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NEGLECTED SOURCES FOR A NEGLECTED TOPIC:  
CARIBBEAN AGRICULTURE

Agriculture, in one form or another, was traditionally the socio-economic foundation of society in Central America and the Caribbean. Agriculture provided far more than food and fiber for the region, it created employment, dictated life-styles and generated excess goods for world markets.<sup>1</sup> In 1979, for example, the value of coffee traded on the world market totalled \$13.4 billion, a value substantially greater than the \$9.7 billion trade in corn and the \$8.9 billion trade in sugar. Approximately one-half of the coffee trade, nearly \$7 billion, originated in the Caribbean. And who can ignore rum, that time-honored Caribbean agricultural byproduct which presently occupies first place among alcoholic beverages consumed in the United States. Production and trade in these commodities influenced peoples of the region so much that even their languages and idiomatic expressions grew to reflect a rural orientation.<sup>2</sup> Central Americans praised agrarismo, or agrarianism, and proudly guided visitors to see their humble fincas and their grandiose haciendas.<sup>3</sup>

All of this has not passed; today one finds continuation of the same patterns throughout the region, although agriculture is declining in importance due to increased urbanization and industrialization. The latter developments are often equated with modernization and many Latin Americans, frequently encouraged by foreigners, prefer to ignore or disregard their agricultural heritage. In fact, relatively little is known of that heritage, for only a handful of Latin American and foreign scholars have attempted to trace its history. Ironically, one of the basic components of Central American and Caribbean history continues to be neglected. When it is studied Caribbean rimland agriculture is often oversimplified and distorted by the use of such vague terms as "feudalistic," "backward," and "latifundista." This article examines the origins and nature of this neglect then suggests how it might be remedied by the use of some unexploited archival and secondary research sources, especially the agricultural trade and technical journals published in the twentieth century. It is also argued that emphasis on "middle sector" agriculturalists, those most likely to read technical journals, will appreciably modify our understanding of the evolution of agriculture in the region.

### Recent Literature--Contributions and Omissions

Those familiar with writings on Central America and the Caribbean recognize that agriculture has not been wholly neglected. Throughout the colonial period numerous travelers, priests, businessmen and traders chronicled farming practices in the region. Unfortunately the early enthusiasm to describe and understand agriculture in the area faded rather quickly and was not rediscovered until the 1940s. After World War II scholars in anthropology, economics, geography, sociology and history completed numerous studies on specific aspects of agriculture in the Caribbean basin. Specialized bibliographies, such as those published by the Interamerican Institute of Agricultural Sciences, at Turrialba, Costa Rica, testify to the quantity of research on the subject.<sup>4</sup> The Pan American Union's Inter-American Committee for Agricultural Development Inventories cite additional bibliography.<sup>5</sup> However, the number of such studies pales when compared to the number of works on other Latin American topics. Historian Lesley B. Simpson noted this trend in 1949 when he quantitatively analyzed articles written in the first thirty years of the Hispanic American Historical Review.<sup>6</sup> He concluded there was no article published in that journal before 1949 that could be labeled agricultural. Professor Simpson concluded that his colleagues preferred diplomatic and political topics because they were easier to document than, say, a study of the motives underlying Salvadoran over-dependence on coffee.

Historians were not alone in their neglect of agriculture. Before World War II investigation of the subject was limited to a few governmental reports and the informal observations of persons who had only a passing interest in agriculture. Professor Frans Verdoorn's ambitious, Plants and Plant Science in Latin America (1945), reflects the fragmented character of knowledge on the subject in the early war years.<sup>7</sup> Professor Wilson Popenoe, a contributor to the Verdoorn volume and a noted United States authority on Caribbean agriculture suggested that Latin American agriculturalists had "to walk before we [including himself] can run."<sup>8</sup> He also noted that "the average agriculturalist of tropical America is not prepared to put into effect, overnight as it were, ... those techniques of other regions which obviously could be applied to his condition without previous experimentation."<sup>9</sup> Most foreign scholars, and many Latin American intellectuals, shared Popenoe's view.<sup>10</sup> In 1951 a specialist at the University of Wisconsin's land tenure conference concluded that the farm population of Latin America is "prescientific" and "descending on the technological scale rather than ascending."<sup>11</sup>

The mystique of tropical jungles filled with unknown plants and animals clouded the thinking of otherwise reliable agricultural experts and caused them to look at Caribbean agriculture in a prejudicial and non-scientific manner. Scholars often dwelt on the unique, the unusual and the "abnormal." Latifundismo, the large landed estate system characteristic of much of the area, was labeled an "abnormality" by many and was indiscriminately used to describe agricultural practices everywhere in the region.

In the post World War II epoch agricultural advisors who accompanied the growing United States aid programs argued that latifundismo created most of the region's agricultural problems.<sup>12</sup> This philosophical opposition to latifundismo, coupled with the assumption that Latin American farmers were innately inferior, created a kind of "agricultural black legend" among many scholars. This hispanophobic fallacy, as Professor Philip Wayne Powell labeled it, likely shaped academic thinking about the way Latin Americans practiced agriculture.<sup>13</sup> Professor Powell demonstrates the basis for such prejudices in several quotations from a 1964 textbook used by sixth grade students in the United States. Phrases in the text include, "The Spanish in the Americas were not much interested in farming..." and "The English built a self-sustaining, even rich, agricultural economy, while the Spanish used their energy to seek gold and previous treasures."<sup>14</sup>

"Black legend" stereotypes seem to have influenced the writings of many scholars of agriculture but it must be remembered that most of these early experts were narrowly trained agricultural technicians who just happened to be applying their technology in Latin America. Their suppositions that Latin Americans would fare better with family farms, 4-H Clubs and extension agents were grounded in their culture, not necessarily their technical training--and they cannot be judged too harshly for their cultural biases.<sup>5</sup>

Nevertheless, the first generation of modern scholarly literature on Caribbean agriculture was primarily of a "how-to" nature, written from the vantage point of foreign technicians unmindful of their own biases. Largely ignoring the traditional agricultural practices of Latin America, technicians sent by Point-Four and the Agency for International Development dominated writing in the field. Research done between the end of World War II and the end of the 1950s came from this group. Many of these studies, which were usually sponsored by North American universities, are of excellent quality, despite their occasional biases. The volume, Land Tenure, which grew out of the University of Wisconsin's 1951 "International Conference on Land Tenure and Related Problems in World Agriculture" was one of the first and finest efforts to consider the actual state of Latin American agriculture.<sup>16</sup> Arthur T. Mosher's study, Technical Cooperation in Latin American Agriculture, followed in 1952.<sup>17</sup> As a detailed analysis of specific cases of successes and failures, it became a standard field guide for agricultural advisors sent to Latin America. This "how-to" literature concentrated on how to redistribute land, how to transfer technological knowledge and how to achieve rural economic progress. by 1960 there was so much of this kind of literature that Herbert F. Lionberger, of Iowa State University, provided an annotated bibliography to it, Adoption of New Ideas and Practice. A Summary of the Research Dealing with the Acceptance of Technological Change in Agriculture, with Implications for Actions in Facilitating such Change<sup>18</sup>

Lionberger's work appeared just as agricultural advisors embarked on the Alliance for Progress, the program which was to end their near-monopoly of the literature on Latin American agriculture. The Alliance for Progress program of the early 1960s was predicated on the belief that land reform was essential

for Latin American progress.<sup>19</sup> Some token land reforms did take place as a result of this program but in many cases less, not more, per capita agricultural production resulted.<sup>20</sup> The agricultural programs of the Alliance for Progress, consequently, generally became a failure.<sup>21</sup>

The failure of the Alliance for Progress marked a turning point in the literature on agriculture. Disillusionment grew among both foreign experts and Latin Americans. Ramon Fernández y Fernández, a leader in Mexican land reform, concluded in 1965 that the lack of objective studies drew a veil over Mexico's true agricultural situation. "This veil," he said, "is formed by interrelated dogmas, established over a long time as a result of political pressures and self interests."<sup>22</sup> These words reflected a more realistic understanding of the Mexican agricultural situation. The early idealism of the Alliance's land reform measures that promised miraculously increased production and "family farms" for all Latin Americans who desired them, declined during the early 1960s. Just as the United States National Academy of Sciences concluded that "the lack of a firm foundation of science and technology" in Alliance for Progress programs caused their failure, agricultural experts began to realize just how little scientific knowledge they had of Latin American agriculture.<sup>23</sup>

