

## **BIBLIOGRAPHY**

CAYSOEN, DAISY P. APRIL 2012. Supply Chain of Muscovado Produced in Besao, Mountain Province. Benguet State University, La Trinidad, Benguet.

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## **ABSTRACT**

The study was focused on the supply chain of muscovado produced in Besao, Mountain Province. The study was conducted in the different barangays of Besao and in the different places where the market outlets are.

The data needed were gathered through personal interview with the use of survey questionnaires. Fourteen producers and thirty two consumers served as respondent in the study. Majority of the producers and consumers were middle to senior age. Most of the producers reached elementary level while majority of the consumers are degree holders. Most of the producers still practice the traditional way of producing muscovado wherein they use metal mill with the help of carabaos and human.

There were different market outlets identified which is located in Sagada, Bontoc, Baguio City and in Manila. Seven market outlets were interviewed and result shows that most buy muscovado wholesale. Most also do not add value to the muscovado for they buy it already packaged. Most of the buyers are government employees, local residents, private employees and self-employed.

Production problems encountered by producers were weather, lack of milling equipment, long and hard process, result of muscovado and lack of raw materials. Problems



in marketing include lack of supply, quality of product and promotion. Market outlets encountered also problems in marketing like lack of suppliers and promotion.

Based on the findings, the government should support the producers of muscovado by providing milling equipments to barangays and conduct trainings on muscovado production, create awareness of producers on the high demand of muscovado. Having knowledge on the high demand of muscovado may persuade them to produce muscovado more and market the product and lastly, further development or research focused on product quality improvement.



## RESULTS AND DISCUSSION

### Socio-Cultural Dimension of Muscovado Production in Besao

In Besao, muscovado production is now being practiced and done by farmers aside from rice production. Most of the barangays are planting sugar cane which they process it either as muscovado, “inte”, and basi. There are many producers of muscovado, however, only few are utilizing it for market disposal. Most of the producers utilize the produced muscovado for home consumption and use it during special occasions. The produced muscovado is used as their sugar supply for the whole year. They also share it to relatives and friends.

Muscovado is usually produced in small scale backyards. In some barangays, there’s what they call “dapilan” (mill) where the producers process muscovado. When they process muscovado, the community can help in the processing and in return, they are given muscovado as their share. Carabaos are also used especially if they lack manpower. Before, muscovado is only utilized by the producers for home consumption and usually used only during special occasions. In other barangays, some producers processed and produced muscovado for many many years. It is only for the recent years that they started to market the product.



## Profile of the Producers

Table 1 presents the demographic the profile of the respondents as to their age, educational attainment, years of producing muscovado, and years of selling muscovado.

Age. Most (42.9%) of the producers have an average age bracket of 51-60 years old. Four (28.6%) of the respondents have an age bracket of 41-50 years old. Two (14.3%) have an average bracket of 31 to 40 years old. One (7.1%) has an average bracket of 61 to 70 years old and is similar to those who have an age bracket of above 71 years of age. This result implies that most of the muscovado producers are middle to senior aged.

Educational attainment. Seven (50%) of the respondents reached elementary level and five (35.8%) reached high school level. There is one (7.1%) respondent who had gone to college education and one who had finished a college degree.

Number of years in producing muscovado. Most (50%) of the respondents were into muscovado production for 6-10 years. Also, three (21.4%) were into muscovado production for 1-5 years. Two (14.3%) out of the respondents were into muscovado production for 11-15 years and two also were already in muscovado production for 16-20 years.



Table 1. Profile of the producers

PROFILE	FREQUENCY		PERCENTAGE	
<b>Age</b>				
31 to 40		2		14.3
41 to 50		4		28.6
51 to 60		6		42.9
61 to 70		1		7.1
71 and above		1		7.1
<b>TOTAL</b>		<b>14</b>		<b>100</b>
<b>Educational attainment</b>				
Elementary Level	23	7		50
High School Level	1755	5		35.8
College Level	1	1		7.1
College Graduate	1	1		7.1
<b>TOTAL</b>	<b>42</b>	<b>14</b>		<b>100</b>
<b>Years of producing muscovado</b>				
1 to 5		3	64.3	21.4
6 to 10		7	21.4	50
11 to 15		2	9.5	14.3
16 to 20		2	4.8	14.3
<b>TOTAL</b>		<b>14</b>	<b>1001</b>	<b>100</b>



Table 2. Different producers of muscovado

NAME OF BARANGAY	FREQUENCY	PERCENTAGE
Agawa	4	28.6
Masameyeo	5	35.8
Besao Proper	5	35.8
TOTAL	14	100

#### Producers of Muscovado for Market Disposal

In Table 2, it presents the number of producers in different barangays who utilize the produced muscovado for market disposal. It was shown that there are only three barangays involved in muscovado production. There are four (25.6%) producers of muscovado in Agawa, five (35.8%) producers in Masameyeo and lastly, five producers in Besao Proper also.

