MARKETING OF EGGS IN MALACCA

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SYNOPSIS

The objective of this study is to trace the flow of eggs from the producer to the consumer. In trying to achieve such an objective, investigations are carried out on various activities involved in the marketing of eggs in Malacca.

This study is presented in 8 Chapters.

The introduction in Chapter I, defines the term eggs, the scope of investigation, the methodology involved, and whatever difficulties encountered in making such a study.

Chapter II is an explanation on the importance of egg industry. The characteristics and uses of eggs are also discussed in this Chapter.

A study of production and production costs of eggs can be found in Chapter III; and Chapter IV will give a general background of activities and pattern in the marketing of the various types of eggs in Malacca.

Chapters V, VI and VII gives detailed account in the Marketing activities of various types of eggs. These chapters are a supplement to Chapter IV and it is hoped that a fuller understanding of the study can be obtained. Chapter V deals with a detailed study on the marketing of fresh hen's eggs and duck's eggs whilst Chapters VI and VII gives a fuller account on marketing activities of salted and preserved duck's eggs and quail's eggs.

Chapter VIII will look into the problems in production and marketing of eggs and possible actions that can be taken in the light of the problems discussed.

The conclusion is an attempt to evaluate the prospects of egg industry in Malacca in the future with special reference to investigations made.

CHAPTER I

INTRODUCTION

Definition

The term eggs refer to several types of eggs including hen's eggs, duck's eggs, quail's eggs, turkey's eggs, and turtle's eggs. The term eggs also include fresh as well as salted and preserved eggs. The study includes eggs which are produced for commercial purposes i.e. eggs which are handled by whole-salers and retailers in Malacca.

Marketing is defined by M.L. Brunk and L.S. Dorrah of Cornell University as "a series of services involved in getting goods from the point of production to the point of consumption".[1]

The study therefore involves the tracing of the flow of eggs from the producer (who is usually the farmer) to the consumer. The flow of eggs also involves the study of services performed not only by the farmer but by other parties involved in getting the eggs from the point of production to the point of consumption.

Scope of Investigation

As mentioned earlier, investigations were carried out only on eggs which are produced for commercial purposes. Following this guideline, a study was carried out only on fresh hen's eggs, fresh duck's eggs, quail's eggs and also salted and preserved duck's eggs.

Investigations on marketing of eggs were largely based around and in Malacca town. No attempt was made in investigating the marketing of eggs in the outlying districts of Malacca because Malacca town being the capital of the state of Malacca, acts as the focus of marketing activities for the various types of eggs.

Methodology

Method of Survey

A survey was conducted on various farms, wholesalers,

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[1] Udhis Markswasdi "Agricultural Marketing Structure", Agricultural Marketing Training Centre Manual, Lembaga Permasaran Pertanian Persekutuan, Kuala Lumpur, 1966.

hatcheries, retailers and consumers in Malacca. A questionnaire was prepared and personal interviews were carried out between the writer and the various parties involved in the marketing of eggs. After all questions were asked in the questionnaire, an informal talk was carried out between the writer and the respondents. It was during these informal talks that further information was gathered which would give a better knowledge and insight in the various activities, and problems involved in the marketing and production of eggs.

The method of approach was carried out in 4 parts:

a) A study was first carried out among the producers of fresh hen's eggs and quail's eggs and from these studies production costs were obtained. Six farms were chosen at random from the size of farms ranging from 1,000 birds to 32,000 birds. There was no need for any random sampling for quail's eggs because there was only 1 quail farm in the whole state of Malacca.

b) Secondly interviews were conducted on wholesalers of eggs. In this survey, one large wholesaler and two hatcheries were investigated. They were:-

i) Chop Aik Lee - a wholesaler dealing mainly with fresh hen's eggs.

ii) Chop Nam Huat - Wholesaler in duck's eggs and also hatches different types of poultry eggs.

iii) Chop Say Huat - a hatchery.

c) Information on salted and preserved duck's eggs was obtained from Chop Hong Guan which is the sole-agent for salted and preserved duck's eggs.

d) Fourthly three retailers were interviewed. One was the Malacca Cold Storage which is a supermarket and caters mainly for upper income groups and personnel from the Commonwealth Forces. Chop Seng Huat, one of the two retail shops cater for people of a low income group. The other retailer is Chop Siew Hwee and it caters for government office workers and also the people living in a housing estate. The idea of investigating retailers catering for different people with different income earnings is to get unbiased information of the consumers and their habits.

e) Lastly a bakery - Malacca Cold Storage Bakery was interviewed. Further informal interviews were carried out among several housewives. Here again the interviews

were carried out with the view of finding out the habits of consumers in buying eggs.

The above approach tries to conduct a methodical survey in order to trace the flow of eggs from the point of production to the point of consumption.

Difficulties Encountered

Most of the material and data obtained were carried out by direct interviews. But information was also obtained indirectly, for example, problems on production were also obtained from wholesalers, too.

Perhaps the greatest difficulty faced was that of communication during interviews. This was because the farmers spoke in Chinese which the writer finds difficulty in understanding. This was aggravated by the fact that certain technical terms cannot be translated even though a friend who understood Chinese was brought along for the purposes of translation.

Another difficulty was obtaining cost data. Respondents were reluctant to reveal cost data while others could only give approximate figures. In order to obtain as much data as possible, two or more interviews were carried out on each respondent. This was done in the hope that a better relationship could be created and hence respondents would reveal data which otherwise would not be revealed.

However, a general idea on cost of production, activities and problems could be obtained from the information given by the various respondents.

CHAPTER II

IMPORTANCE OF EGG INDUSTRY

Eggs are considered to be amongst the cheapest animal protein available in the world today. "Eggs are a rich source of highly digestable protein and weight for weight, an egg contains about the same amount of animal protein as pork and poultry meat, about $\frac{3}{4}$ that of beef and 2/3 of whole milk cheese"[1]. It also contains fatty acids, essential vitamins and minerals. The consumption of eggs can thus help to raise the nutritional value of food taken by people in Malaysia, especially so because eggs are consumed by all sections of the Malaysian community.

The importance of eggs can be seen in the light of eggs as a protein food replacing to a certain extent meats like pork, beef and mutton which are consumed by people here. An advantage of eggs as a source of protein relative to meats is that the production of the former can be carried out on land not suitable for any kind of agriculture. The rearing of poultry do not require extensive land as needed by cattle (for meat and milk) and goats.

A further advantage of eggs which adds to its importance is that there is a widespread use of eggs in egg containing products like cakes and biscuits.

Hence we see that the importance of eggs lies in its nutritional value which can be obtained cheaply and that eggs are relatively easy to produce. Production can also be expanded with relatively ease and at a short time (it takes only 6 months for a hen to lay eggs and $1\frac{1}{2}$ months for quail to produce eggs) too.

Characteristics of Eggs

Eggs are good examples of an agricultural commodity and has a number of characteristics which show that it is agricultural in nature:

1) Perishability

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[1] See Au How Wang, "Egg Industry in West Malaysia", Poultry and Egg Industry in West Malaysia, Kuala Lumpur, Federal Agricultural Marketing Authority, (Ministry of Agriculture and Cooperatives) 1968, page 32.

2) Bulkiness

3) Variation in Quality and Quantity

4) Fragility.

Perishability

Eggs are perishable in the sense that eggs are subject to deterioration. Eggs cannot be stored for a long time under ordinary storage conditions. From investigations, the farmers state that eggs cannot be stored for more than three months after which the eggs will deteriorate. Eggs can be stored for longer periods only by the use of a cold room.

Perishability of eggs affects the marketing of eggs because eggs must be transported and sold before it deteriorates. Further if a cold room is used for storage, costs will be involved.

Bulkiness

Eggs are bulky. They are usually packed in trays which can hold about 30 eggs each. As such the bulkiness entails not only difficulty in transportation but also increases costs - viz, the cost of tray for containing the eggs is approximately 7 cents.

The characteristics of bulkiness and perishability of eggs force the production of eggs to be near the market - i.e. near populated areas. Hence we see many poultry farms being situated within the fringe of Malacca town. The nearness of the town will not only ease the transport problem and the problem of perishability but will also create a ready market for the eggs.

Variation in Quality and Quantity

The production of eggs is affected by weather and diseases. The weather and the diseases often go together in reducing the quantity of eggs produced. But today with a better control on diseases, the supply of eggs has been more or less stable.

There is also variation in the quality of eggs. Eggs are produced in several sizes and shades of colour. The variation in quality will entail further marketing problems like grading and standardisation.

Fragility

Eggs are not only bulky but fragile too. Hence this characteristic will cause many marketing problems like storage, packing, transportation and handling of the eggs. Eggs must be placed in special cardboard (or soft-board) trays, stored, packed transported and handled properly or else the eggs will be damaged during the process of marketing.

USES OF EGGS

Fresh Local Eggs

Fresh local eggs include fresh hen's eggs and fresh duck's eggs.

We must distinguish here the nature of consumption of these eggs.

The first one is the industrial market which is composed of all the commercial and productive enterprises which consume eggs as a raw material in activities which is carried out to make profits. Under this category we include bakeries, restaurants, hotels and colleges. Hatcheries though different in consumption pattern, must be included because it uses eggs for profit making. From investigations it was found that both duck's eggs and hen's eggs are used but in the case of hen's eggs, grades C and D are used by bakeries, cake makers and coffee shop.

A wholesaler of eggs, Chop Aik Lee, estimates that about 80% of grades C and D eggs are sold to coffee shops by the wholesaler. According to him the coffee shops prefer these grades of eggs because these eggs are cheaper and can be easily half-boiled too. Customers who take breakfast at coffee shops usually consume half-boiled eggs.

The percentage of eggs sold for commercial purposes are not known but the manager of Chop Aik Lee approximates that in one week he sells 7,000 eggs out of which 20% to 30% go to restaurants and coffee shops. This market is uncertain because the sale of eggs depends on how much eggs are used for commercial purposes. If more eggs are used more will be bought by the commercial enterprises.

The second category is that of a consumer market which is composed of the general public who consume eggs as individuals or as groups for personal satisfaction. Here profit motive is not important. Eggs are bought for food - i.e meals, and as well as cake making. This market according to the dealer, Aik Lee, constitutes a larger portion of all the eggs consumed. For example, the wholesaler sells about 5,000 hen's eggs to retailers (who will eventually sell to the general public) and less than 100 of duck's eggs. Chop Aik Lee essentially does not deal in duck's eggs and buys duck's eggs for sale only when orders are placed on duck's eggs by cake makers. Another dealer, Nam Huat hatchery buys about 10,000 to 15,000 duck's eggs monthly but a large portion of the eggs are used for hatching purposes. The dealer admits that a small portion is sold to cake sellers and a smaller portion still is sold to the general public.

Salted and Preserved Duck's Eggs

Both salted and preserved duck's eggs are popular delicacies among the Chinese. When the Chinese came to Malaya, they brought with them their characteristic in consuming food. Salted eggs and preserved eggs are one of the specialities brought down with them. Since the Chinese in Malaya cannot obtain salted and preserved duck's eggs locally, they imported them from China. Until today most of the salted and preserved eggs are imported from China.

Preserved eggs are mainly consumed by the Chinese. It is considered a delicacy and are served both at home and in restaurants. These eggs are also consumed because the Chinese believe that it has medicinal values. Preserved eggs are more expensive than salted eggs, this explains the heavy consumption of preserved eggs by the higher income groups of Chinese during dinner, lunch or as a light snack.

Whereas preserved duck's eggs are mainly consumed by the Chinese, salted duck's eggs are consumed by all races in Malaya for lunch or dinner, but the Chinese are the main consumers of salted eggs. Salted eggs, though consumed by all classes of Chinese, is most popular among the lower income groups of Chinese especially the labourers and dock workers in Malacca who take their porridge with salted eggs.

Quial's Eggs

Quail's eggs are highly nutritious and is an important source of proteins and vitamins. The Chinese take the eggs in the believe that it has not only nutritional value but also medicinal value.

Quail's eggs are also considered one of the specialities of food by the Chinese. The eggs are used as delicacies by restaurants in preparing certain Chinese dishes.

CHAPTER III

PRODUCTION AND PRODUCTION COSTS

Fresh Local Eggs[1]

The treatment of hen's eggs and fresh duck's eggs together is important in the study of marketing of eggs. It helps to:-

1) distinguish any differences or see any similarities in aspects of marketing of these 2 types of fresh local eggs.

2) present a clearer picture of the marketing practices of both types of eggs.

3) investigate methods of production of hen's eggs and duck's eggs.

Background

In this study, a look into the background of the egg industry will be valuable. It is imperative to study the background of both these products because it will give us a clearer picture of the various aspects and practices of marketing for both types of eggs.

To make a background study of both these products, we have to look at the Census for both these products, but unfortunately census figures for poultry does not include that of duck's eggs. Hence, the limitation in studying the background to duck's eggs industry. The lack of census data on duck's eggs goes to show that duck's eggs production is relatively insignificant compared with that of hen's eggs. From surveys conducted, it was found that the rearing of ducks incur higher feeding costs and require an area where there is water or ponds i.e. only certain areas are suitable for rearing. Hence duck's eggs production are insignificant compared to the production of hen's eggs.

Since the production of hen's eggs production are more significant, census of hens and hen's eggs are available, a study

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[1] The term fresh local eggs refer to fresh hen's eggs and fresh duck's eggs. When any specific reference is to be made to any type of egg, the word hen's eggs or duck's eggs will be used.

will be made on the census for hens and hen's eggs.

Summary of Poultry Farm (Hen's) in Malacca

From appendix V, the number of farms in 1966 was 102 and in 1968 it was 184. There was an increase of nearly 82 farms. The increase in the number of hen's farms can be attributed to:

1) a real increase in the number of farms. "Real" refers to the new farms that were set up.

2) a more thorough investigation by the Veterinary department in its enumeration of farms.[2]

The increase in farms is due largely to the increase for table chickens[3] and eggs. The increase in the demand for hen's eggs may be due to:-

1) increase in the total population

2) increase in income level

3) low prices

4) enlargement of the egg market in Malacca and other states.

The natural increase in population and increase in income level will always lead to the increase in the demand for hen's eggs. The price of eggs is relatively low so that nearly all income groups can consume them. It must be noted that in the past 12 years the price of hen's eggs have declined from about 25 cents each in 1956 to about 10 or 9 cents each at present.[4] The fall in price leads to increase in consumption of eggs. The enlargement of market was

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[2]Backyard production of eggs have been left out because statistics are not available.

[3]Census on table chickens are also included in appendix V.

[4]The Veterinary Division, Ministry of Agriculture and Cooperatives "The Poultry Industry in West Malaysia", a mimeograph.

due to the presence of Commonwealth forces at Terendak camp 14 miles from Malacca town. This camp consumes about 10,000 eggs daily.[5]

Appendix V shows an increase of nearly 34 farms of the layer type birds i.e. from 90 in 1965 to 124 in 1968. What is more important is that there is an increase in layer types birds of nearly 40,000 which is nearly 25% increase over the 1966 figure. An important feature to see is the increase in hen's eggs in the three districts in Malacca. There is an overall increase which is more marked in the districts of Alor Gajah and Jasin. The increase in farms and layers lead to an increase in the production of eggs. This will increase the marketing activities in eggs.

Size of Hen's and Duck's Farms

In Malacca, investigations show that ducks are reared in small numbers especially along the coastal areas of Malacca. The ducks are reared mostly by households and not on commercial basis. The number of these households rearing ducks are numerous. The availability of fish which are not suitable for human consumption plays an important role in the rearing of ducks in these areas. The fish provide a cheap form of feed for the ducks. One wholesaler pointed out that each household has about 40 to 50 ducks and the eggs production is about 25 to 30 daily for each household.

On the other hand we find that farms for hens vary in size i.e.from farms having 50 birds to those having 32,000 birds.[7] Hen's egg farms are highly commercialised. From Appendix VI, farm size which is most popular is in the range 500 - 2,000 birds. The increase in farms is from 68 farms in 1966 to 83 farms in 1968. One feature is that the number of farms with 100 - 500 birds have increased in 1968. The increase in these small farms are not only prevalent among all types of farms (i.e. having different types of birds - layers, table and mixed) but in the layer category too. Appendix VII shows an increase of layers between the ages of 5½ months and 2 years, from 32 to 45. This is a 40% increase over 1967[6] figure. The increase in this category of farms may be due to efforts of the FLDA schemes and also due to Rural Development Programme. Under the Rural Development Programme, loans and grants are given to farmers, trained by the Veterinary Department, to set up poultry farms. From investigations, in the Central district of

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[5]This was before the announcement of the British withdrawal.

[6]See Appendix VII.

[7]Ibid.

Malacca alone seven farmers were given loans and grants during the past two years.[8] In other districts data of such programme is not available.