Ignorance of the widely practiced slash and burn agricultural technique is one of the more dramatic examples of the widespread lack of scientific knowledge. By felling large trees in heavily forested virgin areas subsistence farmers found it possible to cultivate relatively large areas with rather primitive tools and thus were enabled to meet their family's food needs. Experts sent by the Alliance wasted no time in condemning this practice, which they considered wasteful and harmful. In a short time they persuaded the governments of Latin America to pass laws banning the practice. The results were predictable; farmers either ignored the laws or governments refused to enforce them. Had the advisors been more mindful of the Latin American's own research in this matter, they might have acted differently. As early as 1959 a Costa Rican agronomist, José Luis Valenzuela C., observed that there were real scientific benefits, including fertilizers, to be gained by burning.<sup>24</sup> He suggested that burning should not be prohibited in ALL cases. Recent research by the Danes, among others, supports the view that slash and burn can be ecologically beneficial.<sup>25</sup> At any rate, the slash/burn controversy demonstrated that advisors could not disregard either the contemporary research of scientific colleagues or time honored agricultural practices in the area. Unfortunately some humanists and social scientists have apparently not yet recognized reasons for the controversy over slash and burn and contemporary textbooks in these fields continue to condemn its utility.<sup>26</sup>

Mistakes and misunderstandings, coupled with increasing recognition that North American agriculturalists did not have all the answers, engendered a new generation of agricultural studies. From 1965 until the present, both the quality and quantity of writings improved. Many more technical disciplines trained scholars who were well versed in Latin American studies as well as technical subjects, such as soils. In 1967 macro-economist Andre Gúnder

Frank's work, Capitalism and Underdevelopment in Latin America, became a milestone.<sup>27</sup> In his chapter, "The Myth of Feudalism in Brazilian Agriculture," Frank formulated a new theoretical framework for understanding agriculture. He broke from the past by arguing that "feudalism" and "latifundismo" were inadequate concepts to explain problems of Brazilian agriculture, which actually functioned within the context of international capitalism. Frank's volume was a great step forward because it signaled a departure from the "agricultural black legend" too often associated with the term "feudalism."

A few economists completed studies that complemented or enlarged upon Frank's work. North American agricultural economists Thomas F. Carroll, Ernest Feder and Solon Barraclough, all contributed well-researched studies on the economics of land reform.<sup>28</sup> While Project Manager of the United Nation's Land Reform Research Institute (Santiago, Chile), Barraclough investigated the relationship between agrarian structure and economic development.<sup>29</sup> Two Latin American economists completed studies along similar lines: They are Solomón Eckstein, author of the 1966 work, El Ejido Colectivo en México, and Edmundo Flores, Professor of Agricultural Economics, National University of Mexico.<sup>30</sup> Aside from the aforementioned scholars, economists demonstrated little interest in Latin American agriculture. Even those mentioned above, as Professor Flores points out, focussed excessively on the rather narrow subject of land reform.<sup>31</sup>

On the other hand, numerous anthropologists studied agriculture during the 1960s. Most of these investigators were social anthropologists who specialized in peasant cultures. Professor Sol Tax pioneered in studies of indigenous economies in his, Penny Capitalism: A Guatemalan Indian Economy (1953).<sup>32</sup> In the 1960s similar works came from George M. Foster, Sidney W. Mintz and William Carter.<sup>33</sup> Although filled with a wealth of detail about indigenous agriculture, investigations by these men tend to be particularistic. That is, they overemphasize the uniqueness of individual communities which they observed for rather short, limited time periods.

Post World War II sociological writings on agriculture usually concentrated on broad topics, avoiding the narrowness characteristic of anthropological works. Two outstanding sociologists led in the topical approach. They were Professors Rodolfo Stavenhagen, a Mexican teaching at the National University of Mexico, and Henry A. Landsberger, Professor of Sociology at the University of North Carolina. Professor Stavenhagen rectified many myths and mistaken notions about peasants when he edited Agrarian Problems and Peasant Movements in Latin America (1970).<sup>34</sup> Henry A. Landsberger focussed on peasant organizations and movements, treating them within the analytical framework of his discipline.<sup>35</sup> The basic weakness of both authors is that they tend to theorize excessively and often lack hard data to support some of their suppositions. Both, however, are remarkably objectives and free of the agricultural black legend.

Although Sociological investigations were sometimes overburdened by theory, most of the historical studies done after 1965 suffered from the lack

of theory. Histories were very specific and writers concerned themselves little with the broader aspects of topics they choose. Historians initially focused on the large colonial landed estates, the haciendas. The pioneering works of Woodrow Borah, New Spain's Century of Depression (1951) and François Chevalier's La formation des grandes domaines au Mexique. Terre et société aux XVIIe-XVIIIe siècles (1952) were the first serious studies of the origins of the landed estates.<sup>36</sup> These volumes set the tone for subsequent historical investigations and a certain stereotyped vision of the "typical hacienda" dominated literature emanating from historians. Borah's and Chevalier's view of how haciendas originated and functioned soon came to be applied to all of Latin America, even though their own studies dealt only with Mexico. This approach has been questioned only recently, as demonstrated by the excellent historiographical essay by Magnus Mörner, "The Spanish American Hacienda: A Survey of Recent Research and Debate" (May, 1973).<sup>37</sup> Mörner correctly points out that the concept of Hacienda was never clearly defined nor agreed upon--it was often erroneously equated with "plantation" and "encomienda." It would take too long to discuss here the many cogent observations made by Professor Mörner and his own summary is quite thorough:

...Our knowledge about the hacienda and the rural history of Latin America in general is now considerably more extensive than it was twenty years ago. However, it is still strikingly uneven in both geographical and chronological terms. Mexico is still better known than the rest of the region. Absurdly, most of the serious investigations suddenly stop at 1810, a date which is almost meaningless in economic and social history.<sup>38</sup>

There are several histories dealing with the post 1810, or national period, but they suffer from many of the shortcomings cited by Mörner. Neither of these studies focus on the Caribbean rimland but because of their general importance they must be mentioned. Perhaps the best known monograph of this group is Revolution of the Pampas A Social History of Argentine Wheat, 1860-1910 (1964), by Professor James R. Scobie.<sup>39</sup> This classic may stand for many years as the definitive work on Argentina's agricultural history, yet it ignores many important ecological and scientific factors. Although Scobie presents an excellent narration of historical events, he gives no scheme which might be utilized in comparing the agricultural evolution of other nations or regions. Because Scobie's volume deals with a temperate climate nation much of what he discusses is not applicable to the tropical/sub-tropical zones dominant in the Caribbean area. Warren Dean's study of Brazil, The Industrialization of Sao Paulo, 1880-1945 (1969) focuses on the industrial rather than the agricultural, but it does give insight into the processes bringing innovations to both sectors of the economy.<sup>40</sup> Dean shows how coffee revenues were skillfully used by the Brazilian elite, largely of foreign parentage, to further their industrial interests.

Only one person, Victor Manuel Patiño, a Colombian, ventured to write a general, comprehensive agricultural history: Historia de la actividad agropecuaria en América equinocial (1965).<sup>41</sup> Patiño is a follower of the Carl Sauer geographical tradition and is not a professional historian, a

factor that weakens his Historia. He explains how the Spanish introduced tools and cultural practices throughout the conquest and colonial periods but ends his study with 1810. He makes passing observations about the national period throughout his text but often fails to put them into a chronological framework.

This brief survey of the best literature in each of the aforementioned disciplines suggests one major point: Most of the literature currently available on agriculture, whatever its disciplinary origin, suffers from serious deficiencies. As Professor Stavenhagen noted, "The literature in this field generally approaches it from only one angle at a time."<sup>42</sup> Works on the subject are often so specialized and narrowly focussed that they overlook the long term changes occurring in the rural sectors. Excessive scholarly specialization also creates great gaps between the physical and social sciences and the humanities. One suspects that scholars with exclusively urban, social science and humanities backgrounds are trying to explain phenomena that are basically rural, practical and closely tied to the ecological sciences. Not long ago one group of young historians predicted: "...we suspect that some scholars will soon begin to investigate ecological aspects of Latin American society, exploring such problems as the connection between climatic change and social institutions."<sup>43</sup> Unfortunately such agricultural studies are few and far between. In order to study such problems scholars must choose topics for reasons other than the availability of sources. Professor Simpson recognized this in 1949 when he noted that it was certainly more difficult to write agricultural history than say, diplomatic history.<sup>44</sup> Most farmers leave no archives for scholars to examine. Hacienda records are the exception not the rule. Average farmers are ignored by the chroniclers of their own times, who pass over the simple ordinary tasks of day-to-day rural life, in order to concentrate on the doings of hacendados, who often left written testimonials of their activities. Latin American governments ignored the labors of most farmers. Until the 1940s governments failed to systematically gather and store enough data to produce accurate agricultural censuses.<sup>45</sup> Many countries still do not.

