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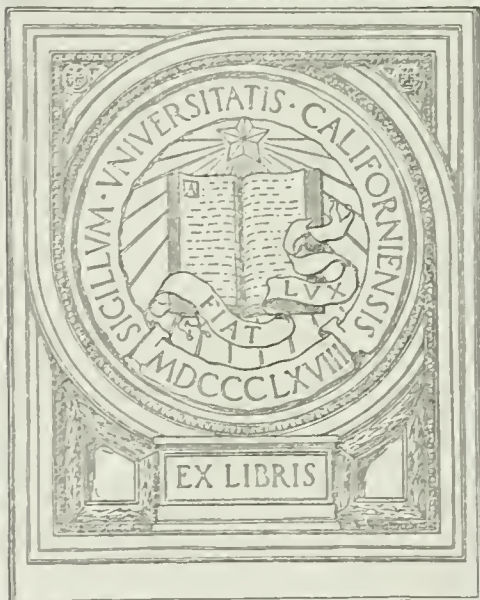
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U. S. D. A., 1901-1920
AND DIVISIONS AND OFFICES
COMBINED TO FORM THIS BUREAU
1862-1901



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UNITED STATES DEPARTMENT OF AGRICULTURE

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Number 3.

Bibliographical Contributions.

January 1921.

A CHECK LIST OF THE PUBLICATIONS OF THE BUREAU OF PLANT
INDUSTRY, 1901-1920, AND OF THE DIVISIONS AND
OFFICES WHICH COMBINED TO FORM THIS
BUREAU, 1862-1901.

Prepared by Jessie M. Allen, Bureau of Plant Industry Library.

This list has been prepared in an effort to assist librarians and others who may be interested in checking their files of the Department's publications on plant industry. It is hoped that it will eliminate some of the confusion in regard to the series of bulletins and reports on plant industry subjects, due to the many changes in the organization of the offices dealing with these subjects. Although none of the separate offices which were coordinated in 1900 to form the Bureau of Plant Industry have since that time issued separate series of publications, with the exception of occasional office circulars, this fact is not clear in the minds of many who are attempting to procure full files of the publications. This list is not expected to take the place of an index or catalog of the publications, but merely to serve as a check list, and to furnish an historical survey of the series in which the various publications have been issued.

Beginning with the earliest days of the Republic, Government officials including officers of the Army and Navy and consuls, as well as private citizens, interested themselves in importing to the United States plants and animals for the general benefit. Congress made the first appropriation to aid this enterprise, in 1839, to be expended by the Commissioner of Patents.

In 1862 the work along these lines was grouped into a Department under a Commissioner, while in 1888 the Department became one of the executive departments, and its Secretary was given a place on the Cabinet.

In the early days of the Department, all the results of its work were published in the annual or special reports of the Department. As the investigational work of the Department grew, its organization necessarily became more complex, and separate divisions or sections were created to study the different lines of work. As each special division was organized, this division issued its own series of bulletins and circulars, setting forth its results.

The Bureau of Plant Industry was one of four bureaus organized during the fiscal year 1900/01 in accordance with an act of Congress. This act authorized the bringing together of the plant physiological and pathological investigations, the botanical investigations, the grass and forage plant investigations, the work on pomology, and the experimental gardens and grounds; and during the year the Arlington

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experimental farm, the investigations in the production of domestic tea, the work on foreign seed and plant introduction and the Congressional seed distribution were added, by executive order.

After this coordination of the various divisions which had been issuing bulletins and circulars, the separate division series were discontinued, and thereafter, until 1912, all contributions were issued as bulletins or circulars of the Bureau of Plant Industry, except those which appeared in the Department Reports, Farmers' Bulletins or Yearbooks.

In 1912, the separate bureau series of bulletins and circulars were discontinued, and the series "United States Department of Agriculture Bulletin" was started, in which were included with continuous numbering, the bulletins contributed by all bureaus. No department circular series was started, but a few circulars were issued from different offices of the Bureau, with separate numbering for each office. In 1913 a series of Department Circulars was started, with the intention of thereafter including all circulars in this series.

At the present time, the Bureau of Plant Industry publishes the results of its investigations in the following series of department publications: Annual report, Yearbook, Bulletin, Circular, Department Report, Office of Secretary Circular, Farmers' Bulletin and Journal of Agricultural Research.

The present list is arranged, so far as possible, in chronological order. This has not been possible in all cases, as some of the series overlap. The Monthly, Special and Department Reports, Office of Secretary Circulars, the Farmers' Bulletin series and the Yearbook articles are listed first, as these are general series which have been running for some time coincident with series of the various divisions and of the Bureau. The lists for the general department publications, U. S. Department of Agriculture Bulletin, Journal of Agricultural Research and Department Circular follow the lists for the Bureau of Plant Industry publications, as these began when the Bureau series were discontinued.

No attempt has been made to show whether the publications are available for distribution. Most of the earlier series are no longer available for free distribution, though some of them may be on sale at the Office of the Superintendent of Documents.

Eunice R. Oberly,
Librarian, Bureau of Plant Industry.

January 1, 1921.

CONTENTS

Department series which began before Bureau of Plant Industry was organized.

	Page
Department Report	4-5
Monthly Report	5-6
Special Report	6
Farmers' Bulletin	7-20
Yearbook	21-34
Office of Secretary Circular	33-34

Publications of divisions and offices which preceded Bureau of Plant Industry

Division of Gardens and Grounds.	35-36
Division of Botany	37-44
Division of Microscopy.	45-46
Division of Pomology	47-48
Division of Vegetable Physiology and Pathology.	49-51
Office of Fiber Investigations	52-53
Division of Agrostology	54-56
Office of Seed and Plant Introduction.	57

Publications of Bureau of Plant Industry.

Bulletin.	58-70
Circular	71-77
[Miscellaneous publications].	78-93
[Office circulars]	94-100
Inventory of seeds and plants	100

Department series started when separate bureau series were discontinued.

Bulletin.	101-111
Journal of agricultural research	112-125
Department circular	126-127

DEPARTMENT OF AGRICULTURE

[DEPARTMENT] REPORT

No. [1] - 117. 1862-1918. In progress.

Contributions from Bureau of Plant Industry
and Divisions which preceded the Bureau

No. 1-58, 1862-1898, were issued without numbers. A list of titles and assigned numbers for this series was printed on cover pages 3 and 4 of No. 59, which was ~~the~~ first to bear a number.

Number.

- [32] Vasey, G. The agricultural grasses of the United States. Also the chemical composition of American grasses, by Clifford Richardson. 1884. (Contrib. from Botanist)
- _____ The agricultural grasses and forage plants of the United States, and such foreign kinds as have been introduced; with an appendix on the chemical composition of grasses, by Clifford Richardson... New, rev. & enl. ed. 1889. (Bot. div., Spec. bul.)
- [47] Saunders, W. Catalogue of economic plants in the collection of the U. S. Department of Agriculture. 1891. (Contrib. from Div. of gard. & grounds)
- [48] _____ Papers on horticultural and kindred subjects. Reprinted from Reports of the Department of agriculture, 1863-1889. 1891. (Contrib. from Div. of gard. & grounds)
65. Loew, O. Physiological studies of Connecticut leaf tobacco. 1900. (Contrib. from Div. of veg. phys. & path. & Div. of Soils)
68. _____ Catalase, a new enzyme of general occurrence, with special reference to the tobacco plant. 1901.
71. Kearney, T.H. & Cameron, F.K. Some mutual relations between alkali soils and vegetation. 1902. (Contrib. from Div. of veg. phys. & path. & Div. of Soils)
72. Progress of the beet-sugar industry in the United States in 1901. 1902.
Townsend, C.O. Some diseases of the sugar beet. p. 90-101.
Pieters, A.J. Sugar-beet seed: production and testing, p. 101-106.
74. Progress of the beet-sugar industry in the United States in 1902. 1903.
Palmer, T.F. Single-germ beet balls and other suggestions for improving sugar-beet culture, p. 141-152.
Tracy, J.E.W. Sugar-beet seed: its importance and production. p. 153-156.
78. Cook, O.F. An enemy of the cotton boll weevil. 1904.
80. Progress of the sugar-beet industry in the United States in 1904. 1905.
Townsend, C.O. Single-germ beet seed. p. 161-166.
_____ Fertilizers and sugar beets. p. 167-176.
Tracy, J.E.W. Commercial sugar-beet seed. p. 177-183.
82. Progress of the beet-sugar industry in the United States in 1905. 1906.
Galloway, B.T. Sugar-beet investigations in 1905, p. 127-130.

DEPARTMENT OF AGRICULTURE

[DEPARTMENT] REPORT (cont.)

- 84. Progress of the beet-sugar industry in the United States in 1906. 1907.
 Saylor, C.F. Report of the special agent, p. 5-131.
 Galloway, B.T. Work of the Bureau of plant industry. p.131-135.
- 86. Progress of the beet-sugar industry in the United States in 1907. 1908.
 Saylor, C.F. Report of the special agent. p.5-83.
 Galloway, B.T. Work of the Bureau of plant industry. p. 84-88.
- 90. Saylor, C. F. Progress of the beet-sugar industry in the United States in 1908. 1909.
- 92. Progress of the beet-sugar industry in the United States in 1909. 1910.
 Saylor, C.F. Report of the special agent. p.7-70.
 Tracy, J.E.W. Comparative tests of sugar-beet varieties. p.71-78.
 Shaw, H. B. The curly-top of beets. p.79-87.
- 95. The agricultural possibilities of the Canal Zone. 1912.
 Pt. II. Taylor, W.A. The outlook for agriculture. p.39-49.
- 96. Soils of the prairie regions of Alabama and Mississippi and their use for alfalfa. 1911.
 Pt. II. Crosby, M.A. Alfalfa on the Houston clay: its culture and management.

MONTHLY REPORT.

May 1863 - December 1876.

Contributions from the Superintendent of Gardens and Grounds, the Botanist and the Microscopist.

"This series contains reports on the conditions of the crops, on special subjects of interest to farmers, and meteorological observations received from the Smithsonian Institution, under the direction of Professor Henry. This series was discontinued in 1876, but ... the Special Reports (old series) continue the reports on the conditions of crops, etc., beginning in 1877." (From Library Bulletin 9.)

May - November 1863 entitled "Monthly report on condition of crops"; January - December 1864, "Bi-monthly report of Agricultural Department". December 1863 and August 1864 not issued.

- 1867. S[auanders], W.? American wines and wine grapes. p.327-329.
 (Contrib. from Supt. gard. & grounds?)
- 1867. _____ Millew of the grape. p.330-333. (Contrib. from Supt. gard. & grounds. Paper read before Amer. Pomol. Soc., St. Louis, Mo.)
- 1870. Parry, C.C. Botanical explorations in East Tennessee. p.221-223. (Contrib. from Botanist)
- 1871. _____ The North American desert flora between 32° and 42°, north latitude. p.23-25. (Contrib. from Botanist. Paper read before Brit. Assoc., Liverpool, 1870.)
- _____ Letter from [San Domingo]. p.69. (Contrib. from Botanist)

DEPARTMENT OF AGRICULTURE

MONTHLY REPORT (cont.)

1872. Saunders, W. Notes of the garden. p.72-74. (Contrib. from Supt. gard. & grounds.)
- Vasey, G. First words of the botanist. p.142-143.
Botanical notes. p.222-225, 313-317, 381-387, 446-449, 505-507. (Contrib. from Botanist)
- Taylor, T. Microscopic investigation. p.225-229, 317-319, 449-451, 507-511. (Contrib. from Microscopist)
1873. Vasey, G. Botanical notes. p.34-35, 115-118, 171-172, 247-249, 354-356, 503-506, 585-587. (Contrib. from Botanist)
- Taylor, T. Microscopic observations. p.118-123, 250-253. (Contrib. from Microscopist)
- Microscopic investigation. p.431-433. (Contrib. from Microscopist)
- Microscopic observations. p.588-594. (Contrib. from Microscopist)
1874. S[aunder], W? The phylloxera in America. p.54-57. (Contrib. from Supt. gard. & grounds?)
- Vasey, G. Botanical notes. p.50-52, 151-156, 227-228, 330-331, 379-380, 438-439, 513-514. (Contrib. from Botanist)
- Taylor, T. Microscopic investigations. p.52-54. (Contrib. from Microscopist)
- Microscopic observations. p.228-231, 273-275, 439-449, 514-519. (Contrib. from Microscopist)
1875. Vasey, G. Botanical notes. p.126-127, 178-179, 313-315. (Contrib. from Botanist)
1876. Taylor, T. Microscopic observations. p.45-49, 105, 196-198, 350-353, 413, 464-466. (Contrib. from Microscopist)

SPECIAL REPORT.

no. 1-65. 1877-1883.

Contribution from Division of Gardens & Grounds and Division of Botany.

Number.

62. Saunders, W. Observations on the soils and products of Florida. 1883. (Contrib. from Supt. gard. & grounds)
63. Vasey, G. The grasses of the United States: being a synopsis of the tribes and genera, with descriptions of the genera, and a list of the species. 1883. (Contrib. from Botanist)

DEPARTMENT OF AGRICULTUREFARMERS' BULLETIN

No. 1-1178. 1889-1920. In progress.

Contributions from Bureau of Plant Industry
and Divisions which preceded the Bureau.

Previous to 1889, frequent bulletins were issued from the various divisions relating to the work undertaken by them. To reach the farmers of the country effectually, more was found to be needed than the issue of the above bulletins in editions of 5,000 or 10,000 copies. Many of these were the careful record of scientific investigations by scientific men, the value of whose conclusions must necessarily bear the scrutiny of scientific investigators the world over. The elimination of all scientific terms and language from such reports was impossible. So it was considered advisable to establish a series for the widespread publication of the practical conclusions of the scientific observations or investigations undertaken, in a brief form and plain terms, and on a scale so extensive as to practically reach all the farmers of the country. Before such series was established, in 1889, advance sheets of every bulletin or other publication about to be issued were prepared, comprising a brief synopsis of the work recorded in the bulletin and giving the conclusions arrived at which might serve as practical suggestions to the farmer. These advance sheets were furnished to the press associations, to all agricultural and many other weekly papers, to agricultural writers, and any journalists and editors applying for them. Later in 1889, the series of farmers' bulletins, brief in form, of an inexpensive character, and summarizing in plain language the information possessed by the Department in regard to some specific subject of interest to the practical farmer, was started. (From Ann. repts., 1889 and 1890.)

Numbers 1-158 were contributed by the various divisions as indicated; numbers 159 - date by the Bureau of Plant Industry.

Number.

4. Galloway, B. T. Fungous diseases of the grape and their treatment. 1891. (Contrib. from Div. of veg. phys. & path.)
5. Swingle, W. T. Treatment of smuts of oats and wheat. 1892. (Contrib. from Div. of veg. phys. & path.)
7. Spraying fruits for insect pests and fungous diseases, with a special consideration of the subject in its relation to the public health. 1892. (Contrib. from Div. of veg. phys. & path.)
10. Dewey, L. H. The Russian thistle and other troublesome weeds in the wheat region of Minnesota and North and South Dakota. 1893. (Contrib. from Div. of bot.)
13. Saunders, W. Cranberry culture. 1894. (Contrib. from Div. of gard. & grounds)
15. Galloway, B. T. Some destructive potato diseases: what they are and how to prevent them. 1894. (Contrib. from Div. of veg. phys. & path.)
17. Smith, E. F. Peach yellows and peach rosette. 1894. (Contrib. from Div. of veg. phys. & path.)
20. Washed soils: how to prevent and reclaim them. 1894. (Contrib. from Divisions of Chemistry, Soils, Forestry and Botany)

DEPARTMENT OF AGRICULTUREFARMERS' BULLETIN (cont.)

Number.

27. Dodge, C.R. Flax for seed and fiber in the United States. 1895. (Contrib. from Fiber Inves. Office.)
28. Dewey, L.H. Weeds: and how to kill them. 1895. (Contrib. from Div. of Bot.)
30. Pierce, M.B. Grape diseases on the Pacific coast. 1895. (Contrib. from Div. of veg. phys. & path.)
31. Smith, J.G. Alfalfa, or lucern. 1899. (Contrib. from Div. of agros.)
33. Smith, E.F. Peach growing for market. 1895. (Contrib. from Div. of veg. phys. & path.)
38. Galloway, B.T. Spraying for fruit diseases. 1896. (Contrib. from Div. of veg. phys. & path.)
50. Williams, T.A. Sorghum as a forage crop. 1899. (Contrib. from Div. of agros.)
53. Falconer, W. How to grow mushrooms. 1897. (Contrib. from Div. of veg. phys. & path.)
58. Williams, T.A. The soy bean as a forage crop. 1899. (Contrib. from Div. of agros.)
66. Smith, J.G. Meadows and pastures; formation and cultivation in the Middle Eastern States. 1899. (Contrib. from Div. of agros.)
68. Smith, E.F. The black rot of the cabbage. 1898. (Contrib. from Div. of veg. phys. & path.)
75. Swingle, W.T. The green smuts: how they are caused and how to prevent them. 1896. (Contrib. from Div. of veg. phys. & path.)
86. Chestnut, V.K. Thirty poisonous plants of the United States. 1898. (Contrib. from Div. of bot.)
89. Smith, J.G. Cowpeas. 1899. (Contrib. from Div. of agros.)
91. Galloway, B.T. Potato diseases and their treatment. 1899. (Contrib. from Div. of veg. phys. & path.)
101. Williams, T.A. Millets. 1899. (Contrib. from Div. of agros.)
102. Scribner, F.L. Southern forage plants. 1899. (Contrib. from Div. of agros.)
108. Kennedy, P.B. Saltashes. 1900. (Contrib. from Div. of agros.)
110. Knapp, S.A. Rice culture in the United States. 1900. (Contrib. from Div. of bot.)
111. Pieters, A.J. The farmer's interest in good seed. 1900. (Contrib. from Div. of bot.)
113. Brackett, G.B. The apple and how to grow it. 1900. (Contrib. from Div. of pomol.)
115. Flint, D. Hop culture in California. 1900. (Contrib. from Div. of bot.)
118. Tracy, S.M. Grape growing in the South. 1900. (Contrib. from Div. of pomol.)
123. Pieters, A.J. Red clover seed: information for purchasers. 1901. (Contrib. from Div. of bot.)
129. Nesbit, D.M. Sweet potatoes. 1901. (Contrib. from Office of plant indus.)
139. Carleton, M.A. Emmer: a grain for the semi-arid regions. 1901.
140. Rolfs, P.H. Pineapple growing. 1901.
147. Ball, C.R. Winter forage crops for the South. 1902.

DEPARTMENT OF AGRICULTUREFARMERS' BULLETIN (cont.)

Number.

148. Beattie, W.R. Celery culture. 1902.
 154. Corbett, L.C. The home fruit garden: preparation and care. 1902.
 156. Ragan, W. H. The home vineyard, with special reference to northern conditions. 1902.
 157. Corbett, L.C. The propagation of plants. 1902.
 161. Gould, H. P. Practical suggestions for fruit growers. 1902.
 164. Hitchcock, A.S. Rape as a forage crop. 1903.
 167. Tracy, S.M. Cassava. 1903.
 168. Ball, C. R. Pearl millet. 1903.
 174. Hartley, C.P. Broom corn. 1903.
 175. Husmann, G.C. Home manufacture and use of unfermented grape juice. 1903.
 176. Corbett, L.C. Cranberry culture. 1903.
 181. _____ Pruning. 1903.
 185. _____ **Beautifying** the home grounds. 1904.
 188. Henkel, A. Weeds used in medicine. 1904.
 194. Brown, E. Alfalfa seed. 1904.
 195. Corbett, L.C. Annual flowering plants. 1904.
 198. _____ Strawberries. 1904.
 199. Hartley, C.P. Corn growing. 1904.
 204. Duggar, B. M. The cultivation of mushrooms. 1904.
 208. Ragan, W. H. Varieties of fruits recommended for planting. 1904.
 213. Corbett, L.C. Raspberries. 1905.
 214. Moore, G.T. & Beneficial bacteria for leguminous crops. 1905.
 Robinson, T.R.
 215. Hitchcock, A.S. Alfalfa growing. 1905.
 217. Redding, R.J. Essential steps in securing an early crop of cotton. 1905.
 218. Corbett, L.C. The school garden. 1905.
 219. Carleton, M.A. Lessons from the grain-rust epidemic of 1904. 1905.
 220. Corbett, L.C. Tomatoes. 1905.
 221. Shear, C.L. Fungous diseases of the cranberry. 1905.
 224. Shaw, T. Canadian field peas. 1905.
 229. Hartley, C.P. The production of good seed corn, with an appendix on Selection and care of seed corn by H. J. Webber. 1905.
 231. Orton, W. A. Spraying for cucumber and melon diseases. 1905.
 232. Beattie, W.R. Okra: its culture and uses. 1905. (Reprinted 1918).
 238. Rolfs, P. H. Citrus fruit growing in the Gulf states. 1906.
 240. Kellerman, K.F. Inoculation of legumes. 1905.
 & Robinson, T.R.
 242. Spillman, W.J. **An example of model farming.** 1906.
 243. Waite, M.B. Fungicides and their use in preventing diseases of fruits. 1906.
 245. Spillman, W.J. Renovation of worn-out soils. 1906.
 246. Ball, C. R. Saccharine sorghums for forage. 1906.
 247. Marlatt, C.L. & The control of the codling moth and apple scab. 1906.
 Orton, W.A. (In cooperation with Bur. of Entomology.)
 248. Corbett, L.C. The lawn. 1906.

DEPARTMENT OF AGRICULTURE

FARMERS' BULLETIN (cont.)

Number.

250. Swingle, W.T. The prevention of stinking smut of wheat and loose smut of oats. 1905.
255. Duvel, J.W.T. The germination of seed corn. 1905.
254. Corbett, L.C. Cucumbers. 1906.
255. Beattie, W.R. The home vegetable garden. 1906.
260. Brown, E. & Hillman, F.H. Seed of red clover and its impurities. 1906.
271. Hunter, B. Forage-crop practises in western Oregon and western Washington. 1906.
272. Spillman, W.J. A successful hog and seed-corn farm. 1906.
274. Bolley, H.L. & Marcy, W.L. Flax culture. 1907.
278. Piper, C.V. Leguminous crops for green manuring. 1907.
279. Cates, J.S. & Spillman, W.J. A method of eradicating Johnson grass. 1907.
280. Carrier, L. A profitable tenant dairy farm. 1907.
282. Beattie, W.R. Celery. 1907.
283. Scott, W.M. & Quaintance, A.L. Spraying for apple diseases and the codling moth in the Ozarks. 1907. (In cooperation with Bur. of Entomology.)
284. Quaintance, A.L. & Shear, C.L. Insect and fungous enemies of the grape east of the Rocky Mountains. 1907. (In cooperation with Bur. of Entomology.)
285. Webber, H.J. & Boykin, E.B. The advantage of planting heavy cotton seed. 1907.
286. Boykin, E.B. Comparative value of whole cotton seed and cotton-seed meal in fertilizing cotton. 1907.
288. Warburton, C.W. The nonsaccharine sorghums. 1907.
289. Corbett, L.C. Beans. 1907.
291. Gould, H.P. Evaporation of apples. 1907.
292. Carrier, L. Cost of filling silos. 1907.
294. Hunter, B. Farm practice in the Columbia Basin uplands. 1907.
299. Brodie, D.A. & McClelland, C.K. Diversified farming under the plantation system. 1907.
300. Tracy, S.M. Some important grasses and forage plants for the Gulf coast region. 1907.
301. Mitchell, G.F. Home-grown tea. 1907.
302. Orton, W.A. Sea Island cotton: its culture, improvement, and diseases. 1907.
304. Stockberger, W.W. Growing and curing hops. 1907.
306. Hillman, F.H. Dodder in relation to farm seeds. 1907.
307. Wester, P.J. Rosalie: its culture and uses. 1907.
310. Crosby, M.A. et al. A successful Alabama diversification farm. 1907.
312. Benton, H. A successful southern hay farm. 1907.
313. Hartley, C.P. Harvesting and storing corn. 1907.
314. Bennett, R.L. A method of breeding early cotton to escape boll-weevil damage. 1908.
315. Kelleman, K.F. & Robinson, T.R. Progress in legume inoculation. 1908.
318. Nielson, H.T. Cowpeas. 1908.

DEPARTMENT OF AGRICULTUREFARMERS' BULLETIN (cont.)

Number.

319. Knapp, S.A. Demonstration work in cooperation with southern farmers. 1908.
322. Ball, C.R. & Leidigh, A.H. Milo as a dry-land grain crop. 1908.
323. Smith, C.B. Clover farming on the sandy jack-pine lands of the north. 1908.
324. Beattie, W.R. Sweet potatoes. 1908.
325. Warren, J. A. Small farms in the corn belt. 1908.
326. Brodie, D. A. Building up a run-down cotton plantation. 1908.
331. Quinn, C. E. Forage crops for hogs in Kansas and Oklahoma. 1908.
333. Orton, W. A. Cotton wilt. 1908. (Reprinted 1910.)
337. Dodge, L. G. Cropping systems for New England dairy farms. 1908.
339. Westgate, J.M. Alfalfa. 1908.
343. Scherffius, W.H. et al The cultivation of tobacco in Kentucky and Tennessee. 1909.
347. Beattie, W.R. The repair of farm equipment. 1909.
354. _____ Onion culture. 1909.
355. Spillman, W.J. A successful poultry and dairy farm. 1909.
356. Beattie, W. R. Peanuts. 1909.
361. Vinall, H.N. Meadow fescue: its culture and uses. 1909.
362. McClure, H.B. Conditions affecting the value of market hay. 1909.
364. Goodrich, C.L. A profitable cotton farm. 1909.
365. Dodge, L. G. Farm management in northern potato-growing sections. 1909.
368. Cox, H. R. The eradication of bindweed, or wild morning-glory. 1909.
370. Smith, C.B. & Froley, J.W. Replanning a farm for profit. 1909.
372. Piper, C.V. & Nielsen, H.T. Soy beans. 1909.
380. Marsh, C. D. The loco-weed disease. 1909.
382. Hillman, F.H. The adulteration of forage-plant seeds. 1909.
386. Grubb, E. H. Potato culture on irrigated farms of the west. 1910.
395. Warburton, C.W. Sixty-day and Kherson oats. 1910.
398. Beavers, J.C. Farm practice in the use of commercial fertilizers in the south Atlantic states. 1910.
400. Hartley, C.P. A more profitable corn-planting method. 1910.
401. O'Gara, P.J. The protection of orchards in the Pacific north-west from spring frosts by means of fires and smudges. 1910.
402. Oakley, R. A. Canada bluegrass: its culture and uses. 1910.
406. Spillman, W.J. Soil conservation. 1910.
407. Corbett, L.C. The potato as a truck crop. 1910.
414. Hartley, C.P. Corn cultivation. 1910.
415. _____ Seed corn. 1910. (Rev. 1917)
416. Frear, W. & Hibshman, E.K. The production of cigar-leaf tobacco in Pennsylvania. 1910.

DEPARTMENT OF AGRICULTUREFARMERS' BULLETIN (cont.)

Number.

417. Knapp, S.A. Rice culture. 1910.
420. Warburton, C.W. Oats: distribution and uses. 1910.
421. Free, E.E. & Westgate, J.M. The control of blowing soils. 1910. (In cooperation with Bur. of Soils.)
422. Knapp, S.A. Demonstration work on southern farms. 1910.
421. Warburton, C.W. Oats: growing the crop. 1910.
426. Gould, H.P. & Fletcher, W.F. Canning peaches on the farm. 1910.
427. Derr, H.B. Barley culture in the southern states. 1910.
428. Hillman, F.H. Testing farm seeds in the home and in the rural school. 1911.
431. Beattie, W.R. The peanut. 1911.
432. Arnold, J.H. How a city family managed a farm. 1911.
433. Corbett, L.C. Cabbage. 1911.
434. Beattie, W.R. The home production of onion seed and sets. 1911.
436. Warburton, C.W. Winter oats for the south. 1911. (Rev. 1917)
437. Froley, J.W. & Smith, C.B. A system of tenant farming and its results. 1911.
438. Warren, J.A. Hog houses. 1911.
440. Scott, W.M. & Quaintance, A.L. Spraying peaches for the control of brown-rot, scab, and curculio. 1911. (In coop. with Bur. of Entomol.)
441. McWair, A.D. & Mercier, W.B. Lespedeza, or Japan clover. 1911.
443. Derr, H.B. Barley: growing the crop. 1911.
446. Kearney, T.H. The choice of crops for alkali land. 1911. (Rev. 1920.)
448. Ball, C.R. Better grain-sorghum crops. 1911.
454. Burritt, M.C. A successful New York farm. 1911.
455. Westgate, J.M. Red clover. 1911.
- & Hillman, F.H.
458. Conner, A.B. The best two sweet sorghums for forage. 1911.
460. Beattie, W.R. Frames as a factor in truck growing. 1911.
462. Hunter, B. & Thompson, H. The utilization of logged-off land for pasture in western Oregon and western Washington. 1911.
464. Cates, J.S. The eradication of quack grass. 1911.
466. Carleton, M.A. Winter emmer. 1911.
467. Metcalf, H. & Collins, J.F. The control of the chestnut bark disease. 1911.
471. Husmann, G.C. Grape propagation, pruning, and training. 1911.
472. Billings, G.A. & Beavers, J.C. Systems of farming in central New Jersey. 1911.
475. Corbett, L.C. Ice houses. 1911.
482. Brackett, G.B. The pear and how to grow it. 1912.
483. Griffiths, D. The thornless prickly pears. 1912.
485. Westgate, J.M. & Vinali, H.N. Sweet clover. 1912.
488. ~~Harter~~, L.L. Diseases of cabbage and related crops and their control. 1912.
489. Spaulding, P. & Field, E.C. Two dangerous imported plant diseases. 1912.
491. Burritt, M.C. The profitable management of the small apple orchard on the general farm. 1912.

DEPARTMENT OF AGRICULTURE

FARMERS' BULLETIN (cont.)

Number.

492. Quaintance, A.L. & Scott, W.M. The more important insect and fungous enemies of the fruit and foliage of the apple. 1912. (In cooperation with Bur. of Entomology)
494. Schreiner, O. et al Lawn soils and lawns. 1912. (In cooperation with Bur. of Soils.)
495. Westgate, J.M. et al Alfalfa seed production. 1912.
501. Cook, O. F. Cotton improvement under weevil conditions. 1912.
502. Evans, M.W. Timothy production on irrigated land in the north-western states. 1912.
507. Johnson, E.C. The smuts of wheat, oats, barley and corn. 1912.
508. McClure, H.B. Market hay. 1912.
509. Tracy, S.M. Forage crops for the cotton region. 1912.
511. Thomson, E.H. Farm bookkeeping. 1912. (Rev. by J.S. Ball, 1920.)
515. Piper, G.V. & McKee, R. Vetches. With a chapter on vetch seed and its adulterants, by F. H. Hillman. 1912. (Rev. 1920)
518. Derr, H. B. Winter barley. 1912.
519. Crosby, M.A. An example of intensive farming in the cotton belt. 1913.
520. Beattie, W.R. The storage and marketing of sweet potatoes. 1912.
521. Canning tomatoes at home and in club work. 1913.
I. Breazeale, J.F. Canned tomatoes, batchup, chow-chow, etc.
II. Benson, O.H. Canning tomatoes in clubs and for market. (In cooperation with Bur. of Chemistry.)
523. Garner, W.W. Tobacco curing. 1913.
524. Smith, A.G. Tile drainage on the farm. 1913.
529. _____ Vetch growing in the south Atlantic states. 1913.
531. Marsh, C.D. et al Larkspur, or "poison weed". 1913.
533. Stuart, W. Good seed potatoes and how to produce them. 1913.
534. Salmon, C. & Clark, J.A. Durum wheat. 1913.
536. Marsh, C.D. Stock poisoning due to scarcity of food. 1913.
537. Hartley, C.P. How to grow an acre of corn. 1913.
538. Rolfs, P.H. Sites, soils, and varieties for citrus groves in the Gulf states. 1913.
539. _____ Propagation of citrus trees in the Gulf states. 1913.
542. _____ Culture, fertilization, and frost protection of citrus groves in the Gulf states. 1913.
544. Orton, W.A. Potato-tuber diseases. 1913.
545. Cox, H. R. Controlling Canada thistles. 1913.
546. Arnold, J.H. How to manage a corn crop in Kentucky and West Virginia. 1913.
548. Thompson, H.C. Storing and marketing sweet potatoes. 1913.
550. Westgate, J.M. Crimson clover: growing the crop. 1913.
551. Van Fleet, W. The cultivation of American ginseng. 1913.
552. Ball, C.R. & Rothgeb, B.E. Kafir as a grain crop. 1913.