As mentioned earlier, there is a tendency in which a large number of farms are in the 100 to 2,000 birds range. From field investigations it was found that the popularity[9] in this size-range of farms is mainly due to the fact that the farms are mostly family owned, and as such use only family labour. One important feature for this range of farm-size is that the owner usually has some other types of occupations. From investigations, out of 6 farms enumerated, 4 farms are between the range 100 to 2,000 birds and out of the 4 farms, 3 of the farmers have other occupations other than solely rearing the hens. In this case the owner will look after the management side of the farm business - like making sales and buying feeds, while the feeding and cleaning of the farm will be looked after by the wife, children and relatives. For example, Chong farm at Batu Berendam in Malacca, the son looks after the feeding and other chores in the farm while the father who is a clerk in a bus company looks after the management of the farm. One reason why there are numerous farms between the size range, 100 to 2,000 is that farms of these size range can be set up behind the owner's or farmer's house. The size of these range of farms will not occupy a large space of more than $\frac{1}{2}$ an acre. Costs consideration are important. The bigger the farm, the bigger will be the overhead costs. Hence we see the relatively large number of farms between the range 100 to 2,000 birds. The range of farms mentioned is not necessarily the optimum size of a hen farm. But 2,000 birds would be an optimum size for a farm employing family labour.

In Malacca the number of farms (layer type only) which have more than 2,000 birds are about 16 in 1968.[10] The largest farm in Malacca has about 32,000 birds of layer type. The management of the larger farms that were investigated are considerably different from that of smaller farms mentioned just now.

In bigger farms, the management of the farm is usually under one man, who is the manager of the farm. The manager may be the owner of the farm or paid employee. An example of manager/owner is the Chong Farm at Tanjong Minyak where Mr. Chong is the owner and makes management decisions as well. But the Chong Farm at Paya

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[8] Figures of grants and loans given by a Veterinary Officer in Malacca.

[9] See appendix VI, VII, and VIII.

[10] Ibid.

Rumput (7,000 birds) employs a manager to look after the farm. The owner of the farm, a Mr. Chong.[11] employs a man who was his assistant previously. The manager of this farm makes all the management decisions regarding the farm but any financial decisions like expansion of farm and investment in the farm is left to the owner.

From investigations it can be distinguished that farms of smaller size usually depend on family labour without a full time manager whereas the bigger farms have a full time manager. This distinction is important because the bigger farms are better off financially, and hence able to market their own eggs.

Sources of Supply

The main source of supply of fresh hen's eggs come from the State of Malacca itself. The hen farms are usually situated near the towns.

Fresh hen's eggs have the characteristics of an agricultural product i.e. it is perishable with time and is also a fragile product. Farms are therefore situated near where there are large concentration of population so that the eggs can be sold off as quickly as possible. Hence in Malacca the farms are situated near towns or populated areas.

For Malacca town, the fresh hen's eggs come from farms around or near the town. Most of them are within 10 miles radius from Malacca town. Farms in smaller towns i.e. in the districts of Alor Gajah and Jasin, are also situated around the respective towns. In Malacca, there is a good and efficient system of roads, hence if a farm is situated further away from a town, these roads can serve the farm by bringing its product to town or populated areas for sale. However the only snag is that transport costs will be higher.

Another feature of hen farms shows that in Malacca, farms which are small do not market their own produce. Further such farms are situated near the town - around Malacca town. The farms are approximately situated within 4 miles radius. Out of the 6 farms investigated, 2 of them do not market their own produce. These 2 farms are situated about 4 miles radius from Malacca town, and are the Lim Farm (1,170 birds), situated about 2½ miles from town and the Chong Farm (3,000 birds), situated 3½ miles from Malacca town.

Though there might be some supply of eggs coming from households which have 30 to 50 layers, the volume coming from this source is small. It is interesting to note the marketing of eggs

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[11] Incidentally, Mr. Chong managed the farm previously but due to other business commitments, he left the management of the farm to his assistant, Mr. Tan.

for these producers. The eggs from these sources are collected by a few market intermediaries, most of them being old women. These old women do the function of assembling and they also sell the eggs from house to house in a populated area of a town or village. They usually visit a particular area regularly but their customers are not necessarily regular ones.

The source of fresh duck's eggs comes from two areas:-

Firstly, by small "backyard producers" near the coastal area of Malacca.

Secondly, from areas outside Malacca - namely Perak, Trengganu and Kuala Lumpur.

The source of fresh duck's eggs is not large. One wholesaler quoted that the supply of eggs from the coastal area of Malacca is about 2,000 to 3,000 every 3 or 4 days. Sources from outside the state are larger in volume but the volume of duck's eggs supplied from these areas fluctuates. For example, the volume bought by the Nam Huat hatchery for the months of January, February, March and April this year is as follows:-

January - 4,000 eggs

February - 10,869 eggs (5,531 and 5,538)[12]

March - 13,641 eggs (6,821 and 6,820)

April - 10,200 eggs

Salted and Preserved Duck's Eggs

In Malacca the supply of salted and preserved duck's eggs come from a sole agent cum importer for the above mentioned eggs. The sole agent is also a wholesaler for the eggs. Salted duck's eggs are both produced locally (i.e. in Malaya) as well as countries like China and Thailand. Preserved duck's eggs come mainly from China.

Sources of supply

The sources of supply for salted eggs are from Kedah and Perak in Malaya, and Shanghai and Bangkok in China and Thailand respectively. However, preserved duck's eggs come from Shanghai, China.

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[12]The figures in brackets indicate that 2 consignments of duck's eggs for the month were supplied.

The sole agent cum importer obtains eggs from wholesalers in Kedah and Perak and from wholesalers cum exporters in China and Thailand. The wholesalers cum exporters from China and Thailand either buy salted eggs from their respective local agents or buy them fresh and turn them into salted eggs. For local wholesalers in Kedah and Perak, they buy fresh duck's eggs from producers or assemblers and then turn these eggs into salted eggs.[13]

Types and Quality

The types of salted and preserved duck's eggs and their quality must be considered because the prices of these eggs are different for different type and quality.

Salted Eggs

There are 3 types of salted eggs:-

1) The local type of salted eggs - produced in Malaya.

2) The Chinese type - imported from China.

3) The Siamese type - imported from Thailand.

The local type is of much inferior quality and cheaper than the imported ones. The Chinese type is said to be the best because they are tastier than that of the local or Siamese type.[14]

Preserved Eggs

The quality of this egg is not significant because they come from the same source but there are 3 types of grades for preserved duck's eggs. The grades are A, B and C but grade A need not necessarily be the best quality but is slightly bigger than the rest of the grades and therefore a little bit more expensive.[15]

Quail's Eggs

Background of Quail's Eggs Production

The "Malacca Quail Farm" is the only quail farm in

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[13] See Survey Reports - Marketing of Eggs in Kuala Lumpur - 658.8091.5951 UM/FEA.

[14] Quoted from the Sole Agent.

[15] See Price in Chapter VI.

Malacca. It is owned by Mr. Tan Kek Seng who started rearing quails about 10 years ago. Mr. Tan claims that the farm can be considered to be the largest quail farm in Malaya. As such he claims to be one of the largest producers of quail's eggs. Mr. Tan also owns a hatchery to hatch "quail chicks" and he says that the fact that he owns a hatchery goes to show that the farm is a large one. Only a few quail farms in Malaya own hatcheries and these are quite large ones.

Size of Farm

The size of a farm is indicated by the number of birds in the farm. Mr. Tan has approximately 10,000 birds and out of these 8,000 birds are layers and the rest are of various stages of growth (before layer stage).

The farm produces about 4,000 eggs daily and out of these 300 eggs are fertilised quail's eggs which will be hatched into quail's chicks. The chicks are sold to various quail farms all over Malaya.

Method of Production for Hen's Eggs

Layers are usually kept under free range, semi-intersive systems of poultry rearing.[16] The farms which operate under the intensive system usually specialise in egg production for commercial purposes. Under the intensive system farms use battery cages in which layers are put singly or doubly in cages. The layers are not allowed to run freely. Even layers which produce fertilised eggs are kept in cages. In this case the layers are artificially inseminated to produce fertilised eggs.

Types of Hens Reared

Farms in Malacca rear different types of hens. Among the most popular varieties are White Leghorn, Austrolorps, Rhode Island Red, New Hampshire and their crosses. The type of hens reared is important because of several considerations.

Firstly White leghorn type lays white coloured shell eggs which are not popular among the local consumers and therefore fetch a lower price.

Secondly, the type reared influences the cost of production. The other variety of layers are heavier feeders and less prolific

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[16] See Au How Wong, "Egg Industry in Malaysia", Poultry and Egg Industry in West Malaysia, Kuala Lumpur, Federal Agricultural Marketing Authority, (Ministry of Agriculture and Cooperatives) 1968, page 32.

layers compared to the White Leghorn. For example Chong farm at Tanjong Minyak have two varieties of hens (layers). The owner says that the cost of feed for White Leghorn is about 3 cents per layer per day whereas the other variety, Rhode Island Red consumes about 3½ cents of feed per layer per day.

Although the other varieties of layers are heavier feeders and less prolific layers, they are reared because they lay coloured shells (brownish red) and these eggs fetch a higher price which will compensate the disadvantage of higher feeding cost.

Cost of Production of Hen's Egg[17]

The methodology in calculation of cost of production for hen's egg is based on FAMA's methodology of cost culculation by Au How Wong in his article "Egg Industry in West Malaysia"[18] Here again cost of production of duck's eggs is not available because of lack of data and hence the study will be on cost of production of hen's eggs.

In order to get various cost figures, 6 farmers whose farms vary in size were interviewed. They are:-

Name of Farm	Place	No. of Birds Reared
1) Lim Farm	Bachang Road	370 layers 800 pullets
2) Aik Lee Farm	Ayer Keroh Road	800 layers 700 pullets
3) Chong Farm	Batu Berendam	1,500 layers 1,500 pullets
4) Ng Farm	Semabok Road	2,000 layers 2,000 pullets
5) Chong Farm	Paya Rumput Road	3,000 layers 4,000 pullets
6) Chong Farm	Tanjong Minyak	30,000 layers 2,000 pullets

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[17] See Appendix I and II.

[18] Au How Wong op. cit. pp. 45-46.

The production costs for hen's eggs are divided into parts:-

1) Estimated cost of production of Pullets.[19]

2) Estimated cost of production per egg.[20]

In appendix I, the cost of 1 pullet up to layer stage was calculated to be $5.54. The largest single item is feeding costs which accounted for 62.4% of the total cost of 1 pullet. The cost of 1 egg was calculated to be 6.34 cents. The cost of feed account for nearly 83.9% of the total cost of production of one egg. If the cost of feeds can be reduced, the overall cost of production can be reduced. The high cost of feed was attributed to the high costs of imported feed material to produce animal feeds.

The cost of producing one egg in Malacca is 6.34 cents which is lower than that calculated by FAMA[21] which is about 6.66 cents per egg. The slight difference in cost per egg between FAMA and the calculations based on figures given by farmers in Malacca, is due to the differences in costs of labour which is higher in Kuala Lumpur than in Malacca. As mentioned earlier, the farms investigated use mostly family labour and as such it is very difficult to find cost of labour. An alternative was to ask the farmer how much would he pay per worker to look after a certain number of birds. Another difficulty is that even if a worker is employed, the payment of wages in the end of the month does not give us the actual wages of labour. This is because labour is paid $60/- per month but lunch and tea is provided. There are many other fringe benefits which may be enjoyed by a worker. The worker may be even given a place to stay. Hence the figures of cost of labour is an average and approximate cost.

Cost figures are given by farmers and as such they might be inaccurate figures. But on the average the various farms have given costs figures which are mostly similar in the various items asked for during interviews.

Cost of Production of Quail's Eggs[22]

The method of rearing quails from pullet stage to layer stage is similar to that of rearing hens.

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[19] See Appendix I.

[20] See Appendix II.

[21] Au How Wong op. cit. pp. 45-46.

[22] See Appendix III and IV.

The cost of production for a quail chick up to laying stage was first determined and secondly the cost per egg was calculated. The costs are calculated with figures furnished by the owner, Mr. Tan, who maintains that he keeps record on costs. The method of calculating costs was based on FAMA's methodology of calculating costs of producing one poultry egg. One element of cost which was left out in the calculations of costs was the depreciation costs of the shed and rent. The cost of one quail chick up to layer stage was calculated to be $1.30. The cost of feed is again one single item which accounts for more than half the total cost of rearing one quail chick up to layer stage. The cost of production of one quail egg was calculated to be 2.34 cents. The cost of feed is again the highest item of cost in the production of one quail egg. It is estimated that the cost of feed accounts for about 63% in the cost of production of one quail egg.

CHAPTER IV[1]

MARKETING OPERATIONS

Marketing operations help in selling eggs for farmers and bringing the eggs to the consumers. With the production of eggs for commercial purposes, marketing operations become very important. Marketing helps to find markets for eggs which otherwise cannot be sold. But a more important function of marketing is that it eases the flow of eggs from the producer to the consumer. Farmers will produce eggs only for their consumption if they cannot find an outlet for eggs and consumers will not be able to consume such a product.

One role of marketing should be such that it minimises price fluctuations so that prices are fair to both farmers and consumers. With stable prices, farmers will be able to plan production and output. Any fluctuation in prices will disturb the production and output of eggs. Fluctuating prices involve risks to the farmers and as such farmers prefer stable prices which is on the average higher. Consumers are also affected by fluctuation of prices. Any price fluctuation will upset the consumer's budget and as such consumers too prefer stable prices which is on the average lower.

Pattern of Flow

The pattern of flow for all types of eggs in Malacca is complex. Fresh hen's eggs are produced in Malacca but fresh duck's eggs are produced both in Malacca and other states like Kedah, Perak and Trengganu. Quail's eggs are produced in Malacca while salted and preserved duck's eggs are imported.

The next level in the pattern of flow is the wholesaler. Wholesalers of eggs act as collecting and distributing agent. This is true for all types of eggs.

The last level in the flow pattern is the retailer. The retailer is the selling agent for the wholesalers and the function of the retailer is important here because the retailer is the last line of the

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[1]This Chapter will discuss marketing pattern and activities in general. A detailed study of marketing operations and activities for the different types of eggs can be found in Chapters V, VI and VII. This Chapter hopes to present only the general aspects of marketing of eggs.

pattern of flow and the retailer is the one that will know the quantity that will be demanded and such information will be passed to the wholesalers who will in turn pass this information to the producer in the form of orders for eggs.

One unique feature that must be mentioned is that of salted and preserved duck's eggs. The two types of eggs are not produced in Malacca and hence they are imported through a sole-agent. The sources of supply of these two types or eggs are from Kedah, Thailand and China. The importer will also be the distributing agent and thus distributes it to the wholesalers and the retailers in Malacca and elsewhere.

Marketing Services

The flow of eggs will not be possible without marketing services. Marketing services are performed by several intermediaries in the pattern of flow of eggs - viz wholesalers, sole-agents and retailers.

Transportation

This service is essential for the flow of eggs from the point of production to the point of consumption. Transport services are provided either by the wholesaler or by transport companies. In Malacca, hen's eggs are transported by wholesalers in vans whereas out of state duck's eggs come to Malacca in lorries. Salted and preserved duck's eggs are collected by wholesalers in the respective countries and sent to Malacca by ship as in the case of salted and preserved eggs from China.

Transport is a very essential service without which the whole pattern of flow of eggs cannot be organised.

Storage

Storage is performed by all the three levels of the marketing flow. Eggs produced in the farms are usually stored in the farms for a short time before it is sold to the wholesalers.

Eggs are subject to deterioration and as such cannot be stored for a long time. To prevent losses due to deterioration, eggs can be kept in a cold room but in Malacca only wholesalers and big farms and big retailers like Cold Storage can afford cold rooms, whereas most of the farms are too small to have a cold room of their own. If a cold room is used, costs will be incurred.

Grading and Standardisation

Eggs are usually graded before sales are made to the consumers. Hen's eggs are graded in alphabetical order which denotes the size viz - grades A, B, C and D, of which grade A is the biggest size eggs. Fresh duck's eggs are graded into a big and small and salted

and preserved duck's eggs are also graded into grades A, B and C.

Grading of eggs are usually performed by the wholesalers. Wholesalers usually buy in bulk at one ruling price. Wholesalers will then grade the eggs. The performance of such a service is benificial to the buying and selling of eggs. Eggs can therefore be bought at a standard grade which will be at a certain price range. Consumers will always be sure of the quality of eggs bought, without having to look at the eggs, and further haggling will not be necessary and thus much time is saved.

Packaging

A service which is important in marketing is packaging. Hen's eggs are not packed in boxes but kept in trays to prevent breakage. Duck's eggs are packed in boxes or in big bamboo baskets. Quail's eggs are packed in neat boxes which can contain two dozens of quail's eggs.

Packaging costs involved tend to add to the price of eggs sold to the consumers. Packaging costs all add up to the marketing cost.

Financing

Another important marketing service is financing. Right from the point of production to that of sale to the consumers, financing is needed.

In Malacca the financing of the egg farms are usually self-financed. Sometimes close relatives do help in the financing of the capital outlays of the farm.