The paucity of sources on certain subjects resulted in an overemphasis on others, especially haciendas and peasants. This overemphasis dovetailed with the dual-society (dependency) model, which portrays Latin America as two extremes, the rich and the poor. Unfortunately this dual-society model served those who, consciously or unconsciously, believe the agricultural black legend to be true. Scholars tended to lump farmers either among the cruel exploiters, the hacendados, or the exploited, the humble peón or peasant field worker.

In tacitly accepting this agricultural dual-society model researchers overlooked a large segment of Latin America's farming population--the middle class. There are some who will argue perhaps that a rural middle class does not or has not existed in Latin America. Yet Solon Barraclough convincingly

argues that:

Most of [Latin America's] agricultural production reaching national and international markets originates on farm units which can be called capitalist by any common sense meaning of the term, not from subsistence peasant holdings or traditional haciendas.<sup>46</sup>

Mörner, Stavenhagen and others suggest that this type of farmer exists and has been generally ignored by scholars.

The current emphasis on haciendas and peasants must change if we are to get an accurate picture of Caribbean agriculture. This certainly does not mean that such studies are worthless or that we should demean those who undertake them. Quite the contrary is true. Had John Womack, Jr. not written Zapata and the Mexican Revolution (1968), much less would be known about peasant uprisings in revolutionary Mexico.<sup>47</sup> Nevertheless, scholars must not create romanticized images of modern peasants and then equate them with the "noble savages" of the eighteenth century, who were always trying to escape the exploitive grasp of the hacendados. Although Womack resisted the temptation to idealize, all writers are not so objective, particularly the more leftist or Marxist ones. Recent writings by this group have created a kind of "peasant cult" among a few scholars. Adherents to this cult portray Latin American peasants in heroic and overblown terms. A typical example of this kind of writing is, Land or Death The Peasant Struggle in Peru (1972), by Hugo Blanco, a Peruvian journalist.<sup>48</sup> The dual society model, found in most of the traditional literature, is used to support Blanco's arguments but becomes distorted in the process. In the hands of Blanco it becomes rhetorical and factually weak.

Fact, not value judgements, will finally prove or disprove the importance of middle sector agriculturalists in the Caribbean. First it will be necessary to identify the characteristics of this hypothetical middle class farmer. Members of this group likely included literate, rational economic decision makers who owned middle sized, commercially oriented, family farms.<sup>49</sup> They probably earned rather than inherited the bulk of their holdings. Unlike the colonial hacendados they did not let their lands lay idle. They used their entrepreneurial skills to increase production so that they would have more goods to sell in the national and international markets. These entrepreneurs embraced technological advances in agriculture and used them when it was financially profitable; thus, they kept well informed about foreign discoveries and innovations. These farmers often depended upon bank loans for operating capital and their financial positions were frequently insecure. Rarely did their families become members of the permanent landed elite. Rather, they used their agricultural profits to move on to other occupations. There was thus a rapid turnover in this owner/managerial class, and that makes it even harder to identify and systematically study them.<sup>50</sup>

If scholars are to define, identify, and describe middle sector agriculturalists they would be well advised to begin with the region's most recent history. In this epoch, the twentieth century, it should be easiest to

investigate the type of farmer portrayed above. In a field where sources are scarce to begin with, researchers will usually find more data on agriculture in this period. Censuses, bank loan records, field reports, trade journals, and so on, are more numerous for the last several decades. The agricultural trade and technical journals promise to be one of the sources which will be most useful in opening this line of inquiry. The commercially-minded farmer usually subscribed to such journals and was frequently written about in them. Once fully exploited, hopefully in an interdisciplinary manner, these sources should either confirm or deny the role played by those who can be labeled middle sector agriculturalists. At the very least, investigators would gain a new perspective on a field that needs much more study.

Because of the aforementioned trends, scholars face unusually difficult bibliographical problems in any investigation of Caribbean agricultural history. Growing awareness of these problems stimulated production of numerous agricultural bibliographies. One of the objectives of this paper is to evaluate the most noteworthy of these bibliographies and to assess their historical usefulness. In the third portion of this paper sources have been selected to illustrate the types of material that investigators might use in studying Caribbean and Central American agricultural history. Most items annotated in the third section were chosen as representatives of a group of sources found in a number of countries from the colonial epoch through the national period. The fourth and final portion of the paper briefly lists and describes neglected archival sources that would be very useful to any student of agricultural history.

## Part II, Bibliographical Sources

For the long term it is difficult to make quantitative judgments about the kinds of agricultural works originally written in, or translated into, Spanish and Portuguese. However, for the decade, 1958-1969, the Programa Interamericano de Desarrollo para Bibliotecas Agrícolas sponsored a comprehensive quantitative analysis of two thousand books in Spanish dealing with agricultural science.<sup>53</sup> The study revealed that most of the works on the subject were translations, rather than original agricultural studies by Latin Americans. This "borrowing" of foreign sources on agriculture has ancient origins, but became firmly established with the Bourbon rule of Spain, when France acted as the transmitter of technical knowledge to the Spanish.<sup>54</sup>

A statistical analysis of agricultural books produced from 1958 to 1968 shows that of the 2000 volumes listed, 358 dealt with social science, economic development and rural social organization. 228 volumes represented the pure sciences. Books concerned with biological sciences numbered 283, and zoology included 51 volumes. Of the more applied agricultural sciences, 515 volumes dealt with soils, fertilizers and applied botany. Books on the cultivation of cereals, fodders, fibers, cafe and cacao numbered 96. Seventy-five volumes were related to forest development, and horticulture had 71 titles. Animal husbandry included 314 books and beef husbandry comprised most of these. Aviculture had 90 titles. The animal related industries (such as feedlots) had 105 publications.<sup>55</sup>

This detailed analysis of recent agricultural books illustrates the fact that agricultural historians of the Caribbean must rely on the literature of many disciplines. It is difficult, perhaps impossible, for the agricultural historian to clearly delimit sources. To illustrate the breadth of material to which the modern student may turn a few of the recent agricultural bibliographies will be discussed in detail.

The most outstanding bibliographical studies dealing with Caribbean agriculture are those prepared by the Instituto Interamericano de Ciencias Agrícolas (IICA), the Interamerican Institute for Agricultural Sciences, formerly part of the Organization of American States. Their series on Bibliotecología y Documentación is perhaps the most complete of its kind ever produced. Item No. 10 in that series is particularly useful. It is the Bibliografía de bibliografías agrícolas de América Latina.<sup>56</sup> Although most of the bibliographies cited in this work are not strictly historical, a few are; such as the Bibliografía sobre historia do azucar, done in Brazil.<sup>57</sup> Other varied titles in the IICA series include: Estudio de la situación actual de las instituciones de educación agrícola superior,<sup>58</sup> lists of theses done by agricultural students,<sup>59</sup> and a Bibliography of Rural Youth Programs Publications.<sup>60</sup> In addition, IICA has sponsored a bibliographical series dealing with particular crops. This series now includes extensive bibliographies on beans, coffee, corn and lesser crops.<sup>61</sup>

Taken as a whole, the IICA bibliographies give most attention to highly scientific and specialized works of a technical nature. But this series also

includes works on everything from community group study to crop prices. The use of these sources will vary according to the project undertaken by particular historians, but in no case can one ignore this vast quantity of relevant literature.

A second, and equally important, collection of bibliographical material is the series put out by CIDA, the Inter-American Committee for Agricultural Development. This series, published by the Pan-American Union, has a volume on each of the Latin American countries. Its subtitle, Inventory of Information Basic to the Planning of Agricultural Development in Latin America, aptly describes the objectives of the series. The series is not purely bibliographical, for each country's general agricultural situation is discussed at the same time that bibliography is presented. Five topics are discussed for each country: natural resources, land use and agricultural production, human resources, agricultural institutions and general conditions. Bibliographies are annotated and discussed whenever they relate to the topics listed above.<sup>62</sup> The bibliographical notes are complete and candid.<sup>63</sup> Maps and tables greatly enhance the value of this series. The Pan-American Union also publishes a single volume containing only the bibliographical references used throughout the series on each country.<sup>65</sup> This Selected Bibliography is divided topically and by country.

