COMMENTS ON

"Land Use in Cuba Before and After the Revolution: Economic and Environmental Implications" by Sergio Díaz-Briquets

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As it has always been the case, Sergio Díaz-Briquets has made an important contribution to the analysis of the Cuban environment. It could not have been otherwise. He and Jorge Pérez-López have been researching, and writing about, that topic for almost ten years. Such dedication culminated in the recent publication of their book *Conquering Nature: The Environmental Legacy of Socialism in Cuba* (Díaz-Briquets and Pérez-López, 2000). The present article is an expansion of the topic "Land Use Trends" discussed in chapter 4 of their book, to which they devoted less than four pages, and of other topics discussed in other sections of the book. Since the article is a solid piece of research, I have only a few minor comments which testify to the validity of its findings.

My first comment relates to the factors hampering agricultural production in socialist countries mentioned at the very beginning of the paper. Although it could be considered among what the author calls "the systemic flaws associated with a command economy," the state intervention which results in pronounced differences in agricultural productivity between the state and non-state sectors deserves being mentioned separately. In another panel of this Conference, Alvarez (2000) documents with newly released data previous results by Alvarez and Puerta (1994). Regardless of land use patterns, non-state units have been more productive than state units in Cuba. Another factor listed is the "undue reliance on extensive cultivation." Díaz-Briquets advances solid evidence with the use of the variable planted areas. A thorough documentation for sugarcane is contained in Peña Castellanos and Alvarez (1996). The state extensive growth model, applied mainly during the 1980s, relied on extensive plantings to make up for decreases in productivity. This fact brought about the depopulation of sugarcane areas, one of the main factors responsible for the poor performance of this industry in the 1990s.

The second comment goes to the author's assertion that, by choosing 1945 and 1989 as the years for comparisons, he was unable to isolate the important changes in Cuban agriculture that began after World War II. It is obvious that the 44-year period is a big jump for this type of analysis. Díaz-Briquets' findings, however, do not change when pre-1959 data are considered. The 1946 Agricultural Census was the last one performed in pre-1959 Cuba. (The 1953 Housing, Population and Electoral Census did not include this type of information.) There are data, however, that can be used to validate the author's conclusions. In fact, Rodríguez (1963, p. 22) shows that between 1946 and 1957, area planted to sugarcane (the crop with the highest land area) increased by only 2.6%. Additional proof has been compiled by Equipo (1971, p. 70) and reproduced in Pérez Marín (1990, p. 36). When data for 1950 are compared with the 1946 Agricultural Census data, one finds that 12 out of 18 crops studied experienced negative growth, while six experienced the opposite. It is interesting to note that, in the first group, we find sugarcane, which implies that the just-mentioned growth took place after 1950. To further corroborate the author's results, all 18 crops combined experienced a decrease in area of 20%. These two sets of data contain irrefutable proof that growth was lacking between 1946 and 1959, and that the tremendous growth in planted areas occurred during the socialist revolution.

My third point is more a suggestion than a comment. The previous remarks include an implicit *ceteris paribus* assumption. We know that everything did not remain equal. An important factor to consider is population growth. It is obvious that Cuba's population did not remain unchanged from 1946 to 1989. If food imports of the type we have considered did not increase considerably, then, in the absence of productivity gains, additional land had to be planted to feed the growing population. The author could relate a measure of land use with population. For example, a simple correlation between population and area planted could show interesting results that could further validate the author's findings.

As a final point, I would like to mention that the author states that the evidence being collected and published in recent years seem to indicate that Cuba's agricultural production decline may originate in the substantial degradation of Cuba's natural resource base. Díaz-Briquets adds that "it is surprising that hardly any attention has been directed to assess the potential effect of environmental factors in the production collapse." Those words constitute a challenge for those of us working on Cuban agricultural issues.

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