DEPARTMENT OF AGRICULTUREFARMERS' BULLETIN (cont.)

Number.

553. Hartley, C.P. & Willier, J.G. Pop corn for the home. 1913.
554. _____ Pop corn for the market. 1913. (Rev. 1920.)
555. Gilbert, W.W. Cotton anthracnose and how to control it. 1913.
558. Agricultural Outlook. 1913.
- Taylor, W.A. Apple outlook. p.2-3.
- Corbett, L.C. Potato outlook. p.3-4.
560. Agricultural Outlook for meat production. 1913.
- Spillman, W.J. Future meat supply of the United States. p.23-26.
551. Fluharty, L.W. Bean growing in eastern Washington and Oregon, and northern Idaho. 1913.
565. Ward, W.F. Boys' pig clubs, with special reference to their organization in the South. 1913. (In cooperation with Bur. of Animal Indus.)
567. Townsend, C.O. Sugar-beet growing under irrigation. 1914. (Rev. 1920.)
568. _____ Sugar-beet growing under humid conditions. 1914.
571. Garner, W.W. Tobacco culture. 1914. (Rev. 1920.)
572. Ladd, C.E. A system of farm cost accounting. 1914. (In cooperation with Dept. Farm manag. N.Y. State Col. Agr.)
577. Hudson, E.W. Growing Egyptian cotton in the Salt River Valley, Arizona. 1914.
579. Westgate, J.M. Crimson clover: utilization. 1914.
581. Agricultural Outlook. 1914. (In cooperation with Bur. of Statistics.)
- Düvel, J.W.T. Argentine corn. p.9-12.
582. Nellis, J.C. Uses for chestnut timber killed by the bark disease. 1914. (In cooperation with Forest Serv.)
584. Agricultural Outlook. 1914. (In cooperation with Bur. of Statistics.)
- Hartley, C.P. Preparing seed corn for planting. p.4-5.
- Carleton, M.A. The preparation of seed grain for spring planting. p.6-7.
586. Derr, H.B. & Lane, C.H. Collection and preservation of plant material for use in the study of agriculture. 1914. (In cooperation with Office of Exper. Stations.)
588. Cotton, J.S. & Ward, W.F. Economical cattle feeding in the corn belt. 1914. (In cooperation with Bur. of Animal Indus.)
591. Earle, D.E. & Dean, W.S. The classification and grading of cotton. 1914.
596. Leighty, C.E. The culture of winter wheat in the eastern United States. 1914. (Rev. 1917.)
599. Hunter, B. Pasture and grain crops for hogs in the Pacific Northwest. 1914.
600. Thompson, H. An outfit for boring taprooted stumps for blasting. 1914.
601. Cook, O.F. A new system of cotton culture and its application. 1914.
605. Vinall, H.N. Sudan grass as a forage crop. 1914.
610. Cox, H.R. Wild onion: methods of eradication. 1914.

DEPARTMENT OF AGRICULTUREFARMERS' BULLETIN (cont.)

Number.

613. Van Fleet, W. Goldenseal under cultivation. 1914.
614. Drake, J.A. A corn-belt farming system which saves harvest labor by hogging down crops. 1914.
616. Leighty, C.E. Winter-wheat varieties for the eastern United States. 1914.
618. Townsend, C.O. Leaf-spot, a disease of the sugar beet. 1914.
625. Gilbert, W.W. Cotton wilt and root-knot. 1914.
631. Gould, H.P. Growing peaches: sites, propagation, planting, gillage, and maintenance of soil fertility. 1915.
632. _____ Growing peaches: pruning, renewal of tops, thinning, interplanted crops, and special practices. 1915.
633. _____ Growing peaches: varieties and classification. 1914.
635. Funk, W.C. What the farm contributes directly to the farmer's living. 1914.
642. Thompson, H.C. Tomato growing in the South. 1915.
643. Darrow, G.M. Blackberry culture. 1915.
644. Husmann, G.C. Manufacture and use of unfermented grape juice. 1915.
646. Westgate, J.M. Crimson clover: seed production. 1915.
647. Thompson, H.C. The home garden in the South. 1915.
648. Bessey, E.A. & Byars, L.P. The control of root-knot. 1915.
660. Cox, H. R. Weeds: how to control them. 1915. (Rev. 1918.)
661. Thomson, E.H. & Dixon, H.M. A method of analyzing the farm business. 1915.
663. Stockberger, W.W. Drug plants under cultivation. 1915.
664. Thompson, H.C. Strawberry growing in the South. 1915.
669. Miles, F.C. Fiber flax. 1915.
676. Harrington, G.T. Hard clover seed and its treatment in hulling. 1915.
677. Piper, C.V. Growing hay in the South for market. 1915.
et al
678. Ball, C.R. & Clark, J.A. Growing hard spring wheat. 1915.
680. _____ Varieties of hard spring wheat. 1915.
685. Fletcher, W.F. The native persimmon. 1915.
686. Ball, C.R. & Rothgeb, B.E. Uses of sorghum grain. 1915.
687. Cox, H. R. Eradication of ferns from pasture lands in the eastern United States. 1915.
688. Chambliss, C.E. & Adams, E.L. The culture of rice in California. 1915.
690. Vinall, H.N. The field pea as a forage crop. 1915. (Rev. 1917.)
693. Piper, C.V. & McKee, R. Bur clover. 1915.
694. Van Fleet, W. The cultivation of peppermint and spearmint. 1915.
696. Ramsey, H.J. Handling and shipping citrus fruits in the Gulf States. 1915.

DEPARTMENT OF AGRICULTURE

FARMERS' BULLETIN (cont.)

Number.

700. Reed, C.A. Pecan culture; with special reference to propagation and varieties. 1916.
709. Husmann, G.C. & Muscadine grapes. 1916.
Dearing, C.
710. Fletcher, W.F. Bridge grafting of fruit trees. 1916.
714. Harter, L.L. Sweet-potato diseases. 1916.
726. Tracy, S. M. Natal grass: a southern perennial hay crop. 1916.
727. Gould, H.P. & Growing fruit for home use in the Great Plains
Grace, O.J. area. 1916.
728. Darrow, G.M. Dewberry culture. 1916.
729. Kyle, C.H. Corn culture in the southeastern states. 1916.
730. McKee, R. Button clover. 1916.
732. Ball, C.R. & Marquis wheat. 1916.
Clark, J.A.
736. Whetzel, H.H. Ginseng diseases and their control. 1916.
et al.
738. Ross, J.F. Cereal crops in the Panhandle of Texas. 1916.
742. Spaulding, P. The white-pine blister rust. 1916.
749. Donaldson, N.C. Grains for the Montana dry lands. 1916.
750. Mulford, F.L. Roses for the home. 1916.
751. Thompson, H.C. Peanut oil. 1916. (In cooperation with Bur, of
& Bailey, H.S. Chemistry.)
756. Leighty, C.E. Culture of rye in the eastern half of the United
states. 1916.
757. Oakley, R.A. & Commercial varieties of alfalfa. 1916.
Westover, H.L.
758. Dearing, C. Muscadine grape sirup. 1916.
768. Rothgeb, B.E. Dwarf broom corns. 1916.
769. Aicher, L.C. Growing grain on southern Idaho dry farms. 1916.
772. Shaw, H. B. Control of the sugar-beet nematode. 1916.
773. Hartley, C.P. & Corn growing under droughty conditions. 1916.
Zook, L.L.
776. Gould, H.P. Growing cherries east of the Rocky Mountains. 1916.
785. Clark, C.H. Seed-flax production. 1917.
786. Stanton, T.R. Fall-sown grains in Maryland and Virginia. 1917.
787. Orton, W.A. Sea Island cotton. 1916.
793. Vinall, H.N. Foxtail millet: its culture and utilization in the
United States. 1917.
794. Shamel, A.D. Citrus-fruit improvement: how to secure and use
tree-performance records. 1917.
796. Patterson, F.W. Some common edible and poisonous mushrooms. 1917.
& Charles, V.K.
797. Coe, H.S. Sweet clover; growing the crop. 1917.
800. Breithaupt, L.R. Grains for the dry lands of central Oregon. 1917.
814. Tracy, S.M. Bermuda grass. 1917.
818. The small vegetable garden: suggestions for utilizing limited
areas. 1917.
820. Coe, H.S. Sweet clover: utilization. 1917.
821. Orton, W.A. Watermelon diseases. 1917.
823. Townsend, C.O. Sugar-beet sirup. 1917. (In cooperation with
& Gore, H.C. Bur. of Chemistry.)

DEPARTMENT OF AGRICULTUREFARMERS' BULLETIN (cont.)

Number.

827. Rothgeb, B.E. Shallu, or "Egyptian wheat": a late maturing variety of sorghum. 1917.
829. Thompson, H.C. Asparagus. 1917.
833. Cates, H.R. Methods of controlling or eradicating the wild oat in the hard spring-wheat area. 1917.
836. Coe, H.S. Sweet clover: harvesting and thrashing the seed crop. 1917.
841. Drying fruits and vegetables in the home, with recipes for cooking. 1917.
847. Stuart, W. Potato storage and storage houses. 1917. (In cooperation with Office of Markets.)
852. Ramsey, H.J. & Dennis, S.J. Management of common storage houses for apples in the Pacific Northwest. 1917. (In cooperation with Office of Markets.)
854. Darrow, G.M. Strawberry culture in Tennessee, Kentucky, and West Virginia. 1917.
856. Orton, W.A. & Chittenden, F.H. Control of diseases and insect enemies of the home vegetable garden. 1917. (In cooperation with Bur. of Entomology.)
859. Dearing, C. Home uses for Muscadine grapes. 1917.
868. Chittenden, F.H. & Orton, W.A. How to increase the potato crop by spraying. 1917. (In cooperation with Bur. of Entomology.)
878. Babcock, F.R. & al Grains for western North and South Dakota. 1917.
879. Beattie, J.H. Home storage of vegetables. 1917.
883. Jones, J.W. & Bracken, A.F. Grains for the Utah dry lands. 1917.
884. Tracy, W.W. Sr. Saving vegetable seeds for the home and market garden. 1917.
885. Leighty, C.E. Wheat growing in the southeastern states. 1917.
886. Morse, W.J. Harvesting soy-bean seed. 1917.
887. Darrow, G.M. Raspberry culture. 1917.
892. Warburton, C.W. Spring oat production. 1917. (Revision of Farm. bul. 424.)
894. Leighty, C.E. Rye growing in the southeastern states. 1917.
895. Chilcott, E.C. & Cole, J.S. Growing winter wheat on the Great Plains. 1917.
900. Close, C.P. Homemade fruit butters. 1917.
901. Darrow, G.M. Everbearing strawberries. 1917.
903. Beattie, J.H. & Gould, H.P. Commercial evaporation and drying of fruits. 1917.
915. Kyle, C.H. How to reduce weevil waste in southern corn. 1918.
917. Gould, H.P. Growing peaches: sites and cultural methods. 1918. (Revision and combination of Farm. bul. 631 and 632.)
918. _____ Peach varieties and their classification. 1918. (Revision of Farm. bul. 633.)
925. Harter, L.L. & Jones, L.R. Cabbage diseases. 1918.
934. Thompson, H.C. Home gardening in the South. 1918.

DEPARTMENT OF AGRICULTURE

FARMERS' BULLETIN (cont.)

Number.

936. Conolly, H.M. The city and suburban vegetable garden. 1918.
(In cooperation with States Relations Serv.)
937. Beattie, J.H. The farm garden in the North. 1918.
938. Roberts, J.W. & Apple bitter-rot and its control. 1918.
Pierce, L.
939. Humphrey, H.B. Cereal smuts and the disinfection of seed grain.
& Potter, A.A. 1918.
945. Hansen, A.A. Eradication of Bermuda grass. 1918.
948. Burt, G.J. The rag-doll seed tester: its use in determining
et al what ears of corn are fit for seed. 1918.
951. Carrier, L. & Hog pastures for the southern states. 1918. (In
Ashbrook, F.G. cooperation with Bur. of Animal Indus.)
953. Stuart, W. Potato culture under irrigation. 1918.
et al
958. Rothgeb, B.E. Standard broom corn. 1918.
962. Tracy, S.M. & Velvet beans. 1918.
Coe, H.S.
965. Letteer, C.R. Growing grain sorghums in the San Antonio district
of Texas. 1918.
967. McKee, R. Purple witch. 1918.
968. Harlan, H.V. Cultivation and utilization of barley. 1918.
969. McKee, R. Horse beans. 1918.
970. Thompson, H.C. Sweet-potato storage. 1918.
972. Ball, C.R. & How to use sorghum grain. 1918.
Rothgeb, B.E.
973. Morse, W.J. The soy bean: its culture and uses. 1918.
984. Caldwell, J.S. Farms and home drying of fruits and vegetables. 1918.
990. Evans, M.W. Timothy. 1918.
994. Wallace, E. & Commercial Bordeaux mixtures: how to calculate
Evans, L.H. their value. 1918.
995. McMurrain, S.M. Preventing wood rot in pecan trees. 1918.
996. Beinhart, E.G. Stem-sterilization of seed beds for tobacco and
other crops. 1918.
998. Darrow, G.M. Culture of the Logan blackberry and related vari-
eties. 1918.
999. Miller, F.E. Sweet-potato growing. 1919.
1001. Gould, H.P. & Growing fruit for home use. (Rev. Nov. 1919.)
Darrow, G.M. Feb. 1919.
1002. Hansen, A.A. Canada thistle and methods of eradication. 1918.
1016. Drummond, B. Propagation and culture of the date palm. 1918.
1024. Darrow, G.M. Currants and gooseberries. 1919.
1026. _____ Strawberry culture: South Atlantic and Gulf Coast
regions. 1919.
1027. _____ Strawberry culture: Western United States. 1919.
1028. _____ Strawberry culture: Eastern United States. 1919.
1031. Gould, H.P. Fig growing in the South Atlantic and Gulf states.
1919.
1033. Dearing, C. Muscadine grape paste. 1919.
1034. Yoder, P.A. Growing sugar cane for sirup. 1919.
1041. Byars, L.P. The eelworm disease of wheat and its control. 1919.
1043. Darrow, G.M. Strawberry varieties in the United States. 1919.

DEPARTMENT OF AGRICULTUREFARMERS' BULLETIN (no.)

Number.

1044. Beattie, W.R. The city home garden. 1919.
 1047. Hunter, B. Dry farming for better wheat yields. The Columbia and Snake river basins. 1919. (In cooperation with Office of Farm manag.)
1048. Tracy, S.M. Rhodes grass. 1919.
 1053. Roberts, J.W. & Pierce, L. Control of cherry leaf-spot. 1919.
1056. Fisher, D.F. & Newcomer, E.J. Controlling important fungous and insect enemies of the pear in the humid sections of the Pacific northwest. 1919. (In cooperation with Bur. of entomology.)
1058. Stakman, E.C. Destroy the common barberry. 1919.
 1059. Harter, L.L. Sweet-potato diseases. 1919.
 1060. Walker, J.C. Onion diseases and their control. 1919.
 1062. Leighty, C.E. Buckwheat. 1919.
 1063. Humphrey, H.B. & Johnson, A. Take-all and flag smut, two wheat diseases new to the United States. 1919.
1064. Stuart, W. Production of late or main-crop potatoes. 1919.
 1072. Griffiths, D. Prickly pear as stock feed. 1920.
 1075. Dearing, C. Unfermented grape juice: how to make it in the home. 1919.
1081. Shear, C.L. Cranberry diseases and their control. 1920.
 1087. Mulford, F.L. Beautifying the farmstead. 1920.
 1092. Chambliss, C.E. Prairie rice culture in the United States. 1920.
 1095. Jones, J.W. Beet-top silage and other by-products of the sugar beet. 1919.
1103. Aicher, L.C. Growing irrigated grain in southern Idaho. (In cooperation with Idaho Agr. Exp. Sta.) 1920.
1119. Warburton, C.W. & Stanton, T.R. Fall-sown oats. 1920.
1120. Fisher, D.F. Control of apple powdery mildew. 1920.
 1122. Vosbury, E.D. Citrus-fruit growing in the Gulf States. 1920.
 1124. Tisdale, W.H. The brown-spot of corn with suggestions for its control. 1920.
1125. Tracy, S.M. Forage for the cotton belt. 1920.
 1126. Vinall, H.N. Sudan grass. 1920.
 1127. Beattie, W.R. Peanut growing for profit. 1920.
 1129. McMurrin, S.M. & Demaree, J.B. Diseases of Southern pecans. 1920.
1130. Piper, C.V. & Carrier, L. Carpet grass. 1920.
1137. Rothgeb, B.E. Grain sorghums: how to grow them. 1920.
 1141. Chambliss, C.E. Rice growing in California. 1920.
 1142. Kephart, L.W. Growing crimson clover. 1920.
 1143. Carrier, L. Lespedeza as a forage crop. 1920.
 1147. Rothgeb, B.E. Milo, a valuable grain crop. 1920.
 1148. Morse, W.J. Cowpeas: culture and varieties. 1920.
 1149. Kyle, C.H. Growing corn in the southeastern states. 1920.
 1151. Pieters, A.J. Alsike clover. 1920.
 1152. Tracy, W.W., Jr. Sugar-beet growing in the Rocky Mountain states. 1920.

DEPARTMENT OF AGRICULTURE

FARMERS' BULLETIN (cont.)

Number.

- | | |
|---------------------------------------|--|
| 1153. Morse, W.J. | Cowpeas: utilization. 1920. |
| 1158. Vinall, H.M. &
Getty, R.E. | Growing and utilizing sorghums for forage.
1920. |
| 1160. Brocks, C.
et al | Diseases of apples in storage. 1920. |
| 1162. Martin, J. H. | Proso, or hog millet. 1920. |
| 1163. Mathews, O.R. | Dry farming in western South Dakota. 1920. |
| 1166. Grant, C.V. &
Hansen, A.A. | Poison ivy and poison sumac and their eradication.
1920. |
| 1170. Piper, C.V. &
Carrier, L. | Meadows for the Northern states. 1920. |
| 1175. Hartley, C.P. | Better seed corn. 1920. |
| 1176. Holbert, J.R. &
Hoffer, G.N. | Control of the root, stalk, and ear rot diseases
of corn. 1920. |
| 1178. Collins, J.F. | Tree surgery. 1920. |

DEPARTMENT OF AGRICULTURE

YEARBOOK

1894 - 1910. In progress.

Contributions from Bureau of Plant Industry:
and Divisions which preceded the Bureau.

The act of public printing and binding approved January 12, 1896, provides as follows:-

"The Annual Report of the Secretary of Agriculture shall hereafter be submitted and printed in two parts, as follows: Part one, which shall contain purely business and executive matter which it is necessary for the Secretary to submit to the President and Congress; part two, which shall contain such reports from the different bureaus and divisions, and such papers prepared by their special agents, accompanied by suitable illustrations, as shall, in the opinion of the Secretary, be specially suited to interest and instruct the farmers of the country, and to include a general report of the operations of the Department for their information.."

Complying with the provisions of this law, since 1894 the Annual Report, Part 1, is issued as a part of the Messages and Documents communicated to the two houses of Congress. Part 2, under the title of Yearbook of the Department of Agriculture, contains a reprint of the Secretary's personal report to the President; reports and papers from the different bureaus and divisions, discussing in a popular manner the results of investigations in agricultural science or new developments in farm practice; an appendix, consisting of useful information, chiefly statistical, presented as far as possible in tabular form. (From Preface to 1894 Yearbook, and Ann. rept. 1894/95, p. 224.)

The articles contained in the Yearbook are also printed separately. For convenience in checking and ordering, the articles are here arranged by Separate numbers.

1894.

Separate

- 6. Galloway, B.T. Water as a factor in the growth of plants. p.165-176. (Contrib. from Div. of veg. path.)
- 2 Woods, L.F.
- 8. Webber, H.J. Fertilization of the soil as affecting the orange in health and diseases. p.193-203. (Contrib. from Div. of veg. path.)
- 18. Hicks, G.H. Pure seed investigations. p.389-408. (Contrib. from Div. of bot.)
- 19. Swingle, W.T. The grain smuts: their causes and prevention. p.409-420. (Contrib. from Div. of veg. path.)
- 20. Scribner, F.L. Grasses as sams and soil binders. p.421-438, 580. (Contrib. from Div. of agric.)
- 22. Dodge, C.R. Facts concerning ramie. p.445-460. (Contrib. from Special agent in charge of Fiber inves.)
- Appx. Treatment for fungous diseases of plants. p.577-580. (Contrib. from Div. of veg. path.?)
- Appx. Table of one hundred weeds. p.581-583. (Contrib. from Div. of bot.?)

DEPARTMENT OF AGRICULTURE

YEARBOOK (cont.)

1895.

Separate.

33. Hicks, G.H. Oil-producing seeds. p.185-204. (Contrib. from Div. of bot.)
34. Pieters, A.J. Testing seeds at home. p.175-184. (Contrib. from Div. of bot.)
- 36.pt.2.Galloway, B.T. The health of plants in greenhouses. p.247-256. (Contrib. from Div. of veg. phys. and path.)
38. Dodge, C.R. Hemp culture. p.215-232. (Contrib. from Special Agent in charge of Fiber inves.)
41. Crville, F.V. Some additions to our vegetable dietary. p.205-214. (Contrib. from Div. of bot.)
47. Taylor, W.A. Small-fruit culture for market. p.283-294. (Contrib. from Div. of pomol.)
48. Galloway, B.T. Frosts and freezes as affecting cultivated plants. p.143-158. (Contrib. from Div. of veg. phys. and path.)
50. Waite, M.B. The cause and prevention of pear blight. p.295-300. (Contrib. from Div. of veg. phys. & path.)
- 55.pt.2.Webber, H.J. The two freezes of 1894-95 in Florida, and what they teach. p.159-174. (Contrib. from Div. of veg. phys. & path.)
- 55.pt.3._____ The pineapple industry in the United States. p.269-282. (Contrib. from Div. of veg. phys. & path.)
- 57.pt.1.Woods, A.F. Principles of pruning and care of wounds in woody plants. p.257-268. (Contrib. from Div. of veg. phys. & path.)
- 59.pt.2.Scribner, F.L. Grass gardens. p.301-308. (Contrib. from Div. of agros.)
- 59.pt.3.Smith, J.G. Forage conditions of the prairie region. p.309-324. (Contrib. from Div. of agros.)
- 59.pt.4.Scribner, F.L. Grasses of salt marshes. p.325-332. (Contrib. from Div. of agros.)
- Appx. Treatment for fungous diseases of plants. p.587-590. (Contrib. from Div. of veg. phys. & path.?)
- Appx. Two hundred weeds: how to know them and how to kill them. p.592-611. (Contrib. from Div. of bot.?)
- Appx. Number, weight, cost of seeds, and amount to sow per acre. p.612-614. (Contrib. from Div. of agros.?)

1896.

60. Williams, T.A. Timothy in the prairie region. p.147-154. (Contrib. from Div. of agros.)
61. Smith, J.G. Cowpeas. (*Vigna catjang*). p.287-296. (Contrib. from Div. of agros.)
57. Chestnut, V.K. Some common poisonous plants. p.137-145. (Contrib. from Div. of bot.)

DEPARTMENT OF AGRICULTUREYEAR BOOK (cont.)

1896 (cont.)

Separate

68. Pieters, A.J. Seed production and seed saving. p.207-216.
(Contrib. from Div. of bot.)
69. Hicks, G.H. & Dabney, J.C. The superior value of large, heavy seed. p.305-322. (Contrib. from Div. of bot.)
70. Dewey, L.H. Migration of weeds. p.263-266. (Contrib. from Div. of bot.)
82. Galloway, B.T. Diseases of shade and ornamental trees. p.237-254. (Contrib. from Div. of veg. phys. & path.)
83. Webber, H.J. Influence of environment in the origination of plant varieties. p.89-106. (Contrib. from Div. of veg. phys. & path.)
84. Pierce, N.B. Olive culture in the United States. p.370-390. (Contrib. from Div. of veg. phys. & path.)
85. Webber, H.J. Methods of propagating the orange and other citrus fruits. p.471-488. (Contrib. from Div. of veg. phys. & path.)
86. Carleton, M.A. Improvements in wheat culture. p.489-498. (Contrib. from Div. of veg. phys. & path.)
- Appx. Seed standards. p.623-624. (Contrib. from Div. of bot.?)
- Appx. Treatment for fungous diseases of plants - formulas for fungicides. p.625-628. (Contrib. from Div. of veg. phys. & path?)
- Appx. Number, weight, cost of grass seeds, and amount to sow per acre. p.632-634. (Contrib. from Div. of agros.?)

1897.

90. Scribner, F.L. Work of the Department for the farmer: Division of agrostology. p.160-174. (Contrib. from Div. of agros.)
91. _____ Lawns and lawn making. p.355-372. (Contrib. from Div. of agros.)
92. Smith, J. G. Leguminous forage crops. p.487-508. (Contrib. from Div. of agros.)
97. Coville, F.V. Work of the Department for the farmer: Division of botany. p.90-98. (Contrib. from Div. of bot.)
98. Hicks, G.H. & Key, S. Additional notes on seed testing. p.441-452. (Contrib. from Div. of bot.)
108. Dodge, C.R. Work of the Department for the farmer: Office of fiber investigations. p.224-235. (Contrib. from Fiber inves. office.)
109. _____ The present status of flax culture in the United States. p.471-486. (Contrib. from Fiber inves. office.)
113. Saunders, W. Work of the Department for the farmer: Experimental gardens and grounds. p.180-203. (Contrib. from Div. of gard. & grounds.)

DEPARTMENT OF AGRICULTURE

YEARBOOK (cont.)

1897 (cont.)

Separate

115. Brackett, G.B. Work of the Department for the farmer: Division of pomology. p.111-115. (Contrib. from Div. of pomol.)
116. Taylor, W.A. The fruit industry, and substitution of domestic for foreign-grown fruits. p.305-344. (Contrib. from Div. of Pomol.)
123. Galloway, B.T. Work of the Department for the farmer: Division of vegetable physiology and pathology. p.99-110. (Contrib. from Div. of veg. phys. & path.)
124. Swingle, W. T. & Hybrids and their utilization in plant breeding. Webber, H.J. p.383-420. (Contrib. from Div. of veg. phys. & path.)
- Appx. Twenty-five-most harmful weeds. p.641-644. (Contrib. from Div. of Bot.?)
- Appx. Amount and cost of grass seed per acre. p.670-671. (Contrib. from Div. of Agros.?)
- Appx. Treatment for fungous diseases of plants - Formulas for fungicides. p.673-676. (Contrib. from Div. of veg. phys. & path.?)

1898.

127. Scribner, F.L. Sand-binding grasses. p.405-420. (Contrib. from Div. of agros.)
128. Williams, T.A. Millets. p.269-290. (Contrib. from Div. of agros.)
129. Smith, J.G. Forage plants for cultivation on alkali soils. p.535-550. (Contrib. from Div. of agros.)
134. Dewey, L.H. Weeds in cities and towns. p.193-200. (Contrib. from Div. of bot.)
135. Steele, E.S. Can perfumery farming succeed in the United States? p.377-398. (Contrib. from Div. of bot.)
136. Hicks, G.H. Grass seed and its impurities. p.473-494. (Contrib. from Div. of bot.)
145. Saunders, W. Pruning of trees and other plants. p.151-166. (Contrib. from Div. of gard. & grounds)
146. Brackett, G.B. Utilizing surplus fruits. p.309-316. (Contrib. from Div. of pomol.)
147. Husmann, G. The present condition of grape culture in California. p.551-562. (Contrib. from Div. of pomol.)
157. Waite, M.B. Pollination of pomaceous fruits. p.167-180. (Contrib. from Div. of veg. phys. & path.)
158. Woods, A.F. Work in vegetable physiology, and pathology. p.261-266. (Contrib. from Div. of veg. phys. & path.)
159. Webber, H.J. Improvement of plants by selection. p.355-376. (Contrib. from Div. of veg. phys. & path.)

DEPARTMENT OF AGRICULTURE

YEARBOOK (cont.)

1898 (cont.)

Separate

- Appx. Plant diseases in the United States in 1898. p.652. (Contrib. from Div. of veg. phys. & path.)
Appx. Composition of millets and other forage plants. p.655-656. (Contrib. from Div. of agros.)

1899.

176. Scribner, F.L. Progress of economic and scientific agronomy. p.347-356. (Contrib. from Div. of agros.)
182. Webber, H.J. & Bessey, E.A. Progress of plant breeding in the United States. p.465-490. (Contrib. from Div. of veg. phys. & path.)
184. Pieters, A.J. Seed sowing, seed growing, and seed testing. p.519-524. (Contrib. from Div. of bot.)
189. Galloway, B.T. Progress in the treatment of plant diseases in the United States. p.191-200. (Contrib. from Div. of veg. phys. & path.)
190. Williams, T.A. Succulent forage for the farm and dairy. p.613-626. (Contrib. from Div. of agros.)
191. Galloway, B.T. Progress of commercial growing of plants under glass. p.575-590. (Contrib. from Div. of veg. phys. & path.)
Appx. Progress in fruit growing in 1899. p.748-749. (Contrib. from Div. of pomol.)
Appx. Plant diseases in the United States in 1899. p.750-751. (Contrib. from Div. of veg. phys. & path.)

1900.

195. Carleton, M.A. Successful wheat growing in semiarid districts. p.529-542. (Contrib. from Div. of veg. phys. & path.)
203. Smith, J.G. Commercial plant introduction. p.131-144. (Contrib. from Div. of bot.)
206. Chestnut, V.K. Some poisonous plants of the northern stock ranges. p.305-324. (Contrib. from Div. of bot.)
208. Schrenk, H. von. Fungus diseases of forest trees. p.199-210. (Contrib. from Div. of veg. phys. & path.)
215. Waite, M.S. Commercial year culture. p.369-396. (Contrib. from Div. of veg. phys. & path.)
218. Swingle, W.T. The date palm and its culture. p.453-490. (Contrib. from Div. of bot.)
220. Tracy, W.W., Jr. Testing commercial varieties of vegetables. p.543-560. (Contrib. from Div. of bot.)
222. Taylor, W.A. The influence of refrigeration on the fruit industry. p.561-580. (Contrib. from Div. of pomol.)
223. Scribner, F.L. Our native pasture plants. p.581-598. (Contrib. from Div. of agros.)

DEPARTMENT OF AGRICULTURE

YEARBOOK (cont.)

1900 (cont.)

Separate

- Appx. Plant diseases in the United States in 1900. p.729-731. (Contrib. from Div. of veg. phys. & path.)
- Appx. Progress in fruit growing in 1900. p.731-733. (Contrib. from Div. of pomol.)

1901.