Finance from other sources other than self-finance at any level of the flow of eggs is at the level of feed manufacturing. The feed manufacturers do get finance from banks andthey in turn provide credit to wholesalers who will in turn provide credit for feed bought by the farmers. From field investigations no credit was directly provided by banks to the actual producers of eggs.

Risk-bearing

Risk bearing is a market service. Wholesalers who buy eggs from the producers face the whole range of risks, viz, risks poor quality, deterioration and risks of falling prices. When the eggs are sold to the retailers, it is the retailers who have to bear the burden of the above mentioned risks.

Price

The way in which eggs are priced are determined by three inter-related factors:

a) Type of grade of eggs purchased.

b) Nature of purchase.

c) Nature of purchaser - retailer or consumer.

a) The type and grade of eggs bought is one of the most important factors in the price pattern. Grade A eggs are usual between 1 or ½ a cent more than grade B eggs. The type of eggs, viz, whether hen's eggs, quail's eggs or preserved eggs also show price differences. Price of grade A hen's eggs will be around 9 cents whereas that of quail's eggs will be around 4 cents.

b) Bulk buying will always be given a discount on the price of eggs bought. For example if a jar of salted eggs are bought, a discount is given by the sole agent amounting to $2/- less and no charges are made for the porcelain jar.

c) The ex-farm prices will always be less than that of consumer's price of eggs. As such this difference will be reflected in the nature of the purchase. Whereas in ex-farm prices, marketing services are not included, once the eggs are channelled into the market, services rendered are charged over and above ex-farm prices. For the different types of eggs, damaged eggs are sold at less than cost price. For example the price of a fresh duck's eggs which is damaged may cost 7 cents, and the loss will be 3 cents. The loss of 3 cents is not great compared to the loss of the price for the whole egg if damaged eggs cannot be sold.

Market for Eggs

As mentioned earlier, eggs are consumed by all sections of the community. As such the market for eggs is actually the whole population of the country.

One characteristic which is marked is the increase of per caput[2] consumption of eggs. There has been a continuous increase in per caput consumption of eggs from 1955 - 1966. This trend is for West Malaysia but it can be applied for the purposes of this study.

The table below show the increased trend in consumption:

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[2] Per Caput = $\frac{\text{Total production}}{\text{Total population}}$

TABLE 4.1

TABLE SHOWING PER CAPUT CONSUMPTION OF EGGS IN WEST MALAYSIA FOR 1956 - 1966[3]

Year	Total Supply (Millions)	Per Caput Consumption (Number)
1956	184.59	30
1958	271.03	41
1960	355.89	51
1962	560.84	75
1964	778.98	99
1966	887.96	106

From the table above we can see that the consumers have been increasing in the consumption of eggs. Hence it may be expected that in future there will be a further increase in consumption of eggs. This will further expand the market for eggs.

[3]See Au How Wang, "Egg Industry in West Malaysia", Poultry and Egg Industry in West Malaysia, Kuala Lumpur, Federal Agricultural Marketing Authority (Ministry of Agriculture and Cooperatives), 1968, pp. 36.

CHAPTER V

MARKETING OF FRESH LOCAL EGGS

Marketing Services

Marketing services are a "series of services involved in getting a farm produce from the point of production to the point of consumption".[1] These services provide what is technically known as form, time, place or possession utilities. All these services facilitate the producer to sell off his produce and help the consumers to obtain what is wanted.

These services include transportation, storage, grading and standardisation, packaging, buying and selling, financing and risk bearing.

Transportation

This is a very important marketing service. Without this service much of the agricultural products cannot be transfered from the place of production to the place of consumption.

Transportation of fresh duck's eggs are being carried out by wholesalers and dealers of eggs. Data on transport costs are not available. Duck's eggs come from two sources. Therefore, for both these sources, transport arrangement is different.

Local Source

Local sources of duck's eggs are transported by dealers or wholesalers who go in their vans to collect eggs from various places in Malacca. For example, Aik Lee, an egg wholesaler gets fresh duck's eggs from a "collector" in Port Dickson and from kampong people along the coastal areas in Malacca. The Port Dickson "collector" is actually a shop-keeper who owns a retail shop. His retail shop acts as a collecting point for duck's eggs for the people who wants to sell duck's eggs in that area. Whereas in the coastal area in Malacca, the wholesaler will go from area to area to collect the eggs. He goes in a van to collect the eggs. An interesting feature here is that the wholesaler does not pay the various small producers of duck's eggs in cash but

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[1] Prof. Udhis Markwasdi, Agricultural Marketing Structure. Agricultural Marketing Training Centre Manual, Kuala Lumpur, Lembaga Permasaran Pertanian Persekutuan, 1966.

rather, he exchanges one fresh hen's egg for one fresh duck's egg. The exchange of hen's eggs for duck's eggs is mutually accepted by both parties. In such a transaction, the wholesaler always gain. Hen's eggs are always cheaper than duck's eggs. If a payment for duck's eggs is in terms of money the wholesaler has to pay 9 cents whereas the hen's egg exchanged is valued at only 8 cents. Another dealer, Nam Huat hatchery, obtains fresh duck's eggs from a coastal area of Ayer Salak, in Malacca. The method of collection is the same as that of the wholesaler mentioned above, i.e. he uses a van to transport the eggs. He collects fresh duck's eggs from this area every four days.

Out of State Source

The out of state source of eggs come by lorry to Malacca. Duck's eggs ordered are usually for hatching according to the two wholesalers mentioned above. But when consumers place an order for fresh duck's eggs, the wholesaler might oblige to order fresh duck's eggs for the customers concerned. A small commission is charged which will cover transportation costs and a small margin of profits.

Who pays for the transportation costs differ from area to area the supply comes from. According to the dealer, Nam Huat, if the eggs come from Perak, the costs are borne equally between the wholesaler in Malacca and his counter-part in Perak. If the fresh duck's eggs come from Kuala Lumpur, the transportation costs are borne by the dealer in Malacca.

Hen's Eggs

Transportation costs of fresh hen's eggs are different from that of duck's eggs because hen's eggs do not come from any out of state sources.

Dealers, wholesalers of farmer/dealer[2] who market eggs usually transport the hen's eggs by their own means of transport and they bear the costs of transport.

But wholesalers and farmer/dealers from Malacca do sell hen's eggs out of Malacca i.e. to Negri Sembilan and Johore. Here, the transport cost are again borne by the dealer. Chong farm from Paya Rumput estimates that a trip from Malacca to Bahau and Tampin, a trip of about 30 to 50 miles, the transportation cost (including petrol, depreciation for van and tyres) is about $10/-. But this cost is compensated in a form of better (or higher) prices obtained from this market than from Malacca. Mr. Tan of Chong farm is of the opinion that he gets better prices usually from any out of State sale of eggs.

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[2]Farmer/Dealer refers to a farmer who markets his own eggs.

Both the producers (farmers) and the wholesalers are of the opinion that transport is crucial in the marketing of eggs. This is more so because Malaya is a hot country and the eggs may deteriorate if not sold off quickly. As such an efficient transport system is very important. Fortunately our road system is good and transport system is efficient too and this helps in the ease of flow of eggs from one area to another.

Storage

As mentioned earlier, eggs cannot be stored for long periods in a hot climate. It is estimated that if the eggs are not kept in a cold room, they cannot be kept for more than three weeks without a deterioration in quality of the eggs. As such eggs are not stored for a very long time in the farms. Farms which sell eggs to dealers usually store the eggs for a few days and then sell them to the dealers or wholesalers. Farms which market their own eggs do not keep the eggs for a very long time too. At the most, the eggs are kept for a week and then put into the van to be sold. Out of the six farms investigated, only one farm could afford a cold room for the proper storage of the eggs. This farm is very large - Chong farm at Tanjong Minyak, and has about 32,000 birds. We see therefore that storage is not used by farmers for speculative purposes but rather for convenience sake.

But the bigger wholesalers and dealers in eggs do have a cold room to store the eggs. The wholesaler, Aik Lee, has a cold room. He rules out any possibility of storing the eggs for speculative purposes. The wholesaler however, admits that if hen's eggs cannot be sold off at prevailing market price or even cannot be sold at the cost of making a small loss, he will have to keep the eggs for a longer period until such time when eggs are saleable again. This he states is not storing for speculative purposes because he is willing to sell off the eggs even at a small loss or else the cost of storage might exceed the small loss. He says that under normal circumstances he will sell the eggs as soon as he collects them. The function of the cold room is to keep the eggs fresh before any sale is made.

Storage costs are not available but farmers and dealers say that the costs of storage is not substantial even though a cold room is used.[3]

From field investigations it was found that though theoretically the storage function should act as a stabaliser to supply, this function is of secondary importance to that of the function of just storing the eggs to keep the eggs fresh.

The storage of duck's eggs are similar to that of hen's eggs, as discussed above.

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[3]Note: the cold room will not be used if eggs are not wanted to be stored for a long time.

Grading and Standardisation of Eggs

Eggs are graded and standardised to facilitate the sale of eggs.

For duck's eggs, the grading is not specific and grading is usually on two basis: namely big duck's eggs and small duck's eggs, i.e. according to the size of the eggs. The bigger eggs cost more than the small ones.

Generally, duck's eggs are sold in two grades; big and small. The grading is done by the wholesaler himself and the grading is arbitrary, i.e. without using any type of weight or measure to determine the size or the grade. When the fresh duck's eggs arrive from the local source or out of state source, the eggs are not graded, hence the wholesaler has to grade the eggs himself.

Fresh hen's eggs are graded into four grades. The grades are in alphabetical order - A, B, C and D. The grading is by weight which will indirectly reflect the size of the eggs. In Malacca, the generally accepted grades have a certain weight range. The grades and weight given for each grade was given by a farmer/dealer and a wholesaler:

Grade A - 2 ozs. and above[4]
Grade B - 1¾ " to 2 ozs.
Grade C - 1½ " " 1¾ "
Grade D - 1¼ " " 1½ "

Eggs are not only graded according to the weighted sizes but also according to the colour of the shell. According to the farmers and wholesalers, the coloured shell eggs fetch better prices and are sought for by customers.[5]

At the farm level or producers level, farmers do not usually grade hen's eggs. Even if farmers do grade the eggs they are not graded to that specified in the market. For example, Chong Farm at Batu Berendam, eggs are graded into grades A on one hand and grades B, C and D on the other as another group. The method of grading is to place the egg on an egg tray (tray with a lot of depressions to hold the eggs) and according to the farmer only grade A hen's eggs will fit

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[4]Grades by FAMA is slightly different:-
Grade A - 2 ozs. and above
Grade B - 1 7/8 " - less than 2 ozs.
Grade C - 1¾ " - " " 1 7/8 ozs.
Grade D - 1½ " - " " 1¾ ozs.

[5]See Au How Wong, "Egg Industry in Malaysia", Poultry and Egg Industry in West Malaysia - Federal Agricultural Marketing Authority (Ministry of Agriculture and Cooperatives) Kuala Lumpur, 1968, p. 40.

the hollow of the tray very nicely. Others - grades B, C and D do not fit the hollow. As such we see that eggs are usually bought by wholesalers at a flat rate of 8 cents to 8½ cents each. This is very disadvantageous to the farmer who might be easily cheated by the wholesaler. There is a possibility that the dealer will claim that the eggs produced by the farmer are all of the lower grades and hence pay lower prices for it. Mr. Chong (of Batu Berendam) of Chong Farm admits that there is a possibility of being cheated in this way but the only defence of such a system to continue is that the dealer is a friend of his, who can be trusted upon. Further, to grade the eggs as specified in the market will incur too much time and trouble at the expense of the farmer.

Grading and standardisation of hen's eggs are very advantageous in the marketing of any agricultural produce.

Firstly, there is no question of bargain and eggs can be ordered ahead of time or bought at the ruling market price without fear of poor quality.

Secondly eggs could be bought and resold as many times without being inspected.

Lastly eggs could be bought from any farmer or dealer and as such the market is a perfect one.

Packaging

Duck's eggs which are bought from out of State are placed in trays and packed in a wooden crates. Duck's eggs are also packed in boxes with rice husks placed in the boxes. The rice husks act as a cushion from any mishandling, and hence prevent any breakage of the eggs. Costs of the boxes are not known but the dealer in Malacca has to bear the cost of the box which is already included in the cost of one box of eggs.

Hen's eggs are not packed in boxes when sold but are placed on "egg trays" which can accommodate about 30 eggs. Each tray costs between 6 cents to 8 cents. The costs of trays are always borne by the dealer.

It was found that the largest farmer/dealer in fresh hen's eggs export hen's eggs to Hong Kong. In such a case the hen's eggs are packed in boxes before being exported.

At present eggs are not packed in boxes when retailed locally. But there is a possibility of packaging eggs in 20's or 30's (neatly packed boxes) to facilitate easier handling as done with quail's eggs.[6]

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[6]See Chapter VII on quail's eggs.

Buying and Selling Services[7]

The buying and selling services are considered to be one of the most important functions in the marketing of agricultural products.

The buying function is largely seeking out the sources of supply, assembling the products and all other activities associated with purchase. It can be assembling of raw products or finished products. The selling function according to some economists is more difficult to interpret. It covers a broad range of activities i.e. the demand creation. If one word is needed to describe selling services, "merchandising" is appropriate.

Financing Services

At every level of the marketing process, finance is required. In the case of production, there is a need for cash to run the farm, and in the case of the wholesaler and retailers, finance is needed to stock the shops with eggs.

Finance in this study can be divided into three levels:

1) Farm level

2) Dealer or Wholesaler level

3) Retailer level.

Farm Level

In field investigations, it was found that farms are mostly self-financed. By this, is meant that when starting a farm, the initial capital in building up the farm is provided for by the farmers themselves or provided by close relatives.

A typical example is that of Chong Farm at Batu Berrndam. The owner, Mr. Chong, started the farm with few hundred dollars of his savings. He started with 500 birds. Later when profits were obtained from sale of eggs, the profits were reinvested to enlarge the farm to the present size of 3,000 birds. Another example is the Chong Farm at Tanjong Minyak. An investment of about $10,000 was made with the money obtained from the family. Mr. Chong has now built up the farm (over the last 11 years) up to the present size of 32,000 birds.

But financing at farm level is not just the provision of initial capital. Money is needed to pay for recurrent expenditure of

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[7] For detailed discussion see caption on Pattern of Flow.

which feed account for nearly 60% to 80% of the cost of production of eggs. As such we see that the financing of this aspect is more important than the provision of initial capital to build up the farm.

In the six farms investigated, credit was granted by the feed dealers when feed is bought by the farmers. The credit granted is in the form of deferred payment, i.e. farmers will take the feed first and pay the feed dealer when cash is obtained from the sale of eggs. Credit granted in this way may be for a few days up to a month or more. In the case of big farms, like Chong Farm (Tanjong Minyak) and Chong Farm (Paya Rumput), feeds are obtained at a more favourable price and credit is always granted without question. This is mainly because the feed dealers know that such farms are financially sound and the owners not ony own the farm, but other form of properties, and as such payment is no problem.

But in the case of smaller farm such as the Chong Farm at Batu Berendam, and Lim Farm, credit is granted with strings attached. A good example is Chong Farm at Batu Berendam where the egg dealer provides feed as well as buying eggs from the farmer. The wholesaler provides credit only because he is assured that payment is forthcoming. Every time the wholesaler sells feed to the farm he can expect to get back the money in the form of eggs. From investigations, it was found that there is exploitation of the farmer by the wholesaler. Firstly, feeds provided are more expensive than what could be obtained at the local feed mill and this is claimed to be so because of transport costs. The question of transport costs does not arise because he already is on the way to collect eggs from the farm and as such the transport costs is included in the costs of selling the eggs.

Another point is that since credit is provided in the form of feed, eggs are bought cheaper than what could be obtained in the market. This exploitation is reinforced by the fact that the dealer only knows the price of eggs and therefore the price quoted by the wholesaler has to be accepted by the farmer. Though the latter cases are rare, the Lim and Chong farms admit that this observation is true at times.

Wholesaler Level

The finance at wholesale level is more difficult to investigate. In most cases wholesalers or dealers provide their own finance. Wholesalers (like Aik Lee wholesaler) own retail shops or provision shops. The Aik Lee wholesaler owns a large market stall and as such finance is provided through this source.

The importance of the wholesaler is that they provide finance to both the farmers and the retailers.

Retail Level

The retailers obtain eggs usually from dealers or farmer/

dealer. The eggs bought by the retailers are usually small in volume and therefore the eggs bought are paid in cash. But at certain times when more eggs are needed and no cash is available, we find that the wholesaler provide short term credit. The credit is usually for ½ a month or 1 month.

According to retailers and wholesalers, credit is provided because of their friendly relationship with each other. But here again exploitation is inherent though the wholesaler denies this when asked. The retailers were unsure whether the provision of credit is a tool for exploitation. The provision of credit is a means in which the retailer is tied to the wholesaler and the retailer has to buy eggs from that particular wholesaler. Though there may be a counter argument that it is the retailer who is in an advantageous position, because if credit is not granted, the retailer can buy from other wholesalers. But this is only true in the initial stages when a sort of relationship is not created, but after the wholesaler/retailer relationship is created, the retailer is obliged to buy eggs only from a particular wholesaler.