#### Production Practices

Muscovado is naturally labor and time intensive and was usually produced in small scale backyards (Larkin, 1993). Unlike most other brown sugars, which are made by adding molasses to refined white sugar, muscovado takes its flavor and color, from its source sugarcane juice. Table 3 shows the kind of mills or technology used by muscovado producers and the volume produced in one production as well as their packaging materials.



Milling. Most important of the steps to improve the quality is to upgrade the mills. Most of the muscovado mills in the country are motor driven while some still use carabao (Icamina, 2009). In Besao, four (28.6%) of the respondents are still practicing the traditional way of producing muscovado wherein they use the metal mill with the help of carabao and human. Seven (50%) of the respondents use electrical mill. Three (21.4%) use the motor mill that is using diesel.

Packaging materials used. Result in Table 3 shows that most (77.7%) use cellophane bags to pack muscovado. Two of the respondents (11.1%) put labels on their product and another two (11.1%) of the respondents use sealer.

Volume of production. It was stated by Larkin (1993) that in 2002, muscovado production was pegged at 13.8 metric tons globally with India being the top producer with 9.8 metric tons followed by Columbia and Pakistan. The Philippines was the eighth largest producer with 0.1 metric tons presenting 0.8% of total production. In connection with this, Table 3 shows that one (7.1%) of the respondents produce 50-100 kilos and most (57.2%) of the respondents produce 101 to 200 kilos. Moreover, two (14.3%) of the respondents produce 201 to 300 kilos while three (21.4%) of the respondents produce 301 to 400 kilos of muscovado per production.



Table 3. Production practices

PARTICULARS	FREQUENCY	PERCENTAGE
<b>Mill Equipment</b>		
metal with the use of carabao	4	28.6
electrical mill (motor)	7	50
mill using diesel (motor)	3	21.4
<b>TOTAL</b>	<b>14</b>	<b>100</b>
<b>Packaging materials used</b>		
Cellophane	14	100
Labels	2	14.3
Sealer	2	14.3
<b>TOTAL*</b>	<b>18</b>	
<b>Volume of production Annually</b>		
50 to 100 kilos	1	7.1
101 to 200 kilos	8	57.2
201 to 300 kilos	2	14.3
301 to 400 kilos	3	21.4
<b>TOTAL</b>	<b>14</b>	<b>100</b>

\*multiple response

#### Marketing Practices of Producers

As cited by Miranda (1983), Beckman and David (1982) marketing is the process in which the demand structure for economic goods and services is anticipated, enlarged and satisfied through the conception, promotion, and exchange and physical distribution of





goods and services. Table 4 presents the marketing practices of the producers. It includes the mode of selling and mode of payment from buyers, where they supply muscovado, and how they sell muscovado.

Mode of selling and payment. Result shows that most (57.1%) sell muscovado through direct contact which means that buyers buy muscovado from them. Six (42.9%) deliver muscovado especially those who are supplying market outlets and when there are orders from buyers. On the other hand, eight (57.1%) of the respondents sell muscovado on cash basis most especially for those who buy directly from them and six (42.9%) of the respondents sell muscovado on cash upon delivery and lastly, three (21.4%) of the respondents sell muscovado on consignment basis.

How they sell muscovado. Table 4 presents that most (85.7%) of the respondents sell muscovado per kilo. Two (14.3%) of the respondents sell muscovado per pack weighing 500 grams each pack and one sell muscovado per can.

Where do you sell muscovado. Two (14.3%) of the respondents sell muscovado to their different market outlets in Sagada, Bontoc, Baguio and Manila. Most (71.4%) sell their product to direct buyers while five (35.7%) sell it during special occasions.