225. Woods, A.F. The relation of nutrition to the health of plants. p.155-176.
229. Taylor, W.A. Little-known fruit varieties considered worthy of wider dissemination. p.381-392.
230. Brackett, G.B. Commercial apple orcharding. p.593-608.
238. Pieters, A.J. Agricultural seeds -- where grown and how handled. p.233-256.
242. Cook, O. F. Agriculture in the tropical islands of the United States. p.349-365.
246. Corbett, L.C. The home fruit garden. p.431-446.
254. Dewey, L.H. The hemp industry in the United States. p.541-554.
- Appx. Orton, W.A. Plant diseases in the United States in 1901. p.558-572.
- Appx. Ragan, W.H. Progress in fruit growing in 1901. p.673-674.
- Appx. Spillman, W.J. Grasses and forage plants for the year 1901. p.672-673.

1902.

262. Moore, G.T. The contamination of public water supplies by algae. p.175-186.
264. Galloway, E.T. Industrial progress in plant work. p.219-230.
266. Powell, G.H. Top working orchard trees. p.245-258.
277. Moore, G.T. Bacteria and the nitrogen problem. p.333-342.
278. Spillman, W.J. Systems of farm management in the United States. p.343-364.
279. Febber, H.J. Improvement of cotton by seed selection. p.365-366.
281. Husmann, G.C.F. Grape, raisin, and wine production in the United States. p.407-420.
283. Taylor, W.A. Promising new fruits. p.469-480.
284. Corbett, L.C. Plants as a factor in home adornment. p.501-518.
287. Hartley, C.P. Improvement of corn by seed selection. p.539-552.
290. Woods, A.F. Fertilizers for special crops. p.563-572.
291. Kearney, T.H. Crops used in the reclamation of alkali lands in Egypt. p.573-586.
293. Waite, M.B. Cultivation and fertilization of peach orchards. p.607-623.
- Appx. Orton, W.A. Plant diseases in the United States in 1902. p.714-719.
- Appx. Ragan, W.H. Progress in fruit growing in 1902. p.719-721.
- Appx. Spillman, W.J. Hay, pasture, and forage crops. p.721-722.

DEPARTMENT OF AGRICULTURE

YEARBOOK (cont.)

1903.

Separate

310. Hartley, C.P. The cultivation of corn. p.175-192.
314. Webber, H.J. The growing of long-staple upland cottons.
p.121-136.
317. Powell, G.H. Relation of cold storage to commercial apple
culture. p.225-238.
320. Townsend, C.O. Relation of sugar beets to general farming.
p.399-410.
321. Dewey, L.H. Principal commercial plant fibers. p.387-398.
323. Spillman, W.J. A model farm. p.363-370.
325. True, R.H. Cultivation of drug plants in the United States.
p.337-346.
330. Taylor, W.A. Promising new fruits. p.267-278.
Appx. Orton, W.A. Plant diseases in 1903. p.550-555.
Appx. Ragan, W.H. Progress of fruit growing in 1903. p.555-556.

1904.

336. Woods, A.F. The relation of plant physiology to the develop-
ment of agriculture. p.119-132.
340. Opportunities in agriculture.
I. Galloway, B.T. Growing crops under glass. p.161-169.
II. Waite, M.B. Fruit growing. p.169-191.
III. Spillman, W.J. General farming. p.181-190.
343. Webber, H.J. New citrus creations of the Department of Agricul-
ture. p.221-240.
351. Tracy, J.E.W. Sugar-beet seed breeding. p.341-352.
354. Husmann, G.C.F. Some uses of the grapevine and its fruit. p.363-
380.
356. Taylor, W.A. Promising new fruits. p.309-415.
358. Shamel, A.D. The improvement of tobacco by breeding and selec-
tion. p.435-452.
361. Cook, O.F. Cotton culture in Guatemala. p.475-488.
363. Galloway, B.T. Work of the Bureau of plant industry in meeting
the ravages of the boll weevil and some dis-
eases of cotton. p.497-508.
Appx. Orton, W.A. Plant diseases in 1904. p.581-586.
Appx. Ragan, W.H. Progress of fruit growing in 1904. p.586-587.
Appx. Spillman, W.J. Grasses and forage plants. p.587-588.

1905.

377. Diversified farming in the cotton belt.
I. Spillman, W.J. South Atlantic Coast. p.193-200.
II. Crosby, M.A. Alabama and Mississippi. p.201-207.
III. Brodie, D.A. Louisiana, Arkansas, and northeastern Texas.
p.207-212.
IV. Warburton, S.W. Texas. p.212-218.

DEPARTMENT OF AGRICULTURE

YEARBOOK (cont.)

1905 (cont.)

Separate

383. Webber, H.J. New fruit productions of the Department of agriculture. p.257-290.
384. Pieters, A.J. The business of seed and plant introduction and distribution. p.290-306.
387. Powell, G.H. The handling of fruit for transportation. p.349-362.
389. Shamel, A.D. The effect of inbreeding in plants. p.377-392.
394. Rolfs, P.H. New opportunities in subtropical fruit growing. p.439-454.
399. Taylor, W.A. Promising new fruits. p.495-510.
401. True, R.H. Progress in drug-plant cultivation. p.533-540.
- Appx. Orton, W.A. Plant diseases in 1905. p.602-611.
- Appx. Ragan, W.H. Progress in fruit growing in 1905. p.620-651.
- Appx. Spillman, W.J. Improvements in farm practice. p.628.

1906.

411. Woods, A.F. The present status of the nitrogen problem. p.125-136.
419. Cotton, J.S. Range management. p.225-238.
422. Townsend, C.O. Methods of reducing the cost of producing beet sugar. p.265-278.
427. Webber, H.J. New citrus and pineapple productions of the Department of agriculture. p.329-346.
429. Taylor, W.A. Promising new fruits. p.355-370.
431. Shamel, A.D. New tobacco varieties. p.387-404.
- Appx. Orton, W.A. Plant diseases in 1906. p.499-508.
- Appx. Spillman, W.J. Progress in farm management in 1906. p.524-525.

1907.

441. Galloway, B.T. Progress in some of the new work of the Bureau of plant industry. p.159-148.
446. Shamel, A.D. The art of seed selection and breeding. p.221-236.
450. Taylor, W.A. Promising new fruits. p.305-320.
453. Powell, G.H. The status of the American lemon industry. p.343-360.
456. Spillman, W.J. Cropping systems for stock farms. p.385-398.
459. Corbett, L.C. Truck farming in the Atlantic coast states. p.425-434.
461. Chilcott, E.C. Dry-land farming in the Great Plains area. p.451-468.
463. Metcalf, H. Diseases of ornamental trees. p.483-494.
- Appx. Spillman, W.J. Improvements in farm practice. p.559-560.
- Appx. Orton, W.A. Plant diseases in 1907. p.577-589.

DEPARTMENT OF AGRICULTUREYEARBOOK (cont.)

1908.

Separate.

475. Woods, A.F. The wastes of the farm. p. 195-216.
478. Piper, C. V. The search for new leguminous forage crops.
p.359-360.
483. Knapp, S.A. Causes of southern rural conditions and the small
farm as an important remedy. p.311-320.
487. Spillman, W.J. Types of farming in the United States. p.351-366.
490. Mathewson, E.H. Intensive methods and systematic rotation of crops
in tobacco culture. p.403-420.
493. Townsend, C.O. By-products of the sugar beet and their uses.
p.443-452.
494. Orton, W.A. The development of farm crops resistant to dis-
ease. p.453-464.
496. Taylor, W.A. Promising new fruits. p.473-490.
- Appx. Orton, W.A. Plant diseases in 1908. p.533-533.

1909.

501. Knapp, S.A. The farmers' cooperative demonstration work.
p.153-160.
503. Townsend, C.O. Conditions influencing the production of sugar-
beet seed in the United States. p.173-184.
507. Scofield, C.S. The problems of an irrigation farmer. p.197-208.
509. Kellerman, K.F. The functions and value of soil bacteria.
p.219-236.
511. Carleton, M.A. The future wheat supply of the United States.
p.251-272.
512. Tracy, W.W. Vegetable seed growing as a business. p.273-284.
515. Hartley, C.P. Progress in methods of producing higher yielding
strains of corn. p.309-320.
518. Beattie, V.R. Comforts and conveniences in farmers' homes.
p.346-356.
519. Brackett, G.B. Prevention of frost injury to fruit crops.
p.357-364.
520. Stubenrauch, A.V. The handling of deciduous fruits on the Pacific
coast. p.365-374.
521. Taylor, W.A. Promising new fruits. p.375-386.

1910.

530. Kellerman, K.F. Nitrogen-gathering plants. p.213-218.
540. Collins, G.N. Increased yields of corn from hybrid seed.
p.319-328.
541. Brand, C.J. The utilization of crop plants in paper making.
p.329-340.
546. Powell, G.H. Cooperation in the handling and marketing of
fruit. p.391-406.
549. Taylor, W.A. Promising new fruits. p.425-436.

DEPARTMENT OF AGRICULTURE

YEARBOOK (cont.)

1910 (cont.)

Separate

550. Stubenrauch, A.V. The precooling of fruit. p.437-448.
551. Hood, S.C. Campher cultivation in the United States.
p.449-460.

1911.

556. Galloway, B.T. Seaman Asahel Knapp. p.151-154.
560. Dewey, L.H. Fibers used for binder twine. p.193-200.
565. Chilcott, E.C. Some misconceptions concerning dry farming.
p.247-256.
567. Spillman, W.J. Seasonal distribution of labor on the farm.
p.269-284.
568. Knapp, B. Some results of the farmers' cooperative demon-
stration work. p.285-296.
572. Smith, C.B. Rotations in the corn belt. p.325-336.
574. Kearney, T.H. The water economy of dry-land crops. p.351-362.
576. Scofield, C.S. The present outlook for irrigation farming.
p.371-382.
579. Cook, O.F. Cotton improvement on a community basis. p.397-
410.
580. Fairchild, D.G. Plant introduction for the plant breeder. p.411-
422.
581. Taylor, W.A. Promising new fruits. p.423-438.

1912.

589. Taylor, W.A. Promising new fruits. p.261-278.
597. Corbett, L.C. A successful method of marketing vegetable prod-
ucts. p.353-362.
598. Metcalf, H. The chestnut bark disease. p.363-372.
605. Brand, C.J. Improved methods of handling and marketing cot-
ton. p.443-462.
608. Scofield, C.S. The settlement of irrigated lands. p.483-494.
609. Oakley, R.A. Some new grasses for the South. p.495-504.

1913.

617. Spillman, W.J. Factors of efficiency in farming. p.93-108.
618. Taylor, W.A. Promising new fruits. p.109-124.
622. Collins, J.F. Practical tree surgery. p.163-190.
625. Ball, C.R. The grain sorghums: immigrant crops that have
made good. p.221-238.
628. Dewey, L.H. Hemp. p.283-346.

DEPARTMENT OF AGRICULTUREYEARBOOK (cont.)

1914.

Separate

649. Carleton, M.A. Hard wheats winning their way. p.391-420.
 652. Cobb, N.A. Nematodes and their relationships. p.457-490.

1915.

671. Meyer, F.N. China a fruitful field for plant exploration.
 p.205-224.
 677. Duval, L. The production and handling of grain in Argentina.
 p.281-298.
 679. Brown, E. How seed testing helps the farmer. p.311-316.

1916.

686. Corbett, L.C. Color as an indication of the picking maturity
 of fruits and vegetables. p.99-106.
 687. Dorsett, P.H. The plant-introduction gardens of the Department
 of agriculture. p.135-144.
 689. Young, R.A. The dasheen: its uses and culture. p.199-208.
 690. Scofield, C.S. Agriculture on government reclamation projects.
 p.177-193.
 695. Townsend, C.O. The present status of the sugar-beet seed indus-
 try in the United States. p.399-410.
 711. Kellerman, K.F. Cooperative work for eradicating citrus canker.
 p.267-272.

1917.

732. Cates, H. R. The weed problem in American agriculture.
 p.305-315.
 734. Stockberger, W.W. Production of drug-plant crops in the United
 States p.169-176.
 740. Morse, W.J. The soy-bean industry in the United States.
 p.101-111.
 742. Thompson, H.C. Present status of the peanut industry. p.113-126.
 755. Humphrey, H.B. Cereal diseases and the national food supply.
 p.481-495.
 757. Oakley, R.A. The seed supply of the nation. p.497-536.

1918.

769. Leighty, C.E. The place of rye in American agriculture. p.169-
 184.
 776. Biggar, H.H. The old and the new in corn culture. p.123-136.
 790. Edwards, H.T. Sisal and henequen as binder-twine fibers. p.357-
 366.
 796. Stakman, E.C. The black stem rust and the barberry. p.75-100.

DEPARTMENT OF AGRICULTURE

YEARBOOK (cont.)

1919.

Separate

813. Shamel, A.D.

Cooperative improvement of citrus varieties.

p. 349-375.

815. Brown, E.

What the farmer should expect from the seedsman.

p. 343-346.

DEPARTMENT OF AGRICULTURE

OFFICE OF SECRETARY

CIRCULAR

Number 1-154. 1896-1920. In progress.

Contributions from Bureau of Plant Industry and Divisions which preceded the Bureau.

Number.

8. Williams, T.A. Cooperative grass and forage plant investigations with state experiment stations. 1900.
(Contrib. from Div. of Agros.)
9. Shear, C.L. Collection and distribution of grass seed: field work. 1900. (Contrib. from Div. of Agros.)
16. Galloway, B.T. Tests of commercial cultures of nitrogen-fixing bacteria. 1906.
20. _____ Adulteration of alfalfa seed. 1906.
26. _____ Adulteration and misbranding of alfalfa, red clover, and grass seeds. 1908.
28. _____ Adulteration and misbranding of the seeds of alfalfa, red clover, orchard grass, and Kentucky blue grass. 1909.
30. Knapp, S.A. Hog raising in the South. 1909.
31. Woods, A.F. Adulteration and misbranding of the seeds of alfalfa, red clover, orchard grass, and Kentucky bluegrass. 1910.
32. Knapp, S.A. Cotton, the greatest of cash crops. 1910.
33. _____ The mission of cooperative demonstration work in the South. 1910.
35. Taylor, W.A. Adulteration and misbranding of the seeds of alfalfa, red clover, Kentucky bluegrass, orchard grass, and reedtop. 1911.
36. Brodie, D.A. Emergency forage crops. 1911.
39. Galloway, B.T. Adulteration and misbranding of the seeds of red clover, Kentucky bluegrass, orchard grass, and hairy vetch. 1912.
42. The seed importation act of August 24, 1912. 1913.
43. Galloway, B.T. Adulteration and misbranding of the seeds of Kentucky bluegrass, reedtop, and orchard grass. 1913.
45. Taylor, W.A. Adulteration and misbranding of the seed of hairy vetch. 1913.
50. Knapp, B. Diversified agriculture and the relation of the banker to the farmer. 1915.
68. Besley, H.J. & Baston, G.H. Improved apparatus for use in making acidity determinations of corn. 1916.
81. Thompson, H.C. Harvesting, picking, thrashing, and storing peanuts. 1917.
114. Byars, L.P. A serious belworm of nematode disease of wheat. 1918.

DEPARTMENT OF AGRICULTURE

OFFICE OF SECRETARY

Circular.

Special Series (Unnumbered).

<u>Warburton, C.W.</u>	Winter oats in the cotton belt. 1914.
<u>Leighty, C.E.</u>	Winter wheat in the cotton belt. 1914.
<u>Piper, C.V.</u>	Rye in the cotton belt. 1914.
	Rape as a forage crop in the cotton belt. 1914.
	Hairy vetch for the cotton belt. 1914.
<u>Carrier, L.</u>	Permanent pastures for the cotton belt. 1914.
<u>Vinall, H.N.</u>	Sorghum for forage in the cotton belt. 1914.
<u>Morse, W.J.</u>	Soy beans in the cotton belt. 1915.
	Cowpeas in the cotton belt. 1915.
<u>Thompson, H.C.</u>	Sweet-potato growing in the cotton belt. 1915.
	Peanut growing in the cotton belt. 1915.

DEPARTMENT OF AGRICULTURE

DIVISION OF GARDENS AND GROUNDS

The propagating garden, started in 1858, was turned over by the Commissioner of Patents to the Department of Agriculture shortly after the creation of the Department in May, 1862, and the Division of Gardens and Grounds was organized as an experimental garden by the appointment of a horticulturist superintendent, in September 1862. The superintendent was charged with the care of keeping the lawns and other ornamentations of the park, and with all duties connected with the introduction and propagation of desirable economic plants, and their dissemination in suitable climates throughout the States. After the reservation now occupied by the Department was secured, he furnished the plans for the laying out of the grounds, and the conservatories and other buildings of that time were erected under his direction. For over twenty years the superintendent served as vegetable physiologist, pomologist, and adviser on all matters relating to soils and soil culture, and farms and gardens, and everything pertaining thereto, performing duties which were later conducted by divisions specially formed for the purpose. From 1862-1867 his title was Superintendent of experimental garden; 1868-1900, Superintendent of gardens and grounds. Mr. William Saunders served as superintendent from September 1862 until his death in September 1900. (From Div. of Pub. Bul. 3, p. 34.) The division was then put in charge of Dr. B. T. Galloway, Chief of Division of vegetable physiology and pathology, and July 1, 1901 was merged into the Bureau of plant industry.

ANNUAL REPORT

1862-1900.

- 1862. In Annual report, Commissioner of agriculture, 1862, p.541-545.
- 1863. In Annual report, Commissioner of agriculture, 1863, p.547-550.
- 1864. In Annual report, Commissioner of agriculture, 1864, p.605-609.
- 1865. In Annual report, Commissioner of agriculture, 1865, p.13-25.
- 1866. In Annual report, Commissioner of agriculture, 1866, p.17-25.
- 1867. In Annual report, Commissioner of agriculture, 1867, p.25-31.
- 1868. In Annual report, Commissioner of agriculture, 1868, p.118-124.
- 1869. In Annual report, Commissioner of agriculture, 1869, p.79-91.
- 1870. In Annual report, Commissioner of agriculture, 1870, p.16-23.
- 1871. In Annual report, Commissioner of agriculture, 1871, p.102-109.
- 1872. None printed.
- 1873. None printed.
- 1874. None printed.
- 1875. None printed.
- 1876. In Annual report, Commissioner of agriculture, 1876, p.61-73.
- 1877. In Annual report, Commissioner of agriculture, 1877, p.47-65.
- 1878. In Annual report, Commissioner of agriculture, 1878, p.194-207.
- 1879. In Annual report, Commissioner of agriculture, 1879, p.359-364.
- 1880. None printed.
- 1881-82. In Annual report, Commissioner of agriculture, 1881-82, p.215-230.
- 1883. In Annual report, Commissioner of agriculture, 1883, p.181-196.
- 1884. None printed.
- 1885. In Annual report, Commissioner of agriculture, 1885, p.33-46.

DEPARTMENT OF AGRICULTURE

DIVISION OF GARDENS AND GROUNDS

ANNUAL REPORT (cont.)

1886. In Annual report, Commissioner of agriculture, 1886, p.687-703.
1887. In Annual report, Commissioner of agriculture, 1887, p.673-690.
1888. None printed.
1889. In Annual report, Secretary of agriculture, 1889, p.111-134.
1890. In Annual report, Secretary of agriculture, 1890, p.557-596.
1891. In Annual report, Secretary of agriculture, 1891, p.453-484.
1892. In Annual report, Secretary of agriculture, 1892, p.377-402.
1893. In Annual report, Secretary of agriculture, 1893, p.355-387.
1894. In Annual report, Secretary of agriculture, 1894, p.207-208.
1895. In Annual report, Secretary of agriculture, 1895, p.189-190.
1896. None printed.
1897. In Annual report, Secretary of agriculture, 1897, p.159-160.
1898. In Annual report, Secretary of agriculture, 1898, p.143-144.
1899. In Annual report, Secretary of agriculture, 1899, p.91-92.
1890. In Annual report, Secretary of agriculture, 1890, p.273-278.

CIRCULAR

No.1. [1897]

Number.

1. Saunders, W. An experiment in tea culture: report on tea gardens of Dr. Charles U. Shepard, Pinehurst, S. C. [1897.]

See also contributions of the Division of gardens and grounds to the [Department], Monthly and Special reports; Farmers' Bulletin, and Year-book.

DEPARTMENT OF AGRICULTUREDIVISION OF BOTANY

In the organic law creating the Department of Agriculture, enacted in 1862, provision was made for scientific officers of three classes, namely, chemists, entomologists, and botanists. It was not, however, until March 1839 that a Division of Botany was organized. The division made experiments with poisonous and medicinal plants and on the treatment of weeds, tested seeds with a view to their increased purity and commercial value, and investigated other questions of economic botany, and published the results of these investigations. Dr. C. C. Parry was botanist from 1869 to 1871. His principal achievement was the formation of a National Herbarium. This Herbarium was maintained by the division until July 1, 1898, when the work was transferred to the Smithsonian Institution. Dr. George Vasey was chief of the division from 1872 to 1893, Frederick V. Coville from 1893 to July 1, 1901 when the division was merged into the Bureau of plant industry. (From Yearbook, 1897, p. 90; and Div. of Pub., Bul. 3, p. 35.)

ANNUAL REPORT

1869-1900.

1869. In Annual report, Commissioner of agriculture, 1869, p. 91-97.
 1870. In Annual report, Commissioner of agriculture, 1870, p. 108-113.
 1871. None printed.
 1872. In Annual report, Commissioner of agriculture, 1872, p. 159-179.
 1873. None printed.
 1874. In Annual report, Commissioner of agriculture, 1874, p. 156-160.
 1875. None printed.
 1876. In Annual report, Commissioner of agriculture, 1876, p. 73-74.
 1877. None printed.
 1878. In Annual report, Commissioner of agriculture, 1878, p. 157-194.
 (Not designated annual report, but a "Report of the Botanist and Chemist on grasses and forage plants," by George Vasey and Peter Collier.)
 1879. In Annual report, Commissioner of agriculture, 1879, p. 349-359.
 1880. In Annual report, Commissioner of agriculture, 1880, p. 375-386.
 1881-82. In Annual report, Commissioner of agriculture, 1881-82, p. 231-255.
 1883. In Annual report, Commissioner of agriculture, 1883, p. 83-98.
 1884. In Annual report, Commissioner of agriculture, 1884, p. 123-136.
 1885. In Annual report, Commissioner of agriculture, 1885, p. 63-88.
 1886. In Annual report, Commissioner of agriculture, 1886, p. 69-93.
 1887. In Annual report, Commissioner of agriculture, 1887, p. 301-321.
 1888. In Annual report, Commissioner of agriculture, 1888, p. 305-324.
 1889. In Annual report, Secretary of agriculture, 1889, p. 377-395.
 1890. In Annual report, Secretary of agriculture, 1890, p. 375-391.
 1891. In Annual report, Secretary of agriculture, 1891, p. 341-358.
 1892. In Annual report, Secretary of agriculture, 1892, p. 201-214.
 1893. In Annual report, Secretary of agriculture, 1893, p. 235-244.
 1894. In Annual report, Secretary of agriculture, 1894, p. 161-166.
 1895. In Annual report, Secretary of agriculture, 1895, p. 159-164.
 1896. In Annual report, Secretary of agriculture, 1896, p. 96-102.

DEPARTMENT OF AGRICULTUREDIVISION OF BOTANYANNUAL REPORT (cont.)

1897. In Annual report, Secretary of agriculture, 1897, p.167-174.
 1898. In Annual report, Secretary of agriculture, 1898, p.153-158.
 1899. In Annual report, Secretary of agriculture, 1899, p.53-57.
 1900. In Annual report, Secretary of agriculture, 1900, p.91-101.
 Reports for 1886, 1888-1900 reprinted as separates.

BULLETIN

No.1-29. 1886-1901.

1. Vasey, G. Investigation of grasses of arid districts of Kansas, Nebraska, and Colorado. 1886.
2. Scribner, F.L. Fungus diseases of grape vine. 1886.
3. Vasey, G. Grasses of the South, report on certain grasses and forage plants for cultivation in South and Southwest. 1887.
4. _____ Desiderata of herbarium for North America north of Mexico. Ranunculaceae to Rosaceae, inclusive. (Distributed among botanists with the purpose of obtaining specimens.) 1887.
5. Scribner, F.L. Experiments made in 1887 in treatment of downy mildew and black-rot of grapevine with chapter on apparatus for applying remedies for these diseases. 1888.
6. [Grasses of arid districts.] Investigation of grasses of arid districts of Texas, New Mexico, Arizona, Nevada, and Utah in 1887. 1888.
7. Scribner, F.L. Black rot [of grapevine]. 1888.
& Viala, P.
8. Vasey, G. & Galloway, B.T. Record of some work of division, including extracts from correspondence and other communications. 1889.
9. Smith, E.F. Peach yellows, a preliminary report. 1888.
10. Experiments made in 1888 in treatment of downy mildew and black rot of grape vine. 1889.
11. Galloway, B.T. Experiments made in 1889 in treatment of fungous diseases of plants. 1890.
12. Vasey, G. Grasses of the Southwest; plates and descriptions of grasses of desert region of western Texas, New Mexico, Arizona, and southern California. Pt. 1, 1890.
Pt. 2, 1891.
13. _____ Grasses of Pacific Slope, including Alaska and adjacent islands; plates and descriptions of grasses of California, Oregon, Washington, and the north-western coast, including Alaska. Pt. 1. 1892.
Pt. 2. 1893.
14. Hale, E.M. Ilex cassine, aboriginal North American tea, its history, distribution, and use among native North American Indians. 1891.
15. Dewey, L.H. Russian thistle, its history as a weed in U.S., with an account of means available for its eradication. 1894.

DEPARTMENT OF AGRICULTUREDIVISION OF BOTANYPUBLICATIONS (cont.)

Number.

16. Nash, G. V. American ginseng, its commercial history, protection, and cultivation. 1895.
Revised and extended by Maurice G. Kains. 1898.
[With prefatory note by Frederick V. Coville].
1903.
17. Dewey, L.H. Legislation against weeds. 1896.
18. Webber, H.J. Water hyacinth, and its relation to navigation in Florida. 1897.
19. Kains, M.G. Chicory growing as addition to resources of American farmer. 1898.
20. Chesnut, V.K. Principal poisonous plants of United States. 1898.
21. Calbraith, S.J. Vanilla culture, as practiced in Seychelles Islands. 1898.
22. Knapp, S.A. Present status of rice culture in United States. 1899.
23. Carleton, M.A. Russian cereals adapted for cultivation in United States. 1900.
24. Hicks, G.H. Germination of seeds as affected by certain chemical fertilizers. 1900.
25. Cook, O.F. Shade in coffee culture. 1901.
26. Chesnut, V.K. & Wilcox, E.V. Stock-poisoning plants of Montana, preliminary report. 1901.
27. Collins, G.H. Seeds of commercial saltbushes. 1901.
28. Cook, O.F. Okra, a tropical vegetable. 1901.
29. Pieters, A.J. & Charles, V.K. Seed coats of certain species of genus Brassica. 1901.

CIRCULAR

No. 1-30. 1894-1901.

1. Scribner, F.L. Hungarian brome grass. 1894.
2. Dewey, L.H. Nut grass. 1894.
3. _____ Russian thistle. [1895.]
4. Scribner, F.L. Flat pea. 1895.
5. _____ Giant knotweed, or sachaline. 1895.
6. Hicks, G. H. Standards of the purity and vitality of agricultural seeds. 1896.
7. Dewey, L.H. Tumbling mustard. 1896.
Ed. 2. 1896.
8. Coville, F.V. Crimson clover hair balls. 1896.
9. Dewey, L.H. Wild garlic. 1897.
Ed. 2. 1900.
10. _____ Three new weeds of mustard family. 1897.
11. Hicks, G.H. & Dabney, J.C. Vitality of seed treated with carbon bisulphid. n.d.
12. Dewey, L.H. Camphor trees. 1897.
Rev. ed. 1897.

DEPARTMENT OF AGRICULTURE

DIVISION OF BOTANY

CIRCULAR(cont.)

Number.

13. Coville, F.V. Observations on recent cases of mushroom poisoning in District of Columbia. 1897.
Rev. ed. 1898.
Ed. 3. 1899.
14. Dewey, L.H. Dodders infesting clover and alfalfa. 1898.
15. Kains, M.G. Horse-radish. 1898.
16. Cook, O.F. Section of seed and plant introduction. 1899.
17. Hitchcock, F.H. Notes on plant products of Philippine Islands. 1899.
18. Pieters, A.J. Crimson clover seed. 1899.
Rev. ed. 1900.
19. Fairchild, D.G. Hop cultivation in Bohemia. 1899.
20. _____ Horse-radish culture in Bohemia. 1899.
21. _____ Yams in West Indies. 1899.
22. Swingle, W.T. Bur, or globe, artichokes. 1899.
& Fairchild, D.G.
23. Fairchild, D.G. Lebbek or siris tree. 1900.
24. Pieters, A.J. Red clover seed. 1900.
25. _____ Seed of beardless brome grass. 1900.
26. Dewey, L.H. Egyptian cotton in U. S. 1900.
27. _____ Canada thistle. 1900.
Rev. ed. 1901.
28. Cook, O.F. Rubber cultivation for Porto Rico. 1900.
29. Kains, M.G. Chicory growing. 1900.
30. Coville, F.V. List of publications of Division of Botany. 1901.
Rev. ed. 1902.

Contributions from U.S. National Herbarium
1890 - 1902.

The U. S. National Herbarium, founded by the Smithsonian Institution, was transferred to the Department of Agriculture in 1868, and returned to the custody of the Smithsonian Institution, July 1, 1896. The Department of Agriculture, however, continued to publish this series of botanical reports until July 1, 1902, when, in pursuance of an act of Congress, the National Museum assumed the responsibility of the publication.

- V. 1. Reports on collections and miscellaneous papers. 1890-1895.

Contents:

- No. 1. Vasey, G. & Rose, J.W. List of plants collected by Edward Palmer in 1888 in South Carolina. List of plants collected by Edward Palmer at Lagoon Head, Cedros Island, San Benito Island, Guadalupe Island, Head of Gulf of California. 1890. p.1-28.
- No. 2. Coulter, J.M. Collection of plants made by G. C. Nealley in region of Rio Grande in Texas, from Brazos Santiago to El Paso County. 1890. p.29-35.

DEPARTMENT OF AGRICULTURE

DIVISION OF BOTANY

Contributions from U. S. National Herbarium (cont.)

- V. 1. No. 3. Vasey, G. & Rose, J.N. List of plants collected by Dr. Edward Palmer in Lower California and western Mexico, in 1890. p.63-90. 1890.
- No. 4. Rose, J.N. List of plants collected by Dr. Edward Palmer in western Mexico and Arizona in 1890. p.91-116. 1891.
_____ List of plants collected by Dr. E. Palmer in Arizona in 1890. p.117-127. 1891.
- No. 5. _____ List of plants collected by Dr. Edward Palmer in 1890 on Carmen Island. p.129-134.
_____ et al. List of plants collected by the U.S.S. Albatross in 1887-91 along the western coast of America. p.135-142.
- Fisher, E.M. Revision of North American species of Hoffmannseggia. p.143-150.
- Clark, J.A. Systematic and alphabetic index of new species of North American phanerogams and pteridophytes, published in 1891. p.151-188. 1892.
- No. 6. Holzinger, J.M. List of plants collected by C.S. Sheldon and M.A. Carleton in Indian Territory in 1891. p.189-219.
Carleton, M.A. Observations on the native plants of Oklahoma Territory and adjacent districts. p.220-232. 1892.
- No. 7. Clark, J.A. Systematic and alphabetic index to new species of North American phanerogams and pteridophytes, published in 1892. p.233-264. 1893.
- No. 8. Vasey, G. Notes on some Pacific Coast grasses. p.265-266.
_____ Descriptions of new or noteworthy grasses from the U. S. p.267-280.
_____ Descriptions of new grasses from Mexico. p.281-285.
- Holzinger, J.M. Descriptions of new plants from Texas and Colorado. p.286-287.
_____ List of plants new to Florida. p.288.
- Rose, J.N. Descriptions of three new plants. p.289-290.
- Eckfeldt, J.W. List of lichens from California and Mexico, collected by Dr. Edward Palmer from 1888 to 1892. p.291-292. 1893.
- No. 9. Rose, J.N. Report on a collection of plants made in States of Sonora and Colima, Mexico by Edward Palmer, 1890 and 1891. p.293-434. 1895.
- V. 2. Coulter, J.M. Botany of western Texas, a manual of phanerogams and pteridophytes of western Texas. 1891-94.
[Reprinted by Smithsonian Institution, 1902, under title "Botany of western Texas."]