Duck's Eggs

In the case of duck's eggs, finance is provided by the wholesaler. Duck's eggs coming from the out of state source the Malacca wholesaler finance the buying of the eggs and then sell the eggs to retailers on credit or for cash. For duck's eggs from local sources, wholesalers provide the finance in paying out the farmers and then sell the eggs to retailers. The condition of sale and the provision of credit is the same as the one discussed in the paragraph on hen's eggs.

Risk Bearing

Under this topic we can discuss three types of risks the farmers, wholesalers and retailers have to face in the process of marketing the eggs. They are:-

1) Falling Prices

2) Quality and Spoilage

3) Deterioration and Breakage.

1) Falling Prices

For fresh hen's eggs at farm level, the risk of falling prices are borne by the farmers. For example, if the price of eggs falls below the cost of production of an egg, then the loss will be borne by the farmers. Once the eggs are sold to the wholesaler, the burden of falling prices is borne by the wholesaler. This is what is generally believed. But one observation made is that the wholesaler do not lose in case of falling prices though they claim that a drop in the price of eggs will affect them. For example, Aik Lee wholesaler buys hen's eggs from Chong farm (Batu Berendam) at 8 cents (for

all grades of eggs). To simplify matters let us assume that the wholesaler sells the hen's eggs at 8½ cents i.e. a ½ cent profit per egg is made by the wholesaler. But if the wholesaler buys the eggs at 8 cents on a certain day and the price of eggs drops to 7½ cents the same day, then the loss is ½ a cent because the wholesaler has to sell at prevailing market prices to the retailers. To cover up losses made during the day, usually the wholesaler will buy eggs from the farmer at 7½ cents the following day even though the price of eggs might have gone up to its original level of 8 cents. The farmers can refuse to sell to the wholesaler but if he is tied to the wholesaler through provision of credit for feed or through the creation of farmer/wholesaler relationship, then the latter has got no choice. Hence the burden of falling price can be shifted from the wholesaler to the farmer.

At the retail level the burden of falling price fall on the retailers themselves. If prices of eggs fall after the eggs are delivered to the retailers, they tend to lose.

In the case of duck's eggs, the risk of falling prices is borne by the wholesaler. This is only true for eggs bought from out of State.

2) Quality and Spoilage

The risk of poor quality of eggs and spoilage is not as great at wholesale and retail levels as that of falling prices. This is because the burden in quality deterioration is incurred at the farm level. In the case of fresh hen's eggs, if, due to wrong feeding the hens lay grade B, C and D eggs mostly instead of grade A eggs, then the loss incurred in this type of risk will be borne by the farmer. Spoilage of eggs are also borne by the farmers because farmers have to see that the eggs sold are good eggs. But risk of spoilage at all the three levels is negligible.

The burden of spoilage or poor quality in the case of duck's eggs is borne by the wholesalers. This risk is negligible for duck's eggs because duck's eggs bought from out of State is always checked by wholesalers from that State.

3) Deterioration and Breakage

The risk of deterioration is negligible for both duck's and hen's eggs. Though these eggs deteriorate at a fast rate, the sale of the eggs is fast too, i.e. turnover of eggs per day is great. This is true because eggs which are collected by the farmers reach the retailers within the time period of about 4 days or less. Hence the eggs are still fresh when consumed.

Risk of breakage through handling in the process of marketing of both types of eggs is negligible. If there is any risk of breakage it is the wholesaler who will have to face this risk. This is because it is the wholesaler who will have to handle the eggs most of the time

through the process of grading transportation. As such breakage is expected at the wholesale level.

Price[8]

1) Pricing of Eggs

The process of price formation in the case of local fresh eggs is affected by the supply and demand elements. The demand element is more important in influencing the price of eggs. The retailer will always estimate the demand price of the eggs and pass the information to the wholesalers in the form of volume of eggs bought. It must be noted that the supply factor do play a part in price formation, but the role of supply is a passive one. From here we can see certain features in price of eggs:

a) Fluctuation in Prices

This feature is dominant in the case of fresh eggs because the demand for eggs is not constant. The price variability can be seen in the table given where we can observe that certain characteristics can be drawn from it:

i) there is seasonality in the demand for eggs and hence the fluctuations in price. From the table the prices of eggs during the festival months are higher than other months. "Normal prices" of eggs mean prices during non-festival months. The months November, December, January and February are considered to be festival months when prices are higher than other months.

Though it is not obvious from tables 5.1 and 5.2 for the months of July and August, the price of eggs will go up slightly. This is because during these months many Chinese and Malay marriages take place.

b) Prices of Various Grades of Eggs

The price of hen's eggs follow that of the various grades of the eggs. For each grade, there is a 1 cent differential. For example if the price of grade A hen's eggs cost 9 cents, then grade B is 8 cents, C is 7 cents and grade D is 6 cents. The wholesaler however says that this 1 cent differential is not necessarily true all the time as shown in the table.

c) Price of Spoiled Eggs

As mentioned earlier, the volume of spoiled eggs is negligible.

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[8]Refer to Tables 5.1, 5.2, 5.3 and 5.4 for prices of fresh hen's and duck's eggs for 1968 and first four months of 1969.

TABLE 5.1[a]

MONTHLY AND YEARLY AVERAGE OF EGG (HEN) PRICES[b] AT MALACCA - 1968

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly Average
Wholesale eggs (in ¢ per egg)													
Grade A	-	-	9	9	9	9	9.4	9.4	9	9	9.2	10	9.16
Grade B	-	-	8	8	8	8	8.4	8.4	8	8	8.2	9	8.16
Grade C	-	-	7	7	7	7	7.6	7.6	7.06	7	7.2	8	7.19
Grade D	-	-	-	-	-	6	-	-	-	-	-	-	6
Retail:													
Grade A	-	-	10	10	10	10	10.4	10.4	10	10	10.2	11.2	10.18
Grade B	-	-	9	9	9	9	9.4	9.4	9	9	9.2	10.7	9.23
Grade C	-	-	8	8	8	8	8.6	8.6	8.06	8	8.2	10.2	8.31
Grade D	-	-	-	-	-	7	-	-	-	-	-	-	7

[a]FAMA's Weekly Prices of Eggs, FAMA.

[b]Prices are unweighted.

TABLE 5.2[a]

MONTHLY AVERAGE PRICES OF HEN'S EGGS FOR 4 MONTHS IN 1969 - PRICES[b] - MALACCA

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average for 4 Months
Wholesale:													
Grade A	10.5	10.31	9.43	9.5	-	-	-	-	-	-	-	-	9.98
Grade B	10	9.81	8.63	8.5	-	-	-	-	-	-	-	-	9.23
Grade C	9.5	9.31	7.44	7.5	-	-	-	-	-	-	-	-	8.43
Grade D	9	8.81		6.5	-	-	-	-	-	-	-	-	8.10
Retail:													
Grade A	11	10.81	10	10	-	-	-	-	-	-	-	-	10.45
Grade B	10.5	10.31	9.18	9	-	-	-	-	-	-	-	-	9.75
Grade C	10	9.81	8	8	-	-	-	-	-	-	-	-	8.95
Grade D	10.5	9.31	6.63	7	-	-	-	-	-	-	-	-	8.05

[a]FAMA's Weekly Prices of Eggs, FAMA.

[b]Prices are unweighted.

TABLE 5.3[a]

MONTHLY AND YEARLY AVERAGE OF DUCK'S EGGS PRICES[b] AT MALACCA IN 1968

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly Average
Wholesale:													
Big	-	-	10	10	10	10	10	10	10	10	10	-	10
Small	-	-	9	9	9	9	9	9	9	9	9	-	9
Retail:													
Big	-	-	11	11	11	11	11	11	11	11	11	11.75	11.08
Small	-	-	10	10	10	10	10	10	10	10	10	10.75	10.08

[a]FAMA's Weekly Prices of Egg.

[b]Prices are unweighted.

TABLE 5.4[a]

MONTHLY AVERAGE OF PRICES[b] OF DUCK'S EGGS FOR FOUR MONTHS IN 1969 AT MALACCA

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Wholesale:													
Big	-	-	-	11	-	-	-	-	-	-	-	-	-
Small	-	-	-	10	-	-	-	-	-	-	-	-	-
Retail:													
Big	11.55	11.75	11	11.33	-	-	-	-	-	-	-	-	11.44[c]
Small	10.55	10.75	10	10.35	-	-	-	-	-	-	-	-	10.44

[a] FAMA's Weekly Prices of Egg.

[b] Prices are unweighted.

[c] Average for four months.

But if there are any spoiled eggs being sold, the eggs are definitely cheaper than those of good ones.

MARKETING PROCESS

Pattern of Flow

The marketing process can be described as processes which involve Concentration, Equalisation and Dispersion of agricultural produce. These processes are performed in a certain pattern of flow. In the case of hen's eggs the pattern of flow is as follows:-[9]

1) PRODUCER — CONSUMER

2) PRODUCER — WHOLESALER — RETAILER — CONSUMER

3) PRODUCER — RETAILER — CONSUMER

4) PRODUCER — HATCHERY

For duck's eggs:-[10]

1) PRODUCER — OUT OF STATE WHOLESALER — WHOLESALER — RETAILER — CONSUMER

2) PRODUCER — WHOLESALER — RETAILER — CONSUMER

3) PRODUCER — CONSUMER

PRODUCER TO CONSUMER

In both types of eggs the volume of eggs from the producer to consumer i.e. direct sale of eggs between producer and customer, is small. Direct sale is usually carried out by small producer.

PRODUCER — WHOLESALER — RETAILER — CONSUMER

This is one of the pattern of flow in the marketing process. For hen's eggs, the wholesaler will collect eggs from the producer and sell them to the retailers. In Malacca town area, there are six large wholesalers in fresh eggs and the majority of these wholesalers sell their eggs to retailers in town or near the town. Aik Lee wholesaler buys fresh hen's eggs from 12 farms altogether, and every day he collects about 1,000 eggs from 2 farms.

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[9] Refer to Diagram 1.

[10] Refer to Diagram 2.

DIAGRAM 1

DIAGRAMMATICAL REPRESENTATION OF THE MARKETING PATTERN FOR HEN'S EGGS IN MALACCA

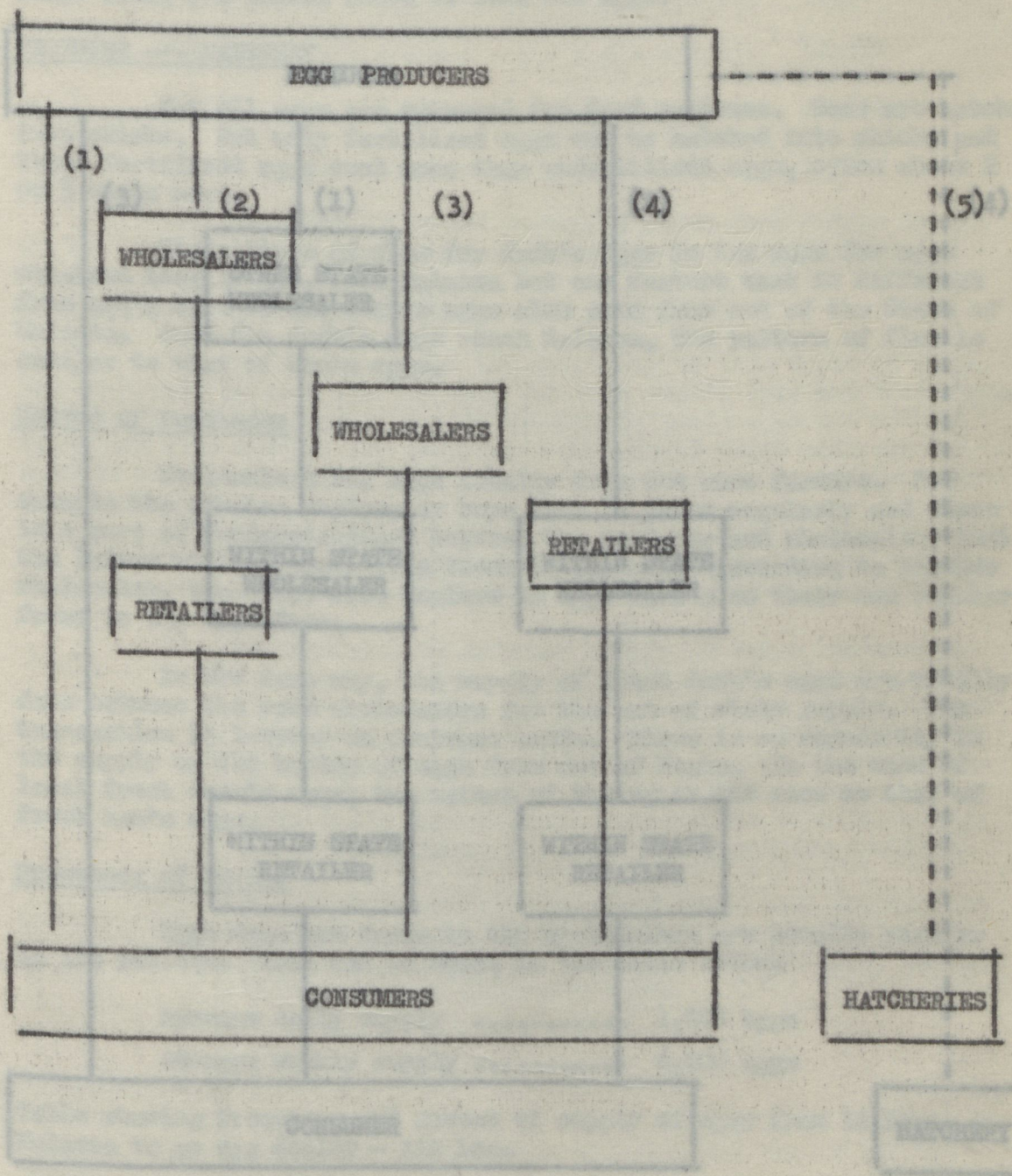
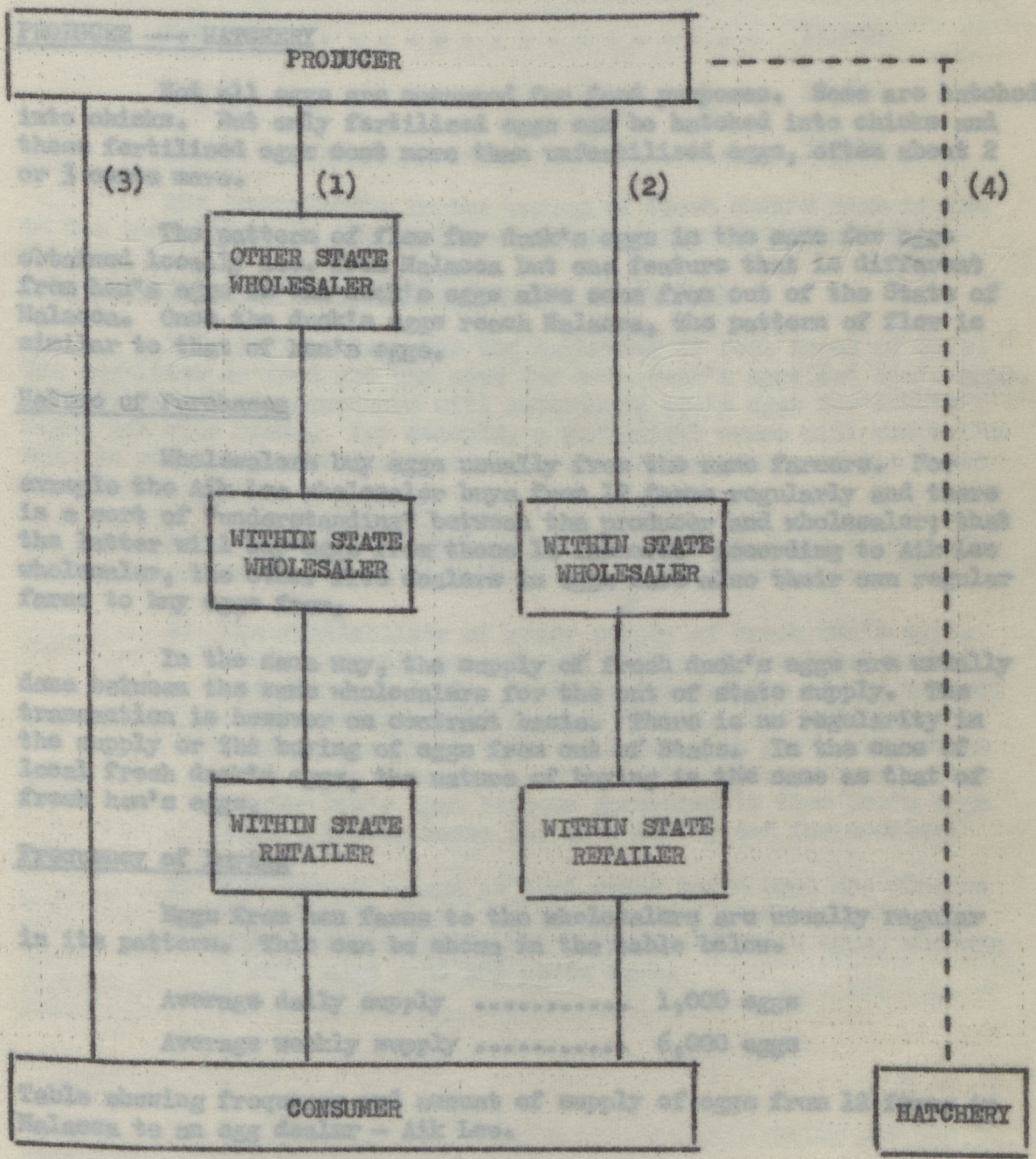


DIAGRAM 2

DIAGRAMMATICAL REPRESENTATION OF THE MARKETING PATTERN FOR DUCK'S EGGS IN MALACCA



PRODUCER —— RETAILER —— CONSUMER

This pattern is true for farmers who are also wholesalers for their own eggs. Typical examples are Chong Farms at Tanjong Minyak and Paya Rumput. One feature is that these farms produce sufficient volume of eggs so that each farm can market the eggs economically by themselves. These two farms market the eggs not only in the urban areas but also all along the rural areas or small towns in the rural areas. They travel from area to area and stop at retail shops along its travel route to sell the eggs.