Promotion of muscovado. It was shown in Table 4 that two (14.3%) of the respondents promote their products through promoters like the agriculturists, and Local Government Units. Two (14.3%) of the respondents promote their product by joining trade fairs. Seven (50%) of the respondents promote their product through personal selling.



Table 4. Marketing practices of producers

PARTICULAR	FREQUENCY	PERCENTAGE
Mode of Selling		
Delivered	6	42.9
Direct Contact	18	57.1
TOTAL	14	100
Mode of Payment		
Cash	8	57.1
Cash upon delivery	6	42.9
Consignment	3	21.4
How do you sell muscovado		
per kilo	12	85.7
per pack (500 grams)	2	14.3
per can (12 ganta)	1	7.1
Where do you sell muscovado		
direct consumers	10	71.4
market outlets	2	14.3
occasions (fiestas)	5	35.7
Promotion of Products		
Promoters	2	14.3
participation in trade fairs	2	7
personal selling	5	35.7

\*multiple response



## Marketing Practices of Market Outlets

A supply chain is a network of facilities and distribution options that performs the functions of procurement of materials, transformation of these materials into intermediate and finished products, and distribution of these finished products to customers (Ganeshan, 2007).

Table 5 shows the marketing practices of market outlets. It presents how market outlets buy muscovado, what they do with unsold items, the mode of procurement from producers and how they promote muscovado.

Result shows that all (100%) of the respondents buy muscovado in a wholesale basis. Meanwhile, one (14.3%) of the respondent returns unsold muscovado to the producer while majority (85.7) of the respondents said that muscovado coming from Besao are always sold-out. There are no muscovado left unsold.

Mode of procurement from producers. Four (57.1%) of the respondents procure muscovado as cash upon delivery. Two (28.6%) of the respondents pay in consignment and one pay in installment basis.

Promotion. Most (57.1%) of the respondents promote the product by displaying it on their shops while two (28.6%) promote muscovado by “personal promotion.” They advertise the product to the people by talking to them and approaching them.



Table 5. Marketing practices of market outlets

PARTICULAR	FREQUENCY	PERCENTAGE
Mode of Buying		
wholesale	7	100
retail	0	0
TOTAL	7	100
What do you do for unsold items		
return to producer	1	14.3
always sold-out	6	85.7
TOTAL	7	100
Mode of procurement from producers		
cash upon delivery	4	57.1
consignment	2	28.6
installment Basis	1	14.3
TOTAL	7	100
Promotion		
personal promotion	2	28.6
display	4	57.1
*multiple response		



## Different Market Outlets

For any product or service offered by any business, there are usually a number of different business entities involved in the various stages of a supply chain, including manufacturers, distributors and retailers (Ehowmedia, 2011). In this table, it presents the different market outlets where the products are supplied including the volume supplied in 1 year.

Result shows that there are two main producers of muscovado in Besao who supplies the product in different market outlets. Table 6 shows that Mr. Pablo Dicdican supplies two market outlets in Sagada, the Consumers Coop (70 kilos) and Something Souvenirs (50 kilos). He also supplies Chakas Chief Wood in Bontoc (50 kilos) and Health 100 Restoerant in Baguio City (60 kilos). He supplies St. Luke's Hospital in Manila with 50 kilos in 1 year and trade 100 kilos during Trade Fares especially during Lang-ay Festivals.

Table 7 shows that Mr. Patricio Bal-o, another main producer supplies Sagada's Souvenir Shop in Sagada with 100 kilos, Anaya's Restaurant (63 kilos) and RMR (50 kilos) in Bontoc. He also trade 100 kilos of muscovado during Lang-ay Festivals and sell muscovado to residents.

Table 8 presents producers in Agawa (150 kilos), five producers in Masameyeo (200 kilos) sell their product to local residents, visitors, and during special occasions like municipal fiestas. Table 9 shows some producers in Besao Proper sell their product to Mr. Pablo Dicdican who package and sell to market outlets.



Table 6. Market outlet of Pablo Dicdican and volume supplied

PRODUCER	MARKET OUTLET	VOLUME SUPPLIED IN 1 YEAR
Pablo Dicdican		
a. Sagada	-Consumers Coop	70 kilos
	-Something Sagada Souvenirs	50 kilos
b. Bontoc	-Chakas Chief Wood	50 kilos
c. Baguio City	-Health 100 Restoreant	60 kilos
d. Manila	-St. Luke's Hospital	50 kilos
e. Trade Fair	-Lang-ay Festival	100 kilos
TOTAL		380 kilos

Figure 1 illustrates the flow of product from the producer (Mr. Dicdican) to different market outlets and to consumers. He also sell directly to St. Luke's Hospital in Metro Manila. In Sagada, Bontoc and Baguio City market outlet he sells the product per kilo and per pack. The price of muscovado per kilo ranges from Php80-100.00 while the price per pack is Php 50.00.

