

# THE JOURNAL OF AGRICULTURE OF THE UNIVERSITY OF PUERTO RICO

Issued quarterly by the Agricultural Experiment Station of the University of Puerto Rico, for the publication of articles by members of its personnel, or others, dealing with any of the more technical aspects of scientific agriculture in Puerto Rico or the Caribbean Area.

Vol. LV

July 1971

No. 3

## Indexes to The Journal of Agriculture of the University of Puerto Rico, Volumes 1-47 (1917-1963)

*Luis F. Martorell, Silverio Medina Gaud, and Enrique Jordán-Musa<sup>1</sup>*

### INTRODUCTION

The Journal of Agriculture of the University of Puerto Rico is one of the few periodicals in Latin America devoted to the diffusion of knowledge concerning scientific agriculture. This Journal was founded in 1917 and has been issued regularly for 52 consecutive years.

The first issue, Volume 1, Part 1, carries the imprint "The Journal of the Board of Commissioners of Agriculture—Porto Rico."<sup>2</sup> Reorganization of the Government of Puerto Rico at that time, whereby the Agricultural Experiment Station and certain functions of the Board of Commissioners were assigned to the Commissioner of Agriculture and Labor, necessitated change of title in Volume 1, Part 2, to "The Journal of the Department of Agriculture of Porto Rico." In 1933, the title became "The Journal of Agriculture of The University of Puerto Rico" when the Agricultural Experiment Station was transferred from the Department of Agriculture to the University of Puerto Rico and became a part of the Land-Grant College System.

Mr. John A. Stevenson, the Station Pathologist beginning in 1913, was the founder and first editor of the Journal. He also was the first editor of *Revista de Agricultura de Puerto Rico*. Mr. Stevenson left the Station in 1918 and editorial duties were conducted at various times by several Station Staff members. Mr. Enrique Molinary Salés, an agronomist, was Editor from October 1946 until his retirement in 1966. He was assisted by Mr. T. Swann Harding as English Technical Editor. Mr. José Abad Ramos was appointed Technical Editor in Charge in 1966. Also an agronomist, he had served for many years with the Agricultural Research Service of the U. S. Department of Agriculture.

<sup>1</sup> Entomologist, Assistant Entomologist, and formerly Research Assistant in Entomology, respectively, Agricultural Experiment Station, Mayagüez Campus, University of Puerto Rico, Rio Piedras, P. R. Mr. Enrique Jordán Musa now is a lawyer associated with the Justice Department of the Commonwealth of Puerto Rico.

<sup>2</sup> The name "Porto Rico," used frequently in public documents since 1898, was supplanted officially by legislative action in the early thirties to the Spanish "Puerto Rico." The latter spelling has been preferred in common usage.

Mr. Alberto S. Amy, another agronomist, was appointed Technical Editor in Charge following the resignation of Mr. Ramos from that position in October 1969. Mr. Amy is assisted by Mr. Ramos and Mr. David G. Hall, English Editor, who for many years was Chief of Publications, ARS, USDA. He replaced Mr. Harding in 1969.

The 52 volumes of the Journal (through 1968) contain 993 research reports. Of these, 228 concern various phases of zoology (183 entomology, 28 herpetology, 28 nematology, 34 faunistic studies of crustaceans, arachnids, fishes, mammals, etc., 23 ornithology and 2 parasitology.) A total of 191 reports concern plant pathology, 143 agronomy, 96 soils and fertilizers, 96 chemistry including food technology and biochemistry, 67 animal husbandry, 18 genetics, 14 cytology, 11 herbicides, 7 radiation, 7 statistics, 5 botany, 4 rum chemistry, and the remainder miscellaneous agricultural subjects.

The scientific data presented in the Journal is of such diversity that it has become virtually impossible for anyone to remember where the different subjects are treated. The authors realized that searching for needed information by checking individual parts of the 53 volumes by scientists and other interested persons is a tedious and time-consuming (thus costly) process. This Index makes such information immediately available.

The subject matter has been divided into two parts. First, an Author Index includes the name of all authors arranged alphabetically, a serial number assigned to every paper, the year during which the paper was published, the title, volume number, part number, and page numbers; second, a cross-referenced Subject Matter Index in which each subject reference is followed by one or more numbers referring to the serial numbers of the titles furnished in the Author Index.

The Index to volumes 1 through 47 was completed in 1966 but withheld for a number of reasons. It thus was necessary to prepare Supplement 1 to include volumes 48 through 52 covering years 1964-8. The present indices thus cover the Journal from its beginning through 1968.

## INDEX OF AUTHORS

### ABRAMS, R.<sup>3</sup>

1. 1960. (See Pérez-López, A., ref. 851.)<sup>4</sup>

### ABRAMS, R. AND VELEZ-FORTUÑO, J.

2. 1961. Radiation research with pigeonpeas (*Cajanus cajan*): results on X<sub>1</sub> and X<sub>2</sub> generations, 45 (4): 197-204.

### ABRAMS, R. AND VELEZ-FORTUÑO, J.

3. 1962. Radiation research with pigeonpeas (*Cajanus cajan*): results on X<sub>3</sub> and X<sub>4</sub> generations, 46 (1): 34-42.

### ABRAMS, RAUL

4. 1957. Effects of X-ray radiation on oat seed, 41 (4): 242-58.
5. 1960. (See Ramírez, Oscar D., ref. 870.)
6. 1960. Effects of gibberellic acid on dormant seeds and subsequent crops of pigeonpeas (*Cajanus cajan*), 44 (1): 21-7.

### ABRAMS, RAUL AND JACKSON, GEORGE, C.

7. 1959. Influence of root-inducing substances and time intervals on the rooting of acerola cuttings, 43 (3): 152-8.

<sup>3</sup> The names of authors may appear variously, sometimes with the first name in full, at other times with initials. Sometimes author's names appear with single and at other times with compound family names with or without hyphens. Lack of uniformity in the original publications made it necessary for the authors of the Index to cite the names of authors as they originally appeared in print.

<sup>4</sup> Coauthorship is indicated by enclosing in parentheses the name of the senior author and the sequence number of the title of the paper.

### ABRAMS, R., PENNOCK, W., JACKSON, G. C., AND PEREZ-LOPEZ, A.

8. 1957. Flower behavior of different avocado varieties grown in Puerto Rico, 41 (4): 236-41.

### ABRAMS, R., WALKER, D., AND RICO-BALLESTER, M.

9. 1962. Effect of pesticides on the yield of some vegetable crops in the Isabela area of Puerto Rico, 46 (1): 1-8.

### ABRUÑA, F.

10. 1947. (See Bonnet, J. A., ref. 224.)
11. 1950. (See Bonnet, J. A., ref. 207.)
12. 1951. (See Bonnet, J. A., ref. 214.)
13. 1952. (See Lugo-López, M. A., ref. 692.)
14. 1953. (See Jeffries, C. D., ref. 593.)

### ABRUÑA, FERNANDO

15. 1960. (See Silva, Servando, ref. 1085.)

### ABRUÑA, FERNANDO AND FIGARELLA, JACINTO

16. 1957. Some effects of calcium and phosphorus fertilization on the yield and composition of a tropical Kudzu-grass pasture, 41 (4): 231-5.

### ABRUÑA, FERNANDO AND VICENTE-CHANDLER, JOSE

17. 1963. Effects of six sources of nitrogen on yields, soil acidity, and leaf composition of coffee, 47 (1): 41-6.

### ABRUÑA, FERNANDO AND VICENTE, JOSE

18. 1955. Refinement of a quantitative method for determining the lime requirements of soils, 39 (1): 41-5.

- ABRUÑA, FERNANDO, VICENTE-CHANDLER, JOSE, AND SILVA, SERVANDO
19. 1959. The effect of different fertility levels on yields of intensity managed coffee in Puerto Rico, 43 (3): 141-6.
- ABRUÑA-RODRIGUEZ, FERNANDO AND VICENTE-CHANDLER, JOSE
20. 1955. Organic-matter activity of some typical soils of Puerto Rico, 39 (2): 65-76.
- ACEVEDO, G.
21. 1956. (See Lugo-López, M. A., ref. 693.)
  22. 1957. (See Lugo-López, M. A., ref. 703.)
- ACEVEDO, G., LUGO-LOPEZ, M. A., AND ORTIZ-VELEZ, J.
23. 1959. Occurrence of soil tumors northeast of the Guánica Lagoon, Lajas Valley, P. R., 43 (2): 103-15.
- ACEVEDO-RAMOS, G., BONNET, J. A., AND ORTIZ-VELEZ, J.
24. 1961. Degree of reclamation of a saline-sodic soil in Lajas Valley, Puerto Rico, 45 (3): 157-71.
- ACEVEDO-RAMOS, GILBERTO
25. 1962. Analysis of probable relationships between leaf-potassium percentage and sucrose content and maturity of sugarcane, 46 (1): 15-22.
- ACOSTA, JOSE J.
26. 1924. Determination of maceration per cent of cane and the percentages of fibre and sucrose in cane, 8 (2): 47-9.
- ACOSTA-MATIENZO, A.
27. 1962. (See González-Molina, C. L., ref. 510.)
  28. 1963. (See González-Molina, C. L., ref. 511.)
- ACOSTA-MATIENZO, ANGEL
29. 1962. (See González-Molina, Carlos L., ref. 508.)
- ADSUAR, J.
30. 1953. (See González-Ríos, P., ref. 515.)
  31. 1953. (See Landrau, Jr., P., ref. 634.)
  32. 1953. (See Alvarez-García, L. A., ref. 92.)
  33. 1955. A mosaic disease of sweet-potato, *Ipomoea batatas*, in Puerto Rico, Research Note, 39 (1): 49-50.
  34. 1955. Susceptibility of some varieties of melons to the cucurbit viruses present in Puerto Rico, Research Note, 39 (2): 111.
  35. 1955. A mosaic disease of the yam, *Dioscorea rotundata*, in Puerto Rico. Research Note, 39 (2): 111-3.
  36. 1955. A disease of tomato in Puerto Rico resembling the Brazilian curly top of tomatoes, Research Note, 39 (2): 113-4.
  37. 1955. (See Pérez, J. Enrique, ref. 846.)
  38. 1956. Evidence of the presence of sugarcane-mosaic virus in the roots of infected sugarcane plants, Research Note, 40 (2): 125.
  39. 1956. Transmission of cucumber mosaic (*Cucumber virus 9*) found in Puerto Rico to *Carica papaya*, Research Note, 40 (2): 125-6.
  40. 1956. A virus-like disease of sorghum in Puerto Rico, Research Note, 40 (2): 126-7.
  41. 1956. A report on two species of tomato resistant to the tomato disease known as *tisis* in Puerto Rico. Research Note, 40 (2): 127-8.
  42. 1956. Preliminary notes on the so-called recovery of the cane variety B, 34-104 from the sugarcane mosaic virus in Puerto Rico, Research Note, 40 (3): 206-7.
  43. 1957. (See Boneta-García, E., ref. 198.)

## ADSUAR, J., AMY, A. S., AND LOPEZ-MATOS, L.

44. 1954. The effects of the mottled and the common tobacco mosaic viruses on the yield of variety Virginia 12, 38 (2): 105-7.

## ADSUAR, J. AND LOPEZ-MATOS, L.

45. 1955. Reaction of some *Nicotiana* species to the pepper- and common tobacco-mosaic viruses, 39 (3): 168-71.

## ADSUAR, JOSE

46. 1941. (See Roque, Arturo, ref. 974.)  
 47. 1943. (See Alvarez-García, L. A., ref. 98.)  
 48. 1947. Studies on virus diseases of papaya (*Carica papaya*) in Puerto Rico. I. Transmission of papaya mosaic, 31 (3): 248-56.  
 49. 1947. Studies on virus diseases of papaya (*Carica papaya*) in Puerto Rico. II. Transmission of papaya mosaic by green citrus aphid (*Aphis spiraecola* Patch), 31 (3): 257-9.  
 50. 1947. Studies on virus diseases of papaya (*Carica papaya*) in Puerto Rico. III. Property studies of papaya mosaic virus, 31 (3): 260-4.  
 51. 1950. (See Alvarez-García, L. A., ref. 94.)  
 52. 1952. (See Bird, Julio, ref. 192.)  
 53. 1952. (See Martorell, Luis F., ref. 747.)  
 54. 1954. (See Pérez, J. Enrique, ref. 843.)  
 55. 1954. Further studies on the mosaic of the sugarcane variety Mayagüez 336, 38 (1): 16-21.  
 56. 1955. (See Pérez, J. Enrique, ref. 844.)  
 57. 1955. A new host of the virus (Virus B) causing cucumber mosaic in Puerto Rico, Research Note, 39 (3): 173.  
 58. 1956. Susceptibility of some sugarcane varieties to the heat treatment used in the control of chlorotic streak, 40 (1): 67-9.

59. 1956. On the presence of crown gall in Puerto Rico, Research Note, 40 (4): 255.

60. 1957. (See Pérez, J. Enrique, ref. 845.)

61. 1960. Field behavior of certain sweetpotatoes to mosaic in Puerto Rico, Research Note, 44 (4): 251-3.

62. 1961. Use of the root-dipping inoculation method in testing tomatoes for wilt resistance, 45 (2): 116-8.

63. 1961. Delceterious effect of Simazine on mosaic infected sugarcane, Research Note, 45 (3): 191.

64. 1962. The effect of 2-chloro-4,6 Bis (ethylamino)-s-triazine and 3-(3,4-dichlorophenyl)-1,1-dimethyl urea on mosaic-infected B. 37161 sugarcane, Research Note, 46 (2): 156-7.

65. 1962. Failure of rats to transmit the causal agent of the ratoon-stunting disease of sugarcane, Research Note, 46 (3): 239-40.

## ADSUAR, JOSE AND LOPEZ-ROSA, JULIO H.

66. 1962. Effect of the hot-water treatment for the control of ratoon-stunting on the germination of some commercial sugarcane varieties, 46 (2): 83-6.  
 67. 1962. Failure to transmit the causal agent of ratoon-stunting disease of sugarcane through the soil, 46 (2): 87-90.

## ADSUAR, JOSE AND PEREZ, J. E.

68. 1956. Cross-protection tests confirm the presence of etch virus on tobacco in Puerto Rico, Research Note, 40 (1): 83-4.

## ALEMANÝ, L.

69. 1955. (See Aróstegui, F., ref. 120.)

## ALERS-ALERS, S.

70. 1956. (See Samuels, G., ref. 1029.)  
 71. 1957. (See Samuels, G., ref. 989.)

72. 1958. (See Samuels, G., ref. 990.)  
 73. 1959. (See Landrau, Jr., P., ref. 638.)  
 74. 1959. (See Landrau, Jr., P., ref. 639.)  
 75. 1960. (See Samuels, G., ref. 991.)  
 76. 1960. (See Samuels, G., ref. 995.)  
 77. 1960. (See Samuels, G., ref. 1,030.)

## ALERS-ALERS, SEVERIANO

78. 1955. (See Landrau, Jr., Pablo, ref. 633.)

## ALERS-ALERS, SEVERIANO AND SAMUELS, GEORGE

79. 1963. Influence of the inclination of sugarcane stalks on their sucrose content, 47 (1): 24-7.  
 80. 1963. The topping of sugarcane, 47 (4): 257-64.

## ALERS-ALERS, S., SAMUELS, G. AND LANDRAU, JR., P.

81. 1960. Influence of time of planting on the growth of sugarcane variety P.R. 980 at Río Piedras, 44 (2): 45-52.

## ALEXANDER, CHARLES P.

82. 1932. The crane-flies of Puerto Rico, 16 (4): 347-87.  
 83. 1936. New or little-known species of West Indian "Tipulidae" (Diptera) I, 20 (4): 877-82.  
 84. 1937. New or little-known species of West Indian Tipulidae (Diptera), II, 21 (2): 179-90.  
 85. 1937. New or little-known species of West Indian Tipulidae (Diptera), III, 21 (4): 523-34.  
 86. 1939. New or little-known species of West Indian Tipulidae (Diptera), IV, 23 (2): 91-130.

## ALVAREZ-GARCIA, L. A.

87. 1943. *Acrothecium* leaf spot of *Basella rubra* L., 27 (4): 149-64.  
 88. 1943. *Alternaria* blight of bachelor's button (*Gomphrena globosa* L.), 27 (4): 165-9.

89. 1949. Anthracnose of the Annonaceae in Puerto Rico, 33 (1): 27-43.  
 90. 1951. Identity of a chlorotic ring-spot virus from kale (*Brassica oleracea* var. *acephala*), 35 (4): 115-25.  
 91. 1951. A new disease of orchids in Puerto Rico: *Pythium* black rot, 35 (4): 126-35.

## ALVAREZ-GARCIA, L. A., ADSUAR, J., RODRIGUEZ, J. P., CRUZ-MIRET, A., AROSTEGUI, F., OLIVENCIA, R. AND ROCHE, F.

92. 1953. Fungicidal control of early and late blight of the potato in Puerto Rico, 37 (4): 288-97.

## ALVAREZ-GARCIA, L. A. AND ADSUAR, JOSE

93. 1943. Studies on tomato mosaic in Puerto Rico. A new mosaic disease of tomato, 27 (4): 141-8.  
 94. 1950. On the occurrence of a tomato disease in Puerto Rico resembling big bud (*Chlororegenous australiensis* Hol.), 34 (4): 327-32.

## ALVAREZ-GARCIA, L. A. AND DIAZ, MIGUEL A.

95. 1949. *Aspergillus* root-stalk rot of sansevieria (*Sansevieria laurentii* Wildem.), 33 (1): 45-53.

## ALVAREZ-GARCIA, L. A. AND LOPEZ-MATOS, LIDY

96. 1953. Results of tests with new fungicides for the control of damping-off of tobacco in Puerto Rico, 37 (4): 283-7.  
 97. 1954. Influence of root-knot nematodes on the decline in vigor of the Red Spanish variety of pineapple in Puerto Rico, 38 (1): 61-72.

## ALVAREZ-GARCIA, LUIS A.

98. 1945. Studies on coffee root disease in Puerto Rico. I. A coffee *Fusarium* wilt, 29 (1): 1-29.

99. 1946. The control of *Rhizoctonia* damping-off of pepper and eggplant in Puerto Rico, 30 (2): 69-96.
100. 1960. *Phoma* canker of pigeonpeas in Puerto Rico, 44 (1): 28-30.
101. 1962. *Phytophthora* damping-off of "brujas" (*Bryophyllum* spp.), Research Note, 46 (4): 363.
102. 1963. *Glomerella* gummiosis of citrus species in Puerto Rico, 47 (1): 38-40.
103. 1963. A new species of *Leptosphaeria* causing leaf blight of common garden asparagus in Puerto Rico, Research Note, 47 (1): 56.
- ALVAREZ, L. A.
104. 1943. (See Asenjo, C. F., ref. 133.)
- AMOROS-MARIN, LUIS
105. 1958. (See Asenjo, Conrado F., ref. 137.)
- AMY, ALBERTO
106. 1956. (See Cibes, Héctor R., ref. 307.)
- AMY, A. S.
107. 1954. (See Adsuar, J., ref. 45.)
108. 1957. (See Lugo-López, M. A., ref. 702.)
- ANDREWS, JOHN S. AND MALDONADO, JOSE F.
109. 1940. A preliminary note on the internal parasites of Puerto Rican cattle with special reference to those species found in calves suffering from "tropical diarrhea", 24 (4): 121-32.
- ANDREW, JOHN S., MUÑIZ, CARLOS M. AND ORIHUELA, FELIX
110. 1943. Preliminary note on the administration of non-conditioned phenothiazine, in small daily doses, for the control of gastrointestinal parasites of cattle in Puerto Rico, 27 (3): 125-30.
- ANONYMOUS
111. 1924. Report of public hearing to consider the advisability of restricting or prohibiting the entry from Porto Rico of fruits and vegetables in the raw or unmanufactured state on account of the West Indian fruit fly, the bean pod borer, and other injurious insects, 8 (1): 5-46.
- APP, BERNARD A.
112. 1938. *Euxesta stigmatias* Loew, an otidid fly infesting ear corn in Puerto Rico, 22 (2): 181-8.
113. 1941. A report of some investigations on the corn insects of Puerto Rico, 25 (4): 21-31.
- ARANA, FRANCISCA E. AND KEVORKIAN, A. G.
114. Relation of moisture content to quality of vanilla beans, 27 (3): 105-16.
- ARCHER, ALLAN F.
115. 1958. Notes on the ecology of coffee plantations, Research Note, 42 (4): 267-8.
- ARENAS-MONTALVO, P.
116. 1963. (See Landágora, F. T., ref. 605.)
- ARMSTRONG, FERNANDO E.
117. 1947. (See Orlandi, Radamés, ref. 806.)
- ARNDT, CHARLES H. AND DOZIER, HERBERT L.
118. 1931. The Haitian coffee tree cricket, 15 (3): 325-35.
- AROSTEGUI, F.
119. 1953. (See Lugo-López, M. A., ref. 704.)
- 119a. 1953. (See Alvarez-García, L. F., ref. 92.)
- AROSTEGUI, F., ASENJO, C. F., MUÑIZ, ANA I., AND ALEMÁNY, L.

120. 1955. Observations and data on a promising selection of the West Indian cherry, *Malpighia punicijolia* L., 39 (2): 51-6.
- ARROYO-AGUILU, JOSE A., EVANS, JOSEPH L., AND TAYLOR, M. WIGHT
121. 1963. The artificial-rumen technique for estimating the nutritive values of forages, 47 (3): 169-79.
- ARROYO, J. A.
122. 1959. (See Rivera-Brenes, L., ref. 926.)
123. 1961. (See Rivera-Brenes, L., ref. 930.)
124. 1961. (See Rivera-Brenes, L., ref. 921.)
- ARROYO, J. A. AND RIVERA-BRENES, L.
125. 1960. Digestibility studies on Venezuela grass (*Paspalum fasciculatum*) and plantain pseudostalks (*Musa paradisiaca*), 44 (3): 103-6.
126. 1961. Digestibility studies on Napier (Merker) grass (*Pennisetum purpureum*), Giant Pangola grass (*Digitaria validia* Stent), and Signal grass (*Brachiaria brizantha*), 45 (3): 151-6.
- ARROYO, RAFAEL
127. 1934. The utilization of waste molasses in the production of : I. Acetone and butanol. II. Normal butyric acid, 18 (4): 463-79.
128. 1936. Butyric acid by fermentation, 20 (2): 629-47.
- ASENJO, C. F.
129. 1938. (See Axtmayer, J. H., ref. 144.)
130. 1955. (See Aróstegui, F., ref. 120.)
131. 1959. Vitamin C in acerola and rose hips, Research Note, 43 (3): 212-3.
- ASENJO, C. F. AND FERNANDEZ, M. DEL C. C. DE
132. 1945. Uses, preparation and properties of pinguinain, the protein-splitting enzyme of the maya fruit, 29 (2): 35-46.
- ASENJO, C. F., COOK, D. H., CAPELLA-FERNÁNDEZ, M. DEL C. DE, AND ALVAREZ, L. A.
133. 1943. Chemical changes of the papaya plants during development, with special reference to its proteolytic activity, 27 (1): 1-15.
- ASENJO, CONRADO F.
134. 1950. Riboflavin in eggs from hens of different breeds raised in Puerto Rico, 34 (4): 322-6.
135. 1957. (See del Campillo, Alice, ref. 409.)
136. 1957. (See del Campillo, Alice, ref. 419.)
- ASENJO, CONRADO F., AMOROS-MARIN, LUIS, TORRES, WANDA, AND DEL CAMPILLO, ALICE
137. 1958. Ternuite-repellent activity and chemical composition of West Indian mahogany wood (*Scheelea mahogani* Jacq.) with special reference to the P<sub>2</sub> fraction, 42 (3): 185-95.
- ASENJO, CONRADO F. AND FERNANDEZ, DELIA
138. 1950. Effect of mora (*Morus alba*) L. on alloxan diabetic rats, 34 (4): 343-6.
- ASENJO, CONRADO F. AND GOYCO, JOSE
139. 1952. Puerto Rican fatty oils. VIII-The characteristics and composition of the oils from the fatty covering and the kernel of the anacagüita seed (*Sterculia apetala* (Jacq.) Karst.), 36 (1): 1-4.

- ASENJO, CONRADO F. AND PORRATA, ELBA I.
140. 1956. The carotene content of green and ripe plantains, 40 (3): 152-6.
- ASENJO, CONRADO F. AND RECIO, EVANGELINA
141. 1962. Methionine and Cystine in Puerto Rican institutional dishes, 46 (4): 350-9.
- ASENJO, CONRADO F., DIAZ-RIVERA, ANGELA CRISTINA, A., AND RECIO, EVA
142. 1963. Niacin in Puerto Rican cofees, 47 (3): 186-192.
- AUDANT, ANDRE AND OCCENAD, ALBERT
143. 1937. The Mexican cotton boll weevil, *Anthonomus grandis* Boheman, in Haiti, 21 (1): 69-76.
- AXTMAYER, J. H., ASENJO, C. F., AND COOK, D. H.
144. 1938. The nutritive values of some crops of Puerto Rico. I. Grasses, 22 (2): 95-121.
- AXTMAYER, JOSEPH H., RIVERA-HERNANDEZ, G., AND COOK, D. H.
145. 1938. The nutritive values of some forage crops of Puerto Rico. II. Legumes, grasses and a mixture, 22 (4): 455-81.
146. 1940. The nutritive values of some forage crops of Puerto Rico. III. Grasses, legumes and mixtures, 24 (1): 3-31.
147. 1940. Chemical analyses of grasses, 24 (1): 32-4.
- AYALA, ALEJANDRO
148. 1961. An analysis of the quantitative and qualitative composition of the nematode populations in pineapples fields in Puerto Rico, 45 (4): 265-99.
149. 1962. Parasitism of bacterial nod-
- ules by the reniform nematode, Research Note, 46 (1): 67-9.
150. 1962. Pathogenicity of the reniform nematode on various hosts, 46 (2): 73-82.
151. 1962. Occurrence of the nematode *Meloidogyne javanica* on pigeonpea roots in Puerto Rico, Research Note, 46 (2): 154-6.
152. 1962. Greenhouse tests with nematicides for control of nematodes attacking tomato (*Lycopersicon esculentum* var. Rutgers) in Puerto Rico, 46 (4): 319-27.
- AYALA, ALEJANDRO AND ROMAN, JESSE
153. 1963. Distribution and host range of the burrowing nematode in Puerto Rican soils, 47 (1): 28-37.
- AYALA, ALEJANDRO, ROMAN, JESSE, AND GANDIA, HECTOR
154. 1963. Effect of soil fumigation used in the control of pineapple nematodes in Puerto Rico, 47 (2): 76-90.
- AYALA, ALEJANDRO, ROMAN, JESSE, AND TARJAN, A. C.
155. 1963. Comparison of four methods for isolating nematodes from soil samples, 47 (4): 219-25.
- AZZAM, H.
156. 1962. Abortive flower-cluster mutant in tomatoes, Research Note, 46 (1): 69-72.
- BANGDIWALA, ISHVER S.
157. 1953. (See Samuels, George, ref. 1025.)
158. 1954. (See Martorell, Luis F., ref. 748.)
- BANKS, NATHAN
159. 1938. Antillean Ascalaphidae, 22 (2): 177-80.
- BARBER, H. G. AND BRUNER, S. C.
160. 1932. The Cydnidae and Pentatomidae of Cuba, 16 (3): 231-84.

- BARBOSA-CUPELES, J. E. AND  
LUGO-LOPEZ, M. A.
161. 1961. Use of allyl alcohol as a pre-emergent weedkiller in coffee seedbeds, 45 (2): 112-5.
- BARRET, O. W.
162. 1925. The food plants of Porto Rico, 23 (2): 67-72.
- BARROW, E. H.
163. 1924. White grubs, *Lachnosteria* sp., and larvae of the weevil root-borer, *Diaprepes spengleri* L., attacking sugar cane in the Guánica district of Porto Rico, and methods practised for controlling them, 8 (2): 22-6.
- BARTLETT, K. A.
164. 1938. A search in the Guianas and Trinidad for predatory beetles of the bamboo scales, 22 (4): 493-5.
165. 1938. A dryinid parasite attacking *Baldulus maidis* in Puerto Rico, 22 (4): 497-8.
- BARTLETT, KENNETH A.
166. 1939. Introduction and colonization of two parasites of the pineapple mealybug in Puerto Rico, 23 (2): 67-72.
167. 1941. The introduction and colonization in Puerto Rico of beneficial insects parasitic on West Indian fruitflies, 25 (1): 25-31.
- BEATTY, HARRY A.
168. 1930. Birds of St. Croix, 14 (3): 135-150.
169. 1931. Notes on birds observed at Guánica Lagoon, and its vicinity, 15 (1): 19-32.
170. 1941. New bird records and some notes for the Virgin Islands, 25 (4): 32-6.
171. 1944. Fauna of St. Croix, V. I., 28 (3-4): 103-85.
172. 1944. The endoparasites of St Croix, V. I., 28 (3-4): 107-10.
173. 1944. The Arachnida of St. Croix, V. I., 28 (3-4): 111-3.
174. 1944. The insects of St. Croix, V. I., 28 (3-4): 114-72.
175. 1944. Brachyuran crabs of St. Croix, V. I., 28 (3-4): 173-7.
176. 1944. The fresh water fishes of St. Croix, V. I., 28 (3-4): 178-80.
177. 1944. The mammals of St. Croix, V. I., 28 (3-4): 181-5.
- BENERO, J.
178. 1958. (See Sánchez-Nieva, F., ref. 1041.)
179. 1961. (See González, M. A., ref. 505.)
180. 1960. (See Sánchez-Nieva, F., ref. 1042.)
181. 1961. (See González, M. A., ref. 506.)
182. 1961. (See Sánchez-Nieva, F., ref. 1043.)
183. 1961. (See Sánchez-Nieva, F., ref. 1044.)
184. 1963. (See Sánchez-Nieva, F., ref. 1045.)
- BERROCAL, CARLOS M.
185. 1963. (See Rivera-Anaya, José D., ref. 911.)
186. 1963. (See Rivera-Anaya, José D., ref. 912.)
187. 1963. (See Rosado-Carbo, Gilberto ref., 975.)
- BERROCAL, C. M.
188. 1963. (See Rahman, Abdul R., ref. 867.)
- BERROCAL, J. E.
189. 1925. (See Colón, E. D., ref. 319.)
- BIRD, JULIO
190. 1961. Inoculation of sugarcane plants with the mosaic virus using the airbrush, 45 (1): 1-7.
191. 1961. Further studies on transmission of the causal agent of the chlorotic-streak disease of sugarcane, 45 (1): 8-18.

