

The CARICOM Regional Transformation Programme for Agriculture

Executive Summary

The Global Market for Small Ruminant Meat: Sources of Supply and Competitiveness for the CARICOM Industry



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Acknowledgements

The core team takes the opportunity to express its appreciation to all those who provided logistical and technical support for the completion of this exercise. We firstly like to thank the RTP Coordinator / Agricultural Advisor, Mr. Sam Lawrence as well as the country officers for their logistical and other support in the completion of this exercise. Field visits allowed us to verify and update the information base on small ruminants. Small ruminant investors particularly in the case of Jamaica, Trinidad and Tobago and Guyana provided valuable information in shaping the review of the Regional Sheep and Goat industry. The database on small ruminants worldwide, as well as in the Caribbean, contains significant gaps and took considerable time in their verification and validation.

Our discussion with officials in the Ministries of Agriculture in the Region proved helpful in reconciling some of the deficiencies we encountered in the review. Technical support was provided through the assistance of Brent Theophhile, Rebecca Gookool, Jai Rampersad and David Hanson, to which the Core Team also expresses support. To Ms. Martha Jiminez-Spence and Ms. Indira Buchoon-Ousman, we express our sincere thanks for their logistical organizational and communication support.

Although we tried to ensure accuracy of the database used for the review, nonetheless we accept responsibility for any errors that may be discovered. This may be the result of the multiple databases from which we had to access the data. The small ruminants sector in the Caribbean is just emerging unlike countries such as Australia and systems of data recording for this commodity have not yet entered the mainstream databases. This gap we recommend should be addressed with urgency.

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DEDICATION

We dedicate this work to the Memory of our Colleague and member of the study team, Dr Lloyd B. Rankine. Dr Rankine passed away on October 25, 2006. He was a colleague with whom we shared many long hours in dialogue, in the field and in the class room. His life long endeavours and dedication reflect his passion for agriculture in the Caribbean.

Dr. Rankine was an integral part of the University of the West Indies having served the University (both Mona and St. Augustine campuses) from 2nd December 1968 to June 3, 2006 when he suffered a debilitating stroke. He served as Head of the Department of Agricultural Economics and Extension from 1977 to 1990 and taught in the capacity of Senior Lecturer up until 2003, when he retired. From 2003 to June 3, 2006, he lectured part-time in the Department

Dr. Rankine also served as Director and Chairman on many Boards in Trinidad and Tobago. .



Ranjit H. Singh & Govind Seepersad

EXECUTIVE SUMMARY

THE GLOBAL MARKET FOR SMALL RUMINANT MEAT: SOURCES OF SUPPLY AND COMPETITION FOR THE CARICOM INDUSTRY

1. BACKGROUND & PURPOSE OF THE STUDY

This Report constitutes the results of a review of the Markets for Meats of Small Ruminants (sheep and goats) from the perspective of the CARICOM industry. It is part of a larger study commissioned by the CARICOM Regional Transformation Programme for Agriculture. The study evaluates the international competitiveness of five commodities: hot pepper, papaya, sweet potato, coconuts and small ruminants.

The market intelligence study covers a review of the global situation – production and trade flows. It focuses on the Markets of interest to CARICOM producers with respect to competition, opportunities and challenges. This market intelligence report is followed by the final component of the overall study which evaluates the competitiveness of the Industry in each of the countries studied as well as identifying strategies for development.

This study also sought to assess the regional market requirements for meats of sheep and goats; determine the gaps between domestic production and meats imported to satisfy regional demand and to isolate the particular market constraints and challenges that are likely to restrict trade and benefits to producers as part of an essential component required for informed decision making.

