per products; identify their production problems encountered; identify their marketing problems encountered; and the suggested possible solutions to these problems.

Sixty eight (68) of the processors were personally interviewed while others is thru the floating survey questionnaire form during the conduct.

Most of the processors belonged to the middle age and were high school level. The total number of processors/respondents collected was 68. Most of them has a permit/license of business to Department of Trade and Industry (DTI). The total number of processed products was 16 and the marketing outlet were traders, direct consumers and supermarkets. Many of the processors chose direct consumers who bought their products at higher price.

The main problems of the processors were high cost of raw materials, availability of resources, lack of government support, high transportation cost, price fluctuation,

technology gap, high cost of raw materials, lack of financial assistance and competition were the main problem of the processors. The suggested possible solutions to these problems were to add additional market outlets, financial assistance/support, formation of organizations of fish marketing association/cooperatives marketing and storage facilities.



TABLE OF CONTENTS

	Page
Bibliography.....	i
Abstract	i
Table of Contents	iii
INTRODUCTION	
Rationale	1
Statement of the Problem	2
Objectives of the Study	3
Importance of the Study	3
REVIEW OF LITERATURE	
Production	4
Marketing Practices	4
Marketing Outlets	5
Choice of Outlets	5
Factors Affecting the Choice of Outlets	5
METHODOLOGY	
Locale and Time of the Study	6
Respondents of the Study	6
Methods of Data Gathering.....	6
Data Analysis	6

RESULTS AND DISCUSSION

Study Area	7
Profile of Respondents	9
Kinds of Processed Bangus Products	11
Market Outlets.....	12
Kinds of Packaging Materials for the Bangus Processed Products.....	14
Production Problems Encountered by Bangus Processors.....	15
Marketing Problems Encountered by Bangus Processors.....	16
Suggested Solutions to the Problems.....	17
SUMMARY, CONCLUSIONS, RECOMMENDATIONS	
Summary	19
Conclusions.....	20
Recommendations.....	21
LITERATURE CITED.....	22

INTRODUCTION

Rationale

Pangasinan is known for its bangus production, especially in the city of Dagupan. Dagupan City is located on the northern part of Pangasinan and is 212 kilometers north of Manila. It is bounded by Lingayen Gulf in the north, San Fabian in the northeast, Mangaldan in the east, Calasiao in the south and Binmaley in the west.

Production and marketing practices of processed bangus is one of the upraising industry in the province of Pangasinan. At present there are five municipalities and one city of Pangasinan who are engaged in bangus processing industry. The five municipalities are Lingayen, San Fabian, Mangaldan, Calasiao, and Binmaley. And one city, Dagupan.

Pangasinan is the major producer and supplier of bangus for fresh market in northern Luzon and in some part of the Metro Manila. In early 80's Bureau of Fisheries and Aquatic Resources (BFAR) promoted the intensive production of bangus. The intensive support by BFAR on bangus production had resulted on expansion of production areas up to other areas of Luzon such as La Union and Ilocos. The increase in production per area led to the increase in supply as alternative market. Thus the processing technology had been developed and now becoming one of the major livelihood in Pangasinan area (BFAR, 2002). Dagupan city gave birth to the bangus festival which started in May 1998. In the festival different processing method and technology, and recipes are showcased.

Bangus processing is one way of prolonging the storage life of bangus production and prevention from spoilage caused by microbial chemical composition.



The bangus processors contribute thousands of pesos annually to the government in terms of specific taxes, license, and inspection fees. Bangus production and processing is one of the major upraising livelihood in Pangasinan.

Production and marketing practice of processed bangus has economic potentials and can become a highly profitable livelihood especially in production areas, where bangus harvest is abundant. Therefore, it is necessary that the government and private sectors should work hand in hand to support and develop the production and marketing system of processed bangus especially for the small scale production processing enterprises. Market support is necessary to improve marketing system.

Statement of the Problem

This study focused on the survey and analysis on the production and marketing practices of processed bangus. Specifically, the study aimed to answer the following questions: 1). who are the bangus processors? 2). what are the processed bangus products produced by the different processors? 3). what are the market outlets for processed bangus? 4). what are the production problems encountered by bangus processors? 5). what are the marketing problems encountered by the bangus processors? and 6). what are the suggested possible solutions to the problems encountered by bangus processors?