PRODUCER —— HATCHERY

Not all eggs are consumed for food purposes. Some are hatched into chicks. But only fertilised eggs can be hatched into chicks and these fertilised eggs cost more than unfertilised eggs, often about 2 or 3 cents more.

The pattern of flow for duck's eggs is the same for eggs obtained locally i.e. from Malacca but one feature that is different from hen's eggs is the duck's eggs also come from out of the State of Malacca. Once the duck's eggs reach Malacca, the pattern of flow is similar to that of hen's eggs.

Nature of Purchases

Wholesalers buy eggs usually from the same farmers. For example the Aik Lee wholesaler buys from 12 farms regularly and there is a sort of "understanding" between the producer and wholesaler; that the latter will buy eggs from these 12 farmers. According to Aik Lee wholesaler, the other five dealers in eggs have also their own regular farms to buy eggs from.

In the same way, the supply of fresh duck's eggs are usually done between the same wholesalers for the out of state supply. The transaction is however on contract basis. There is no regularity in the supply or the buying of eggs from out of State. In the case of local fresh duck's eggs, the nature of buying is the same as that of fresh hen's eggs.

Frequency of Buying

Eggs from hen farms to the wholesalers are usually regular in its pattern. This can be shown in the table below.

Average daily supply	1,000 eggs
Average weekly supply	6,000 eggs

Table showing frequency and amount of supply of eggs from 12 farms in Malacca to an egg dealer - Aik Lee.

The supply of fresh duck's eggs from Kuala Lumpur are less regular to the wholesaler or hatchery in Malacca. This is shown in the table below.

TABLE 5.5

TABLE SHOWING AMOUNT OF FRESH DUCK'S EGGS FROM OUT OF STATE TO CHOP NAM HUAT FOR THE FIRST 4 MONTHS OF 1969

January	4,600
February	11,069
March	13,641
April	10,222

The irregularity in the buying of fresh duck's eggs is due to the uncertainty in the supply of the eggs from out of state.

Substitubality of Fresh Duck's Eggs for Hen's Eggs

This is important for the marketing of both types of eggs. The qualities as food are the same for both duck's eggs and hen's eggs. To this extent the consumers will substitute hen's eggs for duck's eggs, and vice versa. For example, a restaurant owner will use hen's eggs to substitute for duck's eggs in the frying of mee if the latter is not available.

From field investigations, the trend at present is for consumers to consume more and more hen's eggs. This is due to:-

1) The availability of ready supply of fresh hen's eggs. Hen's eggs can be obtained easily at the local market and also regularly. This is the opinion of the manager of the Malacca Cold Storage Bakery. The Cold Storage Bakery uses about 7,000 to 8,000 eggs per month and as such needs a regular supply. The ordinary house-wives prefer hen's eggs because according to them hen's eggs have a better taste for cake making and for cooking.

2) The second reason is that fresh hen's eggs are cheaper than duck's eggs. On the average, grade A hen's eggs cost 9 cents (see table on price of hen's eggs) whereas duck's eggs cost 10½ cents each.

CHAPTER VI

MARKETING OF SALTED AND PRESERVED DUCK'S EGGS

The marketing of salted and preserved duck's eggs are being studied together because their marketing process are more or less similar. The study is confined to the marketing of these eggs in Malacca.

The Marketing Process

Buying - The Nature of Buying

Most of the salted and preserved eggs are imported through a local agent in Malacca - Guan Hong and Company, which is incidentally the sole importer for Malacca.

The salted and preserved duck's eggs from China are imported on a yearly basis. The amount imported is limited by the amount that can be supplied by China and Thailand (Salted eggs only). Local salted eggs from Kedah are bought by the agent here whenever there is a supply forthcoming.

Salted and preserved eggs are imported on contract basis, but the local salted eggs are bought whenever there is supply of the eggs. One feature of the local supply of salted eggs is the uncertainty of supply.

Volume Imported

The volume handled varies from year to year and also varies with the availability of supply from the three sources of the eggs.

China

China is the chief supplier of salted eggs and the only supplier of preserved eggs. The supply usually comes in a regular pattern i.e. one shipment of eggs every two months. The amount imported in one shipment varies according to the availability of the eggs. For example in 1968, the agents imported 200,000 preserved eggs. For one shipment in the month of February was 35,000 eggs and that of April was 45,000 preserved eggs were imported.

Thailand and Kedah

The amount bought from Kedah and Thailand varies and the amount was not disclosed by the agent.

Buying Practice

The import of salted eggs and preserved duck's eggs is done on a contract basis. As an importer and sole agent, the agent here will contact the exporter in China or Thailand and determine the volume or amount that will be wanted during the year, or alternatively the amount that could be supplied during the year. When a shipment is to be made from China to Malaya, the wholesaler in the Shanghai will contact the sole agent here who will instruct the latter's bank in Hong Kong to check the shipment of eggs in Hong Kong. If the cargo is found to be as specified by the contract, a payment is made to the exporter by the bank in Hong Kong.

Financing Imports

The imports of these eggs go through a foreign business transaction. A draft is made at a local bank here. The draft is then sent to a bank in Hong Kong who will act as an agent for the local agent here. The draft is made for a whole year's contract and the payments are made according to the size of the shipment until the whole year's contract has been fulfilled. A small fee is charged by the Hong Kong bank for services rendered.

Transportation and the Burden of Costs

Imports from China are loaded into ships in Shanghai and then shipped to Hong Kong for checking and then sent to Singapore. From Singapore the eggs are transfered to another ship and sent to the port of Malacca. In Malacca the eggs are then put into barges and sent to the godowns owned by the sole agent. The eggs are stored in the godown until taken out for sale.

The burden of transportation costs from Shanghai to Singapore is borne by the exporter in Shanghai whilst that from Singapore to Malacca and barge charges are borne by the sole agent here.

The transportation process from Thailand is the same as that mentioned above.

When a contract is made to buy salted eggs from Alor Star (Kedah), the wholesaler there, will pack the eggs in baskets and send them by lorries to Malacca. The eggs are also stored in the godown. The burden of transportation costs is borne by the wholesaler in Alor Star.

Risk Bearing

Four types of risks must be distinguished:

1) quality deterioration,

2) low prices,

3) quantity,

4) damage.

Quality Deterioration

The risk of quality deterioration is seldom faced by the importer here, but the importer admits that there may be on or two bad eggs which is considered insignificant and such risks are borne by the sole agent. But it must be noted that sometimes when the eggs are packed in a jar or box, ten extra eggs are put into each jar or box. As such the risk of quality deterioration is covered. This is true for imported eggs and eggs from Kedah.

Lower Prices

The price of imported eggs charged by exporters in Shanghai and wholesaler in Kedah varies according to the supply and demand. When the demand is lower such as harvesting period, the price charged by exporters or local wholesalers in Kedah falls. When demand is greater than the supply, such as the beginning of the rainy season, the price at which the Malacca agent buys rises.

Fluctuation in prices give rise to risks. When the price falls just after harvesting season,[1] then the sole agent are incurring losses in the sense that the eggs can now only be sold at lower prices than the price paid for.

Damage

Again the risk of damage is relatively negligible but if these eggs are damaged, the agent will have to bear the risk.

Storage

When the imported salted and preserved eggs arrive, they are stored in godowns beside Malacca river. Such storage involve costs, and the cost according to the agent is being calculated in the pricing of the eggs. The period of storage is not known but salted eggs and preserved eggs can be stored for quite long periods before they deteriorate.

Packaging

Salted and preserved duck's eggs come in different containers and this depends from which countries they come from. Those eggs which come from China are put into porcelain containers which come in two

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[1] Harvesting or dry seasons are seasons when the supply of duck's eggs is at the minimum.

sizes, i.e. big and small. The big ones contain approximately between 300 to 400 eggs whereas the small contains about 220 eggs.

The salted eggs coming from Thailand are packed into wooden boxes of 200 eggs each, whereas those from Kedah are packed into bamboo baskets of 400 to 500 eggs.

The fact that these eggs are packed into different types of containers shows that distance affects the form of packaging. The eggs from China have to travel a long distance by ship and as such it has to withstand more rough handling and therefore porcelain containers are just ideal for fragile commodities like eggs, whereas those eggs from Thailand and Kedah, have to travel shorter distances and are subject to less rough handling and hence only boxes and baskets are used as containers.

It must be noted that the eggs - salted and preserved are further coated with a dried up paste like material made from wood chips or rice husks, before they are packed into containers. Thus the eggs are further safeguarded against breakage.

Selling

Nature of Selling

Selling of salted duck's eggs and preserved duck's eggs can be divided into four categories:[2]

1) Selling directly to retailers.

2) Selling to wholesalers.

3) Selling to wholesalers outside Malacca.

4) Selling directly to consumers.

1) Selling Directly to Retailers

This type of sale is regarded by the sole agent to be the largest proportion of the total sales. This category of sales is important because retailers prefer to buy directly from the agent to cut the wholesaler's commission and thus get the eggs faster and a little cheaper.[3] Further, retailers around Malacca town usually go to the agent whenever they want salted or preserved eggs.

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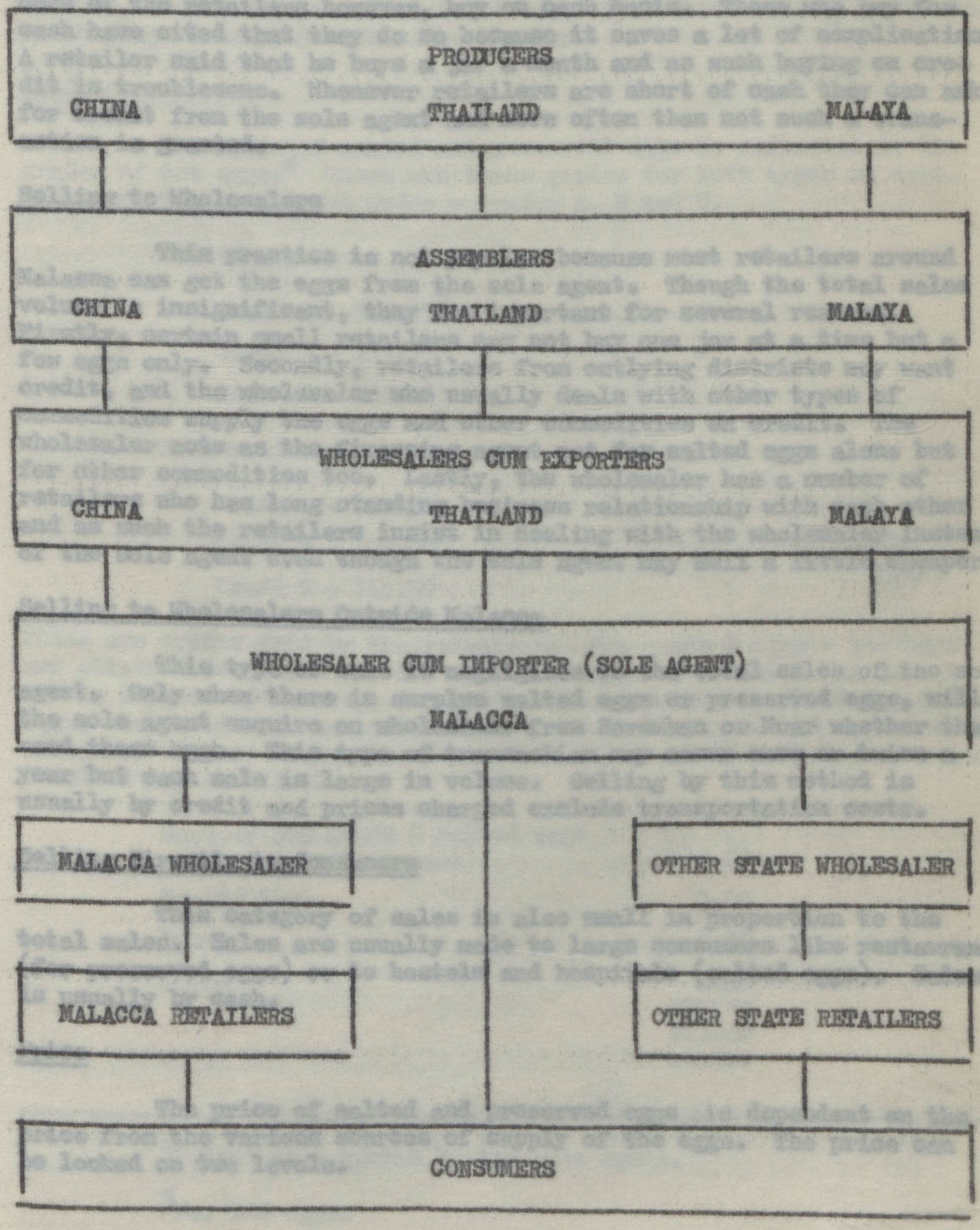
[2] Refer Diagram 3.

[3] The discount may not be given if the retailers do not buy in bulk.

DIAGRAM 3

DIAGRAMMATICAL REPRESENTATION OF THE MARKETING PATTERN FOR SALTED EGGS AND PRESERVED EGGS



Retailers usually buy on two basis:

1) Credit.

2) Cash.

The sole agent sells on credit only to retailers whose credit ratings are good or they have established themselves as reliable customers to the sole agent. The sole agent maintains that most of the retailers however, buy on cash basis. Those who buy for cash have cited that they do so because it saves a lot of complications. A retailer said that he buys a jar a month and as such buying on credit is troublesome. Whenever retailers are short of cash they can ask for credit from the sole agent and more often than not such a transaction is granted.

Selling to Wholesalers

This practice is not popular because most retailers around Malacca can get the eggs from the sole agent. Though the total sales volume is insignificant, they are important for several reasons. Firstly, certain small retailers may not buy one jar at a time but a few eggs only. Secondly, retailers from outlying districts may want credit, and the wholesaler who usually deals with other types of commodities supply the eggs and other commodities on credit. The wholesaler acts as the financing agent not for salted eggs alone but for other commodities too. Lastly, the wholesaler has a number of retailers who has long standing business relationship with each other and as such the retailers insist in dealing with the wholesaler instead of the sole agent even though the sole agent may sell a little cheaper.

Selling to Wholesalers Outside Malacca

This type of sale is negligible to the total sales of the sole agent. Only when there is surplus salted eggs or preserved eggs, will the sole agent enquire on wholesalers from Seremban or Muar whether they need these eggs. This type of transaction may occur once or twice a year but each sale is large in volume. Selling by this method is usually by credit and prices charged exclude transportation costs.

Selling Directly to Consumers

This category of sales is also small in proportion to the total sales. Sales are usually made to large consumers like restaurants (for preserved eggs) or to hostels and hospitals (salted eggs). Sales is usually by cash.

Price

The price of salted and preserved eggs is dependent on the price from the various sources of supply of the eggs. The price can be looked on two levels.

1) The price paid by the sole agent.

2) The price sold to retailers or wholesalers.

The Price Paid by the Sole Agent

This price depends on the supply price from exporting countries. If there is a shortage of supply from the exporting countries, the price will be higher than normal. An example can be cited: for example, in August, prices of salted eggs from China usually go up due to shortage in supply within the country.

Grading and Price

The price[4] of salted and preserved eggs is reflected in the grades of the eggs. There are three grades for both types of eggs. They are in alphabetical order - grades A, B and C.

Salted eggs:

Grade A - $14.50[5]

Grade B - $14.25

Grade C - $14.00

Preserved eggs:

Grade A - $19.50

Grade B - $19.00

Grade C - $18.50

These are prices paid by the retailers. For grade C eggs - the eggs are obtained at $10.00 per 100 from the exporter in China. A 3 cents tax is imposed on each egg imported, thus amounting to $3.00 for 100 eggs. Labour charge was calculated to be 20 cents per 100 eggs. A surtax of 20cents is further imposed on imports. Hence price of grades C salted egg is $13.40.