The final bibliography to which attention will be turned is Martin H. Sable's, Latin American Agriculture: A Bibliography, published in 1970.<sup>66</sup> The full title of this work best describes its contents. It is, Latin American Agriculture: A Bibliography on Pioneer Settlement, Agricultural History and Economics, Rural Sociology and Population (Including Immigration and Foreign Minorities), Agricultural Cooperatives and Credit, From the Holdings of the Widener Library, Harvard University<sup>64</sup> Sable's attempt to include so many subjects is both the strength and weakness of his work. His broad interpretation of agriculture gives the work a historical dimension not often found in the previously discussed bibliographies, but at the same time his attempt to consider so many topics in this brief volume meets with only moderate success---partly because of the limited holdings of the Widener Library (on this topic), and partly because the research was apparently completed hurriedly. Despite its failings, Sable's bibliography is certainly a useful tool for students who are just being introduced to the subject of Latin American agricultural history, and this was the author's stated purpose.<sup>67</sup>

It can be concluded that interest in agricultural bibliographies of Latin America has grown considerably during the last decade. As a result of this interest a great variety of bibliographies are emerging and many of them promise to be of great use to agricultural historians. While these bibliographical efforts are only a beginning, they hold much promise for the future.

### Part III, Examples of Secondary Source Materials

It is the purpose of this section to illustrate the kinds of source materials available for the study of Caribbean agricultural history. Only a few titles have been annotated because of space limitations. Not only are Publications few in number, press-runs are limited to between fifty and five-hundred copies for works published in Latin America. The attempt of this section is to provide an illustrative cross-section of the kinds of materials that may be consulted.

#### The Colonial Period, 1492-1810

##### I. COLONIAL AGRICULTURAL TEXTS:

1615: Ximenez, (first name unknown), Quatro libros de la naturaleza y virtudes de la plantas...en la nueva espagna (México: 1615).

Noel Deerr, noted historian of sugar, cites this volume as the first significant agricultural work written and printed in Latin America.<sup>68</sup> It is extremely rare and available only at the New York Public Library. Nevertheless, a partial translation (in Latin) is found in Piso and Margrav's Historial Naturalis Braziliae (Amsterdam: 1648), Part II, p. 85-6, ch. XVII, Hist. Plantarvm. The brief chapter in Piso is subtitled, "De iisdem cannis & modo faciendi saccharum apud Hispanos ex . Fr. Ximenez." As the title indicates, the bulk of the Ximenez work, which seems paraphrased in Piso, is concerned with sugar cane and its milling processes. As it has been impossible for me to review the original Spanish text I could not determine whether most of the Ximenez work is concerned only with sugar, or with other crops, as the Spanish title implies. The book is cited here as one of the few published new world treatises dealing exclusively with agriculture. Similar works are known to be in Latin American national archives but only in manuscript form.

##### II. COLONIAL VOYAGES & TRAVELS:

1701: Sloane, Hans, A Voyage to the Islands of Madera, Barbados, Nieves, S. Christophers and Jamaica, with the natural history of the herbs and trees, four-footed beasts, fishes, birds, insects, reptiles, etc. of the last of those Islands (London: Printed by B.M. for the author, 1707), 2 vols.

Natural history accounts are particularly valuable for the historian of Caribbean agriculture. This work, by the great British naturalist and collector, Hans Sloane, is of particular interest because of his detailed description of sugar plantations and the sugar economy. See especially Vol. I, introduction pp. LX and LXI. Although his observations could not be considered scientific in the modern sense, they are the most reliable ones available.

III. COLONIAL PERIODICALS

1788-1794: Gazeta de Literatura (Ciudad México, México: publisher unknown, 1788-1794), 3 vols. microfilm, R. L. Gilmore collection. Number 8, June 12, 1788, of this periodical publication states that the purpose of this series was to "propagate the study of the sciences." The authors of this series considered agriculture a science, therefore there are many articles on that subject interspersed throughout the publication. While many of these articles are practically oriented; such as how to grow cacao, they frequently refer to contemporary agricultural developments in Europe. The topics most often dealt with are botany, chemistry, and physics. Such items as the "Notes of the Berlin Academy, 1782" are reprinted. Plant illustrations are sometimes included.

IV. PLANTATION STUDIES:

Sheridan, Richard B., "Samuel Martin, Innovating Sugar Planter of Antigua 1750-1776" Agricultural History, XXXIV, no. 3 (1960), 126-39.

Sheridan, Richard B., "Temperate and Tropical: Aspects of European Penetration into Tropical Regions" Caribbean Studies, III, no. 2 (July, 1963), 3-21.

Sheridan, Richard B., "The Plantation Revolution and the Industrial Revolution, 1625-1775" Caribbean Studies, IX, no. 3 (October, 1969), 7-25.

Professor Sheridan, an economist, has an extraordinary understanding of the functioning of Caribbean plantation economics in the colonial period. His careful use of primary sources establishes his ability as an historian, as well as an economist.

V. GENERAL COLONIAL HISTORIES:

1794: Edwards, Bryan, History of the West Indies; The History Civil & Commercial of the British Colonies in the West Indies, 2 vols. (London: John Stockdale: Piccadilly, 1794, 2nd. edition), 1100 pp. Spencer, Ellis collection M63, Univ. of Kansas, Lawrence.

It presents a comprehensive view of all the British settlements in the West Indies, with excellent tables showing trade trends for each area. There are import-export tables for 1698-1790. Sugar agriculture is especially well described and several excellent plates show mills, boiling processes and plantation layouts.

VI. TECHNOLOGICAL STUDIES OF COLONIAL AGRICULTURE:

Barrett, Ward, "Caribbean Sugar-Production Standards in the Seventeenth and Eighteenth Centuries," in: Parker, John (ed.), Merchants and Scholars Essays in the History of Exploration and Trade (Minneapolis, Minnesota: University of Minnesota Press, 1965), pp. 147-70.

This article is a welcome attempt by a geographer to compare technological capacity and output of Caribbean sugar plantations prior to 1800. Although Prof. Barrett fails to deal with all of the Spanish sources he has done well with the French and British ones. His consideration of types of mills, power sources, acres harvested per hour/workdays, and schedules add much to the study of Caribbean agriculture.

THE NATIONAL PERIOD

VII. GOVERNMENT MEMORIAS

The Memorias, or annual reports, of the governments of Latin America provide the greatest repository of information on agricultural topics. Of particular interest are the Memorias de agricultura, fomento (development) and hacienda y comercio. The aforementioned memorias were most often concerned with agricultural questions; however, their names were frequently changed and their publication was so sporadic that they pose a special bibliographic problem. The following listing of memorias is extrapolated from: Childs, James B., The Memorias of the Republics of Central America and of the Antilles (Washington: G.P.O. 1932), 170 pp. While this guide is somewhat dated it is still the basic source on this matter, giving an indication of when memorias were published in the nineteenth and twentieth centuries. The description of memorias which follows illustrates the utility of some memorias as sources.

Central America: 1830/31 (Feb.); Memoria que se presentó al Congreso federal de Centro-América el Secretario de estado y del despacho de hacienda del supremo gobierno de la república el 26 de Marzo de 1831 en la legislatura ordinaria del mismo año. (Guatemala: Imprenta nueva, 1831, 1 leaf, 28 pp. 12 tables (9 folding), signed, P. José Valenzuela.

Costa Rica: The first Secretaria de agricultura e industria was created June 20, 1870 and annexed to Gobernacion. It was abolished in 1881 and replaced by the Secretaria de fomento. Fomento in turn, originated in the department of roads (departamento itinerario) which began in 1854. From 1881 until 1928 the department of fomento acted as the agricultural ministry. In 1928 a separate ministry of agriculture was established, but it remained under the control of the fomento ministry until the recent past. Hacienda reports run for the longest period, from 1844 to the present.

Cuba: Childs does not attempt to describe Cuban agricultural reports previous to the United States' occupation of the island; for that period one must consult the Spanish archives. On January 11, 1899 the Cuban government was established after the United States model and a separate secretary of agriculture was designated. The Ministry of Agriculture operated rather independently until Fidel Castro came to power. Little is known about the functioning of the agricultural department after the Castro revolution.

Dominican Republic: The Ministry of Agriculture in the constitution of 1903, replaced fomento. After 1929 it was renamed the Secretaría de agricultura y comercio. Agricultural memorias exist for nearly every year since 1908.