Objectives of the Study

The study aimed to 1). find out the bangus processors, 2). find out the different processed products produced from bangus, 3). find out market practices employed by bangus processors, 4). find out production problems encountered by bangus processors, 5). identify the marketing constraints encountered by the bangus processors, and 6). enumerate possible solutions to the problems encountered by bangus processors.

Importance of the Study

From the stand point of processed bangus production, every processors engaged in this enterprise should consider marketing as one factor in attaining profitable production. The availability of market and market system is one of the major factor/consideration in production and processing enterprise. Production is not profitable if market system is not viable.

The general situation of the production and marketing practices in the processed bangus was appraised in this study. Hence, the appraisal can promote understanding of the various production and marketing operations done by the processors, find means of improving the system and make it more efficient, and also become a useful guide for processed bangus in improving their production and marketing practices.

The result of this research work will provide a picture on the profile of bangus industry and marketing operations of bangus processors. Results can be a basis in planning to improve the production system and marketing. The findings can also serve as a guide for further research and analysis.



REVIEW OF LITERATURE

Production

World processed bangus production plays an increasingly important role in providing the quality of diet demanded by the expanding population in developed and developing nations. Bangus processing industry has been able to meet the world demand. Some of the main attributes of processed bangus include its ideal suitability to mechanization from harvesting to processing (Smith, 2002).

Padian (2002) reported that high production from a unit of water is the result of harvesting fish that are properly handled, processed and stored. As stated by Oshima (1998) the production of processed bangus in the Philippines had been delegated to qualify private cooperators approved by fish board.

Marketing Practices

The major pre-sale practices involved in processed bangus marketing include drying, storing, grading, packaging, processing and transporting to market. Most processors transport processed bangus to market with motor vehicles, trucks, jeeps, and boats (Hipolito, 1995).

The marketing distribution system of processed bangus involves many gadgets before reaching the final consumer. The marketing agents are processors, local assemblers, processed bangus wholesale dealers, and processed bangus retailers. The bangus processors have very limited choices in marketing their products, because they usually commit their produce to local assemblers to whom the processors are in debt for financial sustenance during the production period to the processing time (Rosario, 1999).



Marketing Outlets

Private wholesalers are the most important outlets and are used by about 40 percent of the processors. The second most important outlets is sales direct to consumers; sales to agent buyers and to retailers are next to consumers. Sales to agent buyers and to retailers are of importance. Nearly 60 percent of the processors sell to wholesalers including agent buyers as outlets of their products. Practically, all the leading bangus processors sell to wholesale buyers. Nevertheless, a few sell some processed bangus to retailers and even to costumers in an attempt to obtain higher prices (Hipolito and Rosario, 1995).

Choice of Outlets

Convenience and good prices are two equal major reason why processors choose particular buyers/outlets for their processed bangus (Hipolito and Rosario, 1995).

Factors Affecting the Choice of Marketing Outlets

One of the factors affecting the choice of marketing is dependent upon the volume and size of production. It is the processors who decides whether to increase the size of production. With the big volume of production, processors employ wholeselling or contract buying as their marketing outlets (Agricultural Economics and Development, 1996).

METHODOLOGY

Locale and Time of the Study

The study was conducted in five municipalities and one city of Pangasinan. The municipalities are Lingayen, San Fabian, Mangaldan, Calasiao, Binmaley and the City of Dagupan. These areas are the major producers of fresh and processed bangus.

Respondents of the Study

The respondents of the study were the bangus processors in the identified areas. There were 60 respondents in which includes licensed and unlicensed bangus processors. Random sampling was employed in the selection of respondents.

Methods of Data Gathering

Data were gathered through interview with the use of open and closed ended questionnaire. The list of licensed bangus processors was gathered from the office of Department of Trade and Industry (DTI) used in the selection of respondents.

Data Analysis

The data gathered were tabulated and analyzed using simple descriptive analysis such as frequency counts and percentage.



RESULTS AND DISCUSSION

Study Area

Bangus processing is one of the livelihood portfolio of household in different municipalities of Pangasinan. Table 1 shows the distribution of respondents as to the study site and classifications as to the availability of business permit. Results show that municipality of Calasiao had the highest number of processors/respondents in bangus processing. The municipality of Dagupan had the highest number of registered processors of bangus (with business permit) as processors of Department of Trade and Industry (DTI). Dagupan City also has the less number of processors without business permit. Followed by Calasiao, Lingayen, Binmaley, San Fabian and finally the municipality of Mangaldan. The map of the study is shown in Figure 1.