2. AN OVERVIEW OF THE CARICOM MARKET FOR MEATS OF SHEEP & GOAT

Market Size & Imports: Consumption of sheep and goat meat in CARICOM is highly dependent on imports from New Zealand and Australia. Overall, the Region imports approximately 75 % of its consumption requirements of both meats. In 2004, imports were valued at USD 23.3 mn with over 88 % being sheep meat. Our estimate is that the total value of the industry with respect to ONLY meat is approximately USD 30 – 40 mn. Estimated CARICOM

consumption is approximately 15000 tonnes. However, the actual levels of consumption and self sufficiency vary among countries as well as between mutton and chevron meats.

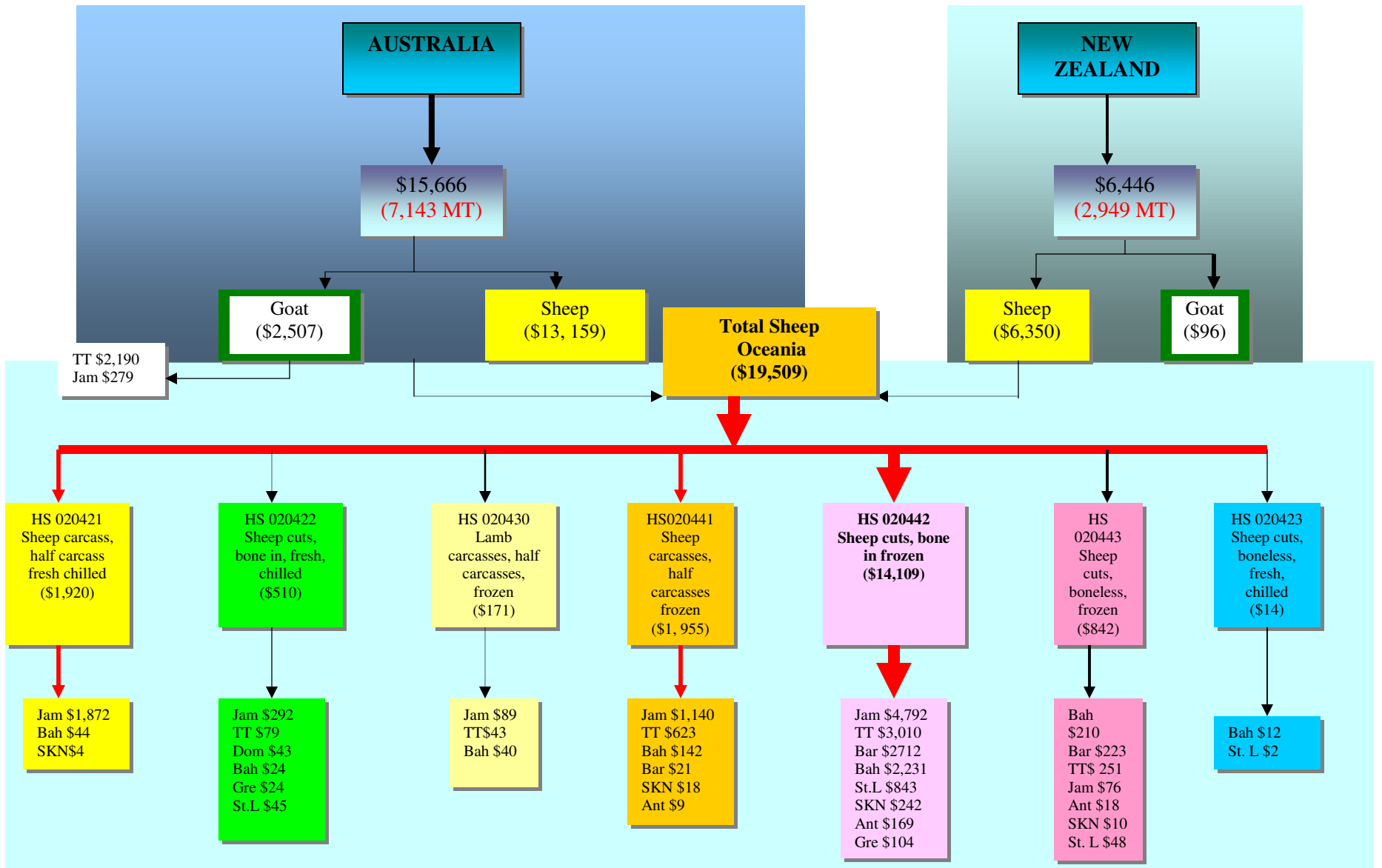
Imports of mutton and chevron into the CARICOM Region averaged 10,343 tonnes (2002/04) with 64% of the total value of imports coming from Australia and 30% from New Zealand . The USA's market share in the Region was estimated at only just about 5% in value terms.