- BIRD, JULIO AND ADSUAR, JOSE  
**192.** 1952. Viral nature of papaya  
 bunchy top, 36 (1): 5-11.
- BONETA-GARCIA, E. AND  
 LUGO-LOPEZ, M. A.  
**193.** 1962. Losses of sucrose in cut cane  
 kept under shade or sun for different  
 periods, 46 (3): 189-94.
- BONETA-GARCIA, EFRAIN  
**194.** 1955. (See Bruchl, G. W., ref. 248.)
- BONETA-GARCIA, E. G.  
**195.** 1962. (See González-Molina, C. L.,  
 ref. 512.)  
**196.** 1962. (See Samuels, G., ref. 994.)  
**197.** 1962. (See Samuels, G., ref. 1028.)
- BONETA-GARCIA, E.,  
 GONZALEZ-RIOS, P., AND  
 ADSUAR, J.  
**198.** 1957. Prevalence of mosaic and  
 chlorotic streak diseases in the  
 sugarcane of Puerto Rico, 41 (3):  
 202-6.
- BONETA-GARCIA, ELVIN G.  
**199.** 1962. (See González-Molina, C. L.,  
 ref. 510.)
- BONNET, J. A.  
**200.** 1951. (See Lugo-López, M. A., ref.  
 692.)  
**201.** 1951. (See Lugo-López, M. A., ref.  
 694.)  
**202.** 1953. (See Jeffries, C. D., ref. 593.)  
**203.** 1957. (See Lugo-López, M. A., ref.  
 701.)  
**204.** 1957. (See Lugo-López, M. A., ref.  
 703.)  
**205.** 1957. (See Lugo-López, M. A., ref.  
 702.)  
**206.** 1961. (See Acevedo-Ramos, G.,  
 ref. 24.)
- BONNET, J. A., ABRUÑA, F. AND  
 LUGO-LOPEZ, M. A.  
**207.** 1950. Trash disposal and its relation  
 to cane yield, soil and water  
 losses, 34 (3): 286-93.
- BONNET, J. A. AND LUGO-LOPEZ,  
 M. A.  
**208.** 1950. Relative erosiveness of  
 Puerto Rico soils, 34 (3): 294-307.  
**209.** 1952. The rate of infiltration of  
 lateritic soils, 36 (2): 161-6.  
**210.** 1953. Effect of different quantities  
 of velvetbean green manure on corn  
 yields in Puerto Rico, 37 (1): 96-  
 101.
- BONNET, J. A. AND RIERA,  
 ALFONSO R.  
**211.** 1946. Tracing the mineral from the  
 soil to the plant to the animal blood.  
 Part I. Effect of lime on the mineral  
 composition of the soil, of the grass,  
 and on the crop yield, 30 (3):  
 138-58.
- BONNET, J. A. AND RIERA, A. R.  
**212.** 1949. Tracing the mineral from the  
 soil to the plant to the animal blood.  
 Part III-The effect of phosphorus  
 and lime on the mineral composition  
 of the soil and grass, 33 (2):  
 57-65.
- BONNET, J. A., CAPO, B. G. AND  
 RIERA, A.  
**213.** 1946. Lack of response of sugarcane  
 to applications of phosphorus  
 in Puerto Rico, 30 (3): 186-95.
- BONNET, J. A., LUGO-LOPEZ,  
 M. A., AND ABRUÑA, F.  
**214.** 1951. Cation exchange capacity of  
 some tropical soils of Puerto Rico,  
 35 (2): 49-56.
- BONNET, J. A., LUGO-LOPEZ, M.  
 A., AND RICO-BALLESTER, M.  
**215.** 1957. Effect of incorporating or-  
 ganic material into a clay soil at  
 Lajas Valley on the yields of food  
 crops, 41 (3): 173-8.
- BONNET, J. A., LUGO-LOPEZ, M.  
 A., ROLDAN, J., AND  
 PEREZ-ESCOLAR, R.

216. 1958. Effect of lime and phosphate-bearing materials on sugar cane yields, 42 (1): 1-6
- BONNET, J. A., RIERA, A. R., AND LUGO-LOPEZ, M. A.
217. 1958. Lack of response of old coffee trees grown in Alonso clay to lime and phosphatic fertilization, 42 (3): 161-7.
- BONNET, J. A., RIERA, A. R., AND ROLDAN, J.
218. 1952. Tracing the mineral from the soil to the plant, Part V. Effect of lime and phosphorus on Guinea, Merker, and Para-carib grasses grown in association with tropical Kudzu, 36 (2): 141-54.
219. 1956. Correlation at different ages between nitrogen, green- and dry-matter contents of leaves, and yield of sugarcane grown in sand culture, 40 (2): 101-9.
220. 1958. Yield responses to different N-P-K levels, and correlations with foliar analysis, in sand-culture studies with corn, sugarcane, and cotton, 42 (3): 168-84.
- BONNET, J. A. RIERA, A. R., RIVERA-BRENES, L., AND ORLANDI, R.
221. 1946. Tracing the mineral from the soil to the plant to the animal blood. Part II. Effect of unlimed and limed grass on the chemical composition of goat's blood, 30 (3): 159-83.
222. 1949. Tracing the mineral from the soil to the plant to the animal blood. Part IV. Effect of urea added to grass fertilized with lime and phosphorus on the nutrition and health of goats, 33 (2): 67-73.
- BONNET, J. A., TELFORD, E. A., MARIOTA, F. AND TIRADO-SULSONA, P.
223. 1945. Effect of lime and phosphorus on the yield of four legumi-nosac in two acid soils of Puerto Rico, 29 (2): 47-56.
- BONNET, J. A., TIRADO-SULSONA, P., AND ABRUNA, F.
224. 1947. Effect of lime-phosphorus and green manure on sweet potatoes and corn grown in acid soils, 31 (4): 303-21.
- BONNET, J. A., TIRADO-SULSONA, P., AND LUGO-LOPEZ, M. A.
225. 1949. Attempt to reclaim with chemicals a salty clay in Puerto Rico, 33 (2): 75-84.
- BONNET, JUAN A.
226. 1953. Soil-salinity studies as related to sugarcane growing in southwestern Puerto Rico, 37 (2): 103-13.
227. 1953. Potassium content of Puerto Rico soils as related to sugarcane growing, 37 (3): 183-94.
- BONNET, JUAN, AND BRENES, EDUARDO J.
228. 1957. Salinity status of Lajas Valley soils, 41 (1): 25-34.
- BONNET, JUAN AMEDEE
229. 1931. Nitrogen transformations in the decomposition of sugar cane trash, with special bearing upon Puerto Rico soil problems, 15 (2): 113-46.
230. 1935. Nitrification studies with soil types in northern Puerto Rico, 19 (2): 73-103.
231. 1940. Phosphoric acid and silica of Puerto Rico soils, 24 (4): 143-50.
- BONNET, JUAN AMEDEE AND VILLAMIL, FERNANDO A.
232. 1933. Research on shortening time without affecting the accuracy of Dyer's modified method for the determination in soils, of phosphoric acid, lime and potash soluble in

- citric acid solution (1 per cent), 17 (4): 287-300.
- BOURNE, B. A.
233. 1924. Morphological similarity between the *Pythium*-like fungus found associated with diseased sugar-cane roots in Hawaii and Porto Rico, 8 (2): 61-70.
- BOX, HAROLD E.
234. 1925. Porto Rican cane-grubs and their natural enemies, with suggestions for the control of Laticllicorn larva by means of wasp-parasites (Scoliidae), 9 (4): 291-356.
- BOYCE, D. S.
235. 1959. The effect of various processing methods on ease of removal of more than half the silver skin from green coffee beans, 43 (2): 128-31.
236. 1960. The determination of moisture in parchment coffee and green coffee beans with a dielectric-type moisture-meter, 44 (4): 176-93.
237. 1961. The absorption of water by washed parchment coffee when stored under water, Research Note, 45 (3): 191-2.
238. 1962. Processing yield from parchment coffee demucilaged mechanically and by natural fermentation, 46 (4): 334-41.
- BOYCE, D. S. AND CALPOUZOS, L.
239. 1963. Limitations of use of oil-indicator cards for determining oil-spray deposits on banana leaves, Research Note, 47 (2): 138-9.
- BOYCE, D. S. AND PEREZ-FONRODONA, A. A.
240. 1962. Observations on the resistance to vertical airflow of green and parchment coffees, 46 (1): 55-64.
- BRAU, HERMINIO
241. 1957. The effect of the presence of different concentrations of fusel oil on the determination of alcohol by pionometer and hydrometer, 41 (2): 140-5.
- BRAU, HERMINIO M.
242. 1958. Considerations on the convenience of distilling at high proof in continuous alcoholic distillation for beverages, 42 (4): 248-57.
- BREGGER, THOMAS
243. 1933. The relation of anther color and the proportions of starch filled pollen grains in the sugar cane, 17 (2): 139-43.
- BRENES, E. J.
244. 1957. (See Lugo-López, M. A., ref. 709.)
- BRENES, EDUARDO J.
245. 1957. (See Bonet, Juan A., ref. 228.)
- BRIDWELL, JOHN COLBURN
246. 1943. A new *Amblycerus* affecting seeds of *Prosopis chilensis* in Puerto Rico and Hispaniola, 27 (3): 133-35.
- BRUEHL, G. W.
247. 1954. Identification, occurrence, and distribution of strains of sugarcane mosaic in Puerto Rico, 38 (4): 188-98.
- BRUEHL, G. W. AND BONETA-GARCIA, EFRAIN
248. 1955. A chlorotic streak disease of Merker grass (*Pennisetum purpureum*), 39 (4): 190-7.
- BRUNER, S. C.
249. 1932. (See Barber, H. G., ref. 160.)
250. 1936. (See Metcalf, Z. P., ref. 772.)
- BRYANT, ELIZABETH B.
251. 1942. Additions to the spider fauna of Puerto Rico, 26 (1): 1-18.

## BURLEIGH, CALVIN

252. 1961. (See Caro-Costas, Rubén, ref. 294.)  
 252a. 1954. (See Martorell, Luis F., ref. 749.)

## CABANILLAS, E.

253. 1962. (See Delfel, N. E., ref. 411.)

## CABRERA, J. I.

254. 1947. (See Rivera-Brenes, L., ref. 923.)  
 255. 1949. (See González-Chapel, A., ref. 500.)  
 256. 1950. (See Rivera-Brenes, L., ref. 928.)  
 257. 1952. Minimum nutritive requirements of dairy cattle under tropical conditions, 36 (2): 102-7.  
 258. 1952. (See Rivera-Brenes, L., ref. 929.)  
 259. 1954. (See Rivera-Brenes, L., ref. 922.)  
 260. 1959. (See Rivera-Brenes, L., ref. 926.)

CABRERA, J. I. AND  
RIVERA-BRENES, L.

261. 1953. The value of grass silage for feeding diary cows in Puerto Rico, 37 (1): 59-73.

## CABRERA, JOSE I.

262. 1949. (See Rivera-Brenes, Luis, ref. 934.)

## CALDWELL, JOHN S.

263. 1942. New Psyllidae from Puerto Rico with notes on others (Homoptera), 26 (2): 28-32.  
 264. 1947. The synonymy of *Empoasca fabalis* DeLong (Cicadellidae: Homoptera), 31 (3): 226.

CALDWELL, JOHN S. AND  
MARTORELL, LUIS F.

265. 1950. Review of the Auchenorrhynchos Homoptera of Puerto Rico. Part I. Cicadellidae, 34 (1): 1-132.  
 266. 1950. Review of the Auchenorrhyn-

chos Homoptera of Puerto Rico. Part II. The Fulgoroidea except Kimmaridae, 34 (2): 133-269.

267. 1951. New leafhoppers from Puerto Rico (Cicadellidae: Homoptera), 35 (2): 88-9.

## CALPOUZOS, L.

268. 1963. (See Boyce, D. S., ref. 239.)

## CANALS, R. A.

269. 1962. (See García-Monge, G., ref. 484.)

## CANCEL, M. M.

270. 1960. (See Sánchez-Nieva, ref. 1042.)

## CAPO, BERNARDO

271. 1937. A comparative study of the statistical methods most commonly used in agricultural research, 21 (2): 201-24.  
 272. 1938. A modification of Mitscherlich's method for the determination of the nutrient contents of a soil, 22 (2): 137-69.  
 273. 1944. A method for the solution of normal equations, 28 (1): 1-6.  
 274. 1944. A method of interpreting the results of field trials, 28 (1): 7-21.  
 275. 1944. A new method of performing field trials, 28 (1): 22-34.

## CAPO, BERNARDO G.

276. 1952. (See Samuels, George, ref. 1026.)  
 277. 1953. (See Samuels, George, ref. 1025.)  
 278. 1962. A new approach to the problem of adequate fertilization of a crop, 46 (4): 243-53.

CAPO, BERNARDO G. AND  
SAMUELS, GEORGE

279. 1953. The development of a mathematical concept to interpret the relation between plant composition and crop yield, 37 (4): 249-64.

- CAPO, B. G.
- 280. 1946. (See Bonnet, J. A., ref. 213.)
  - 281. 1946. (See Gómez, Luis A., ref. 494.)
  - 282. 1953. (See Lugo-López, M. A., ref. 704.)
  - 283. 1954. (See Lugo-López, M. A., ref. 695.)
  - 284. 1954. (See Lugo-López, M. A., ref. 696.)
  - 285. 1956. (See Samuels, G., ref. 1031.)
  - 286. 1958. (See Lugo-López, M. A., ref. 707.)
- CARLO, ISMAEL
- 287. 1954. (See González-Chapel, A., ref. 497.)
  - 288. 1958. Optimum weights to which pigs should be carried in Puerto Rico for maximum profits, 42 (1): 35-7.
  - 289. 1960. Value and cost of farm-mixed rations used in swine-feeding trials at Lajas Substation, 44 (3): 150-3.
  - 290. 1963. (See Rosado-Curbó, Gilberto, ref. 975.)
- CARO-COSTAS, RUBEN AND VICENTE-CHANDLER, JOSE
- 291. 1956. Comparative productivity of Merker grass and of a Kudzu-Merker grass mixture as affected by season and cutting height, 40 (3): 144-51.
  - 292. 1961. Effects of two cutting heights on yields of five tropical grasses, 45 (1): 46-9.
  - 293. 1963. Effect of liming and fertilization on productivity and species balance of a tropical Kudzu-molassesgrass pasture under grazing management, 47 (4): 326-41.
- CARO-COSTAS, RUBEN, VICENTE-CHANDLER, JOSE, AND BURLEIGH, CALVIN
- 294. 1961. Beef production and carrying capacity of heavily fertilized, irrigated Guinea, Napier, and Pangola grass pastures under semiwrid south coast of Puerto Rico, 45 (1): 32-6.
- CARO-COSTAS, RUBEN  
VICENTE-CHANDLER, JOSE, AND FIGARELLA, JACINTO
- 295. 1960. The yields and composition of five grasses growing in the humid mountains of Puerto Rico, as affected by nitrogen fertilization, season, and harvest procedures, 44 (3): 107-20.
- CARRERAS, JOSE R.
- 296. 1925. Steam consumption in an electrified sugar mill, 9 (3): 283-8.
- CESTERO, H.
- 297. 1961. (See Rivera-Brenes, L., ref. 921.)
  - 298. 1962. (See Rivera-Brenes, L., ref. 924.)
- CHAPIN, EDWARD A.
- 299. 1935. New species of Scarabaeidae (Coleoptera) from Puerto Rico and the Virgin Islands, 19 (2): 67-71.
- CHARDON, CARLOS E.
- 300. 1924. Mosaic investigation at Central Cambalache. Preliminary Report, 8 (2): 27-39.
  - 301. 1929. New or interesting tropical American Dothideales-II, 13 (1): 5-17.
  - 302. 1932. New or interesting tropical American Dothideales-III, 16 (2): 167-92.
- CHARDON, CARLOS E. AND TORO, RAFAEL A.
- 303. 1930. Mycological explorations of Colombia, 14 (4): 195-369.
- CIBES, HECTOR R.
- 304. 1953. (See Samuels, George, ref. 1012.)
  - 305. 1962. Control of harsh grasses in pasturelands, Research Note, 46 (1): 65.
  - 306. 1962. Effect of BOH on flowering of pineapple, Research Note, 46 (1): 65-7.

- CIBES, HECTOR, R. AND AMY,  
ALBERTO  
**307.** 1956. Control of weeds in tobacco seedbeds, Research Note, 40 (1): 85.
- CIBES, HECTOR, SAMUELS,  
GEORGE, AND RODRIGUEZ, JUAN P.  
**308.** 1955. Influence of preharvest sprays with maleic hydrazide on the sprouting of potatoes, 39 (2): 92-9.
- CIBES, H. R.  
**309.** 1957. The control of weeds in pineapple fields with CMU, 41 (1): 11-9.
- CIBES-VIADE, HECTOR  
**310.** 1963. (See Samuels, George, ref. 1013.)
- CIBES-VIADE, H. R.  
**311.** 1953. (See Hernández-Medina, F., ref. 572.)  
**312.** 1953. (See Lugo-López, M. A., ref. 706.)
- CIFERRI, R.  
**313.** 1930. Phytopathological survey of Santo Domingo. 1925-1929, 14 (1): 5-44. (Printed as 14 (1): January 1929.)  
**314.** 1931. Studies on cacao. I. Actinomycetes on cacao beans, 15 (3): 223-86.
- CIORDIA, H. AND RIVERA-ANAYA,  
J. D.  
**315.** 1955. Nematode-larvae infestation in goats fed "malojillo" (Pará grass) and Merker grasses in Puerto Rico, 39 (1): 22-31.
- COLON, A.  
**316.** 1959. (See Méndez-Roig, F., ref. 770.)
- COLON, ANGEL ALBERTO  
**317.** 1940. The effect of temperature upon the base-exchange capacity of clays, 24 (4): 133-42.
- COLON, E. D.  
**318.** 1919. The absorption spectrum of the chlorophyll in yellow-striped sugar-cane, 3 (4): 43-6.
- COLON, E. D. AND BERROCAL, J. E.  
**319.** 1925. An experiment on drainage by means of pumps, 9 (4): 257-72.
- COLON, L. F.  
**320.** 1950. (See Marchán, F. J., ref. 724.)  
**321.** 1954. (See Rivera-Brenes, L., ref. 922.)
- COLON-TORRES, E. N.  
**322.** 1958. (See Rivera-Brenes, L., ref. 925.)
- COCK, D. H.  
**323.** 1938. (See Axtmayer, Joseph H., ref. 144.)  
**324.** 1938. (See Axtmayer, Joseph H., ref. 145.)  
**325.** 1940. (See Axtmayer, Joseph H., ref. 146.)  
**326.** 1940. (See Axtmayer, Joseph H., ref. 147.)  
**327.** 1943. (See Asenjo, C. F., ref. 133.)
- COCK-IVIMEY, W. R.  
**328.** 1932. On the life-history and systematic position of the organisms causing dry top rot of sugar cane, 16 (4): 409-18.
- COOK, MELVILLE T.  
**329.** 1923. The status of Plant Pathology in Porto Rico, 7 (3): 3-14.  
**330.** 1924. Present knowledge of mosaic diseases, 8 (2): 50-4.  
**331.** 1924. Sugar-cane leaf spots in Porto Rico, 8 (2): 55-7.  
**332.** 1924. *Helminthosporium* leaf spot of sugar cane in Porto Rico (Preliminary paper), 8 (4): 5-10.  
**333.** 1924. A method in micro-technique, 8 (4): 11.  
**334.** 1924. Coconut fall, (Preliminary paper), 8 (4): 12-14.

335. 1924. A bacterial wilt of *Cosmos*, (Preliminary paper), 8 (4): 14.
336. 1924. A bacterial wilt of eggplants, (Preliminary paper), 8 (4): 15.
337. 1925. Histology and cytology of sugar cane mosaic, 9 (1): 5-27.
338. 1925. Relationship of cane varieties to diseases, 9 (4): 277-81.
339. 1926. Epiphytic orchids—a serious pest on citrus trees, 10 (2): 5-9.
340. 1926. The eye-spot disease of sugar cane, 10 (3-4): 207-27.
341. 1926. The effect of mosaic on the content of the plant cell, 10 (3-4): 229-38.
342. 1926. Photo-synthesis of the sugar cane mosaic plant, 10 (3-4): 239-42.
343. 1926. The unrolling of the leaves of sugar cane, 10 (3-4): 243-44.
344. 1928. The gummosis of sugar cane, 12 (3) 143-79. (Printed as 12 (4).)
345. 1929. Life history of *Ligniera vascularum* (Matz) Cook (formerly known as *Plasmadiophora vascularum*), 13 (1): 19-29.
346. 1929. The gummosis of sugarcane, (Second paper), 13 (2): 73-6.
347. 1930. The effect of some mosaic diseases on cell structure and on the chloroplasts, 14 (2): 69-101.
348. 1931. The effect of mosaic on cell structure and chloroplasts, 15 (2): 177-81.
349. 1931. The leaf spot of tobacco; an after symptom of mosaic, 15 (2): 183-87.
350. 1931. Some undescribed symptoms of mosaic in Porto Rican tobacco, 15 (2): 189-91.
351. 1931. New virus diseases of plants in Porto Rico, 15 (2): 193-95.
352. 1932. *Thielaviopsis paradoxa*; an important disease of sugar cane, 16 (2): 205-11.
353. 1932. *Marasmius sacchari*, a parasite on sugar cane, 16 (2): 213-26.
354. 1933. The pineapple disease of sugar cane in Puerto Rico, 17 (4): 305-9.
355. 1933. White spot of pineapples, 17 (4): 311-13.
356. 1933. Patho-anatomy of roots attacked by nematodes, 17 (4): 315-19.
357. 1934. (See Otero, José I., ref. 814.)
358. 1935. Root diseases of sugar cane in Puerto Rico, 19 (2): 121-28.
359. 1935. (See Otero, José I., ref. 813.)
360. 1935. Host index of virus diseases of plants, 19 (3): 315-406.
361. 1935. Index of the vectors of virus diseases of plants, 19 (3): 407-20.
362. 1936. Records of virus diseases of plants in Puerto Rico, 20 (3): 681-84.
363. 1936. Phloem necrosis in the stripe disease of corn, 20 (3): 685-88.
364. 1936. Descriptions of virus diseases of plants: Criticisms and suggestions, 20 (3): 689-90.
365. 1936. First supplement to the host index of virus diseases of plants, 20 (3): 691-727.
366. 1936. First supplement to the index of vectors of virus diseases of plants, 20 (3): 729-39.
367. 1936. (See Otero, José I., ref. 816.)
368. 1937. The organism causing the dry top rot of sugar cane, 21 (1): 85-97.
369. 1937. (See Otero, José I., ref. 817.)
370. 1938. Second supplement to host index of virus diseases of plants, 22 (3): 411-35.
371. 1938. Second supplement to the index of vectors of virus diseases of plants, 22 (3): 437-9.
372. 1938. The witches' broom of *Tabebuia pallida* in Puerto Rico, 22 (3): 441-2.
373. 1938. Cucumber mosaic in Puerto Rico, 22 (3): 443-7.
374. 1938. (See Otero, José I., ref. 818.)
375. 1941. Germination failures of the magnolia in Puerto Rico, 25 (4): 51-2.

COOK, MELVILLE T. AND  
GLEASON, ALLAN HENRY

376. 1928. Ecological survey of the flora of Porto Rico, 12 (1-2): 3-139.
- COOK, MELVILLE T. AND MORALES-OTERO, PABLO  
377. 1933. Gum-producing organisms in sugar cane, 17 (4): 271-86.
- CORTES-MONLLOR, AMIELLA  
378. 1960. (See Pérez, J. Enrique, ref. 846.)  
379. 1961. (See Pérez, J. Enrique, ref. 847.)
- COTTON, R. T.  
380. 1917. The eggplant lace-bug in Porto Rico, 1 (3): 170-3.  
381. 1917. Life history of *Haltica jamaicensis* Fabr., 1 (3): 173-5.  
382. 1917. Scale-feeding habits of a Porto Rican millipede, *Rhinocricus arboreus* (Saussure), 1 (3): 175-6.  
383. 1918. Experimental work on the control of the white grubs of Porto Rico, 2 (1): 1-18.  
384. 1918. Insects attacking vegetables in Porto Rico, 2 (4): 265-317.
- COWGILL, H. B.  
385. 1917. A method of identification and description of sugar cane varieties, and its application to types grown in Porto Rico, 1 (3): 119-40.  
386. 1918. Studies in inheritance in sugarcane, 2 (1): 33-41.  
387. 1919. Cross-pollination of sugar cane, 3 (1): 1-5.
- CROMROY, HARVEY LEONARD  
388. 1958. A preliminary survey of the plant mites of Puerto Rico, 42 (2): 39-144.
- CRUZADO, H.  
389. 1961. (See Roark, B., ref. 939.)
- CRUZ-CAY, J. R.  
390. 1963. (See Rahman, Abdul R., ref. 867.)
- CRUZ-MIRLET, A.  
391. 1953. (See Alvarez-García, L. A., ref. 92.)  
392. 1957. (See Hernández-Medina, E., ref. 571.)
- CRUZ-MONCLOVA, H. E.  
393. 1936. Investigations on the root of *Manihot utilissima* Pohl., 20 (2): 649-54.
- DANFORTH, STUART T.  
394. 1926. An ecological study of Cartagena Lagoon, Porto Rico, with special reference to the birds, 10 (1): 1-136.  
395. 1930. Bird records from the Virgin Islands, 14 (3): 107-34.  
396. 1931. Puerto Rican ornithological records, 15 (1): 33-106.  
397. 1935. Investigations concerning Cuban birds, with special reference to their economic status, and consideration of those which might be desirable for introduction into Puerto Rico, 19 (4): 421-37.  
398. 1935. Supplementary account of the birds of the Virgin Islands, including Culebra and adjacent islets pertaining to Puerto Rico, with notes on their food habits, 19 (4): 439-72.  
399. 1935. The birds of Barbuda, with notes on their economic importance, and relationship to the Puerto Rican avi-fauna, 19 (4): 473-82.  
399a. 1935. A new ground dove from the West Indies, 19 (4): 483-4.  
400. 1937. A revision of the West Indian races of *Loxigilla noctis* (Linnaeus), 21 (2): 225-32.  
401. 1937. Ornithological investigations in Vieques Island, Puerto Rico, during December, 1935, 21 (4): 539-50.  
402. 1938. The birds of Saba, 22 (4): 503-12.  
403. 1939. The birds of Guadalupe and adjacent islands, 23 (1): 9-46.

- 404.** 1939. The birds of Montserrat, 23 (1): 47-66.
- DANFORTH, STUART T. AND SMITH, J. ADGER**
- 405.** 1935. The Puerto Rican form of the broad-winged hawk, 19 (4): 485-6.
- DE CAMPILLO, ALICE**
- 406.** 1958. (See Asenjo, Conrado F., ref. 137.)
- DECKER, JOHN P. AND TIO, MARCO A.**
- 407.** 1958. Photosynthesis of papaya as affected by leaf mosaic, 42 (3): 145-50.
- 408.** 1959. Photosynthetic surges in coffee seedlings, 43 (1): 50-5.
- DEL CAMPILLO, ALICE AND ASEÑJO, CONRADO F.**
- 409.** 1957. Bound ascorbic acid in acerola juice, 41 (2): 134-9.
- 410.** 1957. The distribution of ascorbic acid, dehydroascorbic acid, and diketogulonic acid in the acerola fruit at different stages of development, 41 (3): 161-6.
- DELFEL, N. E., CABANILLAS, E., AND ORTIZ-TORRES, E.**
- 411.** 1962. A small-scale technique for evaluation of the effect of spray oils and other materials on sugar-cane yields, 46 (4): 328-33.
- DE LONG, DWIGHT M.**
- 412.** 1932. Three species of *Empoasca* leafhoppers known to affect economic plants in Haiti (including the description of two new species), 16 (2): 113-5.
- DELPIN, H.**
- 413.** 1961. (See Roark, B., ref. 938.)
- DEL TORO, E.**
- 414.** 1947. (See Rivera-Brenes, L., ref. 927.)
- DIAZ, MIGUEL A.**
- 415.** 1949. (See Alvarez-Garcia, L. A., ref. 95.)
- DIAZ-RIVERA, ANGELA CRISTINA A.**
- 416.** 1963. (See Asenjo, Conrado F., ref. 142.)
- DOHANIAN, S. M.**
- 417.** 1937. The introduction of parasites of the sugar-cane borer into Puerto Rico, 21 (2): 237-41.
- 418.** 1937. The importation of coccinellid enemies of diaspine scales into Puerto Rico, 21 (2): 243-7.
- DOZIER, HERBERT L.**
- 419.** 1931. (See Arndt, Charles H., ref. 118.)
- 420.** 1932. Description of new mymarid egg parasites from Haiti and Puerto Rico, 16 (2): 81-91.
- 421.** 1932. Notes on the genus *Aneristus* Howard with description of new species (Hymenoptera, Chalcidoidea), 16 (2): 93-102.
- 422.** 1932. Two important West Indian seed-infesting chalcid wasps, 16 (2): 103-12.
- 423.** 1937. Descriptions of miscellaneous chalcidoid parasites from Puerto Rico (Hymenoptera), 21 (2): 121-35.
- DOZIER, H. L.**
- 424.** 1925. An outbreak of red-striped sugar-cane scale, 9 (4): 357-67.
- 425.** 1926. Some new and interesting Porto Rican leafhoppers, 10 (3-4): 259-65.
- 426.** 1926. Notes on Porto Rican scale parasites, 10 (3-4): 267-77.
- 427.** 1926. Notes on Porto Rican Thyanoptera, 10 (3-4): 279-81.
- EARLIE, F. S.**
- 428.** 1919. Varieties of sugar cane in Porto Rico, 3 (2): 15-55.
- 429.** 1919. The year's experience with

- sugar-cane mosaic or yellow stripe disease, 3 (4): 3-33.
- 430.** 1920. Sugar cane root disease, 4 (1): 3-27.
- 431.** 1920. An annotated list of sugar-cane varieties, 4 (3): 3-80.
- 432.** 1921. Sugar-cane varieties of Porto Rico-II, 5 (3): 3-141.
- 433.** 1924. Sugar-cane cultivation, 8 (2): 7-13.
- 434.** 1924. Cane varieties resistant to salt lands, 8 (2): 14-5.
- ESCALONA-SALAS, ANSELMO**
- 435.** 1939. (See Martorell, Luis F., ref. 750.)
- ESCHENWALD, ADOLFO AND HALL, CARL W.**
- 436.** 1961. Coefficient of friction, angle of repose, specific gravity, and bulk density of coffee fruits and coffee beans, 45 (1): 19-25.
- 437.** 1961. Air-flotation, pneumatic conveying velocities, and airflow relationships for coffee fruits and coffee beans, 45 (3): 319-32.
- ESTEVA, JR., CARLOS**
- 438.** 1938. A comparison of methods of determining carbon in soils, 22 (2): 123-36.
- EVANS, JOSEPH L.**
- 439.** 1963. (See Arroyo-Aguilú, José A., ref. 121.)
- FELT, E. P.**
- 440.** 1932. A new citrus cambium miner from Puerto Rico, 16 (2): 117-8.
- FERNANDEZ, DELIA**
- 441.** 1950. (See Asenjo, Conrado F., ref. 138.)
- FERNANDEZ-GARCIA, R.**
- 442.** 1924. (See López-Domínguez, F., ref. 655.)
- FERNANDEZ, MARIA DEL C. C.**
- 443.** 1962. Effect of filter-press cake on tomato plants grown in sterilized and unsterilized soil, 46 (3): 167-70.
- 444.** 1943. (See Asenjo, C. F., ref. 133.)
- 445.** 1945. (See Asenjo, C. F., ref. 132.)
- FIFE, L. C.**
- 446.** 1937. Damage to Sea Island cotton by the West Indian blister mite (*Eriophyes gossypii* Banks) in Puerto Rico, 21 (2): 169-77.
- 447.** 1937. Status of the pink bollworm in Puerto Rico during 1935-36, 21 (2): 233-5.
- FIFE, L. COURTNEY**
- 448.** 1938. Alternate host plants of the pink bollworm, *Pectinophora gossypiella* (Saund.), in Puerto Rico, 22 (4): 483-92.
- FIGARELLA, JACINTO**
- 449.** 1956. (See Vicente-Chandler, José, ref. 1187.)
- 450.** 1957. (See Abruña, Fernando, ref. 16.)
- 451.** 1958. (See Vicente-Chandler, José, ref. 1182.)
- 452.** 1959. (See Vicente-Chandler, José, ref. 1188.)
- 453.** 1950. (See Vicente-Chandler, José, ref. 1189.)
- 454.** 1959. (See Vicente-Chandler, José, ref. 1190.)
- 455.** 1960. (See Caro-Costas, Rubén, ref. 295.)
- 456.** 1961. (See Vicente-Chandler, José, ref. 1186.)
- 457.** 1962. (See Vicente-Chandler, José, ref. 1183.)
- 458.** 1962. (See Vicente-Chandler, José, ref. 1184.)
- 459.** 1962. (See Vicente-Chandler, José, ref. 1191.)
- FIGUEROA, C. A.**
- 460.** 1919. The mottling disease of cane and the sugar production of Porto Rico, 3 (4): 35-41.