Contents:

- No. 1. Coulter, J.M. Polypetalae. p.1-152. 1891.
- No. 2. _____ Gamopetalae. p.153-345. 1893.
- No. 3. _____ Apetalae, Monocotyledonae, Pteridophyta. p.347-588. 1894.

DEPARTMENT OF AGRICULTURE

DIVISION OF BOTANY

(Contributions from U.S. National Herbarium. (cont.)

V. 3. Reports on collections, revisions of groups, and miscellaneous papers. 1892-1896.

Contents:

- No. 1. Vasey, G. Monograph of the grasses of the United States and British America. p.1-89. 1892.
- No. 2. Coulter, J.M. Preliminary revision of the North American species of Cactus, Anhalonium, and Lophophora. p.91-132. 1894.
- No. 3. Rydberg, P.A. Flora of the sand hills of Nebraska. p.133-200. 1895.
- No. 4. Holzinger, J.M. Report on a collection of plants made by J.H. Sandberg and assistants in northern Idaho, in the year 1892. p.205-287. 1895.
- No. 5. Coulter, J.M. & Rose, J.N. Report on Mexican Umbelliferae, mostly from the State of Oaxaca, recently collected by C. G. Pringle and E. V. Nelson. p.289-309.
Rose, J.N. Descriptions of plants, mostly new, from Mexico and the United States. p.311-323. 1895.
- No. 6. Botany of Yakutat Bay, Alaska. 1896.
I. Funston, F. Field report. p.325-333.
II. Coville, F.V. Botanical report. p.334-353.
- No. 7. Coulter, J.M. Preliminary revision of the North American species of Echinocactus, Cereus, and Opuntia. p.355-462. 1896.
- No. 8. Rydberg, P.A. Flora of the Black Hills of South Dakota. p.463-536. 1896.
- No. 9. Hitchcock, A.S. Report on a collection of plants made by C. H. Thompson in southwestern Kansas in 1893. p.537-557.
Coville, F.V. *Crepis occidentalis* and its allies. p.559-565.
Rose, J.N. Plants from the Big Horn Mountains of Wyoming. p.567-574.
Coulter, J.M. & Rose, J.N. *Leibergia*, a new genus of Umbelliferae from the Columbia River region. p.575-576.
Cogniaux, A. *Roseanthus*, a new genus of cucurbitaceae from Acapulco, Mexico. p.577-578. 1896.

V. 4. Coville, F.V. Botany of the Death Valley expedition. A report on the botany of the expedition sent out in 1891 by the U. S. Department of Agriculture to make a biological survey of the region of Death Valley, California. 363 p. 1893.

V. 5. Systematic, economic, and ecological investigations. 1897-1901.

Contents:

- No. 1. Leiberg, J.B. General report on a botanical survey of the Coeur d'Alene Mountains in Idaho during the summer of 1895. p.1-85. 1897.

DEPARTMENT OF AGRICULTURE

DIVISION OF BOTANY

Contributions from U.S. National Herbarium. (cont.)

- V. 5. No. 2. Coville, F.V. Notes on the plants used by the Klamath Indians of Oregon. p.87-103. 1897.
- No. 3. Rose, J.N. Studies of Mexican and Central American plants. p.109-144. 1897.
- No. 4. _____ Studies of Mexican and Central American plants. - No. 2. p.145-200.
- Henderson, L.F. Two new species of plants from the north-western United States. p.201-202.
- Coulter, J.M. & Rose, J.N. Hesperogenia, a new genus of Umbelliferae from Mount Rainier. p.203.
- Rose, J.N. Three new species of Tradescantia from the United States. p.204-206.
- _____ Treleasea, a new genus of Compositaceae. p.207-208.
- _____ Notes on useful plants of Mexico. p.209-259. 1899.
- No. 5. Kearney, T.H. Jr. The plant covering of Ocracoke Island; a study in the ecology of the North Carolina strand vegetation. p.261-319. 1900.
- No. 6. _____ Report on a botanical survey of the Dismal Swamp region. p.321-550. 1901.
- V. 6. Mohr, C. Plant life of Alabama. An account of the distribution, modes of association, and adaptations of the flora of Alabama, together with a systematic catalogue of plants growing in the State. Prepared in cooperation with the Geological Survey of Alabama. 921 p. 1901.
- V. 7. Systematic and geographic botany, and aboriginal uses of plants. 1900-1902.
- Contents:
- No. 1. Coulter, J.M. & Rose, J.N. Monograph of the North American Umbelliferae. p.9-256. 1900.
- No. 2. Cook, O.F. Origin and distribution of the cocoa palm. p.257-293. 1901.
- No. 3. Chesnut, V.K. Plants used by Indians of Mendocino County, California. p.295-406. 1902.

A few of the more important papers contained in the various numbers of this series are issued separately in pamphlet form.

INVENTORY [OF SEEDS AND PLANTS]

- No. 1. Foreign seeds and plants imported by the Section of seed and plant introduction, numbers 1-1000. n.d. [1898?]
- No. 2. Foreign seeds and plants imported by the Section of seed and plant introduction, numbers 1001-1300. [1899.]

DEPARTMENT OF AGRICULTURE

BOTANY OF DIVISION

INVENTORY [OF SEEDS AND PLANTS] (cont.)

- No. 3. Seeds of saccharine sorghums distributed by the Section of seed and plant introduction. [1899.]
- No. 4. Cereals and forage plants collected in Russia by M. A. Carleton for the Section of seed and plant introduction. [1899.]
- No. 5. Foreign seeds and plants imported by the Department of agriculture and for distribution through the Section of seed and plant introduction. Numbers 1901-2700. 1899.
- No. 6. Foreign seeds and plants collected in Austria, Italy, and Egypt by Barbour Lathrop and David G. Fairchild for the Section of seed and plant introduction. [1900.]
- No. 7. Foreign seeds and plants imported by the Department of agriculture, through the Section of seed and plant introduction, for distribution in cooperation with the state agricultural experiment stations. Numbers 2701-3400. 1900.

- No. 8. Issued by Section of seed and plant introduction.
- No. 9-47. Issued by Bureau of plant industry. See Inventory of seeds and plants imported, under Bureau of plant industry.

See also contributions of the Botanist and the Division of Botany to [Department], Monthly and Special reports, Farmers' bulletin and Yearbook.

DEPARTMENT OF AGRICULTURE

DIVISION OF MICROSCOPY

ANNUAL REPORT

1872-1894.

Reports on microscopical investigations were made from 1872 to 1875 by the microscopist, but the division was not organized, as such, until 1885. July 1, 1895, by order of the Secretary, the work hitherto carried on by this division was divided among the divisions of Chemistry, Animal Industry, Vegetable physiology and pathology, etc. Thomas Taylor was microscopist from the beginning of the investigations to 1894.

Microscopic Investigations: Report of the microscopist.

- 1872. In Annual report, Commissioner of agriculture, 1872, p.188-203.
- 1873. In Annual report, Commissioner of agriculture, 1873, p.183-210.
- 1874. In Annual report, Commissioner of agriculture, 1874, p.161-172.
- 1875. In Annual report, Commissioner of agriculture, 1875, p.187-206.
- 1876. In Annual report, Commissioner of agriculture, 1876, p.74-86.
- 1877-84. None printed.

Division of Microscopy: Report of the microscopist.

- 1885. In Annual report, Commissioner of agriculture, 1885, p.89-108.
- 1886. In Annual report, Commissioner of agriculture, 1886, p.139-147.
- 1887. In Annual report, Commissioner of agriculture, 1887, p.617-625.
- 1888. In Annual report, Commissioner of agriculture, 1888, p.559-564.
- 1889. In Annual report, Secretary of agriculture, 1889, p.191-200.
- 1890. In Annual report, Secretary of agriculture, 1890, p.361-374.
- 1891. In Annual report, Secretary of agriculture, 1891, p.405-413.
- 1892. In Annual report, Secretary of agriculture, 1892, p.281-292.

Division of Microscopy: Report of the Chief.

- 1893. In Annual report, Secretary of agriculture, 1893, p.297-302.
- 1894. In Annual report, Secretary of agriculture, 1894, p.195-196.

1893-1893 reprinted as separates.

Food products.

No. 1-3. 1891-1893.

Number.

- 1. Taylor, T. Twelve edible mushrooms of U. S., with directions for their identification and their preparation as food. (Reprinted from report, Commissioner of Agriculture for 1885.) 1893. [Reprinted with addition of article on mushroom industry (Falconer).] 1894.

DEPARTMENT OF AGRICULTURE

DIVISION OF MICROSCOPY

FOOD PRODUCTS (cont.)

Number.

2. Taylor, T. Eight edible and twelve poisonous mushrooms of U. S., with directions for culture and culinary preparation of the edible species. (Reprinted from report of Secretary of Agriculture, 1890, p. 366-373, with appendix: List of edible fungi of U.S.) 1891. [Ed. 2, Rev.] 1893.
3. _____ Improved methods of distinguishing between pure and fictitious lard [and] Four edible mushrooms of U. S. (Reprinted with revision, from report of Secretary of Agriculture for 1891.) 1893.

See also contributions of Microscopist to Monthly Report.

DEPARTMENT OF AGRICULTURE

DIVISION OF POMOLOGY

The Division of Pomology was established in 1886. It collected and distributed information in regard to the fruit interests of the United States, investigated the habits and peculiar qualities of fruits, their adaptability to various soils and climates, and conditions of culture, and introduced new and untried fruits from foreign countries. H. E. Van Deman was chief from 1886 to 1892, S. B. Heiges 1894-1896, and 1897-1900, G. B. Brackett. Report for 1893 was made by W. A. Taylor as Assistant pomologist, 1900 as Acting pomologist. Merged into the Bureau of Plant Industry July 1, 1901. (From Div. Publ. Bul. 3, p.36.)

ANNUAL REPORT.

1886-1900.

- 1886. In Annual report, Commissioner of agriculture, 1886, p.259-276.
- 1887. In Annual report, Commissioner of agriculture, 1887, p.627-652.
- 1888. In Annual report, Commissioner of agriculture, 1888, p.565-595.
- 1889. In Annual report, Commissioner of agriculture, 1889, p.433-451.
- 1890. In Annual report, Commissioner of agriculture, 1890, p.409-424.
- 1891. In Annual report, Secretary of agriculture, 1891, p.379-404.
- 1892. In Annual report, Secretary of agriculture, 1892, p.247-280.
- 1893. In Annual report, Secretary of agriculture, 1893, p.277-295.
- 1894. In Annual report, Secretary of agriculture, 1894, p.205-206.
- 1895. In Annual report, Secretary of agriculture, 1895, p.191-194.
- 1896. In Annual report, Secretary of agriculture, 1896, p.109-114.
- 1897. In Annual report, Secretary of agriculture, 1897, p.147-151.
- 1898. In Annual report, Secretary of agriculture, 1898, p.127-131.
- 1899. In Annual report, Secretary of agriculture, 1899, p.85-90.
- 1900. In Annual report, Secretary of agriculture, 1900, p.59-63.

1887, 1889-1900 reprinted as separates.

BULLETIN

No. 1-10. 1888-1901.

Number.

1. Report on condition of tropical and semitropical fruits in United States in 1887. 1888. [Ed. 2.] 1891.
Reasner, P.W. Tropical and semitropical fruits in Florida and Gulf States.
Klee, W.G. Tropical and semitropical fruits of California, Arizona, and New Mexico.
2. Lyon, T.T. Adaptation of Russian and other fruits to extreme northern portions of United States. 1888.
3. Munson, T.V. Classification and generic synopsis of wild grapes of North America. 1890.
4. King, W.R. Relative merit of various stocks for orange, with notes on mal di gomma and mutual influence of stock and scion. [compiled by William R. King.]. 1891.

DEPARTMENT OF AGRICULTURE

DIVISION OF POMOLOGY

BULLETIN (cont.)

Number.

5. Eisen, G. Fig culture; edible figs; their culture and curing.
- Earle, F. S. Fig culture in Gulf States. 1897.
6. Catalogue of fruits recommended for cultivation in various sections of U. S., by American Pomological Society; revised by committee of society, T. T. Lyon, chairman. 1897.
7. Taylor, W. A. Fruit industry and substitution of domestic for foreign-grown fruits, with historical and descriptive notes on ten varieties of apple suitable for export trade. 1898. [Reprint from Yearbook 1897.]
8. Revised catalogue of fruits recommended for cultivation in various sections of U. S. and British provinces, by American Pomological Society; revised by committee of society, W. H. Ragan, chairman. 1899.
- 9 Eisen, G. Fig, its history, culture, and curing, with descriptive catalogue of known varieties of figs. 1901.
10. Lake, E. R. Prunes and prune culture in Western Europe, with special reference to existing conditions in Pacific Northwest. 1901.

CIRCULAR

No. 1-3. 1896-1897.

[Reprinted from Report of Pomologist for 1894.]

1. Engle, H. M. Nut culture. 1896.
2. Lake, E.R. Prune culture in Pacific Northwest.
Revised edition. 1897.
3. Hale, J.H. Notes on peach culture, n.d.
Revised edition. 1897. [Erroneously numbered 40.]

See also contributions of Division of Pomology to Farmers' bulletins and Yearbook.

DEPARTMENT OF AGRICULTURE

DIVISION OF VEGETABLE PHYSIOLOGY AND PATHOLOGY

This Division was originally established in 1886 as a Section of Mycology in the Division of Botany; the following year it was changed to a Section of Vegetable Pathology, and in 1891 became a separate Division. In 1895 the scope of its work was enlarged and name altered to Division of Vegetable Physiology and Pathology. The Division had for its object the study of normal and abnormal life processes of plants. It sought by means of both field and laboratory investigations in plant physiology, plant breeding and selection, and the morphology and classification of fungi, to determine the causes and methods of prevention of plant diseases, the amelioration of economic plants, and rational methods of growing commercial crops. Merged into Bureau of Plant Industry July 1, 1901. Report for 1886 made by F. Lamson-Scribner as Mycologist, 1887 as Chief of Section of Vegetable Pathology; 1888-1900 B. T. Galloway was chief, 1888-1889 of Section of Vegetable Pathology, 1890-1894, of Division of Vegetable Pathology, 1895-1900 of Division of Vegetable Physiology and Pathology. (From Div. Pub. Bul. 3, p.35-37.)

ANNUAL REPORT.
1886-1900.

Report of the mycologist.

1886. In Annual report, Commissioner of agriculture, 1886, p.95-138.

Report of the chief of the Section of Vegetable Pathology.

1887. In Annual report, Commissioner of agriculture, 1887, p.323-397.
1888. In Annual report, Commissioner of agriculture, 1888, p.325-404.
1889. In Annual report, Secretary of agriculture, 1889, p.397-432.

Report of the chief of the Division of Vegetable Pathology.

1890. In Annual report, Secretary of agriculture, 1890, p.393-408.
1891. In Annual report, Secretary of agriculture, 1891, p.359-378.
1892. In Annual report, Secretary of agriculture, 1892, p.215-245.
1893. In Annual report, Secretary of agriculture, 1893, p.245-276.
1894. In Annual report, Secretary of agriculture, 1894, p.143-150.

Report of the chief of the Division of Vegetable Physiology and Pathology.

1895. In Annual report, Secretary of agriculture, 1895, p.169-174.
1896. In Annual report, Secretary of agriculture, 1896, p.15-22.
1897. In Annual report, Secretary of agriculture, 1897, p.7-13.
1898. In Annual report, Secretary of agriculture, 1898, p.27-36.
1899. In Annual report, Secretary of agriculture, 1899, p.71-83.
1900. In Annual report, Secretary of agriculture, 1900, p.49-58.

Reports for 1886-1893, 1896-1900 reprinted as separates.

DEPARTMENT OF AGRICULTURE

DIVISION OF VEGETABLE PHYSIOLOGY AND PATHOLOGY

BULLETIN

No. 1-39. 1891-1901.

Number.

1. Smith, E. F. Additional evidence on communicability of peach yellows and peach rosette. 1891.
2. Pierce, N.B. California vine disease, preliminary report of investigations. 1892.
3. Galloway, B.T. Experiments made in 1891 in treatment of plant diseases. 1892.
4. Smith, E.F. Experiments with fertilizers for prevention and cure of peach yellows, 1889-92. 1893.
5. Waite, M.B. Pollination of pear flowers. 1894.
[Ed. 2.] 1895.
6. Fairchild, D.C. Bordeaux mixture as a fungicide. 1894.
7. Galloway, B.T. Effect of spraying with fungicides on growth of nursery stock. 1894.
8. Swingle, W.T. Principal diseases of citrus fruits in Florida. & Webber, H.J. 1896.
9. Swingle, W.T. Bordeaux mixture, its chemistry, physical properties, and toxic effects on fungi and algae. 1896.
10. Evans, W.H. Copper sulphate and germination, treatment of seed with copper sulphates to prevent attacks of fungi. 1896.
11. Smith, E.F. Legal enactments for restriction of plant diseases, compilation of laws of U.S. and Canada. 1896.
12. _____ Bacterial disease of tomato, eggplant, and Irish potato. 1896.
13. Webber, H.J. Sooty mold of orange and its treatment. 1897.
14. Woods, A.F. Bermuda lily disease, preliminary report of investigations. 1897.
15. Farlow, W.G. Some edible and poisonous fungi. 1898.
16. Carleton, M.A. Cereal rusts of United States, a physiological investigation. 1899.
17. Smith, E.F. Wilt disease of cotton, watermelon, and cowpea. 1899.
18. Loew, O. Physiological rôle of mineral nutrients. 1899.
19. Woods, A.F. Stigmamose: a disease of carnations and other pinks. 1900.
20. Pierce, N.B. Peach leaf curl, its nature and treatment. 1900.
21. Schrenk, H. von Two diseases of red cedar, caused by *Polyporus juniperinus* n. sp. and *Polyporus carneus* Nées; preliminary report. 1900.
22. Webber, H.J. Xenia, or immediate effect of pollen, in maize. 1900.
23. Dorsett, P.H. Spot disease of violet (*Alternaria violas* n.sp.). 1900.
24. Carleton, M.A. Basis for improvement of American wheats. 1900.
25. Schrenk, H. von Some diseases of New England conifers, preliminary report. 1900.
26. Smith, E.F. Wakker's hyacinth germ *Pseudomonas hyacinthi* (Wakker). 1901.
27. Orton, W.A. Wilt disease of cotton and its control. 1900.

DEPARTMENT OF AGRICULTURE

DIVISION OF VEGETABLE PHYSIOLOGY AND PATHOLOGY

BULLETIN (cont.)

Number.

28. Smith, E.F. Cultural characters of *Pseudomonas hyacinthi*, *Ps. campestris*, *Ps. phaseola*, and *Ps. stewarti*, four one-flagellate yellow bacteria parasitic on plants. 1901.
29. Hays, W.M. Plant breeding. 1901.

CIRCULAR

No.1-18. 1886-1901.

grape

1. Treatment of downy mildew and black rot [of grape]. [1886.]
2. [Grapevine mildew and black-rot.] 1886.
3. Colman, N.J. Treatment of downy mildew and black-rot of grape. 1887.
4. Scribner, F.L. Treatment of potato and tomato for blight and rot. 1887.
5. _____ Fungicides, or remedies for plant diseases. 1888.
6. Galloway, B.T. Treatment of black-rot of grape. n.d.
7. _____ Grape-vine diseases. n.d.
8. _____ Experiments in treatment of pear leaf-blight and apple powdery mildew. [1889].
9. Rusk, J.M. Root-rot of cotton, circular of inquiry. n.d.
10. Galloway, B.T. Treatment of nursery stock for leaf-blight and powdery mildew. 1891.
11. Willits, E. [Questions regarding black-rot, downy mildew, and anthracnose of grape.] n.d.
12. Rusk, J.M. [Questions asked and specimens of straw and stubble of wheat, oats, rye, and barley solicited.] n.d.
13. Willits, E. [Letter of inquiry relative to leaf curl of peach trees.] 1893.
14. Dabney, C.W. [Letter of inquiry relative to grain rusts, requesting specimens of rusted wheat, oats, rye, and barley.] 1894.
15. Webber, H.J. Treatment of sooty mold of orange. 1895.
16. Swingle, W.T. Danger of introducing a Central American coffee disease into Hawaii. 1898.
17. Galloway, B.T. New spraying devices. 1899.
18. Carleton, M.A. New wheat industry for semi-arid west. 1901.

See also contributions of Division of vegetable physiology and pathology to Department report, Farmers' bulletin and Yearbook.

DEPARTMENT OF AGRICULTURE

OFFICE OF FIBER INVESTIGATIONS

In 1889 a section of fiber investigations was created in the Division of Statistics, and in 1890 the independent office of fiber investigations was established. It collected and disseminated information regarding the cultivation of textile plants, directed experiments in the culture of new and hitherto unused plants, purchased seed and plants for limited distribution for experimental purposes, and investigated the merit of new machines and processes for extracting the fiber and preparing it for manufacture. Charles Richards Dodge was appointed special agent in charge of the Office January 1, 1891, and continued in charge until June 30, 1898, when the work of the Office was assigned to the Division of Botany. (From Yearbook 1897, p. 226; and Div. of Publ. Bul. 3, p. 37.)

ANNUAL REPORT
1890-1897

1890. In Annual report, Secretary of agriculture, 1890, p.451-470.
1891. In Annual report, Secretary of agriculture, 1891, p.417-438.
1892. In Annual report, Secretary of agriculture, 1892, p.359-376.
1893. In Annual report, Secretary of agriculture, 1893, p.567-584.
1894. In Annual report, Secretary of agriculture, 1894, p.196-197.
1895. In Annual report, Secretary of agriculture, 1895, p.187-188.
1896. In Annual report, Secretary of agriculture, 1896, p.27-28.
(Report of Special Agent, Office of Fiber Investigations)
1897. In Annual report, Secretary of agriculture, 1897, p.21-24.
(Report of Special Agent, Office of Fiber Investigations)

1890-1893, 1896-1897 reports reprinted as separates.

REPORT

No.1-11. 1892-1898.

Number.

1. Dodge, C.R. Report on flax, hemp, ramie, and jute, with considerations upon flax and hemp culture in Europe, report on ramie machine trials of 1889 in Paris, and present status of fiber industries of U. S. 2d ed. 1892.
2. _____ Recent facts regarding ramie industry in America, with brief statements relating to manufacture in Europe, etc. 1893.
3. _____ Sisal hemp culture in United States [Florida], with statements relating to industry in Yucatan and Bahama Islands, and brief considerations upon question of machinery for extracting fiber. 1891.
4. _____ Flax culture for fiber in U. S., including special reports on flax culture in Ireland, Belgium, and Austria, with statements relative to the industry in Russia. 1892.

DEPARTMENT OF AGRICULTURE

OFFICE OF FIBER INVESTIGATIONS

REPORT (cont.)

Number.

5. Dodge, C.R. Leaf fibers of U. S., detailing results of recent investigations relating to Florida sisal hemp, the false sisal hemp plant of Florida, and other fiber-producing agaves, bowstring hemp, pineapple fiber, New England flax, and bear grass. 1893.
6. _____ Uncultivated bast fibers of U. S., including history of previous experiments with plants or fibers, and brief statements relating to allied species that are produced commercially in the old world. 1894.
7. _____ Cultivation of ramie in U. S., with statements concerning practice in foreign countries, cost of cultivation and percentages of yield, the machine question, and preparation of fiber for manufacture. 1895.
8. _____ Culture of hemp and jute in U. S., with statements concerning practice in foreign countries, preparation of fiber for market, and remarks on the machine question. 1896.
9. _____ Descriptive catalogue of useful fiber plants of world, including structural and economic classifications of fibers. 1897.
10. _____ Flax culture for seed and fiber in Europe and America. 1898.
11. _____ Culture of hemp in Europe including special consular report on growth of hemp in Italy. 1898.

See also contributions of Office of fiber investigations to Farmers' bulletins and Yearbook.

DEPARTMENT OF AGRICULTURE

DIVISION OF AGROSTOLOGY

The Division of Agrostology, formerly in the Division of Botany, was established as an independent division July 1, 1895. It was charged with the investigations of the natural history, geographical distribution, and uses of grasses and forage plants, their adaptation to special soils and climates, the introduction of promising native and foreign kinds into cultivation, and the preparation of publications and correspondence relative to these plants. F. Lenson-Scribner was chief of the Division from its organization until it was merged into the Bureau of plant industry July 1, 1901. (From Greathouse, C. H. Historical sketch of U. S. Dept. Agr. Div. of Publ. Bul. 3. 1892.)

ANNUAL REPORT
1895-1900.

- 1895. In Annual report, Secretary of agriculture, 1895, p.165-168.
- 1896. In Annual report, Secretary of agriculture, 1896, p.103-108.
- 1897. In Annual report, Secretary of agriculture, 1897, p.161-166.
- 1898. In Annual report, Secretary of agriculture, 1898, p.145-152.
- 1899. In Annual report, Secretary of agriculture, 1899, p.113-117.
- 1900. In Annual report, Secretary of agriculture, 1900, p.83-90.

Reports for 1896-1900 also reprinted as separates.

BULLETIN

No.1-35. 1895-1901.

Number.

- 1. Kearney, T.H.Jr. Grasses and forage plants of the Southeastern States. 1895.
- 2. Smith, J.G. Fodder and forage plants exclusive of grasses. 1896.
Revised ed. 1900.
- 3. Scribner, F.L. Useful and ornamental grasses. 1896.
- 4. _____
et al. Studies on American grasses. 1897.
- 5. Rydberg, P.A. & Shear, C.L. Grasses and forage plants of Rocky Mountain region. 1897.
- 6. Williams, T.A. Grasses and forage plants of the Dakotas. 1897.
- 7. Scribner, F.L. American grasses. 1897.
Rev. ed. 1898.
Ed. 3. 1900.
- 8. _____ &
Ogden, E.L. Studies on American grasses. 1897.
- 9. Pammel, L.H. Grasses and forage plants of Iowa, Nebraska, and Colorado. 1897.
- 10. Bentley, H.L. Grasses and forage plants of central Texas. 1898.
- 11. Kearney, T.H.Jr. & Scribner, F.L. Studies on American grasses. 1898.
- 12. Williams, T.A. Grasses and forage plants and forage conditions of eastern Rocky Mountain region. 1898.

DEPARTMENT OF AGRICULTURE

DIVISION OF AGROSTOLOGY

BULLETIN (cont.)

Number.

13. Nelson, Aven. Red Desert of Wyoming and its forage resources. 1898.
14. Scribner, F.L. Economic grasses. 1898.
15. Tracy, S.H. Forage plants and forage resources of Gulf States. 1898.
16. Smith, J.G. Grazing problems in Southwest and how to meet them. 1899.
17. Scribner, F.L. American grasses -II-. 1899.
Rev. ed. 1891.
18. Smith, J.G. Studies on American grasses; synopsis of genus Sitanion. 1899.
19. Kennedy, P.B. Structure of caryopsis of grasses, with reference to morphology and classification. 1899.
Rev. ed. 1900.
20. Scribner, F.L. American grasses -III-. 1900.
Rev. ed. 1900.
21. _____ Studies on American grasses; North American species of chaetochloa. 1900.
& Merrill, E.D.
22. Kennedy, P.B. Cooperative experiments with grasses and forage plants. 1900.
23. Shear, C.L. Studies on American grasses; a revision of North American species of Bromus occurring north of Mexico. 1900.
24. Scribner, F.L., et al. Studies on American grasses. 1900.
25. Shear, C.L. Field work of Division of Agrostology; review and summary of work done since organization of division, July 1, 1895. 1901.

CIRCULAR

No.1-36. 1895-1901.

1. Smith, J.G. Note on experimental grass gardens. 1895.
2. Scribner, F.L. Hairy vetch, sand vetch, or Russian vetch. 1895.
3. Smith, J. G. Saltbushes. 1895.
4. Williams, T.A. Renswing of worn-out native prairie pastures. 1895.
Rev. ed. 1897.
5. Smith, J. G. Cowpeas. 1897.
Rev. ed. 1898.
6. _____ Cultivated vetches. Feb. 1898.
Rev. ed. April 1898.
7. _____ Gram, chick-pea, or Idaho pea. 1898.
8. _____ Experiments in range improvements. 1898.
9. Scribner, F.L. New species of North American grasses. 1899.
10. Williams, T.A. Poa fendleriana and its allies. 1899.
11. Scribner, F.L. Flat pea. 1899.
12. Williams, T.A. Rape as a forage plant. 1899.
13. Smith, J.G. Florida beggar weed, also known as Beggar weed, Florida clover, Giant Beggar weed. 1899.

DEPARTMENT OF AGRICULTURE

DIVISION OF AGROSTOLOGY

CIRCULAR (cont.)

Number.

14. Smith, J.G. Velvet bean. 1899.
15. Recent additions to systematic agrostology. 1899.
16. Scribner, F.L. New species of North American grasses. 1899.
17. Williams, T.A. Crimson clover. 1899.
18. Kennedy, P.B. Smooth brome-grass. 1899.
19. Scribner, F.L. New or little known Mexican grasses. 1899.
20. Kennedy, P.B. Experiments with forage plants in Ontario. 1899.
21. Scribner, F.L. Cooperative range grass and forage plant experiments at Highmore, South Dakota. 1899.
22. _____ Grass and forage plant investigations on the Pacific coast. 1899.
23. Bentley, H.L. Progress of experiments in forage crops and range improvement at Abilene, Texas. 1899.
24. Gettys, W. Cowpeas and corn for silage and fodder. 1900.
25. Kennedy, P.B. Turkestan alfalfa. Apr. 1900.
Rev. ed. [Aug. 1900.]
26. Shear, C.L. Rescue grass. 1900.
27. Scribner, F.L. Agrostological notes: Grasses of herbarium of Dr. & Merrill, E.D. H. Muhlenberg. Two new species of Eatonia, etc. 1900.
28. Ball, C.R. Grasses and fodder plants on Potomac flats. 1900.
29. Scribner, F.L. Grasses in Elliott's "Sketch of Botany of South Carolina and Georgia". [1901.]
30. _____ New or little known grasses. 1901.
31. Hitchcock, A.S. Bermuda grass. 1901.
32. Merrill, E.D. Some Arizona grasses. 1901.
33. Scribner, F.L. Range grass and forage plant experiments at Highmore, S. Dak., report of progress. 1901.
34. Merrill, E.D. Aristida purpurea Nutt., and its allies. 1901.
35. Scribner, F.L. Agrostological notes. 1901.
& Merrill, E.D.
36. _____ List of publications of Division of Agrostology. 1901.

See also contributions of Division of agrostology to Farmers' bulletins and Yearbook.

DEPARTMENT OF AGRICULTURE

OFFICE OF SEED AND PLANT INTRODUCTION

Separated from Division of Botany and made independent office about January 1, 1901. Merged into Bureau of plant industry July 1, 1901.

CIRCULAR

No. 1-2. 1900-1901.

Number.

1. Fairchild, D.G. Best horse-radish varieties of Europe, and methods of cultivation. 1900.
2. _____ Cultivation of Znam cucumbers. 1901.