Jamaica is the largest importer in the Region, followed by Trinidad and Tobago. Jamaica, as do other relatively large importers (The Bahamas, Barbados) imports mostly meats of sheep while Trinidad and Tobago's imports are mixed - about 65% sheep meat and 35% goat. Figure ES1 presents a summary of CARICOM small ruminant meat import situation.

Production: The Regional meat production has been dominated by Jamaica, which produces an average of 1,500 tonnes annually. Production in Guyana, Antigua, St Lucia, St Kitts and Nevis, Barbados, The Bahamas and Grenada are much less than Jamaica, but remain reasonably high when compared to St Vincent, Trinidad and Tobago, Dominica, Suriname, Montserrat and Belize the smallest producers in the Region. CARICOM countries also produce small quantities of breeding stock for exports. Barbados is a major exporter of the Barbados Black Belly Sheep, while Trinidad and Tobago exports both sheep and goat, the majority within the Region.

Market Segmentation & Preferences: While CARICOM countries have ready access to relatively cheap supplies of frozen mutton and chevron from extra-regional sources, most consumers in the Region have a strong preference for fresh mutton and chevron produced from local flocks. This, in part, is reflected by the much higher prices consumers are willing to pay for the latter. This distinction and preference provides the basis for the observed segmentation of the domestic market between locally produced fresh meats and frozen imports. Notwithstanding this segmentation, there is a trigger price at which imports begin to substitute for fresh. The level of this trigger price depends on the individual's income level as well as cultural background.

Figure ES1: CARICOM Import Consumption of Small Ruminant Meats by Major Suppliers (USD 1,000)



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3. THE GLOBAL MARKET FOR SHEEP & GOAT MEATS

Market Dominance: Global exports of small ruminant meat is be dominated by Oceania (New Zealand and Australia) at 64%, and by Europe (mostly France) at 31%. Asia and South America accounted for 6% of world trade.

With respect to sheep meat, Australia and New Zealand account for 70% of the global exports valued at USD 1.96 billion. Of this amount, New Zealand has a 56% share and Australia 44%. In the case of chevron, the combined exports from both countries are 14,680 tonnes valued at USD 34.7 mn (2003). Australia accounts for most (89 %) of the chevron exports.

Joint Product Industry Structure: Sheep flocks in both Australia and New Zealand are produced for both meat (including sheep for live export) and wool¹. Australia is the world's largest wool producer, accounting for about 30% of global production². The joint product nature of the industry in both countries allows for cost sharing of production expenses between wool and meat. This gives the respective industries tremendous leverage in pricing their products and maintaining a competitive position in global trade. Countries attempting to develop a sheep industry solely for meat production would find it difficult to compete on the basis of price. Quality factors must therefore constitute the basis for developing a mutton industry.

In the case of goat meat, it should be noted that Australia's supply is based on both feral (wild) and domesticated species. This former obviously provides a relatively cheap source of meat. Domesticated species include dairy goats and the genetically improved boer goat.

The sheep and lamb meat industry in New Zealand is considered one of the most efficient. In addition to the joint product nature of the industry, the industry was geared for export marketing with about 50 meat export processing plants in 2004. In the case of Goat, New Zealand has consistently worked towards achieving a highly productive and efficient industry. In this regard, the country introduced the Boer Goat from South Africa in 1983 in an attempt to increase flock productivity. Today, New Zealand is the third largest exporter of goat meat (about 5%) after Australia and France.