- FISHER, W. S.
- 461. 1935. New cerambycid beetles from Puerto Rico, 19 (2): 51-63.
  - 462. 1935. New eucnemid beetles from Puerto Rico, 19 (2): 65-6.
  - 463. 1941. New Coleoptera from Puerto Rico, 25 (4): 37-9.
  - 464. 1943. A new species of *Phloeoneurus* from Puerto Rico. (Coleoptera: Colydiidae), 27 (3): 131-2.
- FORBES, WM. T. M.
- 465. 1931. Supplementary report on the Heterocera or moths of Porto Rico, 15 (4): 339-94.
- FORBES, W. T. M. AND LEONARD, M. D.
- 466. 1930. A new leaf-miner of cotton in Porto Rico. (*Nepticula gossypii* new species), 14 (3): 151-57.
- FOX, IRVING
- 467. 1942. The occurrence of a rare genus of ticks on bats in Puerto Rico. (Acarina: Spelaeorhynchidae), 26 (4): 95-7.
  - 468. 1955. A catalogue of the blood sucking midges of the Americas (*Culicoides*, *Leptoconops*, and *Lasiuhelea*) with keys to the subgenera and neartic species, a geographic index, and bibliography, 39 (4): 214-85.
  - 469. 1957. The insect Family Japygidae (Order Thysanura) in Puerto Rico, 41 (1): 35-7.
- FROMM, FRITZ
- 470. 1960. A modification of the Lemna Test for phytotoxicity, 44 (3): 93-102.
- FUHRIMAN, D. K. AND SMITH, R. M.
- 471. 1951. Conservation and consumptive use of water with sugar cane under irrigation in the south coastal area of Puerto Rico, 35 (1): 1-47.
- GAHAN, A. B.
- 472. 1943. A new encyrtid parasitic in the eggs of Hesperiidae, 27 (3): 137-39.
- GANDIA-CARO, R.
- 473. 1955. (See Landrau, Jr., Pablo, ref.)
  - 474. 1956. (See Rodriguez, Juan Pastor, ref. 949.)
- GANDIA-DIAZ, HECTOR
- 475. 1958. (See Samuels, George, ref. 1014.)
  - 476. 1960. (See Samuels, George, ref. 1015.)
  - 477. 1963. (See Samuels, George, ref. 1016.)
- GANDIA, HECTOR
- 478. 1963. (See Ayala, Alejandro, ref. 154.)
- GARCIA, BETTY G.
- 479. 1962. Occurrence and some characterization studies of invertase in the green plantain fruit (*Musa paradisiaca*), 46 (2): 120-26.
- GARCIA-DIAZ, JULIO
- 480. 1938. An ecological survey of the fresh water insects of Puerto Rico. I. The Odonata: With new life-histories, 22 (1): 43-97.
- GARCIA, JOSE M.
- 481. 1937. A farm management study of 224 coffee farms in Puerto Rico, 1934, 21 (1): 29-67.
- GARCIA-MONGE, GILBERTO
- 482. 1960. Cation-exchange equilibria in a carboxylic cation exchanger and in attapulgite clay, 44 (4): 221-35.
  - 483. 1961. Evaluation of the Averell and Norris method for the determination of Parathion in West Indian cherry (*Malpighia punicea* L.), 45 (1): 50-3.

- GARCIA-MONGE, G., PEREZ, M. E., AND CANALS, R. A.
484. 1962. Persistence of Parathion residue on fresh West Indian cherries and in canned West Indian cherry juices, 46 (1): 9-14.
- GAZTAMBIDE DE URRUTIA,  
SOCORRO
485. 1950. Primary soil forming processes as influenced by the composition of parent material and environmental condition, 34 (3): 271-85.
- GELPI, F.
486. 1958. (See Rivera-Brenes, L., ref. 925.)
- GILES, G. M.
487. 1924. Some notes on tile drainage on the south coast of Porto Rico, 8 (2): 58-60.
- GLEASON-ALLAN, HENRY
488. 1928. (See Cook, Melville, T., ref. 376.)
- GOLDSTEIN, HARVEY L.
489. 1955. A novel medium for mounting nematodes, Research notes, 39 (1): 46-7.
- GOMEZ, LUIS A.
490. 1938. (See Guiscafré-Arrillaga, J., ref. 555.)
491. 1940. (See Guiscafré-Arrillaga, J., ref. 556.)
492. 1942. (See Guiscafré-Arrillaga, J., ref. 557.)
493. 1942. (See Guiscafré-Arrillaga, J., ref. 558.)
- GOMEZ, LUIS A., LERIA-ESMORIS, JOSE, AND CAPO, B. G.
494. 1946. Fertilizer requirements of coffee grown on Catalina clay in Puerto Rico, 30 (3): 127-37.
- GONZALEZ-CHAPEL, A.
495. 1947. Comparative performance of the native Puerto Rican fowl, the White Leghorn, the New Hampshire, and crosses between them, 31 (4): 265-302.
496. 1952. Body measurements as related to live weight in swine, 36 (2): 89-101.
- GONZALEZ-CHAPEL, A. AND CARLO, ISMAEL
497. 1954. Control of factors increasing the preweaning mortality of swine in Puerto Rico, 38 (4): 205-24.
- GONZALEZ-CHAPEL, A. AND ROJAS-DAPORTA, M.
498. 1951. Influence of time of hatching on sexual maturity of pullets in Puerto Rico, 35 (3): 100-13.
499. 1952. Environmental influence on the egg size of pullets in Puerto Rico, 36 (2): 115-21.
- GONZALEZ-CHAPEL, A. AND CABRERA, J. I.
500. 1949. Crossbreeding for swine production in Puerto Rico, 33 (4): 119-55.
- GONZALEZ, M. A.
501. 1958. (See Sánchez-Nieva, F., ref. 1041.)
502. 1961. (See Sánchez-Nieva, F., ref. 1043.)
503. 1961. (See Sánchez-Nieva, F., ref. 1044.)
504. 1963. (See Sánchez-Nieva, F., ref. 1045.)
- GONZALEZ, M. A., BENERO, J., AND SANCHEZ-NIEVA, F.
505. 1961. Canning characteristics of the Cobre variety sweetpotato, 45 (2): 106-11.
506. 1961. Effect of age of roots on yield for canning purposes, chemical composition of raw roots, and quality of canned product of Cobre and U.P.R. 3 sweetpotatoes, 45 (4): 259-64.

- GONZALEZ-MOLINA, C.
507. 1959. (See Landrau, Jr., P., ref. 639.)
- GONZALEZ-MOLINA, CARLOS L.  
AND ACOSTA-MATIENZO, ANGEL
508. 1962. Effectiveness of various dosages of allyl alcohol with DD as a pre-emergent weedkiller in tobacco seedbeds, 46 (2): 97-101.
- GONZALEZ-MOLINA, C. L.
509. 1959. Factors that govern the sensitivity of oat seed to X-Rays, 43 (3): 194-211.
- GONZALEZ-MOLINA, G. L.,  
ACOSTA-MATIENZO, A., AND  
BONETA-GARCIA, ELVIN G.
510. 1962. Evaluation of four commercial varieties of tobacco, 46 (1): 43-7.
- GONZALEZ MOLINA, C. L. AND  
ACOSTA MATIENZO, A.
511. 1963. Performance of mosaic-resistant strains of filler tobacco, 47 (1): 47-53.
- GONZALEZ-MOLINA, C. L.,  
SIERRA-BRACERO, A., AND  
BONETA-GARCIA, E. G.
512. 1962. Effects of topping on the selection Olor tobacco variety, 46 (4): 313-8.
- GONZALEZ, P.
513. 1919. A pineapple fertilizer experiment, 3 (1): 6-13.
- GONZALEZ-RIOS, P.
514. 1957. (See Boneta-Garcia, E., ref. 198.)
- GONZALEZ-RIOS, P. AND  
ADSUAR, J.
515. 1953. Effect of mosaic on the yield of sugarcane variety B. 34-104, 37 (1): 13-8.
- GONZALEZ-VELEZ, F.
516. 1962. (See Samuels, G., ref. 993.)
517. 1962. (See Samuels, G., ref. 994.)
518. 1962. (See Samuels, George, ref. 1017.)
519. 1962. (See Samuels, G., ref. 1028.)
- GONZALEZ-VELEZ, F. AND  
SAMUELS, G.
520. 1962. Response of sugarcane to fertilizers on an organic soil, 46 (4): 284-96.
- GONZALEZ-VELEZ, FRANCISCO
521. 1963. (See Samuels, George, ref. 1018.)
- GORHAM, RICHARD J.
522. 1962. Insecticide resistance-susceptibility tests with German cockroaches (*Blattella germanica* Linnaeus) in Puerto Rico, 46 (3): 219-25.
- GOYCO, JOSE
523. 1952. (See Asenjo, Conrado F., ref. 139.)
- GRANT, CHAPMAN
524. 1931. The sphaerodactyls of Porto Rico, Culebra and Mona Islands, 15 (3): 199-213.
525. 1931. A revised list of the herpetological fauna of Culebra Island, 15 (3): 215.
526. 1931. Reestablishment of a Scincid lost since 1837, 15 (3): 217-18.
527. 1931. A new species and two new sub-species of the genus *Anolis*, 15 (3): 219-22.
528. 1931. A new species of *Aristelliger* from Navassa, 15 (4): 399-400.
529. 1931. A new sphaerodactyl from Porto Rico, 16 (1): 31.
530. 1932. Chart for determining the sphaerodactyl of the Porto Rico region, 16 (1): 33-5.
531. 1932. The Herpetology of Vieques Island, 16 (1): 37-9.
532. 1932. *Bufo lemur*, a rare Porto Rican toad, 16 (1): 41.

533. 1932. *Sphaerodactylus grandisquamis*, a valid species, 16 (1): 43-5.
534. 1932. The hemidactyls of the Porto Rico region, 16 (1): 51-7.
535. 1932. A new frog from Puerto Rico, 16 (2): 145-8.
536. 1932. The genus *Alsophis* in the Puerto Rico area, 16 (2): 149-51.
537. 1932. A redescription of *Amphisbaena caeca* with a discussion of its relationship to *A. bakeri*, 16 (2): 152-5.
538. 1932. The large ameivas of the Puerto Rico region with one new species, 16 (2): 157-60.
539. 1932. Herpetological notes from the Puerto Rico area, 16 (2): 161-5.
540. 1932. A new frog from the Virgin Islands, 16 (3): 325-6.
541. 1932. Notes on the boas of Puerto Rico and Mona, 16 (3): 327-29.
542. 1932. The Herpetology of St. John and adjacent Keys, U. S. Virgin Islands, 16 (3): 311-4.
543. 1932. A genus of gecko new to the Greater Antilles, 16 (3): 335-7.
544. 1932. Herpetology of Tortola; notes on Anegada and Virgin Gorda, British Virgin Islands, 16 (3): 339-46.
545. 1932. The growth of Herpetology in the Puerto Rico and Virgin Island area, 16 (4): 401-4.
546. 1932. Herpetological notes, 16 (4): 405-7.
547. 1937. Two early Puerto Rican Herpetologists, 21 (4): 491-501.
548. 1937. Herpetological notes with new species from the American and British Virgin Islands, 1936, 21 (4): 503-22.
549. 1946. Notes on *Tretanorhinus* of Cuba and the Isle of Pines, 30 (2): 102-17.
550. 1946. A new name for *Alsophis antillensis*, 30 (2): 118-25.
551. 1932. The Herpetology of Caja de Muertos Island and Cardona Key, Porto Rico, 16 (1): 47-9.
- GRANT, R.
552. 1952. (See Lugo-López, M. A., ref. 697.)
553. 1953. (See Lugo-López, M. A., ref. 711.)
- GRIFFITH, J. P.
554. 1925. The Queensland raspberry (*Rubus probus*). A species adapted to tropical conditions, 9 (1): 29-45.
- GUISCAFRE-ARRILLAGA, J. AND GOMEZ, LUIS A.
555. 1938. Studies of the root system of *Coffea arabica* L. Part I. Environmental condition affecting the distribution of coffee roots in Coloso clay, 22 (2): 227-62.
556. 1940. Studies of the root system of *Coffea arabica* L. Part II. Growth and distribution in Catalina clay soil, 24 (3): 109-17.
557. 1942. Studies of the root system of *Coffea arabica* L. Part III. Growth and distribution of roots of 21-year old trees in Catalina clay soil, 26 (2): 34-9.
558. 1942. Effect of solar radiation intensity on the vegetative growth and yield of coffee, 26 (4): 73-90.
- GUISCAFRE, JAIME R.
559. 1932. The brown rot fungus in Puerto Rico, 16 (2): 193-202.
- HALL, CARL W.
560. 1961. (See Eschenwald, Adolfo, ref. 436.)
561. 1961. (See Eschenwald, Adolfo, ref. 437.)
- HALL, DAVID G.
562. 1938. New South American Sarcophagidae (Diptera), 22 (2): 171-76.

GRANT, CHAPMAN AND  
ROOSEVELT, CORNELIUS

- HERENCIA, J.
563. 1959. (See Rivera-Brenes, L., ref. 926.)
- HERNANDEZ, I.
564. 1963. (See Sánchez-Nieva, F., ref. 1045.)
- HERNANDEZ-MEDINA, E.
565. 1953. (See Lugo-López, M. A., ref. 706.)
566. 1956. (See Lugo-López, M. A., ref. 705.)
567. 1956. The use of chelates to control iron chlorosis in soybeans grown in alkaline substrate under greenhouse conditions, 40 (4): 245-54.
568. 1959. (See Landrau, Jr., P., ref. 635.)
- HERNANDEZ-MEDINA, E. AND LUGO-LOPEZ, M. A.
569. 1958. Observations on the boron-manganese relationships in soybean and corn plants, 42 (1): 27-34.
570. 1958. Effects on the calcium-boron relationship on growth and production of the pineapple plant, 42 (4): 207-23.
- HERNANDEZ-MEDINA, E., CRUZ-MIRET, A., AND LUGO-LOPEZ, M. A.
571. 1957. Residual effect of filter-press cake application on pineapple yields, 41 (3): 197-201.
- HERNANDEZ-MEDINA, E., LUGO-LOPEZ, M. A., AND CIBES-VIADE, H. R.
572. 1953. The beneficial effect of filter-press cake on pineapple yields under field conditions, 37 (3): 206-12.
- HERNANDEZ-MEDINA, ERNESTO
573. 1943. Studies of the shade requirements of vanilla, 27 (1): 27-37.
574. 1943. The value of utilizing existing shade in the growing of vanilla, 27 (3): 117-24.
575. 1945. The cashew—A promising support for vanilla, 29 (1): 30-4.
576. 1952. The beneficial effect of filter press cake on pineapple growth, development and production. I. Effect on the plant crop, 36 (3): 255-80.
577. 1952. The beneficial effect of filter press cake on pineapple growth, development and production. II. Effect on the ratoon crop, 36 (3): 281-301.
578. 1952. The apparent degeneration of pineapple slips in Puerto Rico, 36 (3): 302-17.
- HERNANDEZ-MEDINA, ERNESTO AND SHIVE, JOHN W.
579. 1946. Calcium-boron relationships in the nutrition of corn and the distribution of these elements in the plant, 30 (4): 251-91.
- HERNANDEZ-RAMIREZ, MARTIN
580. 1947. A socio-economic study of southwestern Puerto Rico, 31 (1): 1-165.
- HOPKINS, E. F., PAGAN, VICTOR, AND RAMIREZ-SILVA, F. J.
581. 1944. Iron and manganese in relation to plant growth and its importance in Puerto Rico, 28 (2): 43-101.
- HUTCHINSON, J. B.
582. 1944. The cottons of Puerto Rico, 28 (2): 35-42.
- HUYKE, ALICE
583. 1956. (See Santini, Jr., Rafael, ref. 1050.)
584. 1956. (See Santini, Jr., Rafael, ref. 1051.)
585. 1956. (See Santini, Jr., R., ref. 1053.)
- HUYKE, ROBERTO
586. 1939. A farm management study of

- 60 dairy farms in Puerto Rico, 1935-36, 23 (3): 131-75.
- JACKSON, G. C.  
 587. 1957. (See Abrams, R., ref. 8.)  
 588. 1958. (See Samuels, G., ref. 990.)
- JACKSON, GEORGE C.  
 589. 1959. (See Abrams, Ruful, ref. 7.)  
 590. 1963. Ascorbic acid content of some Malpighia spp., 47 (3): 201-4.  
 591. 1963. *Diaprepes abbreviata* Linnaeus on *Phoenix dactylifera* L., Research Note, 47 (4): 290.
- JACKSON, GEORGE C. AND PENNOCK, WILLIAMS  
 592. 1958. Fruit and Vitamin C production of five- and six-year-old acerola trees, 42 (3): 196-205.
- JEFFRIES, C. D., BONNET, J. A., AND ABRUÑA, F.  
 593. 1953. The constituent minerals of some soils of Puerto Rico, 37 (2): 114-39.
- JOHANNSEN, O. A.  
 594. 1938. New species of *Nemocera* from Puerto Rico, 22 (2): 219-25.
- JOHNSTON, JOHN R.  
 595. 1917. History and cause of the rind disease of sugar cane, 1 (1): 17-45.
- JOHNSTON, JOHN R. AND STEVENSON, JOHN A.  
 596. 1917. Sugar-cane fungi and diseases of Porto Rico, 1 (4): 177-264.
- JONES, THOMAS H.  
 597. 1917. A list of the Coccidae of Porto Rico, 1 (1): 1-16.
- JONES, THOMAS H. AND WOLCOTT, GEORGE N.  
 598. 1922. The caterpillars which eat the leaves of sugar cane in Porto Rico, 6 (1): 38-50.
- JUAREZ, JR., J.  
 599. 1959. (See Lugo-López, M. A., ref. 698.)
- JUMP, JOHN A.  
 600. 1937. A new fungus on *Ficus nitida* Thunb., 21 (4): 573-5.
- KEVORKIAN, A. G.  
 601. 1943. (See Arana, Francisca E., E., ref. 114.)
- KEVORKIAN, ARTHUR G.  
 602. 1937. Studies in the Entomophthoraceae I. Observations on the genus *Conidiobolus*, 21 (2): 191-200.
- KRAMER, JAMES P. AND MARTORELL, LUIS F.  
 603. 1960. First records for the rice plant hopper, *Sogata orizicola* Muir, in Puerto Rico (Homoptera: Fulgoridea: Delphacidae), 44 (4): 163-5.
- LANDAGORA, F. T.  
 604. 1962. Effect of feeding achioxe seed on egg-yolk pigmentation, 46 (2): 91-6.
- LANDAGORA, F. T. AND ARENAS MONTALVO, P.  
 605. 1963. Increasing flesh pigmentation in growing chickens, 47 (2): 91-7.
- LANDRAU, JR. P.  
 606. 1952. (See Samuels, G., ref. 1033.)  
 607. 1952. (See Lugo-López, M. A., ref. 708.)  
 608. 1955. (See Samuels, G., ref. 1032.)  
 609. 1956. (See Lugo-López, M. A., ref. 705.)  
 610. 1956. (See Lugo-López, M. A., ref. 699.)  
 611. 1956. (See Samuels, G., ref. 1031.)  
 612. 1956. (See Samuels, G., ref. 1029.)  
 613. 1957. (See Samuels, G., ref. 989.)  
 614. 1959. (See Samuels, G., ref. 1034.)  
 615. 1960. (See Alers-Alers, S., ref. 81.)

- 616.** 1960. (See Samuels, G., ref. 991.)  
**617.** 1960. (See Samuels, G., ref. 992.)  
**618.** 1960. (See Samuels, G., ref. 1030.)  
**619.** 1952. (See Samuels, G., ref. 1019.)  
**620.** 1952. (See Samuels, George, ref. 1026.)
- LANDRAU, JR. PABLO**
- 621.** 1953. (See Samuels, George, ref. 1020.)  
**622.** 1953. (See Samuels, George, ref. 1021.)  
**623.** 1954. (See Samuels, George, ref. 1020.)  
**624.** 1954. (See Samuels, George, ref. 1023.)  
**625.** 1955. (See Samuels, George, ref. 1024.)  
**626.** 1956. (See Rodríguez, Juan Pastor, ref. 950.)  
**627.** 1958. (See Lugo-López, M. A., ref. 707.)
- LANDRAU, JR. PABLO AND SAMUELS, GEORGE**
- 628.** 1951. The effect of fertilizers on the yield and quality of sweetpotatoes, 35 (2): 71-87.  
**629.** 1952. The handling of sugarcane trash. I. Yield and economic considerations, 36 (3): 240-45.  
**630.** 1954. Response of four sugarcane varieties to fertilizers during the first Isabela cycle, 1946-51, 38 (2): 73-95.  
**631.** 1955. Influence of fertilizers on the yield of the Plamar variety of tomatoes on a Coto clay, 39 (2): 77-83.  
**632.** 1956. Results of lime and minor-element fertilizer research in Puerto Rico, 1949-50, 40 (4): 224-34.
- LANDRAU, JR. PABLO, RODRIGUEZ, JUAN PASTOR, SAMUELS, GEORGE, ALERS-ALERS, SEVERIANO, AND GANDIACARO, R.**
- 633.** 1955. Effect of spacing and fertilization on the yield of potatoes, 39 (2): 100-10.
- LANDRAU, JR. P. AND ADSUAR, J.**
- 634.** 1953. Effect of chlorotic streak on the yield of sugarcane, 37 (1): 19-27.
- LANDRAU, JR. P. AND HERNANDEZ-MEDINA, E.**
- 635.** 1959. Effects of major and minor elements, lime, and soil amendments on the yield and ascorbic acid content of acerola (*Malpighia puniceifolia* L.), 43 (1): 19-33.
- LANDRAU, JR. P. AND SAMUELS, GEORGE**
- 636.** 1959. The effects of fertilizer applications on yields of pigeonpeas, 43 (1): 69-72.
- LANDRAU, JR. P., LUGO-LOPEZ, M. A., SAMUELS, G., AND SILVA, S.**
- 637.** 1954. Leaving sugarcane trash undisturbed on a lateritic soil compares favorably with currently used trash-disposal methods, 38 (1): 1-8.
- LANDRAU, JR. P., SAMUELS, G., AND ALERS-ALERS, S.**
- 638.** 1959. The response of two sugar cane varieties to fertilizers at Río Piedras, 1954-57, 43 (2): 73-88.
- LANDRAU, JR. P., SAMUELS, G., ALERS-ALERS, S., AND GONZALEZ-MOLINA, C.**
- 639.** 1959. The influence of fertilizers on tobacco yields, 43 (1): 56-68.
- LANDRAU, JR. P., SAMUELS, G., AND RODRIGUEZ, P.**
- 640.** 1953. Influence of fertilizers, minor elements, and soil pH on the growth and protein content of tropical Kudzu, 37 (1): 81-95.

## LEONARD, M. D.

- 641. 1930. (See Forbes, W. T. M., ref. 465.)
- 642. 1932. The initiation of an insect pest survey in Porto Rico, 16 (1): 59-64.
- 643. 1932. The pink bollworm of cotton in Porto Rico, 16 (1): 65-73.
- 644. 1932. Additional references to the bean lace bug, 16 (1): 75-6.
- 645. 1932. Insect conditions in Puerto Rico during the Fiscal Year—July 1, 1930 through June 30, 1931, 16 (2): 121-44.

## LEONARD, MORTIMER D.

- 646. 1930. A little-known root-weevil of cassava (*Coelosternus sulcatulus* Boheman), 14 (3): 159-65.
- 647. 1931. A bibliography of the banana root-weevil, 15 (2): 147-76.
- 648. 1933. An annotated bibliography of Puerto Rican Entomology, 17 (1): 5-96.
- 649. 1933. Notes on insect conditions in Puerto Rico for the Fiscal Year, July 1931 through June 1932, 17 (2): 97-137. (Author's name erroneously printed as Mortimer B. Leonard).

## LEONARD, MORTIMER D. AND MILLS, ALFRED S.

- 650. 1931. Observations on the bean lace-bug in Porto Rico, 15 (3): 309-23.

## LERIA-ESMORIS, JOSE

- 651. 1946. (See Gómez, Luis A., ref. 494.)

## LOPEZ-DOMINGUEZ, F. A.

- 652. 1919. Has "yellow stripe" or "mottling" disease any effect on the sugar content of cane juice?, 3 (4): 47-64.
- 653. 1920. Changes wrought in the grapefruit in the process of maturation (Part I—Natural Changes), 4 (4): 5-101.

- 654. 1921. Changes wrought in the grapefruit in the process of maturation (Part II—Factors affecting the composition of the fruit), 5 (4): 1-45.

## LOPEZ-DOMINGUEZ, F. AND FERNANDEZ-GARCIA, R.

- 655. 1924. An interesting case of boiler-tube corrosion, 8 (2): 40-6.

## LOPEZ-GARCIA, J.

- 656. 1963. (See Singh-Dhaliwal, T., ref. 1090.)

## LOPEZ-MATOS, L.

- 657. 1954. (See Adsuar, J., ref. 44.)
- 658. 1955. (See Adsuar, J., ref. 45.)
- 659. 1956. (See Segall, R. H., ref. 1061.)
- 660. 1959. Evidence of the presence of tobacco-etch virus in Puerto Rico, 43 (3): 171-81.

## LOPEZ-MATOS, LIDY

- 661. 1953. (See Alvarez-García, L. A., ref. 96.)
- 662. 1954. (See Alvarez-García, L. A., ref. 97.)

## LOPEZ-ROSA, JULIO H.

- 663. 1962 (See Adsuar, José, ref. 66.)
- 664. 1962. (See Adsuar, José, ref. 67.)

## LUGO-LOPEZ, M. A.

- 665. 1949. (See Bonnet, J. A., ref. 225.)
- 666. 1950. (See Bonnet, J. A., ref. 207.)
- 667. 1950. (See Bonnet, J. A., ref. 208.)
- 668. 1951. (See Bonnet, J. A., ref. 214.)
- 669. 1951. Functional relationships between moisture at several equilibrium points and the clay content of tropical soils, 35 (2): 66-70.
- 670. 1952. Comparative value of various methods of approximating the permanent wilting percentage, 36 (2): 122-33.
- 671. 1952. Available water capacity of the surface layer of various soils from the arid and semiarid region of Puerto Rico, 36 (2): 134-40.

- 672.** 1952. (See Martínez, M. B., ref. 731.)
- 673.** 1952. (See Bonnet, J. A., ref. 209.)
- 674.** 1952. (See Samuels, G., ref. 1033.)
- 675.** 1953. (See Martínez, M. B., ref. 7324.)
- 676.** 1953. (See Bonnet, J. A., ref. 210.)
- 677.** 1953. (See Hernández-Medina, E., ref. 572.)
- 678.** 1954. (See Landrau, P., ref. 637.)
- 679.** 1954. (See Martínez, M. B., ref. 733.)
- 680.** 1954. The effect of soil conditions on the sucrose content of sugarcane, 38 (3): 132-46.
- 681.** 1957. (See Bonnet, J. A., ref. 215.)
- 682.** 1957. (See Pérez-Escolar, R., ref. 836.)
- 683.** 1957. (See Hernández-Medina, E., ref. 571.)
- 684.** 1958. (See Bonnet, J. A., ref. 216.)
- 685.** 1958. (See Bonnet, J. A., ref. 217.)
- 686.** 1958. (See Hernández-Medina, E., ref. 569.)
- 687.** 1958. (See Hernández-Medina, E., ref. 570.)
- 688.** 1959. (See Acevedo, G., ref. 23.)
- 689.** 1960. Pore size and bulk density as mechanical soil factors impeding root development, 44 (1): 40-4.
- 690.** 1961. (See Barbosa-Cupeles, J. E., ref. 161.)
- 691.** 1962. (See Boneta-García, E., ref. 193.)
- LUGO-LOPEZ, M. A., ABRUÑA, F., AND ROLDAN, J.**
- 692.** 1952. Evaluation of the lime requirement of tropical soils in terms of other soil characteristics, 36 (2): 155-60.
- LUGO-LOPEZ, M. A. AND ACEVEDO, G.**
- 693.** 1956. Effects of tractor-traffic compaction on the physical properties of an irrigated soil in southwestern Puerto Rico, 40 (4): 235-44.
- LUGO-LOPEZ, M. A. AND BONNET, J. A.**
- 694.** 1951. Utilization of organic soils in Puerto Rico, 35 (2): 57-65.
- LUGO-LOPEZ, M. A. AND CAPO, B. G.**
- 695.** 1954. The effect of elevation on the sucrose content of sugarcane, 38 (3): 128-31.
- 696.** 1954. The effect of weather and climate on the sucrose content of sugarcane, 38 (4): 149-69.
- LUGO-LOPEZ, M. A. AND GRANT, R.**
- 697.** 1952. Preharvest foliage sprays of sugarcane with 2, 4-D, 36 (3): 187-93.
- LUGO-LOPEZ, M. A. AND JUAREZ, JR. J.**
- 698.** 1959. Evaluation of the effects of organic matter and other soil characteristics upon the aggregate stability of some tropical soils, 43 (4): 268-72.
- LUGO-LOPEZ, M. A. AND LANDRAU, JR. P.**
- 699.** 1956. Practical evaluation of garbage compost as a fertilizer under conditions in Puerto Rico, 40 (2): 110-17.
- LUGO-LOPEZ, M. A. AND PEREZ-ESCOBAR, R.**
- 700.** 1959. Hydraulic conductivity of subsoils of Lajas Valley, 43 (4): 273-77.
- LUGO-LOPEZ, M. A., BONNET, J. A., AND PEREZ-ESCOBAR, R.**
- 701.** 1957. Effect of lime and soil conditioners on crop yields and soil aggregation, 41 (3): 179-88.
- LUGO-LOPEZ, M. A., BONNET, J. A., AMY, A. S., AND PEREZ-ESCOBAR, R.**

702. 1957. Effect of soil-structure stabilizer on the production of tobacco plants in the seedbed, 41 (3): 189-96.
- LUGO-LOPEZ, M. A., BONNET, J. A., RICO-BALLESTER, M., AND ACEVEDO, G.
703. 1957. Lack of response of some food crops to the application of synthetic soil conditioners to a clay soil in Lajas Valley, 41 (3): 167-72.
- LUGO-LOPEZ, M. A., CAPO, B. G., AROSTEGUI, F., AND RIOLLANO, A.
704. 1953. Intercropping sugarcane with food crops, 37 (3): 171-82.
- LUGO-LOPEZ, M. A., HERNANDEZ-MEDINA, E., AND LANDRAU, JR. P.
705. 1956. Differential response of some tropical soils to additions of organic matter, 40 (1): 70-7.
- LUGO-LOPEZ, M. A., HERNANDEZ-MEDINA, E., CIBES-VIADE, H. R., AND VICENTE-CHANDLER, J.
706. 1953. The effect of filter press-cake on the physical and chemical properties of soils, 37 (3): 213-23.
- LUGO-LOPEZ, M. A., LANDRAU, JR., PABLO, AND CAPO, B. G.
707. 1958. The response of Hegari sorghum to lime applications at various levels, 42 (4): 233-38.
- LUGO-LOPEZ, M. A., LANDRAU, JR., AND SAMUELS, G.
708. 1952. The handling of sugarcane trash II. Effects of various practices on soil properties, 36 (3): 246-54.
- LUGO-LOPEZ, M. A., MANFRINATO, H. A., AND BRENES, E. J.
709. 1957. Characterization of a buried, latosol from northern Puerto Rico 41 (2): 119-26.
- LUGO-LOPEZ, M. A., MARTINEZ, M. B., AND RIERA, A. R.
710. 1952. Morphological and physico-chemical properties of various tropical soils from east-central Puerto Rico, 36 (2): 167-78.
- LUGO-LOPEZ, M. A., SAMUELS, G., AND GRANT, R.
711. 1953. Failure of preharvest foliage sprays with 2, 4-D and maleic hydrazide to affect the sucrose content of sugarcane, 37 (1): 44-51.
- LUGO-LOPEZ, M. A., SAMUELS, G., AND MENDEZ, F.
712. 1953. Factors affecting the sucrose content of sugarcane: III. Varieties, 37 (1): 28-34.
- MACVEY, DONALD W.
713. 1962. (See Ortiz-Torres, Vicente, ref. 809.)
- MADDEN, A. H.
714. 1937. Notes on the change, or West Indian mole cricket, in Puerto Rico in 1935 and 1936, 21 (2): 115-20.
- MALDONADO, G.
715. 1963. (See Pennock, W., ref. 824.)
- MALDONADO, GILBERTO
716. 1962. (See Pennock, William, ref. 828.)
- MALDONADO, JOSE F.
717. 1940. (See Andrews, John S., ref. 109.)
- MANFRINATO, H. A.
718. 1957. (See Lugo-Lopez, M. A., ref. 709.)
- MANZANO, M.
719. 1960. (See Samuels, George, ref. 1027.)

