COMMENTS ON

"Cuba Market Potential for U.S. Livestock Genetics in a Free Market Cuban Economy" by Ross and

"Differences in Agricultural Productivity in Cuba's State and Nonstate Sectors: Further Evidence" By Alvarez

William E. Kost

I have been asked to discuss two papers: Jim Ross' "Cuba Market Potential for U.S. Livestock Genetics in a Free Market Cuban Economy" and José Alvarez's "Differences in Agricultural Productivity in Cuba's State and Nonstate Sectors: Further Evidence". Both papers are quite good and raise some important issues. Given the limited time available, I'll confine my remarks to a few of the issues that came to mind as I read these papers and listened to the authors summarize them in this session.

First, Jim Ross' livestock paper. Jim provides an excellent historical perspective and summary of the current livestock situation in Cuba. He concludes that the market for livestock products in Cuba is growing and that a likely response will be an increase in Cuban livestock production. Given that both animal numbers and productivity are relatively low in Cuba, there is a need to increase the productivity through improved genetics. Were the Cuban economy opened to trade with the free market economies, particularly with a lifting of U.S. sanctions, he anticipates an increase in Cuban imports of improved breeding stock. With Cuban climatic conditions so similar to that of the U.S. southern states, much of that improved genetic stock would likely come from the United States. This would be particularly true for beef and dairy cattle.

Jim makes a good, logical argument to support these conclusions. While I think he is correct in these conclusions, I think that there are limits to the size of that market. To illustrate my point, I would like to look at the Cuban livestock and meat economy from the perspective of the constraints facing the industry. Several constraints exist.

First, demand constraints. Meat consumption is constrained by relatively low per capita income levels. Given the relatively higher prices of beef and veal, this becomes more of a constraint for beef and veal than for poultry and pork. With the limited prospects for significant income growth, meat consumption levels, particularly beef and veal, will likely remain low for the near to intermediate term.

Second, severe supply constraints that reduce the availability of meat in the marketplace. Livestock numbers are down and productivity is low. Poultry and pork production, on the other hand, have shown some production gains. Jim does a good job of discussing these supply constraints to meat and dairy production.

Third, other resource constraints that affect meat production. Land constraints preclude domestic production of the feedstuffs required to produce meat. Thus, meat production will be heavily dependent on imported feeds. The foreign exchange constraint is clearly going to severely limit feed imports. Given the relatively more efficient feed conversion of poultry and pigs over cattle, it is clear why poultry and pork production have shown some gains while beef and veal production gains haven't materialized.

And fourth, another land resource constraint directly affecting cattle is the limited amount of pasture land on which to run cattle and the relatively low carrying capacity of that land. While Cuba has some lands that are uniquely suited for pasture-fed livestock, it is still limited. For much of the land suitable for livestock, cattle will have to compete with other agricultural enterprises that will likely have a comparative advantage over a livestock enterprise.

This leaves Cuba with some pent-up demand for livestock products (with a long-run potential for significant demand growth) facing low production and a constrained domestic production capacity.

The one segment of the Cuban market that has the potential to become a growing market for meat, particularly beef, veal, and dairy products, is Cuba's growing tourist industry. However, Cuban livestock and meat producers face additional constraints in this market. Demand in tourist markets will be primarily for fresh, high-quality, grain-fed beef. Serving this market will require a reasonably well developed coldchain technology and infrastructure. Tourist hotel restaurants will want consistently high-quality food products delivered on a consistently regular basis. Cuba neither produces much of this grade quality beef nor has the market infrastructure developed to meet tourist industry needs. The tourist industry will have the foreign exchange, the fresh food storage capacity, and the links to foreign suppliers dedicated to serving a sophisticated food service industry. Therefore, Cuba's tourist industry likely will be heavily dependent on imports, including beef, veal, and dairy products. If trade restrictions are lifted, much of these tourist industry imports will likely come from U.S. food wholesalers, particularly those in Florida.

Cuba's livestock industry is also constrained by a locational disadvantage. If trade restrictions are lifted, Cuba is close to the United States: a large, efficient, low-cost meat producer. Cuba, for the foreseeable future, will not have a comparative advantage in live-stock production, particularly for high-quality grainfed beef. Cuban meat producers will have to compete with relatively low priced imported meat and dairy products in urban domestic markets, not just the above discussed tourist industry. And once these markets are captured by imports, it will be difficult for the domestic producers to recapture them.

To the extent that a Cuban cattle industry develops, it will likely be traditional range-fed livestock focusing on meeting local domestic, not tourist and maybe not even urban, demand needs. That market is large enough and growing rapidly enough to more than absorb the domestic meat production in the near to intermediate term. That is the market segment that the southeast United States, particularly Florida, will support with exports of both genetically superior live breeding animals and genetically superior semen.

The constraints Cuban animal agriculture faces, coupled with comparative advantage market forces, will lead to Cuban animal products imports being more important than imports of genetic inputs. Given the well-developed cold-chain infrastructure in the United States for meat and dairy products, regions other than the southeast United States stand to benefit from Cuban trade. For example, meat exports and grain/oilseed feed exports will generate equally important benefits for cornbelt states.

Several things need to be in place for the United States to capture these postulated benefits. U.S. restrictions on trade with Cuba must be lifted. Cuba must continue promoting market and trade oriented policies that allow continued economic growth. Cuba needs to generate higher per capita incomes to create increased demand and more foreign exchange earnings to buy the demanded imports. Particularly for meat and dairy products, Cuba needs to improve and develop the marketing channel infrastructure required to handle perishable products.

Now, I briefly turn to José Alvarez's productivity paper. A study of Cuban agricultural productivity, particularly a comparison of state and nonstate sectors, can have a major impact on agricultural policy deci-

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sions. Higher productivity in the nonstate sector — the sector that contains the more market-oriented enterprises — would provide a strong argument for continuing structural change in Cuban agriculture. Given the production shortages in Cuban agriculture, higher nonstate sector productivity would provide a strong impetus for continuing to reduce state intervention in agriculture.

Is there higher productivity in the nonstate sector? José's analysis showed:

- nonstate sector productivity in sugarcane and peppers was significantly higher than state sector;
- nonstate sector productivity in tobacco and onions was higher, but not significantly higher;
- nonstate sector productivity in tomatoes, potatoes, boniatos, and rice was about the same; and
- nonstate sector productivity in malanga, corn, and beans was significantly lower.

The results are clearly mixed.

José raised the issue of differences in resource allocation between the two sectors. If nonstate enterprises are allocated fewer production inputs, yields would be reduced. This would bias the productivity measures downward for nonstate produced commodities and understate any benefits to producing agricultural products in nonstate enterprises. No attempt was made to correct for this kind of bias in the analysis. I suspect the required data are not available to make that kind of adjustment. I also suspect that the results would still remain mixed — in part because of the relatively wide year-to-year variations and the short data series analyzed.

All research studies need a "more work needs to be done section." Here is my suggestion. One of the problems José faced was the short time series (1990-97, 8 observations) over which to apply the statistical tests. Creating an index of production (or productivity) would transform the data into index numbers that could be aggregated across commodities, thereby increasing the degrees of freedom for any statistical test applied. These index numbers for each commodity could aggregated simply or aggregated using quantity or value weights to capture differences in relative importance of individual commodities to the Cuban economy. This might provide a more definitive general answer to the state-nonstate productivity question (though at the expense of commodity detail).

I therefore close with a traditional "this was a good study, a good start, and more work could be done!"