¹ (Source: Statistics – Tasmania Agriculture. Agricultural production., Livestock., Sheep and lambs
<http://www.abs.gov.au/Ausstats/abs@.nsf/Lookup/7FE4D2922DD91969CA256C3200241770>)

² Year Book Australia 2002., 2002., Agriculture., The wool industry
<http://www.abs.gov.au/Ausstats/abs@.nsf/Lookup/F7B136618913C740CA256B35007C2065>

Factors Influencing Global Demand: Understanding the drivers of demand in the market is critical to maintaining a strong market presence and optimizing revenues. We note two groups of factors influencing demand for sheep and goat meats; the economic factors and the socio-cultural/religious factors.

(i)The Economic Factors Influencing Demand/Consumption: At the international level, a number of factors are seen to impact on the relative prices of sheep/goat meat. These include the price of substitute meats such as chicken and pork³, changing consumer preferences as they switch from mutton to lamb and to fresh / chilled from frozen meats, rising income levels in many developing countries and changes in farm support policies in major producing / trading countries. In some countries, beef, fish and chicken may represent substitutes for goat and sheep meat.

Additionally, changes in the relative exchange rates between trading partners. For example the appreciation of the Australia dollar relative to the U.S. increased the price of lamb in the US market thus having a dampening effect on the demand for Australian mutton exports to the USA⁴.

(ii) Socio-cultural/Religious Factors Influencing Demand/Consumption: The socio-cultural and religious forces influencing the demand for Small Ruminant meats, particularly for sheep meat, is considered quite strong. The range of these factors however varies by country, ethnicity, religion and culture. Some of these factors include:

- **Religious Markets for Lamb:** There are a number of religious celebrations throughout the year for which lamb is a traditional part. In the USA, lamb and mutton import orders are normally placed at the beginning of the year in preparation for the religious holidays of Easter and Passover⁵. During *Eid al Adha*, *Eid al Fitr* and Christmas, the demand also spikes up for live small ruminants and meats of sheep and goats.

³ New Zealand Ministry of Agriculture and Forestry. <http://www.maf.govt.nz/mafnet/rural-nz/statistics-and-forecasts/sonzaf/2004/2004-sonzaf-18.htm#h6> p6.

⁴ *ibid*

⁵ **Livestock, Dairy, and Poultry., Outlook.** Mildred M. Haley, USDA. <http://usda.mannlib.cornell.edu/reports/erssor/livestock/ldp-mbb/2005/ldpm131t.pdf>. May 19, 2005.

- **Ethnic niches.** Sheep and goat meat are a staple food among people from specific parts of the world, especially those of Middle Eastern, African, Latin American, or Caribbean origins. Lamb is also very popular among Greeks and Basques⁶.
- **Age of Consumer:** In some markets such as the USA, the typical lamb consumer was found to be older, relatively well-established ethnic minorities⁷.
- **Other special requirements:** Muslim and Jewish customers for example, have specific dietary laws for which special arrangements must be made. People of the Jewish faith who keep a *kosher* diet have specific requirements for animal slaughter and meat consumption⁸.
- **Cultures:** Primary research in Chicago has shown that some cultures have specialty stores operated by their own people that tend to be the first stop for certain items. For instance, Pakistani and other Middle Eastern shops that sell meat will carry ‘halal’ lamb, which will often bring in customers of any nationality that is predominantly Muslim. Other parts of the animal such as bones, heads, organs, and variety meats are also available⁹.
- **Restaurants and mainstream stores** that serve ethnic communities may need year-round supply.