Cost of 100 grade C salted eggs (including transport)	$10.00
Tariff tax	3.00
Labour	0.20
Surtax	0.20
	$13.40

[4]Prices were quoted by the sole agent.

[5]For 100 eggs.

A gross profit of 60 cents is made for every 100 grade C eggs sold.

Price Sold to Retailers

The price sold to retailers have been arrived by the above calculations. But it is not true for all times. In this cass the price mentioned was at the time when the survey was conducted.

The price sold to retailers depend largely on the forces of local demand for the two types of eggs and the foreign supply of these eggs. When there is a glut of supply from abroad, the price will be lowered and hence prices offered to the retailers are low. But when there is a lack of demand and if prices fall below the cost of obtaining the eggs, the sole agent has to bear the loss.

Prices during the period of shortage of supply (especially during festivals) the prices will go up to $16.00 per 100. Hence there will be greater profit made by the sole agent.

Here are a number of features on prices of the imported eggs:

1) The sole agent will have to bear the burden of a loss of falling prices. This happens when the agent buys the eggs at a certain price and after sometime due to a combination of two forces - namely a glut in supply and a fall in demand for the eggs, will force the price of eggs to fall. Hence if the price of the eggs are below that bought earlier, the sole agent will make a loss. For example if the sole agent buys 100 grade C eggs for $15.00 and due to the above forces, on the following month, the price drops to $14.70 per 100, the sole agent will lose 30 cents per 100 eggs. But the sole agent might not incur a great loss because by the time the price dropped to $14.70, he might have already sold most of the eggs bought at $15.00.

2) The price of eggs will usually rise during festival periods. The higher demand for the eggs forces the sole agent to raise the price in order to equate demand with supply.

3) Another feature is that when supply is short and demand, normal, price will tend to rise in order to equate the demand with the supply.

Price Variation and its Effects on the Dealers

As stated earlier if the sole agent buys at a certain price and at another time if the price fall he tends to lose. The loss amounts to the price bought from exporter minus price sold to the

retailers. This is true for retailers or wholesalers in salted and preserved eggs, but they make a smaller loss. The loss usually is compensated when prices go up during festival times. Under normal conditions the sole agent will make "normal profits", i.e. profits obtained during normal times.

Profits

In practice the sole agent says that profits tend to be more or less stable, even though the price of the two types of eggs fluctuate. The rise in price and hence higher gain in profits, will tend to be followed by a fall in prices and thus a small loss. Hence, only "normal" profits will be obtained. This is true for both the wholesaler and the retailer in the pattern of flow.

Profits are stable because of one feature which we do not see in the case of hen's and quail's eggs. This is due to the fact that salted and preserved eggs are less perishable, and so can be kept for a long time.

CHAPTER VII

MARKETING OF QUAIL'S EGGS

From field investigations it was found that the marketing of quail's eggs was slightly different from local fresh eggs and that of imported eggs. The size of the eggs are smaller and therefore certain market services provided are also different.

Marketing Services

Transportation

The costs of transportation of quail's eggs can be calculated on two levels.

At the local level the eggs are transported by the producer himself and transportation costs are borne by him on interstate level, the transportation costs are borne by the dealers who order the eggs. To calculate the producer's profits, at the local level, a deduction equivalent to the cost of transportation must be made.

Transport is very important in the marketing of quail's eggs because without transport the eggs cannot be moved from place to place. Transport is more important in the case of quail's eggs than local eggs because quail's eggs are supplied to dealers or consumers in Kuala Lumpur and Seremban. The producer is of the opinion that there is no difficulty in transporting his produce because though quail's eggs are fragile, they are not bulky and as such do not require much space when transported.

Storage

The function of storage is important generally for all agricultural products. Quail's eggs are kept in boxes in a cool place (there is no air conditioned cold room in the farm). The eggs are kept in big wooden boxes which can contain about 1,000 eggs. The cost of storage is negligible in the sense that the boxes which contain the eggs are stored in the corner of the farm where it is cool and only for a short time. Costs incurred are those for buying the boxes which costs 40 cents per box.

The storage function is not used for speculative purposes. This means that quail's eggs are not stored till such time when the price of the eggs are high and then disposed off for a high margin of profits.

Grading and Standardisation

There is no grading or standardisation of quail's eggs. From weights taken the eggs range from 10.2 grams for small quail's eggs to 13 grams for the large quail's eggs. Such small differences in weights do not show any significance in the largeness or smallness of the eggs. For this reason the eggs are not graded when sold.

Though the eggs are not standard in size when it is produced, they have the same shell texture. The eggs have purple and black dots on the shell. As such, differences in texture of shell as those of hen's eggs are not significant in the case of quail's eggs.

The producer is at present experimenting on feeds which will not only induce quails to lay more eggs per laying period but also large eggs. The eggs then can be sold at standard grades and no complaints can be made by consumers of the size of eggs consumed.

The quail's eggs which are more or less standardised have some important advantages over that on non-standardised eggs like hen's eggs. They do not incur costs for grading and further, time is saved from grading the eggs. But what is more important is that costs can be calculated at uniform rates and not according to grades of each quail's egg produced.

Packaging

The functions of packaging are manifold. In the case of quail's eggs:-

1) to prevent the eggs from any breakage

2) afford a convenient way of handling the eggs

3) facilitate easy transportation

4) looks more attractive to consumer and thus act as a media through which the eggs can be advertised and thus boost sales.

It must be noted that only eggs sold out of the state of Malacca are packed in boxes which contain 24 or 2 dozens quail's eggs. Therefore the importance of packaging can be easily understood. There is no necessity to pack eggs in boxes for the local market because they are bought in bulk by local dealer who will later distribute them to consumers. Further there is no competition from other sources in selling quail's eggs in Malacca. But there are other competitors in Kuala Lumpur or out of state towns vying for the quail's egg market, hence the eggs from Malacca must be distinguised from other sources. This is done by packing the eggs in a box with a trade mark of the Malacca Quail Farm.

The packaging is done by Mr. Tan's workers. The eggs are packed in cardboard boxes by hand. Whenever there are orders from outside Malacca, the eggs are packed in the boxes and then transported to its place of destination. The cost of one box is 5 cents. The cost of the box is included in the price of eggs sold to consumers outside Malacca. But one box of 24 quail's eggs costs $1.00 of which 5 cents is the price of the box. Hence the 24 eggs in the box costs actually 95 cents.

Buying and Selling

The buying of quail's eggs can be divided into:-

1) Nature of buying

2) Frequency of buying

3) Volume handled.

Nature of Buying

Quail's eggs are bought on two levels.

Firstly there is the local wholesaler, and secondly the out of State wholesaler. On the local level, the sale of quail's eggs from the farm is only through the wholesaler in Malacca. This wholesaler handles the distribution of quail's eggs in Malacca. Whenever the wholesaler needs eggs, he will order the eggs from the farm. There is a kind of tacit agreement between the wholesaler and the producer who will only sell the eggs through the wholesaler. Whenever more eggs are demanded in the market, the wholesaler will send orders for more eggs to be sent. But when such occasions do not arise, the farmer can expect regular orders.

Quail's eggs sold outside the State are different in the nature of buying arrangement. Wholesalers outside the state buy eggs only when there is a demand for the eggs. Kuala Lumpur wholesalers for example, order quail's eggs irregularly and when such orders are made only then the farmer can expect sales.

Frequency of Buying

Quail's eggs bought on the local market varies in volume. The volume is variable to the extent that unusual orders come from the wholesaler. On the average about 5,000 to 10,000 eggs are sold in Malacca per month. For example in the month of February, a total of 7,650 eggs were bought by the dealer in Malacca.

The volume bought by the dealers in Kuala Lumpur is much larger than that in Malacca. The reason for this is mainly because Kuala Lumpur has a larger market than that in Malacca for quail's eggs. On the average, 20,000 eggs are sold outside Malacca a month.

Most of the eggs sold are destined for Kuala Lumpur. The volume handled day to day varies from few hundred to few thousands. For example in the month of May, 26,664[1] were sole in four consignments. The above mentioned volume was sold to Kuala Lumpur alone and does not include eggs sold to other places outside Malacca.

Financing

The financing of the farm and production costs are provided by the farmer himself. Thus the farmer has no obligations to anyone and is able to sell to any wholesaler he likes. In the marketing of eggs, the terms of sale of quail's eggs is at two levels. At the local level, the eggs are sold for cash on delivery. On the other hand the eggs sold to wholesalers outside Malacca are on credit. The credit granted by the producer to the Kuala Lumpur wholesalers is for two weeks. Under such credit arrangement, the producer will collect the money for the sale of the eggs once a fortnight.

Risk Bearing

The risks involved in the marketing of quail's eggs can be divided into three categories. They are:-

1) Falling prices

2) Quality and spoilage

3) Deterioration and breakage.

1) Risk of Falling Prices

At the farm level, i.e. before the eggs are sold, any risk of falling prices are borne by the farmer. But the risk borne by the local wholesaler from falling prices is slightly different from that borne by the Kuala Lumpur wholesalers. In Malacca, the wholesaler will have to bear the burden of falling prices once the quail's eggs are transfered to the wholesaler. But the arrangement with the Kuala Lumpur dealers is different. Here the burden of falling prices are shared between the farmer and the wholesalers. The arrangement is that firstly the price of the quail's eggs will be agreed upon on the day when order is made for quail's eggs. If upon delivery of the eggs, the price of the eggs falls lower than that agreed upon, the wholesaler will cut a certain percentage from the original sum of money to be paid to the farmer.

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[1] Record Books on sales from the Malacca Quail Farm.

Such a practice is followed because of the competitive consumer market in Kuala Lumpur for quail's eggs. On the other hand, this practice is not applicable in Malacca because there are no other suppliers of quail's eggs to compete with the farmer or producer.

2) Risk of Quality and Spoilage

The farmer says that the risk under this heading is negligible. The quality of the quail's eggs is always good. But once the eggs are sold to the wholesalers, the burden of risk of poor quality and spoilage is borne by the wholesalers.

3) Risk of Deterioration and Breakage

Here again the farmer maintains that deterioration of quail's eggs is neglible. He says that he can always sell off the eggs before they deteriorate. Like hen's eggs, quail's eggs becomes bad if it is kept for too long.

At the wholesale level, the burden of deterioration is borne by the wholesaler. The wholesaler may make a substantial loss if he cannot sell off the eggs before the eggs deteriorate.

The risk of breakage of eggs is also negligible in terms of costs at both the farmer's level and at the wholesaler's level.

Price

Pricing

The price of quail's eggs is determined by the supply and demand for the eggs in the market. As such the price fluctuates. But like hen's eggs, the demand factor is more important in the determination of the price of quail's eggs. This is mainly due to the fact that the supply of the eggs is always constant. This is especially true in the case of quail's eggs because there is a seasonality in the demand for the eggs.

Normal Price

The normal price for quail's eggs in Malacca is $3\frac{1}{2}$ cents and for Kuala Lumpur and other states is 4 cents. By normal price it is assumed that there is no unusual demand for quail's eggs which will fluctuate the price of the eggs.

Price During Festivals

The price of quail's eggs will usually go up during festivals. But the rise in the price of quail's eggs is marked during the months of July and August. This is because during these months most Chinese couples get married. With the marriages

there will be dinners given in retaurants. Quail's eggs are usually served in Chinese dinners as a speciality. After these months, the price will then level out or go down during the nest 3 or 4 months when marraiges are less common.

Pattern of Flow

The pattern[2] of flow of eggs from the producer to the consumers is three-fold.

1) Producer — consumer

2) Producer — wholesaler — restaurant/retailer — consumer

3) Producer — out of state wholesaler — restaurant/retailer — consumer

1) Producer — consumer

Here the pattern of flow is one whereby the producer sells quail's eggs directly to the consumer. The amount or volume sold to consumers directly is small.

2) Producer — wholesaler — restaurant/retailer — consumer

Under this pattern of flow, the quail's eggs are delivered to the local wholesalers who then sell the eggs to local restaurants and retailers.

The restaurants buy the bulk of the eggs from the wholesaler. Retailers buy limited amounts from the local wholesaler. This is because quail's eggs unlike fresh hen's eggs are not consumed regularly. But they are consumed only because the Chinese believe that the eggs have medicinal value. As such retailers are not willing to buy quail's eggs in large amounts.

3) Producer — out of state wholesaler — retailer — consumer

In addition to dealing with the local market, the producer sells quail's eggs to wholesalers out side the State of Malacca. The producer sells quail's eggs to the restaurants and retailers in Kuala Lumpur through the last mentioned wholesaler. Here again the bulk of the eggs are taken by restaurants.

The price per box of 24 quail's eggs sold to restaurants and retailers is between $1.20 to $1.40. The price sold to the

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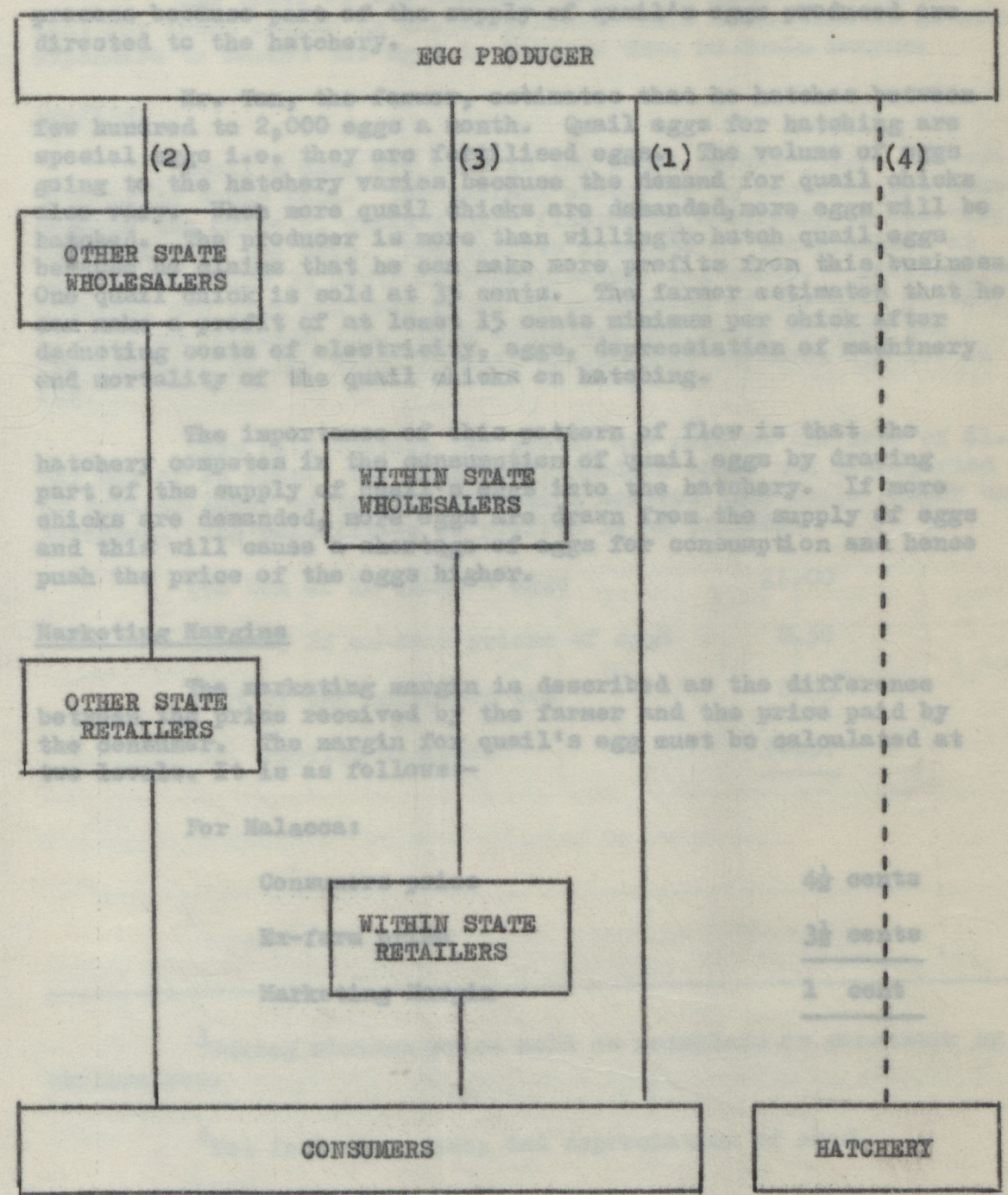
[2] Refer to Diagram 4.

DIAGRAM 4

DIAGRAMMATICAL REPRESENTATION OF THE MARKETING PATTERN FOR QUAIL'S EGGS IN MALACCA



wholesalers is usually $1.00 per box. The difference may be as much as 40 cents for the price sold by the producer and that bought by the retailers or restaurants.

Hatchery

Another pattern of flow of quail's eggs is from the farm to the hatchery. Though the functions of farming and hatching are done by the same person, hatching is important in the marketing process because part of the supply of quail's eggs produced are directed to the hatchery.