INVENTORY [OF SEEDS AND PLANTS].

No. 8. 1900.

8. Seeds and plants imported for distribution in cooperation with the agricultural experiment stations. Numbers 3401-4350. 1901.

No. 1-7 issued by Division of botany; no. 9 - date by Bureau of plant industry.

DEPARTMENT OF AGRICULTUREBUREAU OF PLANT INDUSTRYBULLETIN

No. 1-285. 1901-1913.

- Technical or semi-technical material, issued in limited editions.
Number.
1. The relation of lime and magnesia to plant growth. 1901.
 - I. Loew, O. Liming of soils from a physiological standpoint.
 - II. May, D.W. Experimental study of the relation of lime and magnesia to plant growth.
 2. Webber, H.J. Spermatogenesis and fecundation of *Zamia*. 1901.
 3. Carleton, H.A. Macaroni wheats. 1901.
 4. Griffiths, D. Range improvement in Arizona. (Cooperative experiments with the Arizona experiment station.) 1901.
 5. Seeds and plants imported. 1900. (Inventory no.9) 1902.
 6. Tracy, W.W. Jr. A list of American varieties of peppers. 1902.
 7. Scofield, C.S. The Algerian durum wheats: a classified list, with descriptions. 1902.
 8. Patterson, F.W. A collection of economic and other fungi prepared for distribution. 1902.
 9. Merrill, E.D. The North American species of *Spartina*. 1902.
 10. Scribner, F.L. Records of seed distribution and cooperative experiments with grasses and forage plants. 1902.
 11. Ball, C. R. Johnson grass: report of investigations made during the season of 1901. 1902.
 12. Davy, J. B. Stock ranges of northwestern California: notes on the grasses and forage plants and range conditions. 1902.
 13. Bentley, H.L. Experiments in range improvement in central Texas. 1902.
 14. Schrenk, H. von The decay of timber and methods of preventing it. 1902.
 15. Griffiths, D. Forage conditions on the northern border of the Great Basin, being a report upon investigations made during July and August, 1901, in the region between Winnemucca, Nevada, and Ontario, Oregon. 1902.
 16. Ferguson, H.C. A preliminary study of the germination of the spores of *Agaricus campestris* and other basidiomycetous fungi. 1902.
 17. Some diseases of the cowpea. 1902.
 - I. Orton, W.A. The wilt disease of the cowpea and its control.
 - II. Webber, H.J. A cowpea resistant to root knot (*Heterodera* & Orton, W.A. *radicicola*).
 18. Woods, A.F. Observations on the mosaic disease of tobacco. 1902.
 19. Pieters, A.J. & Drown, E. Kentucky bluegrass seed: harvesting, curing, and cleaning. 1902.
 20. Skinner, R.P. Manufacture of semolina and macaroni. 1902.
 21. Tracy, W.W. Jr. List of American varieties of vegetables for the years 1901 and 1902. 1903.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

BULLETIN (cont.)

Number.

22. Hartley, C.P. Injurious effects of premature pollination; with general notes on artificial pollination and the setting of fruit without pollination. 1902.
23. Fairchild, D.G. Berseem: the great forage and soiling crop of the Nile Valley. 1902.
24. Husmann, G.C. The manufacture and preservation of unfermented grape must. 1902.
25. Miscellaneous papers. 1903.
I. Hillman, F.H. The seeds of rescue grass and chess.
II. Fairchild, D.G. Saragolla wheat.
III. Plant introduction notes from South Africa.
IV. Congressional seed and plant distribution circulars, 1902-1903.
26. Fairchild, D.G. Spanish almonds and their introduction into America. 1902.
27. _____ Letters on agriculture in the West Indies, Spain, and the Orient. 1902.
28. Collins, G.N. The mango in Porto Rico. 1903.
29. Smith, E.F. The effect of black rot on turnips: a series of photomicrographs, accompanied by an explanatory text. 1903.
30. Oliver, G.W. Budding the pecan. 1902.
31. Hitchcock, A.S. Cultivated forage crops of the northwestern states. 1902.
32. Schrenk, H. von A disease of the white ash caused by *Polyporus fraxinophilus*. 1903.
33. Hitchcock, A.S. North American species of *Leptochloa*. 1903.
34. Oliver, G.W. Silk worm food plants: cultivation and propagation. 1903.
35. Knapp, S.A. Recent foreign exploration, as bearing on the agricultural development of the southern states. 1903.
36. Schrenk, H. von The "blueing" and the "red rot" of the western yellow pine, with special reference to the Black Hills forest reserve. 1903.
37. Swingle, D.B. Formation of the spores in the sporangia of *Rhizopus nigricans* and of *Phycomyces nitens*. 1903.
38. Griffiths, D. Forage conditions and problems in eastern Washington, eastern Oregon, northeastern California, and northwestern Nevada. 1903.
39. Oliver, G.W. The propagation of the Easter lily from seed. 1903.
40. Powell, G.H. & Fulton, S.H. Cold storage, with species reference to the pear and peach. 1903.
41. Scofield, C.S. The commercial grading of corn. 1903.
42. Fairchild, D.G. Three new plant introductions from Japan. 1903.
43. _____ Japanese bamboo and their introduction into America. 1903.
44. Schrenk, H. von & Spaulding, F. The bitter rot of apples. 1903.

DEPARTMENT OF AGRICULTUREBUREAU OF PLANT INDUSTRYBULLETIN (cont.)

- Number.
45. Loev, O. The physiological rôle of mineral nutrients in plants. 1903.
46. Oliver, G.W. The propagation of tropical fruit trees and other plants. 1903.
47. Scofield, C.S. The description of wheat varieties. 1903.
48. Powell, G.H. & Fulton, S.H. The apple in cold storage. 1903.
49. Cook, O.F. The culture of the Central American rubber tree. 1903.
50. Brown, E. & Scofield, C.S. Wild rice: its uses and propagation. 1903.
51. Miscellaneous papers. 1905.
- I. McKenney, R.E.B. The wilt disease of tobacco and its control.
- II. Knapp, S.A. The work of the community demonstration farm at Terrell, Tex.
- III. Waite, M.R. Fruit trees frozen in 1904.
- IV. Fairchild, D.G. The cultivation of the Australian wattle.
- V. Brown, E. Legal and customary weights per bushel of seeds.
- VI. Henkel, A. & Klugh, G.F. Golden seal.
52. Rolfs, P.H. Wither-tip and other diseases of citrous trees and fruits caused by *Colletotrichum gloeosporioides*. 1904.
53. Swingle, W.T. The date palm and its utilization in the southwestern states. 1904.
54. Fairchild, D.G. Persian gulf dates and their introduction into America. 1903.
55. Smith, E.F. & Swingle, D.B. The dry rot of potatoes due to *Fusarium oxysporum*. 1904.
56. Ragan, W.H. Nomenclature of the apple; a catalogue of the known varieties referred to in American publications from 1804 to 1904. 1905.
57. Hitchcock, A.S. Methods used for controlling and reclaiming sand dunes. 1904.
58. Duvel, J.W.T. The vitality and germination of seeds. 1904.
59. Lyon, T.L. & Hitchcock, A.S. Pasture, meadow, and forage crops in Nebraska. 1904.
60. Townsend, C.O. A soft rot of the calla lily. 1904.
61. Rolfs, P.H. The avocado in Florida; its propagation, cultivation, and marketing. 1904.
62. Foaden, G.P. Notes on Egyptian agriculture. 1904.
63. Carleton, M.A. Investigations of rusts. 1904.
64. Moore, G.T. & Kellerman, K.F. A method of destroying or preventing the growth of Algae and certain pathogenic bacteria in water supplies. 1904.
65. Westgate, J.M. Reclamation of Cape Cod sand dunes. 1904.
66. Seeds and plants imported, 1902-1903. (Inventory no. 10) 1905.
67. Griffiths, D. Range investigations in Arizona. 1904.
68. Hitchcock, A.S. North American species of *Agrostis*. 1905.
69. Tracy, W.W. Jr. American varieties of lettuce. 1904.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

BULLETIN (cont.)

Number.

70. Carleton, M.A. & Chamberlain, J.S. The commercial status of Durum wheat. 1904.
71. Moore, G.T. Soil inoculation for legumes; with reports upon the successful use of artificial cultures by practical farmers. 1905.
72. Miscellaneous papers. 1905.
I. Fairchild, D. Cultivation of wheat in permanent alfalfa fields.
II. Scofield, C.S. The salt water limits of wild rice.
III. Spillman, W.J. Extirpation of Johnson grass.
IV. Woods, A.F. Inoculation of soil with nitrogen-fixing bacteria.
73. Townsend, C.O. & Rittue, E.C. The development of single-germ beet seed. 1905.
74. Griffiths, D. The prickly pear and other cacti as food for stock. 1905.
75. Cotton, J.S. Range management in the state of Washington. 1905.
76. Moore, G.T. & Kellerman, K.F. Copper as an algicide and disinfectant in water supplies. 1905.
77. Collins, G.N. The avocado, a salad fruit from the tropics. 1905.
78. Lyon, T.L. Improving the quality of wheat. 1905.
79. Harter, L.L. The variability of wheat varieties in resistance to toxic salts. 1905.
80. Kearney, T.H. & Means, T.H. Agricultural explorations in Algeria. 1905.
81. Cook, O.F. & Swingle, W.T. Evolution of cellular structures. 1905.
82. Piper, C.V. Grass lands of the South Alaska coast. 1905.
83. Duvel, J.W.T. The vitality of buried seeds. 1905.
84. The seeds of the bluegrasses. 1905.
I. Brown, E. Germination, growing, handling and adulteration of bluegrass seeds.
II. Hillman, F.H. Descriptions of the seeds of the commercial bluegrasses and their impurities. 1905.
85. Duggar, B.M. The principles of mushroom growing and mushroom spawn making. 1905.
86. Kearney, T. H. Agriculture without irrigation in the Sahara desert. 1905.
87. Jones, L.R. Disease resistance of potatoes. 1905.
88. Cook, O.F. Weevil-resisting adaptations of the cotton plant. 1906.
89. Henkel, A. Wild medicinal plants of the United States. 1906.
90. Miscellaneous papers. 1906.
I. Duvel, J.W.T. The storage and germination of wild rice seed.
II. Hedgcock, G.G. The crown-gall and hairy-root diseases of the apple tree.
III. Henkel, A. Peppermint.
IV. Crawford, A.C. The poisonous action of Johnson grass.
91. Shamel, A.D. & Cobey, W.W. Varieties of tobacco seed distributed in 1905-6, with cultural directions. 1906.
92. Kearney, T.H. Date varieties and date culture in Tunis. 1906.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

BULLETIN (cont.)

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93. Scott, W.M. The control of apple bitter-rot. 1906.
94. Hunter, B. Farm practice with forage crops in western Oregon and western Washington. 1906.
95. Brand, C.J. A new type of red clover. 1906.
96. Shamel, A.D. & Cobey, W.W. Tobacco breeding. 1907.
97. Seeds and plants imported, 1903-1905. (Inventory no.11) 1907.
98. Ball, C.R. Soy bean varieties. 1907.
99. Brown, E. & Duvel, J.W.T. A quick method for the determination of moisture in grain. 1907.
100. Miscellaneous papers. 1907.
- I. Shear, C.L. Cranberry spraying experiments in 1905.
- II. Schrenk, H. von & Hedgcock, G.G. The wrapping of apple grafts and its relation to the crown-gall disease.
- III. Duvel, J.W.T. Garlicky wheat.
- IV. Garner, W.W. Methods of testing the burning quality of cigar tobacco.
- V. Stockberger, W.W. The drug known as pintroot.
- VI. Oakley, R.A. Orchard grass.
- VII. Kellerman, K.F. & Beckwith, T.D. The effect of copper upon water bacteria.
- VIII. Kellerman, K.F. & Robinson, T.R. Conditions affecting legume inoculation.
101. Rockwell, J.E. Contents of and index to bulletins of the Bureau of plant industry nos. 1 to 100, inclusive. 1907.
102. Miscellaneous papers. 1907.
- I. Griffiths, D. & Hare, R.F. Summary of recent investigations of the value of cacti as stock food.
- II. Dodge, L.G. A successful dairy farm.
- III. Spillman, W.J. Planning a cropping system.
- IV. Westgate, J.M. & Oliver, G.W. The application of vegetative propagation to leguminous forage plants.
- V. Shear, C.L. & Mills, G.F. The control of Texas root-rot of cotton.
- VI. Wight, V.F. The history of the cowpea and its introduction into America.
- VII. Garner, W.W. A new method for the determination of nicotine in tobacco.
103. Scofield, O.S. Dry farming in the Great Basin. 1907.
104. Cushman, A.S. The use of feldspathic rocks as fertilizers. 1907.
105. Garner, W.W. The relation of the composition of the leaf to the burning qualities of tobacco. 1907.
106. Seeds and plants imported. 1903-1905. (Inventory no. 12) 1907.
107. Henkel, A. American root drugs. 1907.
108. Fulton, S.H. The cold storage of small fruits. 1907.
109. Tracy, W.W. Jr. American varieties of garden beans. 1907.
110. Shear, C.L. Cranberry diseases. 1907.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

BULLETIN (cont.)

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111. Miscellaneous papers. 1907.
 I. Crawford, A.C. The larkspurs as poisonous plants.
 II. Allard, H.A. The fibers of long-staple upland cottons.
 III. Brown, E. & Crosby, M.L. Imported low-grade clover and alfalfa seed.
 IV. Quinn, C.E. Forage crops for hogs in Kansas and Oklahoma.
 V. Oakley, R.A. The culture and uses of brome-grass.
112. Crawford, A.C. The use of suprarenal glands in the physiological testing of drug plants. 1907.
113. Kearney, T.H. & Harter, L.L. The comparative tolerance of various plants for the salts common in alkali soils. 1907.
114. Schrenk, H. von Sap-rot and other diseases of the red gum. 1907.
115. Kellerman, K.F. et al The disinfection of sewage effluents for the protection of public water supplies. 1907.
116. Griffiths, D. & Hare, R.F. The tuna as food for man. 1907.
117. Griffiths, D. The reseeding of depleted range and native pastures. 1907.
118. Brand, C.J. Peruvian alfalfa: a new long-season variety for the southwest. 1907.
119. Oliver, G.W. The mulberry and other silkworm food plants. 1907.
120. _____ The production of Easter lily bulbs in the United States. 1908.
121. Miscellaneous papers. 1908.
 I. Crawford, A.C. The supposed relationship of white snakeroot to milk sickness or "trembles".
 II. _____ Mountain laurel, a poisonous plant.
 III. Marsh, C.D. Results of loco-weed investigations in the field.
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 IV. Stockberger, W.W. The sources of arsenic in certain samples of dried hops.
 V. Scott, W.M. & Rorer, J.B. Apple leaf-spot caused by *Sphaeropsis malorum*.
 VI. Metcalf, H. The immunity of the Japanese chestnut to the bark disease.
122. Townsend, C.O. Curly-top, a disease of the sugar beet. 1908.
123. Powell, G.H. et al The decay of oranges while in transit from California. 1908.
124. Griffiths, D. The prickly pear as a farm crop. 1903.
125. Kearney, T.H. Dry-land olive culture in northern Africa. 1908.
126. Ragan, W.H. Nomenclature of the pear; a catalogue-index of the known varieties referred to in American publications from 1804 to 1907. 1903.
127. Cotton, J.S. The improvement of mountain meadows. 1908.
128. Kearney, T.H. & Peterson, W.A. Egyptian cotton in the southwestern United States. 1908.
129. Crawford, A.C. Barium, a cause of the loco-weed disease. 1908.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

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130. Dry-land Agriculture. Papers read at the second annual meeting of the Cooperative experiment association of the Great Plains area, held at Manhattan, Kansas, June 26-27, 1907. 1908.
- Burnett, E.A. The development of dry-land farming.
Alway, F.J. Some soil studies in dry-land regions.
Montgomery, E.G. Crop production under humid and dry conditions.
Hazen, L.E. Blowing soils.
Waliron, L.R. Plant breeding in conjunction with dry-land agriculture.
Rate of sowing Durum wheat.
Payne, J.E. Fruit growing on the plains.
Moorhouse, L.A. Oklahoma rotations and their relation to soil-culture work.
Shepperd, J.H. Dry-land plant breeding.
131. Miscellaneous papers. 1908.
- I. Brown, E. & Goss, W.L. The germination of vegetable seeds.
II. Scofield, C.S. The botanical history and classification of alfalfa.
III. Hedgcock, G.G. The cross-inoculation of fruit trees and shrubs with crown-gall.
IV. Smith, E.F. Recent studies of the olive-tubercle organism.
V. Tyler, F.J. The nectaries of cotton.
132. Seeds and plants imported. 1903-1907. (Inventory no. 13) 1908.
133. Rabak, F. Peach, apricot, and prune kernels as by-products of the fruit industry of the United States. 1908.
134. Harter, L.L. The influence of a mixture of soluble salts, principally sodium chlorid, upon the leaf structure and transpiration of wheat, oats, and barley. 1908.
135. Gould, H.F. Orchard fruits in the Piedmont and Blue Ridge regions of Virginia and the South Atlantic states. 1908.
136. Cook, O.F. Methods and causes of evolution. 1908.
137. Seeds and plants imported. Jan.-Mar. 1908. (Inventory no. 14) 1909.
138. Stewart, J.B. The production of cigar-wrapper tobacco under shade in the Connecticut Valley. 1908.
139. Henkel, A. American medicinal barks. 1909.
140. Griffiths, D. The "spineless" prickly pears. 1909.
141. Miscellaneous papers. 1909.
- I. Garner, W.W. The relation of nicotine to the burning quality of tobacco.
II. Smith, E.F. The Granville tobacco wilt.
III. Bort, K.S. The Florida velvet bean and its history.
IV. Collins, G.N. The importance of broad breeding in corn.
V. Metcalf, H. & Collins, J.F. The present status of the chestnut-bark disease.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

BULLETIN (cont.)

Number.

142. Seeds and plants imported. Apr.-June, 1908. (Inventory no.15)
1909.
143. Garner, W.W. Principles and practical methods of curing tobacco. 1909.
144. Scott, W.M. & Apple blotch, a serious disease of southern orchards. 1909.
Rorer, J.B.
145. Cook, O.F. Vegetation affected by agriculture in Central America. 1909.
146. _____ The superiority of line breeding over narrow breeding. 1909.
147. _____ Suppressed and intensified characters in cotton hybrids. 1909.
148. Seeds and plants imported. Jul-Sept., 1908. (Inventory no.16)
1909.
149. Schrenk, E. von Diseases of deciduous forest trees. 1909.
& Spaulding, P.
150. Hansen, N.E. The wild alfalfas and clovers of Siberia with a perspective view of the alfalfas of the world. 1909.
151. American pomological society. Fruits recommended by the American pomological society for cultivation in the various sections of the United States and Canada ... 1909.
152. Freeman, E.M. & The loose smuts of barley and wheat. 1909.
Johnson, E.C.
153. Seeds and plants imported. Oct-Dec., 1908. (Inventory no.17).
1909.
154. Kellerman, K.F. Farm water supplies of Minnesota. 1909.
& Whittaker, H.A. (In cooperation with the Minnesota State Board of Health)
155. Shear, C.L. et al The control of black-rot of the grape. 1909.
156. Cook, O.F. et al A study of diversity in Egyptian cotton. 1909.
157. Scofield, C.S. & The Truckee-Carson experiment farm. 1909.
Rogers, S.J.
158. Gilbert, W.W. The root-rot of tobacco caused by *Thielavia basicola*. 1909.
159. Cook, O.F. Local adjustment of cotton varieties. 1909.
160. Italian lemons and their by-products. 1909.
I. Powell, G.H. The Italian lemon industry.
II. Chace, E.M. The by-products of the lemon in Italy.
161. Collins, G.N. A new type of Indian corn from China. 1909.
162. Seeds and plants imported. Jan.-Mar., 1909. (Inventory no.18).
1909.
163. Tyler, F.J. Varieties of American upland cotton. 1910.
164. Promising root crops for the South. 1910.
I. Barrett, O.W. Yautias, tarcs, and dasheens.
II. Cook, O.F. Agricultural history and utility of the cultivated aroids.

DEPARTMENT OF AGRICULTUREBUREAU OF PLANT INDUSTRYBULLETIN (cont.)

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165. Spillman, W.J. Application of some of the principles of heredity to plant breeding. 1909.
166. Bray, W.L. The mistletoe pest in the Southwest. 1910.
167. Oliver, G.W. New methods of plant breeding. 1910.
168. Seeds and plants imported. Apr.-Jun., 1902. (Inventory no.19). 1909.
169. Westgate, J.M. Variegated alfalfa. 1910.
170. Ellis, L.W. Traction plowing. 1910.
171. Some fungous diseases of economic importance. 1910.
I. Patterson, F.W. Miscellaneous diseases.
& Charles, V.K.
II. Patterson, F.W. Pineapple rot caused by *Thielaviopsis paradoxa*.
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172. Husmann, G.C. Grape investigations in the vinifera regions of the United States with reference to resistant stocks, direct producers, and viniferas. 1910.
173. Jensen, C.A. Seasonal nitrification as influenced by crops and tillage. 1910.
174. Scott, W.M. & Ayers, T.W. The control of peach brown-rot and scab. 1910.
175. Ball, C.R. The history and distribution of sorghum. 1910.
176. Seeds and plants imported. Jul.-Sept., 1909. (Inventory no.20). 1910.
177. Griffiths, D. A protected stock range in Arizona. 1910.
178. Blanchard, H.F. Improvement of the wheat crop in California. 1910.
179. Piper, C.V. & Tracy, S.M. The Florida velvet bean and related plants. 1910.
180. Aaronschn, A. Agricultural and botanical explorations in Palestine. 1910.
181. Shaw, H.B. The curly-top of beets. 1910.
182. Carleton, M.A. Ten years' experience with the Swedish select oat. 1910.
183. Hedgcock, G.G. Field studies of the crown-gall of the grape. 1910.
184. Tracy, W.W., Sr. The production of vegetable seeds: sweet corn and garden peas and beans. 1910.
185. Brand, C.J. & Waldron, L.R. Cold-resistance of alfalfa and some factors influencing it. 1910.
186. Hedgcock, G.G. Field studies of the crown-gall and hairy-root of the apple tree. 1910.
187. Chilcott, E.C. A study of cultivation methods and crop rotations for the Great Plains area. 1910.
188. Briggs, L.J. & Belz, J.O. Dry farming in relation to rainfall and evaporation. 1910.
189. Barflatt, H.H. The source of the drug *Dioscorea*, with a consideration of the *Dioscoreae* found in the United States. 1910.
190. McKee, R. Orchard green-manure crops in California. 1910.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

BULLETIN (cont.)

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191. Collins, G.N. The value of first-generation hybrids in corn. 1910.
192. Mason, S.C. Drought resistance of the olive in the south-western states. 1911.
193. Coville, F.V. Experiments in blueberry culture. 1910.
194. Gould, H.P. Summer apples in the Middle Atlantic States. 1911.
195. Rabak, F. The production of volatile oils and perfumery plants in the United States. 1910.
196. Dillman, A.C. Breeding drought-resistant forage plants for the Great Plains area. 1910.
197. Piger, C.V. & Morse, W.J. The soy bean; history, varieties, and field studies. 1910.
198. Cook, O.F. Dimorphic branches in tropical crop plants: cotton, coffee, cacao, the Central American rubber tree, and the banana. 1911.
199. Black, O.F. & Alsberg, C.L. The determination of the deterioration of maize, with incidental reference to pellagra. 1910.
200. Kearney, T.H. Breeding new types of Egyptian cotton. 1910.
201. Shantz, H.L. Natural vegetation as an indicator of the capabilities of land for crop production in the Great Plains area. 1911.
202. Oliver, G.W. The seedling-inarch and nurse-plant methods of propagation. 1911.
203. Ball, C.R. The importance and improvement of the grain sorghums. 1911.
204. Meyer, F.N. Agricultural explorations in the fruit and nut orchards of China. 1911.
205. Seeds and plants imported. Oct.-Dec., 1909. (Inventory no.21). 1911.
206. Spaulding, P. The blister rust of white pine. 1911.
207. Seeds and plants imported. Jan.-Mar., 1910. (Inventory no.22). 1911.
208. Seeds and plants imported. Apr.-June, 1910. (Inventory no.23). 1911.
209. Brand, C.J. Green alfalfa and its utilization in the Northwest. 1911.
210. Cook, O.F. Hindi cotton in Egypt. 1911.
211. Kellerman, A.F. & Allen, E.R. Bacteriological studies of the soils of the Truckee-Carson irrigation project. 1911.
212. Ellis, L.W. A study of farm equipment in Ohio. 1911.
213. Smith, E.F. et al. Crown-gall of pines: its cause and remedy. 1911.
214. Spaulding, P. The timber rot caused by *Lenzites sepiaria*. 1911.
215. Warren, J.A. Agriculture in the central part of the semiarid portion of the Great Plains. 1911.
216. Freeman, E.M. & Johnson, E.C. The rusts of grains in the United States. 1911.
217. Bessey, E.A. Root-knot and its control. 1911.
218. Hartley, C.P. et al. Crossbreeding corn. 1912.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

BULLETIN (cont.)

Number.

219. Hexkel, A. American medicinal leaves and herbs. 1911.
220. Cook, O.F. Relation of drought to weevil resistance in cotton. 1911.
221. _____ Dimorphic leaves of cotton and allied plants in relation to heredity. 1911.
222. _____ & _____ Arrangement of parts in the cotton plant. 1911.
223. Maade, P.M. Seeds and plants imported. Jul.-Sept., 1910. (Inventory no.24). 1911.
224. Johnson, E.C. Timothy rust in the United States. 1911.
225. McCulloch, L. A spot disease of cauliflower. 1911.
226. Heald, F.D. & Wolf, F.A. A plant-disease survey in the vicinity of San Antonio, Texas. 1912.
227. Seeds and plants imported. Oct-Dec., 1910. (Inventory no.25). 1911.
228. Johnston, J.R. The history and cause of the coconut bud-rot. 1912.
229. Piper, C.V. Agricultural varieties of the cowpea and immediately related species. 1912.
230. Briggs, L.J. & Shantz, H.L. The wilting coefficient for different plants and its indirect determination. 1912.
231. True, R.H. & Bartlett, H.H. Absorption and excretion of salts by roots, as influenced by concentration and composition of culture solutions. I. Concentration relations of dilute solutions of calcium and magnesium nitrates to pea roots. 1912.
232. Sievers, A.F. & True, R.H. A preliminary study of the forced curing of lemons as practiced in California. 1912.
233. Seeds and plants imported. Jan.-Mar. 1911. (Inventory no.26). 1912.
234. Mitchell, G.F. The cultivation and manufacture of tea in the United States. 1912.
235. Rabak, F. Wild volatile-oil plants and their economic importance: 1.-black sage; 2.-wild sage; 3.-swamp bay. 1912.
236. Hayes, W.M. et al Farm management: organization of research and teaching. 1912. (In cooperation with the Minnesota Agricultural Experiment Station.)
237. Ball, C.R. & Hastings, S.H. Grain-sorghum production in the San Antonio region of Texas. 1912.
238. Bunzel, H.H. The measurement of the oxidase content of plant juices. 1912.
239. Thompson, H. Cost and methods of clearing land in western Washington. 1912.
240. Cory, V.L. Cooperative grain investigations at McPherson, Kans., 1904-1909. 1912.
241. Garner, W.W. The use of artificial heat in curing cigar-leaf tobacco. 1912.
242. Seeds and plants imported. Apr.-June, 1911. (Inventory no.27). 1912.
243. East, E.M. & Hayes, H.K. Heterozygosis in evolution and in plant breeding. 1912. (In cooperation with the Connecticut Agricultural Experiment Station and Harvard University.)

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

BULLETIN (cont.)

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244. Mathewson, E.H. The export and manufacturing tobaccos of the United States, with brief reference to the cigar types. 1912.
245. Jones, L.R. Investigations of the potato fungus *Phytophthora infestans*. 1912. (In cooperation with the Vermont Agricultural Experiment Station.)
et al
246. The relation of barium to the loco-weed disease. 1912.
I.Marsh,C.D. A field study on the relation of barium to the loco-weed disease.
II.Alsberg,C.L. Laboratory studies on the relation of barium & Black,O.F. to the loco-weed disease.
247. Hedges,F. & A knot of citrus trees caused by *Sphaeropsis tenefaciens*. 1912.
Tenny, L.S.
248. Seeds and plants imported. Jul.-Sept., 1911. (Inventory no.28). 1912.
249. McLachlan, A. The branching habits of Egyptian cotton. 1912.
250. Whetzel,H.H. & The diseases of ginseng and their control. 1912.
Rosenbaum, J.
251. Reed, C.A. The pecan. 1912.
252. Shear,C.L. & Studies of fungous parasites belonging to the genus *Glomerella*. 1913.
Wood, A.K.
253. Ball, C.R. The kaoliangs: a new group of grain sorghums. 1913.
254. Lake, E.R. The Persian walnut industry of the United States. 1913.
255. Smith,E.F. The structure and development of crown gall: a plant cancer. 1912.
et al
256. Cook, O.F. Heredity and cotton breeding. 1913.
257. Cates,J.S. & The weed factor in the cultivation of corn. 1912.
Cox, H.R.
258. Oliver, G.W. Some new alfalfa varieties for pastures. 1913.
259. Spillman, W.J. What is farm management? 1912.
260. The American beet-sugar industry in 1910 and 1911. 1912.
261. Seeds and plants imported. Oct.-Dec.,1911. (Inventory no.29). 1912.
262. Thompson, C.H. Ornamental cacti: their culture and decorative value. 1912.
263. Norton, J.B. Methods used in breeding asparagus for rust resistance. 1913.
264. Bartlett, H.H. The purpling chromogen of a Hawaiian *Dioscorea*. 1913.
265. Hawkins, L.A. Some factors influencing the efficiency of Bordeaux mixture. 1912.
266. McBeth,I.G. & The destruction of cellulose by bacteria and filamentous fungi. 1913.
Scales, F.M.
267. McKee, R. & Nonperennial medicagos: the agronomic value and botanical relationship of the species. 1913.
Ricker, P.L.
268. Mathewson, E.H. Tobacco marketing in the United States. 1913.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

BULLETIN (cont.)

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269. Montgomery, E.G. Experiments in wheat breeding; experimental error in the nursery and variation in nitrogen and yield. 1913.
270. Alsberg, C.L. & Black, O.F. Contributions to the study of maize deterioration. Biochemical and toxicological investigations of *Penicillium puberulum* and *Penicillium stoloniferum*. 1913.
271. Stockberger, W.W. & Rabak, F. Some effects of refrigeration on sulphured and unsulphured hops. 1912.
272. Collins, G.N. Heredity of a maize variation. 1913.
273. Husmann, G.C. & Dearing, C. The muscadine grapes. 1913.
274. Cook, O.F. Wild wheat in Palestine. 1913.
275. Gould, H.P. & Fletcher, W.F. Apples and peaches in the Ozark region. 1913.
276. Rabak, F. The utilization of waste raisin seeds. 1913.
277. Bunzel, H.H. A biochemical study of the curly-top of sugar beets. 1913.
278. Kempton, J.H. Floral abnormalities in maize. 1913.
279. Shantz, H.L. The effects of artificial shading on plant growth in Louisiana. 1913.
280. Roberts, J.W. The "rough-bark" disease of the yellow Newtown apple. 1913.
281. Harter, L.L. & Field, E.C. A dry rot of sweet potatoes caused by *Diaporthe batatas*. 1913.
282. Seeds and plants imported. Jan.-Mar., 1912. (Inventory no. 30). 1913.
283. Ross, J.F. & Leidigh, A.H. Cereal experiments in the Texas Panhandle. 1913.
284. Briggs, L.J. & Shantz, H.L. The water requirement of plants. I. Investigations in the Great Plains in 1910 and 1911. 1913.
285. _____ The water requirement of plants. II. A review of the literature. 1913.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

CIRCULAR

no. 1-132. 1908-1913.