Table 1. Distribution of respondents as to study area and availability of business permit/license

AREA	WITH BUSINESS PERMITS		WITHOUT BUSINESS PERMITS		TOTAL PERCENTAGE (%)
	F	%	F	%	
DagupanCity	11	16.2	1	1.5	17.7
Mangaldan	6	8.8	5	7.4	16.2
San Fabian	7	10.3	3	4.4	14.7
Lingayen	9	13.2	2	2.9	16.1
Binmaley	7	10.3	3	4.4	14.7
Calasiao	9	13.2	5	7.4	20.6
TOTAL	49	72	19	28	100



Profile of the Respondents

Table 2 shows the profile of respondents as to age, sex, civil status, educational attainment and source of income.

Age. Fifty six percent of the 68 respondents were 26-35 years of age, 26% with age ranging from 36-45, 12% with age ranging from 15-25, and 6% age ranging from 46-55 years old.

Sex. Most (69%) of the respondents were female processors and 31% were males. Results implies that females have equal or more opportunities on food processing such bangus processing as livelihood activity.

Civil status. Majority (74%) of the respondents processors are married and 26% are single. This implies that married persons are more involved in livelihood activities such as bangus processing than unmarried person.

Educational attainment. Most (47%)of the respondents had reached high school, 31% of the processors reached college and 22% elementary education. Results implies that those who reached high school and elementary educated are involved in bangus processing wherein they could their own employing themselves.

Source of income. The major and only source of livelihood of respondent processors is bangus processing by 72% of the respondents. Twenty eight percent are into bangus processing as additional source of income and for family consumption.



Table 2. Profile of the respondents

PARTICULARS	FREQUENCY (F)	PERCENTAGE (%)
Age		
15-25	8	12
26-35	38	56
36-45	18	26
46-55	4	6
TOTAL	68	100
Sex		
Male	21	31
Female	47	69
TOTAL	68	100
Civil Status		
Married	50	74
Single	18	26
TOTAL	68	100
Educational Attainment		
Elementary	15	22
High school	32	47
College	21	31
TOTAL	68	100



Table 2. Continued...

PARTICULARS	FREQUENCY (F)	PERCENTAGE (%)
Source of Income		
Business	49	72
Employed	19	28
TOTAL	68	100

*Multiple response

Kinds of Bangus Products

Table 3 shows the kind of bangus products processed by the respondents. Boneless bangus product is the most common products processed by almost all of respondents (67 out of 68 respondents). Followed by smoked bangus (56 respondents), dried bangus (37 respondents), lumpia (36 respondents), longaniza (33 respondents), relleno (20 respondents), fillet, shanghai, tocino (19 respondents), belly (17 respondents), boneless tinapa (14 respondents), burong bangus (11 respondents), smoked soft-boned bangus (8 respondents), lamayong bangus (7 respondents), hamonadong bangus (6 respondents) and there were only 5 respondents processing bangus into sardines.



Table 3. Kinds of bangus processed products produced by respondents

PRODUCTS	FREQUENCY (F)	PERCENTAGE (%)
Boneless	67	98.52
Smoked bangus	56	82.35
Fillet	19	27.94
Longaniza	33	48.53
Dried bangus/daing	37	54.41
Lumpia	36	52.94
Shanghai	19	27.94
Belly	17	25.00
Tocino	19	27.94
Sardines	5	7.35
Smoked soft-boned bangus	8	11.76
Boneless tinapa	14	20.59
Relleno	20	29.41
Burong bangus	11	16.18
Lamayong bangus	7	10.29
Hamonadong bangus	6	8.82

*Multiple response

Market Outlet According to Kind of Bangus Processed Products

Table 4 shows market outlet of bangus processed products. The major market outlets of the processors for boneless bangus are supermarkets (97.06%), followed by



direct consumers (98.52%), and traders (66.18%). Smoked bangus is open sold to direct consumers (79.41%), followed by supermarkets (73.53%), and traders (35.29%). Fillet, longaniza, lumpia, shanghai, belly, tocino, and sardines are usually sold to traders. Smoked soft-boned bangus, boneless tinapa, relleno and hamonadong bangus are open sold directly to consumers. While dried bangus or daing, burong bangus and lamayong bangus are open sold to supermarkets. However, all the bangus processed products are sold to traders, directly to consumers and supplied to supermarkets.