Mr. Tan, the farmer, estimates that he hatches between few hundred to 2,000 eggs a month. Quail eggs for hatching are special eggs i.e. they are fertilised eggs. The volume of eggs going to the hatchery varies because the demand for quail chicks also vary. When more quail chicks are demanded, more eggs will be hatched. The producer is more than willing to hatch quail eggs because he claims that he can make more profits from this business. One quail chick is sold at 35 cents. The farmer estimates that he can make a profit of at least 15 cents minimum per chick after deducting costs of electricity, eggs, depreciation of machinery and mortality of the quail chicks on hatching.

The importance of this pattern of flow is that the hatchery competes in the consumption of quail eggs by drawing part of the supply of quail's eggs into the hatchery. If more chicks are demanded, more eggs are drawn from the supply of eggs and this will cause a shortage of eggs for consumption and hence push the price of the eggs higher.

Marketing Margins

The marketing margin is described as the difference between the price received by the farmer and the price paid by the consumer. The margin for quail's egg must be calculated at two levels. It is as follows:-

For Malacca:

Consumers price	4½ cents
Ex-farm price	3½ cents
Marketing Margin	1 cent

For Kuala Lumpur:

Consumer's price per box (2 dozens)	$1.20[3]
Ex-farm price per box (2 dozens)	$1.00
Marketing Margin	$0.20

The share of the consumer dollar is 23.3% for Malacca and that for Kuala Lumpur is slightly less. This shows that it is more expensive to market the eggs in Malacca than in Kuala Lumpur.

Profits

Quail's eggs are sold in the local market - i.e. Malacca town at 3½ cents each. The ex-farm prices of 3½ cents is not fixed because the price of quail's eggs fluctuates according to the supply and demand of the eggs. The profits obtained by the producer at selling the eggs 3½ cents is approximately 1.1 cents.[4] Profits obtained are high and calculated on percentage of the cost price it will approximate 47%. Even deducting the costs of rent and depreciation of the shed, profits should come to about 25% for an egg.

Eggs sold outside the state, are sold at the rate of $1.00 per box of 24 eggs. The eggs are packed in boxes and transported by taxi or lorry to various consuming centres like Kuala Lumpur and Seremban. The calculation of profits is as follows:

One box of 24 quail's eggs	$1.00
Cost of 24 ex-farm prices of eggs	0.58
Cost of one cardboard box	0.05
Profits obtained	$0.37

[3] Taking minimum price sold to retailers or consumers by wholesalers.

[4] Not including rent, and depreciation of shed.

CHAPTER VIII

PROBLEMS AND REMEDIES IN THE MARKETING OF EGGS

Production Problems

In the production of hen's eggs, cost of feed as seen in the previous chapter amounts to about 70% to 80% of the cost of production of one egg. The high cost of feed was mainly due to the high cost of importing raw animal feeds for processing locally. In West Malaysia alone about $44 million of raw animal feeds was imported in 1963.[1] These raw animal feeds like rice bran, maize, copra cake, soya bean meal, lucerne meal, skim milk powder, meat and bone meal[2] are essentially imported into this country. The veterinary department expects the production of eggs to increase in future. In a trend projection the veterinary department estimated the growth in production of eggs from $750 million to $1,800 million in value. The table below will show trend figures estimated by the department:

TABLE 8.1

TABLE SHOWING PROJECTIONS OF EGGS FOR THE[3] PERIOD 1965 TO 1980

Eggs	Unit	1955	1960	1965	1970	1980
Local Production	Value($)	77	208	750	1,200	1,800
Annual per capita consumption	No. in millions	30	55	100	130	160

The per capita consumption is also expected to increase.

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[1] Raymond Crotty "Livestock Marketing in West Malaysia" Review of Agricultural Economics in Malaysia, FAMA Publication, Vol. 1, No. 2, December 1967.

[2] Veterinary Division, Ministry of Agriculture and Cooperatives, Written on verbation evidence presented by the Veterinary Department at TAB hearing on Rice Bran, and other animal feeding stuffs, Kuala Lumpur, 1966.

[3] Ibid.

If the projection of the veterinary is accurate, then it will be necessary to import more raw animal feedstuffs.

Exogeneous Factors Affecting Production

The production of eggs is always fraught with the risk of diseases and bad weather. It is also unfortunate that weather, especially the cold rainy weather is bad for the layer and this weather factor also brings with it diseases.[4] Some diseases do not come with the weather and also cause problems in production. But the disease which have caused high mortality rate among poultry, Ranikhet disease, has been brought under control by the use of vaccines.[5] Through interviews with farmers and the State Assistant Veterinary Officer, it was understood that other diseases have also caused economic losses to farmers. One example was the Lim Farm at Bachang which lost a total of 6,000 layers (all the birds in the farm) through a certain disease in 1966.

Efficiency of Farm and Farm Rearing Techniques

It has been discussed earlier that farms rearing white Leghorn layer consumes less than other varieties of layer and the former variety is a more prolific layer. Unfortunately this variety lays white shelled eggs which fetch a lower price. The breeding of other varieties will definitely incur higher cost because they consume more feed.

It has been noted in earlier chapters that small farms cannot afford cold room for storage and also transport equipment. This brings the question of the economic size of a farm. No research has been done to determine the economic size of a farm.

Marketing Problems

Transportation

Transportation is a very important factor in marketing of eggs. Many small farmers do not have their own transport equipment. It is not economical for them to own transport equipment and hence wholesalers do the transporting and gathering of eggs for the small size farms. This has led wholesalers to exploit farmers.[6]

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[4] Interviews with farmers.

[5] The Veterinary Division, Ministry of Agriculture and Cooperatives, Proposals for the Development and the Reorganisation of the Veterinary Services, Kuala Lumpur, 1967.

[6] Discussed in Chapter V.

Storage

Storage function has not been used by farmers to the fullest. For small farmers, any surplus of eggs cannot be kept for fear that eggs might deteriorate. As such the eggs have to be disposed at a lower price during season of glut.

Grading and Standardisation

Grading of eggs are important. But producers do not grade their own eggs and grading are left to the wholesalers. It had been noticed that grading by some wholesalers are by use of weights whereas some others grade the eggs by employing a worker to grade the eggs. In the latter case, there might be discrepancy in the grading of eggs because a person's judgement is very subjective. The marketing of eggs will therefore entail difficulty because consumers who do not get uniformly graded eggs will tend to look for other sources. This will surely disturb the market for eggs and hence cause some difficulty to both the farmer and wholesalers.

The average West Malaysian prefers coloured shell eggs to that of a white ones. The white shelled eggs are therefore generally slightly difficult to dispose off. What is surprising is that the quality of white and coloured shelled eggs is the same but the former is being demanded at slightly lower price.

A lower price for white shell eggs will bring lower income to producers of such eggs.

Risk Bearing

During the interviews conducted, it was found that once the title of the eggs has been passed from the producer to the wholesaler, the latter was to bear risks of deterioration, falling prices and damage. But it has been noted that whilst the risk of deterioration and damage are borne by the wholesaler, the risk of falling prices are either passed to the producer or retailer. Though it can be accepted that all business enterprises must bear risks, it is unfair that risk of falling price should fall on the producers.

Financing

In the marketing of eggs all levels of marketing are observed to be self financed. Whilst it is true that wholesalers are usually owners of other businesses (especially retail business), the former usually finances his own production of eggs.

Lack of finance retards the growth of the egg industry. Investments on the farm cannot be carried out unless the producer is prudent and any surplus income is saved for further expansion on the farm. This is true of Chong Farm at Batu Berendam which cannot expand because of lack of finance. Any expansion of the farms can benefit consumers in the form of more eggs produced.

It was understood that due to the lack of finance wholesalers cannot exploit the possibility of exporting eggs. Firstly it was due to the lack of credit to finance any export orders and secondly there was the lack of information on export markets and export possibilities.

Lack of Information

As mentioned above lack of information on export possibilities has retarded export of eggs. Eggs can for example, be exported to Sarawak and Sabah. These two states in East Malaysia are lacking in eggs. Farmers are also ignorant of price of eggs because of the lack and unavailability of market information. Hence we see that in Malacca, there might be times of shortage which will fluctuate the price of eggs. Hence farmers will not be able to compare prices and as such exploitation by unscruplous dealers will arise.

Unstable Prices

The problem of unstable prices have many interelated causes.

Firstly the seasonal demand conditions cause the price of eggs to fluctuate. This is so because supply is rather inelastic, i.e. once a layer starts to lay eggs, it will continue to do so for a long time ($1\frac{1}{2}$ years).

Secondly the problem of dumping is always present. This is true because farmers and wholesalers in Malacca complain that any surplus of eggs from Selangor and Johore are always dumped in Malacca and thus depress prices of eggs in Malacca.

There has been a steady decline of the price of eggs over the past 12 years. Prices of hen's eggs dropped from 25 cents in 1956 to about $9\frac{1}{2}$ cents today.[7] Even quail's eggs have declined in prices from 7 cents in the late 1950's to about 4 cents today. Prices quoted above are retail prices. Ex-farm prices are usually lower than retail prices and to obtain ex-farm prices we have to deduct approximately $1\frac{1}{2}$ cents for hen's eggs and $\frac{1}{2}$ cent from quail's eggs. The cost of production of hen's eggs in Malacca is about $6\frac{1}{2}$ cents and farmers will face a loss if there are any further decline in prices.

Exploitation

This is always the problem of the producers. Exploitation of producers are usually by wholesalers. Exploitation by wholesalers are in many forms. Chapter V discusses how the provision of credit to buy feeds lead to the exploitation of the farmers in the form of lower

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[7] The Veterinary Division, Ministry of Agriculture and Co-operatives, The Poultry Industry in West Malaysia, a mimeograph.

prices offered for eggs. Another form is that lack of information of prevailing market situation can lead to exploitation by wholesalers who taking advantage of the ignorance of the farmers, offer lower prices of eggs than that can be obtained in the market. Yet another way in which exploitation is carried out is the classic way in which a sort of relationship is created between the producers and the wholesalers and as such the farmers are bound to sell eggs to the wholesaler even if lower prices are offered. This is true because investigation show that producers are reluctant to sell to other wholesalers for fear that they might cause embarrassment to their regular wholesaler.

Possible Action

Production

It is possible to reduce the high cost of feed in egg production by using local substitutes of raw materials for imported ones. Lowering the cost of feed, will result in lower cost of production which will in turn lead to lower prices of eggs.

Possible feeding stuffs which could be locally substituted are rice bran, maize, groundnut cakes, blood meal, meat and bone meal ect.[8] The government should further encourage feedmills to substitute local material by giving the feedmills concession or rebates when local raw material is used. This can be in the form of Tax holidays or Pioneer status.

Another direction to reduce the dependence of imported raw material is for research to be conducted by government on the availability of other types of cheap raw materials used for the production of feeds. Grants should be provided to institutes of higher learning like the college of Agriculture at Serdang or the Faculty of Agriculture in the University of Malaya in persuing such an objective. In the long run, the government can save money in the form of foreign exchange saved. Local substitutes for feeds are imperative because as earlier mentioned, it is expected that production of eggs will be on the increase which only means that more feeds will be needed in the near future.

Disease Control

The veterinary department has done a lot of research on disease control through its extension programmes. The control of renikhet disease through a campaign by the veterinary department to urge the use of vaccine has drastically reduced mortality rates of layers caused by the

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[8] Report to the government of the Federation of Malaya "Survey of Possibilities of processing Animal Feedstuffs from locally available by-products and Raw materials". FAO 1961.

disease.[9] But the veterinary department must also find means of control for other types of diseases like infections bronchitis disease, and campaigns must be launched to educate the farmers to use vaccine and drugs and also services provided by the Veterinary department. Lastly a continuing research programme on diseases will be useful.

Research must also be carried out on production techniques whereby efficiency of layers can be increased and also develop new strains or crosses of layers that will be able to lay more eggs and consume less feeds.[10] Research in this direction will lower cost and benefit not only the producers but also the consumers.

White shelled eggs are not popular with the average consumer. The veterinary department can educate consumers to consume white shelled eggs and explain that prejudices against the white coloured eggs are unfounded.

One project which is encouraged for the egg industry is that the veterinary department in Malacca is training youths in the proper rearing of poultry. They are taught modern methods of poultry rearing.

Possible action on Marketing

Where the marketing problems like storage, transport, and finance are concerned, there are few alternatives that can be adopted.

Firstly the producers can set up a multi-purpose cooperative societies in different areas in Malacca to provide a more efficient marketing service. In this way costs on storage and transport can be minimised through economics of large scale. Finance and credit can be granted by the government through such an organisation for investments or credit to the members. In this way larger profits will accrue to the producers. Technical know-how on methods of running such a business organisation should either be provided by the Ministry of Agriculture and Cooperatives or through FAMA.

If such an organisation cannot be set up, the government can help by setting up a Marketing Board which can control prices and the whole process of marketing.

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[9] The Veterinary Division, Ministry of Agriculture and Cooperatives, Proposals for the Development of Livestock Industry and the Reorganisation of Veterinary Services, Kuala Lumpur, 1967.

[10] According to Mr. Thuraisingam, Deputy Director of veterinary department, the problem of

Market Information

At present FAMA gives belated reports on retail prices of eggs over the radio. Information on prices and market situation can be collected from various centres and dessiminated through mass media to the producers. Dessimination of information should be accurate and simple and should be in all languages so that everybody could understand the information. Information could also specify grades and the location of markets.

Price Stabilisation

To reduce fluctuating prices, an organisation like a marketing Board can be set up either regionally or Nationally to control prices. In such a way, areas with surplus eggs can sell eggs to areas where there is shortage of eggs at a fair price. This will iron out any price differences in different areas. Producers can also form an organisation to control prices.

Since it has been forecasted that egg production will increase in the near future, there should be an organisation to look into the possibilities of exports, especially to Sabah and Sarawak. It was understood that Mr. Tan, the owner of the Malacca Quail Farm, would like to export quail eggs to Europe. He feels that there is a possibility of a big market for quail's eggs in Europe but he lacks the knowledge of export business and finance. As such the government can set up a farm organisation like an agricultural bank for the purpose of looking at the possibility of exports. The bank need not necessarily be a bank to promote export of eggs but it can be a bank for a range of agricultural products.

Egg-by Products

Finally it would be worthwhile to look into the possibility of using eggs in the making of products like cakes, biscuits etc. This will stimulate the local consumption of eggs and encourage production of eggs and there can also be export possibilities cakes and biscuits and thus earn valuable foreign exchange.

CONCLUSION

AN EVALUATION OF THE PROSPECTS OF THE EGG INDUSTRY IN MALACCA IN FUTURE

The production of fresh hen's eggs have been increasing as seen in the earlier chapters.[1] But such an increase in production cannot be wholly absorbed by local consumption alone, and therefore producers in Malacca must consider channeling eggs to other states of Malaysia or export[2] eggs to foreign countries if the eggs industry is to expand.

Regarding local consumption of eggs (i.e. in Malacca), it is unlikely that growth of the egg industry can be too great proportion in future because the increase in population and income level, which is an indicator of effective demand is a slow process.

But the expansion of the egg industry in Malacca can take place without having to depend on the local demand for eggs in Malacca. What then, are the prospects of channeling eggs to the other states of Malaysia and also to export eggs to foreign countries? Presently, the states of Penang, Selangor and Perak, the main producers of fresh eggs, are not only self-sufficient in eggs, but there are surplus eggs from these three states. Since the three states mentioned are nearer to states like Trengganu, Pahang and Kelantan, where there is a demand for fresh eggs, the former states are in a better position to channel their surplus eggs to the latter states. The opening of the East-West highway will make it easier and cheaper to transport fresh eggs from Penang and Northern Perak to Kelantan and parts of Trengganu.

Yet another possible alternative is for the egg producers in Malacca to find export possibilities in foreign markets. Malacca has an advantage of having a port which can serve as an outlet for exports to other countries. It was pointed out in an earlier chapter that there is an excess of supply over demand in the export market, making the export market very competitive. Unless the producers in Malacca can reduce costs of production, presently or in the near future, the export prospects are dim. Hence the growth of the egg industry in Malacca will not be great.

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[1] See Appendix VII.

[2] Malaysia is self-sufficient in fresh eggs. Only preserved and salted duck's eggs are imported.

Any expansion of the production of eggs in Malacca must take into account the prices of eggs. The trend since 1956 is a progressive decline in the prices of eggs. Low and declining prices of eggs will discourage the future growth of the egg industry. Unless the producers can find means of lowering costs, the egg industry will be stagnant.

One point to be noted is that the effects of British withdrawal on the economy of Malacca is not known yet. But one effect of the British withdrawal will be the reduction in the demand of eggs in Malacca. It was estimated that the British army personnel in Malacca consumes about 10,000 eggs daily.[3] This, will further lead to the prospects of the egg industry in Malacca to be dimmer.

