

Impact of Swiftlet's Moulting Season on the Value of Edible Bird Nests

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Abstract. Edible bird nest has been noted as one of the high value agriculture products in Malaysia. The value of raw bird nests harvested from swiftlet farms are determined by the cleanliness, shapes and colour appearance of the nests. During the dry season, raw bird nest harvested are found to be more dirty with impurities such as feathers and other elements as compared to those harvested in wet season. This study aims to identify the economic impact of swiftlet moulting seasons on the value of edible bird nest.

By analyzing the collected data, the relationship between cleaning wastage and the value of raw bird nests was established. The impact identified was the increase of 4% in wastage and 20% higher in cleaning cost. As the market price of clean edible bird nests constantly fluctuates, losses due to wastage and cleaning cost are absorbed by the raw bird nest sellers. Based on the survey, the economic impact on the raw bird nest pricing was between 20 - 27% lower than the normal trading prices.

Keywords: swiftlet, swiftlet farm, economic impact, moulting seasons, wastage of bird nests, bird nest cleaning.

1. Introduction

The main export market of edible bird nests are Hong Kong (50%), China (8%), Taiwan (4%) and Macau (3%) with estimated consumption of 160 tons for 2006.[1] The growth is exponential in view of the strong growing economy of the Chinese market alone.

The swiftlet farming industry is a new emerging industry in Malaysia and has achieved its critical mass 5 years ago. However, the edible birds' nests industry in Malaysia has a much longer and illustrious history having been in consistent operation for the last 100 odd years, and is made up primarily of cottage style operations and with the main source of bird nests coming mainly from cave nests. As the swiftlet farming industry continues to expand and grow, more and more supplies of edible birds' nests sourced from purpose-built swiftlet farms begin to find their ways into the supply chain. Swiftlet farming industry in Malaysia has been growing by leaps and bounds over the last 8 years. Before 1998, there was an estimated of 900 plus swiftlet farms throughout the country. By the end of 2006, the number of swiftlet farms throughout the country was close to 36,000 units, with an average annualized growth rate of 35% per year (for the last 5 years).[2]

Malaysia is currently the third largest producer of edible birds' nests (7% of gross supply value) in the world, behind Indonesia (60%) and Thailand (20%). [1]

The overall value of bird nest market in Malaysia is still very much determined by the quality of raw bird nests. This is crucial to the swiftlet farming industry as it has a direct impact on the income of swiftlet farmers.

1.1. Types of edible bird nests in the market

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Edible bird nests can generally be categorised into three major types, half-cup shape, strips and biscuits. The selling price ranges from the highest in half-cup shape to the lowest as biscuit. Apart from the appearance, the value is also determined by its size, cleanliness and colour. Preservation of the edible bird nests to its original shape command the highest price followed by the size and cleanliness of the edible nests.

However, other materials were found to be added to increase the net weight of the nests prior to a sale. Such materials included Tremella fungus, karaya gum, red seaweed, pork skin and egg white, etc. [3] These adulterants were usually incorporated at levels approximating 10% and were extremely difficult to detect due to their similar colour, appearance, taste and texture to the actual salivary nest cement.[4]

1.2. Value of raw bird nest

In general, the value of raw bird nests is determined by its shape, cleanliness, size and colour. It is extremely difficult to determine the value as the normal trading of raw bird nests was in the form of negotiation. Most of the swiftlet farmers harvest their nest in different time and the mixture of various grading of bird nest make it difficult to determine a standard value. Due to the nature of business, the trading mostly involves lump-sum tenders similar to those of live fish trading. Therefore, it is depending on the experience of the traders to offer a reasonable value that are acceptable by the farmers.

1.3. Shapes

The most favored shape is a perfect half cup that is large but not too thick, and without holes. [5]

Most of the raw bird nests are subdivided into three categories. They are graded as grade A, grade B and grade C as shown in Fig. 1. The shape of grade A nests resembles a half-cup shape with 180 degrees or even surface when place on the horizontal surface. Grade B nests have similar shape as those of Grade A but it is 135 degrees when placed on flat surface. Grade C is only half of grade A and it is 90 degree when place on a flat surface.