Meanwhile in the different market outlets, the price of muscovado is based on the owners of the outlets. They are the ones making the prices. In Sagada and Bontoc, the price of muscovado is Php 65.00 per pack while the price per kilo is Php 120.00. In Baguio, the muscovado is Php 50.00 per pack.



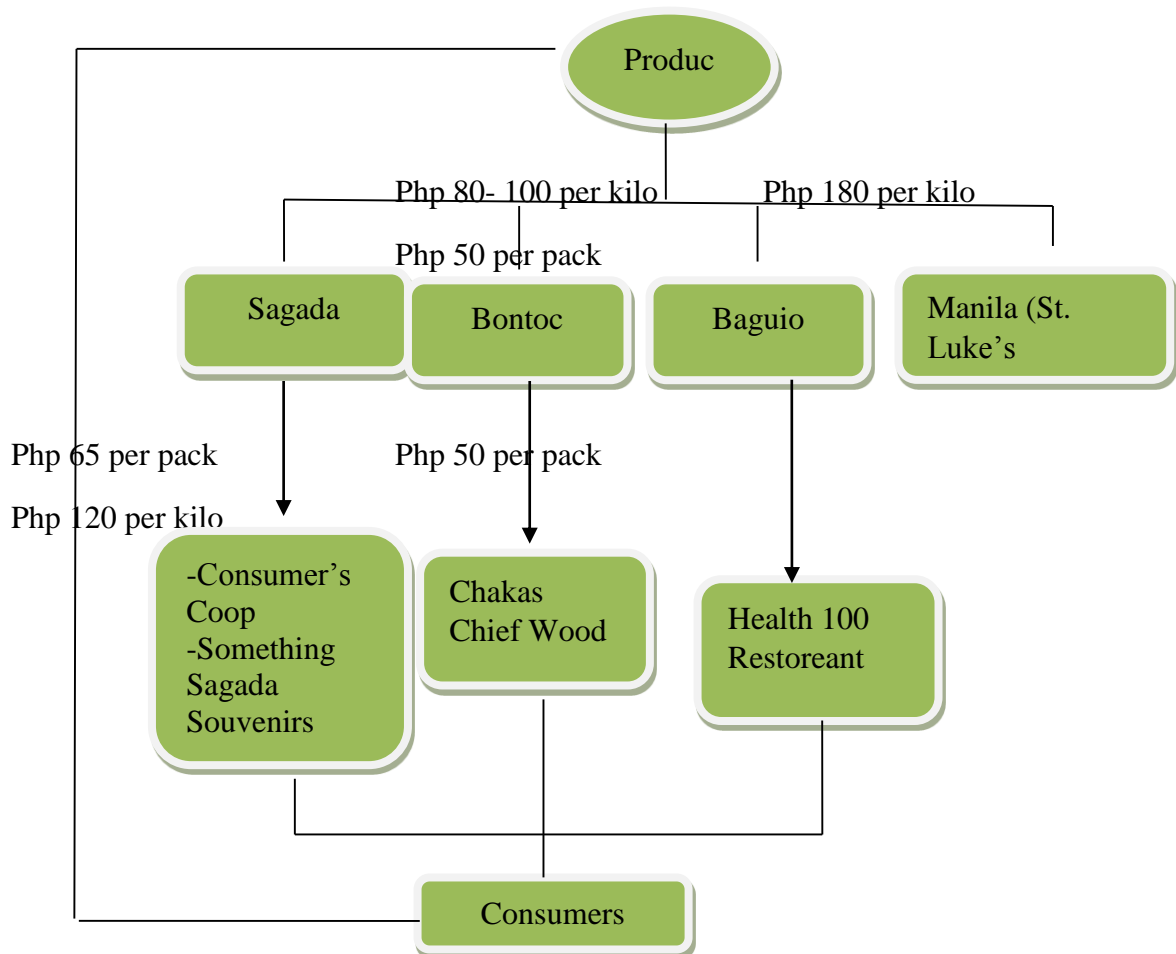


Figure 1. Flow of muscovado from Mr. Dicdican to Consumers

Table 7. Market outlet of Patricio Bal-o and volume supplied

PRODUCER	OUTLET	VOLUME
Patricio Bal-o		
a. Sagada	Sagada's Souvenir Shop	100 kilos
b. Bontoc	Anaya's Restaurant	63 kilos
	RMR(Government Center)	50 kilos
c. Trade Fair	Lang-ay Festival	100 kilos
<b>TOTAL</b>		<b>303 kilos</b>