Result implies that all the processors have their own major market outlet for specific products, although the products could also be sold to other outlets/potential outlets.

Table 4. Market outlets of processors according to kind of products

PRODUCTS	MARKET OUTLET					
	TRADERS		DIRECT CONSUMERS		SUPERMARKETS	
	F	%	F	%	F	%
Boneless	45	66.18	67	98.52	66	97.06
Smoked bangus	24	35.29	54	79.41	50	73.53
Fillet	18	26.47	20	29.41	20	29.41
Longaniza	32	47.05	34	50.00	34	50.00
Dried bangus/daing	14	20.59	36	52.94	35	51.47
Lumpia	34	50.00	37	54.41	37	54.41
Shanghai	20	29.41	21	30.88	20	29.41
Belly	17	25.00	18	26.47	18	26.47
Tocino	18	26.47	21	30.88	19	27.94
Sardines	5	7.35	6	8.82	6	8.82
Smoked soft-boned bangus	4	5.88	11	16.18	7	10.29



Table 4. Continued...

PRODUCTS	MARKET OUTLET					
	TRADERS		DIRECT CONSUMERS		SUPERMARKETS	
	F	%	F	%	F	%
Boneless tinapa	7	10.29	15	22.06	12	17.65
Relleno	19	27.94	21	30.88	20	29.41
Burong bangus	3	4.41	11	16.18	14	20.59
Lamayong bangus	2	2.94	5	7.35	6	8.82
Hamonadong bangus	3	4.41	6	8.82	5	7.35

*Multiple response

Kinds of Packaging Material for the Bangus Processed Products

Table 5 presents the packaging materials used by the processors in marketing their product. The most common packaging materials used by the processors for all kind of products are plastic bag, styrofoam, foil, paper plate, newspaper and vacuum. For boneless bangus, the products is placed in styrofoam or in paper plate then placed in transparent plastic bag. Smoked bangus is placed in transparent plastic bag or placed in styrofoam, foil, paper plate or wrapped with newspaper then packed in plastic bag. Sardines placed in transparent bottles/foil then placed and packed in boxes/cartoon when delivered or picked-up by buyers.



Table 5. Kinds of packaging materials for the bangus processed products

PRODUCTS	PLASTIC BAG		STYROFOAM		FOIL		PAPER PLATE		NEWSPAPER		VACUUM	
	F	%	F	%	F	%	F	%	F	%	F	%
Boneless	67	98.52	65	95.59	-	-	66	97.05	-	-	-	-
Smoked bangus	62	91.18	43	63.24	1	1.47	53	77.94	52	76.47	-	-
Fillet	20	29.41	19	27.94	-	-	19	27.94	2	2.94	-	-
Longaniza	31	45.59	33	48.53	-	-	31	45.59	-	-	-	-
Dried bangus/daing	32	47.05	4	5.88	-	-	9	13.24	16	23.53	-	-
Lumpia	37	54.41	35	51.47	-	-	37	54.41	3	4.41	-	-
Shanghai	17	25.00	18	26.47	-	-	19	27.94	-	-	-	-
Belly	16	23.53	15	22.05	-	-	15	22.05	-	-	1	1.47
Tocino	17	25.00	16	23.53	-	-	14	20.59	-	-	2	2.94
Sardines	4	5.88	4	5.88	-	-	3	4.41	-	-	-	-
Smoked soft-boned bangus	7	10.29	7	10.29	-	-	7	10.29	3	4.41	-	-
Boneless tinapa	11	16.18	11	16.18	1	1.47	9	13.24	8	11.76	-	-
Relleno	20	29.41	21	30.82	20	29.41	20	29.41	1	1.47	12	17.65
Burong bangus	11	16.18	6	8.82	-	-	10	14.71	1	1.47	-	-
Lamayong bangus	8	11.76	4	5.88	-	-	7	10.29	-	-	-	-
Hamonadong bangus	6	8.82	6	8.82	1	1.47	7	10.29	-	-	-	-

*Multiple response

Production Problems Encountered by Bangus Processors

Table 6 shows the problems encountered by bangus processors. All the respondents mentioned that high cost of raw materials is the major problem in bangus



processing. This is followed by the availability of resources (97.05%). Other problems identified includes: lack of government aid/support (35.29%), low income derived from bangus processing (13.24%), low supply of bangus (11.76%) and lack of manpower (4.41%).