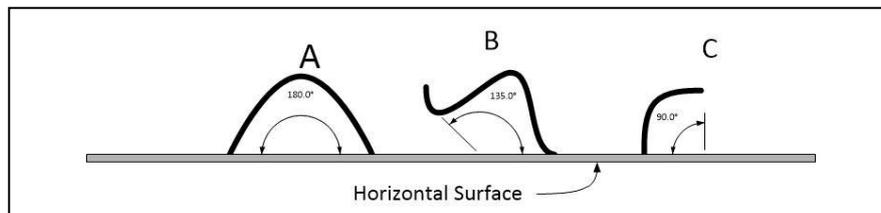


Fig. 1 – Grading of Raw Bird Nests

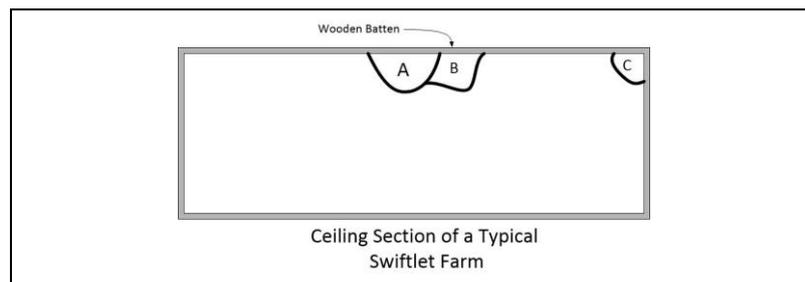


Fig. 2 – Formation of Raw bird nest in Swiftlet farm

Fig. 2 shows the formation of different grade when the swiftlet building their nest on the wooden batten. In most of the new swiftlet farm, the swiftlet would occupy the four corners of the wooden batten as nestling place. This is due to the location in which it is easier for the birds to construct the nest with lesser resources. Therefore, the percentage of grade C raw bird nest will be higher as compare to grade A and grade B.

1.4. Cleanliness

Cleanliness is one of the determining factors on the value. Any impurity on the bird nests would affect the costs of cleaning as cleaning is time consuming and this would also increase the wastage of the bird nests. If the swiftlet farm owners wish to obtain a higher price for their nests, they have to remove all traces of feathers and impurity. Most often, white nests are clean by hand to preserve the shapes. However, the process may create holes which reduce their value. [5]

The cleanliness of birds nest was directly influenced by the maintenance of the swiftlet farms. Regular clearing of guano from swiftlet farms could reduce the amount of impurity on the bird nests. However, the moult seasons of swiftlet during the month of May to August have greatly affected the cleanliness of bird nests due to the presence of more shredded feathers in the raw bird nests.

1.5. Size

Traditionally, the size of the bird nests was determined by the number of finger (width of adult fingers). It was inaccurate as the size varies from different persons. The more scientific method was determined by the height and length of the bird nest as shown in the Fig. 3. A Grade A nest would have a measurement of 3 cm x 6 cm and a Grade B 2.5 cm x 5 cm. Or it could also be determined by the number of pieces in one kilogramme. Grade A would have 100 to 110 pieces and grade B in the range of 120 pieces in one kilogramme.

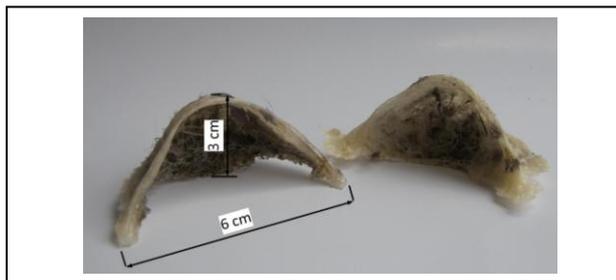


Fig. 3– Measurement of Raw Bird Nests

1.6. Colour

In general, most of the raw edible bird nests produced by the swiftlets are white in colour. Some of the bird nests of different colours as been seen in the market are not their original colours, it may be due to the poor maintenance of swiftlet farms, added elements or compound into original raw bird nests. Due to the exposure of the “blood bird” incident which unveiled the entire industry on adultrants, white bird nest has become the highly recognized bird nest colour in the market.

White colour has been considered as the highest grade followed by the a mixture of more yellowish nests. The yellowish colour tone may be due to high moisture content inside the swiftlet farms and high concentration of guano which contains nitrite compound.

1.7. Moisture contents

The main export market specify the moisture contents of 10% in Hong Kong but some others allowed for higher moisture contents such as in Taiwan. This has become controversial that some owners tried to increase the total weight by spraying more water on the nests. [5] Spraying of more water could preserve the shape and prevent the bird nest from being broken during transportation. However, the norm only allows for 10% of moisture contents. Any higher moisture contents would affect the value or be required to dry out the bird nests before weighing.

1.8. Wastages

Most of the swiftlet farms owners understand that during the dry seasons, the raw nests’ prices would reduce substantially compared to normal seasons. The harvested raw bird nests have more feathers contents as compared to normal seasons, due to the moulting seasons of swiftlet life cycles.