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1. Scott, W.M. Self-boiled lime-sulphur mixture as a promising fungicide. 1908.
2. Shaw, H.B. An improved method of separating buckhorn from red clover and alfalfa seeds. 1908.
3. Heigcock, G.G. Some stem tumors or knots on apple and quince trees. 1908.
4. Spaulding, P. The treatment of damping-off in coniferous seedlings. 1908.
5. Carleton, M.A. Barley culture in the northern Great Plains. 1908.
6. Henkel, A. & Klugh, G.F. The cultivation and handling of goldenseal. 1908.
7. Briggs, L.J. The field treatment of tobacco root-rot. 1908.
8. Freeman, E.M. & Umberger, H.J.C. The smuts of sorghum. 1908.
9. Shear, C.L. & Miles, G.F. Texas root-rot of cotton: field experiments in 1907. 1908.
10. Jardine, W.M. Notes on dry farming. 1908.
11. Cook, O.F. Danger in judging cotton varieties by lint percentages. 1908.
12. Jardine, W.M. Dry-land grains. 1908.
13. Headley, F.R. & Hastings, S.H. The work of the San Antonio experiment farm in 1907. 1908.
14. Cook, O.F. Change of vegetation on the South Texas prairies. 1908.
15. Robinson, T.R. The fertilizing value of hairy vetch for Connecticut tobacco fields. 1908.
16. Mann, A. A new basis for barley valuation and improvement. 1908.
17. Rockwell, J.E. Index to papers relating to plant-industry subjects in the Yearbooks of the United States Department of Agriculture. 1908.
18. Cook, O.F. Reappearance of a primitive character in cotton hybrids. 1908.
19. Tenny, L.S. et al. The decay of Florida oranges while in transit and on the market. 1908.
20. Briggs, L.J. An electrical resistance method for the rapid determination of the moisture content of grain. 1908.
21. Knapp, S.A. Farmers' cooperative demonstration work in its relation to rural improvement. 1908.
22. Hunter, B. Farm methods of applying land plaster in western Oregon and western Washington. 1909.
23. Orton, W.A. Potato diseases in San Joaquin County, California. 1909.
24. Brand, C.J. & Westgate, J.M. Alfalfa in cultivated rows for seed production in semi-arid regions. 1909.
25. Thompson, H. The cost of clearing logged-off land for farming in the Pacific northwest. 1909.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

CIRCULAR (cont.)

Number.

26. True, R.H. & Sievers, A.F. Some factors affecting the keeping qualities of American lemons. 1909.
27. Scott, W.M. Lime-sulphur mixtures for the summer spraying of orchards. 1909.
28. Hunter, B. Clover-seed production in the Willamette Valley, Oregon. 1909.
29. Kearney, T.H. & Peterson, W.H. Experiments with Egyptian cotton in 1908. 1909.
30. Warburton, C.W. Improvement of the oat crop. 1909.
31. Warren, J.A. Notes on the number and distribution of native legumes in Nebraska and Kansas. 1909.
32. Duvel, J.W.T. Moisture content and shrinkage in grain. 1909.
33. Stockberger, W.V. The necessity for new standards of hop valuation. 1909.
34. Headley, F.P. & Hastings, S.H. The work of the San Antonio experiment farm in 1908. 1909.
35. Spaulding, P. The present status of the white-pine blights. 1909.
36. Johnston, J.R. The bud-rot of the coconut palm. 1909.
37. Tracy, J.E. & Reed, J.F. Comparative tests of sugar-beet varieties. 1909.
38. Spaulding, P. European currant rust on the white pine in America. 1909.
39. Harter, L.L. The decay of cabbage in storage: its cause and prevention. 1909.
40. Carroll, W.P. A simple method of detecting sulphured barley and oats. 1909.
41. Fairchild, D.G. & Collins, G.N. The South African pipe calabash. 1909.
42. Cook, O.F. Origin of the Hindi cotton. 1909.
43. Duvel, J.W.T. The deterioration of corn in storage. 1909.
44. Ellis, L.W. Minor articles of farm equipment. 1910.
45. Crosby, M.A. The utilization of pea-cannery refuse for forage. 1910.
46. Swingle, W.T. The limitation of the Satsuma orange to trifoliolate-orange stock. 1909.
47. Vinall, H.N. Prickly comfrey as a forage crop. 1910.
48. Garner, F.W. The present status of the tobacco industry. 1910.
49. Cotton, J.S. Improvement of pastures in eastern New York and the New England states. 1910.
50. Pall, C.R. Three much-misrepresented sorghums. 1910.
51. Gould, H.P. Fruit growing for home use in the central and southern Great Plains. 1910.
52. Orton, W.A. & Field, E.C. Wart disease of the potato; a dangerous European disease liable to be introduced into the United States. 1910.
53. Cook, O.F. Mutative reversions in cotton. 1910.
54. Scott, W.M. The substitution of lime-sulphur preparations for Bordeaux mixture in the treatment of apple diseases. 1910.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

CIRCULAR (cont.)

Number.

55. Shanahan, J.D. American export corn (maize) in Europe. 1910.
et al
56. Stockberger, W.W. Some conditions influencing the yield of hops.
& Thompson, J. 1910.
57. Dewey, L.H. The cultivation of hemp in the United States.
1910.
58. Waite, M.B. Experiments on the apple with some new and little-
known fungicides. 1910.
59. Salmon, C. Dry-land grains for western North and South
Dakota. 1910.
60. Hunter, P. & Suggestions to settlers on the sandy soils of the
Jayne, S.O. Columbia River Valley. 1910.
61. Farrell, F.D. Dry-land grains in the Great Basin. 1910.
62. Derr, H.B. The separation of seed barley by the specific
gravity method. 1910.
63. Kellerman, K.F. Methods of legume inoculation. 1910.
64. Burritt, M.C. Agricultural conditions in southern New York,
1910.
65. Hawkins, L.A. Grape-spraying experiments in Michigan in 1909.
1910.
66. Cook, O.F. Cotton selection on the farm by the characters
of the stalks, leaves, and bolls. 1910.
67. Robinson, T.R. Seed sterilisation and its effect upon seed
inoculation. 1910.
68. Fitz, L.A. Handling wheat from field to mill. 1910.
69. Griffiths, D. The ornamental value of the saltbushes. 1910.
70. Warren, J.A. Additional notes on the number and distribution
of native legumes in Nebraska and Kansas. 1910.
71. Kellerman, K.F. & Legume inoculation and the litmus reaction of
Robinson, T.R. soils. 1910.
72. Duvel, J.W.T. A moisture tester for grain and other substances
and how to use it. 1910.
73. Hillman, F.H. The distinguishing characters of the seeds of
quack-grass and of certain wheat-grasses. 1911.
74. Smith, L.M. The sulphur bleaching of commercial oats and
barley. 1911.
75. Thompson, E.H. Agricultural survey of four townships in south-
ern New Hampshire. 1911. (In cooperation
with the New Hampshire College Agricultural
Experiment Station.)
76. Kellerman, K.F. The relation of crown-gall to legume inocula-
tion. 1911.
77. Shamel, A.D. A study of the improvement of citrus fruit through
bud selection. 1911.
78. Headley, F.B. & Agricultural observations on the Truckee-Carson
Fulkerson, V. irrigation project. 1911.
79. Salmon, C. Winter wheat in western South Dakota. 1911.
80. Vinall, H.N. Forage crops for the sand-hill section of Ne-
braska. 1911.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

CIRCULAR (cont.)

Number.

81. Duvel, J.W.T. & Duvel, L. The shrinkage of corn in storage. 1911.
82. Brand, C.J. Crop plants for paper making. 1911.
83. Aune, B. Suggestions to settlers on the Belle Fourche irrigation project. 1911.
84. Youngblood, B. Suggested cropping systems for the black lands of Texas. 1911.
85. Smith, E.F. Crown-gall and sarcoma. 1911.
86. Scofield, C.S. & Briggs, L.J. Preliminary report on the Klamath marsh experiment farm. 1911.
87. Atwood, A.C. Description of the comprehensive catalogue of botanical literature in the libraries of Washington. 1911.
88. Beattie, W.R. The picking and handling of peanuts. 1911.
89. Collins, G.N. & Kempton, J.H. An improved method of artificial pollination in corn. 1912.
90. Corbett, L.C. Suggestions to potato growers on irrigated lands. 1912.
91. Scofield, C.S. The nematode gallworm on potatoes and other crop plants in Nevada. 1912.
92. Orton, W.A. & Gilbert, W.W. The control of cotton wilt and root-knot. 1912.
93. Stuart, W. & Orton, W.A. The danger of using foreign potatoes for seed. 1912.
94. Cates, J.S. The Mangum terrace in its relation to efficient farm management. 1912.
95. Hartley, C.P. The seed-corn situation. 1912.
96. Cook, O.F. Results of cotton experiments in 1911. 1912.
97. Chambliss, C.E. A preliminary report on rice growing in the Sacramento Valley. 1912.
98. Beattie, W.R. Peanut butter. 1912.
99. Bailey, C.H. & Thomas, L.M. A method for the determination of the specific gravity of wheat and other cereals. 1912.
100. Galloway, B.T. Distribution of seeds and plants by the Department of Agriculture. 1912.
101. Brown, E. & Goss, W.L. The germination of packeted vegetable seeds. 1912.
102. Piper, C.V. & Brown, E. The production of hairy vetch seed. 1912.
103. Dewey, L.H. Ramie. 1912.
104. Benson, O.H. Special contests for corn-club work. 1912.
105. Hawkins, L.A. Experiments in the control of grape anthracnose. 1913.
106. Hastings, S.H. Forage-crop experiments at the San Antonio field station. 1913.
107. Collins, G.N. A variety of maize with silks maturing before the tassels. 1913.
108. Fairchild, D.G. The Chinese wood-oil tree. 1913.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

CIRCULAR (cont.)

Number.

109. Miscellaneous papers. 1913.
Cobb, N.A. United States official cotton grades.
Orton, W.A. Potato leaf-roll.
Cook, O.F. Morphology of cotton branches.
Kearney, T.H. The wilting coefficient for plants in alkali soils.
Farrell, F.D. Interpreting the variation of plat yields.
110. Miscellaneous papers. 1913.
Grass demonstrations in the South.
Fairchild, D. Some Asiatic Actinidias.
Orton, W.A. Powdery dry-rot of the potato.
Hudson, E.W. Preparation of land for Egyptian cotton in the Salt River Valley, Arizona.
Headley, F.B. & Agriculture on the Truckee-Carson project:
Fulkerson, V. vegetables for the home garden.
Mann, A. Fungus staining of cotton fibers.
Piper, C.V. The jack bean and sword bean.
Kearney, T.H. Fiber from different pickings of Egyptian cotton.
111. Miscellaneous papers. 1913.
Clark, C.F. Preliminary report on sugar production from maize.
Cook, O.F. Durango cotton in the Imperial Valley.
Baston, G.H. Improved apparatus for detecting sulphured grain.
Meade, R.M. Supernumerary carpels in cotton bolls.
Oliver, G.W. Keeping soft cuttings alive for long periods.
112. Miscellaneous papers. 1913.
Reed, C.A. Opportunities in pecan culture.
Scott, W.M. & The Jonathan fruit-spot.
Roberts, J.W.
Kearney, T.H. Egyptian cotton as affected by soil variations.
Stockberger, W.W. Relation of stand to yield in hops.
& Thompson, J.
113. Miscellaneous papers. 1913.
Kellerman, K.F. Soil bacteriology as a factor in crop production.
Cook, O.F. A new ornamental palmetto in southern Texas.
Headley, F.B. & Commercial truck crops on the Truckee-Carson
Fulkerson, V. project.
Dewey, L.H. A purple-leaved mutation in hemp.
Stuart, W. The tuber-unit method of seed-potato improvement.
114. Miscellaneous papers. 1913.
Evans, M.F. Sowing flax on winterkilled wheat fields.
Hastings, S.H. & Experiments in subsoiling at San Antonio.
Letteer, C.R.
Harter, L.L. Control of the black-rot and stem-rot of the sweet potato.
Stubenrauch, A.V. Bartlett pear precooling and storage investi-
& Ramsey, H.J. gations in the Rogue River Valley.
Headley, F.B. Climatic conditions on the Truckee-Carson project.
115. Miscellaneous papers. 1913.
Oakley, R.A. & Two types of proliferation in alfalfa.
Garver, S.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

CIRCULAR (cont.)

Number.

115. Miscellaneous papers. 1913. (cont.)
Cook, O.F. A new system of cotton culture.
Dilman, A.C. Grasses for canal banks in western South Dakota.
116. Miscellaneous papers. 1913.
Swingle, W.T. The fundamentals of crop improvement.
Knorr, F. The work of the Scottsbluff experiment farm in 1912.
Could, H.P. The Hiralta blackberry.
McClure, H.B. The artificial curing of alfalfa hay.
117. Miscellaneous papers. 1913.
Galloway, B.T. The Bureau of plant industry, its functions and efficiency.
Smith, C.B. & Atwood, K.H. The relation of agricultural extension agencies to farm practices.
118. Miscellaneous papers. 1913.
Schofield, C.S. The economics of crop disposal.
Cook, O.F. The abortion of fruiting branches in cotton.
Headley, F.B. & Fulkerson, V. Fruit growing on the Truckee-Carson project.
Kellerman, K.F. The excretion of cytase by *Penicillium pinophilum*.
119. Miscellaneous papers. 1913.
Fairchild, D. & Simmonds, E. The grafted papaya as an annual fruit tree.
Aune, B. The work of the Belle Fourche experiment farm in 1912.
Priggs, L.J. A hand grain thrasher.
McKee, R. Arabian alfalfa.
120. Miscellaneous papers. 1913.
Kellerman, K.F. Testing cultures of nodule-forming bacteria.
Hastings, S.H. The work of the San Antonio experiment farm in 1912.
Collins, G.N. & Kempton, J.H. Inheritance of waxy endosperm in hybrids with sweet corn.
Cook, O.F. Leaf-cut, or tomosis, a disorder of cotton seedlings.
121. Miscellaneous papers. 1913.
McLachlan, A. The culture of Durango cotton in the Imperial Valley.
Pool, V.W. & McKay, M.B. The control of the sugar-beet leaf spot.
Hansen, D. The work of the Huntley experiment farm in 1912.
Meade, R.M. Methods of securing self-pollination in cotton.
122. Miscellaneous papers. 1913.
Coville, F.V. Directions for blueberry culture.
Headley, F.B. The work of the Truckee-Carson experiment farm in 1912.
Vinali, H.N. & Ball, C.R. Feterita, a new variety of sorghum.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

CIRCULAR (cont.)

Number.

123. Miscellaneous papers. 1913.
Cook, O.F. Factors affecting the production of long-staple cotton.
Brand, C.J. & Behavior of seed cotton in farm storage.
Sherman, W.A.
Scofield, C.S. Egyptian cotton culture in the Southwest.
124. Miscellaneous papers. 1913.
Scofield, C.S. Agriculture on the Yuma reclamation project.
Collins, G.N. & Effects of cross-pollination on the size of
Kempton, J.H. seed in maize.
Grossenbacher, J.G. Experiments on the decay of Florida oranges.
Piper, C.V. The wilt prototype of the cowpea.
125. Piper, C.V. Sudan grass, a new drought-resistant hay plant.
1913.
126. Miscellaneous papers. 1913.
Field, E.S. Fungous diseases liable to be disseminated in
shipments of sugar cane.
Peterson, W.A. The work of the Yuma experiment farm in 1912.
Ricker, P.L. Directions for collecting plants.
127. Miscellaneous papers. 1913.
Irish, J.P., Jr. The work of the Delta experiment farm in 1912.
Melhus, I.E. Silver scurf, a disease of the potato.
Young, R.A. The dasheen, a root crop for the southern states.
128. Miscellaneous papers. 1913.
Robertson, F.E. Some profitable and unprofitable farms in
& Dodge, L.G. New Hampshire.
Dewey, L.H. & The strength of textile plant fibers.
Goodloe, M.
129. Miscellaneous papers. 1913.
Swingle, W.T. The present status of date culture in the south-
western states.
Spaulding, P. The present status of the white-pine blister rust.
Allen, R.W. The work of the Umatilla experiment farm in 1912.
130. Miscellaneous papers. 1913.
Cook, O.F. Cotton problems in Louisiana.
Kellerman, K.F. The use of Congo red in culture media.
Arnold, J.H. & A simple and economical method of burning lime.
Nichols, J.E.
131. Miscellaneous papers. 1913.
Shear, C.L. & Cultural characters of the chestnut-blight fun-
Stevens, N.E. gus and its near relatives.
McClure, H.B. et al Measuring hay in ricks or stacks.
McClure, I.G. Cellulose as a source of energy for nitrogen fixation.
132. Miscellaneous papers. 1913.
Spillman, W.J. The farmer's income.
Cook, O.F. Cotton farming in the southwest.
Collins, G.N. Mosaic coherence of characters in seeds of
maize.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS]

Beginning in 1901, when the present Bureau of plant industry was established, at frequent intervals brief publications of a more or less ephemeral nature have been issued. These included cultural directions distributed with seed or plants, practical instructions for farmers, boys' and girls' clubs, etc. In various lists of Department of agriculture publications, issued by Division of publications and Superintendent of documents, these leaflets are designated "Documents", "Miscellaneous" and "General publications." These were not considered of sufficient value to be designated and numbered as a regular series. Some of these publications were unnumbered, others were included in a series of document numbers which covered all publications of the Bureau. Those which were so included have a number preceded by "B.P.I." in the upper left corner of first page. Many of these emanated from the various offices of the Bureau, and in some cases an additional office number is assigned, this being in the upper right corner of first page. Often these publications were distributed by the offices, and it is believed that no record was kept of some of them and that no copies are now extant. The list below includes all that are now on file in the Department of agriculture library, and the Bureau editor's office. From 1915 to 1919 very few of such publications were issued, as the offices maintained series of office circulars, each office having its own series of numbers. These office circulars are here listed immediately following the miscellaneous publications. Beginning in 1919, all such publications of offices and bureau are included in the Department circular series.

UNNUMBERED

- [Blue slip. Cultural directions distributed with seed]. n.d.
(Contrib. from Grass & forage-plant inves.)
Contents:
Molasses grass (*Melinis minutiflora* Beauv.).
Wilt-resistant Jackson cotton. n.d. (Contrib. from Seed & plant
introd. & distr.)
Plan of distributing cotton seed, with a description of the varieties
obtained for distribution. n.d. (Contrib. from
Seed & plant introd. & distr.)
Directions for planting bulbs. n.d. Reprinted in B.P.I. Bull. 25,
p. 47. 1903.
Orton, W.A. Rivers sea island cotton; a variety resistant to
the wilt disease or black-root. n.d. (Contrib.
from Seed & plant introd. & distr.)
Reprinted in B.P.I. Bul. 25, p. 53-53. 1903.
Pieters, A.J. Kleinganzleben sugar beet. n.d. Reprinted in
B.P.I. Bul. 25, p. 58-59. 1903.
Orton, W.A. Iron cowpea: a variety resistant to wilt and root-
knot. n.d. (Contrib. from Seed & plant
introd. & distr.) Reprinted in B.P.I. Bul. 25,
p. 65-68. 1903.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] UNNUMBERED (cont.)

- Arbeit des ackerbau Departements der Vereinigten Staaten. n.d.
(Transl. of p. 1-12 of Misc. pub. no. 156.)
- Instructions regarding the preservation of fruits in antiseptic fluids.
n.d. (Contrib. from Office of pomol. collections)
- Japanese iris. (*Iris kaempferi*). n.d. (Contrib. from Seed & plant
introd. & distr.)
- Directions for using inoculating material. n.d. (Contrib. from Soil
bacteriol. inves. Sheet A)
- [Blue slips. Cultural directions distributed with seed.] n.d.
Contents:
Grass mixture for hay for sections south of the
timothy region.
Grass mixture for moist meadows.
- [Blue slips. Cultural directions distributed with seed.] n.d.
(Contrib. from Farm management inves.)
Contents:
Barnyard millet (*Panicum crus-galli*)
Carpet grass (*Paspalum compressum*).
The growing of alfalfa without irrigation in
eastern Oregon and eastern Washington.
Beggarweed (*Meibomia tortuosa* (Sav.) Kuntze.)
Blue grass (*Poa pratensis*).
Common vetch (*Vicia sativa*) and pearl vetch
(*Vicia sativa alba*).
Johnson grass (*Sorghum halepense*).
Mexican clover (*Richardia scabra* St. Hil.)
Prosc (*Panicum miliaceum*).
Rape (*Brassica napus*).
Teosinte (*Euchloena mexicana*).
Thousand-headed kale (*Brassica oleracea* var.)
Velvet bean (*Mucuna utilis*).
Velvet grass (*Holcus lanatus*).
Yellow milo (*Andropogon sorghum* var.)
- Knapp, B. The county agent in Farmers' cooperative demonstration
work. n.d. (Contrib. from Farmers' coop. dem. work)
- Directions for using inoculating material. n.d. (Contrib. from Soil
bacteriol. & plant nutrition inves. Sheet B)
- Kellerman, K.F. [Seed and soil inoculation] n.d.
- Principal poisonous plants of the stock ranges of the western states.
n.d. (Contrib. from Office of poisonous-plant
inves.) Poster.
- Fairchild, D. How to send living plant material to America. n.d.
(Contrib. from Office of foreign seed & plant introd.)
- Suggested list of premiums suitable for award in the Boys' and girls'
potato club work. n.d. (Contrib. from Office of
farm management. Sect. of field studies & dem. club
work. Form O-1) Multigraphed.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] UNNUMBERED (cont.)

- Benson, O.H. Outline for illustrated booklet, "How I made my crop" in the Boys' and girls' potato club work. n.d. (Contrib. from Office of farm management. Sect. of field studies & dem. club work. Form O-5.) Multigraphed.
-
- Outline for illustrated booklet, "How I made my crop" in the Boys' corn club work. n.d. (Contrib. from Office of farm management. Sect. of field studies & dem. club work. Form R-6) Multigraphed.
-
- Age, acreage, and basis of award requirement in the Boys' corn club work. n.d. (Contrib. from Office of farm management. Sect. of field studies & dem. club work, Form R-11) Multigraphed.
-
- Canning recipes. n.d. (Contrib. from Farmers' coop. dem. - Club work northern & western States. Form N.-3.) Multigraphed.
-
- Time table for canning clubs. n.d. (Contrib. from Farmers' coop. dem. - Club work northern & western states. Form N.-3.) Multigraphed.
- Addresses of companies from which canning outfits... can be purchased. n.d. (Contrib. from Farmers' coop. dem. - Club work northern & western states. Form N-9) Multigraphed.
- Benson, O.H. Recipe for home-made potato starch. n.d. (Contrib. from Farmers' coop. dem. - Club work northern & western states. Form O-4) Multigraphed.
-
- Suggested list of premiums suitable for award in the Boys' corn club work. n.d. (Contrib. from Farmers' coop. dem. - Club work northern & western states. Form R-1) Multigraphed.
-
- Suggestions on what to give premiums for. n.d. (Contrib. from Farmers' coop. dem. - Club work. Northern & western states. Form R-3) Multigraphed.
- Instructions for making the moisture test. n.d. (Contrib. from Farmers' coop. dem., northern & western states - club work. Form R-4)
- Economical methods of cutting ~~and~~ potatoes. n.d.
- Save your pines. Help stamp out the white pine blister disease. n.d. (Contrib. from Office of forest path.) Poster.
- The dasheen. n.d. (Contrib. from Foreign seed & plant introd.)
- [Blue slips. Cultural directions distributed with seed.] n.d. (Contrib. from Seed & plant introd. & distr.)
- Contents:
- Alsike clover (*Trifolium hybridum*).
 - Arabian alfalfa (*Medicago sativa*).
 - Black-hulled kafir corn (*Andropogon sorghum* var.).
 - Bromus inermis*.
 - Broom corn (*Andropogon sorghum*).
 - Canada field pea (*Pisum arvense*).
 - Cowpeas (*Vigna unguiculata*).
 - Crested dog's tail (*Cynosurus cristatus* L.).

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] UNNUMBERED (cont.)

[Blue slips. Cultural directions distributed with seed.] (cont.)

Contents:

- Crimson clover (*Trifolium incarnatum*).
- Dwarf milo (*Andropogon sorghum* var.).
- Egyptian rice (*Oryza sativa* var.).
- Fenugreek (*Trigonella foenum-graecum*).
- Florida beggar weed (*Meibomia tortuosa* Kuntze).
- Cuar (*Cyanopsis psoralioides*).
- Japan clover (*Lespedeza striata*).
- Johnson grass (*Sorghum halapense*).
- Meadow fescue (*Festuca pratensis*).
- Mung bean (*Phaseolus radiatus* and *Phaseolus max*).
- Natal grass (*Tricholaena rosea*).
- Paspalum dilatatum*.
- Pearl millet (*Pennisetum spicatum* R. & S.).
- Perennial rye-grass (*Lolium perenne*).
- Phaseolus angularis*.
- Phaseolus mungo* (Mung bean) and related species.
- Rape (*Brassica napus*).
- Red clover (*Trifolium pratense*).
- Red kafir corn (*Andropogon sorghum* var.).
- Redtop (*Agrostis alba*).
- Sanfoin (*Onobrychis sativa*).
- Scarlet vetch (*Vicia vulgens*).
- Slender wheat-grass (*Agropyron tenerum*).
- Soy bean (*Glycine hispida*).
- Sulla (*Hedysarum coronarium*).
- Tall fescue (*Festuca elatior*).
- Tall meadow oat-grass (*Arrhenatherum elatius*).
- Teosinte (*Euchlaena mexicana* Schrad.).
- Timothy (*Phleum pratense* L.).
- Tobacco seed, Brazilian.
- Velvet bean (*Mucuna utilis*).
- Wax-podded peas.
- Western wheat-grass (*Agropyron occidentale*).
- White clover (*Trifolium repens*).
- Thousand-headed kale (*Brassica oleracea* var.). 1906.
- Alfalfa (*Medicago sativa*). [Pa., West Va., Md., Ky., Tenn., Ark., Va., and the Southern states, except western Texas.] 1908.
- Alfalfa (*Medicago sativa*). [Eastern Oregon and eastern Washington]. 1908.
- Cold-resistant alfalfas (*Medicago sativa*). [Wis., Minn., N. Dak., S. Dak., and Mont.] 1908.
- Drought-resistant alfalfas (*Medicago sativa*). [Okla.; western Nabr., Tex., and Kans.; eastern Colo.] 1908.
- Alfalfas (*Medicago sativa*) [Irrigated and humid sections of the western half of the U. S.] 1908.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS NUMBERED (cont.)]

[Blue slips. Cultural directions distributed with seed.] (cont.)

Contents:

- Arabian alfalfa (*Medicago sativa* var.) 1908.
- Barnyard millet (*Panicum crusgalli*). 1908.
- Burt oats (*Avena sativa*). 1908.
- Canada bluegrass (*Poa compressa*). 1908.
- Creeping bent (*Agrostis stolonifera*). 1908.
- Guinea grass (*Panicum maximum*). 1908.
- Moth bean (*Phaseolus aconitifolius*). 1908.
- Pama grass (*Panicum barbarode*). 1908.
- Scarlet vetch (*Vicia fulgens*). 1908.
- Sixty-day oats (*Avena sativa*). 1908.
- Sorghos or sweet sorghums (*Andropogon sorghum* var.). 1908.
- Swedish select oats (*Avena sativa*). 1908.
- Tangier pea (*Lathyrus tingitensis*). 1908.
- Velvet grass (*Holcus lanatus*). 1908.
- Orchard grass (*Dactylis glomerata*). 1910.
- Rescue grass (*Bromus unioloides*). 1910.
- Directions for cooking sweet potatoes. 1901. (Contrib. from Pomological inves.) Extract from Farmers' Bul. 129.
- Plan of distributing tobacco, and cultural directions for the different types of tobacco distributed. 1902. (Contrib. from Congressional seed listr.) Reprinted in B.P.I. Bul. 25, p. 70-82. 1903.
- Spillman, W.J. List of publications of the Office of grass and forage plant investigations and the Division of agronomy. 1902.
- Galloway, B.T. Congressional seeds and plants, 1902-1903; plan of distribution and allotments. 1902. Reprinted in B.P.I. Bul. 25, p. 23-26. 1903.
- Webber, H.J. Distribution of cotton seed in 1903. n.d. (Contrib. from Seed & plant introd. & distr.) Reprinted in B.P.I. Bul. 25, p. 47-59. 1903.
- Orton, W.A. Sea Island cotton no. 224. 1903. Reprinted in B.P.I. Bul. 25, p. 64-65. 1903.
- _____ Rivers sea island cotton. 1903. (Contrib. from Seed & plant introd. & distr.)
- Webber, H.J. Distribution of cotton seed in 1904. 1904. (Contrib. from Seed & plant introd. & distr.)
- Orton, W.A. Iron cowpea. 1904. (Contrib. from Seed & plant introd. & distr.)
- _____ Vilt-resistant Jackson cotton. 1904. (Contrib. from Seed & plant introd. & distr.)
- Corbett, L.C. The school garden. 1904. (Contrib. from Hort. inves.) Rev. 1905. Misc. pub. no. 140.?
- Tracy, W.W.Sr. Directions for making window gardens. 1904. (Contrib. from Seed & plant introd. & distr.) Ed. 2, 1905, Misc. pub. 138; Ed. 3, 1909, no. 433.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] UNNUMBERED (cont.)

- Brown, E. Crimson clover seed. 1904. (Contrib. from Bot. inves. & exper.)
- Bulletins of the Bureau of plant industry. 1905.
- Cooperative experiments with forage crops, autumn of 1906 - spring of 1907. 1906. (Contrib. from Seed & plant introd. & distr.)
- Pieters, A.J. Cooperative field-crop experiments with farmers. 1906. (Contrib. from Seed & plant introd. & distr.)
- Fairchild, D. Cultural directions for wasabi, the horse-radish of the Japanese. 1906. (Contrib. from Seed & plant introd. & distr.)
- Webber, H.J. Distribution of the Morton citrange in 1907. 1907. (Contrib. from Seed & plant introd. & distr.)
- Lists of seeds wanted, season of 1907. n.d. (Contrib. from Seed laboratory)
- Bulletins of the Bureau of plant industry. 1907.
- Webber, H.J. Distribution of cotton seed in 1907. 1907. (Contrib. from Seed & plant introd. & distr.)
- Cultural directions for the carob. 1908. (Contrib. from Seed & plant introd. & distr.)
- Fairchild, D. The chayote, a new winter vegetable from the south. 1908. (Contrib. from Seed & plant introd.)
- [Blue slips. Cultural directions distributed with seed.] 1908. (Contrib. from Office of grain inves.)
- Contents:
- Milo. (A form of *Andropogon sorghum*). 1908.
- Bulletins of the Bureau of plant industry. 1908.
- Fairchild, D. Two methods of growing udo, a Japanese salad plant. 1908. (Contrib. from Foreign seed & plant introd.)
- Cultural directions for bamboo. 1908. (Contrib. from Foreign seed & plant introd.)
- Fairchild, D. The chayote, a new winter vegetable from the South. 1908. (Contrib. from Foreign seed & plant introd.)
- Rev. (Exact reprint of text, designation of office and date changed.)
- Bulletins of the Bureau of plant industry. Jul. 1, 1908.
- Bulletins of the Bureau of plant industry. Aug. 3, 1908.
- Bulletins of the Bureau of plant industry. Dec. 29, 1908.
- [Blue slips. Cultural directions distributed with seed.] 1909-1913. (Contrib. from Forage crop inves.)
- Contents:
- Bermuda grass (*Cynodon dactylon*). 1909.
- Dwarf milo (*Andropogon sorghum* var.). 1909.
- Bromus inermis*. 1909.
- Italian rye-grass (*Lolium italicum*). 1909.
- Kentucky bluegrass (*Poa pratensis* L.). 1909.
- Para grass (*Paricum barbinode*). 1909.
- Pink kafir (*Andropogon sorghum*). 1909.
- Red kafir (*Andropogon sorghum* var.). 1909.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] UNNUMBERED (cont.)