Table 6. Production problems encountered by bangus processors

PROBLEMS	FREQUENCY (F)	PERCENTAGE (%)
High cost of raw materials	68	100.00
Availability of resources	66	97.05
Low supply of bangus	8	11.76
Lack of government aid/support	24	35.29
Lack of manpower	3	4.41
Low income	9	13.24

*Multiple response

Marketing Problems

There were nine (9) important problems noted as shown in table 7. Major problems identified by respondents includes high transportation cost (98.53%), price fluctuation (95.59%), technology gap (97.05%), competition (98.53%), high marketing cost (97.05%), lack of capital (95.59%). Almost all the respondents have the same problem encountered and although some are encountering additional problems such as lack of financial assistance (29.41%), choice of outlets (44.41%), and lack of price information (11.76%).



Table 7. Marketing problems encountered by bangus processors

PROBLEMS	FREQUENCY (F)	PERCENTAGE (%)
High transportation cost	67	98.53
Price fluctuation	65	95.59
Technology gap	66	97.05
Competition	67	98.53
High marketing cost	66	97.05
Lack of capital	65	95.59
Lack of financial assistance	20	29.41
Lack of choice of outlets	3	4.41
Lack of price information	8	11.76

*Multiple response

Suggested Solutions to the Problems

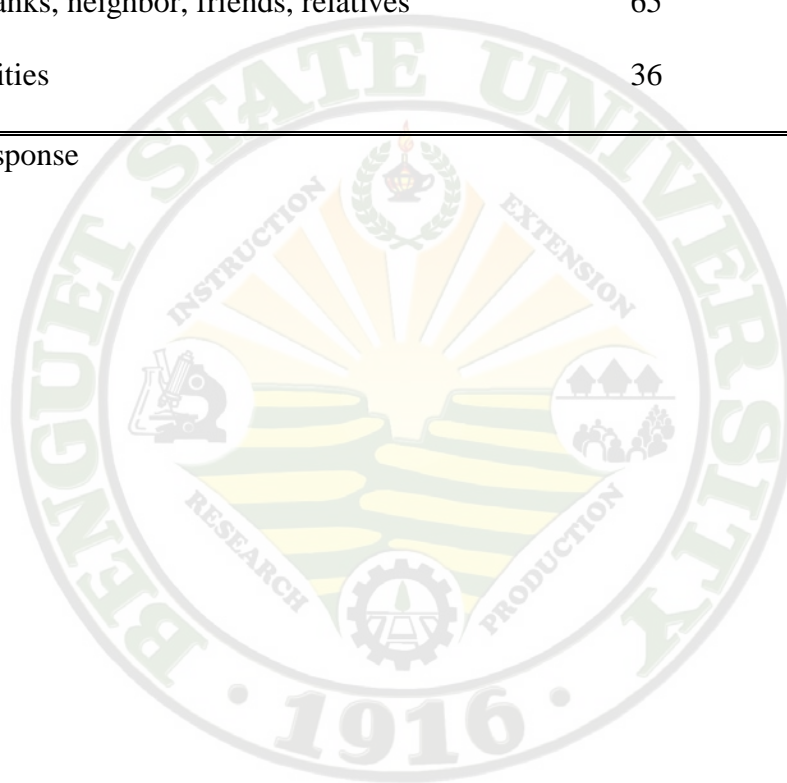
Table 8 shows the suggestions/possible solutions of the respondents to the problems encountered, Ninety seven point zero five percent of the respondents mentioned additional market outlets, financial assistance and organization of fish marketing association/cooperative marketing as solutions to the identified problems, (95.59%) suggested that banks, neighbor, friend, relatives should provide loans or financial assistance and (52.94%) mentioned the provision of storage facilities especially by the government.



Table 8. Possible solutions suggested by bangus processors to address problems on bangus processing

POSSIBLE SOLUTIONS	FREQUENCY	PERCENTAGE (%)
Additional market outlets	66	97.05
Financial assistance	66	97.05
Organization of fish marketing association or cooperative marketing	66	97.05
Loan from banks, neighbor, friends, relatives	65	95.59
Storage facilities	36	52.94

*Multiple response



SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This study was conducted to find out the bangus processors, find out the different processed products produced from bangus, find out market outlets by processors, find out production problems encountered by bangus processors, identify the marketing constraints encountered by the bangus processors, and enumerate possible solutions to the problems encountered by bangus processors.