Figure 2 shows the flow of product from the producer (Mr. Bal-o) who supplies Sagada and Bontoc market to the final consumer.

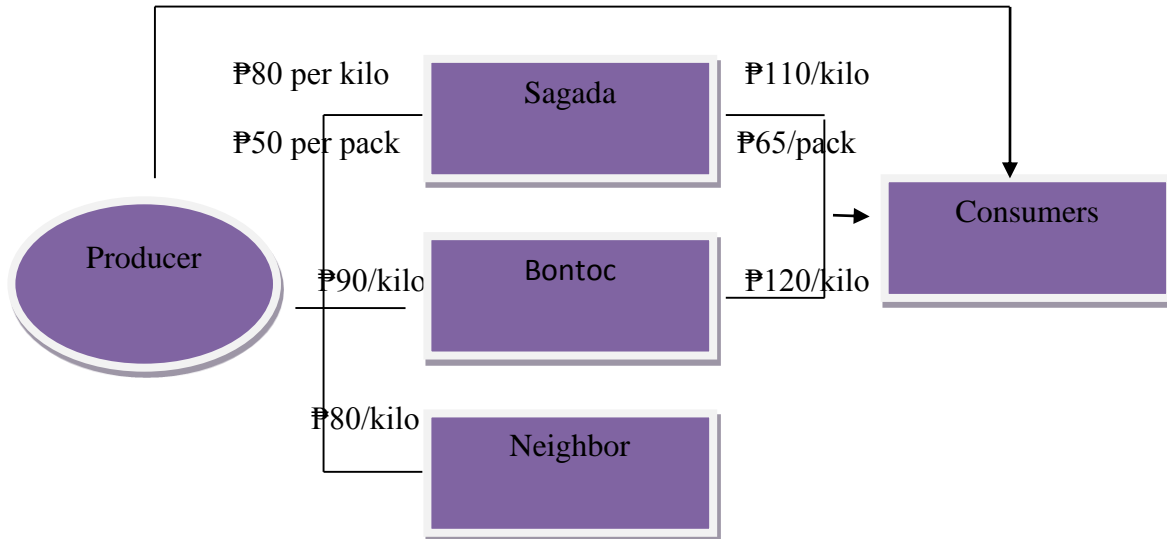


Figure 2. Flow of muscovado from Mr. Bal-o

Table 8. Market outlet of producers from Agawa and Masameyeo

PRODUCERS	OUTLET	VOLUME
Agawa, Besao (4 producers)	residents of Agawa, visitors, fiestas	150 kilos
Masameyeo (5 producers)	residents of Masameyeo, visitors, fiestas	200 kilos

Figure 3 presents the flow of product from the producer to consumers. The producers sell muscovado directly to consumers like the local residents and visitors.

Php 80- 100 per kilo

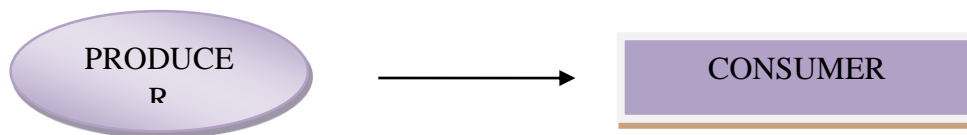


Figure 3. Flow of muscovado from Agawa and Masameyeo





Table 9. Market outlet of producers from Besao proper

PRODUCERS	OUTLET	VOLUME
Besao Proper (5 producers)	trader: Pablo Dicdican, residents, visitors	200 kilos

Figure 4 shows the flow of muscovado from the producer to another producer who supplies it to the different market outlets and finally to consumers. From producers, they trade to Mr. Dicdican, where he does packaging and labeling, then supplies the product to market outlets. The producers directly sell also to residents and visitors.