Guatemala: As was the pattern elsewhere, the Ministry of Agriculture was created from the fomento department, in 1920. Agricultural memorias exist for most of the years after 1920 and are usually about 230 pages long. The Ministry apparently operates with greater independence than many of its counterparts in other Caribbean countries.

Haiti: This island republic has a more complex governmental structure than its Spanish-speaking neighbors. There are only four secretaries of state and Interieur et agriculture is one of these. The Interieur et agriculture department existed most of the time since 1805 but there are relatively few extant memorias from that Ministry.

Honduras: The Ministry of Agriculture became, in 1908, one of the sub-divisions of the Ministry of Fomento. There are few separate agricultural memorias and fomento usually discussed the subject in its own reports.

Nicaragua: Their ministry of agriculture was established January 24, 1929. The first reports discussed labor as well as agriculture. Publication of annual reports has been fairly regular since 1929, although fomento frequently included agricultural subjects in its reports.

Panama: Originally agriculture in Panama was discussed in the fomento reports, but after 1924 a Department of Agriculture and Public Works prepared annual reports. These reports have been regular, although titles vary considerably and fomento is sometimes listed as the originating office.

El Salvador: Was one of the first to have a separate Ministry of Agriculture. It was created in 1911 and annexed to Gobernación. Yet the agricultural Memorias rarely appear under the Department's authorship but are found under Gobernación and Fomento.

VII. TECHNICAL ENCYCLOPAEDIAS:

1857: Laboulaye, Charles Pierre Lefebvre, Enciclopedia tecnológica, Diccionario de artes y manufacturas, de agricultura, de minas, etc. Descripción de todos los procedimientos industriales y fabriles. (Madrid & Paris: Establecimiento Tipográfico de Mellado, 1857), 4 volumes. Apparently an adaptation of the original French edition, Dictionnaire des arts et manufactures. Description des procedes de l'industrie francaise et estrangere, 2 vols. (1847).

This work, found in a nineteenth century Costa Rican library, is exemplary of the sources upon which some Latin American agriculturalists depended. The section on economía rural is of particular interest. The author defines economía rural as: "Agriculture, an industry, the object of which is no other than to get the greatest

profit possible from the time invested, and the knowledge and capital invested to obtain products from the earth." Tomo II, p. 962. The work discusses economic questions and examines the theories of Adam Smith, Say and Ricardo. A refined discussion of systems of mixed, pasture and grain cultivation follows. Much of the article is concerned with stock breeding and formulae are given for animal feeds. The final section includes practical suggestions, such as how to store eggs and make chicken waterers.

In all, 257 pages are devoted to agriculture. While it is practically impossible to assess the impact of this kind of literature it is clear that its presence indicated some Costa Rican interest in technical aspects of agriculture.

IX: AGRICULTURAL EXPOSITIONS:

Agricultural expositions within and between Caribbean countries were fairly common during the 19th & 20th centuries. Reports of these expositions often reveal much about agricultural products, such as notes on particular alcoholic beverages displayed for evaluation. For example: in 1901, in the United States see: Burton, D. Ingle, Souvenir of the Pan-American Exposition (New York: The Stephenson Co., 1901), no pagination, bilingual.

This item is typical of publications about agricultural expositions held in the United States. This one features articles on participating country's agricultural and commercial exhibits.

X: HISTORICAL AGRICULTURAL NOVELS:

Circa 1873, Seco I Shelly, Manuel, Historia de un grano de trigo (Bogotá, Colombia: Tipografía de Nicolás Pontón I Compañía, 1873), 69 pp.

This, "History of a Grain of wheat", is a very curious piece of fiction (perhaps) about how a community comes to adopt a new wheat variety under the guidance of a scientist, Dr. Herman de Leibich. The doctor in the novel could well be meant to symbolize the famous European, Justus von Liebig. The story ends with the triumph of the new wheat variety, a prosperous community, and a scientist held in high regard by his peers. Very rare item in LKL collection.

XI: RECENT CARIBBEAN AGRICULTURAL PERIODICALS:

1948-1961, Ministerio de agricultura, Costa Rica, Suelo Tico (San Jose, Costa Rica, 1948-61?), about 47 numbers, publication irregular.

This series is representative of recent agricultural journals in Latin America. It was started in order to stimulate broader interest in agricultural development. Issues dealt with include: scientific agricultural experiments, crop and animal diseases, leading articles in foreign journals and agricultural prices. Potentially these are one of the best sources for agricultural historians.

XII: RECENT PERIODICALS OF NON-CARIBBEAN ORIGINS:

Twentieth Century; Agricultural Trade and Technical Journals—Keys to the Middle Sector Riddle?

Among the most neglected sources one finds the agricultural trade and technical journals, which may be fruitfully researched to enhance our understanding of agriculture associated with middle sector farmers. For purposes of this analysis trade and technical journals are broadly defined. They include serial publications which deal either exclusively with Latin American agriculture or some important facet of it. All were published in the so-called developed world during the nineteenth and twentieth centuries.<sup>51</sup> United States government publications are omitted because of their large number and the fact that they are indexed elsewhere.<sup>52</sup> It is believed that further research in these sources will support the middle sector hypothesis and at the same time provide specific useful data. The best known example in this group is probably La Hacienda magazine.

1905-present, La Hacienda Company, La Hacienda (New York: La Hacienda company, 1905-present, although under numerous editors and in different locations. A Buffalo, N. Y. sugar cane equipment manufacturer founded this magazine. Last regular editions were done by Mr. Robert Cody, Cody Publishing Interprises of Kissimmee, Florida [305/847-4781]; Current owner is Gregorio Escagedo, 1402 Queen Palm Lane, Sarasota, Fla., 33580).

Although published in the United States, little is known about this popular agricultural magazine once prepared in Spanish and Portuguese editions. The series contains many practically oriented articles, obviously directed to many different types of farmers. Much more needs to be known about the circulation and impact of this well printed and highly illustrated magazine. Vision purchased the Portuguese edition, O Dirigente Rural, and continues to publish it in Brasil.

Other examples of trade journals are: the Butcher's Advocate; the Tea and Coffee Trade Journal; Export Trade and Shipper; Farm Implement News; Business Abroad (The International Trade Review); Cuba's, Revista de Agricultura (at least 1934-57), OUS); the Buyers Guide; The Gardner's Chronicle and Agricultural Gazette (England); Annals of the Missouri Botanical Garden; Der Tropenplanzer (Germany); Revista Comercial, (Nicaragua); The Export Shipper; Board of Trade Journal (England); Commercial Intelligence Journal (Ottawa, Canada); International Cotton Bulletin; Agriculture and Horticultural Engineering Abstract (England) and Agricultura de las Americas (Intertec, Kansas City).

XIII: COMMODITY PUBLICATIONS, COFFEE AS AN EXAMPLE:

The three items that follow are representative of a great body of published material on coffee. Similar works exist for most other crops.

1933: Secretaría de la economía nacional, departamento de estudios economicos, El Café, Aspectos Económicos de su Producción y Distribución en México y en el Extranjero (México: Editorial "Cvltvra", 1933), 362 pp.

The title is descriptive of the content, which is of a high calibre.

1931 & 1934: Choussy, Felix, El Café Historia del Café, sus crisis, reveses y vicisitudes. su introducción en América (San Salvador, El Salvador: Asociación Cafetalera de El Salvador, 1934), 2 tomos.

A surprisingly thorough work for the period, it considers (in tomo II) the expansion of the coffee culture in Latin America. It includes maps, tables and ample bibliography.

1961: Coste, Rene, Les cafeiers et les cafes dans le monde (Paris: Editions Larose, 1961), 2 tomes, approx. 900 pp. each.

This is an excellent illustration of the fine French studies that exist on agriculture in tropical regions. The author is general director of the Institut Français du Café et du Cacao. The coffee cultures are discussed in each of the Latin American republics, with emphasis on growing regions, techniques of growing and the world coffee economy.

#### XIV: PUBLICATIONS OF AGRICULTURAL SCHOOLS:

1962-63: Boletín Oficial de la Escuela Agrícola Panamericana (Tegucigalpa, Honduras: Valle de Zanmorano, 1963), 80 pp.

This annual report includes a survey of the school's research activities. Personnel, publications and scholarships are also discussed.

1950-present: Turrialba, Revista Interamericana de Ciencias Agrícolas (Turrialba, Costa Rica: IICA).