- MARCHAN, F.
720. 1947. (See Rivera-Brenes, L., ref. 927.)
- MARCHAN, F. J.
721. 1947. (See Rivera-Brenes, L., ref. 923.)
722. 1950. (See Rivera-Brenes, L., ref. 928.)
723. 1952. (See Rivera-Brenes, L., ref. 929.)
- MARCHAN, F. J., RIVERA-BRENES, L., AND COLON, L. F.
724. 1950. Carotenoids and Vitamin A in the blood of dairy calves in Puerto Rico, 34 (4): 316-21.
- MARCHAN, FRANCISCO J.
725. 1949. (See Rivera-Brenes, Luis, ref. 934.)
- MARIOTA, F.
726. 1945. (See Bonnet, J. A., ref. 223.)
- MARIOTA-TRIAS, F.
727. 1947. A study of the effect of six qualitative character pairs on yield and component characters in the  $F_2$  of a cross between two varieties of barley, 31 (3): 227-47.
- MARTINEZ-DE JESUS J.
728. 1953. (See Rivera-Anaya, J. D., ref. 909.)
- MARTINEZ-DE JESUS, JOSE
729. 1951. (See Rivera-Anaya, José D., ref. 913.)
- MARTINEZ, M. B.
730. 1952. (See Lugo-López, M. A., ref. 709.)
- MARTINEZ, M. B. AND LUGO-LOPEZ, M. A.
731. 1952. Tillage Tests. I. Effect of subsoiling and mole drainage upon the minimum infiltration capacity of a heavy claypan soil of the tropics, 36 (2): 179-85.
732. 1953. Tillage Tests, II. The beneficial effect of subsoil fertilization on sugarcane yields, 37 (1): 35-43.
733. 1954. Lack of residual influence from subsoil fertilization of a sugarcane plant crop upon the succeeding ratoon crop, 38 (3): 123-27.
- MARTORELL, L. F.
734. 1958. (See Smith, Clyde F., ref. 1094.)
- MARTORELL, LUIS F.
735. 1937. (See Wolcott, George N., ref. 1258.)
736. 1937. (See Wolcott, George, N., ref. 1259.)
737. 1939. Insects observed in the State of Aragua, Venezuela, South America, 23 (4): 177-232.
738. 1943. (See Wolcott, George N., ref. 1260.)
739. 1943. (See Wolcott, George N., ref. 1261.)
740. 1945. A survey of the forest insects of Puerto Rico, Part I, 29 (3): 69-354.
741. 1945. A survey of the forest insects of Puerto Rico. Part II, 29 (4): 355-608.
742. 1950. (See Caldwell, John S., ref. 265.)
743. 1950. (See Caldwell, John S., ref. 266.)
744. 1951. (See Caldwell, John S., ref. 267.)
745. 1955. *Acanthochila spinacosta* Van Duzee, a new tingiid for Puerto Rico, Research Note, 39 (1): 47-8.
746. 1960. (See Kramer, James P., ref. 603.)
- MARTORELL, LUIS F. AND ADSUAR, JOSE
747. 1952. Insects associated with papaya virus diseases in the Antilles and Florida, 36 (4): 319-29.

## MARTORELL, LUIS F. AND

BANGDIWALA, ISHVER

748. 1954. Sucrose content of sugarcane as affected by moth-borer, *Diatraea saccharalis* (Fabricius), infestation, 38 (1): 22-37.

MARTORELL, LUIS F. AND  
BURLEIGH, CALVIN II.

749. 1954. Ineffectiveness of the over-head-irrigation method for application of insecticides to control the sugarcane moth stalk-borer, *Diatraea saccharalis* (Fabricius), 38 (1): 38-60.

MARTORELL, LUIS F. AND  
ESCALONA-SALAS, ANSELMO

750. 1939. Additional insect records from Venezuela, 23 (4): 233-64.

## MATZ, J.

751. 1919. Infection and nature of the yellow stripe disease of cane (mosaic, mottling, etc.), 3 (4): 65-82.  
 752. 1920. Investigations of root disease of sugar cane, 4 (1): 28-40.  
 753. 1920. A new vascular organism in sugar cane, 4 (1): 41-6.  
 754. 1921. The rhizoctonias of Porto Rico, 5 (1): 5-30.

## MATZ, JULIUS

755. 1922. Gumming disease of sugar cane, 6 (3): 5-21.  
 756. 1922. Recent developments in the study of the nature of mosaic disease of sugar cane and other plants, 6 (3): 22-7.  
 757. 1922. Dry top rot of sugar cane. A vascular disease, 6 (3): 28-47.

## MCATEE, W. L.

758. 1932. A new neotropical genus of Eupteryginae (Homoptera) from Puerto Rico, 16 (2): 119-20.

## MCGREGOR, E. A.

759. 1942. A new spinning mite attacking sugarcane in Puerto Rico, 26 (4): 91-4.

## MCLELLAND, T. B.

760. 1932. Introduction of *Leptodactylus fallax* in Puerto Rico, 16 (4): 419.

## MEDINA-GAUD, SILVERIO

761. 1958. Control of the red-banded thrips, *Selenothrips rubrocinctus* (Giard), on *Acalypha*, 42 (4): 258-62.  
 762. 1959. Control of greenhouse thrips (*Heliothrips haemorrhoidalis* (Bouché), with systemic insecticides, 43 (4): 291-94.  
 763. 1959. Preliminary study on the control of the cottony-cushion scale (*Icerya purchasi* Maskell) by means of insecticides, 43 (4): 295-99.  
 764. 1963. A new host of *Aneristus ceroplastae* Howard (Eulophidae: Hymenoptera) in Puerto Rico, Research Note, 47 (1): 55-6.  
 765. 1963. *Leptopharsa constricta* (Champion) a new lacewing bug (Tingidae: Hemiptera) for Puerto Rico, Research Note, 47 (1): 56-7.  
 766. 1963. A new species of *Heterothrips* (Thysanoptera: Heterothripidae) from Puerto Rico, 47 (3): 164-68.

## MELENDEZ-GONZALEZ, P.

767. 1963. (See Singh-Dhaliwal, T., ref. 1089.)

## MENDEZ, F.

768. 1953. (See Lugo-López, M. A., ref. 712.)

MENDEZ-ROIG, FERDINAND AND  
SAMUELS, GEORGE

769. 1957. Sugarcane variety trials in Puerto Rico, 1951-55, 41 (3): 147-60.

MENDEZ-ROIG, F., SAMUELS, G.,  
AND COLON, A.

770. 1959. Sugarcane variety trials in Puerto Rico, 1952-57, 43 (1): 1-18.

- MENÉNDEZ-RAMOS, R.
771. 1923. Experience in the manufacture of cane sugar in Porto Rico, 7 (2): 5-30.
- METCALF, Z. P. AND BRUNER, S. C.
772. 1936. The Cicadellidae of Cuba, 20 (4): 915-73.
- MILLER, JULIAN H.
773. 1945. Fungi of the Dominican Republic-Xylariaceae, 29 (2): 57-68.
- MILLS, ALFRED S.
774. 1931. (See Leonard, Mortimer, ref. 650.)
- MISKIMIN, G. W.
775. 1962. Studies of the biological control of *Diatraea saccharalis* F. (Lepidoptera: Crambidae) on St. Croix, U. S. Virgin Islands, 46 (2): 135-39.
- MORALES-OTERO, PABLO
776. 1933. (See Cook, Melville T., ref. 377.)
- MORRIS, M. P.
777. 1961. (See Roark, B., ref. 938.)
778. 1961. (See Roark, B., ref. 939.)
- MUÑIZ, ANA I.
779. 1955. (See Aróstegui, F., ref. 120.)
- MUÑIZ, CARLOS M.
780. 1943. (See Andrews, John S., ref. 110.)
- NADAL, NORMA
781. 1955. (See Santini, Jr. Rafael, ref. 1052.)
- NEEDHAM, JAMES G.
782. 1941. Life history notes on some West Indian Coenagrionine dragonflies (Odonata), 25 (3): 1-18.
- NEVAREZ, J.
783. 1955. (See Santini, Jr. R., ref. 1054.)
- NOLLA, J. A. B.
784. 1926. The anthracnoses of citrus fruits, mango and avocado, 10 (2): 25-63.
785. 1926. Onion-leaf anthracnose, 10 (3-4): 245-56.
786. 1926. Mango wither-tip (*Collectotrichum gloeosporioides* Penz.), 10 (3-4): 257-58.
787. 1928. The black-shank of tobacco in Porto Rico, 12 (4): 185-215.
788. 1929. The eggplant blight and fruit rot in Porto Rico, 13 (2): 35-57. (Printed as 13 (1).)
789. 1929. *Acrostalagmus aphidum* Oud. and aphid control, 13 (2) 59-72.
790. 1931. Studies on the bacterial wilt of the Solanaceae in Porto Rico, 15 (2): 287-308.
791. 1932. Inheritance of color in the eggplant (*Solanum melongena* L.), 16 (1): 19-30.
792. 1932. The damping off of tobacco and its control in Puerto Rico, 16 (2): 203-04.
793. 1932. The damping-off of tobacco and its control in Puerto Rico, 16 (3): 285-324.
794. 1934. Inheritance in *Nicotiana*. I. Study of the glaucous and the yellow characters in *N. tabacum* L., 18 (4): 443-62.
795. 1935. Studies on disease resistance. I. A tobacco resistant to ordinary tobacco mosaic, 19 (1): 29-49.
- NOLLA, J. A. B. AND ROQUE, ARTURO
796. 1933. A variety of tobacco resistant to ordinary tobacco mosaic, 17 (4): 301-03.
- OAKES, A. J.
797. 1959. Germination of elephant grass (*Pennisetum purpureum*

- Schum.), Research Note, 43 (2): 140.
- OCCENAD, ALBERT  
**798.** 1937. (See Audant, Andr , ref. 143.)
- OLIVENCIA, R.  
**799.** 1953. (See Alvarez-Garc a, L. A., ref. 92.)  
**800.** 1955. (See Samuels, G., ref. 1032.)
- OMAN, P. W.  
**801.** 1937. New Eupterygine leafhoppers from Puerto Rico (Homoptera-Cicadellidae), 21 (4): 567-71.
- ORIHUELA, FELIX  
**802.** 1943. (See Andrews, J. S., ref. 110.)
- ORLANDI, R.  
**803.** 1946. (See Bonnet, J. A. ref., 221.)  
**804.** 1949. (See Bonnet, J. A., ref. 222.)  
**805.** 1953. (See Rivera-Anaya, J. D., ref. 909.)
- ORLANDI, RADAMEE AND  
 ARMSTRONG, FERNANDO E.  
**806.** 1947. Sodium fluoride as an ascariicide for swine raised on the ground, 31 (2): 190-202.
- ORTIZ, TORRES, E.  
**807.** 1962. (See Delfel, N. E., ref. 411.)
- ORTIZ-TORRES, ENRIQUE  
**808.** 1962. Damage caused by the snail, *Marisa cornuarietis*, to young rice seedlings in Puerto Rico, Research Note, 46 (3): 241-42.
- ORTIZ-TORRES, ENRIQUE, THEIS,  
 THOMAS, AND MCVEY, DONALD V.  
**809.** 1962. Hoja blanca symptom not observed on susceptible rice varieties in Puerto Rico, 46 (3): 237-38.
- ORTIZ-VELEZ, J.  
**810.** 1959. (See Acevedo, G., ref. 23.)
- 811.** 1961. (See Acevedo-Ramos, G., ref. 24.)
- OSBORN, HERBERT  
**812.** 1929. Notes on Porto Rican Homoptera, 13 (3): 81-112.
- OTER , JOSE I.  
**813.** 1936. A Host Plant Index to Insectae Borinquenses, 20 (1): 601-27.
- OTERO, JOSE I. AND COOK,  
 MELVILLE T.  
**814.** 1934. Partial bibliography of virus diseases of plants, 18 (1-2): 5-410.  
**815.** 1935. First supplement to partial bibliography of virus diseases of plants, 19 (2): 129-313.  
**816.** 1936. Second supplement to partial bibliography of virus diseases of plants, 20 (3): 741-818.  
**817.** 1937. A bibliography of Mycology and Phytopathology of Central and South America, Mexico and the West Indies, 21 (3): 249-486.  
**818.** 1938. Third supplement to partial bibliography of virus diseases of plants, 22 (3): 263-409.
- PADILLA, E. A.  
**819.** 1956. (See P rez, J. Enrique, ref. 848.)
- PADILLA, E.  
**820.** 1957. (See P rez, J. Enrique, ref. 845.)
- PAGAN, VICTOR  
**821.** 1944. (See Hopkius, E. R., ref. 581.)
- PAGE, R. L.  
**822.** 1924. Implement tillage for irrigation, 8 (2): 16-21.
- PENNOCK, W.  
**823.** 1957. (See Abrams, R., ref. 8.)
- PENNOCK, W. AND MALDONADO,  
 G.

- PENNOCK, WILLIAM**
824. 1963. The propagation of guavas from stem cuttings, 47 (4): 280-89.
- PENNOCK, WILLIAM AND MALDONADO, GILBERTO**
828. 1962. Hot-water treatment of mango fruits to reduce anthracnose decay, 46 (4): 272-83.
- PEREZ, A.**
829. 1962. (See Riollano, A., ref. 902.)
- PEREZ-ESCOLAR, M. E.**
830. 1958. (See Smith, Clyde F., ref. 1094.)
- PEREZ-ESCOLAR, MARIO E.**
831. 1959. Further experiments on the control of pineapple gummosis in Puerto Rico, 43 (2): 116-27.
- PEREZ-ESCOLAR, R.**
832. 1957. (See Lugo-López, M. A., ref. 701.)
833. 1957. (See Lugo-López, M. A., ref. 702.)
834. 1958. (See Bonnet, J. A., ref. 216.)
835. 1959. (See Lugo-López, M. A., ref. 700.)
- PEREZ-ESCOLAR, R. AND LUGO-LOPEZ, M. A.**
836. 1957. The effect of synthetic soil conditioners on soil-aggregate stability and the production of potatoes and stringless beans, 41 (2): 127-33.
- PEREZ-FONRODONA, A. A.**
837. 1962. (See Boyce, D. S., ref. 240.)
- PEREZ, J.**
838. 1956. (See Adsuar, José, ref. 68.)
- PEREZ, J. ENRIQUE**
839. 1959. Absence of hemagglutinins from buffer extracts of virus-infected leaves, Research Note, 43 (2): 139-40.
840. 1961. Control of bacterial wilt of tomato by streptomycin in a hydroponic farm, Research Note, 43 (3): 193-94.
841. 1962. The use of Fuller's Formamide Method in the serological identification of *Pseudomonas solanacearum*, 46 (2): 144-53.
842. 1963. A strain of squash-mosaic virus and other cucurbit viruses found in Puerto Rico, during 1958-62, 47 (3): 141-53.
- PEREZ, J. ENRIQUE AND ADSUAR, JOSE**
843. 1954. Serological reactivity of sugarcane-mosaic virus, 38 (1): 9-15.
844. 1955. Antigenic relationship between Puerto Rican pepper-mosaic virus and a strain of potato virus Y, 39 (3): 165-67.
- PEREZ, J. ENRIQUE, ADSUAR, JOSE AND PADILLA, E.**
845. 1957. A survey for common tobacco- and pepper-mosaic viruses in the filler-tobacco area of Puerto Rico, 41 (1): 20-4.
- PEREZ, J. ENRIQUE AND CORTES-MONLLOR, AMELIA**
846. 1960. Survey for the presence of tobacco mosaic, *Cymbidium* mosaic, and other viruses in orchids, 44 (3): 138-49.
847. 1961. *Xanthomonas vesicatoria* in Puerto Rico, 45 (4): 304-10.
- PEREZ, J. ENRIQUE, PADILLA, E. A., RIVERA-ANAYA, J. D., AND TORRECH, A.**
848. 1956. Bacterial flora of foot rot:

- report of findings in 100 cattle, 40 (2): 118-24.
- PEREZ-LOPEZ, A.**
- 849. 1957. (See Abrams, R., ref. 8.)
  - 850. 1963. (See Singh-Dhaliwal, T., ref. 1090.)
- PEREZ-LOPEZ, A. AND ABRAMS, R.**
- 851. 1960. Effects of growth regulators on the rooting of grape cuttings, 44 (2): 70-6.
- PEREZ-LOPEZ, AGRIPINO**
- 852. 1960. Relation of earliness to some plant characters in the tomato, 44 (4): 236-50.
  - 853. 1961. Effects of scarification and gibberellie acid on germination of Congo watermelon seed, 45 (3): 182-87.
  - 854. 1963. Relation of maturity to some fruit characters of the West Indian cherry, 47 (3): 193-200.
- PEREZ, MARIO E.**
- 855. 1951. The food of *Rana catesbeiana* Shaw in Puerto Rico, 35 (4): 136-42.
  - 856. 1962. (See Garcia-Monge, G., ref. 484.)
- PHILLIPS, ALLAN L.**
- 857. 1963. A solar-energy method for reducing coffee-drying costs, 47 (4): 226-35.
- PICADO, T. C.**
- 858. 1932. *Fusarium* diseases of coffee in Costa Rica, 16 (4): 389-400.
- PITTIER, HENRY**
- 859. 1929. The Middle American species of the genus *Inga*, 13 (4): 117-77.
- PLANK, H. K. AND SMITH, M. R.**
- 860. 1940. A survey of the pineapple mealybug in Puerto Rico and preliminary studies of its control, 24 (2): 49-76.
- PORRATA, ELBA I.**
- 861. 1956. (See Asenjo, Conrado F., ref. 140.)
- PUTTEMANS, ARSENE**
- 862. 1940. Some data concerning the history of Phytopathology in Brazil and the first notices of diseases of plants in the country. (With Foreword by Anna E. Jenkins), 24 (3): 77-107.
- QUIÑONES, JOSE A.**
- 863. 1961. (See Ramirez, Oscar, D., ref. 871.)
- RAHMAN, ABDUL R.**
- 864. 1961. The effect of chemical pre-treatment on the quality of dehydrated pigeonpeas, 45 (3): 172-81.
  - 865. 1963. Economical method for the production of flour from green plantains, 47 (1): 1-10.
  - 866. 1963. (See Rosado-Carbó, Gilberto, ref. 975.)
- RAHMAN, ABDUL R., BERROCAL, C. M., CRUZ-CAY, J. R., AND RIVERA-ANAYA, J. D.**
- 867. 1963. Toxicity studies on flour produced from unpeeled green plantains, 47 (1): 11-13.
- RAMIREZ DE HERNANDEZ, ALICIA**
- 868. 1953. Observations on the chromosome number of *Pennisetum ciliare*, 37 (2): 161-70.
- RAMIREZ, OSCAR D.**
- 869. 1961. Effects of gibberellic acid on germination of papaya (*Carica papaya* L.) seed, 45 (3): 188-90.
- RAMIREZ, OSCAR D. AND ABRAMS, RAUL**
- 870. 1960. An evaluation of five pole-bean varieties for a breeding program, 44 (1): 31-4.

- RAMIREZ, OSCAR D. AND  
QUIÑONES, JOSE A.  
871. 1961. Snap bean-variety trials at  
the Lajas Substation, 45 (1): 26-31.
- RAMIREZ, OSCAR D. AND  
VELEZ-SANTIAGO, J.  
872. 1962. Snap bean variety trials in  
east-central Puerto Rico, 46 (3):  
213-18.
- RAMIREZ-SILVA, F. J.  
873. 1944. (See Hopkins, E. F., ref.  
581.)
- RAMIREZ-SILVA, FRANCISCO J.  
874. 1946. The effect of certain micro-  
nutrient elements on the growth  
and yield of pineapple plants, 30  
(4): 197-250.
- RAMOS, C.  
875. 1967. (See Riollano, A., ref. 901.)
- RAMOS-CARO, CESAR A.  
876. 1962. (See Rico-Ballester, M., ref.  
886.)
- RAMOS, J. A.  
877. 1946. The insects of Mona Island  
(West Indies), 30 (1): 1-74.  
878. 1957. A review of the Auchen-  
orhynchous Homoptera of Puerto  
Rico, 41 (1): 38-117.
- R. DE HERNANDEZ, ALICE  
879. 1955. (See Snyder, L. A., ref. 1108.)
- R. DE HERNANDEZ, ALICIA  
880. 1954. Relationship between chro-  
mosome number and stomata size  
in certain pineapple varieties, 38  
(4): 199-204.
- RECIO, EVA  
881. 1963. (Asenjo, Conrado F., ref.  
142.)
- RECIO, EVANGELINA  
882. 1962. (See Asenjo, Conrado F., ref.  
141.)
- RICO-BALLESTER, M.  
883. 1957. (See Lugo-López, M. A.,  
ref. 703.)  
884. 1957. (See Bonnet, J. A., ref. 215.)  
885. 1962. (See Abrams, R., ref. 9.)
- RICO-BALLESTER, M.,  
RAMOS-CARO, CESAR A., AND  
VELEZ-FORTUNO, J.  
886. 1962. An evaluation of pickling  
cucumber varieties at Isabela  
Substation, 46 (4): 360-62.
- RIECKEHOFF, IRMA G. AND RIOS, A.  
887. 1956. Occurrence of pectin methyl-  
esterase in guavas, 40 (2): 90-2.  
888. 1956. A new instrument for meas-  
uring the breaking strength of  
jellies, 40 (2): 93-100.
- RIERA, A.  
889. 1946. (See Bonnet, J. A., ref. 213.)
- RIERA, ALFONSO  
890. 1946. Laboratory recommendation  
of lime to an acid soil checks with  
expected pH changes, 30 (3): 184-  
85.
- RIERA, ALFONSO R.  
891. 1946. (See Bonnet, J. A., ref. 211.)
- RIERA, A. R.  
892. 1946. (See Bonnet, J. A., ref. 221.)  
893. 1949. (See Bonnet, J. A., ref. 212.)  
894. 1949. (See Bonnet, J. A., ref. 222.)  
895. 1952. (See Bonnet, J. A., ref. 218.)  
896. 1952. (See Lugo-López, M. A., ref.  
710.)  
897. 1956. (See Bonnet, J. A., ref. 219.)  
898. 1958. (See Bonnet, J. A., ref. 217.)  
899. 1958. (See Bonnet, J. A., ref. 220.)
- RIOLLANO, A.  
900. 1953. (See Lugo-López, M. A., ref.  
704.)
- RIOLLANO, A., PEREZ, A., AND  
RAMOS, C.  
901. 1962. Effects of planting date,

- variety, and plant population on the flowering and yield of pigeon-peas (*Cajanus cajan* L.), 46 (2): 127-34.
- RIOLLANO, ARTURO**
902. 1942. The value of filter press cake as a fertilizer for vegetable crops. Preliminary trials with tomatoes and cucumbers, 26 (4): 99-104.
903. 1943. The effect of staking and pruning on tomato plant, 27 (1): 17-26.
- RIOS, A.**
904. 1956. (See Rieckhoff, Irma G., 887.)
905. 1956. (See Rieckhoff, Irma G., ref. 888.)
- RIVERA-ANAYA, J. D.**
906. 1955. (See Ciordia, H., ref. 315.)
907. 1956. (See Pérez, J. Enrique, ref. 848.)
- RIVERA-ANAYA, J. D.**
908. 1963. (See Rahman, Abdul R., ref. 867.)
- RIVERA-ANAYA, J. D., MARTINEZ DE JESUS, J., AND ORLANDI, R.**
909. 1953. The use of streptomycin (Dihydrostreptomycin sulfate) in the treatment of fowl coryza or "moquillo", 37 (1): 52-8.
- RIVERA-ANAYA, JOSE D.**
910. 1963. (See Rosado-Carbó, Gilberto, ref. 975.)
- RIVERA-ANAYA, JOSE D. AND BERROCAL, CARLOS M.**
911. 1963. Evaluation of "Valsyn-Gel" in the treatment of chronic, sub-clinical mastitis, 47 (3): 180-85.
912. 1963. Further evaluation of "Valsyn-Gel" in treatment of chronic subclinical mastitis, 47 (4): 252-56.
- RIVERA-ANAYA, JOSE D. AND MARTINEZ DE JESUS, JOSE**
913. 1951. An improved technique for the microscopic diagnosis of liver-fluke infection in cattle, 35 (3): 98-9.
- RIVERA-BRENES, L.**
914. 1946. (See Bonnet, J. A., ref. 221.)
915. 1949. (See Bonnet, J. A., ref. 222.)
916. 1950. (See Marchán, F. J., ref. 724.)
917. 1953. (See Cabrera, J. I., ref. 261.)
918. 1960. (See Arroyo, J. A., ref. 125.)
919. 1961. (See Arroyo, J. A., ref. 126.)
920. 1962. Results of splitting the application of nitrogenous fertilizers to Pangola grass (*Digitaria decumbens*), 46 (3): 171-74.
- RIVERA-BRENES, L., ARROYO, J. A., CESTERO, H., AND SIERRA, A.**
921. 1961. Palatability tests on giant Pangola grass (*Digitaria validula* Stent) and Signal grass (*Bracharia brizantha*) as compared with Napier (Merker) grass (*Pennisetum purpureum*), 45 (3): 147-50.
- RIVERA-BRENES, L., CABRERA, J. I., AND COLON, L. F.**
922. 1954. Comparison of Guinea grass, tropical Kudzu, Para grass, Pangola grass and St. Augustine grass as pasture crops in the Yabucoa Valley in eastern Puerto Rico, 38 (2): 96-104.
- RIVERA-BRENES, L., CABRERA, J. I., AND MARCHAN, F. J.**
923. 1947. The use of cane molasses as part of the concentrate dairy ration using Merker grass as roughage, 31 (2): 203-14.
- RIVERA-BRENES, L., CESTERO, H., AND SIERRA, A.**
924. 1962. Napier grass (*Pennisetum purpureum*) versus sugarcane (*Saccharum officinarum*) as forage crops in Puerto Rico, 46 (4): 307-312.
- RIVERA-BRENES, L., COLON-TORRES, E. N., GELPI, F., AND TORRES-MAS, J.**
925. 1958. Influence of nitrogenous fertilizers on Guinea grass yield and

- carrying capacity in Lajas Valley, 42 (4): 239-47.
- RIVERA-BRENES, L., HERENCIA, J., ARROYO, J. A., AND CABRERA, J. I.
926. 1959. Palatability trials on Merker grass (*Pennisetum purpureum*), Venezuela grass (*Paspalum fasciculatum*) and plantain pseudostalks (*Musa paradisiaca*), 43 (4): 249-54.
- RIVERA-BRENES, L., MARCILAN, F. AND DEL TORO, E.
927. 1947. Studies on silage in Puerto Rico. I. Methods of ensiling and resulting quality of Merker, cane tops and Para grass silages, 31 (2): 168-79.
- RIVERA-BRENES, L., MARCHAN, F. J., AND CABRERA, J. I.
928. 1950. The utilization of grasses, legumes and other forage crops for cattle feeding in Puerto Rico. III. Comparison of fertilized Guinea grass, Para grass and tropical Kudzu and Guinea grass and tropical Kudzu, 34 (4): 309-15.
929. 1952. The utilization of grasses, legumes and other forage crops for cattle feeding in Puerto Rico. III. Comparison of fertilized Guinea grass, Para grass, tropical Kudzu and Guinea grass, and tropical Kudzu, 36 (2): 108-14.
- RIVERA-BRENES, L., TORRES-MAS, J., AND ARROYO, J. A.
930. 1961. Response of Guinea, Pangoa, and coastal Bermuda grasses to different nitrogen fertilization levels under irrigation in the Lajas Valley of Puerto Rico, 45 (3): 123-46.
- RIVERA-BRENES, LUIS
931. 1947. The utilization of grasses, legumes and other forage crops for cattle feeding in Puerto Rico. I. Comparison of Guinea grass, Pará grass, "malejillo" and a mixture of Pará grass and tropical Kudzu as pasture crops, 31 (2): 180-89.
932. 1951. Forage consumption as silage by Holstein, native and Holstein-native crossbred cows, 35 (3): 91-7.
933. 1956. Value of roofing tower silos and of paper and earth covers for trench silos, 40 (1): 78-82.
- RIVERA-BRENES, LUIS, MARCHAN, FRANCISCO J., AND CABRERA, JOSE I.
934. 1949. The utilization of grasses, legumes and other forage crops for cattle feeding in Puerto Rico. II. Comparison of fertilized Guinea grass, Para grass and tropical Kudzu alone as pasture crops, 33 (3): 85-97.
- RIVERA-HERNANDEZ, G.
935. 1938. (See Axtmayer, Joseph H., ref. 145.)
936. 1940. (See Axtmayer, Joseph II., ref. 146.)
937. 1940. (See Axtmayer, Joseph H., (ref. 147.)
- ROARK, B., CRUZADO, H., DELPIN, H., AND MORRIS, M. P.
938. 1961. The effect of fermentation on the diosgenin content of *Dioscorea* tubers, 45 (2): 121-22.
- ROARK, BRUCE AND MORRIS, M. P.
939. 1961. The biosynthesis of steroid saponins by homogenates of *Dioscorea* tubers, 45 (2): 119-20.
- ROCHET, F.
940. 1953. (See Alvarez-García, L. A., ref. 92.)
- RODRIGUEZ, A. J.
941. 1962. Results of a consumer acceptance test for two types of containers for guava paste, 46 (2): 140-43.

- RODRIGUEZ, ANTONIO G.
942. 1932. Influence of smoke and ethylene on the fruiting of the pineapple (*Ananas sativus* Shult.), 16 (1): 5-18.
- RODRIGUEZ-GEIGEL, ANTONIO
943. 1935. Effect of boron on the growth of certain green plants, 19 (1): 5-28.
- RODRIGUEZ, J. P.
944. 1953. (See Alvarez-García, L. A., ref. 92.)
945. 1959. (See Samuels, G., ref. 1034.)
- RODRIGUEZ, JUAN P.
946. 1955. (See Cibes, Héctor, ref. 308.)
- RODRIGUEZ, JUAN PASTOR
947. 1949. Effect of nitrogen applications on the yields and composition of forage crops, 33 (3): 98-117.
948. 1955. (See Landrau, Pablo, ref. 635.)
- RODRIGUEZ, JUAN PASTOR, GANDIA-CARO, R., AND VAZQUEZ-ROMERO, ROBERTO
949. 1956. Cotton variety trials in Puerto Rico, 40 (1): 49-61.
- RODRIGUEZ, JUAN PASTOR AND LANDRAU, JR. PABLO
950. 1956. Essentials of successful potato culture in Puerto Rico, 40 (3): 157-70.
- RODRIGUEZ, P.
951. 1953. (See Landrau, Jr. P., ref. 640.)
- ROJAS-DAPORTA, M.
952. 1951. (See González-Chapel, A., ref. 498.)
- ROJAS, M.
953. 1952. (See González-Chapel, A., ref. 499.)
- ROLDAN, J.
954. 1952. (See Bonnet, J. A., ref. 218.)
955. 1952. (See Lugo-López, M. A., ref. 692.)
956. 1956. (See Bonnet, J. A., ref. 219.)
957. 1958. (See Bonnet, J. A., ref. 216.)
958. 1958. (See Bonnet, J. A., ref. 220.)
- ROLDAN, JULIAN
959. 1959. Parathion-residue studies on acerola, 43 (3): 147-51.
960. 1959. Phosphate retention by muck soils, 43 (3): 182-93.
961. 1959. Fertility status of organic soils in Puerto Rico, 43 (4): 255-67.
- ROLLE, FRANCIS J.
962. 1961. Notes and records of little-known species of birds from Puerto Rico, 45 (4): 333-41.
- ROMAN, JESSE
963. 1961. Pathogenicity of five isolates of root-knot nematodes (*Meloidogyne* spp.) to sugarcane roots, 45 (2): 55-84.
964. 1961. Control of nematodes attacking sugarcane, Research Note, 43 (3): 194-95.
965. 1961. A new species of the Genus *Helicotylenchus* (Nematoda: Hoplolaimidae) attacking sugarcane, 45 (4): 300-3.
966. 1962. *Trophurus longimarginatus* n. sp. (Tylenchida: Nematoda) from Puerto Rico, 46 (4): 269-71.
967. 1963. Sugar: an effective but expensive nematocide, Research Note, 47 (1): 54-5.
968. 1963. (See Ayala, Alejandro, ref. 153.)
969. 1963. (See Ayala, Alejandro, ref. 154.)
970. 1963. (See Ayala, Alejandro, ref. 155.)
- ROOSEVELT, CORNELIUS
971. 1932. (See Grant, Chapman, ref. 551.)
- ROQUE, ARTURO
972. 1933. Bacterial wilt of tobacco in Puerto Rico and its intertransmission to other solanaceous hosts, 17 (2): 145-56.
973. 1933. (See Nolla, J. A. B., ref. 796.)