Industry Marketing Strategy: The Small Ruminant meat industries in New Zealand and Australia are similar with production strongly export orientated. Revenues of exporters and producers are therefore largely dependent on international prices, exchange rates, seasonal/climatic conditions and abnormalities, and animal disease and food safety shocks.¹⁰

As global market leaders for sheep and goat meats, one of key marketing strategies pursued by New Zealand and Australia is the segmentation of their markets. The markets range from industrial countries offering high-value returns to less developed countries offering outlets for

⁶ Direct Marketing Lamb to Niche and Ethnic Markets. University of Illinois.
<http://web.extension.uiuc.edu/iidea/PDF/lambfactsheet.pdf>

⁷ Ibid.

⁸ Ibid.

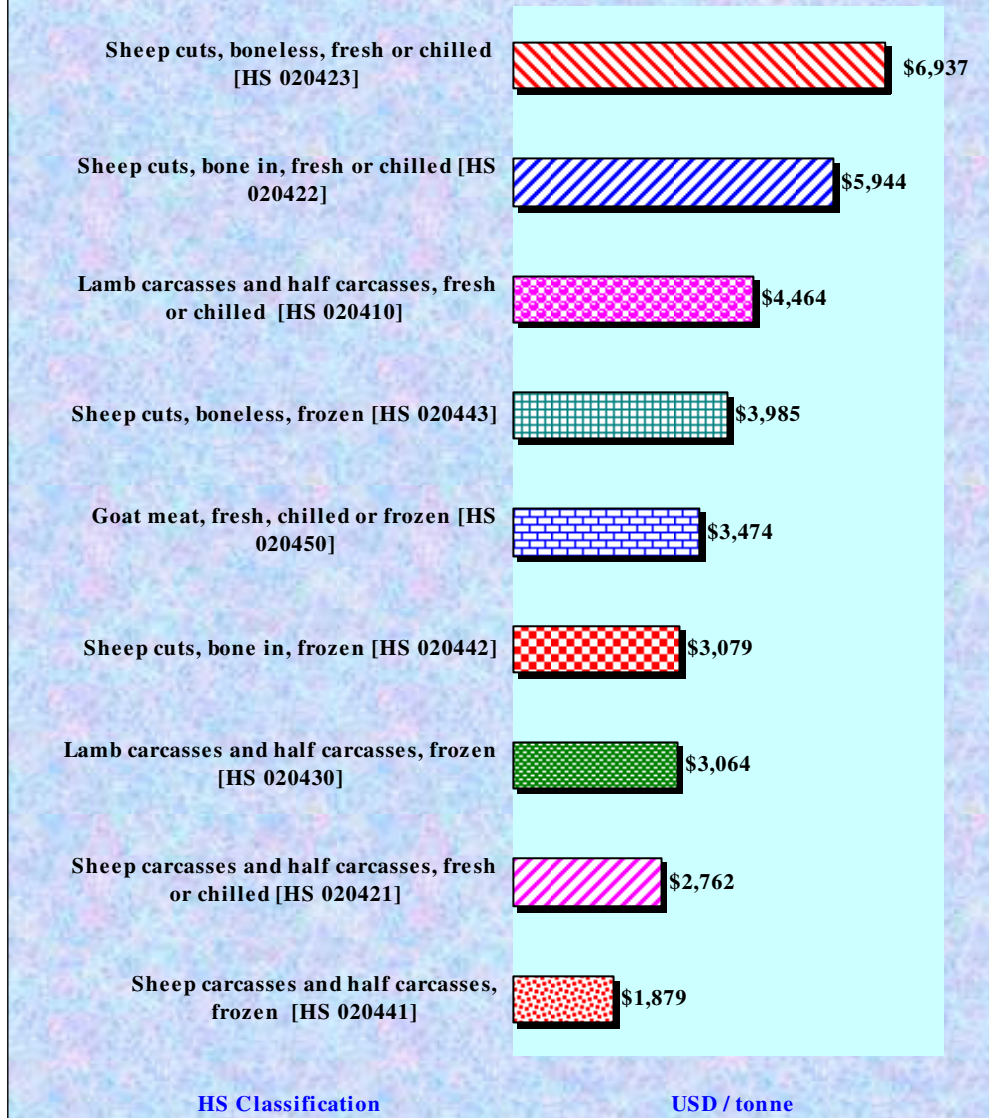
⁹ ibid

¹⁰ New Zealand red meat industries
<http://www.mla.com.au/TopicHierarchy/MarketInformation/OverseasMarkets/RedMeatMarkets/NewZealand/default.htm>