Probably the leading periodical publication on agriculture in Latin America, its articles are usually on a scientific level with those of the United States and Europe. It is published three times a year and each issue runs about 125 pages. Each issue has a useful list of agricultural works for sale through IICA.

#### XV: FOREIGN CORPORATION STUDIES:

1958: May, Stacy and Galo Plaza, The United Fruit Company in Latin America (New York: The National Planning Association, 1958), 290 pp. Also Spanish edition.

This is one of the classic studies of foreign investment in Latin American agriculture, and while there are a few others like it, there is a great need for further studies of this type. Business archives abound but few researchers are utilizing them (see section 4 below).

XVI: TYPICAL SECONDARY MONOGRAPHS:

1957: Yanez-Perez, Luís, Mecanización de la agricultura Mexicana (México: Instituto Mexicano de Investigaciones Económicas, 1957), 419 pp.

Undoubtedly the most complete study of agricultural mechanization in any country of the Caribbean. This work is outstanding. It is, however, perhaps too oriented toward economic factors while neglecting scientific factors and processes governing the adoption of agricultural machines.

XVII: NATIONAL AGRICULTURAL HISTORIES:

1970: Saénz Moroto, Alberto, Historia agrícola de Costa Rica (San Jose, Costa Rica: Universidad de Costa Rica, 1970), 1087 pp.

This national agricultural history is more chronological than historical. It is lengthy but weak in style and organization. Nevertheless, it is one of the few attempts by a Central American to describe and evaluate his nation's agrarian history. It signals a new interest in the subject throughout the region. We can expect similar efforts in the near future.

#### Part IV, Neglected Archival Sources

The most exciting neglected sources available on Caribbean agricultural history are, no doubt, the archival ones. Rarely have such excellent sources been so systematically ignored by professional historians. Perhaps this neglect grows out of the profession's biases against the study of agriculture, as suggested early in this presentation, or perhaps our colleagues are simply unaware of what great and useful treasures await them.

There are at least 25 noteworthy collections focussing on agriculture in Central American and the Caribbean. Briefly, they are:

- 1) The Harry A. Wallace papers at the University of Iowa.
- 2) Archives of the Panamerican Agricultural School of Zamorano, Honduras.
- 3) Wilson Popenoe's papers are in an official repository at the Hunt Botanical Institute in Pittsburg, PA.; however, some are scattered in the two sources mentioned above, the archives (Development Information Unit) of the Agency for International Development, and in a few personal papers and photographs held by Hugh Popenoe, University of Florida, Gainesville. Popenoe was a very rich source and merits a biography.
- 4) Archives of the National Academy of Sciences, especially the Office of the Foreign Secretary for Latin American Affairs.
- 5) Fundación del Centavo, "Penny Foundation" of Guatemala City, especially the records of Sam Greene, founder.
- 6) The American Friends Service Committee, Philadelphia, PA.
- 7) Ecumenical Mission to Guatemala, the United Presbyterian Church.
- 8) Mexico City Branch office of the Food and Agriculture Organization of the United Nations (F.A.O.).
- 9) The Rockefeller Foundation, Division of Agricultural Sciences, Mexico City office.
- 10) Correspondence of the Botanical Museum of Harvard University, Cambridge, Mass.
- 11) Correspondence of C. Steward Baeder, former vice president of the National Association of Manufacturers, New York City.
- 12) Archives of the Maryknoll Fathers, esp. "News desk" items, Maryknoll, N.Y.
- 13) Instituto Agropecuario Nacional, Guatemala City.

- 14) Hacienda E. Ingenio "La Cabaña" records available as part of the Henry Wallace Collection.
- 15) Grant and Thomas Hybrid Corn Company, Coon Rapids, Iowa.
- 16) Worthington of Mexico (seed dealers), possibly associated with Pioneer Hi-Bred Corn Co.
- 17) Pioneer Hi-Bred Corn Company, Des Moines, Iowa, [an excellent source] and Plant Breeding records from Johnston, Iowa office.
- 18) Cargill, Inc. (Minneapolis, Minnesota) Dr. Richard Baldwin, Vice-President and Executive Director of Research, is an excellent contact person.
- 19) The Conservation foundation, New York, N.Y. est. 1948.
- 20) La Hacienda Correspondence is scattered in several places, reputedly including a closet in Miami, Florida. Its most important editors were probably Mr. Albert Bayard and his son Stivessant [813/355-4840]. Albert's grandson, David, continues to work for the paper in Kissimmee, Fla. Current address for La Hacienda is P.O. Box 61-1197, North Miami, Fla. 33161.
- 21) Cyanimid Boringuen Corporation, Agricultural department, Santurce 34, Puerto Rico.
- 22) University of Puerto Rico, Río Piedras Agricultural Experiment Station records.
- 23) United States Department of Agriculture, Washington, D.C.
- 24) Agency for International Development, U.S. Dept. of State, Washington, D.C. The Development Information Unit, a part of the Science and Technology Bureau of AID, is the official repository and library for Agency records not routinely sent to the National Archives.
- 25) Archives of the United Fruit Company. Many are concentrated in the U.S. but others are scattered throughout the Central American region. A few are in private hands.

FOOTNOTES

<sup>1</sup>Inter-American Development Bank, Annual Report 1973 (Washington, D.C.: Inter-American Development Bank, 1974), 4-6, note especially the table on page 4 entitled, "Latin America: Growth of Gross Domestic Product, Agriculture and Industry, 1965-72." This report confirms that although agricultural production declined recently in Latin America it is historically the most vital sector of the area's economy.

<sup>2</sup>Alfredo Costales Samaniego, "Modismos y regionalismos centroamericanos" América Latina, VI, No. 4 (Oct.-Dec., 1963), 131-168. Examples of rural dichos or "sayings" are found in, "En las haciendas y fincas de El Salvador se colocarán importantes leyendas," Revista Comercial (Managua, Nicaragua), II, No. 16 (May, 1937), 430.

<sup>3</sup>George McCutchen McBride describes such a visit in Chile: Land and Society (New York: America Geographical Society, 1936), pp. 3-14.

<sup>4</sup>Orlando Arboleda-Sepúlveda, 2000 libros en ciencias agrícolas en castellano, 1958-1969 (1969); Guilberto Alfredo Alvear Herrera, Bibliografía de bibliografías agrícolas de América Latina (1969); Angelina Martínez and C. Noel James, Café. Bibliografía de las publicaciones que se encuentran en la biblioteca del Instituto 2 vols. (1960), Cacao. Bibliografía de las publicaciones que se encuentran en la biblioteca del Instituto 2 vols. (1958), Maíz. Bibliografía de las publicaciones que se encuentran en la biblioteca 2 vols. (1958); Ana María Paz de Erickson, Frijol. Bibliografía de las publicaciones que se encuentran en la Biblioteca Conmemorativa Orton 2 vols. (1965). All of the above were published at Turrialba, Costa Rica, by the Instituto Interamericano de Ciencia Agrícolas; Biblioteca y Servicio de documentación. Bibliographies on these, and other subjects, are being constantly updated by the fine library staff at IICA [Note that the former IICA offices at Turrialba are now part of the Costa Rican research system and are known as CATIE, Teaching and Research Agricultural Center of Turrialba. IICA's central offices are located at Coronado, near San José, Costa Rica]. A general account of work on Latin American agricultural bibliography is found in working paper number 22, "Estado actual de la bibliografía agrícola de América Latina," in the Fourteenth Seminar on the Acquisition of Latin American Library Materials (1969), Final Report and Working Papers, 1970, 2 vols, (Washington, D.C.: Organization of the American States, Reuniones Bibliotecológicas series, Nos. 18-19, 1970). The best basic bibliography in English is, Martin H. Sable, Latin American Agriculture: A Bibliography (Milwaukee, Wisconsin: Latin American center, University of Wisconsin, 1970).

<sup>5</sup>Inter-American Committee for Agricultural Development, Inventory of Information Basic to the Planning of Agricultural Development in Latin America (Washington: Pan-American Union, no date), Separate Inventories were published for each country in Latin America, except for the Central American nations, which were grouped into one volume.

<sup>6</sup>Lesley Byrd Simpson, "Thirty Years of the Hispanic American Historical Review" Hispanic American Historical Review, XXIX, No. 2 (May, 1949), 188-204.

<sup>7</sup>Frans Verdoorn, ed., Plants and Plant Science in Latin America (Waltham, Mass.: Chronica Botanica Company, 1945).

<sup>8</sup>Wilson Popenoe, "Some Problems of Tropical American Agriculture," in Verdoorn, Plants, p. 1.