- ROQUE, ARTURO AND ADSUAR, JOSE  
**974.** 1941. Studies on the mosaic of peppers (*Capsicum frutescens*) in Puerto Rico, 25 (4): 40-50.
- ROSADO-CARBO, GILBERTO, RIVERA-ANAYA, JOSE D., RAHMAN, ABDUL, R., CARLO, ISMAEL, AND BERROCAL, CARLOS M.  
**975.** 1963. Effect of estrogen in the elimination of sexual odor in boars, Research Note, 47 (3): 217.
- ROSENFIELD, ARTHUR H.  
**976.** 1924. Some Java P. O. J. seedlings in Tucumán and Porto Rico, (with two appendices), 8 (3): 5-87.  
**977.** 1925. The BH 10(12) and SC 12(4) canes—Some observations on these two promising varieties in the West Indies, 9 (3): 215-47.  
**978.** 1927. A monograph of sugarcane varieties, 11 (1-4): 7-334.
- SAMUELS, G.  
**979.** 1952. (See Lugo-López, M. A., ref. 708.)  
**980.** 1953. (See Lugo-López, M. A., ref. 711.)  
**981.** 1953. (See Lugo-López, M. A., ref. 712.)  
**982.** 1953. (See Landrau, Jr. P., ref. 640.)  
**983.** 1954. (See Landrau, Jr. P., ref. 637.)  
**984.** 1959. (See Méndez-Roig, F., ref. 770.)  
**985.** 1959. (See Landrau, Jr. P., ref. 639.)  
**986.** 1959. (See Landrau, Jr. P., ref. 638.)  
**987.** 1960. (See Alers-Alers, S., ref. 81.)  
**988.** 1962. (See González-Valez, F., ref. 520.)
- SAMUELS, G., ALERS-ALERS, S., AND LANDRAU, JR. P.  
**989.** 1957. A comparison of different leaf-sampling techniques used in the foliar diagnosis of sugarcane in different countries, 41 (1): 1-10.
- SAMUELS, G., ALERS-ALERS, S., AND JACKSON, G. C.  
**990.** 1958. Influence of fertilizers on yields of pineapple on a Coto clay, 42 (1): 12-26.
- SAMUELS, G., ALERS-ALERS, S., AND LANDRAU, JR. P.  
**991.** 1960. The influence of time of harvest and age of sixteen sugarcane varieties on their sucrose content, 44 (1): 1-10.  
**992.** 1960. The application of fertilizers in relation to the handling of sugarcane trash, 44 (2): 87-91.
- SAMUELS, G. AND GONZALEZ-VELEZ, F.  
**993.** 1962. The influence of ammonium sulfate fertilization on the pH of sugarcane soils, 46 (4): 297-306.
- SAMUELS, G., BONETA-GARCIA, E. G., AND GONZALEZ-VELEZ, F.  
**994.** 1962. A comparison of phosphate fertilizers for tobacco, 46 (1): 48-54.
- SAMUELS, GEORGE  
**995.** 1951. (See Landrau, Jr. Pablo, ref. 628.)  
**996.** 1952. (See Landrau, Jr. Pablo, ref. 629.)  
**997.** 1953. (See Capó, Bernardo G., ref. 279.)  
**998.** 1954. (See Landrau, Jr. Pablo, ref. 630.)  
**999.** 1955. (See Landrau, Jr. Pablo, ref. 631.)  
**1000.** 1955. Influence of fertilizers on the components of available sucrose-percent-cane, 39 (2): 84-91.  
**1001.** 1955. (See Cibes, Héctor, ref. 308.)  
**1002.** 1955. (See Landrau, Jr. Pablo, ref. 633.)  
**1003.** 1956. The efficiency of sugarcane in its use of nitrogen fertilizer applications, 40 (4): 209-17.

- 1004.** 1956. (See Landrau, Jr. Pablo, ref. 632.)
- 1005.** 1957. (See Méndez-Roig, Ferdinand, ref. 769.)
- 1006.** 1959. The influence of the age of sugarcane on its leaf-nutrient (N-P-K) content, 43 (3): 159-70.
- 1007.** 1959. (See Landrau, Jr. P., ref. 636.)
- 1008.** 1960. The influence of fertilizers on cigar-filler tobacco quality, 44 (4): 194-207.
- 1009.** 1962. The pH of Puerto Rican soils used for principal crops, 46 (2): 107-19.
- 1010.** 1963. (See Alers-Alers, Severiano, ref. 79.)
- 1011.** 1963. (See Alers-Alers, Severiano, ref. 80.)
- SAMUELS, GEORGE AND CIBES, HECTOR R.
- 1012.** 1953. Iron chlorosis on *Dracaena sanderiana*, 37 (4): 265-72.
- SAMUELS, GEORGE AND CIBES-VIADE, HECTOR
- 1013.** 1963. Influence of mineral deficiencies on the growth and yield of sugarcane, 47 (2): 61-75.
- SAMUELS, GEORGE AND GANDIA-DIAZ, HECTOR
- 1014.** 1958. Influence of the number of fertilizer applications on pineapple yields, 42 (1): 7-11.
- 1015.** 1960. Effects of potassium chloride and sulfate on pineapple yields and quality, 44 (1): 16-20.
- 1016.** 1963. Influence of various phosphate fertilizers on yields of Red Spanish pineapples in Puerto Rico, 47 (4): 242-45.
- SAMUELS, GEORGE AND GONZALEZ-VELEZ, F.
- 1017.** 1962. Influence of beta-amilose tri-iodide (Fertidyne) on soil fertility, 46 (3): 175-82.
- SAMUELS, GEORGE AND GONZALEZ-VELEZ, FRANCISCO
- 1018.** 1963. Influence of nitrogen sources and time of cutting on yield and protein content of Napier (Merker) grass, 47 (3): 205-11.
- SAMUELS, GEORGE AND LANDRAU, JR. PABLO
- 1019.** 1952. The response of sugarcane to fertilizers. I. The Arecibo cycle, 1944-1950, 36 (3): 203-29.
- 1020.** 1953. Influence of nitrogen, calcium and boron on the nodulation, yield, and protein content of tropical Kudzu, 37 (1): 74-80.
- 1021.** 1953. Potassium competition in a Kudzu-Merker grass association, 37 (4): 273-82.
- 1022.** 1954. The influence of potassium on the yield and sucrose content of sugarcane, 38 (4): 170-78.
- 1023.** 1954. The effect of differential sugarcane fertilizer treatment on a Coloso silty clay, 38 (4): 179-87.
- 1024.** 1955. Filter-press cake as a fertilizer, 39 (4): 198-213.
- SAMUELS, GEORGE, CAPO, BERNARDO G., AND BANGDIWALA, ISHVER S.
- 1025.** 1953. The nitrogen content of sugarcane as influenced by moisture and age, 37 (1): 1-12.
- SAMUELS, GEORGE, LANDRAU, JR., PABLO, AND CAPO, BERNARDO G.
- 1026.** 1952. The response of sugarcane in Puerto Rico to various nitrogen sources, 36 (3): 230-39.
- SAMUELS, GEORGE, VELEZ-SANTIAGO, J., AND MANZANO, M.
- 1027.** 1960. A comparison of ammonium sulfate and urea as tobacco fertilizers, 44 (1): 35-39.
- SAMUELS, G., GONZALEZ-VELEZ, F., BONETA-GARCIA, E. G., AND SIERRA-BRACERO, A.
- 1028.** 1962. Influence of potash fer-

- tilizers on tobacco yields and quality on a Mabí clay, 46 (3): 183-88.
- SAMUELS, G., LANDRAU, JR. P., AND ALERS-ALERS, S.  
**1029.** 1956. Influence of phosphate fertilizers on pineapple yields, 40 (4): 218-23.
- 1030.** 1960. Influence of height of cane and leaf stage at time of sampling on leaf-nutrient content of sugarcane, 44 (1): 11-5.
- SAMUELS, G., LANDRAU, JR. P., AND CAPO, B. G.  
**1031.** 1956. Influence of fertility levels on the varietal response of sugarcane, 40 (3): 129-43.
- SAMUELS, G., LANDRAU, JR. P., AND OLIVENCIA, R.  
**1032.** 1955. Response of pineapples to the application of fertilizers, 39 (1): 1-11.
- SAMUELS, G., LUGO-LOPEZ, M. A., AND LANDRAU, JR. P.  
**1033.** 1952. Factors affecting the sucrose content of sugarcane: fertilizers, 36 (3): 194-202.
- SAMUELS, G., RODRIGUEZ, J. P., AND LANDRAU, JR. P.  
**1034.** 1959. The response of cotton to fertilizers in Puerto Rico, 43 (2): 89-102.
- SANCHEZ-NIEVA, F.  
**1035.** 1955. Extraction, processing, canning, and keeping quality of acerola juice, 39 (4): 175-83.
- 1036.** 1961. The influence of degree of maturity on the quality of canned pigeonpeas, 45 (4): 217-31.
- 1037.** 1961. (See González, M. A., ref. 505.)
- 1038.** 1961. (See González, M. A., ref. 506.)
- 1039.** 1962. Processing characteristics of pigeonpeas of the Kaki and Saragatedo selections, 46 (1): 23-33.
- 1040.** 1963. Application of the shear press to determine the degree of maturity of pigeonpeas, 47 (3): 212-16.
- SANCHEZ-NIEVA, F., BENERO, J., AND GONZALEZ, M. A.  
**1041.** 1958. A comparison of the canning quality of the Rico and the U.P.R. 3 sweetpotatoes, 42 (4): 224-32.
- SANCHEZ-NIEVA, F., CANCEL, M. M., AND BENERO, J. R.  
**1042.** 1960. Maturity indices for pigeonpeas, 44 (2): 60-9.
- SANCHEZ-NIEVA, F., GONZALEZ, M. A., AND BENERO, J. R.  
**1043.** 1961. The freezing of pigeonpeas for market, 45 (4): 205-16.
- 1044.** 1961. The effects of some processing variables on the qualities of canned pigeonpeas, 45 (4): 232-58.
- SANCHEZ-NIEVA, F., GONZALEZ, M. A., BENERO, J. R., AND HERNANDEZ, I.  
**1045.** 1963. The brine-grading of pigeonpeas, 47 (1): 14-23.
- SANFIORENZO, HAYWARD JOHN  
**1046.** 1962. Evaluation of six breeding lines of milk goats, 46 (3): 205-12.
- SANTINI, JR., RAFAEL  
**1047.** 1953. Identification and determination of polybasic organic acids present in West Indian cherries (*Malpighia punicifolia* L.) and in three varieties of guava (*Psidium guajava*), 37 (3): 195-98.
- 1048.** 1953. Determination of reducing and total sugars in West Indian cherry (*Malpighia punicifolia* L.) juice, 37 (3): 199-205.
- 1049.** 1954. Phosphorus content of pineapple juice, Research Note, 38 (3): 147.
- SANTINI, JR., RAFAEL AND HUYKE, ALICE  
**1050.** 1956. Identification of the anthocyanin present in the acerola which

- produces color changes in the juice on pasteurization and canning, 40 (3): 171-78.
- 1051.** 1956. Identification of the polybasic organic acids present in guavas and acerola by paper chromatography, Research Note, 40 (1): 86.
- SANTINI, JR., RAFAEL AND NADAL, NORMA
- 1052.** 1955. Chemical analysis of stone cells present in guava, Research Note, 39 (3): 172.
- SANTINI, JR., R. AND HUYKE, ALICE S.
- 1053.** 1956. Identification of sugars present in fruit of the acerola (*Malpighia puncticfolia* L.) by paper chromatography, 40 (2): 87-9.
- SANTINI, JR., R. AND NEVAREZ, J.
- 1054.** 1955. Extraction of ascorbic acid from acerolas (*Malpighia puncticfolia* L.), 39 (4): 184-9.
- SANTINI, JR., R. AND SOTELO, EVANGELINA
- 1055.** 1955. Determination of O,O-diethyl-O-p-nitrophenyl thiophosphate (Parathion) in pineapples, 39 (1): 12-5.
- SCHAPPELLE, N. A.
- 1056.** 1942. Fertilizer studies with pineapples in Puerto Rico, 26 (3): 41-60.
- 1057.** 1942. The effect of pH and of certain minor elements on the growth of pineapples in water cultures, 26 (3): 63-72.
- SCHIERTZ, K. F.
- 1058.** 1960. (See Sotomayor-Ríos, A., ref. 1111.)
- 1059.** 1960. (See Sotomayor-Ríos, A., ref. 1112.)
- SCOTT, L. B.
- 1060.** 1940. The bean pod borers in Puerto Rico, 24 (2): 35-47.
- SEGALL, R. H. AND LOPEZ-MATOS, L.
- 1061.** 1956. Control of damping-off of tobacco in seedbeds by the use of gaseous soil fumigants, 40 (1): 62-6.
- SEIN, JR. FRANCISCO
- 1062.** 1930. A new mechanical method for artificially transmitting sugar-cane mosaic, 14 (2): 49-68.
- 1063.** 1930. The sugar cane root caterpillar and other new root pests in Puerto Rico, 14 (3): 167-91.
- 1064.** 1933. *Anastrepha* (Tryptyidae, Diptera) fruit flies in Puerto Rico, 17 (3): 183-96.
- 1065.** 1933. (See Wolecott, George N., ref. 1262.)
- 1066.** 1934. Paring and heat sterilization of the corms to eliminate the banana root weevil *Cosmopolites sordidus* Germar, 18 (3): 411-6.
- 1067.** 1935. Heat sterilization of mangoes and guavas for fruit flies, 19 (2): 105-15.
- 1068.** 1937. The development of the giant Surinam toad, *Bufo marinus* L., 21 (1): 77-8.
- SHAMEL, A. D. AND TWIGHT, E. H.
- 1069.** 1933. Puerto Rico seedless orange selections, 17 (2): 171-81.
- SHIVE, JOHN W.
- 1070.** 1946. (See Hernández-Medina, Ernesto, ref. 579.)
- SIERRA, A.
- 1071.** 1961. (See Rivera-Brenes, L., ref. 921.)
- 1071.** 1962. (See Rivera-Brenes, L., ref. 924.)
- SIERRA-BRACERO, A.
- 1073.** 1960. (See Sotomayor-Ríos, A., ref. 1112.)
- 1074.** 1962. (See Samuels, G., ref. 1028.)
- 1075.** 1962. (See González-Molina, C. L., ref. 512.)

- SILVA, S.
- 1076.** 1954. (See Landrau, P., ref. 637.)
- SILVA, SERVANDO
- 1077.** 1956. (See Vicente-Chandler, José, ref. 1187)
- 1078.** 1959. (See Abruña, Fernando, ref. 19.)
- 1079.** 1959. (See Vicente-Chandler, José, ref. 1188.)
- 1080.** 1959. (See Vicente-Chandler, José, ref. 1189.)
- 1081.** 1959. (See Vicente-Chandler, José, ref. 1190.)
- 1082.** 1960. (See Vicente-Chandler, José, ref. 1185.)
- 1083.** 1961. (See Vicente-Chandler, José, ref. 1186.)
- 1084.** 1962. (See Vicente-Chandler, José, ref. 1191.)
- SILVA, SERVANDO, ABRUÑA, FERNANDO, AND VICENTE-CHANDLER, JOSE
- 1085.** 1960. The effect of yields on picking efficiency in coffee production, 44 (4): 173-75.
- SINGH-DHALIWAL, TARA
- 1086.** 1959. The Mysore raspberry, a new fruit for home gardens in the central-western mountainous region of Puerto Rico, 43 (2): 132-38.
- SINGH-DHALIWAL, TARA AND TORRES-SEPULVEDA, ANIBAL
- 1087.** 1961. Effects of ionizing radiations on germination of seed and morphology of seedlings of Puerto Rican coffee, *Coffea arabica* L., 45 (4): 311-18.
- 1088.** 1962. Performance of acerola, *Malpighia puniceifolia* L., in the coffee region of Puerto Rico, 46 (3): 195-204.
- SINGH-DHALIWAL, T., MELENDEZ-GONZALEZ, P., AND TORRES-SEPULVEDA, A.
- 1089.** 1963. Spontaneous hybridization of coffee varieties and species in Puerto Rico, 47 (4): 265-79.
- SINGH-DHALIWAL, T., PEREZ-LOPEZ, A., AND LOPEZ-GARCIA, J.
- 1090.** 1963. Performance of the Solo papaya (*Carica papaya* L.) in Puerto Rico, 47 (4): 246-51.
- SKOV, OLIVER C.
- 1091.** 1944. Biographical sketch of Harry A. Beatty, 28 (3-4): 103-4.
- SMITH, CLYDE F.
- 1092.** 1960. Aphids (Aphidae: Homoptera) on "cacao" in the Dominican Republic, 44 (3): 154-56.
- 1093.** 1960. New species of Aphidae: Homoptera from Puerto Rico, 44 (3): 157-62.
- SMITH, CLYDE F., MARTORELL, L. F., AND PEREZ-ESCOLAR, M. E.
- 1094.** 1958. *Myzus persicae* (Sulzer) in Puerto Rico, 42 (4): 263-66.
- SMITH, LESLIE ROCKWELL
- 1095.** 1933. (See Thorp James, ref. 1127.)
- SMITH, M. R.
- 1096.** 1936. The ants of Puerto Rico, 20 (4): 819-75.
- 1097.** 1940. (See Plank, H. K., ref. 860.)
- 1098.** 1942. The relationship of ants and other organisms to certain scale insects on coffee in Puerto Rico, 26 (2): 21-7.
- 1099.** 1951. (See Fuhriman, D. K., ref. 471.)
- SMYTH, E. G.
- 1100.** 1917. The white-grubs injuring the sugar cane in Porto Rico. I. Life-cycles of the May-beetles or melolonthids, 1 (2): 47-92.
- SMYTH, E. GRAYWOOD
- 1101.** 1919. Insects and mottling disease, 3 (4): 83-116.
- 1102.** 1919. An annotated bibliography of Porto Rican cane insects, 3 (4): 117-34.
- 1103.** 1919. List of the insect and mite pests of sugar cane in Porto Rico, 3 (4): 135-50.

- 1104.** 1920. The white-grubs injuring sugar cane in Porto Rico, 4 (2): 3-29.
- SMYTH, EUGENE G.
- 1105.** 1917. The white-grubs injuring the sugar cane in Porto Rico. I. Life-histories of May-beetles. (Continued.), 1 (3): 141-69.
- SMYTH, J. ADGER
- 1106.** 1935. (See Danforth, Stuart T., ref. 405.)
- SNYDER, FRED M.
- 1107.** 1957. Puerto Rican *Neodexiopsis* (Diptera: Muscidae: Coenosiainae), 41 (3): 207-29.
- SNYDER, L. A., R. DE HERNANDEZ, ALICE, AND WARMKE, H. E.
- 1108.** 1955. The mechanism of apomixis in *Pennisetum ciliare*, 39 (3): 150-64.
- SNYDER, THOMAS E.
- 1109.** 1956. Termites of the West Indies, the Bahamas and Bermuda, 40 (3): 189-202.
- SOTELO, EVANGELINA
- 1110.** 1955. (See Santini, Jr. R., ref. 1055.)
- SOTOMAYOR-RIOS, A., SCHERTZ, K. F., WOODBURY, R., AND VELEZ-FORTUÑO, J.
- 1111.** 1960. Taxonomic description and reproductive behavior of Giant Pangola (*Digitaria validia* Stent), 44 (2): 53-59.
- SOTOMAYOR-RIOS, A., VELEZ-FORTUÑO, J., WOODBURY, R., SCHERTZ, K. F., AND SIERRA-BRACERO, A.
- 1112.** 1960. Description and cytology of a form of signal grass (*Brachiaria brizantha* Stapf) and its agronomic behavior compared to Guinea grass (*Paricum maximum* Jacq), 44 (4): 208-20.
- SPAULDING, NINA G.
- 1113.** 1937. Studies of the nesting activities of Latimer's vireo (*Vireo latimeri* Baird), 21 (1): 17-28.
- 1114.** 1937. Nesting of the Puerto Rican oriole, 21 (4): 551-8.
- 1115.** 1927. Some observations of the nesting habits of Adelaide's warbler, 21 (4): 559-66.
- STEVENSON, JOHN A.
- 1116.** 1917. Diseases of vegetable and garden crops, 1 (2): 93-117.
- 1117.** 1917. (See Johnston, John R., ref. 596.)
- 1118.** 1918. The green muscardine fungus in Porto Rico, (*Metarrhizium anisopliae* (Metsch.) Sorokin), 2 (1): 19-32.
- 1119.** 1918. Citrus diseases of Porto Rico, 2 (2): 43-123.
- 1120.** 1918. A check list of Porto Rican fungi and a host index, 2 (3): 125-264.
- 1121.** 1919. The mottling or yellow stripe disease of sugar-cane, 3 (3): 3-76. (Appears as No. 4 (1).)
- TARJAN, A. C.
- 1122.** 1963. (See Ayala, Alejandro, ref. 155.)
- TATE, H. DOUGLAS
- 1123.** 1941. The biology of the tropical cattle tick and other species of tick in Puerto Rico, with notes on the effect on ticks of arsenical dips, 25 (1): 1-24.
- TAYLOR, M. WIGHT
- 1124.** 1963. (See Arroyo-Aguilá, José A., ref. 121.)
- TELFORD, E. A.
- 1125.** 1945. (See Bonnet, J. A., ref. 223.)

- THEIS, THOMAS  
**1126.** 1962. (See Ortiz-Torres, Enrique, ref. 809.)
- THORP, JAMES AND SMITH,  
 LESLIE ROCKWELL  
**1127.** 1933. Concerning the origin of the white quartz sands of northern Puerto Rico, 17 (2): 157-70.
- TIO, MARCO A.  
**1128.** 1955. Effect of photoperiodism on enzymatic response of sugarcane, 39 (1): 16-21.  
**1129.** 1958. (See Decker, John P., ref. 407.)  
**1130.** 1959. (See Decker, John P., ref. 408.)  
**1131.** 1962. Effect of light intensity on the rate of apparent photosynthesis in coffee leaves, 46 (3): 159-66.
- TIRADO-SULSONA, P.  
**1132.** 1945. (See Bonnet, J. A., ref. 223.)  
**1133.** 1947. (See Bonnet, J. A., ref. 224.)  
**1134.** 1949. (See Bonnet, J. A., ref. 225.)
- TORO, RAFAEL A.  
**1135.** 1922. Studies on banana anthracnose, 6 (4): 3-23.  
**1136.** 1926. Mycological notes I, 10 (2): 11-23.  
**1137.** 1930. (See Chardón, Carlos E., ref. 303.)  
**1138.** 1931. The Cercosporae of Puerto Rico, 15 (1): 5-17.  
**1139.** 1938. Pugillus Fungorum Venezuelensis, 22 (4): 449-54.  
**1140.** 1939. The nomenclatorial status of the genus *Dimerella* Spec, 23 (2): 73-89.  
**1141.** 1946. Studies on the aereobiology of Puerto Rico, 30 (2): 97-101.  
**1142.** 1952. A study of the tropical American black-mildews, 36 (1): 24-87.
- TORRECH, A.  
**1143.** 1956. (See Pérez, J. Enrique, ref. 848.)
- TORRES-MAS, J.  
**1144.** 1958. (See Rivera-Brenes, L., ref. 925.)  
**1145.** 1961. (See Rivera-Brenes, L., ref. 930.)
- TORRES-SEPULVEDA, ANIBAL  
**1146.** 1961. (See Singh-Dhaliwal, Tara, ref. 1087.)  
**1147.** 1962. (See Singh-Dhaliwal, Tara, ref. 1088.)  
**1148.** 1963. (See Singh-Dhaliwal, Tara, ref. 1089.)
- TORRES, WANDA  
**1149.** 1958. (See Asenjo, Conrado F., ref. 137.)
- TOWNSEND, J. IVES AND  
 WHEELER, MARSHALL, R.  
**1150.** 1955. Notes on Puerto Rican Drosophilidae including descriptions of two new species of *Drosophila*, 39 (2): 57-64.
- TRAVER, JAY R.  
**1151.** 1938. Mayflies of Puerto Rico, 22 (1): 5-42.
- TUCKER, R. W. E.  
**1152.** 1952. The insects of Barbados, 36 (4): 330-63.
- TULLOCH, GEORGE S.  
**1153.** 1937. The mosquitoes of Puerto Rico, 21 (4): 137-67.  
**1154.** 1937. The brackish water mosquitoes of Puerto Rico, 21 (4): 581-3.  
**1155.** 1938. Ecological notes on mosquitoes associated with bromeliads, 22 (4): 499-501.
- TWIGHT, E. D.  
**1156.** 1933. (See Shamel, A. D., ref. 1069.)
- VALENTIN-RAMOS, LILYBETT  
**1157.** 1959. Identification of various mi-

- cro-organisms found in sweet-potatoes and guava, 43 (4): 278-90.
- VAZQUEZ, ROBERTO**
1158. 1960. Effects of irrigation, nitrogen levels, and plant population on corn yields in Lajas Valley, P. R., 44 (3): 121-37.
1159. 1961. Effects of irrigation at different growth stages, and of nitrogen levels on corn yields in Lajas Valley, P. R., 45 (2): 85-105. (See Erratum of paper published before page 123, Vol. 45 (3).)
- VAZQUEZ-ROMERO, ROBERTO**
1160. 1956. (See Rodríguez, Juan Pastor, ref. 949.)
- VELEZ-FORTUÑO, J.**
1161. 1952. Corn-breeding work in Puerto Rico, 36 (1): 12-23.
1162. 1956. Inheritance of staple length in upland cotton (*Gossypium hirsutum* L.) and its interrelationships with perimeter, wall thickness, and weight fineness of fiber, 40 (1): 1-48.
1163. 1960. (See Sotomayor-Ríos, A., ref. 1111.)
1164. 1960. (See Sotomayor-Ríos, A., ref. 1112.)
1165. 1961. (See Abrams, R., ref. 2.)
1166. 1962. (See Rico-Ballester, M., ref. 886.)
1167. 1962. (See Abrams, R., ref. 3.)
- VELEZ-FRANCESCHI, ARNALDO**
1168. 1936. The relation of buffer capacity and organic matter to the solubility of the nutrient elements in Toa silt loam, 20 (2): 655-79.
- VELEZ-SANTIAGO, J.**
1169. 1960. (See Samuels, George, ref. 1027.)
1170. 1962. (See Ramírez, Oscar D., ref. 872.)
- VEVE, R. A.**
1171. 1925. What sugar-cane variety to plant, 9 (4): 293-76.
- VICENTE-CHANDLER, J.**
1172. 1953. (See Lugo-López, M. A., ref. 706.)
- VICENTE-CHANDLER, JOSE**
1173. 1955. (See Abruña-Rodríguez, Fernando, ref. 20.)
1174. 1956. (See Caro-Costas, Rubén, ref. 291.)
1175. 1959. (See Abruña, Fernando, ref. 19.)
1176. 1960. (See Caro-Costas, Rubén, ref. 295.)
1177. 1960. (See Silva-Servando, ref. 1085.)
1178. 1961. (See Caro-Costas, Rubén, ref. 292.)
1179. 1961. (See Caro-Costas, Rubén, ref. 294.)
1180. 1963. (See Abruña, Fernando ref. 17.)
1181. 1963. (See Caro-Costas, Rubén, ref. 293.)
- VICENTE-CHANDLER, JOSE AND FIGARELLA, JACINTO**
1182. 1958. Growth characteristics of Guinea grass on the semiarid south coast of Puerto Rico, and the effect of nitrogen fertilization on forage yields and protein content, 42 (3): 151-60.
1183. 1962. Effects of five nitrogen sources on yield and composition of Napier grass, 46 (2): 102-6.
1184. 1962. Experiments on plantain production with conservation in the mountain region of Puerto Rico, 46 (3): 226-36.
- VICENTE-CHANDLER, JOSE AND SILVA SERVANDO**
1185. 1960. Effects of nitrogen fertilization and grass species on soil physical condition in some tropical pastures, 44 (2): 77-86.
- VICENTE-CHANDLER, JOSE, FIGARELLA, JACINTO, AND SILVA, SERVANDO**
1186. 1961. Effects of nitrogen fertilization and frequency of cutting on

- the yield and composition of Pangola grass in Puerto Rico, 45 (1): 37-45.
- VICENTE-CHANDLER, JOSE,  
SILVA, SERVANDO, AND  
FIGARELLA, JACINTO
1187. 1956. Some limitations in the use of air piezometer for soil-porosity, soil-moisture and particle-density determinations, 40 (3): 179-88.
1188. 1959. Effects of nitrogen fertilization and frequency of cutting on the yield and composition of Napier grass in Puerto Rico, 43 (4): 215-27.
1189. 1959. Effects of nitrogen fertilization and frequency of cutting on the yields and composition of Guinea grass in Puerto Rico, 43 (4): 228-39.
1190. 1959. Effects of nitrogen fertilization and frequency of cutting on the yield and composition of Para grass in Puerto Rico, 43 (4): 240-8.
1191. 1962. Effect of frequency of application on response of Guinea grass to nitrogen fertilization, 46 (4): 342-9.
- VICENTE, JOSE
1192. 1955. (See Abruña, Fernando, ref. 18.)
- VILLAMIL, FERNANDO
1193. 1933. (See Bonnet, Juan Amedée, ref. 232.)
- VIRKKI, NIILLO
1194. 1962. Meiosis and development of the embryo sac in *Gunnera insignis* (Oersted) D. C. (Haloragaceae), 46 (4): 254-68.
1195. 1963. Gametogenesis in *Diatraea saccharalis* (Fabr.), Research Note, 47 (1): 57-9.
1196. 1963. Eighteen chromosome pairs in an american bamboo, *Chusquea subtessellata* Hitch., 47 (2): 98-101.
1197. 1963. Gametogenesis in the sugar-cane borer moth, *Diatraea saccharalis* (F.) (Crambidae), 47 (2): 102-37.
1198. 1963. High chromosome number and giant postreductional sex-chromosomes in the beetle *Wallerianella venusta* Schaufuss (Chrysomelidae, Alticinae), 47 (3): 154-63.
- WADLEY, F. M.
1199. 1937. Observations on some insects associated with sugarcane in Puerto Rico, 21 (2): 103-14.
- WALKER, D.
1200. 1962. (See Abrams, R., ref. 9.)
- WARMKE, H. E.
1201. 1955. (See Snyder, L. A., ref. 1108.)
- WEBSTER, P. J.
1202. 1926. Edible garcinias and possible mangosteen stocks, 10 (3-4): 283-305.
- WETMORE, ALEXANDER
1203. 1937. Ancient records of birds from the island of St. Croix with observations on extinct and living birds of Puerto Rico, 21 (1): 5-16.
1204. 1939. Biographical sketch of Stuart T. Danforth, 1900-1938, 23 (1): 1-8.
- WHEELER, MARSHALL, R.
1205. 1955. (See Townsend, J. Ives, ref. 1150.)
- WOODBURY, R.
1206. 1960. (See Sotomayor-Ríos A., ref. 1111.)
1207. 1960. (See Sotomayor-Ríos A., ref. 1112.)
- WOLCOTT, GEORGE N.
1208. 1921. The minor sugar-cane insects of Porto Rico, 5 (2): 5-46.
1209. 1922. Insect parasite introduction in Porto Rico, 6 (1): 5-20.
1210. 1922. The influence of the variety of sugar-cane on its infestation by *Diatraea saccharalis*, and the other factors affecting the abundance of the moth borer, 6 (1): 21-31.