lower value products; markets with preference for specific cuts/products to those seeking a cheap source of protein; from those that have special religious requirements to those that do not; those markets that would only consume traditional meat cuts to those that have a preference for offals. Accordingly, these countries seek to differentiate their industry products according to the characteristics of the market. As a result, a wide range of products are produced from each animal to meet the unique preference of each market. For example, New Zealand currently processes a lamb carcass into 33 main product cuts.

Product Differentiating / Pricing Strategy: We present in Figure ES2 the average 2004 prices of various cuts of sheep meat exported from the major exporting countries. The diagram reflects the pricing strategy for various cuts of meat. Clearly the products are differentiated according to the preference patterns of the various markets. The bulk of the high valued cuts are destined for markets such as the EU where incomes are high.

**Figure ES2: Average Value per Tonne for Sheep and Goat Meat Traded-
Major Exporting Countries in 2004 (USD/Tonne)**
Data Source: Comtrade Database



4. THE WAY FORWARD: IMPLICATIONS FOR CARICOM

Opportunities: Having analyzed the world market for meats of sheep and goat at the global level, the remainder of the analysis focuses on the Caribbean, being net importers of this commodity, a situation which is likely to continue for some time because of the relatively slow progress in trying to satisfy a major share of this market with indigenous production. The gap

between the quantity of imports of this commodity and domestic production continue to widen, thus representing potential investment opportunities subject to the results of the competitiveness analysis, biological / genetic resource limitations and zoonoses / diseases. Production models and value added, infrastructural and policy support mechanisms can also serve to impact on production and expansion initiatives.

Nature of the CARICOM Market: Key Segments: The four major markets for small ruminant meats in CARICOM are The Bahamas, Jamaica, Trinidad and Tobago and Barbados. This may be further segmented into three groups: (i) live / fresh (ii) mutton / chevron and (iii) frozen imports. A significant share of the sheep meat is directed to the service industry (tourism) while goat meat is used to satisfy the exotic taste of the indigenous population. Progressively, goat meat is being introduced to the tourist sector in Jamaica and Trinidad and Tobago. The success of this programme will to some extent depend on how meats of sheep and goats are presented to these consumers and would extend beyond the forms currently consumed by the indigenous population.

Sustainability Issues: The basket of meat-based protein sources – chicken, fish, beef, pork, meat of sheep and goat as well as crop-based ones are dependent on both imported and indigenous inputs of varying proportions. Unlike chicken, pork and the vegetable proteins which currently depend on high levels of imported inputs, mutton and chevron are attractive investment opportunities because they can be produced on high levels of indigenous-based materials. It is no secret that investments in livestock research in the Region have concentrated on the large ruminants and to lesser extent small ruminants (i.e. sheep and goat). Whatever has been attempted in the past has not been sustained. A case in point is efforts to link sugarcane production with livestock, a crop which is commonly produced region-wide. However, within recent years this crop has been on the decline within recent years.

Risk Factors & Mitigating Strategies: The emergence of **Mad Cow Disease (BSE)** and its association with small ruminant sheep and goat is a recent development and may serve to constrain the rate of indigenous expansion and alter the pattern and direction of trade globally. Mutton and chevron which enters the Caribbean must therefore be screened and thus, meats that are exported from countries with disease potential must not be allowed to enter the Regional market. Thus vigilance by trade personnel becomes increasingly important at all ports of the

Caribbean in order to protect the health and safety of consumers, and the investment of entrepreneurs in the Region.