<sup>9</sup>Ibid.

<sup>10</sup>Examples include Moise Poblete Troncoso's, Problemas sociales y económicos de América Latina (Santiago: Ediciones de la Universidad de Chile, 1936), p. 85; and Luis Quintanilla, A Latin American Speaks (New York: The Macmillan company, 1943), pp. 76-79.

<sup>11</sup>From a statement made by Henry S. Sterling at the 1951 International Conference on Land Tenure and Related Problems in World Agriculture in Land Tenure, ed. by Kenneth H. Parsons, et al. (Madison, Wis.: University of Wisconsin Press, 1956), pp. 349-50. Evidence of the continuation of these ideas exists in Ester Boserup's, The Conditions of Agricultural Growth. The Economics of Agrarian Change under Population Pressure (Chicago: Aldine Publishing Company, 1965), pp. 62-63.

<sup>12</sup>Solon Barraclough, "The Agrarian Problem" in Claudio Veliz, Latin America and the Caribbean (New York: Frederick A. Praeger, Publishers, 1968), pp. 487-500.

<sup>13</sup>Philip Wayne Powell, Tree of Hate. Propaganda and Prejudices Affecting United States Relations with the Hispanic World (New York: basic Books, Inc. Publishers, 1971).

<sup>14</sup>Ibid, pp. 140-141.

<sup>15</sup>United States influence in the curricula of Latin American agricultural schools is very great. See Carlos Molestina Escudero, Estudio de la situación actual de las instituciones de educación agrícola superior (Turrialba, Costa Rica: IICA, Educación Superior, 1970). Where United States hegemony was strong in nations, such institutions as 4-H clubs spread rapidly. Witness the example of the 5-C clubs in Cuba during the 1930s: Cuba, Secretaría de Agricultura, Revista de agricultura, Numero Extraordinario

<sup>16</sup>Kenneth H. Parsons, Land Tenure.

<sup>17</sup>Arthur T. Mosher, Technical Co-operation in Latin-American Agriculture (Chicago: University of Chicago Press, 1957).

<sup>18</sup>Herbert F. Lionberger, Adoption of New Ideas and Practices. A Survey of the Research Dealing with the Acceptance of Technological Change in Agriculture, with Implications for Action in Facilitating such Change (Ames: Iowa State University Press, 1960).

<sup>19</sup>Thomas F. Carroll, "The Land Reform Issue in Latin America," in Latin American Issues, ed. by Albert O. Hirschman (New York: Twentieth Century Fund, 1961, pp. 161-201; and J. Warren Nystrom and Nathan A. Haverstock, The Alliance for Progress. Key to Latin America's Development (Princeton, N.J.: D. Van Nostrand Company, Inc., 1966).

<sup>20</sup>Ernest Feder, "Counterreform," in Agrarian Problems and Peasant Movements in Latin America, ed. by Rodolfo Stavenhagen (Garden City, N.Y.: Doubleday & Company, Inc., 1970) pp. 173-223; William C. Thiesenhusen, Chile's Experiments in Agrarian Reform (Madison: University of Wisconsin press, 1966); Jeanine Swift, Agrarian Reform in Chile: An Economic Study (Lexington, Mass.: Heath Lexington Books, 1971); also see the recent Praeger series on the agricultural development of individual Latin American countries.

<sup>21</sup>Nystrom and Haverstock, The Alliance, p. 86.

<sup>22</sup>Ramon Fernández y Fernández, "Prologue" to Salomón Eckstein, El ejido colectivo en México (México: Fondo de Cultura Económica, 1966), p. ix.

<sup>23</sup>Quoted in Nystrom and Haverstock, The Alliance, p. 86.

<sup>24</sup>José Luis Valenzuela C. "El efecto de las quemas sobre el suelo," Suelo Tico (San José, Costa Rica), XI, No. 41 (Dec.-March, 1959), 1-22.

<sup>25</sup>Johannes Iversen, "Forest Clearance in the Stone Age" Scientific American, CXIV, No. 3 (March, 1956), 36-41.

<sup>26</sup>A typical example is Raymond E. Crist's, "Tropical Subsistence Agriculture in Latin America: Some Neglected Aspects and implications" in Smithsonian Report for 1963 (Washington, D.C.: Smithsonian Institution, 1964), pp. 503-519; and indirect criticism of slash-and-burn is in Stanley J. Stein, The Colonial Heritage of Latin America (New York: Oxford University Press, 1970), p. 33.

<sup>27</sup>Andre Günder Frank Capitalism and Underdevelopment in Latin America (New York: Monthly Review press, 1967).

<sup>28</sup>See footnotes 12, 19, and 20 for some works by these authors. In addition note Ernest Feder, The Rape of the Peasantry (Garden City, New York: Anchor Books, 1971) and the articles contributed by these economists to Rodolfo Stavenhagen, ed., Agrarian Problems and Peasant Movements in Latin America (Garden City, New York: Anchor Books, 1970).

<sup>29</sup>Barraclough's own view of Latin American agriculture shifted considerably in the last decade. His thought provoking recent work, "Rural Development and Employment Prospects," appears in City and Country in the Third World, edited by Arthur J. Field (Cambridge, Mass.: Schenkman Publishing Company, Inc., 1970), pp. 97-135.

<sup>30</sup>See footnote 22.

<sup>31</sup>Edmundo Flores, "The Economics of Land Reform," International Labour Review, XCII, No. 1 (July, 1965).

<sup>32</sup>United States, Smithsonian Institute, Institute of Social Anthropology, Penny Capitalism: A Guatemalan Indian Economy, by Sol Tax (Washington, D.C.: Government Printing Office, 1953).

<sup>33</sup>George M. Foster, Culture and Conquest: America's Spanish Heritage (New York: Wenner-Glen Foundation for Anthropological Research, 1960); Sidney W. Mintz, "Peasant Markets," in Plant Agriculture, ed. by Jules Janick, et al. (San Francisco: W. H. Freeman and Company, 1970), 215-22; and William Carter, New Lands and Old Traditions, Kekchi Cultivators in the Guatemalan Lowlands (Gainesville: University of Florida Press, 1969).

<sup>34</sup>See footnote 20.

<sup>35</sup>Henry A. Landsberger, ed., Latin American Peasant Movements (Ithaca, N.Y.: Cornell University Press, 1969). This volume includes eleven papers presented at a seminar on Latin American peasant movements held at Cornell University in 1966. Also see Henry A. Landsberger and Cynthia N. Hewitt, "Ten Sources of Weakness and Cleavage in Latin American Peasant Movements," in Stavenhagen, Agrarian Problems, pp. 559-583.

<sup>36</sup>Woodrow Borah, New Spain's Century of Depression (Berkeley: University of California Press, 1951); Francois Chevalier, La formation des grandes domaines au Mexique. Terre et societe aux XVI-XVIII siecles (Paris: Institut d'Ethnologie, 1952), Spanish edition, México, 1956 and an English edition, 1963. The latter has no source citations.

<sup>37</sup>Magnus Mörner, "The Spanish American Hacienda: A Survey of Recent Research and Debate," Hispanic American historical Review, LIII, No. 2 (May, 1973), 183-216.

<sup>38</sup>Ibid., p. 215.

<sup>39</sup>James R Scobie, Revolution on the Pampas, A Social History of Argentine Wheat, 1869-1910 (Austin: University of Texas Press, 1964).

<sup>40</sup>Warren Dean, The Industrialization of São Paulo, 1880-1945 (Austin: University of Texas Press, 1969).

<sup>41</sup>Victor Manuel Patiño, Historia de la actividad agropecuaria en America equinocial (Cali, Colombia: Imprenta Departamental, 1965). Such a historical survey text was slow in coming for Europe also. The really first successful one is B. H. Slicher Van Bath's, The Agrarian History of Western Europe A.D. 500-1850 (London: Edward Arnold [Publishers] LTD, 1963).

<sup>42</sup>Stavenhagen, Agrarian Problems, p. xi.

<sup>43</sup>Richard Graham and Peter H. Smith, eds., New Approaches to Latin American History (Austin & London: University of Texas Press, 1974), p. xiii

<sup>44</sup>See Footnote 6, p. 1.

<sup>45</sup>The Inventories referred to in footnote five indicate when particular censuses started and their weaknesses and strengths. Most censuses began during or after World War II and were heavily influenced by United States censuses and statistical advisors. See 1982 special report on latter point prepared by James Riordan for the Latin American Bureau of A.I.D.