1211. 1922. The insects of sugar cane in Santo Domingo, 6 (1): 32-7.
1212. 1922. (See Jones, Thomas H., ref. 598.)
1213. 1922. The status of Entomology in Porto Rico, 6 (2): 3-11.
1214. 1923. "Insectae Portoricensis". A preliminary annotated check-list of the insects of Porto Rico, with descriptions of some new species, 7 (1): 5-313.
1215. 1923. The food of Porto Rican lizards, 7 (4): 5-37.
1216. 1923. First supplement to Insectae Portoricensis, 7 (4): 38-43.
1217. 1925. On the amount of food eaten by insects 9 (1): 47-58.
1218. 1931. The infestation of young okra pods by pink bollworm in Porto Rico, 15 (4): 395-98.
1219. 1933. The extent to which the practice of not burning cane trash has been adopted in Puerto Rico, 17 (3): 197-98.
1220. 1933. Recent experiments in the control of two Puerto Rican ants, 17 (3): 223-39.
1221. 1933. The lima bean pod-borer caterpillars of Puerto Rico, 17 (3): 241-55.
1222. 1933. The larval period of *Diaprepes abbreviatus* L., 17 (3): 257-64.
1223. 1933. The changed status of some insect pests in Puerto Rico, 17 (3): 265-70.
1224. 1934. The diapause portion of the larval period of *Diaprepes abbreviatus* L., 18 (3): 417-28.
1225. 1934. Lima bean pod-borer caterpillars of Puerto Rico on their wild hosts, 18 (3): 429-34.
1226. 1934. The larvae of *Lycana theonius* Lucas feed on buds and flowers of lima bean and *Crotalaria incana* in Puerto Rico, 18 (3): 435.
1227. 1934. The present status of white grubs parasites in Puerto Rico, 18 (3): 436-41.
1228. 1935. The first records of the mosaic disease of sugar-cane in Puerto Rico, 19 (2): 117-20.
1229. 1936. "Insectae Borinquenses" (A revised annotated check-list of the insects of Puerto Rico). (Host Plant Index to Insectae Borinquenses by J. I. Otero.) 20 (1): 1-627.
1230. 1936. The life history of "*Diaprepes abbreviatus* L.", at Rio Piedras, Puerto Rico, 20 (4): 883-914.
1231. 1937. What the giant Surinam toad, *Bufo marinus* L. is eating now in Puerto Rico, 21 (1): 79-84.
1232. 1938. Description and biologic notes on a *Tiphia* (Hymenoptera: Scoliidae) from Haiti, 22 (2): 189-92.
1233. 1938. The introduction into Puerto Rico of *Larra americana* Saussure, a specific parasite of the "changa" or Puerto Rican mole-cricket, *Scapteriscus vicinus* Seudder, 22 (2): 193-218.
1234. 1941. A supplement to "Insectae Borinquenses", 25 (2): 33-158.
1235. 1947. A quintessence of sensitivity: The coffee leafminer, 31 (3): 215-19.
1236. 1947. The leafhoppers of white clover, *Trifolium repens* L. in northern New York and in the mountains of Haiti, 31 (3): 220-3.
1237. 1947. Benzene hexachloride as a termite repellent, 31 (3): 224-5.
1238. 1948. The insects of Puerto Rico, 32 (1-4): 1-975.
1239. 1950. Control of the soil-inhabiting grubs of Puerto Rico, 34 (4): 333-7.
1240. 1950. The termite resistance of phosylivin, stilbene and other new insecticides, 34 (4): 338-42.
1241. 1953. Termite-repellent wood extractives, 37 (3): 224-7.
1242. 1953. Biological control of the pustule scale in Puerto Rico, 37 (3): 228-33.
1243. 1953. Control of the laurel thrips, *Gynaikothrips ficorum* Marchal, 37 (3): 234-40.
1244. 1953. The food of the mongoose (*Herpestes javanicus auropunctata*

- tus* Hodgson) in St. Croix and Puerto Rico, 37 (3): 241-8.
1245. 1954. Residual effectiveness of insecticides against soil-inhabiting insects, 38 (2): 108-14.
1246. 1954. Termite damage and control as factors in the utilization of timber in the Caribbean area, 38 (2): 115-22.
1247. 1955. Dispersion to the Tropics of the spiraea aphid, *Aphis spiraecola* Patch, 39 (1): 32-40.
1248. 1955. Addendum to "The Insects of Puerto Rico, Research Note, 39 (1): 46.
1249. 1955. A new fungus for Puerto Rico, Research Note, 39 (1): 46.
1250. 1955. Organic termite repellent tested against *Cryptotermes brevis* Walker, 39 (3): 115-49.
1251. 1955. *Rhinocritus monilicornis* (Porath): a black and yellow millipede new to Puerto Rico, Research Note, 39 (4): 286.
1252. 1956. One-percent pentachlorophenol protects wood against dry-wood termite attack for more than 11 years, Research Note, 40 (1): 85-6.
1253. 1956. *Bactrocera rubra* Linnaeus in Puerto Rico, Research Note, 40 (1): 86.
1254. 1956. The insects of "almendrón", *Prunus occidentalis* Sw., Research Note, 40 (3): 203-4.
1255. 1956. Resistance by plant tissue high in silicea to injury by cyanide and marine borers, Research Note, 40 (3): 204-5.
1256. 1957. Inherent natural resistance of woods to the attack of the West Indian dry-wood termite, *Crypto-*
- termes brevis* Walker, 41 (4): 249-311.
1257. 1960. Efficiency of ladybeetles (Coccinellidae: Coleoptera) in insect control, 44 (4): 166-72.
- WOLCOTT, GEORGE N. AND MARTORELL, LUIS F.
1258. 1937. Two insects new to Puerto Rico: the lycid beetle, *Thonalmus chevrolati* Bourgeois, and the ephydrid fly, *Ephydria gracilis* Packard, 21 (4): 535-8.
1259. 1937. The ant *Monomorium carbonarium ebeninum* Forel, in a new role: As predator on the egg-clusters of *Diatraea saccharalis* F. in Puerto Rican fields, 21 (4): 577-9.
1260. 1943. Natural parasitism by *Trichogramma minutum* of the eggs of the sugar-cane moth borer, *Diatraea saccharalis*, in the cane fields of Puerto Rico, 27 (2): 39-83.
1261. 1943. The seasonal cycle of insect abundance in Puerto Rican cane fields, 27 (2): 85-104.
- WOLCOTT, GEORGE N. AND SEIN JR., FRANCISCO
1262. 1933. A year's experience with the cottony cushion scale in Puerto Rico, 17 (3): 199-221.
- WRAY, DAVID L.
1263. 1953. New Collembola from Puerto Rico, 37 (2): 140-50.
- YOUNG, JR., DAVID A.
1264. 1953. Empoascan leafhoppers of the *solana* group with description of two new species. (Homoptera, Cicadellidae), 37 (2): 151-60.

## INDEX OF SUBJECTS<sup>1</sup>

- Acalypha*  
 control of *Selenothrips rubrocinctus*, 761
- Acanthochila spinacosta*  
 new tingtid for Puerto Rico, 745
- "acerola"  
 anthocyanin, 1050  
 ascorbic acid content  
     in juice, of *Malpighia*  
     spp., 409, 590, 635  
 ascorbic acid extraction, 409, 1054  
 ascorbic, diketogulonic and dehydro-  
     ascorbic acids in fruit, 410
- determination  
 of Parathion, 483  
 of sugar, 1048
- effect of major and minor elements, lime,  
 etc., 635
- extraction, processing, canning and keep-  
 ing quality of juice, 1035
- fruit and vitamin C production, 592
- identification  
 of anthocyanin, 1050  
 of polybasic organic acids, 1051  
 of sugars by paper chromatography,  
 1053
- Parathion residues, 484, 959  
 performance in coffee region, 1088  
 polybasic organic acids, 1047, 1051  
 promising varietal selection, 120  
 relation of maturity to some fruit char-  
     acteristics, 854  
 root inducing substances, 7  
 vitamin C content, 131
- acetone  
 production, 127
- "achiote"  
 effect of seed feeding on egg yolk pig-  
     mentation, 604  
 increasing of flesh pigmentation in  
     chickens, 605
- <sup>1</sup> Scientific names are printed in *italics*,  
 common Spanish names in roman type with  
 quotation marks, names of orders, sub-  
 orders and higher groups in CAPITALS,  
 names of families and sub-families in SMALL  
 CAPITALS and locality names in **boldface**  
 type.
- Acrostalagmus aphidum*  
 aphid control, 789
- Acrothecium* leaf spot  
 of *Basella rubra*, 87
- ACTINOMYCETES  
 on cacao beans, 314
- Adelaides warbler  
 nesting habits, 1115
- aerobiology  
 of **Puerto Rico**, 1141
- airbrush for virus inoculations, 190
- air picnometer  
 limitations in determination of soil char-  
     acteristics, 1187
- alcohol  
 allyl, as weed killer, 161, 508
- distilling at high proof, 242
- effect on determination of fusel oil con-  
 centrations by means of picnometer  
 and hydrometer, 241
- alloxan  
 effect of *Morus alba* in diabetic rats, 138
- "almendrón"  
 insects of, 1254
- Alospis*  
 in **Puerto Rico** area, 536  
 new name for *A. antillensis*, 550
- Alternaria* blight  
 of bachelor's button, *Gomphrena globosa*,  
 88
- Ambylycerus*  
 in seeds of *Prosopis chilensis*, 246
- ameivas  
 of **Puerto Rico** region, 538
- ammonium sulphate  
 influence of pH of soils, 993  
 with urea, as tobacco fertilizer, 1027
- Amphisbaena bakeri*  
 relation to *A. caeca*, 537
- Amphisbaena caeca*  
 redescription and relationship to *A.*  
*bakeri*, 537
- "anacagüitas" (tree)  
 fatty oils of, 139
- Ananas sativus* (See pineapple)
- Anastrepha*  
*fraterculus*, quarantine regulations, 111

- of **Puerto Rico**, 1064  
parasites, 167
- Anegada**  
herpetological notes, 544
- Aneristus*  
description of new species, 421  
new host, 764
- ANNONACEAE**  
anthracnose, 89
- Anotis*  
new species and subspecies, 527
- anther  
color relationship in sugarcane, 243
- anthocyanin  
in acerola, 1050
- Anthonomus grandis*  
in **Haiti**, 143
- anthraenose  
of **ANNONACEAE**, 89  
of avocado, 784  
of banana, 1135  
of citrus, 784  
of mango, 784, 828  
of onion, 785
- ants  
control experiments, 1220  
*Monomorium carbonarium ebenium*, 1259  
of **Puerto Rico**, 1096  
relationship to scale insects on coffee, 1098
- aphids  
control by entomogenous fungi, 789  
*Myzus persicae* in **Puerto Rico**, 1094  
new species, 1093  
on cacao in **Dominican Republic**, 1092  
papaya mosaic transmission, 48, 49, 50  
Spiraea aphid dispersion to the tropics, 1247
- Aphis spiraecola*  
notes on dispersion of, 1247  
papaya mosaic transmission, 48, 49, 50
- apomixis  
mechanism in *Pennisetum*, 1108
- ARACHNIDA**  
of **St. Croix**, 173  
of **Puerto Rico**, plant mite survey, 388  
ticks on bats, 467
- Aristelliger*  
new species from **Navassa**, 528
- arsenical dips  
for ticks, 1123
- artificial rumen technique, 121
- ASCALAPHIDAE**  
Antillean, 159
- ascaricide  
sodium fluoride for swine, 806
- ASCOMYCETES**  
"black mildews" of tropical America, 1142
- ascorbic acid  
content of *Malpighia* spp., 590  
distribution in acerola, 410  
extraction from acerola, 1054  
in acerola juice, 409, 410
- Asparagus  
leaf blight, 103
- Aspergillus*  
root-stalk rot of *Sansevieria*, 95
- Asterolecanium pustulans*  
biological control, 1242
- Attapulgite clay  
cation exchange equilibria, 482
- AUCHENORHYNCHOUS HOMOPTERA**  
of **Puerto Rico**, review of genera and species, 265, 266, 878
- Averell and Norris method  
evaluation in determination of Parathion in West Indian cherry, 483
- avocado  
anthracnose, 784  
behavior under refrigeration, 827  
flower behavior of different varieties, 8
- B. 34-104 (sugarcane variety)  
effect of mosaic on yield, 515  
recovery from mosaic virus, 42
- bachelor's button  
*Alternaria* blight, 88
- bacterial nodules  
parasitized by reniform nematode, 149
- bacterial wilt  
on *Cosmos*, 335  
on eggplant, 336  
on **SOLANACEAE**, 790, 972  
on tobacco, 790  
on tomato, 840
- bacteria  
*B. solanacearum*, 972  
*Bacillus vascularis*, 345  
flora of foot-rot, 848
- Bacloera rubra*  
in **Puerto Rico**, 1253

- Bahamas**  
termites, list of species, 1109
- Baldulus maidis**  
dryinid parasite, 165
- bamboo  
cytology, 1196  
predatory beetles on scales, 164
- banana  
anthracnose, 1135  
determination of oil-spray deposits, 239  
root-weevil  
bibliography, 647  
control by paring and heat sterilization of corms, 1066
- Barbados**  
insects, list of species, 1152
- Barbuda**  
birds, list of species, 399
- barley  
effect of six qualitative pairs on a cross of two varieties, 727
- Basella rubra*  
*Acrocleciun* leaf spot, 87
- bats  
ticks, 467
- bean  
evaluation of five pole varieties for a breeding program, 870  
snap variety trials at **Lajas Substation**, 871  
in East Central **Puerto Rico**, 872
- beans (stringless)  
effect of soil conditioners, 836
- bean lace bug  
observations, 644, 650
- bean pod borers  
lima bean caterpillar, 1221, 1225  
of Puerto Rico, 1060  
quarantine regulations, 111
- Beatty, Harry A.  
biographical sketch, 1091
- beef  
production on irrigated and heavily fertilized pastures, 294
- benzene hexachloride  
as termite repellent, 1237
- Bermuda**  
termites, list of species, 1109
- Bermuda grass  
response to nitrogen fertilization under irrigation in the **Lajas Valley**, 930
- Beta-amulose tri-iodide**  
influence on soil fertility, 1017
- BH 10 (12) (variety)**  
observations, 977
- bibliographies  
of banana root-weevil, 647  
of cane insects, annotated, 1102  
of entomology of **Puerto Rico**, 648  
of mycology and phytopathology of **Central and South America, Mexico and West Indies**, 817  
of virus diseases of plants, 814, 815, 816, 818
- big bud (*Chlorogenous australiensis*) diseases  
on tomato, 94
- biological control (see also insect parasites)  
of pustule scale, 1242
- birds (see ornithology)
- black rot (*Pythium*)  
on orchids, 91
- black-shank  
on tobacco, 787
- Blatella germanica*  
resistance to insecticides, 522
- blight  
*Alternaria* blight on *Gomphrena*, 88  
of eggplant, 788  
of potato early and late blight, control, 92
- boars  
effect of estrogen on sexual odor, 975
- boas  
of **Mona Island**, 541  
of **Puerto Rico**, 541
- BOH  
effect on pineapple flowering, 306
- boiler tube  
corrosion, 655
- boron  
boron-manganese relationship in soybean and corn plants, 569  
calcium-boron relationship  
in corn nutrition, 579  
in pineapple, 570  
effect on growth of certain green plants, 943  
influence on Kudzu, 1020
- Brachiaria brizantha*  
description and cytology, 1112
- digestibility, 126
- palatability, 921

- Brachyuran crabs  
of St. Croix, 175
- Brassica oleracea* var. *acephala*  
a chlorotic ring-spot virus, 90
- Brazil**  
history of phytopathology, 862
- Brazilian curly top  
of tomato, 36
- Bromelia pinguin*  
enzymic properties of pinguinain, 132
- bromeliads  
association with mosquitoes, 1155
- brown rot fungus  
in Puerto Rico, 559
- “brujas”  
damping off, 101
- Bryophyllum* spp.  
damping off, 101
- buffel grass  
chromosomes, 868
- Bufo lemur*  
toad of Puerto Rico, 532
- Bufo marinus*  
development, 1068  
food in Puerto Rico, 1231
- bunchy top  
of papaya, viral nature, 192
- burrowing nematode  
distribution and host range, 153
- butanol production, 127
- butyric acid  
by fermentation, 128  
from waste molasses, 127
- cacao  
diseases, 314  
new aphid species on, 1092
- Caja de Muertos**  
herpetology, 551
- Cajan cajan*  
effect of planting dates, varieties and  
plant populations on flowering, 901
- Cajanus cajan*  
effect of radiation, 2, 3  
gibberellic effect, 6
- calcium  
calcium-boron relationship  
in corn nutrition, 579  
in pineapple, 570
- field response of Red-Spanish pineapple  
to, 825
- influence on Kudzu, 16, 1020
- cambium miner  
new on citrus, 440
- cane grubs  
natural enemies, 234
- cane sugar  
fibre and sucrose, 26  
maceration, 26  
manufacture, 771
- cane varieties  
relationship to disease, 338
- canker  
of pigeon peas, 100
- canning  
of acerola juice, 1035  
of pigeon peas, 1036, 1044  
of sweetpotatoes, 505, 506, 1041
- Capsicum frutescens* (See peppers.)
- carbon  
determination in soils, 438
- Cardona Key**  
herpetology, 551
- Carica papaya* (See papaya.)
- carotene  
content of plantains, 140
- carotenoids  
in blood of dairy calves, 724
- Cartagena Lagoon**  
birds, 394, 396
- cashew  
as support for vanilla, 575
- cassava  
*Manihot utilissima* root investigations,  
393
- root-weevil, 646
- caterpillars  
feeding  
on sugarcane leaves, 598  
on sugarcane roots, 1063
- lima bean pod borer, 1221, 1225
- cation exchange  
capacity of soils, 214  
equilibria in carboxylic cation exchanger  
and in attapulgite clay, 482
- cattle  
bacterial flora of foot-rot, 848  
biology of tropical cattle tick in Puerto  
Rico, 1123
- cane molasses in feed concentrate, 923
- carotenoids and vitamin A in blood of  
dairy calves, 724
- dairy cattle nutritive requirements, 257

- Holstein, native, and Holstein-native crossbred cows, forage consumption as silage, 932  
internal parasites, 109  
microscopic diagnosis of liver-fluke infection, 913  
phenothiazine for gastrointestinal parasites, 110  
ticks, biology of, 1123  
utilization of grasses for feeding, 928, 929, 931, 934  
utilization of legumes for feeding, 928, 929, 931, 934  
value of grass silage as feed, 261  
cell content  
effect of mosaic on, 341  
cell structure  
effect of mosaic, 347, 348  
cerambycid beetles  
new from Puerto Rico, 461  
CERCOPIDAE  
review of genera and species of Puerto Rico, 878  
CERCOSPORAE  
of Puerto Rico, 1138  
chalcid wasps  
parasites, new, 423  
seed infesting, 422  
"changa" (West Indian mole-cricket)  
*Larra americana*, specific parasite, 1233  
notes on, 714  
chelates  
in soybeans for iron chlorosis control, 567  
*Chlorogenous australiensis*  
virus in tomato, 94  
chlorophyll  
absorption spectrum of yellow-striped sugarcane, 318  
chloroplasts  
effect of mosaic, 347, 348  
chlorosis  
iron chlorosis in *Dracaena*, 1012  
use of chelates to control iron chlorosis, 567  
chlorotic ring spot virus  
on kale, 90  
chlorotic streak  
effect  
on sugarcane, 198  
on sugarcane yield, 634  
heat treatment control on sugarcane, 58  
of Merker grass, 248  
transmission of causal agent, 191  
chromosomes  
of bamboo, *Chusquea substessellata*, 1196  
of beetle, *Walterianella venusta*, 1196  
of *Pennisetum ciliare*, 868  
of pineapple in relation to stomata, 880  
chrysomelid  
cytology, 1198  
life history of *Haltica jamaicensis*, 381  
*Chusquea substessellata*  
chromosomes, 1196  
CICADELLIDAE  
new species for Puerto Rico, 267  
of Cuba, 772  
of Puerto Rico, revision of species, 265  
CICADIDAE  
review of genera and species, 878  
cigar-filler tobacco  
influence of fertilizers, 1008  
citrus diseases  
anthracnose, 784  
brown rot fungus, 559  
*Glomerella gummossis*, 102  
in Puerto Rico, 1119  
citrus pests  
cambium miner, 440  
epiphytic orchids, 339  
CMU  
for weed control in pineapple, 309  
COCCIDAE (See also mealybugs.)  
a predator, 382  
biological control of pustule scale, 1242  
coccinellid enemies of diaspine scales, 418  
cottony cushion scale, 763, 1262  
of Puerto Rico, list of genera and species, 597  
pineapple mealybug, survey and control, 860  
predators on bamboo scales, 164  
pustule scale control, 1242  
relationship with ants on coffee, 1098  
scale parasites, 327  
scale, red-striped on sugarcane, 424  
COCCINELLIDS  
efficiency of, 1257  
enemies of diaspine scales, 418  
from Guiana and Trinidad, 164  
coconut fall, 334

- Coelosternus suleatulus**  
on cassava, 646
- COENAGRIONINE** (dragonflies), 782
- COENOSITHAE (DIPTERA)**  
of Puerto Rico, 1107
- Coffea arabica* (See coffee.)
- coffee**  
allyl alcohol in control, 161  
ants and scales on, 1098  
drying costs with solar energy, 857  
ecology of plantations, 115  
effect  
    of fertility levels on yield, 19  
    of ionizing radiation, 1087  
    of light intensity on leaves, 1131  
    of nitrogen on leaf composition, 17  
    of nitrogen on soil acidity, 17  
    of nitrogen on yields, 17  
    of solar radiation, 558  
    of yield on picking efficiency, 1085  
farm management in Puerto Rico, 481
- fertilizer requirements**, 494
- fruits and beans**  
air flotation, pneumatic carrying velocities, 437  
friction angle of response, specific gravity, 436
- Fusarium* in Costa Rica, 858
- Haitian coffee tree cricket, 118
- leaf miner, 1235
- lime and phosphatic fertilization, 217
- moisture determination, 236
- niacin content, 142
- photosynthesis, 408
- plantations, ecology, 115
- processing by natural fermentation, 238
- resistance to vertical airflow, 240
- root disease, 98
- root system, 555, 556, 557
- seed bed weed killer, 161
- silver skin removal, 235
- spontaneous hybridization in, 1089
- water absorption, 237
- COLEOPTERA**  
new species, 299, 463, 464, 1238
- COLLEMBOLA**  
new species, 1263
- Colletotrichum chardonianum*  
onion-leaf anthracnose, 785
- Colletotrichum gloeosporioides*  
cause of mango wither-tip, 786
- Colombia**  
mycological explorations, 303
- Conidiobolus**  
entomogenous fungi, 602
- containers**  
in consumer's acceptance tests, 941
- corn**  
boron-manganese relationship, 569  
breeding work, 1161  
calcium-boron relationship in nutrition, 579  
effect of velvetbean green manure, 210  
    of lime-phosphorus and green manure, 224
- Euxesta stigmatias*, an otid fly, 112
- factors influencing yields, 1158, 1159
- in sand culture, 220
- insect investigations, 113
- phloem necrosis in stripe disease, 363
- corrosion of boiler tubes, 655
- Corythaica monacha*, 380
- Corythucha gossypii*, 644, 650
- Cosmopolites sordidus*  
bibliography, 647  
control by paring and heat sterilization of banana corms, 1066
- Cosmos**  
bacterial wilt, 335
- Costa Rica**  
*Fusarium* of coffee, 858
- cotton  
blister mite, *Eriophyes gossypii*, 446  
boll weevil, *Anthonomus grandis* in
- Haiti, 143
- cottons of Puerto Rico, 582
- fiber characteristics, 1162
- new leaf miner, 466
- pink bollworm, 447, 448, 643
- response to fertilizers, 1034
- sand culture studies, 220
- variety trials, 949
- cottony cushion scale  
experience of a year, 1262  
control, 763
- crabs  
Brachyuran, 175
- crane flies  
of Puerto Rico, 82  
of West Indies, 83, 84, 85, 86
- cricket  
Haitian coffee tree, 118

- cross-pollination  
of sugarcane, 243, 387
- Crotalaria incana*  
*Lycacna theonius* larvae feeding on, 1226
- crown gall  
in Puerto Rico, 59
- Cryptotermes brevis*  
inherent natural resistance of woods,  
1256  
organic termite-repellent chemicals tested  
for control, 1250
- Cuba**  
birds, 397  
**CICADELLIDAE**, 772  
**CYDNIDAE**, 160  
**PENTATOMIDAE**, 160  
*Trelanorhinus*, 549
- cucumber  
evaluation of pickling varieties at Isabela Substation, 886  
mosaic disease, 39, 373  
new host of virus B, 57  
value of filter press cake, 902
- cucurbit  
viruses, in Puerto Rico, 842
- Culebra Island**  
*Anolis*, new species and subspecies, 527  
birds, 398  
herpetological fauna, revised list, 525  
Sciencid reestablishment, 526  
sphaeractyls, 524
- Culicoides* (See midges.)
- curly top disease  
Brazilian, on tomato, 36
- cyanide  
resistance by plants high in silica, 1255
- CYDNIDAE**  
of Cuba, 160
- Cymbidium* mosaic survey, 846
- cystine in Puerto Rican dishes, 141
- cytology  
apomixis in *Pennisetum ciliare*, 1108  
in chrysomelid beetle, 1198  
of bamboo, 1196  
of *Diatraea saccharalis*, 1195, 1197  
of signal grass, 1112  
of sugarcane mosaic, 337
- dairy (See cattle.)  
dairy cattle nutritive requirements, 257  
farm management study, 586
- damping-off  
of *Bryophyllum* ("bruja"), 101  
of tobacco, 96, 792 793, 1061  
*Rhizoctonia* control, 99
- Danforth, Stuart T.  
biographical sketch, 1204
- DD**  
effectiveness with allyl alcohol as pre-emergent herbicide, 508
- dehydroascorbic acid  
distribution in acerola, 410
- Descecheo Island**  
birds, 396
- diabetes  
effect of *Morus alba* on alloxan diabetic rats, 138
- Diaprepes abbreviatus*  
control, 1239, 1245  
diapause portion of larval period, 1224  
larval period, 1222  
life history, 1230  
on *Phoenix dactylifera*, 591
- Diaprepes splengleri*  
control, 163
- Diatraea saccharalis*  
ant predatory on eggs, 1259  
biological control in St. Croix, U. S. Virgin Islands, 775  
effect on sucrose content, 748  
gametogenesis, 1195, 1197  
ineffectiveness of overhead irrigation methods for application of insecticides, 749  
influence of sugarcane variety on rate of infestation, 1210  
natural parasitism by *Trichogramma minutum*, 1260  
parasites, 417
- diarrhea (tropical)  
in relation to internal parasites of calves, 109
- digestibility  
of Venezuela grass and plantain pseudostalks, 125
- of Napier (Merker) grass, giant Pangola grass and Signal grass, 126
- Digitaria decumbens*  
effect of nitrogenous fertilizers, 920
- Digitaria validia*  
digestibility, 126

- palatability, 921  
taxonomic description, 1111
- diketogulonic acid  
distribution in acerola, 410
- Dimerella*  
nomenclatorial status, 1140
- DIPTERA  
*Anastrepha* of Puerto Rico, 1064  
brackish water mosquitoes of Puerto Rico, 1154  
crane flies of Puerto Rico, 82  
*Drosophila*, new species from Puerto Rico, 1150  
fruit flies, heat sterilization, for control, 1067  
mosquitoes of Puerto Rico, 1153  
mosquitoes associated with bromeliads, 1155  
*Nemocera* species new from Puerto Rico, 594  
*Neodeziopsis* of Puerto Rico, 1107  
South American SARCOPHAGIDAE, 562  
TIPULIDAE, 83, 84, 85, 86
- diseases (plant)  
ANNONACEAE, 89  
asparagus, 103  
avocado, 784  
bachelor's button, 88  
banana, 1135  
*Basella rubra*, 87  
cacao, 314  
citrus, 559, 784, 1119  
coconut, 334  
coffee, 98, 858  
corn, 363  
*Cosmos*, 335  
cucumber, 57, 39, 373  
eggplant, 99, 336, 788  
*Ficus nitida*, 600  
garden crops, 1116  
grass (Merker), 248  
kale, 90  
mango, 784, 786  
melon, 34  
onion, 785  
orchid, 91  
papaya, 39, 48, 49, 50, 192, 407, 747  
pepper, 45, 844  
pineapple, 354, 355  
potato, 92
- sansevieria, 95  
SOLANACEAE, 790, 972  
sorghum, 40  
sugarcane, 55, 58, 38, 42, 64, 65, 66, 67, 198, 233, 247, 300, 318, 328, 330, 331, 332, 337, 338, 340, 341, 342, 344, 345, 346, 352, 353, 354, 358, 368, 377, 429, 430, 460, 515, 595, 634, 652, 751, 752, 753, 755, 756, 757, 843, 1101, 1121  
sweetpotato, 33, 61  
*Tabebuia pallida*, 372  
tobacco, 44, 45, 68, 96, 349, 350, 600, 787, 792, 793, 795, 796, 845, 972, 1061  
tomato, 36, 41, 93, 94, 840, 972  
vegetables, 790, 1116  
yam, 35
- Dioscorea*  
biosynthesis of steroid sapogenins, 939  
effect of fermentation on diosgenin content, 938  
*Dioscorea rotundata*  
mosaic disease, 35  
diosgenin  
on *Dioscorea* tubers, 938  
distillation  
consideration of, in high proof continuous alcoholic distillation, 242  
Dominican Republic (See Santo Domingo.)  
DOTHIDEALES  
tropical American species, 301, 302  
*Dracaena sanderiana*  
iron chlorosis, 1012  
drainage (in sugarcane fields)  
pump, 319  
tile, 487  
dragon-flies  
life history notes, 480, 782  
of Puerto Rico, ecological survey, 480  
DROSOPHILIDAE  
notes on two new Puerto Rican species, 1150  
dry top-rot  
of sugarcane, 328, 354, 368, 757  
Dyer's modified method  
determination in soils of phosphoric acid, lime and potash soluble in citric acid, 232