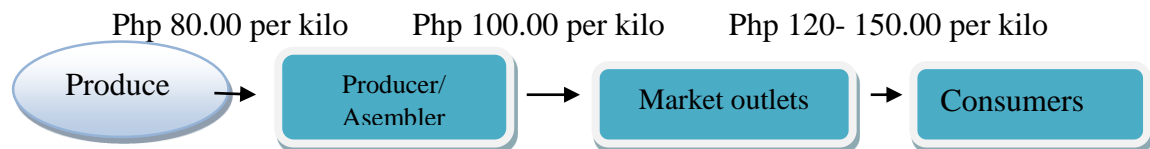


Figure 4. Flow of muscovado from Besao proper producers

Table 10. Market value added activities

PARTICULAR	FREQUENCY	PERCENTAGE
Added activities		
Re-pack	2	28.8
Add label	2	28.8
None	4	57.1
Materials used to add value		
sealer	2	28.8
plastic	2	28.8
tape	1	14.3
labels	2	28.8

\*multiple response



### Market Value Activities

The structure of a supply chain according to Sijses (2004) is a set of organizations that are actively involved in the sequential process and activities that produce a specific product or services. The prospect for developing enterprises to gain larger share of the value added created in turn a function of their own capacity to integrate forward, and so by-pass their “current” buyers. Table 10 shows that two (28.8%) of the respondents in order to add value with the delivered muscovado coming from Besao re-pack and add labelling. It shows also that most (57.1%) do nothing. The different market outlets buy it from producers well packaged so they just sell it. The producers are the ones doing the packaging as well as the labeling. On the other hand, the materials used in the delivered muscovado to add value are; sealer, tape, plastic and labels.

### Profile of the Consumers

Consumer interest in healthy and organic foods has revived interest in muscovado sugar. Most households are now buying muscovado in lieu of refined sugar. Coffee shops are now also offering muscovado sugar (Agriculturebusinessweek, 2008). Table 11 shows the background information of consumers such as age, gender, educational attainment, and main occupation.

Age. Two out of 32 consumer respondents are within the age bracket of 30 to 40, while eleven (34.4%) falls at the age bracket of 41-50 has eleven (34.4%) respondents. Fifteen (46.8%) are within the age bracket of 51 to 60 and four (12.5%) are 61 to 70 years of age.

Gender. Most (71.9%) of the respondents are female and nine (28%) are male.

Table 11. Profile of the consumers



PARTICULAR	FREQUENCY	PERCENTAGE
Age		
30-40	2	6.3
41-50	11	34.4
51-60	15	46.8
61-70	4	12.5
TOTAL	32	100
Gender		
Male	9	28.1
Female	23	71.9
TOTAL	32	100
Educational Attainment		
High School Level	2	6.3
College Level	5	15.6
College Graduate	25	78.1
TOTAL	32	100

Educational attainment. Table 8 shows that two out of 32 respondents are at the high school level while five (15.6%) are college graduate. Most (78.1%) of the consumers are degree holder.

#### Where Consumers Buy Muscovado

Table 12 presents where the consumers buy muscovado and the frequency of buying.

Result shows that seven of the respondents buy from Agawa, 5 (15.6%) of the respondents buy in Sagada, and 5 (15.6%) also in Bontoc. Four (12.5%) out of the respondents buy in Baguio City, seven (21.9%) in Masameyeo and four (12.5%) of the



respondents in Besao Proper. Out of the 32 respondents, eighteen (56.3%) buy in kilos while fourteen (43.7%) buy in packs especially those buying from shops.

Table 12. Where consumers buy muscovado

PARTICULAR	FREQUENCY	PERCENTAGE
Where do you buy muscovado		
Agawa	7	21.9
Sagada	5	15.6
Bontoc	5	15.6
Baguio City	4	12.5
Masameyeo	7	21.9
Besao Proper	4	12.5
Total	32	100
How do you buy muscovado		
per kilo	18	56.3
per pack (500 grams)	14	43.7
TOTAL	32	100



Table 13. Reasons for buying

REASONS FOR BUYING	FREQUENCY	PERCENTAGE
natural	23	71.9
good quality	15	46.9
good for the health	20	62.5
for sugar	21	65.6
pasalubong	3	9.4

\*multiple response

### Reasons for Buying

In Table 13, the respondents have multiple responses on their reasons for buying the product. Twenty three of the respondents buy the muscovado because they said it is natural.