<sup>46</sup>Solon Barraclough, "Rural Development," pp. 102-103.

<sup>47</sup>John Womack, Jr. Zapata and the Mexican Revolution (New York: Alfred A. Knop, 1968).

<sup>48</sup>Hugo Blanco, Land or Death The Peasant Struggle in Peru (New York: Pathfinder Press, 1972). This edition is a translation of the Spanish volume by Blanco, Cuzco: tierra y muerte, however, that volume includes a lengthy introduction by Peter Camejo.

<sup>49</sup>For an amplified account of the middle sectors see Solon Barraclough, "Rural Development," and Andres Hunter Whiteford, "Aristocracy, Oligarchy, and Cultural Change in Colombia." Both articles are found in Arthur J. Field's City and Country, cited in footnote 29.

<sup>50</sup>Researchers are just coming to grips with the problems of turnover in the middle sector groups. Mörner points this out in his review of the fine work of William Taylor on colonial Oaxaca, "Spanish American Hacienda," p. 197; Professor Louisa Hoverman discussed some features of the rural landholdings of middle class merchants in the paper "Merchants in Seventeenth-Century Mexico City," which she read before the 1974 Annual Meeting of the American Historical Association.

<sup>51</sup>There are few French or German trade journals directed toward the Caribbean market. French publications dealing with agriculture were often translated into Spanish for the Latin American market. A typical example is the Enciclopedia tecnológica, Diccionario de artes y manufacturas, de agricultura, de minas, etc., by Charles Pierre Lefebvre Laboulaye. This work originally appeared in French in 1847, was translated and expanded in Spanish in 1857, and found its way to a Costa Rican library by about 1870. French and German journals declined in number throughout the twentieth century as United States traders captured overseas markets.

<sup>52</sup>There are perhaps fifty indexes to various aspects of Latin American agriculture. These are evaluated by Pablo Velasquez G., "Fuentes bibliográficas latinoamericanas de agricultura," Working Paper 19, in the Fourteenth Seminar of the Acquisition of Latin American Library Materials, Footnote 4. United States government publications are usually found through the Monthly Catalog or the Bibliography of Agriculture. In spite of all this indexing many agricultural publications are overlooked. Those which are evaluated here have not, to the author's knowledge, been systematically indexed elsewhere. Detailed information in this problem may be found in Working Papers 13, 14, and 16 of the Fourteenth Seminar on the Acquisition of Latin American Library Materials.

<sup>53</sup>Arboleda-Sepúlveda, Orlando, 2000 libros en ciencias agrícolas en castellano, 1958-1969 (Turrialba, Costa Rica: IICA, Biblioteca y Servicio de Documentación, 1969), i-iii. The following statistical data and that of footnote 3 come from this source.

<sup>54</sup>de Madariaga, Salvador, The Rise of the Spanish American Empire (London: Hollis & Carter, 1947), pp. 209-47.

<sup>55</sup>The following list is a further breakdown of the classification and is taken directly from 2000 libros, p. ii.: Administración Agrícola 27; Agricultura - Estudio y Enseñanza 6; Agricultura General 29; Alimentos, Nutrición, Dietética 22; Alimentos y Nutrición Animal 31; Anatomía y Fisiología Animal 27; Apicultura 14; Avicultura 73; Bacteriología 6; Biología (incluye Técnicas biológicas) 35; Bioquímica, Biofísica 43; Botánica, Taxonomía 42; Cereales 27; Conejos 17; Construcciones Rurales 14; Cooperación, Cooperativas 9; Credito Agrícola 9; Cromatografía 5; Cultivos Generales 7; Dasonomía, Silvicultura 47; Demografía 9; Derecho Agrario 8; Desarrollo Económico 72; Diferentes cultivos horticolas 16; Drenaje, Irrigación 27; Ecología (incluye ecología animal y vegetal) 19; Economía 37; economía Agrícola 62; Edafología 70; Enfermedades, Plagas, Control 21; Entomología 19; Estadística, Metodos Estadísticos 54; evolución, Genética, Herencia 42; Extensión Agrícola 5; Fertilizantes y Abonos 19; Física 26; Física Nuclear 8; Fisicoquímica 18; Fisiología y Morfología Vegetal 29; Fitopatología (enfermedades, plagas, control) 50; Fitotecnia (cultivo, mejoramiento, propagación, métodos de cultivo) 27; Fruticultura General 40; Ganado caprino y lanar 20; Ganado equino y similares 4; Ganado porcino 35; Ganado vacuno (productor de leche y carne) 42; Geodesia 32; Geografía Agrícola 7; Geología Física y Dinámica 45; Hidrología 9; Histología y Citología 31, Hongos 7; Horticultura General 26; Industria de los Alimentos y Subproductos Agropecuarios 31; Ingeniería Hidráulica, Abastecimiento de Aguas 21; Jardinería, Floricultura 22; Leche y sus derivados 27; Maquinaria y Equipo Agrícola 33; Matemáticas en la Agricultura 5; Meteorología, Climatología 12; Micología 4; Microbiología, Virología 32; Mineralogía 8; Peces e Industria Pesquera 11, Petrología 6; Plantas Alkaliodes 10; Plantas Fibrosas 8; Plantas Forrajeras 31; Plantas Oleaginosas, Plantas Medicinales 13; Producción de diferentes frutos 36; Productos Forestales, Aprovechamiento 28; Química 21, Química Agrícola 8; Química Analítica 11; Química Inorgánica 8; Química Orgánica 14; Recursos Naturales, Aprovechamiento y Conservación 5; Reforma Agraria 27; Reproducción, Mejoramiento Genético 20; Sociología 66; Zoología 32; Zootecnia (administración, cria, cuidado, alimentación, enfermedades y su control) 24.

<sup>56</sup>Alvear Herrera, Guilberto Alfredo, Bibliografía de bibliografías agrícolas de América Latina (Turrialba, Costa Rica: IICA, Biblioteca y Servicio de Documentación, 1969), 121 pp.

<sup>57</sup>Ibid., p. 84, Entry No. 604.

<sup>58</sup>Escudero, Carlos Molestina, Estudio de la situación actual de las instituciones de educación agrícola superiores (Turrialba, Costa Rica: IICA, educación Superior, 1970), 91 pp.

<sup>59</sup>Biblioteca y Servicio de Documentación, Tesis de Magister Agriculturae de la escuela para graduados, 1947-1963 (Turrialba, Costa Rica: IICA, Bibliotecología y Documentación, No. 3, 1964), 81 pp. + supplements.

<sup>60</sup>Jones, Earl, Bibliography of Rural Youth Programs Publications (Turrialba, Costa Rica: IICA, 1964), 29 pp./four languages/+ supp.

<sup>61</sup>Martinez, Angelina and C. Noel James, Café Bibliografía de las publicaciones que se encuentran en la biblioteca del instituto (1960), 2 vols.; Cocoa, bibliografía de las publicaciones que se encuentran en la biblioteca del Instituto (1958); Maíz, bibliografía de las publicaciones que se encuentran en la biblioteca (1958). Also see, Paz de Erickson, Ana Maria, Frijol, bibliografía de las publicaciones que se encuentran en la biblioteca Commemorative Orton (1965). All of above published at IICA, Turrialba, Costa Rica.

<sup>62</sup>Inter-American Committee for Agricultural Development, Inventory of Information Basic to the Planning of Agricultural Development in Latin America (Washington: Pan-American Union, no date), Separate titles for each country. I have in hand those for: Argentina, Bolivia, Brazil, Central America, Chile, Colombia, Dominican Republic, Ecuador, Haiti, Panama, Paraguay, Peru, Venezuela, and Uruguay.

<sup>63</sup>Ibid., Argentina., and Aparicio, Francisco de, La Argentina Suma de geografía (Buenos Aires: Ediciones Peuser, 1961), 9 vols.

<sup>64</sup>Inter-American Committee for Agricultural Development, Inventory, Selected Bibliography (Washington: Pan-American Union, 1964), 187 pp.

<sup>65</sup>Sable, Martin H., Latin American Agriculture: A Bibliography (Milwaukee, Wisconsin: Latin American Center, University of Wisconsin, 1970), 74 pp.

<sup>66</sup>From the title page. It is usually brief-titled.

<sup>67</sup>Sable says in the foreword: "It is hoped that the bibliography will facilitate research on the part of...faculty and graduate students."

<sup>68</sup>Deerr, Noel, The History of Sugar (London: Chapman and Hall, Ltd. 1949), 2 vols., II, p. 144.