- ecology  
of birds at **Cartagena Lagoon**, 394  
of coffee plantations, 115  
of flora of **Puerto Rico**, survey, 376  
of fresh water insects of **Puerto Rico**,  
survey, 480  
of mosquitoes and bromeliads, 1155  
economics  
management  
of coffee farms, 481  
of dairy farms, 586  
socio-economics of southwestern **Puerto Rico**, 580  
egg parasites  
mymarids, 420  
eggs (hen)  
effect of feeding achiote seed on egg-yolk pigmentation, 604  
riboflavin, 134  
eggplant  
bacterial wilt, 336  
blight and fruit rot, 788  
color inheritance, 791  
control of *Rhizoctonia* damping-off, 99  
lace-wing bug, 380  
eggplant lace bug  
*Corythaica monacha*, 380  
elephant grass  
germination, 797  
embryo sac  
development in *Gunnera insignis*, 1194  
*Empoasca*  
new species from **Haiti**, 412  
synonymy of *Empoasca fabalis*, 264  
encyrtid  
parasitic in eggs of HESPERIDIIDAE, 472  
endoparasites  
of **St. Croix**, 172  
entomogenous fungi  
*.lerostalagmus aphidum*, 789  
ENTOMOPHTHORACEAE  
observations on genus *Conidiobolus*, 602  
*Ephydria gracilis*  
new to **Puerto Rico**, 1258  
epiphytic orchids  
pest on citrus trees, 339  
*Eriophyes gossypii*  
damage to cotton, 446  
erosion  
relative erosiveness of soils, 208  
estrogen  
effect on sexual odor in boars, 975  
etch virus  
on tobacco, 68, 660  
ethylene gas  
in pineapple fruiting, 942  
eucnemid beetles  
new from **Puerto Rico**, 462  
EUPHRYGINAE  
notes, 758  
of **Puerto Rico**, 425, 801  
*Euzestes stigmatus*  
infesting ear corn, 112  
eye-spot disease  
of sugarcane, 340  
fatty oils  
of "anacagüitas" seed, 139  
Fertidyne  
influence on soil fertility, 1017  
fertilization  
effect  
of nitrogen on soil physical condition,  
1185  
on grasses, 293, 295  
on potatoes, 633  
new approach, 278  
fertilizer  
ammonium sulphate  
and pH of soils, 993  
and urea on tobacco, 1027  
as a factor affecting sucrose content of  
sugarcane, 1000, 1033  
effect  
of calcium and phosphorus on Kudzu,  
16  
of differential treatments on sugar-cane, 1023  
of fertility levels in coffee, 19  
of nitrogenous fertilizers on Guinea  
grass, 925  
of subsoil fertilization on sugarcane,  
732, 733  
on yield of potatoes, 633  
on yield and quality of sugarcane, 638  
on sweetpotatoes, 628  
on yield of pigeon peas, 636  
filter press cake, 902, 1024  
garbage compost, 699

- influence  
 of fertility levels on varietal response  
     of sugarcane, 1031  
 of fertilizers in sucrose, 1000  
 of potash on tobacco yields and quality, 1028  
 on Kudzu, 640  
 on tobacco, 639, 1008  
     on tomato production, 631  
 in pineapple, 513, 990, 1014, 1016, 1029,  
     1032, 1056, 1057  
 lack of response of sugarcane to phosphorus, 213  
 lime and minor element fertilizer research, 632  
 lime and phosphatic fertilization on coffee, 217  
 nitrogen fertilizer effect  
     on Guinea grass, 925, 1189  
     on Napier grass, 1188  
     on Para grass, 1190  
     on sugarcane, 1003, 1026  
 relation to sugarcane trash, 992  
 requirements of coffee, 494  
 response of cotton, 1034  
     of grasses (Guinea, Pangola and Bermuda), 930  
     of pineapple, 1032  
     of sugarcane, 520, 630, 638, 1019  
 results of nitrogenous fertilizer applications, 920  
*Ficus nitida*  
     new fungus, *Hypoxylon borinquensis*, 600  
 filter press cake  
     beneficial effect on pineapple yields, 571,  
     572, 576, 577  
 effect  
     on pineapples, 576, 577  
     on soils, 706  
     on tomato plants grown in sterilized and unsterilized soil, 443  
 for vegetable crops as fertilizer, 902  
 value as fertilizer, 902, 1024  
 fishes  
     of St. Croix, fresh water, 176  
 flies  
     crane, 82  
     *Ephydria gracilis*, 1258  
     *Euxesta stigmatias*, 112  
 fruit flies, TRYPETIDAE, DIPTERA, 1064  
 heat sterilization of mangoes and guavas  
     for control of larvae, 1067  
 otitid fly, 112  
 TIPULIDAE, West Indian species, 83, 84,  
     85, 86  
 flora  
     cottons of Puerto Rico, 582  
     of *Inga*, Middle American species, 859  
     of Puerto Rico, ecological survey, 376  
**Florida**  
     insects associated with papaya diseases,  
     747  
 flour  
     production from green plantains, 865  
     from unpeeled green plantains, toxicity,  
     867  
 foliage sprays  
     of sugarcane with 2,4-D, 697, 711  
 foliar analysis  
     responses to different N-P-K levels, 220  
 foliar diagnosis  
     techniques used in sugarcane, 989  
 food crops  
     intercropping with sugarcane, 704  
 food plants  
     of Puerto Rico, 162  
 foot-rot of cattle  
     bacterial flora, 848  
 forage crops  
     consumption as soilage, 932  
     effect of nitrogen applications, 947  
     of nitrogen fertilization on Guinea grass, 1189  
     influence of nitrogen, calcium and boron on Kudzu, 1020  
     Napier grass versus sugarcane as forage crops, 924  
     nutritive values, 144, 145, 146  
     technique for estimating nutritive values,  
     121  
     utilization of grasses, 928, 929, 931, 934  
 forest insects  
     of Puerto Rico, survey, 740, 741  
 fowl coryza  
     treatment, 909  
 frogs  
     food of *Rana catesbeiana*, 855  
     *Leptodactylus fallax*, introduction, 760  
     new frog species from Puerto Rico, 535

- new frog species from **Virgin Islands**, 540  
fruit flies  
*Anastrepha* spp. in **Puerto Rico**, 1064  
*Drosophila*, new species, 1150  
heat sterilization of mangoes and guavas  
for control, 1067  
parasites of, 167  
West Indian species, 111  
fruit rot  
of eggplant, 788  
fulgorids  
of **Puerto Rico**, review of species, 266  
rice plant hopper, 603  
Fuller's formamide method  
in serological identification of *Pseudomonas solanacearum*, 841  
fumigants  
in tobacco damping-off control, 1061  
fungi  
*Acrostalagmus aphidum*, 789  
*Aerothecium* leaf spot of *Basella rubra*, 87  
*Actinomyces* on cacao beans, 314  
*Alternaria* blight of *Gomphrena*, 88  
anthracnose  
of *ANNONACEAE*, 89  
of avocado, 784  
of banana, 1135  
of citrus, 784  
of mango, 784  
of onion, 785  
aphid control and *Acrostalagmus aphidum*, 789  
bibliography of mycology and phytopathology of **Central and South America and West Indies**, 817  
brown rot fungus, 559  
black shank of tobacco, 787  
**CERCOSPORAE** of **Puerto Rico**, 1138  
**Colombia**, mycological explorations, 303  
coffee *Fusarium* wilt, 98  
control of *Rhizoctonia* damping-off of  
pepper and eggplant, 99  
damping-off in tobacco, 792, 793  
*Dimeriella*, nomenclatorial status, 1140  
**DOTHIEDALES**, tropical American  
forms, 301, 302  
**ENTOMOPHTORACEAE**, 602  
fungi, check list for **Puerto Rico**, 1120  
*Fusarium* of coffee in **Costa Rica**, 858  
green muscardine fungus, 1118  
*Melminthosporium sacchari*, 332  
mango wither-tip, 786  
*Marasmius sacchari*, 353  
mildews of **Tropical America**, 1142  
mycological notes, 1136  
new fungus from **Puerto Rico**, 1249  
of **Santo Domingo**, phytopathological  
survey, 313  
on *Ficus nitida*, 600  
on sugarcane, 233, 328, 331, 332, 340, 344,  
345, 352, 354, 358, 368, 377, 430,  
596, 753, 757  
*Pugillus Fungorum Venezuelensis*, 1139  
*Pythium* in sugarcane, 233  
*Rhizoctonia* of **Puerto Rico**, 754  
**XILARIACEAE** of **Dominican Republic**,  
773  
white spot of pineapple, 355  
fungicides  
for damping-off control, 96  
*Fusarium*  
coffee root disease in *Puerto Rico*, 98  
on *Costa Rica* coffee, 858  
fusel oil  
effect on determination of alcohol, 241  
gametogenesis  
in *Diatraea saccharalis*, 1195, 1197  
garbage compost  
as fertilizer, 699  
garcinias  
edible and possible mangosteen stocks,  
1202  
garden crops  
diseases, 1116  
gastrointestinal parasites  
of cattle, 110  
gecko  
a genus new to **Greater Antilles**, 543  
German cockroach  
insecticide resistance-susceptibility tests,  
522  
giant Pangola grass  
digestibility, 126  
palatability, 921  
gibberellic acid  
effect  
on dormant seeds, 6  
on germination  
of Congo watermelon seed, 853  
of papaya seed, 869  
on pigeon peas, 6

- Glomerella*  
gummosis, 102
- goats  
effect  
of unlimed and limed grass, 221  
of urea to phosphorus-lime fertilizer, 222  
evaluation of breeding lines, 1046  
infested by nematode larvae, 315
- Gomphrena globosa*  
*Alternaria* blight, 88
- Gossypium hirsutum*  
fiber characteristics, 1162
- grape cuttings  
effect of growth regulators, 851
- grapefruit  
changes wrought in process of maturation, 653, 654
- grasses  
chemical analyses, 147  
comparison of grasses, 922  
control in pasturclands, 305  
effect  
of cutting heights, 292  
of lime, 211, 212, 221, 222  
of nitrogen, 925, 1188, 1189, 1190  
of phosphorus, 212, 222  
of urea, 222
- Merker and Para grass ensilage, 927
- Merker grass as roughage, 923
- nutritive values, 144, 145, 146
- utilization for cattle feeding, 928, 929, 931, 934
- value of grass silage for dairy cows, 261
- yields and composition of five grasses, 295
- greenhouse thrips (*Heliothrips haemorrhoidalis*), 762
- green manure  
effect on sweet potatoes and corn, 224  
effect of velvetbean green manure on corn yields, 210
- green muscardine fungus, 1118
- growth regulators  
effect on rooting of grape cuttings, 851
- "guama" (See *Inga*)
- Guadeloupe**  
birds, 403
- guavas  
chemical analysis of stone cells, 1052
- heat sterilization for control of fruit fly larvae, 1067
- micro-organisms found in, 1157
- paste, consumer acceptance tests of containers, 941
- pectin methyl esterase, occurrence, 887
- polybasic organic acids, 1047, 1051
- propagation from stem cuttings, 824
- Guianas**  
beetles predatory on coccids, 164
- Guinea grass  
beef production, 294  
comparison with other grasses, 922, 931, 934, 1112  
effect  
of frequencies of nitrogen application and cutting on yield, 1189  
of nitrogen on yields and protein content, 1182  
of nitrogenous fertilizer, 925, 930
- growth characteristics, 1182
- response to different nitrogen levels under irrigation in the Lajas Valley, 930
- utilization for cattle feeding, 928, 929, 931, 934
- gumming disease (gummosis)  
of citrus, 102  
of pineapple, 831  
of sugarcane, 344, 346, 377, 755
- Gunnera insignis*  
meiosis and development of embryo sacs, 1194
- Gynaikothrips ficorum*  
control of laurel thrips, 1243
- Haiti**  
*Amblycerus* affecting seeds of *Prosopis chilensis*, 246
- coffee tree cricket, 118
- cotton boll weevil, *Anthonomus grandis*, 143
- leafhoppers of white clover, 1236
- mymarid egg parasites, 420
- new species of leafhoppers, 212
- Tiphia* species, description and notes, 1232
- Haltica jamaicensis*  
life history, 381
- Harry A. Beatty  
biographical sketch, 1091

- Hawaii**  
 root disease of sugarcane, 233
- hawk**  
 broad-winged form, 405
- Hegari sorghum**  
 response to lime applications, 707
- Helicotylenchus**  
 in sugarcane, new species, 965
- Heliothrips haemorrhoidalis**  
 control with systemic insecticides, 762
- Helminthosporium** leaf spot of sugarcane, 332
- hemidactyls**  
 of Puerto Rico, 534
- hens** (see poultry.)
- herbicides**  
 allyl alcohol on coffee seedbeds, 161  
 foliage sprays  
   with maleic hydrazide, 308, 711  
   with 2,4-D, 697, 711  
 weed control  
   on pineapple fields with CMU, 309  
   on tobacco seedbeds, 307
- Herpestes javanicus auropunctatus**  
 food habits, 1244
- herpetology** (See also lizards.)  
*Alsophis antillensis*, new name, 550  
*Alsophis* in Puerto Rico, 536  
 ameivas of Puerto Rico, 538  
*Amphisbaena caeca*, redescription, 537  
*Anolis*, new species and subspecies, 527  
*Aristelliger* spp., from Navassa, 528  
 boas from Puerto Rico, 541  
 food of lizards, 1215  
*Gecko*, a genus new to Greater Antilles, 543  
 growth in Puerto Rico and Virgin Islands, 545
- hemidactyls**, Puerto Rico region, 534  
 herpetological faunal lists, notes, reports  
   of American Virgin Islands, 548  
   of Anegada, 544  
   of British Virgin Islands, 548  
   of Cardona Key, 551  
   of Culebra, 525  
   of Mona Island, 524, 526, 541  
   of Muertos Island, 551  
   of Puerto Rico area, 539  
   region, chart for sphaerodactyl determinations, 530
- of Saint John, Virgin Islands**, 542  
**of Tortola**, 544  
**of Vieques Island**, 531  
**of Virgin Gorda**, 544
- herpetologists** Dr. Agustín Stahl, Dr. Francisco del Valle Atiles, 547
- Leptodactylus fallax** introduction into Puerto Rico, 760
- scincid reestablishment**, 526
- Sphaerodactyl new to Puerto Rico**, 529
- Sphaerodactyl grandisquamis**, 533
- sphaerodactyls of Puerto Rico, Culebra and Mona Island**, 524
- Tretanorhinus of Cuba and Isle of Pines**, 549
- Virgin Islands**, a new frog, 540
- HESPERIDAE**
- encyrtid parasite, 472
- HELIROCERA**
- moths of Puerto Rico, supplementary report, 465
- Heterodera marioni**  
 anatomy of attacked roots, 356
- Heterothrips**  
 a new species from Puerto Rico, 766
- Hispaniola**  
 new species of *Amblycerus*, 246
- histology**  
 of sugarcane mosaic, 337
- Holstein**  
 forage consumption, 932  
 "Hoja blanca"  
 symptoms not observed on susceptible rice varieties, 809
- HOMOPTERA**
- AUCHENORYNCHOUS; review of genera and species, 265, 266, 878  
 cottony-cushion scale, control, 763  
*Empoasca fabalis* De Long, synonymy, 264
- EUPTERYGINAE leafhoppers, new, from Puerto Rico, 758, 801
- new leafhoppers (CICADELLIDAE), 267
- notes, 812
- PSYLLIDAE, new, 263
- rice plant hopper, *Sogatao rizicola*, records, 603
- hot water treatment  
 for ratoon stunting, 66

- hydrometer  
effect of fusel oil concentrations on alcohol determinations, 241
- hydroponic farm  
control of bacterial wilt of tomato, 840
- HYMENOPTERA  
chalcidoid parasites from Puerto Rico, 423  
*Tiphia* from Haiti, 1232
- Hypoxylon boringuensis*  
new species of fungus on *Ficus nitida*, 600
- Icerya purchasii* (See COCCIDAE.)  
control, 763  
cottony-cushion scale in Puerto Rico, a year's experience, 1262
- indexes  
host plant index for insects (Insectae Borinquenses), 813  
host plant index for Porto Rican fungi, 1120  
host plant index of virus diseases, 360, 365, 370  
vector index of plant virus diseases, 361, 366, 371
- Inga*  
Middle American species, 859
- inheritance  
chromosomes of *Pennisetum*, 868  
effect of six qualitative character pairs on a cross between two varieties of barley, 727  
in corn breeding, 1161  
in color of eggplant, 791  
in sugarcane, 243, 386, 387  
in *Nicotiana*, 794  
of fiber characteristics in cotton, 1162
- insect parasites  
*Aneristus*, new species, 421  
chalcidoid parasites, 423  
dryinid on *Baldulus maidis*, 165  
encyrtid on eggs of HESPERIIDAE, 472  
introduction into Puerto Rico, 1209  
*Larra americana*, specific parasite of "change", *Scapteriscus vicinus*, 1233  
*Monomorium carbonarium ebenium*, predator on egg clusters of *D. saccharalis*, 1259  
myrmid egg parasites, 420  
new *Tiphia* species from Haiti, 1232
- of mealybugs, 166  
of pineapple mealybug, 166  
of scale, 418, 426  
of sugarcane borer, 417, 1260  
of West Indian fruit flies, 167  
of white grubs in Puerto Rico, 1227  
pustule scale control, 1242  
seed-infesting wasp, 422  
wasp parasites of cane grubs, 234
- insecticides (control)  
for soil insects, 1245  
organic, 763  
systemic, 610, 762  
resistance tests, 522
- INSECTA  
amount of food eaten, 1217  
annotated bibliography of cane insects, 1102
- AUCHENORHYNCHOUS HOMOPTERA of Puerto Rico, 265, 266  
bibliography of Puerto Rico entomology, 648
- COLLEMBOLA, new from Puerto Rico, 1263
- CYDNIDAE and PENTATOMIDAE of Cuba, 160  
ecological status of fresh water insects, ODONATA, 480  
entomology, status in Puerto Rico, 1213  
forest insects of Puerto Rico, 740, 741
- HETEROPTERA, supplementary report, 465
- insect conditions in Puerto Rico,  
years 1930-31, 645  
years 1931-32, 649
- Insectae Borinquenses, 813, 1229, 1234
- Insectae Portoricensis, 1214, 1216
- insects  
and mottling disease, 1101  
associated with sugarcane, 1199  
of Aragua, Venezuela, 737, 750  
of Barbados, 1152  
of Mona Island, 877  
of Puerto Rico, 1238, 1248  
of St. Croix, 174  
of sugarcane in Santo Domingo, 1211
- insect parasite introduction in Puerto Rico, 165, 1209
- insect pest survey initiation, 642

- JAPYGIIDAE (THYSANURA) in Puerto Rico 469  
list of insects and mites of sugarcane, 1103  
minor sugarcane insects, 1208  
mosquitos of Puerto Rico, 1153, 1154, 1155  
seasonal cycle of insect abundance, 1261  
status of some insect pests in Puerto Rico, 1223  
sugarcane leaf-eating caterpillars, 598  
termites of West Indies, Bahamas and Bermuda, 1109  
"Insectae Borinquenses"  
revised annotated check list of insects of Puerto Rico, 813, 1229  
supplement, 1234  
"Insectae Portoricensis"  
preliminary annotated check list of insects of Puerto Rico, 1214  
first supplement, 1216  
"Insects of Puerto Rico," 1238  
addendum, 1248  
invertase  
in green plantain fruits, occurrence and characterization, 479  
*Ipomoea batatas* (See sweetpotato.)  
iron  
and manganese in plant growth, 581  
chlorosis  
in *Dracaena*, 1012  
in soybeans, 567  
field response of Red-Spanish pineapples, 825  
irrigation (See also overhead irrigation.)  
effect on corn yield, 1158, 1159  
effect of tractor on compaction on irrigated soil, 693  
conservation and consumptive use of water by sugarcane, 471  
implement tillage, 822  
Isle of Pines  
*Tretanorhinus* species, 549  
JAPYGIIDAE  
review of genera and species, 469  
Java POJ  
variety studies, 976  
jellies  
measuring breaking strength, 888  
kale  
a chlorotic ring-spot virus, 90  
KINNARIDAE  
review of genera and species of Puerto Rico, 878  
Kudzu (tropical grass)  
as pasture crop, 921, 934  
comparison with other grasses, 922, 931, 934  
effects  
of calcium and phosphorus fertilization, 16, 218  
of liming and fertilization, 293  
for cattle feeding, 928, 929  
influence  
of fertilizers, minor elements and soil pH, 640  
of nitrogen, calcium and boron, 1020  
Kudzu-Merker grass mixture, 291  
potassium competition on Kudzu-Merker, 1021  
lace-wing bugs (See TINGITIDAE, bean lace bug.)  
*Lachnostenra* species, (See Maybeetles, white grubs.)  
control, 163  
lady beetles, efficiency as predators, 1257  
Lajitas Valley  
application of synthetic soil conditioners to a clay soil, 703  
hydraulic conductivity of subsoils, 700  
influence of nitrogenous fertilization on Guinea grass, 925  
occurrence of soil tumors, 23  
reclamation of saline-sodic soils, 24  
salinity studies, 228  
snap bean variety trials, 871  
response of grasses to nitrogen under irrigation, 930  
lamellicorn larvae  
control by wasp parasites, 234  
*Larra americana*  
parasite of "changa" or Puerto Rico mole-cricket, 714, 1233  
*Lasiohelea* (See midges.)  
Latimer's vireo  
nesting activities, 1113  
latosol  
characterization of a buried, 709  
leaf blight  
of asparagus, 103

- leafhoppers  
*EUPTERYGINAE*, new genus from **Puerto Rico**, 758  
*EUPTERYGINE*, new species from **Puerto Rico**, 801  
 from **Puerto Rico**, 267, 425, 812, 1264  
 new species of *Empoasca*, from **Haiti**, 412  
 of **Puerto Rico**, review of genera and species, 265  
 of white clover, *Trifolium repens*, in **Haiti** and **New York**, 1236.
- leafminer  
 new on cotton, 582  
 of coffee, 1235  
 of cotton, 466  
 leaf nutrient  
 factors influencing sugarcane, 1030  
 influence of age of sugarcane, 1006  
 leaf sampling  
 foliar diagnostic techniques, 989  
 leaf spot disease  
 on *Basella rubra*, 87  
 on sugarcane, 331, 332  
 on tobacco, 349  
**Leghorn, White** (See *poultry*.)  
 legumes  
 comparison of Kudzu with other grasses, 922  
 effect of lime and phosphorus on yield, 223  
 influence of calcium and boron in nodulation, 1020  
 nutritive values, 145, 146  
 utilization in cattle feeding, 928, 929, 931, 934  
**Lemna test**  
 modification of, for phytotoxicity, 470  
*Leptoconops* (See *midges*.)  
*Leptodactylus fallax*  
 introduction, 760  
*Leptopharsa constricta*  
 a new lace wing bug for **Puerto Rico**, 765  
*Leptosphaeria*  
 a new species causing leaf blight, 103  
*Ligniera vascularis*  
 life history, 345  
 lima bean  
*Lycaena theonus* larvae, feeding on, 1226  
 pod-borer caterpillar oil, 1221, 1225  
 lime  
 effect  
 on coffee, 217  
 on chemical composition of goat's blood, 221  
 on crop yield, 211, 701  
 on grass, 211, 212, 293  
 on Guinea, Merker, Para-Carib grasses grown with tropical Kudzu, 218  
 on Hegari sorghum, 707  
 on leguminosae, 223  
 on mineral composition of soil, 211, 212, 221  
 on nutrition and health of goats, 222  
 on sugarcane yields, 216  
 on yield and ascorbic acid content of acerola, 635  
 lime and acid soil pH changes, 890  
 lime-phosphorus effect on corn and sweet potatoes, 224  
 method of determination in soils, 18  
 requirements in soils, 692  
 research results, 632  
 short method determination, 132  
 liver fluke  
 diagnosis by microscopic techniques, 913  
 lizards (See *herpetology*.)  
*Loxigilla noctis*  
 revision of West Indian races, 400  
*Lycaena theonus*  
 larva feeding on lima bean and *Crotalaria incana*, 1226  
 lycid beetle (See *Thonalmus chevrolati*.)  
 new to **Puerto Rico**, 1258  
*Lycopersicon esculentum*  
 nematode control, 152  
*Magnolia portoricensis*  
 germination failure, 375  
 mahogany  
 chemical composition and termite-repellent activity, 137  
 major elements  
 effect on yield and ascorbic acid of acerola, 635  
 maleic hydrazide  
 failure of preharvest spray to affect sucrose content of sugarcane, 711  
 influence on sprouting of potatoes, 308  
 "malojillo" (See *Para grass*.)  
*Malpighia puncticolia* (See *acerola*.)  
 mammals  
 of St. Croix, 177  
 manganese

- and iron in plant growth, 581  
 boron-manganese relationships on soybean and corn plants, 569
- mango  
 anthracnose, 784  
 heat sterilization for fruit flies, 1067  
 hot-water treatment to reduce anthracnose decay, 828  
 wither-tip, 786
- mangosteen stocks  
 edible, 1202
- Manihot utilissima*  
 root investigations, 393  
 root-weevil of cassava, 646
- mastitis  
 evaluation of treatment with valsyn-gel, 911, 912
- Marasmius sacchari* (fungus)  
 on sugarcane, 353, 430
- marine borers  
 resistance to high silica content, 1255
- Marisa cornuarietis*  
 damage on rice, 808
- Maruca testudalis*  
 in lima bean, 1221  
 on wild hosts, 1225  
 quarantine regulations, 111  
 studies of bean pod-borers in Puerto Rico, 1060
- maturity  
 relationship between leaf-potassium percentage and sucrose content of sugarcane, 25  
 studies on grapefruit, 653, 654
- "maya" fruit  
 properties, preparation and uses of pinguinain, 132
- Mayagüez 336 (variety)  
 mosaic studies, 55
- May-beetles  
 life cycles, 1100, 1104, 1105  
 control, 167
- Mayflies  
 of Puerto Rico, 1151
- meiosis  
 in *Gunnera insignis*, 1194
- mealybugs (See *Coccoidea*)  
 of Puerto Rico, *Coccoidea*, list of genera and species, 597
- parasites of pineapple mealybug, 166  
 pineapple mealybug survey and control, 860
- Meloidogyne*  
*javanica*, on pigeon peas, 151  
 on sugarcane, 963
- melolonthids (See May-beetles, white grubs.)  
 life cycles, 1100, 1105
- melons  
 susceptibility to cucurbit viruses, 34
- MEMBRACIDAE**  
 of Puerto Rico, review of genera and species, 878
- Merker grass  
 as roughage, 923  
 chlorotic streak disease, 248  
 comparative productivity with Kudzu-Merker mixture, 291
- digestibility, 126  
 effect of lime and phosphorus, 218  
 influence of nitrogen sources, 1018  
 methods of ensiling, 927  
 nematode infestation in goats, 315  
 palatability, 921, 926  
 potassium competition on Kudzu-Merker, 1021
- Metarrhizium anisopliae* (fungus)  
 in Puerto Rico, 1118
- Methionine, in Puerto Rican dishes, 141
- Mexico**  
 bibliography of mycology and phytopathology, 817
- micro-technique  
 a method for preparing diseased plant tissue, 333
- midges  
 bloodsucking species of the Americas, catalogue, 468
- mildews  
 tropical American black-mildews, 1142  
 millipede (See also *Rhinocricus arboreus*.)  
 a new form for Puerto Rico, 1251  
 scale-feeding habits, 382
- mineral deficiency  
 influence on sugarcane, 1013
- mines (insect) (See cambium miner, leaf-miner.)
- minor elements

- effect of micronutrient elements on pineapple, 874  
 effect  
     on yield and ascorbic acid content of acerola, 635  
     on growth and protein influence in Kudzu, 640  
     on growth of pineapples, 1057  
     research on, 632
- mites  
     on sugarcane, new species, 759  
     of cotton, *Eriophyes gossypii*, 446  
     of Puerto Rico, preliminary plant mite survey, 388  
     of sugarcane, list, 1103
- Mitscherlich's method  
     in determination of nutrient contents of a soil, 272
- moisture meter  
     dielectric-type, for use with coffee beans, 236
- molasses (cane)  
     as part of concentrate dairy ration, 923  
     for cattle feeding, 931  
     utilization in production of acetone, butanol, normal butyric acid, 127
- molasses grass  
     effect of liming and fertilization, 293
- mole crickets  
     West Indian species, notes, 714  
     parasite, 1233
- Mona Island**  
     boas from, 541  
     insects, 877  
     scincid reestablishment, 526  
     sphaerodactyls, 524
- mongoose  
     food habits, 1244
- Monomorium carbonarium ebenium*  
     predator on egg clusters of *Diatraea saccharalis*, 1259
- Montserrat**  
     birds, 404  
     “moquillo”  
         treatment, 909  
     “mora” (See *Morus alba*)
- Morus alba*  
     effect on alloxan diabetic rats, 138
- mosaic (For sugarcane: see sugarcane mosaic, yellow stripe, mottling disease.)
- effect  
     on content of cell, 341  
     on tobacco yield, 44
- field behavior of certain sweetpotatoes, 61
- of cucumbers, 39, 373  
 of yams, 35  
 on cell structure and chloroplasts, 347, 348  
 on peppers, 845, 974  
 on sweet potatoes, 33  
 on tomato, 93  
 papaya mosaic, 39, 48, 49, 50, 407  
 status of knowledge in 1924, 330  
 studies on disease resistance in tobacco, 795
- tobacco and pepper mosaic viruses in  
     filler-tobacco area, 845
- tobacco leaf spot, 349
- tobacco mosaic symptoms, 350
- tobacco variety resistance, 511, 796
- virus diseases of plants, 351
- mosquitoes  
     brackish water species, 1154  
     ecological notes, 1155  
     of Puerto Rico, 1153
- moths  
     HETEROCERA, supplementary report, 465
- moth-borer of sugarcane (See sugarcane moth-borer, also *Diatraea saccharalis*.)
- mottling disease of sugarcane (See sugar-cane mosaic.)
- mountain chicken  
     introduction into Puerto Rico, 760
- muck soils  
     phosphate retention, 960
- Muertos Island**  
     herpetology, 551
- Musa paradisiaca*  
     digestibility, 125  
     invertase occurrence and characterization, 479  
     palatability, 926
- mycology (See fungi.)
- mymarids  
     egg parasites, 420

- Mysore* raspberry  
a new fruit for Puerto Rican home gardens, 1086
- Myzus persicae*  
in Puerto Rico, 1094
- Napier grass  
as forage crop, 924  
digestibility, 126  
effect  
of nitrogen fertilization, 1018, 1183, 1188  
of frequency of cutting, 1188  
palatability, 921  
relationship to beef production, 294
- Navassa Island**  
*Aristilliger*, new species, 528
- nematicides  
for control of tomato nematodes, 152  
sugar as nematocide, 967
- nematodes  
burrowing, 153  
in sugarcane, 963, 964, 965  
isolation from soil samples, 155  
larval infestation in goats, 315  
mounting method, 489  
new species from Puerto Rico, 965, 966  
on tomatoes, control of, 152  
patho-anatomy of attacked roots, 356  
pepper pea nematodes, 151  
populations in pineapple fields, 148  
reniform nematode, 149, 150  
root-knot in pineapple, 97
- Nemocera*  
new species from Puerto Rico, 594
- Neodeciopsis*  
of Puerto Rico, 1107
- Nepticula gossypii*  
cotton leaf-miner, 466
- New Hampshire (poultry)  
comparison with breeds of Puerto Rico, 495
- New York**  
leafhoppers on white clover, 1236  
niacin, in coffee, 142
- Nicotiana tabacum*  
inheritance, 794
- nitrogen  
correlation to sugarcane yield, 219  
effect  
on coffee yields, 17
- on forage crops, 947  
on frequency of cuttings, 1188, 1189, 1190
- on Guinea grass, 925, 1182, 1189, 1191
- on leaf composition (in coffee), 17
- on Napier grass, 1018, 1183, 1188
- on Para grass, 1190
- on soil acidity (in coffee), 17
- on soil physical condition, 1185
- on sugarcane in sand culture, 219, 220
- on yields and composition of five grasses, 295
- on yields and composition of Pangola grass, 1186
- field response of Red-Spanish pineapple, 825
- influence  
of age of sugarcane on its NPK content, 1006  
on Kudzu, 1020  
on Merker-Kudzu mixture, 291  
on moisture and age in sugarcane, 1025
- levels effect on corn yields, 1158, 1159
- nitrification studies, 230
- response by grasses, 930  
by sugarcane, 1003, 1026
- sugarcane trash decomposition of, 229
- nodulation  
influence of nitrogen, calcium and boron, 1020
- nutrition  
calcium-boron relationships in corn, 579  
effect of urea added to diet on health of goats, 222
- influence on age of sugarcane on its leaf nutrient content, 1006  
of height of cane and leaf stage on leaf nutrient content, 1030
- nutritive requirements of dairy cattle, 257
- nutritive values  
of forage crops, 144, 145, 146  
of legumes, 145, 146
- oat seed  
effect of X-ray radiation, 4  
sensitivity of seed to X-ray, 509
- ODONATA**  
*COENOCHIONINE* dragonflies, 782
- of Puerto Rico, ecological survey, 480

- oils  
 effect of spray oils on sugarcane yields, 411  
 fatty oils of "anacagüitas" seed, 139  
 fusel oil determination in alcohol, 241  
 spray deposit on bananas, 239
- okra pods  
 pink bollworm infestation, 1218
- onion-leaf  
 anthracnose, 785
- o, o-diethyl-o,p-nitrophenyl* (Parathion)  
 determination in pineapples, 1055
- oranges  
 of Puerto Rico, seedless selections, 1069
- orchids  
 epiphytic on citrus, 339  
*Pythium* black rot, 91  
 survey of viruses, 846
- organic acids (polybasic)  
 in West Indian cherries and guavas, 1047, 1051
- organic matter  
 activity on soils, 20  
 effect in a clay soil, 215
- oriole  
 nesting habits of Puerto Rico species, 1114
- ornithology  
 birds  
 of Barbuda and their economic importance, 399  
 of Cartagena Lagoon, 394, 396  
 of Culebra, 398  
 of Deschecio, 396  
 of Guadeloupe, 403  
 of Guánica Lagoon, 169  
 of Montserrat, 404  
 of Puerto Rico and adjacent islands, 396, 398, 962, 1203  
 of Saba, 402  
 of St. Croix, 168, 1203  
 of Vieques Island, 401  
 of Virgin Islands, 170, 395, 398
- Cuban birds, economic status, 397  
 Latimer's vireo nesting activities, 1113  
 nesting habits of Adelaide's warbler, 1115  
 nesting of the Puerto Rico oriole, 1114  
 observations on living and extinct birds  
 of Puerto Rico, 1203
- Puerto Rican form of broad-winged hawk, 405  
 West Indian *Loxigilla noctis*, 400  
 West Indian new ground dove, 399a
- overhead irrigation  
 ineffectiveness of method in borer control, 749
- palatability tests with grasses, 921
- Pangola grass  
 beef production, 294  
 comparison with other grasses, 922  
 description of Giant Pangola, 1111  
 effect of frequency of cutting, 1186  
 palatability, 921  
 response to different levels of nitrogen, 930  
 results of nitrogenous fertilizer applications, 920, 1186
- papaya  
 chemical changes in plant, 133  
 cucumber mosaic transmission, 39  
 effect  
 of gibberellie acid on germination of seed, 869  
 of mosaic on photosynthesis, 407
- insects associated with virus diseases of, 747
- performance of Solo variety, 1090  
 photosynthesis affected by mosaic, 407  
 transmission of papaya mosaic, 48, 49, 50  
 viral nature of bunchy top, 192
- paper chromatography  
 in identification  
 of polybasic organic acids in "acerola" and guavas, 1051  
 of sugars in acerola fruit, 1053
- Pará-Carib grass  
 effect of lime and phosphorus, 218
- Pará-grass  
 as pasture crop, 931  
 cattle feeding, 928, 929, 934  
 comparison with other grasses, 922, 928, 929, 934
- effect of nitrogen fertilizer and frequency  
 of cutting on yield, 1190  
 methods of ensiling, 927
- nematode larval infestation in goats, 315
- parasites (See insect parasites.) (See cattle, for parasites of.)

