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## Executive summary

It is estimated that pig production in Jamaica accounts for less than 1.0 % to the country's Gross Domestic Product. The industry provides direct employment of some 6,200 persons representing 3.1% of the total agricultural labour force. However, only eleven percent (11%) of pig farmers depend full time on pig production for a living. The majority of them are domicile in rural communities where the poverty level stands at 45%. Assuming a dependent ratio of 1:5, the contribution of the industry to poverty alleviation is extended to some 31,000 persons. Pig production and marketing also contributes to indirect employment and income through its linkages with the food service industry, and other services.

Total capital investment in the industry is estimated to be in the region of J\$ 5.5 billion. However, from an international perspective, the level of Jamaica's pig/pork production is insignificant. In 2000, when world pork production stood at over 90 million metric tones, Jamaica's production was 0.006 million metric tones. This output was produced by a vacillating population of 2,000 ? 4,000 farmers, who had a total herd size of some 60-85,000 animals, most of which were concentrated in three parishes i.e. Westmoreland, St. Elizabeth and St. Catherine.

The majority of these pig farmers (i.e. 98%) have less than fifty (50) animals. They however contribute to seventy five percent (75%) of domestic pork consumption and six percent (6%) of total meat production. In return, they receive an estimated seventy four percent (74%) of the consumer dollar spent on pork meat, and earn aggregate farm gate receipts of J\$ 600 million (US\$ 13 million) per annum. While an important source of nutrition for the Jamaican population, based on the relatively low level of consumption, pork meat cannot be said to be currently of significant strategic importance to the food security of the country.

In addition to being at a relatively low level, Jamaica's pork production has been on a cyclical decline. The number of pigs slaughtered over the ten-year period (1990 ? 2000) declining by some nineteen percent (19%). Pork production moved from 7.39 million kg in 1990, to 6.62 million kg in 2000 - expanding and contracting every 2-3 years. During the said period, more than one thousand (1000) pig producers, mainly small producers, exited and did not re-enter production? a net attrition of 20%. Industry observers are of the perspective that because of their lower level of investment, these small part-time producers, find it much easier to move in and out of the business when market conditions, and/or the cost/profitability of production, changes in an adverse direction.

With reference to market conditions, apart from the fact that there has been increasing consumption of imported value-added pork products (which accounts for over 20% of total consumption), coupled with increasing competition from other meats (particularly poultry), there is a very low level of per capita consumption of fresh pork meat. Religious beliefs, food safety concerns, as well as limited value-added product promotion, are the salient factors contributing to the limited consumption.

With regards to the cost of producing pigs in Jamaica, this is estimated in 1999 to average US\$ 2.10 per kilo - four times that of Canadian farmers in 1993. It is the cost of commercial animal

feed (which accounts for as high as 60% of the total cost of production) that is usually cited as the reason for the cost of producing pigs in Jamaica being so high. However, while this comparison on the surface may point to relatively uncompetitive pig producers, recently conducted competitive analysis indicates that given the prevailing trade regime, fresh pork produced at farm gate is price competitive when compared to its imported counterpart.

Along with the cost push factor, there is the matter of prices received by farmers. The steady lowering of farm gate prices received from butchers (who are the main buyers/distributors), is threatening the profitability of local production. Coincidence or not, this downward trend is occurring at a time when there is a steady increase in the retail price for fresh pork. Some realignment of markets and stability in distribution prices will have to occur if farmers (particularly the larger ones) are to remain in production.

It is argued that it is the response and prosperity of two percent (2%) of Jamaica's farmers (with >50 animals) that will influence the long-term stability in domestic pig production. Concentrated in the parishes of Westmoreland, and St. Catherine, fifty percent (50%) of these larger farmers rely solely on pig production as their main source of income. Between 1988 and 1998, these producers increased in numbers by some 74%. If they are to make further investments and expand their production, it is important that there be stability, growth and sustained profitability in the business.