Likewise, fifteen (46.9%) of the respondents buy the product because it is of good quality and twenty (62.5%) of the respondents said it is good for their health. Moreover, twenty one (61.6%) of the respondents out of 32 buy muscovado because it is used as sugar and three (9.4%) of the respondents said it is for pasalubong especially the tourists.

### Market Acceptability of Muscovado

Food acceptability is often referred to as liking, preference, enjoyment, selection and consumption of a food or drink or food quality. Food acceptability represents different forms of behavior to food products. In this table, it shows the response of consumer respondents whether they are satisfied or not satisfied with the muscovado produced in Besao, the acceptability of muscovado in terms of price, taste, and quality.

Satisfaction of the buyers. In Table 14, it implies that 100 percent of the respondents are satisfied with the muscovado produced in Besao. Hence, there is a great potential of muscovado so the producers should produce more muscovado for market disposal.



Price of the product. With 32 respondents in the study, three (9.4%) of them said that the price is too high while most, (53.1%) said that it is high. They claimed that it is organic that's why the price is high. On the other hand, twelve (40.6%) of the respondents believed that the price was just right and fair. With the effort of processing of muscovado, the price is worthy according to the respondents. The findings show that while there are some of the respondents who are satisfied with the price of the product, it can be drawn that there are majority of them who considered the price as either high or too high.

Table 14. Satisfaction of buyers

PARTICULAR	FREQUENCY	PERCENTAGE
Satisfied	32	100
Not satisfied	0	0
TOTAL	32	100
<u>Reaction on Price</u>		
Too High	3	9.4
High	17	53.1
Fair	12	40.5
TOTAL	32	100

Market Acceptability in Terms of Physical Attributes

Gatchalian (1989), quoted that consumer acceptance indicate the degree of like or dislike for a given product. The expected response is either a rejection or acceptance in varying degrees. Table 15 presents the acceptability of muscovado in terms of taste, color, texture and aroma. The table is solved by getting the mean and the significance with the



following ranges: 1.50 and below stands for extremely dislike, 1.51-2.50 for dislike, 2.51 to 3.5 for fair, 3.51 to 4.5 for like and 4.51 to 5.0 is for extremely like.

Result shows that in terms of taste, respondents extremely like the muscovado with a mean of 4.53 while in terms of color, texture, and aroma, the respondents like it with 4.13, 4.44, and 4.45 mean, respectively. On the other hand, respondents like the moisture content with 4.21 mean the same is through with the packaging and appearance with 4.25 and 4.4 mean. Thus, the result implies that in terms of acceptability of the product in the market, based on the findings, the muscovado is acceptable to the people.



Table 15. Rating on the physical attributes of muscovado

PRODUCT ATTRIBUTES	FREQUENCY					MEAN	INTERPRETATIVE VALUE
	1	2	3	4	5		
Taste				15	17	4.53	Extremely like
Color			4	20	8	4.13	Like
Texture				13	10	4.44	Like
Aroma			1	9	10	4.45	Like
Moisture Content			1	9	10	4.45	Like
Packaging			3	15	10	4.25	Like
Appearance			1	13	11	4.21	Like

Range: 1.50 and below- Extremely Dislike      3.51-4.5-Like  
 1.51-2.50-Dislike      4.51-5.0-Extremenly Like  
 2.51-3.50-Fair

Problems Encountered in Production and Marketing of Muscovado

Table 16 presents the different problems encountered in production and marketing of the producers.

Problems in production. The main production problem encountered by the producers is the weather (25%). The weather especially when it is always raining decreases the volume of juice that will be extracted from the sugarcane. The producers also lack milling equipment (21.9%) especially when the mill has defects. Other barangays also has only one mill that is for the whole barangay to use that's why producers need to wait for each other. Other problems encountered in production are, long and difficult process (15.6%), result of the muscovado (12.5%) whether the right cooking is accomplished and





lastly, lack of raw materials (9.4%) like buildings where to mill, and big pot for cooking. There is lack of carabao to help in milling and also, manpower.