A total of sixty eight bangus processors from the six municipalities of Pangasinan- Lingayen, San Fabian, Calasiao, Binmaley, Mangaldan and Dagupan City. The respondent were personally interviewed with the aid of a questionnaire. Respondents include processors with and without business permit. The data collected were tabulated, analyzed and interpreted using descriptive analysis, frequency counts and percentage. Majority of them were on their middle age, reached high school level of education, married, and female. Bangus processing is the major source of livelihood by the most respondents.

The 10 major bangus processed products produced by the processors are: boneless, smoked bangus, dried bangus/daing, lumpia, longaniza, fillet, relleno, shanghai, tocino, and belly. And the other kind of bangus processed product preserved includes: sardines, smoked soft-boned bangus, boneless tinapa, burong bangus, lamayong bangus and hamonadong bangus.

The most common packaging materials used by processors for all the products includes: transparent plastic bag, styrofoam, foil, paper plate, newspaper, vacuum. Other packaging materials used were bottles, and boxes.



The major market outlets mentioned by the bangus processors were: traders, direct consumers and supermarkets. Most of the processors have their own market outlets for the specific products that they produced/processed.

The respondents has six main problems in production of processed bangus. These are the high cost of raw materials, availability of resources. Low supply of bangus, lack of government aid or support, lack of manpower, and low income.

The marketing problems mentioned by processors were: high transportation cost, price fluctuation, technology gap, high competition, high marketing cost, lack of capital, lack of financial assistance, choice of outlets, and lack of price information.

The suggested possible solutions recommended by the bangus processors to address their problems on bangus processing were: additional market outlets, financial assistance, organization of fish marketing association/cooperative marketing, loan from banks, neighbor, friends, relatives and storage facilities.

Conclusions

Based on the findings, the following conclusions were made:

1. The processors were on their middle age, most of them are married, and reached in high school level of education. They had been processing bangus as their means of livelihood.
2. The ten most popular processed bangus that the processors produced are: boneless, smoked bangus, dried bangus/daing, lumpia, longaniza, fillet, relleno, shanghai, tocino, belly. And the other typed of processed bangus



especially hamonadong bangus were not familiar due to less processors wanting to produced.

3. The major problems encountered by processors were the following: under production problems are: high cost of raw materials, availability of resources, low supply, lack of government aid/support, lack of manpower, low income, and also under marketing problems are: high transportation cost, price fluctuation, technology gap, high competition, high marketing cost, lack of capital, lack of financial assistance, choice of outlets, and last is lack of price information

Recommendations

Based on the conclusions, the following recommendations were made:

1. The processors should be organized and accredited in order to get support or technical assistance of the government or NGO's and be registered in order to avail loans and assistance by government and other agencies.
2. The government should establish dispersal programs in bangus processing especially to the common problems.
3. Research institutions working on aquatic resources should develop technology on bangus processing.
4. Aggressive promotion on the potentials of processed bangus products as a high community to processed more bangus in a larger scale. Training should be provided to the processors with emphasis on production, marketing, and processing.



LITERATURE CITED

- AGRICULTURAL ECONOMICS and DEVELOPMENT, 1996. Agricultural Economic and Development Journal. P. 25
- BFAR. 2002. Bureau of fisheries and aquatic resources manual. Pp. 31-33.
- HIPOLITO and ROSARIO, 1995. Marketing management analysis, planning and control manual Philippines. P. 198.
- HIPOLITO. S.M. 1995. Fisheries Newsletter BFAR Commemorative issue Pp. 5-6.
- OSHIMA, G. 1998. A geographical study on aquaculture in the Philippines. UPLB annual studies. Vol. 22 Pp. 18-20.
- PADIAN. 2002. Fertilization-key to higher fish production. Volume IV:2-3.
- ROSARIO, G. 1999. Agricultural marketing in the Philippines. University of the Philippines. College of Agriculture Pp. 52-54.
- SMITH, I.R. 2002. Inputs as related to output in milkfish production in the Philippines. ICLARM Technical Report, International Center for Living Aquatic Resources Management. P.13.