For Jamaica's pig farmers, apart from the relatively high cost of production and price considerations, the quality of breeding stock and availability is an area that has to be addressed - along with better infrastructure. It is argued in some quarters, that genetic improvement of the sow herd, could increase productivity to result in 50% more pork being produced. Better breeds would deliver better feed conversion rates (i.e. less than 3lb feed to 1 lb of meat), faster growth rates, heavier weights, shorter time to market and improved carcass quality. From the market perspective, this approach would result in an animal with less back fat, thereby opening the opportunity for pork processors to again introduce a proper carcass-quality payment system. Unfortunately, there are very few 'pure pig breeding' operations in Jamaica. There is however a recent private sector (joint venture) initiative to invest in a major breeding operation.

The introduction of better quality animals etc, has to take place in the context of trained pig producers using improved methods of management, particularly record keeping. The majority of Jamaica's pig producers are however untrained and they do not employ adequate business management systems.

Increased pig production has to also take place in an environmentally safe infrastructure that takes care of pen effluence in an integrated and cost reducing manner (e.g. use of manure pit additives and biogas plants to generate electricity). While several large producers are desirous of installing bio-digesters, most pig farmers do not have environmentally friendly operations that reduce contamination of surface or groundwater.

For most pig farmers, environmental safety was not a matter that was found to be on the top of their agenda. As a result, the most important part of any CQA programme which is record keeping, is much ignored by the average pig farmer. Added to this is the fact that visitors are permitted free access to farms and there is neither an enhanced system of early warning about pathogens, nor any formal efforts to introduce comprehensive Hazard and Critical Control Points (HACCP) to guard against microbiological hazards such as Salmonella and E. Coli.

The issue of food safety becomes even more pertinent, as over 100,000 pigs per annum move off the farms, to 1,000 plus local slaughtering facilities. It is no secret that many of these facilities are sub-standard, having no tractability or identification preservation (IP) system. There is also no enhanced system of early warning about pathogens. Local health inspectors would be very much challenged in tracing the flow of contaminated pork meat passing through the food distribution system. There thus needs to be a serious review/rationalization of pig slaughtering facilities with the view of enforcing meat inspection and sanitary standards, as well as implementing of

mandatory Hazard Analysis and Critical Control Point (HACCP) programmes to meet international standards of slaughtering and food safety. Due diligence has to be applied in the process and in this regard, the Ministry of Health and the Veterinary Division (Ministry of Agriculture) both have an integral role to play in the conduct of such an exercise.

Seventy percent (70%) of the pigs slaughtered goes into the fresh meat market. The rest goes to processors/packers and for making value-added products. This is in sharp contrast to the scenario in the USA where fresh pork accounts for only sixteen percent (16%) of all pork consumed.

With regards to the fresh pork market, apart from stipulated carcass dress weight by traders/butchers, there are still no legally established grades for pork sold to the various market outlets. While local butchers, are often stigmatized as providing customers with substandard cuts, major traders of local pork argue strongly that the current quality of pork sold, is 'very good' when compared to previous years and even that available from overseas. There is still however consumer aversion for poor pork quality, specifically leanness, packaging and presentation.

When it comes to pork sent to local processors, approximately fifteen to twenty agents currently supplying six (6) local pork processors with some 1.0-1.5 million kg of local pork meat each year. In 2000, when production was 6.62 million kg, processors used 1,083,619 kg of pork cuts - equivalent to 16.4% of total pork production. However, because of the major (and declining) flow of pork to the fresh meat segment, local processors have been 'crowded out' of the distribution system. All report that they face the challenge of maintaining a reliable network of pig suppliers.

In the absence of adequate local supplies, local processors have had to turn to importing pork cuts (from Canada). Imports by processors increased from 181,930 kg in 1996 to 691,306 kg in 2000. It is estimated that some sixty percent (60%) of pork legs, seventy nine percent (79%) of bellies and seventy percent (70%) of the ribs used by local pork processors, is imported.

Pork processing plants provide direct employment for an estimated two hundred (200) persons. They have also made substantial capital investments (building and equipment) estimated to total some US \$10-15 million. However, none has yet achieved the economies of scale that would allow further expansion and improve the quality of their business. Average plant capacity utilization is less than 50%. To compound matters, recently completed competitive analysis indicates that generally, processed pork products when compared to their imported Canadian counterparts, were very uncompetitive. Increasing plant throughput and accessing low cost financing needed for modern equipment and implementing HACCP systems are the primary challenges facing local pork processors. It is estimated that approximately US\$ 20 million will have to be needed to bring all up to international standards of operation.