The seasons would last for two to three months and coexist with the dry seasons in the month of May to July. During this period, swiftlets would incorporate its own shedding feathers into nest building. As such, the higher contents of the feathers led to the higher wastages and higher cleaning costs.

2. Objectives

This study aims to analyse and determine the correlation between the moult seasons and value of raw bird nest.

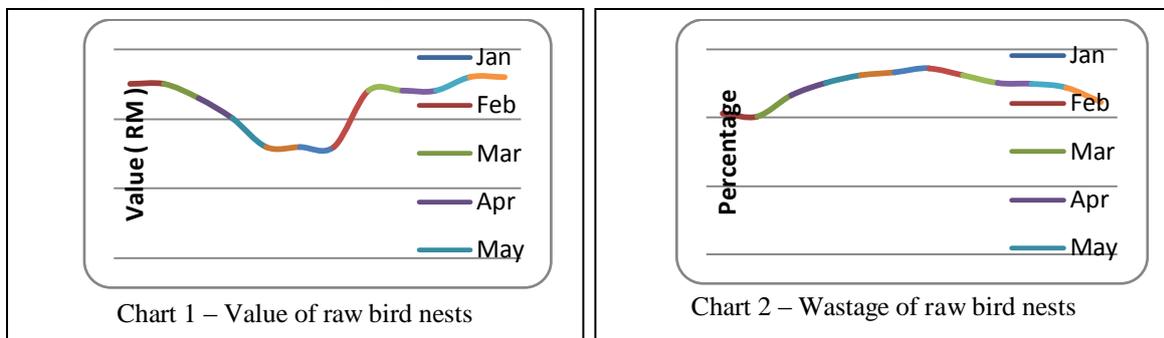
3. Research methodology

The research method tends to look into particular sample data obtained through cleaning facilities and the prices of raw bird nests throughout one year period. By conducting interviews with the swiftlet farm owners and traders, the trading price of the raw bird nests would be able to obtain throughout entire year. Another set of information on cleaning wastage, which mainly comprises of feathers would be obtained through collection of data from a bird nests processing plants.

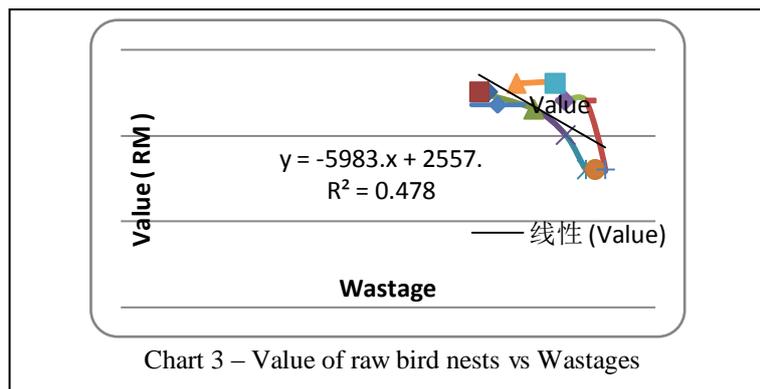
4. Data collection

The data obtained through the interviews show that the trading prices of raw bird nests were driven by market demand. During the month of Lunar Chinese New Year (Feb.) and Mid Autumn Festival (Sept.), the trading price is at its peak (highest) and on other seasons it remains consistent. During the month of May to July, the trading prices dropped to the lowest because of moult season.

Wastage during the cleaning process as shown on the chart below was from 20% to 27%. The result indicate that the peak of wastages was between the month of June to August in which bird nests were shown to compose of more feathers and impurities which can contribute to 15% -20% of the bird nest weight.



The chart below shows the relationship between raw bird nests price and wastages of bird nests. The trading prices have an inverse linear relationship with wastages as the price at its lowest, when the wastages increased to the highest. When the prices are at its peak, the wastages are at its lowest. Therefore, it is concluded that the moult seasons during the month of May to August, which have affected the cleanliness of the bird nests is shown to influence the value of the raw bird nests.



The data also showed that during the moult seasons, the wastage increased by 4% resulting in the price decline of 27% of its average price. According to the survey interviews, some of the owners who are reluctant to sell their bird nests during moulting seasons decided to keep them for better prices. However, with improper storage methods, these bird nests may deteriorate due to molding which further reduce the value of raw bird nests.

5. Conclusion

There is a need to further investigate into the actual economic impact of moulting seasons on the operation of swiftlet farms.

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