Problems in marketing. One of the major problems in muscovado sugar is marketing. There is a little branding involved and standards vary from area to area. That is why a strong brand identity and establishment of product standards would ease marketing products (Agribusinessweek, 2008). The result shows that majority (46.9%) of the respondents said that lack of supply is the major problem in marketing muscovado. The demand for muscovado is high but they lack supply. On the other hand, quality of the product is also recognized by the respondents (3.1%) one of the problems is that they did not attain the right cooking. Lastly, two (6.2%) of the respondents said that promotion of muscovado is also a problem.

#### Marketing Problems of Market Outlets

Table 17 presents the different marketing problems encountered by market outlet respondents. The market outlets have multiple responses on the said problem. There is a high demand for muscovado but lack of suppliers (85.7%). One of the respondents also said that among their problems is promotion (14.3%).



Table 16. Problems encountered in production and marketing of muscovado.

PROBLEMS	FREQUENCY	PERCENTAGE
Problems in production		
long and difficult process	5	15.6
lack of milling equipment	7	21.9
weather	8	25
result of muscovado	4	12.5
lack of raw materials	3	9.4
Problems in Marketing		
lack of supply	15	46.9
quality of product	1	3.1
promotion	2	6.2
*multiple response		

Table 17. Different Problems Encountered in marketing by the market outlets

PARTICULAR	FREQUENCY	PERCENTAGE
lack of supplier	6	85.7
promotion	2	14.3
*multiple response		



## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### Summary

The study was focused on the supply chain of muscovado produced in Besao, Mountain Province. The study was conducted in the different barangays of Besao and in the different places where the market outlets are. The study aimed to identify the producers, the buyers of muscovado in market outlets, and the consumers of muscovado produced in Besao; identify the production and marketing practices of muscovado with the volume produced per production; identify the market outlets and volume being supplied; identify the value added activities of market outlets, determine the market acceptability in terms of price, physical attributes and lastly, determine the constraints or problems in the production and marketing of muscovado.

The data needed were gathered through survey questionnaire and personal interview with the respondents. Fourteen producers and thirty two consumers served as respondents in the study. Majority of the producers and consumers were middle to senior age. Most of the producers reached elementary level while majority of the consumers are degree holders. Most of the producers still practice the traditional way of producing muscovado wherein they use metal mill with the help of carabao and human. Majority also sell muscovado per kilo.

There were different market outlets identified which is located in Sagada, Bontoc, Baguio City and in Manila. Seven market outlets were interviewed and result shows that most buy muscovado wholesale. Most also do not add value to the muscovado for they buy it already packaged. Most of the buyers are government employees, local residents, private employees and self-employed.



The main production problem encountered by producers are weather, lack of milling equipment, the process which is difficult and long, the result of muscovado and lack of raw materials. Lack of supply is the major problem in marketing for the producers of muscovado.

On the other hand, the market outlets encountered problems on lack of supply and promotion. Producers do not meet the volume requirement of their market outlet.

### Conclusions

The following conclusions were drawn from the findings of the study.

1. There are many producers of muscovado but only few utilize it for market disposal. There is a high demand for muscovado but the producers lack supply. They cannot meet the volume requirement of their market outlets.

2. There are two main producers of muscovado who supplies different market outlets in Sagada, Bontoc, Baguio City and Manila. Other producers sell their product to direct consumers like the local residents.

3. Most of the consumers are middle to senior age. Most of them are government employees, if not, private employees and business people.

4. Production problems encountered by producers were weather, lack of milling equipment, long and hard process, outcome of muscovado and lack of raw materials. Problems in marketing include lack of supply, quality of product and promotion. Market outlets encountered also problems in marketing like lack of suppliers and promotion.



## Recommendations

1. The government should support the producers of muscovado. They can help by providing milling equipments to barangays and conduct trainings on muscovado production, both technical and assistance.
2. Create awareness of producers on the high demand of muscovado. Having knowledge on the high demand of muscovado may persuade them to produce muscovado more and market the product.
3. Further development or research on the things that improve product quality.
4. Promote muscovado production among residents of Besao. Majority of the families in Besao receives an average monthly income of P2, 500.00 as shown by a survey conducted by the LGU in 2000 (Anonymous, 2005). Based on the regional poverty threshold of P78, 000.00 per annum in 2000, majority of the families (89%) live below the poverty level and 11% are within the comfortable and above subsistence level.

Among the factors that contribute to low income is dependency on agriculture, therefore alternative livelihood is necessary and muscovado production could be a potential source of income. Moreover, idle lands will be utilized and there will be a substitute additional income.



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