To the extent where **feed supplements** are required in small ruminant production systems, producers must now ensure that animal-based protein have been excluded from such feeds. Further, given the concerns about consumption of meats from animals treated with specific medicinal and growth stimulating substances such as hormones, substances having thyrostatic action or those treated with ionizing or ultra-violet radiation should either be made notifiable or excluded from the consumption plate.

Expansion Strategy: Expansion of sheep and goat supply on the market depends on how the industry is reorganized and developed to reduce dependency on imported products region-wide. With the exception of Jamaica and Trinidad and Tobago, the rate of expansion through increased supplies will depend on the success of micro breeding initiatives currently in place and the introduction of appropriate production systems / models (both intensive and extensive). In this regard, the integrated broiler production model employed in the Region could provide important lessons for entrepreneurs.

A Case for Incentives & More Public Goods Support: The two initiatives to expand sheep and goat production in Jamaica and Trinidad and Tobago had been on the ‘programme’ for a number of years but their sustainability has been constrained by two factors; (i) the slow rate of commercialization of the limited success that has been achieved and (ii) the tracability and evaluation of performance of national herds. Other concerns include the rate at which the first generation stock enters the meat market, and sheep and goat research remained a small farmer activity. Government initiatives have not successfully entered the domain of the large-scale private sector entrepreneurs. **We believe that expansion of the sheep and goat industry will take off as in the case of broilers, should similar incentives be applied.**

Currently sheep and goat consumption is less preferred in some sections of the population because of the meat odor. If this constraint is addressed, together with an appropriate pricing and marketing strategy, we are of the opinion that its acceptance will increase substantially. The acceptance of ‘freshly slaughtered’ meats has already been demonstrated in the case of broilers by our indigenous consumers and we believe that such acceptance can be replicated in the small

ruminant industry if accompanied by the appropriate price incentives. We also believe that Trinidad and Tobago and Jamaica would continue to be major consumption centers and thus production initiatives starting with these countries could become the nucleus of a truly regional sheep and goat industry. But expansion of the current initiative should await the results of our competitiveness analysis as the current pricing structure that exists in the major exporting countries could have significant implications for industry development. Our plans for industrial development for this commodity would be presented in later reports. We wish to exercise some caution however, given regional initiatives in the past to supply the increasing market share which have been developing.

Trade Policy: From the analysis, there is an increasing demand for meats of sheep and goat worldwide. We believe this can also stimulate expansion of supply from major production centres. If such were to occur, it is likely to further crowd out the Region's effort at accessing a major share of its own domestic market. This should provide an early signal to the strengthening of the Region's trade policy to protect the consumers against massive inflows of third quality products including various substitutes for meats of sheep and goats. The adoption of similar third generation regulations as exists in the developed countries should be examined with a view at customizing them for the Region.

The Region's consumers of meats of sheep and goats should be afforded similar measures of quality assurance and food safety. As an importing Region, we do not yet have the capacity to ascertain the post-arrival condition under which the products were produced and handled. **This scenario thus calls for development of appropriate protocols for protection at the point of entry.** Earlier in this section we commented on the use of medicinal and growth stimulating substances in the production system. This issue should also be integrated into the trade protocol.

Pricing Implications for the CARICOM Small Ruminant Market :

An examination of the prices database shows a range of prices for small ruminant meats. Further, variation exists by species of animal, age of animal and the respective cuts. The industry's market is further segmented by economic and socio-cultural/religious factors. Pricing in the industry is also differentiated by meat product form – fresh vs. frozen. Within the Region, freshly slaughtered small ruminant meat attracts premium prices.

Should CARICOM seek to transpose the level of self-sufficiency of the Region from 25% to a much higher range as it relates to meats of small ruminants, the industry would need to take on board the various market strategies employed by other countries in its strategic plan. Further, the industry development strategies would have to be benchmarked on the relative prices of lower-end cuts in the global market. This would be further addressed in the Competitiveness Analysis reports to this Study.