For both Jamaica's pig producers and processors, given the significant number of persons who for religious/cultural reasons do not eat pork meat, any growth in the consumption of pork meat, is welcomed. Real growth in consumption will rest primarily on educating of the average Jamaican consumer about the positive attributes of pork meat, correcting their perception of pork having any food-borne diseases that would endanger their well-being, as well as presenting new pork products especially sausages. Therefore, it is in the interest of all industry players - particularly processors to work together and invest in a programme to continuously assess consumer risk perceptions and undertake generic market promotion. All will benefit from such an endeavor.

It would also be prudent for pork processors and the GOJ to pay attention to the implementation of Jamaica's external trade policy and the stage of multilateral/bilateral agreements. This is against the backdrop of two factors, (1) the CARICOM Single Market and Economy, which will retain a Common External Tariff on extra-regional pork imports; and (2) the push by the USA to increase its exports of pork products to targeted markets including the Caribbean region - through reduced tariffs and less complex import regulations.

It is argued that any further liberalization of Jamaica's import regime at this time, without formal

recognition of the sensitivity of the pig/pork industry could have devastating consequences for capital investment at the processing end of the industry, employment, poverty alleviation and social stability in rural areas. The USA, and Canada, major players in the international pork market, must be made to appreciate and respond to the position that trade liberalization alone will not address the socio-economic needs of developing countries like Jamaica.

With such threatening externalities, a major effort will have to be made by the entire supply chain to work together to address and resolve major production and trade issues as well as develop a shared, confident, long-term vision that will ensure maximum growth and international competitiveness. A confident, trusting producer/processor distribution relationship is imperative to the success of Jamaica's pork industry. It is advisable that there be planned programmes to stimulate cohesiveness and implant collaborative mechanisms to ensure better synchronizing of production and marketing activities between pig farmers, butchers/traders and pork processors.

Parallel to such capacity building initiatives has to be serious improvements in the quality of and access to up-to-date trade, production and marketing information. There has to be the development of an appropriate database on the pig/pork industry. In these areas, there is a role for the Ministry of Agriculture and the Jamaica Livestock Association which is the national body representing the interest of pig producers.

On the human resource development side of the picture, there is no discerned programme for uplifting the skill competence of the operators or service resource persons within the local pig industry. Except for the few training sessions held by feed companies, there is no programme targeted at pig producers and processing managers. The Ministry of Health does conduct training of butchers. If there is to be improvement in the industry as a whole, there will have to be a programme of capacity building in the area of training/sensitization. Areas of focus are good/new production methods, group development, pig husbandry; record keeping procedures and systems, food and environmental safety systems, grading and meat, product development, promotion, marketing and trade.

In summary, Jamaica's pig industry exists within a highly competitive and protective international environment. Trade liberalization, food and environmental safety concerns are converging simultaneously to drive the global pork industry and are causing a major realignment of global pork competitors. Against this background, current output and efficiencies in local pig production and processing have been found to be well below international standards and the investment made by pork processors, the employment generated, and future valueadded development, is under serious threat.

If Jamaica's pig/pork industry is to become stable and bring prosperity to its investors, as well as make a meaningful contribution to economic development and growth in rural income/employment, then there will need to be a major sector development program put in place. This is to ensure that farm and processing productivity, output quality and safety, cost/price competitiveness and product development are all enhanced in a systematic manner.

Nine (9) immediate areas for attention are:

1. Establishing an Industry Development Policy, and Plan;
2. Formation of national and regional Pig/Pork Associations to encourage stakeholder driven policy and development programmes;
3. Establishing breeding/multiplication and research operations;
4. Collection and analysis of production/consumer market data;
5. Modular training of producers and processors;
6. Accessing low cost finance and technical assistance;
7. Implementing environmental and food safety systems ?from farm to market;
8. Programmed institutional collaboration in market promotion/trade.
9. Enhancement of industry survival and competitiveness through strategic and commercial alliances between pig producers and processors in Jamaica and lobby with others in the CARICOM region



Yes