COMMENTS ON

"Property Rights, Technology and Land Degradation: A Case Study of Santo Domingo, Cuba" by Sáez

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Reading the article by Professor Sáez, which I received as an 84-page chapter of his dissertation, has been a long but rewarding experience. If I had to summarize my reaction in just one sentence, the following would be very appropriate: a well researched, documented, written, impressive and devastating paper. This piece adds considerably to the growing wealth of information developed lately in the area of resource conservation and degradation in Cuba.

Since my comments can not address the wide range of topics covered by the author, I have decided to focus in one of my favorite issues: differences in productivity between the state and non-state sectors. At the 1993 ASCE meetings, Ricardo Puerta and I presented a paper, which was later revised and published in *World Development*, discussing statistical results on productivity differences between the state and non-state sectors and some obvious reasons for such differences. In addition to confirming, with data from the municipality of Santo Domingo, the failure of the state extensive growth model applied in agriculture during the 1980s—well before the establishment of the Special Period (SP) in September of 1990—the paper by Professor Sáez adds another dimension that, to my knowledge, has not been documented before in the literature.

After presenting data on increasing private sector output in contrast with declining trends in state farms during the SP, the author asks the following question: "How can private farmers maintain and increase production in the face of widespread chemical-input scarcities?" And he continues:

> The evidence presented ... shows that, in the case of Santo Domingo, private family farmers have conserved and developed their natural resource base, which allowed them to respond to the economic crisis. On the other hand, the state failed to foster resource conservation. The decline of output in state farms is explained in part by the degradation of natural resources in the area.

The article contains a long list of examples on the trade-offs between production and conservation practices in state farms. ("Conservation is not a priority, but maximizing output is.") Cultural practices that increase production (MINAGRI's main objective) rather than those that conserve resources are chosen by state managers. It is like reading René Dumont's accounts of the continuous mistakes made in the early years of the revolution. And this is still happening more than 30 years later! On the other hand, as you will read in the original paper, the author enumerates not only the reasons but also the procedures used by non-state farmers for resource conservation.

Given the success of non-state farmers on higher productivity ("All individual producers interviewed argued that small, individual farming is more productive than state farming in Santo Domingo") due in part to crop rotation, selective use of organic and commercial fertilizers, intercropping, fallow periods, and many other easy practices, one wonders about

the current state of affairs after the establishment of the Basic Units of Cooperative Production (UBPCs). Since the bulk of this research was conducted before their creation, it would be interesting to know the UBPCs' approach to resource conservation—an attractive topic for further research.

One final thought comes to mind. Most of us know about the numerous environmental laws and regulations enacted by the Cuban government. According to Professor Sáez, however, those related to agricultural production and several others are not enforced in the municipality of Santo Domingo. The new environmental law approved by the National Assembly of People's Power at the end of July 1997 appears to be comprehensive and complements previous legislation. It is our hope that strict enforcement will follow for the benefit of those living on the island and the future generations of Cubans.