There is of course, a possibility of concentrating or breeding hens for meat purposes. But it must be noted that the conversion of breeding hens for egg production to meat production cannot be done in a short time. Farmers who are presently breeding hens for egg production must slowly switch over to rearing hens for meat production.

From the analysis alone, except for breeding hens for meat production, the prospects of expansion for the egg industry in Malacca is not good.

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[3] Estimates given by the Manager of the Malacca Cold Storage and one wholesaler.

APPENDIX I

ESTIMATED PRODUCTION COST OF HEN'S EGG

Pullet: 6 Months Old (Laying Age)

1.	Cost of 1,000 day old chicks[1]		$1,000.00
2.	Cost of vaccination[2]		10.00
3.	Cost of electricity to provide[3] warmth for the chicks		30.00
4.	Depreciation of capital[4] equipment		15.00
5.	Cost of feed consumed:[5]		
	(a) From 0 to 1 month	$ 300	
	(b) From 1 to 4 months	2,150	
	(c) From 4 to 6 months	900	3,350.00
6.	Labour cost[6]		540.00
7.	Cost of drug supplement[7]		40.00
8.	Cost of producing 900 six-month old pullets[8]		$4,985.00
9.	Cost of producing one six-month old pullet		$ 5.54

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[1] Price of each day old chick from the local hatcheries - $1/-.

[2] Anti-renikhet vaccination charges per bird - 1 cent.

[3] Electricity was used to provide warmth for the chicks. The cost to provide warmth is $3/- per 100 chicks. For the 1st month electricity for warmth is used from morning to night time. After 1 month electricity for warmth is only used at nights.

[4] Depreciation of chicken shade over a period of six months - straight line basis. Each shade costs $1,500 and can house 500 birds. Life span of the chicken shade is 15 years.

[5]Cost of feed was taken on basis of months. From one day old to one month it was estimated that one chick consume 30 cents of feed. From one month to 4 months old, a chick consumes $2.15 worth of feed each. From 4 months to 6 months (laying stage) a chick consumes 90 cents worth of feed. It must be noted that during the early stages of growth of a chick, the feed is of different type from later stages of growth.

Prices of different types of feed given:

1 picul Starter's mash	$24.00
1 " Grower's and Layer's mash	$18.00

[6]Labour Cost: The cost of labour was computed on the basis that a person can look after 1,000 chicks efficiently. The average paid per labourer in a chicken farm varies from $2.50 to $3.00 per day. I have taken the wage to be $3.00 because I assume that $3.00 is paid for a worker and he is also expected to do other general chores in the farm after his main work of looking after chicks has finished.

[7]The cost of drugs was taken at $5.00 per week for 500 birds. Other sources have quoted costs of drugs to be negligible to be included as part of costs.

[8]This is estimated that mortality rate is 10%. Some sources give as low as 5% mortality rate. But some farmers admitted that to be on a safe side 10% mortality rate will be a more appropriate figure.

APPENDIX II

ESTIMATED COST OF PRODUCTION PER EGG

1.	Cost of 100 six-month old pullets[1]		$ 554.00
2.	Less estimated revenue from[2] culled layers		
3.	Recurrent Costs:		
	For 100 birds over a period of 18 months:-[3]		
	a) Cost of feed consumption (layer mash)[4]	$1,620.00	
	b) Cost of drugs, etc.[5]	10.00	
	c) Cost of depreciation for battery[6] cages, feeding and water trough, shed, etc.	50.00	
	d) Cost of Labour[7]	81.00	
		$1,761.00	
	With average mortality of layers over a period of 18 months at 20%.		
	Recurrent costs of 100 birds in 1st half period of lay	$ 880.50	
	Recurrent costs of 80 birds in the 2nd half period of lay	704.40	
4.	Total costs for total eggs produced over a period of 18 months		$1,928.90
5.	Total number of eggs laid over a[8] period of 18 months.		
	With average mortality of layers at 20%.		
	Number of eggs laid, (100) in the 1st half period of lay.	16,200 eggs	
	Number of eggs laid, (100) in the 2nd half period of lay	12,960 eggs	
	Total number of eggs laid over a period of 18 months	29,160 eggs	
6.	Cost of production per egg	6.61 cents	

[1]Refer to Appendix I.

[2]The average weight of a culled layer at 18 months of age is about 3½ katies and selling price at time of my field studies was about 75 cents per kati. Average mortality of layers over a period of 18 months during normal period (without any serious outbreak of diseases) is about 20%. This figure varies depending on efficiency of each farmer in management and husbandry.

[3]A layer can lay for a period of 18 months before it becomes uneconomical to rear and has to be sold as culled layer.

[4]According to many sources the estimated cost of feeding per day per layer is 3 cents. Other sources quoted higher figures i.e. about 4 cents.

[5]Though costs of drugs are negligible during normal times, I have taken $10/- because drugs are bought and used once in a while as a precautionary measure. It must be noted that in the feed itself, drugs and antibiotics etc. are incorporated.

[6]The estimated costs of shade, cages, water pipes etc. is as follows:-

Cost of shade	$1.00
Cost of wire cages	1.30
Miscellaneous (pipes, water troughs)	1.00
	$3.30

Life expectancy of capital equipment is taken as 10 years and depreciation is calculated over 18 months by straight line depreciation.

[7]Cost of labour: Each worker can handle 2,000 layers and is paid about $3/- per day.

[8]The total number of eggs produced over a period of 18 months assuming:

The average percentage of lay for 1st lay period (9 months) to be 60%. Though some sources give this as high as 70%.

The average percentage of lay for the 2nd lay period (9 months) to be 55%. This figure is taken because layers are sold as culled birds when production of eggs is between 50% or 55% when it uneconomical to rear the bird.

NOTE:

The returns from sale of the chicken faecal matter have not been taken into consideration. It has been estimated that for 100 birds (layers) the production of faecal matter is about 2 bags per month. 1 bag of faecal matter can be sold at $2.50. If this being the case:-

Total costs over a period of 18 months	$ 1,681.00
Total costs for total eggs produced over a period of 18 months	$ 1,848.90
Total number of eggs laid over a period of 18 months	29,160 eggs
Cost of production per egg	6.34 cents

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[1]Price given by Mr. Tan: ex-hatchery price of one quail chick - 35 cents.

[2]For 200 quail chicks, a 60 watt lamp is used for 21 days - 24 hours a day.

[3]Cages for quail chicks: each cage cost $25/-. Each cage can house 200 chicks. Life span of each cage is about 10 years. Depreciation calculated on Straight line depreciation. Chicks kept in cages for 3 weeks. Chicks also kept in ordinary battery cages for 3 weeks. Each cage can house 4 birds and costs $3.50 and can last for approximately 2 years.

[4]The estimated cost of feed per bird is 60 cents.

[5]Cost of drugs was estimated to be $2/- per 100 chicks.

[6]Labour cost: average wage per man is $100/- per month. One man can look after 1,500 chicks.

[7]Mortality rate of the quail chicks was given by the farmer as 5%.

APPENDIX III

ESTIMATED PRODUCTION COST OF QUAIL'S EGGS

Cost of one Chick: 1½ Months (6 Weeks)

1.	Cost of 1,000 day old chicks[1]	$ 350.00
2.	Cost of electricity to provide warmth for 21 days	40.50
3.	Depreciation of capital equipment[3]	26.87
4.	Cost of feed: 6 weeks duration[4]	600.00
5.	Cost of drugs and antibiotic[5]	20.00
6.	Labour cost[6]	150.00
7.	Cost of producing 920 six-week old chicks[7]	$1,197.00
8.	Cost of producing one six-week old chick	$ 1.30

[1]Price given by Mr. Tan: ex-hatchery price of one quail chick - 35 cents.

[2]For 200 quail chicks, a 60 watt lamp is used for 21 days - 24 hours a day.

[3]Cages for quail chicks: each cage cost $25/-. Each cage can house 200 chicks. Life span of each cage is about 10 years. Depreciation calculated on Straight Line depreciation. Chicks kept in cages for 3 weeks. Chicks also kept in ordinary battery cages for 3 weeks. Each cage can house 4 birds and costs $3.50 and can last for approximately 2 years.

[4]The estimated cost of feed per bird is 60 cents.

[5]Cost of drugs was estimated to be $2/- per 100 chicks.

[6]Labour cost: average wage per man is $100/- per month. One man can look after 1,000 chicks.

[7]Mortality rate of the quail chicks was given by the farmer as 8%.

APPENDIX IV

ESTIMATED COST OF PRODUCTION PER EGG

1.	Cost of 100 six-week old quail chicks[1]		$ 130.00
2.	Less estimated revenue from culled layers[2]		41.50
3.	Recurrent cost:		
	For 100 birds over a period of 18 months:-		
	a) Cost of feed consumption. Each layer consumes 35 cents per month[3]	$630.00	
	b) Costs of drugs and antibiotics[4]	36.00	
	c) Cost of depreciation of battery, shed and water troughs etc.[5]	175.00	
	d) Cost of labour[6]	81.00	
		$922.00	
	With the average mortality of layers over a period of 18 months at 11⅓%		
	Recurrent cost for 100 birds in the 1st six months of lay	$344.50	
	Recurrent costs for 83 birds in the 2nd six months of lay	285.94	
	Recurrent costs for 83 birds in the 3rd six months of lay	285.94	
	Total recurrent costs over a period of 18 months		$ 916.38
4.	Total costs for total eggs produced over a period of 18 months		$1,004.88
5.	Total number of eggs laid over a period of 18 months		
	Numbers of eggs laid, (100 layers) in the 1st six months period of lay	15,600	
	Numbers of eggs laid, (83 layers) in the 2nd six months period of lay	13,200	
	Number of eggs laid, (83 layers) in the 3rd six months of period of lay	10,200	
	Total number of eggs laid over a period of 18 months	38,000	
6.	Cost of production per egg		$2.34

[1]Refer to Appendix III.

[2]Each culled layer is sold to the restaurant at a flat rate of 50 cents each. On the average about 11½% layers die yearly. Hence for 18 months, we can assume that 17 birds die. This is based on monthly reports collected by Mr. Tan of the Malacca Quail Farm.

[3]This cost of feed is based on Mr. Tan's estimate that layer consumes 1 kati a month. 1 kati of feed costs 35 cents.

[4]For 100 katies the drug mix is $2/-. The total consumption for 18 months for 100 layers which consume 1 kati per month is $36/-.

[5]Capital equipment including shade is $3.50 for 4 birds calculated that it could last for 2 years. Depreciation was on Straight Line basis.

[6]Costs of labour - see Appendix I.

[7]Average number of eggs laid for 18 months is as follows:

1) For 1st 6 months 26 eggs per month.
2) " 2nd " " 22 " " "
3) " 3rd " " 17 " " "

These figures were taken from the records of the Malacca Quail Farm.

APPENDIX V

MALACCA SUMMARY OF POULTRY FARMS (ALL TYPES OF FARMS) BY STATE

State	Number of Birds						Types of Farms							
	All Farms		Table Birds		Layer Type Birds		Table Birds Only		Layer Type Only		Table Birds + Layer Type Birds			
	Farms Reporting	Total Birds	Farms Reporting	Table Birds	Farms Reporting	Layer Type	Farms Reporting	Birds	Total Reporting	Birds	Farms Reporting	Total Birds	Table Birds	Layer Type
1966 - Malacca	102	203,130	56	38,410	90	164,920	12	21,400	46	109,415	44	72,315	17,010	55,305
1968 - Malacca	184	258,351	114	59,011	124	206,500	60	32,181	70	130,130	54	96,040	26,325	69,915
1966 - District:														
Alor Gajah	18	27,550	10	4,700	16	22,850	2	2,000	8	16,150	8	9,400	2,700	6,700
Malacca Central	174	159,990	38	24,960	67	135,030	7	14,700	36	90,315	31	54,975	10,260	44,715
Jasin	10	15,590	8	8,750	7	6,840	3	4,700	2	2,950	5	7,994	4,050	3,890
1968:														
Alor Gajah	40	59,430	22	20,500	29	51,580	12	11,000	16	23,050	12	25,380	9,500	15,780
Malacca Central	112	169,750	72	31,345	77	139,960	36	18,370	41	98,970	35	52,410	12,255	40,115
Jasin	32	19,171	20	7,596	18	14,960	12	2,811	13	8,110	7	8,250	3,430	3,820

APPENDIX VI

MALACCA: POULTRY FARMS ALL TYPES OF FARMS BY SIZE OF FARMS AND STATE

State	Total		Farms Reporting the Following No. of Birds																
	Farms Reporting	Total Birds	Below 100	100 to 499	500 to 999	1,000 to 1,999	2,000 to 2,999	3,000 to 3,999	4,000 to 4,999	5,000 to 5,999	6,000 to 6,999	7,000 to 7,999	8,000 to 8,999	9,000 to 9,999	10,000 to 14,999	15,000 to 19,999	20,000 to 29,999	30,000 to 49,999	50,000 and over
1966 - Malacca	102	203,130	-	17	23	36	9	4	4	4	1	3	-	-	-	-	-	1	-
1968 - Malacca	184	258,351	17	58	36	34	13	16	4	3	1	1	-	1	-	-	-	1	-
1966 - District:																			
Alor Gajah	18	27,550	-	3	4	8	1	1	-	-	-	1	-	-	-	-	-	-	-
Malacca Central	74	159,950	-	13	17	23	7	3	4	3	1	2	-	-	-	-	-	1	-
Jasin	10	15,590	-	1	2	5	1	-	-	1	-	-	-	-	-	-	-	-	-
1968:																			
Alor Gajah	40	59,430	1	11	9	9	3	5	1	1	1	1	-	-	-	-	-	-	-
Malacca Central	112	169,750	5	37	22	23	9	10	2	1	-	-	1	-	1	-	-	1	-
Jasin	32	19,171	11	10	5	2	1	1	1	-	-	-	-	-	-	-	-	-	-

APPENDIX VII

MALACCA: NO. OF LAYERS IN FARMS AND EGG PRODUCTION BY FARMS

State	Total					No. of Layers (5½ Months - 2 Years)															
	Farms Reporting	Total Birds	Total Layers	Total Daily Egg Prodn.	% Eggs to Layers	Below 100	100 to 499	500 to 999	1,000 to 1,999	2,000 to 2,999	3,000 to 3,999	4,000 to 4,999	5,000 to 5,999	6,000 to 6,999	7,000 to 7,999	8,000 to 8,999	9,000 to 9,999	10,000 to 14,999	15,000 to 19,999	20,000 to 29,999	30,000 and above
1966 - Malacca	88	163,670	111,610	68,689	61.5	3	32	22	16	6	4	1	1	2	-	-	-	-	-	-	1
1968 - Malacca	119	212,370	132,065	79,580	60.2	10	45	27	16	9	8	2	-	1	-	-	-	-	-	-	1
1966 - Districts																					
Alor Gajah	16	22,850	17,300	9,245	53.4	-	6	3	5	-	1	-	1	-	-	-	-	-	-	-	-
Malacce Central	65	133,360	89,360	56,570	63.6	3	23	16	11	5	3	1	-	2	-	-	-	-	-	-	1
Jasin	7	6,840	4,950	2,520	50.9	-	3	3	-	1	-	-	-	-	-	-	-	-	-	-	-
1968:																					
Alor Gajah	26	49,960	28,730	17,025	59.3	1	8	7	4	4	1	1	-	-	-	-	-	-	-	-	-
Malacca Central	75	147,730	95,525	58,785	61.6	5	27	19	10	5	6	1	1	-	-	-	-	-	-	-	1
Jasin	18	14,960	7,810	3,770	47.6	4	10	1	2	-	1	-	-	-	-	-	-	-	-	-	-

APPENDIX VIII

MALACCA: LAYER TYPE ONLY POULTRY FARM BY SIZE OF FARMS
(All these Farms have layer type Birds only and no Table Birds)

State	Total		Farms Reporting the Following No. of Layer Type Birds in Farms															
	Farms Reporting	Total Layer Type	Below 100	100 to 499	500 to 999	1,000 to 1,999	2,000 to 2,999	3,000 to 3,999	4,000 to 4,999	5,000 to 5,999	6,000 to 6,999	7,000 to 7,999	8,000 to 8,999	9,000 to 9,999	10,000 to 14,999	15,000 to 19,999	20,000 to 29,999	30,000 and over
1966 - Malacca	46	109,415	-	12	10	11	3	2	3	2	1	2	-	-	-	-	-	1
1968 - Malacca	70	130,130	3	23	15	10	4	9	2	1	2	1	-	-	-	-	-	1
1966 - District:																		
Alor Gajah	8	16,150	-	3	-	3	1	-	-	-	-	1	-	-	-	-	-	-
Malacca Central	36	90,315	-	9	10	6	1	3	1	1	1	1	-	-	-	-	-	1
Jasin	2	2,950	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
1968:																		
Alor Gajah	16	23,050	-	6	3	3	2	1	-	-	1	-	-	-	-	-	-	-
Malacca Central	41	98,970	2	9	10	6	2	7	2	1	1	1	-	-	-	-	-	-
Jasin	13	8,110	1	8	2	1	-	1	-	-	-	-	-	-	-	-	-	-

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