- Parathion  
determination in pineapples, 1055  
residues in acerola, 483, 484, 959
- Paspalum fasciculatum*  
digestibility, 125  
palatability, 926
- pectin methyl esterase,  
occurrence in guavas, 887
- Pectinophora gossypiella* (See pink boll-worm.)
- Pennisetum ciliare*  
chromosomes, 868  
mechanism of apomixis, 1108
- Pennisetum purpureum* (See Merker grass, elephant grass.)
- pentachlorophenol  
in protection of wood against dry-wood termites, 1252
- PENTATOMIDAE  
of Cuba, 160
- peppers  
control of *Rhizoctonia* damping-off, 99  
mosaic, 45, 844, 974  
mosaic survey, 845
- Perforadix sacchari*  
sugarcane root caterpillar, 1063
- pesticides  
effect on vegetable yields, 9
- phenothiazine  
for control of gastrointestinal parasites in cattle, 110
- Phoenix dactylifera*  
*Diaprepes abbreviata* feeding on flowers and fruits, 591
- Phloeonemus*  
(COLYDIIDAE) COLEOPTERA: new species of, 464
- phoma canker  
of pigeon peas, 100
- phosphate  
and lime in sugarcane, 216  
fertilizers for tobacco, 994  
influence  
on coffee, 217  
on pineapple yields, 1016, 1029  
on sugarcane yields, 216  
retention by muck soils, 960
- phosphoric acid  
in soils of Puerto Rico, 231
- short method for citric acid extraction, 232
- phosphorus  
content of pineapple juice, 1049  
effect  
of lime-phosphorus on corn and sweet-potatoes, 224  
on Guinea, Merker, Para-carib grasses, in association with tropical Kudzu, 218
- on health of goats, 222  
on Kudzu grass, 16  
on LEGUMINOSAE, 223  
on mineral composition of soil and grass, 212
- influence of age of sugarcane to N-P-K content, 1006
- response in sand culture studies in sugarcane, 220
- sugarcane, lack of response, 213
- photoperiodism
- enzymatic responses of sugarcane, 1128
- photosynthesis  
in coffee leaves, 1131  
in coffee seedlings, 408  
in papaya affected by leaf mosaic, 407  
in sugarcane affected by mosaic, 342
- Phyllophaga* species (See white grubs.)
- phytopathology  
bibliography of mycology, and phytopathology of Central and South America, Mexico and West Indies, 817
- history of phytopathology in Brazil, 862
- Santo Domingo, survey, 313
- Phytophthora* of *Bryophyllum* "brujas", 101
- phytotoxicity  
Lenna test modification, 470
- pinometer  
effect of fusel oil concentration on alcohol determination, 241
- limitations in soil-moisture and particle-density determinations, 1187
- pigeonpeas  
brine grading, 1045  
effect  
of chemical pretreatment on quality, 864  
of fertilizer on yields, 636

- of gibberellic acid, 6
- of planting age, variety and plant population, 901
- freezing for marketing, 1043
- influence of maturity on canned quality, 1036
- maturity indexes, 1042
- nematode infestation, 151
- phoma canker, 100
- processing characteristics, 1039
- processing variables on quality, 1044
- radiation research, 2, 3
- Shear press in pea-maturity determinations, 1040
- pineapple**
  - calcium-boron relationship on growth and production, 570
  - control
    - of gummosis, 831
    - of nematodes, 154
  - disease of sugarcane, 354
  - effect
    - of BOH in flowering, 306
    - of certain micro-nutrients in growth and yield, 874
    - of filter press cake, 571, 572, 576, 577, 1024
    - of pH and minor elements, 1057
    - of phosphate, 1029
    - of potassium chloride and sulphate on yields, 1015
  - fertilizer experiments, 513, 1032, 1056, 1057
  - field response of Red-Spanish pineapples to nitrogen, calcium, iron, soil pH, 825
  - influence
    - of fertilizers on yields, 990, 1014, 1016, 1029
    - of root knot nematodes, 97
    - of smoke and ethylene on fruiting, 942
  - nematode populations in fields, 148
  - nutrient elements on growth and yield, 874
  - parasites of mealybug, 166
  - Parathion determination, 1055
  - phosphorus content in juice, 1049
  - pineapple mealybug survey, 860
  - relation between chromosomes and stomata, 880
  - root-knot nematode on decline in vigor of Red Spanish variety, 97
  - slips, apparent degeneration, 578
  - weed control with CMU, 309
  - white spot (disease), 355
- pinguinain**
  - properties, preparation and uses, in "maya" fruit, 132
- pink bollworm**
  - alternate host plants, 448
  - of cotton, 643
  - okra pod infestation, 1218
  - status in Puerto Rico during 1935-36, 447
- pinosylvin**
  - resistance properties against termites, 1240
- plantains**
  - banana root weevil, 1066
  - carotene content, 140
  - digestibility, 125
  - experiments on production with conservation, 1184
  - invertase occurrence and characterization, 479
  - palatability of pseudo-stalks, 926
  - production of flour, 865
  - toxicity of flour from unpeeled green plantains, 867
- plant host index**
  - for Puerto Rican fungi, 1120
- plant growth**
  - relationships to iron and manganese, 581
- plants of Puerto Rico**
  - food plants, 162
- plant pathology**
  - bibliography of phytopathology and mycology of Central, South America, Mexico and West Indies, 817
  - bibliography of virus diseases, 814, 815, 816, 818
  - diseases of plants in Brazil, 862
  - host index of virus diseases, 360
  - index of vectors of virus diseases, 361
  - phytopathological survey of Santo Domingo, 313
  - status in Puerto Rico, 329

- plant quarantine hearing to consider injurious insects, 111  
*Plasmiodiphora vascularum*  
in sugarcane, 753  
in synonymy with *Ligniera*, 345  
pod-boring caterpillars  
in bean, 1060  
in lima bean, 1221, 1225  
quarantine regulations, 111  
pollination (See cross-pollination.)  
anther color in sugarcane and proportions of starch filled pollen grains, 243  
of sugarcane, 387  
potash  
influence as fertilizer in tobacco, 1028  
potassium  
chloride in pineapple, 1015  
competition in Kudzu-Merker grass association, 1021  
content in sugarcane soils, 227  
effect on sucrose, 1022  
influence of age of sugarcane to N-P-K content, 1006  
relationship between leaf potassium percentage, sucrose content, and maturity of sugarcane, 25  
response in sand culture studies in sugarcane, 220  
short method determination, 232  
sulphate in pineapple, 1015  
potatoes (See also sweet potatoes.)  
control of early and late blight, 92  
effect  
of spacing and fertilization, 633  
of synthetic soil conditioners, 836  
influence of malic hydrazide, 308  
potato culture in Puerto Rico, 950  
virus investigations, 844  
poultry  
comparative performance of native Puerto Rican fowl, White Leghorn, New Hampshire and crosses, 495  
environmental influence on egg size of pullets, 499  
fowl coryza treatment, 909  
increasing flesh pigmentation, 605  
riboflavin in eggs from hens of different breeds, 134  
time of hatching and sexual maturity of pullets, 498  
predators  
beetles predacious on bamboo scales, 164  
*Prosopis chilensis*  
*Amblycerus* affecting seeds, 246  
protein  
content of Kudzu, 640, 1020  
effect of nitrogen fertilization on protein content of Guinea grass, 1182  
influence  
of nitrogen, calcium and boron on protein content of Napier grass, 1018  
of nitrogen on protein content of tropical Kudzu, 1020  
pruning  
effect on tomato plants, 903  
*Prunus occidentalis*  
insects, 1254  
*Pseudomonas solanacearum*  
Fuller's formamide method in identification, 841  
*Pseudomonas tumefaciens*  
in Puerto Rico, 59  
**PSYLLIDAE**  
new Puerto Rico species, 263  
pullets  
influence of time of hatching on sexual maturity, 498  
size of eggs, 499  
*Pulvinaria elongata* (See *Pulvinaria iceryi*)  
*Pulvinaria iceryi*  
outbreak, 424  
pump drainage, 319  
pustule scale  
biological control, 1242  
*Pythium*  
black rot on orchids, 91  
on sugarcane, 233  
quarantine  
restrictions on exporting fruits and vegetables, 111  
Queensland raspberry, 554  
radiation  
effect of ionizing radiation on coffee seedlings, 1087  
X-ray radiation  
on oat seed, 4, 509  
on pigeonpeas, 2, 3

- Rana catesbeiana*  
food, 75
- raspberry  
Mysore variety, 1086
- Rubus probus*, 554
- rats  
alloxan diabetic effect of *Morus alba*, 138  
relation to ratoon stunting disease of sugarcane, 65
- ratoon stunting disease  
effect of hot water treatment, 66  
failure  
of rats in transmission, 65  
to transmit through the soil, 67
- red-banded thrips control in *Acalypha*, 761
- refrigeration  
behavior of avocado, 827
- Red Spanish (pineapple)  
influence of phosphate fertilizers, 1016
- reniform nematode  
parasitism of bacterial nodules, 149  
pathogenicity in various hosts, 150
- rhinoceros beetles  
in sugarcane, 1104
- Rhinocricus arboreus*  
feeding habits, 382
- Rhinocritus monilicornis*  
new milliped for Puerto Rico, 1251
- Rhizoctonia*  
control on peppers, 99  
of Puerto Rico, 754
- Rhytisma leptosporium*  
new fungus, 1249
- riboflavin  
in eggs from hens of different breeds, 134
- rice  
damage caused by snail, *Marisa cornu-rictis*, 808  
first record of plant hopper, *Sogata orizicola*, 603  
“hoja blanca” symptoms, 809
- root  
coffee root disease, 98  
development impeded by mechanical soil factors, 689  
effect of age on roots of sweetpotatoes for canning, 506  
diseases in sugarcane, 358, 430, 752  
inducing substances, 7  
investigations on *Manihot*, 393
- patho-anatomy when attacked by nematodes, 356  
pests in sugarcane roots, 1063
- root stalk rot of *Sansevieria*, 95
- root system of coffee, 555, 556, 557
- sugarcane diseased by *Pythium*, 233
- sugarcane mosaic virus, 38
- root-dipping inoculation method  
for testing tomatoes for wilt resistance, 62
- rooting  
of acerola cuttings, 7
- root knot nematode  
effect on patho-anatomy of roots, 356  
in sugarcane roots, 963  
on pineapple, 97
- root-weevil  
of bananas, 647, 1066  
of cassava, 646  
of sugarcane, 167
- rose  
vitamin C in hips, 131
- Rubus probus*  
Queensland raspberry, 554
- Saba*  
birds, 402
- saline soils (See salt lands.)
- salt lands  
chemical attempt to reclaim a salty clay, 225  
resistant sugarcane varieties, 434  
salinity status of Lajas Valley, 228  
soil salinity and sugarcane growing, 226
- sand culture  
in corn, sugarcane and cotton investigations, 220  
in correlation of nitrogen in sugarcane, 219
- sands  
origin of white quartz in northern Puerto Rico, 1127
- Sansevieria laurentii*  
*Aspergillus* root-stalk, 95
- Santo Domingo**  
*Amblycerus* affecting seeds of *Prosopis chilensis*, 246  
fungi, 773  
new aphid on cacao, 1092  
phytopathological survey, 313

- sugarcane insects, 1211
- XYLARIACEAE**, 773
- saponins
  - biosynthesis in *Dioscorea*, 939
- SARCOPHAGIDAE**
  - new from South America, 562
- SC 12(4)**
  - variety of sugarcane, 977
- scale insects (See COCCIDAE.)
- Scapteriscus vicinus**
  - Larva americana*, parasite specific, 1233
  - notes, 714
- scarification
  - in germination of Congo watermelon seed, 853
- SCARABAEIDAE**
  - new species from Puerto Rico and Virgin Islands, 299
- scincid
  - reestablishment, 526
- SCOLIIDAE**
  - wasp parasites of cane grubs, 234
- seeds
  - chalcid wasp infestation, 422
  - seedless orange selections of Puerto Rico, 1069
- Selenothrips rubrocinctus**
  - control on *Acalypha*, 761
- sexual odor
  - in boars, 975
- shade trees
  - Inga* species of Middle America, 859
- Signal grass
  - description and cytology, 1112
  - digestibility, 126
  - palatability, 921
- silage
  - methods of ensiling and quality of Merker, cane tops and Para grass, 927
  - value as feed for dairy cows, 261
- silica
  - high silica content and resistance to injury by cyanide and marine borers, 1255
- of Puerto Rico soils, 231
- silos
  - value of covering, 933
- silver skin
  - removal from coffee beans, 235
- Simazine
  - deleterious effect on mosaic-infected sugarcane, 63
- smoke
  - in pineapple fruiting, 942
- snakes (See also Herpetology.)
  - Alsophis* species in Puerto Rico area, 536
  - a new name for *Alsophis antillensis*, 550
  - boas from Puerto Rico, 541
  - Tretanorhinus* of Cuba and Isle of Pines, 549
- snail (*Marisa cornuarietis*)
  - damage caused to rice seedlings, 808
- socio-economics
  - of southwestern Puerto Rico, 580
- sodium fluoride
  - as ascariicide in swine, 806
- Sogata oryzicola**
  - rice plant hopper in Puerto Rico, 603
- soils
  - attempt to reclaim a salty clay, 225
  - available water capacity in surface layer of various soils, 671
  - buffer capacity and organic matter relationships, 1168
  - carbon determination methods, 438
  - cation exchange capacity, 214
  - characterization of buried latosol, 709
  - constituent minerals, 593
  - determination of phosphoric acid, lime and potash soluble in citric acid solution, 232
  - determining lime requirements, 18
  - differential response to additions of organic matter, 705
  - effect
    - of filter press cake, 706
    - of filter press cake on tomato plants grown in sterilized and unsterilized soil, 443
    - of incorporating organic materials into clay on yield of food crops, 215
    - of lime and soil conditions on crop yield, 701
    - of lime on mineral composition, 211, 223
    - of lime-phosphorus and green manure on corn and sweet potatoes grown on acid soil, 224

- of lime and phosphorus on leguminous yield, 223
- of nitrogen fertilization and grass species on physical conditions in tropical pastures, 1185
- of phosphorus and lime on the mineral composition of the soil, 211, 212
- of soil amendments on yield and ascorbic acid of acerola, 635
- of soil condition on sucrose, 680
- of soil structure stabilizers on tobacco, 702
- of subsoil fertilization on sugarcane yields, 732, 733
- of synthetic soil conditioners on potato and stringless beans, 836
- of temperature on base-exchange capacity of clays, 317
- of tractor traffic compaction on irrigated soil, 693
- evaluation of lime requirements of tropical soils, 692
- factors impeding root development, 689
- fertility status of organic soils in Puerto Rico, 961
- field response of Red-Spanish pineapples to soil pH, 825
- fumigation for nematode control, 154
- handling of sugarcane trash, 708
- hydraulic conductivity of subsoils in **Lajas Valley**, 700
- lack of response to synthetic soil conditioners by some food crops, 703
- lateritic soils, rate of infiltration, 209
- lime and acid soil, pH changes, 890
- limitations in use of air pionometer, 1187
- mineral from soil to plant to blood, 211, 212, 218, 221, 222
- moisture and clay content, 669
- morphological and physicochemical properties of soils of east-central Puerto Rico, 710
- nematode isolation from soil, 155
- nitrification, 230
- nitrogen transformation in the decomposition of sugarcane trash, 229
- nutrient content determination, 272
- obtaining permanent wilting percentage, 670
- organic matter activity, 20
- organic soils in sugarcane, 520
- organic soils utilization, 694
- pH of soils in Puerto Rico, 1009
- phosphate retention in muck soils, 960
- phosphoric acid and silica, 231
- potassium content in sugarcane soils, 227
- primary soil-forming processes, 485
- reclamation of a saline-sodic soil in **Lajas Valley**, 24
- relative erosiveness, 208
- salinity status of **Lajas Valley**, 228
- salinity in sugarcane fields, 226
- soil pH fertilizer and minor element influence on Kudzu, 640
- soil tumors, 23
- stability of soil aggregates, 698
- synthetic soil conditioners applied to clay soil in **Lajas**, 703
- tillage and subsoil fertilization, 732, 733
- Toa silt loam buffer capacity, 1168
- white quartz sands, 1127
- soil tumors
- occurrence in Puerto Rico, 23
- SOLANACEAE**
- bacterial wilt, 790
- bacterial wilt of tobacco and its inter-transmission, 972
- Solanum melongena* (See eggplant.)
- solar radiation
- in coffee, 558, 857
- sorghum
- presence of a virus-like disease in Puerto Rico, 40
- response of Hegari sorghum to lime applications, 707
- soybeans
- boron-manganese relationship, 569
- chelates in control of iron chlorosis, 567
- Sphaerodactylus*
- determination chart for Puerto Rico region, 530
- of Culebra, 524, 525
- of Mona Island, 524
- of Puerto Rico, 524, 529
- Sphaerodactylus gayiæae*, 529
- Sphaerodactylus grandisquamis*, 533
- spiders
- of Puerto Rico, additions to fauna, 251
- of Barbados, 1152
- of St. Croix, 173

- Spiraea* aphid
  - dispersion to tropics, 1247
- staking
  - effect on tomato plants, 903
- St. Augustine grass
  - comparison with other gasses, 922
- St. Croix**
  - ARACHNIDA**, 173
  - biological control of *Diatraea saccharalis*, 775
  - birds, 168, 395, 1203
  - Brachyuran crabs, 175
  - endoparasites, 172
  - fauna, 171
  - fresh water fishes, 176
  - insects, 174
  - mammals, 177
  - mongoose food habits, 1244
- statistical methods
  - in agricultural research, 271
  - in field trial interpretations, 274
  - in new field trial performance tests, 275
  - in normal equation solutions, 273
  - in relationships between plant composition and crop yields, 279
  - Mitscherlich's method, 272
- steam consumption in electrified sugar mill, 296
- Sterculia apetala*
  - fatty oils, 139
- stilbene
  - termite resistant properties, 1240
- stone cells
  - chemical analysis in guava, 1052
- streptomycin
  - in control of bacterial wilt of tomato, 840
  - in treatment of fowl coryza, 909
- stringless beans
  - effect of synthetic soil conditioners, 836
- stripe disease
  - of corn, 363
- sucrose
  - content as affected by moth-borer, 748
  - as influenced by inclination of stalks, 79
  - determination of percentage, 26
  - effect
    - of elevation, 695
    - of potassium, 1022
    - of shade or sun, 193
  - of soil conditions, 680
  - of spray oils on yields, 411
  - of time of harvest and age, 991
- varietal factors of, 712
  - of weather and climate, 696
  - of yellow stripe disease, 652
- fertilizers as factor affecting content, 1000, 1033
  - influence of maleic hydrazide and 2-4D sprays, 711
- sugar
  - as nematocide, 967
  - experience in manufacture, 771
- sugarcane (See also sucrose)
  - as forage crop, 924
  - cultivation, 433
  - deleterious effect of Simazine on mosaic-infected plants, 63
  - effect
    - of differential fertilizers, 1023
    - of lime and phosphates on yield, 216
    - of soil conditions on sucrose content, 680
    - of ethylamino triazine and dimethyl urea, 64
  - efficiency in use of nitrogen fertilizer, 1003
  - foliar diagnosis, 989
  - in sand culture, 220
- influence
  - of age on leaf nutrient content, 1006
  - of ammonium sulphate on pH of soils, 993
  - of height and leaf stage on leaf nutrient content, 1030
  - of mineral deficiencies on growth and yield, 1013
  - of stalk inclination on sucrose content, 79
  - of variety on moth-borer infestation, 1210
  - of time of planting on growth of P. R. 980, 81
- intercropping with food crops, 704
- irrigation, 471
- mottling or yellow stripe disease, 652
- potassium content in soils, 227
- relationships between potassium content, sucrose and maturity, 25
- response

- to fertilizers, 368, 520, 630, 1019  
 to nitrogen, 1003, 1026  
 subsoil fertilization, benefits, 732, 733  
 topping, 80  
 sugarcane diseases (See also sugarcane mosaic.)  
   chlorotic streak, 58, 190, 198, 634  
   dry top rot, 328, 345, 368, 757  
   eye spot, 340  
   fungi and diseases, 596  
   gumming, 344, 346, 377, 755  
   history and cause of rind disease, 595  
   leaf spot, 331, 332  
*Ligniera vascularis*, 345  
*Marasmus sacchari*, 353  
 mosaic, 64, 190, 198, 247, 300, 337, 342, 460, 515, 756, 843, 1026  
 mottling or yellow stripe, 318, 330, 429, 460, 652, 751, 753, 756, 1101, 1121  
 nematodes, 963, 964, 965  
 pineapple disease, 354  
 ratoon stunting, 65, 66, 67  
 root diseases, 233, 358, 430, 752, 963, 964, 965, 1063  
*Thielaviopsis paradoxa*, 352, 354  
 varietal relationship to diseases, 338  
 sugarcane inheritance  
   anther color and pollen grain relationships, 243  
   cross-pollination, 387  
   studies, 386  
 sugarcane insects  
   annotated bibliography, 1102  
   effect of borer on sucrose content, 748  
   ineffectiveness of overhead irrigation in borer control, 749  
   influence of variety on moth-borer infestation, 1210  
   insect parasite introduction, 1209  
   insects associated with sugarcane, 1199  
   Lamellicorn larvae, 234  
   leaf-eating caterpillars, 598  
   May-beetles, 163, 234, 1100, 1104, 1105  
   melolonthids, 163, 1100, 1105  
   minor insect pests, 1208  
   mites, 759, 1103  
   moth-borer, (See *Diatraea saccharalis*.)  
   of Santo Domingo, 1211  
   parasites of moth-borer, 417  
   red-striped scale, 424  
   relation to mottling disease, 1101  
   root caterpillars and other new root pests in Puerto Rico, 1063  
   seasonal cycle of insect abundance, 1261  
   weevil root-borer or "vaquitas", 167  
 white grubs, 167, 234, 1100, 1104, 1105  
 sugarcane mosaic  
   absorption spectrum of chlorophyll, 318  
   developments in the study of, 756  
   deleterious effect of Simazine on infected sugarcane, 63  
 effect  
   of ethylamino triazine and dimethyl urea, 64  
   on plant cell, 341  
   on yield of sugarcane variety B34-104, 515  
 experience during one year with the disease, 429  
 facts about the disease, 1121  
 first records, 1228  
 histology and cytology, 337  
 identification and distribution of strains, 247  
 infection and nature, 751  
 insect relationships, 1101  
 investigations, 300  
 mechanical method for artificial transmission, 1062  
 on roots of infested plants, 38  
 on variety Mayagüez, 336, 55  
 photosynthesis, 342  
 status of knowledge in 1924, 330  
 prevalence, 198  
 recovery of cane variety B 34-104, 42  
 root infection, 38  
 serology, 843  
 sugar-content relationships, 632  
 sugarcane moth-borer (See *Diatraea saccharalis*.)  
 sugarcane physiology  
   influence  
 of age on N-P-K content, 1006  
 of moisture and age on nitrogen, 1025  
 mineral deficiencies on growth and yield, 1013  
   negative response to phosphorus, 213  
   photoperiodism and enzymatic responses, 1128

- Trichogramma minutum*  
natural parasitism of moth-borer, 1260
- Trifolium repens*  
leafhopper on white clover in northern  
New York and Haiti, 1236
- Trinidad**  
beetles predatory on coccids, 164
- Trophorus longimarginatus*  
new nematode species, 966
- tropical diarrhea  
internal parasites, 109
- TRYPETIDAE**  
fruit fly studies, 1064
- Tucumán (variety)  
varieties of Java, 976
- urea  
ammonium sulphate and urea in tobacco,  
1027  
effect on nutrition and health of goats,  
222
- Valsyn-gel  
evaluation in treatment of chromic and  
subclinical mastitis, 911, 912
- vanilla  
cashew as a support, 575  
relation of moisture content to quality  
of vanilla beans, 114  
shade requirements, 573, 574
- varieties of sugarcane (See sugarcane  
varieties.)
- vascular disease  
of sugarcane, 753, 757
- vegetables  
public hearing on quarantine, 111
- vegetable diseases  
bacterial wilt of SOLANACEAE, 790  
studies, 1116
- vegetables  
effect of pesticides on yield, 9  
insect pests, 384
- Venezuela**  
fungi, 1139  
grasses, 125, 926  
insect records, 750  
insects observed in State of Aragua, 737
- Venezuela grass  
palatability, 926
- velvet bean  
green manure effect, 210
- Vieques Island**
- herpetology, 531  
ornithological investigations in 1935, 401
- vireo  
*Vireo latimeri* nesting activities, 1113
- Virgin Gorda**  
herpetology, 544
- Virgin Islands**  
bird records, 170, 395, 398  
herpetology, 542, 545, 548  
new frog species, 540  
new species of SCARABAEIDAE, 299
- Virgin Islands (British) (See Anegada,  
Virgin Gorda and Tortola.)**
- herpetology, 548
- virus diseases  
absence of hemagglutinins, 839  
antigenic relationship of mosaic virus  
strains, 844  
bibliography, 814, 815, 817, 818  
bunchy-top on papaya, 192  
chlorotic ring spot virus from kale, 90  
chlorotic streak of Merker grass, 248  
cucumber mosaic transmission to *Carica*  
*papaya*, 39  
description of various diseases, 364  
effect  
of mottle and common tobacco mosaic  
viruses, 44  
of chlorotic streak on yield of sugar-  
cane, 634  
of viruses on yield of variety B 34-104,  
515
- etch virus on tobacco, 68, 660
- host index, 360, 365, 370
- insects associated with papaya virus  
diseases, 747
- mosaic  
on sugarcane variety Mayagüez 336,  
55  
on cucumber, 373  
on orchids, 846  
on sorghum, 40  
on sugarcane roots, 38  
on sweetpotato, 33  
on tomato, 36, 41, 93, 94  
new to Puerto Rico, 351  
papaya mosaic, 48, 49, 50  
phloem necrosis in the stripe disease, 363  
reaction in *Nicotiana* spp., 45

- records in **Puerto Rico**, 362  
 serological reactivity of sugarcane mosaic, 843  
 recovery, so-called, of cane variety B 34-104 from mosaic virus, 42  
 squash mosaic strain and cucurbit viruses, 842  
 survey of tobacco and pepper, 845  
 susceptibility of melons, 34  
 of sugarcane varieties to heat treatment, 58  
 vector index, 361, 366, 371  
 virus B new host, 57  
**vitamin A**  
 in blood of dairy calves, 724  
**vitamin C**  
 in acerola, 131, 592  
 in rose-hips, 131  
*Walterianella venusta*  
 cytology, 1198  
**warbler**  
 Adehalides' warbler nesting habits, 1115  
**wasp parasites**  
 chalcid, 422  
 eneurytidls on hesperiid eggs, 472  
 of cane grubs, 234  
**watermelon**  
 effect on seeds of scarification and gibberellic acid, 853  
**water cultures**  
 in relation to growth of pineapple, 1057  
**weeds**  
 in pineapple, control, 309  
 in tobacco seedbeds, control, 307  
**weed killers** (See herbicides.)  
**weevil root borer**  
 of sugarcane, control, 163  
**West Indian blister mite** (See also *Eriophyes gossypii*.)  
 damage to Sea Island cotton, 446  
**West Indian cherry** (See acerola.)  
**West Indian COENAGRIONINAE**, 782  
**West Indian fruitfly** (See also *Anastrepha fraterculus*.)  
 quarantine hearings, 111  
 introduced parasites, 167  
**West Indian mahogany**  
 termite repellency, 137  
**West Indian mole cricket**, 714  
**West Indies**  
 bibliography of phytopathology and mycology, 817  
*Loxigilla noctis*, 400  
 new ground dove, 399a  
 termites, 1109  
 TIPULIDAE, 83, 84, 85, 86  
**white clover**  
 leafhopper fauna, 1236  
**white grubs**  
 control, 163, 234, 383, 1239, 1245  
 injuring sugarcane, 163, 1100, 1104, 1105  
 life cycles, 1100, 1105  
 parasite status, 1227  
**White Leghorn (poultry)**  
 comparison with Puerto Rican breeds, 495  
**white quartz sand**  
 in **Puerto Rico**, origin, 1127  
**white spot**  
 of pineapples, 355  
**wither-tip**  
 of mango, 786  
**wilt (bacterial)**  
 of *Cosmos*, 335  
 of eggplants, 336  
 of SOLANACEAE, 790  
 of tobacco, 972  
 resistance test of tomatoes by root-dipping inoculation, 62  
**wilting**  
 obtaining permanent wilting percentage, 670  
**witches' broom**  
 of *Tabebuia pallida*, 372  
**wood extractives**  
 as termite repellents, 1241  
*Xanthomonas vesicator*  
 in **Puerto Rico**, 847  
**XILARIACEA**  
 of **Dominican Republic**, 773  
**X-rays**  
 effect on oat seed, 4  
 sensitivity of oat seed, 509  
**yam**  
 mosaic disease, 35  
 yellow stripe disease of sugarcane (See sugarcane mosaic.)