[Blue slips. Cultural directions distributed with seed.] (cont.)

Contents:

- Alfalfa (*Medicago sativa*). [Sand-hill section of Nebraska.] 1909.
- Alfalfa (*Medicago sativa*). [Eastern Oregon & eastern Washington.] 1909.
- Alfalfa (*Medicago sativa*). [New York & New England states] 1909.
- Alfalfa (*Medicago sativa*). [Ohio, Mich., Ind., Ill., Iowa, Mo., east Kans. & east Nabr.] 1909.
- Alfalfa (*Medicago sativa*). [Penn., W. Va., Md., Ky., Tenn., Ark., Va., & southern states except west Texas]. 1909.
- Bur clover. 1909.
- Cold-resistant alfalfas (*Medicago sativa*). [Wis., Minn., N. Dak., S. Dak., & Mont.] 1909.
- Common vetch or tares (*Vicia sativa*). 1909.
- Crimson clover (*Trifolium incarnatum*). 1909.
- Sand lucern (*Medicago sativa varia*). 1909.
- Drought-resistant alfalfas (*Medicago sativa*) [West Nabr., Kans., east Colo., Okla., & west Tex.]. 1909.
- Hairy vetch (*Vicia villosa*). 1909.
- Kudzu (*Pueraria thunbergiana*). 1909.
- Cowpeas (*Vigna unguiculata*). 1911.
- Sweet clover (*Melilotus alba*). 1911.
- Florida velvet bean (*Stizolobium deeringianum*). 1912.
- Lyon velvet bean (*Stizolobium niveum*). 1912.
- Yokanona velvet bean (*Stizolobium hassjoo*). 1912.
- Soy bean (*Glycine hispida*). 1912.
- Feterita (*Andropogon sorghum var.*). 1912.
- Field pea (*Pisum sativum*). 1912.
- Pink kafir (*Andropogon sorghum*). 1913.
- Blacknull kafir (*Andropogon sorghum*). 1913.
- Dwarf nilo (*Andropogon sorghum*). 1913.
- Sudan grass (*Andropogon sorghum var.*). 1913.
- Dry-land alfalfa. 1913.
- Millet (*Chaetochloa italica*). 1913.
- Sumac sorgo (*Andropogon sorghum var.*). 1913.
- Alsike clover (*Trifolium hybridum*). 1913.
- Red clover (*Trifolium pratense*). 1913.
- Millet (*Chaetochloa italica*). 1913.
- Field pea (*Pisum sativum*). 1913.
- Grimm alfalfa. 1913.
- Sweet clover (*Melilotus alba*). 1913.
- Kudzu (*Pueraria thunbergiana*). 1913.
- Saccharine sorghums (*Andropogon sorghum var.*) 1913.
- Sudan grass (*Andropogon sorghum var.*). 1913.
- Adzuki bean (*Phaseolus angularis*). 1914.
- Cowpea (*Vigna sinensis*). 1914.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] UNNUMBERED (cont.)

[Blue slips. Cultural directions distributed with seed.] (cont.)

Contents:

- Natal grass (*Tricholaena rosea*). 1914.
- Field pea (*Pisum sativum*). 1914.
- Crimson clover (*Trifolium incarnatum*). 1914.
- Japan clover (*Lespedeza striata*). 1914.
- Ladino clover (*Trifolium repens* var. *latum*). 1914.
- White clover (*Trifolium repens*). 1914.

Brewster, W.N. Chinese cultural methods for the leitchee (*Litchi chinensis*). 1909. (Contrib. from Foreign seed & plant introd.)

Knapp, S.A. The corn crop. 1911. (Contrib. from Farmers' coop. dem. work. "A"-76.)

Directions for planting tulip and narcissus bulbs. 1911. (Contrib. from Seed distr.)

Benson, O.H. & Girls' demonstration work: the canning clubs. 1912.

Martin, O.B. (Contrib. from Farmers' coop. dem. work. "A"-77.)
Rev. ed. 1913.

List of seeds wanted 1913. n.d. (Contrib. from Seed laboratory).
Multigraphed.

[Blue slips. Cultural directions distributed with seed.] 1913.

(Contrib. from Corn. inves.)

Contents:

Brown County Yellow Dent corn. 1913.

[Blue slips. Cultural directions distributed with seed.] 1913.

(Contrib. from Cereal inves.)

Contents:

Wheat (*Triticum vulgare*). 1913.

Broom corn (*Andropogon sorghum technicus*).

[Blue slips. Cultural directions distributed with seed.] 1913.

(Contrib. from Office of seed distr.)

Contents:

The tepary and its culture. 1913.

A series of diagrams which show graphically the monthly averages and the variation of the more important factors which were taken into consideration in the grading of commercial corn. 1913. (Contrib. from Office of grain standardization.)

Knapp, B. Field instructions for farmers' cooperative demonstration work in western Texas and Oklahoma. 1913. (Contrib. from Farmers' coop. dem. work)

Brown, E.B. Corn varieties for distribution in Texas, Oklahoma, and Louisiana. 1914. (Contrib. from Corn inves.)

[Blue slips. Cultural directions distributed with seed.] 1914.

(Contrib. from Seed distr.)

Contents:

Bonavist or Hyacinth bean (*Dolichos lablab*). 1914.

Making and maintaining a lawn... 1914.

Young, R.A. The forcing and blanching of dasheen shoots. 1914.
(Contrib. from Foreign seed & plant introd.)

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS UNNUMBERED (cont.)]

- Distribution of cotton seed in 1914. 1914. (Contrib. from Seed distr.)
- Marsh, C.D. *Menziesia*, a new stock-poisoning plant of the north-western states. (Preliminary notice) 1914, (Contrib. from Drug & poisonous plant inves.)
- [Blue slips: Cultural directions distributed with seed.] 1914-1915. (Contrib. from New & rare seed distr.)
- Contents:
- Cowpeas (*Vigna sinensis*). 1914.
 - Crown vetch. 1914.
 - Dwarf milo (*Andropogon sorghum*). 1914.
 - Field pea (*Pisum sativum*). 1914.
 - Grimm alfalfa. 1914.
 - Hairy vetch (*Vicia villosa*). 1914.
 - Natal grass (*Tricholena rosea*). 1914.
 - Red clover (*Trifolium pratense*). 1914.
 - Soy bean (*Soja max*). 1914.
 - Sudan grass (*Andropogon sorghum* var.). 1914.
 - Grass mixture for hay and pasture. 1915.
- Shoemaker, D.N. Japanese iris distribution. 1914. (Contrib. from Office of seed distr.)
- Headley, F.B. The work of the Truckee-Carson reclamation project experiment farm in 1913. 1914. (Contrib. from Western irrig. agric.)
- Hansen, D. The work of the Huntley reclamation project experiment farm in 1913. 1914. (Contrib. from Western irrig. agric.)
- Allen, R.W. The work of the Umatilla reclamation project experiment farm in 1913. 1914. (Contrib. from Western irrig. agric.)
- Aune, B. The work of the Belle Fourche reclamation project experiment farm in 1913. 1914. (Contrib. from Western irrig. agric.)
- Hastings, S.H. The work of the San Antonio experiment farm in 1913. 1914. (Contrib. from Western irrig. agric.)
- Blair, R.E. The work of the Yuma reclamation project experiment farm in 1913. 1914. (Contrib. from Western irrig. agric.)
- Knorr, F. The work of the Scottsbluff reclamation project experiment farm in 1913. 1914. (Contrib. from Western irrig. agric.)
- Marsh, C.D. Principal poisonous plants of the western stock ranges. 1914. (Contrib. from Drug-plant & poisonous-plant inves.)
- Recipes for the dasheen, a delicious and nutritious vegetable. 1915. (Contrib. from Office of foreign seed & plant introd.)
- Creswell, M.E. & Powell, G. Canning. 1915. (Contrib. from Farmers' coop. dem. work)

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] UNNUMBERED (cont.)

- Mann, C.W. The relation of washing to decay in Washington navel oranges; season of 1914-1915. 1915. (Contrib. from Hort. & pomol. inves.)
- Cultural directions for the chayote. 1916. (Contrib. from Office of foreign seed & plant introd.)
- Photographs of drawings of 350 of the commoner weed seeds found in commercial seeds. 1916. (Contrib. from Seed laboratory)
- Buckwheat. 1916.
- The chayote. 1918. (Contrib. from Office of foreign seed & plant introd.)
- The white pine blister rust. 1919. (In cooperation with New Hampshire-Forestry department.)

NUMBERED

No. 1-1803. 1904-1919.

Number.

120. Rockwell, J.E. Visitors' guide to the exhibits of the Bureau of plant industry at the Louisiana purchase exposition, St. Louis, 1904. 1904.
127. Description of varieties of tobacco and cultural directions to accompany seed distribution in 1904-1905. 1904. (Contrib. from Seed & plant introd. & distr. S.P.I.D.-18.)
135. Webber, H.J. Distribution of cotton seed in 1905. 1905. (Contrib. from Seed & plant introd. & distr. S.P.I.D.-439)
136. Knapp, S.A. Agricultural methods for boll-weevil districts. 1905.
138. Tracy, W.W., Sr. Directions for making window gardens. 1904. Ed. 2, rev. 1905. (Contrib. from Seed & plant introd. & distr. S.P.I.D.-44.) Ed. 3, rev. 1909 = no. 433. Ed. 1, 1904 unnumbered?
140. Corbett, L.C. The school garden. Ed. 3, rev. 1905. (Contrib. from Hort. inves. E.C.G.-15.) Ed. 1, 1904 unnumbered?
143. Orton, W.A. Distribution of the Centerville sea island cotton seed. 1905. (Contrib. from Seed & plant introd. & distr. S.P.I.D.-46.)
144. Webber, H.J. Distribution of the Willits citrange in 1905. 1905. (Contrib. from Seed & plant introd. & distr. S.P.I.D.-46.)
145. _____ Distribution of the Rusl. citrange in 1905. 1905. (Contrib. from Seed & plant introd. & distr. S.P.I.D.-45.)
156. Le travail du Département d'agriculture des Etats-Unis. 1905.
177. Pieters, A.J. A variety collection of gladiolus. 1905. (Contrib. from Seed & plant introd. & distr. S.P.I.D.-58.)

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] NUMBERED (cont.)

Number.

196. Shamel, A.D. Cultural directions for tobacco seed distributed in 1905-6. 1905. (Contrib. from Seed & plant introd. & distr. S.P.I.D.-53) Condensed from B.P.I. Bull. 91.
206. Webber, H.J. Distribution of the Willits citrange in 1906. 1906. (Contrib. from Seed & plant introd. & distr.)
207. _____ Distribution of the Rusk citrange in 1906. 1906. (Contrib. from Seed & plant introd. & distr.)
208. _____ Distribution of the Morton citrange in 1906. 1906. (Contrib. from Seed & plant introd. & distr.)
214. _____ Distribution of cotton seed in 1906. 1906. (Contrib. from Seed & plant introd. & distr.)
241. Brief cultural directions for tobacco. 1906. (Contrib. from Seed & plant introd. & distr.)
255. Webber, H.J. Distribution of the Willits citrange in 1907. 1907. (Contrib. from Seed & plant introd. & distr.)
256. _____ Distribution of the Rusk citrange in 1907. 1907. (Contrib. from Seed & plant introd. & distr.)
259. Swingle, W.T. The pistache nut. n.d. (Contrib. from Plant life history inves.)
263. Orton, W.A. Circular of information to accompany seed of wilt-resistant upland cotton, 1907. 1907. (Contrib. from Seed & plant introd. & distr.)
271. Swingle, W.T. Starting a seedling date orchard. 1908. (Contrib. from Plant life history inves.)
272. Webber, H.J. Distribution of the Colman citrange in 1907. 1907. (Contrib. from Seed & plant introd. & distr.)
273. _____ Distribution of the Rustic citrange in 1907. 1907. (Contrib. from Seed & plant introd. & distr.)
281. Cooperative experiments with forage crops, autumn of 1907 - spring of 1908. 1907. (Contrib. from Forage crop inves.)
290. Model plan for a southern farm. 1907.
330. Bean anthracnose. 1907.
331. Cotton anthracnose. 1907.
332. The citrange: a new citrus fruit. 1907. (Contrib. from Plant life history inves.)
333. The Colman citrange. 1907. (Contrib. from Plant life history inves.)
334. The Morton citrange. 1907. (Contrib. from Plant life history inves.)
335. The Rustic citrange. 1907. (Contrib. from Plant life history inves.)
336. The Savage citrange. 1907. (Contrib. from Plant life history inves.)
338. Shoemaker, D.N. Distribution of cotton seed in 1908. 1908. (Contrib. from Seed & plant introd. & distr.)
339. Shamel, A.D. Brief cultural directions for tobacco. 1907. (Abstract of B.P.I. Bull. no. 91. Contrib. from Seed & plant introd. & distr.)

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] NUMBERED (cont.)

Number.

344. Knapp, S.A. Field instructions for farmers' cooperative demonstration work. 1908. (Contrib. from Farmers' coop. dem. work "A"-51.)
355. _____ Economize! Cut down the expenses of the farm! 1908. (Contrib. from Farmers' coop. dem. work "A"-52.) Rev. ed. 1910.
362. Kearney, T.H. Cotton culture in the southwestern United States. 1908. (Contrib. from Alkali & drought resistant plant breeding invest.)
365. Knapp, S.A. Familiar talks on farming: Cultivation of the crop. 1908. (Contrib. from Farmers' coop. dem. work "A"-58.)
366. _____ Field instructions for farmers' cooperative demonstration work. Commercial fertilizers - their uses and cost. 1908. (Contrib. from Farmers' coop. dem. work "A"-59.)
371. _____ Familiar talks on farming. More teams and greater economy. 1912. (Contrib. from Farmers' coop. dem. work "A"-60.)
383. _____ Familiar talks on farming. Diversification. 1908. (Contrib. from Farmers' coop. dem. work "A"-62.)
386. _____ & Barrow, D.N. Seed selection for southern farms: 1908. (Contrib. from Farmers' coop. dem. work "A"-63.)
392. Stubenrauch, A.V. Factors affecting the keeping quality of table grapes while in transit and in storage. 1908. (Contrib. from Field inves. in pomol.)
403. Knapp, S.A. Deep fall plowing and the seed bed. 1908. (Contrib. from Farmers' coop. dem. work "A"-64.)
416. Cates, J.S. & Cox, H.R. The wild onion. 1908. (Contrib. from Farm management inves.)
427. Shamel, A.D. & Mathewson, E.H. Brief directions for the cultivation of tobacco, 1903. 1908. (Contrib. from Seed distr.)
432. Shoemaker, D.N. Distribution of cotton seed in 1909. 1909. (Contrib. from Seed distr.)
433. Tracy, V.W., Sr. Directions for making window gardens. Ed. 3, rev. 1909. (Contrib. from Seed distr.) Ed. 1, 1904 unnumbered?
434. Swingle, W.T. Conditions under which citranges are distributed in warm regions by the United States Department of agriculture. 1909. (Contrib. from Plant life history inves.)
435. _____ Conditions under which citranges are distributed in cold regions by the United States Department of agriculture. 1909. (Contrib. from Plant life history inves.)
436. _____ Distribution of seedling citranges by the United States Department of agriculture. 1909. (Contrib. from Plant life history inves.)

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] NUMBERED (cont.)

- Number.
437. Swingle, W.T. Distributions of seedlings of the large-flowered Citrus trifoliata by the United States Department of agriculture. 1909. (Contrib. from Plant life history inves.)
438. _____ Cooperative distribution of new varieties of Smyrna figs and caprifigs. 1909. (Contrib. from Plant life history inves.)
440. Publications of the Bureau of plant industry. 1909.
441. Knapp, S.A. Field instructions for farmers' cooperative demonstration work. Commercial fertilizers; their uses and value; 1909. (Contrib. from Farmers' coop. dem. work "A"-65.)
442. Hitchcock, A.S. & Chase, A. Directions for preparing herbarium specimens of grasses. 1909. (Contrib. from Taxonomic & range inves.)
451. Means, T.H. & Rogers, S.J. Hints to settlers on the Truckee-Carson project, Nevada. 1909. (Contrib. from Western agric. extension)
452. McPherson, A. Hints to settlers on the Minidoka project, Idaho. 1909. (Contrib. from Western agric. extension)
453. Jensen, C.A. Hints to settlers on the Belle Fourche project, South Dakota. 1909. (Contrib. from Western agric. extension)
454. Warren, J.A. Hints to settlers on the North Platte project, Nebraska. 1909. (Contrib. from Office of farm management)
455. McDowell, J.C. Hints to settlers on the Williston project, North Dakota. 1909. (Contrib. from Farm management inves.)
457. Agricultural conditions in southern Texas. 1909.
462. Cotton, J.S. & Remington, W.A. Hints to settlers on the Sun River project, Montana. 1909. (Contrib. from Office of farm management)
477. True, R.H. American ginseng. 1909. (Contrib. from Drug & poisonous plant & gen. physiol. inves.)
483. Publications of the Bureau of plant industry. 1909.
485. Knapp, S.A. Farm notes. 1909. (Contrib. from Farmers' coop. dem. work. "A"-56.)
485. [b] _____ The selection of cotton and corn seed for southern farms. 1909. (Contrib. from Farmers' coop. dem. work, "A"-67) Rev. ed. 1912 = no. 747. ?
495. Hunter, B. Hints to settlers on the Umatilla project, Oregon. 1909. (Contrib. from Office of farm management)
503. Knapp, S.A. Fall-breaking and the preparation of the seed bed. 1909. (Contrib. from Farmers' coop. dem. work, "A"-68.)
504. Publications of the Bureau of plant industry. 1909.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] NUMBERED (cont.)

Number.

523. Knapp, S.A. Field instructions for farmers' cooperative demonstration work. 1909. (Contrib. from Farmers' coop. dem. work, "A"-69.) (Revision of no. 344, "A"-51) 3d revision, 1911. 4th revision, 1912 signed Bradford Knapp.
524. The rusk citrange. 1909. (Contrib. from Crop physiolo. & breeding inves.)
526. Publications of the Bureau of plant industry. 1909.
533. Garner, W.W. Plans for the continuation of the tobacco investigations in Texas. 1909. (Contrib. from Tobacco inves.)
535. Shoemaker, D.N. Distribution of cotton seed in 1910. 1910. (Contrib. from Seed distr.)
537. Swingle, W.T. Cooperative distribution of new Smyrna figs and caprifigs. 1910. (Contrib. from Crop physiolo. & breeding inves.)
548. Publications of the Bureau of plant industry. 1910.
555. Knapp, S.A. Southern farm notes. 1910. (Contrib. from Farmers' coop. dem. work, "A"-70.)
564. Kyle, C. H. Directions to cooperative corn breeders. 1910. (Contrib. from Corn inves.)
578. Knapp, S.A. Suggestions for setting permanent pastures with Bermuda grass as the basis. 1910. (Contrib. from Farmers' coop. dem. work, B-526.)
589. Hartley, C.P. Have you a more productive corn than First-generation cross no. 182? 1911. (Contrib. from Corn inves.)
619. Knapp, S.A. The production of cotton under boll-weevil conditions. 1911. (Contrib. from Farmers' coop. dem. work. "A"-71.)
629. Mathewson, E.H. The burning quality of tobacco, with suggestions for its improvement in the flue-cured types of eastern North Carolina and South Carolina. 1910. (Contrib. from Tobacco inves.)
631. Knapp, S.A. Farm fertilizers. 1911. (Contrib. from Farmers' coop. dem. work. "A"-72.)
632. _____ Crops for southern farms. 1910. (Contrib. from Farmers' coop. dem. work. "A"-73.)
633. Distribution of cotton seed in 1911. 1911. (Contrib. from Seed distr.)
644. Knapp, S.A. & Martin, O.B. Boys' demonstration work: the corn clubs. 1911. (Contrib. from Farmers' coop. dem. work. "A"-74.)
Rev. 1912 and 1913.
647. _____ Results of boys' demonstration work in corn clubs in 1910. 1911. (Contrib. from Farmers' coop. dem. work. "A"-75.) Rev. ed. 1912 = no. 741.
648. Orton, W.A. The control of cotton wilt and root-knot. 1911. (Contrib. from Farmers' coop. dem. work)

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] NUMBERED (cont.)

Number.

676. Stubenrauch, A.V. The relation of handling to decay in California navel oranges: season of 1910-1911. 1911. (Contrib. from Field inves. in pomol.)
692. Mercier, W.B. & Savely, H.E. Farm fertilizers. 1911. (Contrib. from Farmers' coop. dem. work. "A"-77.)
706. Mercier, W.B. An effective method of preventing erosion of hill lands. 1911. (Contrib. from Farmers' coop. dem. work. "A"-78.)
716. Distribution of cotton seed in 1912. 1912. (Contrib. from Seed distr.)
717. Suggestions on growing Egyptian cotton in the Southwest. 1912. (Contrib. from Western agric. extension.)
720. Cobb, N.A. Memorandum of information concerned official cotton grades. 1912. (Contrib. from Agricultural technology)
730. Knapp, B. The corn crop in the southern states. 1912. (Contrib. from Farmers' coop. dem. work. "A"-80)
741. _____ & Martin, O.B. Results of boys' demonstration work in corn clubs in 1911. 1912. (Contrib. from Farmers' coop. dem. work. "A"-75 rev.) Ed. 1, 1911=no.619.
747. Knapp, B. Selection of cotton and corn seed on southern farms. 1912. (Contrib. from Farmers' coop. dem. work. "A"-67.) Ed. 1, 1909 = no.485 [b].
756. _____ Emergency crops for overflowed lands in the Mississippi Valley. 1912. (Contrib. from Farmers' coop. dem. work)
774. Estabrook, L.M. Tulip and narcissus bulbs. 1912. (Contrib. from Office of congressional seed distr.)
782. Powell, O. & Creswell, M.E. Peppers. 1915. (Contrib. from Farmers' coop. dem. work South F.C.D.V.S.-1)
803. Benson, O.H. Organization and instruction in boys' corn-club work. 1913. (Contrib. from Office of farm management. Form R-4.)
813. Distribution of cotton seed in 1913. 1913. (Contrib. from Seed distr.)
865. Knapp, B. Results of demonstration work in boys' and girls' clubs in 1912. 1913. (Contrib. from Farmers' coop. dem. work)
870. Hill, I.W. & Martin, O.B. Girls' demonstration work: the canning clubs. 1913. (Contrib. from Farmers' coop. dem. work. "A"-79 rev.) Ed. 1 1912. unnumbered?
883. Corbett, L.C. Tomato growing as club work in the north and west. 1913. (Contrib. from Office of farm management)
884. Stuart, W. Potato growing as club work in the north and west. 1913. (Contrib. from Office of farm management)
984. Tracy, J.E. Distribution of tulip and narcissus bulbs in 1913. 1913. (Contrib. from Office of congressional seed distr.)

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[MISCELLANEOUS PUBLICATIONS] NUMBERED (cont.)

- Number.
1009. Scofield, C.S., et al Cotton as a crop for the Yuma reclamation project. 1913. (Contrib. from Committee on southwestern cotton culture.)
1081. Knorr, F. The work of the Scottsbluff reclamation project experiment farm in 1913. 1914. (Contrib. from Western irrig. agric.)
1110. Young, R.A. The dasheen, a root crop for the south. 1914. (Contrib. from Foreign seed & plant introd.)
1122. Oakley, R.A. Distribution of tulip and narcissus bulbs in 1914. 1914. (Contrib. from Office of congressional seed distr.)
1130. Cook, O.F. Single-stalk cotton culture. 1914. (Contrib. from Crop acclimatization and adaptation inves.)
1163. Distribution of cotton seed in 1915. 1915. (Contrib. from New & rare seed distr.)
1249. Oakley, R.A. Distribution of tulip and narcissus bulbs in 1915. 1915. (Contrib. from Office of congressional seed distr. S.D.-21.)
1273. Distribution of cotton seed in 1916. 1915. (Contrib. from New & rare seed distr. S.D.-22.)
1442. Distribution of cotton seed in 1917, 1918. (Contrib. from New & rare seed distr. S.D.-34, S.D.-38.)
1796. Distribution of the seed of Dixie cotton, a wilt-resistant variety. 1919. (Contrib. from New & rare seed distr.)
1797. Distribution of the seed of Acala cotton. 1919. (Contrib. from New & rare seed distr.)
1798. Distribution of the seed of Trice cotton. 1919. (Contrib. from New & rare seed distr.)
1799. Distribution of the seed of Columbia cotton. 1919. (Contrib. from New & rare seed distr.)
1800. Distribution of the seed of Lone Star cotton. 1919. (Contrib. from New & rare seed distr.)
1801. Distribution of the seed of Durango cotton. 1919. (Contrib. from New & rare seed distr.)
1802. Distribution of cotton seed in 1920. 1919. (Contrib. from New & rare seed distr.)

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[OFFICE CIRCULARS]

OFFICE OF AGRICULTURAL TECHNOLOGY

CIRCULAR

Number.

1. Cobb, N.A. Estimating the nema population of the soil ... 1918.

ALKALI AND DROUGHT RESISTANT PLANT INVESTIGATIONS

[CIRCULAR]

1. Kearney, T.H. Tests of Pima Egyptian cotton in the Salt River Valley, Arizona. 1916. A. & D.R.P. - 1.

OFFICE OF COTTON, TRUCK, AND FORAGE CROP DISEASE INVESTIGATIONS

CIRCULAR

C.T. & F.C.D. 1-17. 1918-1919.

1. Orton, W.A. & Link, G.K.K. Powdery dry-rot of potato. 1918.
2. Potato Black-Heart. 1918.
3. Orton, W.A. Selection and treatment of seed potato to avoid diseases. 1918.
4. Pritchard, F.J. & Clark, W.B. The control of tomato leaf-spot. Prevent the diseases by spraying. 1918.
5. Edson, H.A. & Stuart, W. Growing high-grade potato seed stock. 1918.
6. Kunkel, L.O. Wart of potatoes: a disease new to the United States. 1919.
7. Norton, J.B. Washington asparagus: information and suggestions for growers of new pedigreed rust-resistant strains. 1919.

CROP PHYSIOLOGY AND BREEDING INVESTIGATIONS

[CIRCULAR]

C.P. & B.I. 1-5. 1916-1918.

1. Swingle, W.T. The pistache nut. 1916.
2. Hastings, S.H. A lister attachment for a cotton planter. 1917.
3. Mason, S.C. Growing Bermuda onion seed in the northwestern United States. 1917.
4. Swingle, W.T. & Robinson, T.R. Tangelos: what they are. The value in Florida of the Sampson and Thornton tangelos. 1918.
5. Tanaka, T. Varieties of the Satsuma orange group in Japan. 1918.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[OFFICE CIRCULARS] (cont.)

DEMONSTRATIONS ON RECLAMATION PROJECTS

[CIRCULAR]

D.R.P. 1-2. 1915-1916.

Number.

1. Jones, C.S. Establishing the swine industry on the North Platte reclamation project, with an introduction by F. D. Farrell. 1915.
2. Farrell, F.D. Irrigated pastures for northern reclamation projects. 1916.

OFFICE OF DRY-LAND AGRICULTURE

[CIRCULAR]

D.L.A. 1-6. 1916-1919.

1. Cooperative shelter-belt planting on the northern Great Plains. 1916.
2. Cooperative shelter-belt development on the northern Great Plains. 1916.
3. Cooperative shelter-belt development on the northern Great Plains. 1917.
4. Care of cooperative shelter belts on the northern Great Plains. 1919.
5. Conifer additions to shelter belts on the northern Great Plains. 1919.
6. Instructions for the planting and care of conifer trees in cooperative shelter belts. 1919.

OFFICE OF ECONOMIC AND SYSTEMATIC BOTANY

[CIRCULAR]

E. & S.B. 1. 1919.

1. Blake, S.F. Directions for the preparation of plant specimens for identification. 1919.

FARMERS' COOPERATIVE DEMONSTRATION WORK IN THE SOUTH

[CIRCULAR]

F.C.D.W.S. 1. 1915.

1. Powell, O. & Peppers. 1915. (B.P.I. - 782)
Creswell, M.E.

DEPARTMENT OF AGRICULTUREBUREAU OF PLANT INDUSTRYOFFICE CIRCULARS (cont.)FORAGE-CROP INVESTIGATIONS

[Blue slips. Cultural directions distributed with seed.]

F.C. 1-34, 43-53. 1915-1919.

Number.

1. Alfalfa (*Medicago sativa*). New Eng. states & N. Y. 1915.
2. Alfalfa (*Medicago sativa*). Mich., Wis. & Minn. 1915.
3. Hairy vetch (*Vicia villosa*). 1915.
4. Fenugreek (*Trigonella foenum-graecum*). 1915.
5. Rhodes grass (*Chloris gayana*). 1915.
6. Alfalfa (*Medicago sativa*). Pa., W. Va., nw. Md., & north N. J. 1915.
7. Alfalfa (*Medicago sativa*). South N. J. & Md., Del., Va., Ark., Tenn., So. Atlantic & Gulf states. 1915.
8. Alfalfa (*Medicago sativa*). Ohio, Ind., Ill., Iowa, Mo. and Ky. 1915.
9. Furze or gorse (*Ulex europaeus*). 1915.
10. Berseem or Egyptian clover (*Trifolium alexandrinum*). 1915.
11. Crimson clover (*Trifolium incarnatum*). 1915.
12. Sulla (*Hedysarum coronarium*). 1915.
13. Scotch broom (*Cytisus scoparius*). 1915.
14. Shaftal clover (*Trifolium suaveolens*). 1915.
15. Sainfoin (*Onobrychis sativa*). 1915.
16. White clover (*Trifolium repens*). 1915.
17. Serradella (*Ornithopus sativus*). 1915.
18. Ladine clover (*Trifolium repens* var. *latum*). 1915.
19. Soy bean (*Soja max*). 1915.
20. Guar (*Cyamopsis psoraloides*). 1915.
21. Alsike clover (*Trifolium hybridum*). 1915.
22. Bur clover (*Medicago arabica*). 1915.
23. Lespedeza, or Japan clover (*Lespedeza striata*). 1915.
24. Yellow trefoil or black medic (*Medicago lupulina*). 1915.
25. Sweet clover (*Melilotus alba*). 1915.
26. Natal grass (*Tricholaena rosea*). 1916.
27. Red clover (*Trifolium pratense*). 1915.
28. Dwarf hegari sorghum. 1915.
29. Orchard grass (*Dactylis glomerata*). 1915.
30. Teosinte (*Euchlaena mexicana*). 1916.
31. Timothy (*Phleum Pratense*). 1916.
32. Millet (*Chastochloa italica*). 1916.
33. Bermuda grass (*Cynodon dactylon*). 1916.
34. Cassava (*Manihot utilissima*). 1915.
- 35-42. Not issued.
43. Sweet clover. 1917.
44. Carib grass (*Eriochloa subglabra*). 1917.
45. Giant Bermuda grass (*Cynodon dactylon* var.). 1917.
46. Sacaline. 1918.
47. A rotary seed harvester for crimson clover. 1918. (not blue slip)
48. Napier Grass. 1918.
49. Japanese Sugar Cane. 1918.
50. Grain sorghums. 1919.
51. Tall fescue (*Festuca ciatier*). 1919.
52. Not issued.
53. Carpet grass (*Axonopus compressus*). 1919.

DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY

[OFFICE CIRCULARS] (cont.)

OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION

[CIRCULAR]

F.S. & P.I. 1-3.

1916-1917.

Number.

1. New plant introductions. Descriptions of imported seeds and plants which will be sent to experimenters. Sixth annual list 1916-17. 1917.
2. Recipes for the preparation of the dasheen. 1916.
3. New plant introductions. Descriptions of imported seeds and plants which will be sent to experimenters. Seventh annual list 1917-18. 1917.

Inventory of seeds and plants imported.

See

Bureau of plant industry, Inventory of seeds and plants imported by the Office of seed and plant introduction.

OFFICE OF HORTICULTURAL AND POMOLOGICAL INVESTIGATIONS

CIRCULAR

H. & P. 1

1918.

1. Scott, L.B. Varieties of the Satsuma orange group in the United States. 1918.

NEW AND RARE SEED DISTRIBUTION

[Cultural directions distributed with seed].

S. D. 1-41.

1915-1918.

1. Alfalfa (*Medicago sativa*). New Engl. states and New York. 1915.
2. Alfalfa (*Medicago sativa*). Mich., Wis., and Minn. 1915.
3. Grass mixture for hay and pasture. 1915.
4. Grass mixture for hay and pasture. 1915.
5. Rhodes grass (*Chloris gayana*). 1915.
6. Alfalfa (*Medicago sativa*). Penn., W.Va., Nw.Md., & north N.J. 1915.
7. Alfalfa (*Medicago sativa*). So. N.J. & Md., Del., Va., Ark., Tenn., So. Atlantic and Gulf states. 1915.
8. Alfalfa (*Medicago sativa*). Ohio, Ind., Ill., Iowa, Mo. and Ky. 1915.
9. Peruvian alfalfa. 1915.
10. Perennial rye grass (*Lolium perenne*). 1915.
11. Orchard grass (*Dactylis glomerata*). 1915.
12. Tall meadow oat-grass (*Arrhenatherum elatius*). 1915.
13. Making and maintaining a lawn. 1915. (Contrib. from Seed distr.)
14. Cowpeas (*Vigna sinensis*). 1915.
15. Feterita (*Andropogon sorghum*). 1915.
16. Field pea (*Pisum sativum*). 1915.
17. Sudan grass (*Andropogon sorghum* var.). 1916.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[OFFICE CIRCULARS] (cont.)

NEW AND RARE SEED DISTRIBUTION. (cont.)

Number.

- 18. Dwarf milo (*Andropogon sorghum*). 1915.
- 19. Soy bean (*Soja max*). 1916.
- 20. Velvet beans. 1915.
- 21. Distribution of tulip and narcissus bulbs in 1915. 1915. (B.P.I.-1249. Contrib. from Office of congressional seed distr.)
- 22. Distribution of cotton seed in 1916. 1915. (B.P.I.-1273)
- 23. Dry-land alfalfa. 1916.
- 24. Baltic alfalfa. 1916.
- 25. Natal grass (*Tricholaena rosea*). 1916.
- 26. Millet (*Chaetochloa italica*). 1916.
- 27. Dwarf hegari. 1916.
- 28. Bermuda grass (*Cynodon dactylon*). 1916. (Contrib. from Seed distr.)
- 29. Distribution of tulip and narcissus bulbs in 1916. 1916. (Contrib. from Office of congressional seed distr.)
- 30. Making and maintaining a lawn. 1915. (Contrib. from Seed distr.)
- 31. Rhodes grass (*Chloris gayana*). 1916.
- 32. Grimm alfalfa. 1916.
- 33. Saccharine sorghums (*Andropogon sorghum* var.) 1916.
- 34. Distribution of cotton seed in 1917.-1916. (B.P.I.-1442)
- 35. Sweet clover. 1917.
- 36. Milo. 1917.
- 37. Distribution of tulip and narcissus bulbs in 1917. 1917. (Contrib. from Office of congressional seed distr.)
- 38. Distribution of cotton seed in 1918. 1917. (B.P.I.-1442)
- 39. Distribution of tulip and narcissus bulbs in 1918. 1918. (Contrib. from Office of congressional seed distr.)
- 40. Distribution of cotton seed in 1919. 1918.
- 41. Grain sorghums. 1918.

PAPER-PLANT INVESTIGATIONS.

[CIRCULAR]

- 1. Brand, C.J. Crop plants for paper making. 1913. P.P.I. - I. (Reprint of B.P.I.Circ. 82. 1911)

WESTERN IRRIGATION AGRICULTURE

CIRCULAR

W.I.A. 1-27. 1915-1918.

- 1. Allen, R.W. The work of the Umatilla reclamation project experiment farm in 1914. 1915.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[OFFICE CIRCULARS] (cont.)

WESTERN IRRIGATION AGRICULTURE (cont.)

Number.

2. Hansen, D. The work of the ~~Huntley~~ reclamation project experiment farm in 1914. 1915.
3. Headley, F.B. The work of the Truckee-Carson experiment farm in 1914. 1915.
4. Aune, B. The work of the Belle Fourche reclamation project experiment farm in 1914. 1915.
5. Hastings, S.H. The work of the San Antonio experiment farm in 1914. 1915.
6. Knorr, F. The work of the Scottsbluff reclamation project experiment farm in 1914. 1915.
7. Blair, R.E. The work of the Yuma reclamation project experiment farm in 1914. 1915.
8. Hansen, D. The work of the Huntley reclamation project experiment farm in 1915. 1916.
9. Aune, B. The work of the Belle Fourche reclamation project experiment farm in 1915. 1916.
10. Hastings, S.H. The work of the San Antonio experiment farm in 1915. 1916.
11. Knorr, F. The work of the Scottsbluff reclamation project experiment farm in 1915. 1916.
12. Blair, R.E. The work of the Yuma reclamation project experiment farm in 1915. 1916.
13. Headley, F.B. The work of the Truckee-Carson experiment farm in 1915. 1916.
14. Aune, B. The work of the Belle Fourche reclamation project experiment farm in 1916. 1917.
15. Hansen, D. The work of the Huntley reclamation project experiment farm in 1916. 1917.
16. Letteer, C.R. The work of the San Antonio experiment farm in 1916. 1917.
17. Allen, R.W. The work of the Umatilla reclamation project experiment farm in 1915 and 1916. 1917.
18. Knorr, F. The work of the Scottsbluff reclamation project experiment farm in 1916. 1918.
19. Headley, F.B. The work of the Truckee-Carson reclamation project experiment farm in 1916. 1918.
20. Blair, R.E. The work of the Yuma reclamation project experiment farm in 1916. 1918.
21. Letteer, C.R. The work of the San Antonio experiment farm in 1917. 1918.
22. Hansen, D. The work of the Huntley reclamation project experiment farm in 1917. 1918.
23. Headley, F.B. The work of the Truckee-Carson reclamation project experiment farm in 1917. 1918.
24. Aune, B. The work of the Belle Fourche reclamation project experiment farm in 1917. 1918.

DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

[OFFICE CIRCULARS] (cont.)

WESTERN IRRIGATION AGRICULTURE (cont.)

Number.

25. Blair, R.E. The work of the Yuma reclamation project experiment farm in 1917. 1918.
26. Allen, R.W. The work of the Umatilla reclamation project experiment farm in 1917. 1919.
27. Holden, J.A. The work of the Scottsbluff reclamation project experiment farm in 1917. 1918.

INVENTORY OF SEEDS AND PLANTS

No. 9-47. 1902-1920. In progress.

Inventory of seeds and plants imported by the Office of foreign seed and plant introduction 1902-1915. No. 9-47 (Numbers 4351-43012.) 1902-1920.

No. 1-7 (Numbers 1-3400) issued by Division of botany; no. 8 (Numbers 3408-4350) by Section of seed and plant introduction; no. 9-30 by Bureau of plant industry as Bulletins no. 5, 53, 97, 106, 132, 137, 142, 148, 153; 162, 168, 175, 206, 207, 208, 223, 227, 233, 242, 248, 261, 282; subsequent inventories issued not as bulletins, but with inventory number only.

DEPARTMENT OF AGRICULTUREBULLETINCONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

1913-1920. In progress. no.1-930.

In July 1913 the bureau series of bulletins and circulars were discontinued and a new series of Department Bulletins was established, in which was published as contributions from the various bureaus, divisions and offices the popular and semitechnical matter which had been previously published in the separate series. (From Dept. agr. Ann. rept. 1913/14.)

Number.

3. Mowry, H.H. A normal day's work for various farm operations. 1913.
4. Sampson, A.W. The reseeding of depleted grazing land to cultivated forage plants. With prefatory note by F.V. Coville. 1913. (In cooperation with For. Serv.)
6. Coville, F.V. The agricultural utilization of acid lands by means of acid-tolerant crops. 1913.
16. Mathewson, E.H. The culture of flue-cured tobacco. 1913.
26. Henkel, A. American medicinal flowers, fruits, and seeds. 1913.
28. Dorsett, P.H. Experiments in bulb growing at the United States bulb garden at Bellingham. 1913.
29. Arnold, J.H. Crew work, costs, and returns in commercial orcharding in West Virginia. 1913.
30. Cardon, P.V. Cereal investigations at the Nephi substation. 1913.
31. Griffiths, D. Behavior, under cultural conditions, of species of cacti known as *Opuntia*. 1913.
32. Burritt, M.C. & Barron, J.H. An example of successful farm management in southern New York. 1913.
33. Clark, J.A. Cereal experiments at Dickinson, N. Dak. 1914. (In cooperation with N. Dak. agr. exp. sta.)
35. Stubenrauch, A.V. & Mann, C.W. Factors governing the successful storage of California table grapes. 1913.
38. Kearney, T.H. Seed selection of Egyptian cotton. 1913.
39. Champlin, M. Experiments with wheat, oats, and barley in South Dakota. 1914.
40. Allard, H.A. The mosaic disease of tobacco. 1914.
41. Thomson, E.H. & Dixon, H.M. A farm-management survey of three representative areas in Indiana, Illinois, and Iowa. 1914.
43. Young, T.B. & True, R.H. American-grown paprika pepper. 1913.
44. Hartley, C. The blights of coniferous nursery stock. 1913.
47. Orton, W.A. Lessons for American potato growers from German experiences. 1913.
48. Duval, J.E.T. & Duval, L. The shrinkage of shelled corn while in cars in transit. 1913.
49. Bennett, C.M. & Coeper, M.O. The cost of raising a dairy cow. 1914.
50. Chubbuck, L. Possible agricultural development in Alaska. 1914.
52. McMurrin, S.M. The anthracnose of the mango in Florida. 1914.
56. Cox, J.H. A special flask for the rapid determination of water in flour and meal. 1914.

DEPARTMENT OF AGRICULTURE

BULLETIN (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

- Number.
60. Cook, O.F. The relation of cotton buying to cotton growing. 1914.
62. Cobb, N.A. Tests of the waste, tensile strength, and bleaching qualities of the different grades of cotton as standardized by the United States government. 1914.
63. Stubenrauch, A.V., et al. Factors governing the successful shipment of oranges from Florida. 1914.
64. Orton, W.A. Potato wilt, leaf-roll, and related diseases. 1914.
68. Hunter, B. Pasture and grain crops for hogs in the Pacific northwest. 1914.
69. Marsh, C.D., et al. Cicuta, or water hemlock. 1914. (In cooperation with Bur. animal indus.)
75. Piper, C.V., et al. Alfalfa seed production; pollination studies. 1914.
79. Garner, W.W., et al. Research studies on the curing of leaf tobacco. 1914.
81. Orton, W.A. The potato quarantine and the American potato industry. 1914. (In cooperation with Fed. hort. bd.)
82. Melhus, I.E. Powdery scab (*Spongospora subterranea*) of potatoes. 1914.
84. Fairchild, D. Experiments with udo, the new Japanese vegetable. 1914.
89. Long, W.H. The death of chestnuts and oaks due to *Armillaria mellea*. 1914.
91. Thompson, H., & Strait, E.D. Cost and methods of clearing land in the Lake states. 1914.
99. Warburton, C.W., et al. Tests of selections from hybrids and commercial varieties of oats. 1914. (In cooperation with Iowa & Cornell agr. exp. sta.)
102. Besley, H.J. & Baston, G.H. Acidity as a factor in determining the degree of soundness of corn. 1914.
104. Shaw, H.B. Thrips as pollinators of beet flowers. 1914.
109. True, R.H. The molds of cigars and their prevention. 1914.
116. Spaulding, P. New facts concerning the white-pine blister rust. 1914.
117. Thomson, E.H. & Dixon, H.M. Profits in farming on irrigated areas in Utah Lake Valley. 1914.
119. Piper, C.V. & Morse, W.J. Five oriental species of beans. 1914.
120. Ballard, W.S. & Volck, W.H. Apple powdery mildew and its control in the Pajaro Valley. 1914.
121. Taylor, F. & Sherman, W.A. Spinning tests of upland long-staple cottons. 1914. (In cooperation with Off. markets)
125. Marsh, C.D., et al. *Zygodenus*, or death canas. 1915. (In cooperation with Bur. animal indus.)
127. Veihmeyer, F.J. The *Nycogone* disease of mushrooms and its control. 1914.

DEPARTMENT OF AGRICULTUREBULLETIN (cont.)CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

- Number.
130. Miller, G.H. Operating costs of a well-established New York apple orchard. 1914.
133. Knorr, F. Experiments with crops under fall irrigation at the Scottsbluff reclamation project experiment farm. 1914.
135. Hansen, D. Experiments in the production of crops on alkali land on the Huntley reclamation project, Montana. 1914.
137. Harlan, H.V. Some distinctions in our cultivated barleys with reference to their use in plant breeding. 1914.
138. Brown, E. Commercial Turkestan alfalfa seed. 1914.
151. Letteer, C.R. Experiments in crop production on fallow land at San Antonio. 1914.
157. Cardon, P.V. Tillage and rotation experiments at Nephi, Utah, 1915. (In cooperation with Utah agr. exp. sta.)
162. Hastings, S.H. & Blair, R.E. Horticultural experiments at the San Antonio field station, southern Texas. 1915.
168. Duvel, J.W.T. Grades for commercial corn. 1915.
169. Hartley, C. Injury by disinfectants to seeds and roots in sandy soils. 1915.
172. Wight, W.F. The varieties of plums derived from native American species. 1915.
174. Yerkes, A.P. & Mowry, H.H. Farm experience with the tractor. 1915.
175. Patterson, F.W. & Charles, V.K. Mushrooms and other common fungi. 1915.
176. Stuart, W. Group classification and varietal descriptions of some American potatoes. 1915. (Published 1918.)
179. Wight, W.F. Native American species of American Prunus. 1915.
182. Kremers, E. Agricultural alcohol: studies of its manufacture in Germany. 1915.
183. Mann, A. & Harlan, H.V. Morphology of the barley grain with reference to its enzym-secreting areas. 1915.
186. Sasser, E.R. & Hawkins, L.A. A method of fumigating seed. 1915. (In cooperation with Bur. Entomol.)
188. Hastings, S.H. The importance of thick seeding in the production of milo in the San Antonio region. 1915.
195. Stuart, W. Potato breeding and selection. 1915.
199. Shaw, H.B. Loss in tonnage of sugar beets by drying. 1915.
201. Griffiths, D. Native pasture grasses of the United States. 1915. et al.
203. Townsend, C.O. Field studies of the crown-gall of sugar beets. 1915.
208. Griffiths, D. Yields of native prickly pear in southern Texas. 1915.
209. Husmann, G.C. Testing grape varieties in the Vinifera regions of the United States. 1915.
211. Wooton, E.O. Factors affecting range management in New Mexico. 1915.
212. Weir, J.R. Observations on the pathology of the jack pine. 1915.

DEPARTMENT OF AGRICULTUREBULLETIN (cont.)CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

- Number
211. Chilcott, E.C. Spring wheat in the Great Plains area: relation
et al. of cultural methods to production. 1915.
218. _____ Oats in the Great Plains area: relation of cul-
et al. tural methods to production. 1915.
219. _____ Corn in the Great Plains area: relation of cul-
et al. tural methods to production. 1915.
222. _____ Barley in the Great Plains area: relation of cul-
et al. tural methods to production. 1915.
223. Mason, S.C. Botanical characters of the leaves of the date
palm used in distinguishing cultivated vari-
eties. 1915.
227. Humphrey, C.J. & The toxicity to fungi of various oils and salts,
Fleming, R.M. particularly those used in wood preservation.
1915.
228. Briggs, L.J. & Effect of frequent cutting on the water require-
Shantz, H.L. ment of alfalfa and its bearing on pasturage.
1915.
238. Shaw, H.B. Sugar beets: preventable losses in culture. 1915.
242. Chilcott, E. F. Corn, milo, and kafir in the southern Great Plains
et al. area: relation of cultural methods to production.
1915.
247. Hedgcock, G.G. A disease of pines caused by *Cronartium pyriforme*.
& Long, W.H. 1915.
253. Grace, O.J. The effect of different times of plowing small-
grain stubble in eastern Colorado. 1915.
268. Chilcott, E.C. Crop production in the Great Plains area: rela-
et al. tion of cultural methods to yields. 1915.
270. Babcock, F.R. Cereal experiments at the Williston station. 1915.
271. Mason, S.C. Dates of Egypt and the Sudan. 1915.
274. Ramsey, H.J. Factors governing the successful shipment of red
raspberries from the Puyallup Valley. 1915.
275. Meinecke, E.P. Forest Pathology in forest regulation. 1916.
279. Meade, R.M. Single-stalk cotton culture at San Antonio. 1915.
282. Russell, G.A. A study of the soft resins in sulphured and un-
sulphured hops in cold and in open storage. 1915.
287. Boerner, E.G. A device for sampling grain, seeds, and other
material. 1915.
288. Saunders, D.A. & Custom ginning as a factor in cotton-seed dete-
Cardon, P.V. rioration. 1915.
289. Westgate, J.M., Red clover seed production: pollination studies.
Coe, H.S. et al. 1915.
291. Dillman, A.C. Breeding millet and sorgo for drought adaptation.
1916.
297. Salmon, C. Cereal investigations on the Belle Fourche exper-
iment farm. 1915.
306. Sievers, A.F. Some effects of selection on the production of
alkaloids in belladonna. 1915.
307. Zook, L.L. Tests of corn varieties on the Great Plains.
1915.

DEPARTMENT OF AGRICULTURE

BULLETIN (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

- Number.
309. Brand, C. J. & Merrill, J. L. Zacaton as a paper-making material. 1915.
317. Weir, J. R. Larch mistletoe: some economic considerations of its injurious effects. 1916.
318. Piper, C. V. & Morse, W. J. The bonavist, lablab, or hyacinth bean. 1915.
320. Cates, H. R. Farm practice in the cultivation of corn. 1916.
322. Merrill, J. L. Utilization of American flax straw in the paper and fiber-board industry. 1916.
323. Wise, F. B. Importance and character of the milled rice imported into the United States. 1915.
324. McLachlan, A. Community production of Durango cotton in the Imperial Valley. 1915.
328. Miller, R. C. Milling and baking tests of wheat containing admixtures of rye, corn cockle, kinghead, and vetch. 1915.
330. Wise, F. B. & Broomell, A. W. The milling of rice and its mechanical and chemical effect upon the grain. 1916. (In cooperation with Bur. Chem.)
331. Ramsey, H. J. The handling and shipping of fresh cherries and prunes from the Willamette Valley. 1916.
332. Scobfield, C. S. et al. Community production of Egyptian cotton in the United States. 1916.
334. Coville, F. V. Directions for blueberry culture, 1916. 1915.
336. Stanton, T. R. Cereal experiments in Maryland and Virginia. 1916.
349. Husmann, G. C. The raisin industry. 1916.
350. Rabak, F. The utilization of cherry by-products. 1916.
353. Vinall, H. N. & McKee, R. Moisture content and shrinkage of forage and the relation of these factors to the accuracy of experimental data. 1916.
357. Ball, C. R. & Leighty, C. E. Alaska and stoner, or "Miracle", wheats: two varieties much misrepresented. 1916.
360. Weir, J. R. Mistletoe injury to conifers in the Northwest. 1916.
365. Marsh, C. D. et al. Larkspur poisoning of live stock. 1916. (In cooperation with Bur. animal indus.)
367. Wootton, E. O. Carrying capacity of grazing ranges in southern Arizona. 1916.
368. Brooks, C. & Fisher, D. F. Brown-rot of prunes and cherries in the Pacific Northwest. 1916.
372. Hood, S. C. Commercial production of thymol from horsemint (*Monarda punctata*). 1916.
374. Boerner, E. G. The intrinsic values of grain, cottonseed, flour, and similar products, based on the dry-matter content. 1916.
380. Shear, C. L. et al. *Endothia parasitica* and related species. 1917.
383. Vinall, H. N. & Edwards, R. W. New sorghum varieties for the central and southern Great Plains. 1916.
395. Keitt, G. W. Peach scab and its control. 1917.

DEPARTMENT OF AGRICULTURE

BULLETIN (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

- Number,
397. Carrier, L. The grazing industry of the bluegrass region. 1916.
398. Donaldson, N.C. Cereal experiments at the Judith Basin substation, Moccasin, Montana. 1916. (In cooperation with Mont. agr. exp. sta.)
399. Hood, H.C. & Russell, G.A. The production of sweet-orange oil and a new machine for peeling citrus fruits. 1916.
400. Ball, C.R. & Clark, J.A. Experiments with marquis wheat. 1916.
402. McMurdo, G.A. Cereal experiments at the Akron field station Akron, Colo. 1916.
404. Dewey, L.H. & Merrill, J.L. Hemp hurds as paper-making material. 1916.
405. Marsh, C.D. et al. Lupines as poisonous plants. 1916. (In cooperation with Bur. animal indus.)
406. Hillman, F.H. Distinguishing characters of the seeds of Sudan grass and Johnson grass. 1916.
428. Oakley, R.A. & Garver, S. Medicago falcata, a yellow-flowered alfalfa. 1917.
430. Jones, J.W. Cereal experiments on the Cheyenne experiment farm, Archer, Wyo. 1916.
439. Piper, C.V. & Morse, W.J. The soy bean, with special reference to its utilization for oil, cake, and other products. 1916.
441. Skinner, J.J. & Reid, F.R. The action of manganese under acid and neutral soil conditions. 1916.
442. Hood, S.C. Possibility of commercial production of lemon-grass oil in the United States. 1917.
444. Shear, C.L. False blossom of the cultivated cranberry. 1916.
445. Dorsett, P.H. et al. The navel orange of Bahia; with notes on some little-known Brazilian fruits. 1917.
447. Mathews, O.R. Water penetration in the gumbo soils of the Belle Fourche reclamation project. 1916.
450. Clark, J.A. Improvement of Ghirka Spring wheat in yield and quality. 1916.
453. Hartley, C. & Pierce, R.G. The control of damping-off of coniferous seedlings. 1917.
454. Rabak, F. The effect of cultural and climatic conditions on the yield and quality of peppermint oil. 1916.
455. Cox, J.H. The drying for milling purposes of damp and garlicky wheat. 1916.
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Number.

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DEPARTMENT OF AGRICULTUREBULLETIN (cont.)CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Number.

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617. McKee, R. Australian saltbush. 1919.
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623. Shamel, A.D. et al Citrus-fruit improvements; a study of bud variation in the Washington navel orange. 1918.
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629. Parker, J.H. Greenhouse experiments on the rust resistance of oat varieties. 1918.
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DEPARTMENT OF AGRICULTURE

BULLETIN (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Number.

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et al Citrus-fruit improvement: a study of bud variation in the Marsh grapefruit. 1918.
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Rothgeb, B.E. Grain-sorghum experiments in the Panhandle of Texas. 1918.
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et al Spoilage of cranberries after harvest. 1918.
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Hubert, E.E. A study of heart-rot in western hemlock. 1918.
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et al Farm practice in growing sugar beets for three districts in Colorado, 1914-15. 1918. (In cooperation with Off. farm manag.)
727. Gardner, M.W. Anthracnose of cucurbits. 1918.
728. Wooton, E.O. Certain desert plants as emergency stock feed. 1918.
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734. Coleman, D.A. &
Regan, S.A. Nematode galls as a factor in the marketing and milling of wheat. 1918. (In cooperation with Bur. markets.)
735. Nuckols, S.B. &
Carrier, E.L. Farm practice in growing sugar beets in the Billings region of Montana. 1918.
742. Scofield, C.S.
et al Production of American Egyptian cotton. 1919.
743. Popenoe, W. The avocado in Guatemala. 1919.
748. Washburn, R.S.
et al Farm practice in growing sugar beets in Michigan and Ohio. 1919. (In cooperation with Off. farm manag.)
752. Farrell, F.D. The utilization of irrigated field crops for hog pasturing. 1919.
754. Kempton, J.H. Inheritance of waxy endosperm in maize. 1919.
756. McMurran, S.M. Pecan rosette in relation to soil deficiencies. 1919.
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et al Farm practice in growing sugar beets in three California districts. 1919. (In cooperation with Off. farm manag.)
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Milton, R.H. Strains of White Burley tobacco resistant to root-rot. 1919.
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Fulton, H.R. The field testing of copper-spray coatings. 1919.
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Juenemann, H.E. Commercial Dutch-bulb culture in the United States. 1919.
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Hubert, E.E. A study of the rots of western white pine. 1919.
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et al The whorled milkweed (*Asclepias galioides*) as a poisonous plant. 1920. (In cooperation with Bur. animal indus.)

DEPARTMENT OF AGRICULTURE

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CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

- Number.
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821. Shamel, A.D. et al. Frost protection in lemon orchards. 1920.
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823. Warburton, C.W. & Stanton, T.R. Experiments with Kherson and Sixty-Day oats. 1920.
828. Rand, F.V. & Enlows, M.A. Bacterial wilt of cucurbits. 1920.
829. Brandes, E.W. The mosaic disease of sugar cane and other grasses. 1919.
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844. Coe, H.S. & Martin, J.N. Sweet-clover seed. 1920.
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DEPARTMENT OF AGRICULTURE

BULLETIN (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Number.

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DEPARTMENT OF AGRICULTUREJOURNAL OF AGRICULTURAL RESEARCHCONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

V. 1-20. 1913 - 1920. In progress.

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Volume 1.

Number.

- G-1. Swingle, W.T. *Citrus ichangensis*, a promising, hardy, new species from southwestern China and Assam. p.1-14. 1913.
- G-2. Long, W.H. Three undescribed heart-rots of hardwood trees, especially of oak. p.109-128. 1913.
- G-3. Sievers, A.F. Individual variation in the alkaloidal content of belladonna plants. p.129-146. 1913.
- G-4. Mason, S.C. The pubescent-fruited species of *Prunus* of the southwestern states. p.147-178. 1913.
- G-5. Brown, N.A. & Jamieson, C.O. A bacterium causing a disease of sugar-beet and nasturtium leaves. p.189-210. 1913.
- G-6. Long, W.H. *Polyporus dryadeus*, a root parasite on the oak. p.239-250. 1913.
- G-7. Harter, L.L. The foot-rot of the sweet potato. p.251-274. 1913.
- G-8. Collins, G.W. A drought-resisting adaptation in seedlings of Hopi maize. p.293-302. 1914.
- G-9. Rand, F.V. Some diseases of pecans. p.303-338. 1914.
- G-10. Ingram, D.E. A twig blight of *Quercus prinus* and related species. p.339-345. 1914.
- G-11. Long, W.H. An undescribed species of *Gymnosporangium* from Japan. p.355-356. 1914.
- G-12. Kearney, T.H. et al. Indicator significance of vegetation in Tocohe Valley, Utah. p.365-417. 1914.
- G-13. Swingle, W.T. & Kellerman, L. Citropsis, a new tropical African genus allied to citrus. p.419-436. 1914.
- G-14. Ballard, W.S. & Volck, W.H. Winter spraying with solutions of nitrate of soda. p.437-444. 1914. (In cooperation with Office of Santa Cruz (Cal.) Co. Hort.Comr.)
- G-15. Johnson, E.C. A study of some imperfect fungi isolated from wheat, oat, and barley plants. p.475-490. 1914.

DEPARTMENT OF AGRICULTUREJOURNAL OF AGRICULTURAL RESEARCH (cont.)CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 2.

- Number.
- G-16. Mann, A. Coloration of the seed coat of cowpeas. p.33-56.
1914.
- G-17. Roberts, J.W. Experiments with apple leaf-spot fungi. p.57-66.
1914.
- G-18. Heald, F.D. & Longevity of pycnospores of the chestnut-blight
Gardner, M.W. fungus in soil. p.67-75. 1914.
- G-19. Swingle, W.T. Eremocitrus, a new genus of hardy, drought-resist-
ant citrous fruits from Australia. p.88-100.
1914.
- G-20. Kellerman, K.F. & Relation of bacterial transformations of soil ni-
Wright, R.C. trogen to nutrition of citrous plants. p.101-
113. 1914.
- G-21. Rabak, F. Aroma of hops: a study of the volatile oil with
relation to the geographical sources of the
hops. p.115-159. 1914.
- G-22. Weir, J.R. Two new wood-destroying fungi. p.163-165. 1914.
- G-23. Cobb, N.A. Citrus-root nematode. p.217-230. 1914.
- G-24. Hedgcock, G.G. & Identity of *Peridermium fusiforme* with *Perider-*
Long, W.H. *mium cerebrum*. p.247-250. 1914
- G-25. Wollenweber, H.W. Identification of species of *Fusarium* occurring
on the sweet potato, *Ipomoea batatas*. p.251-
283. 1914.
- G-26. Kearney, T.H. Mutation in Egyptian cotton. p.287-302. 1914.
- G-27. Long, W.H. Influence of the host on the morphological char-
acters of *Puccinia ellisiana* and *Puccinia*
andropogonis. p.303-312. 1914.
- G-28. Harter, L.L. Fruit-rot, leaf-spot, and stem-blight of the
eggplant caused by *Thomopsis vexans*. p.331-
338. 1914.
- G-29. Potter, A.A. Head smut of sorghum and maize. p.339-372. 1914.
- G-30. Bunzel, H.H. Oxidases in healthy and in curly-dwarf potatoes.
p.373-404. 1914.
- G-31. Heald, F.D. & Birds as carriers of the chestnut-blight fungus.
Studhalter, R.A. p.405-422. 1914.

Volume 3.

- G-32. Briggs, L.J. & Relative water requirements of plants. p.1-64.
Shantz, H.L. 1914.
- G-33. Charles, V.K. & A fungous disease of hemp. p.81-84. 1914.
Jenkins, A.E.
- G-34. Hedgcock, G.G. & Heart-rot of oaks and poplars caused by *Poly-*
Long, W.H. *porus dryophilus*. p.65-78. 1914.
- G-35. Collins, G.N. A more accurate method of comparing first-gener-
ation maize hybrids with their parents.
p.85-91. 1914.

DEPARTMENT OF AGRICULTURE

JOURNAL OF AGRICULTURAL RESEARCH (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 3 (cont.)

Number.

- G-36. Orton, W.A. & Rand, F.V. Pecan rosette. p.149-174. 1914.
- G-37. Garner, W.W. et al Oil content of seeds as affected by the nutrition of the plant. p.227-249. 1914.
- G-38. Allard, H.A. Effect of dilution upon the infectivity of the virus of the mosaic disease of tobacco. p.295-299. 1915.
- G-39. Hasselbring, H. & Hawkins, L.A. Physiological changes in sweet potatoes during storage. p.331-343. 1915.
- G-40. Cook, O.F. Brachysm, a heredity deformity of cotton and other plants. p.387-400. 1915.
- G-41. Heald, F.D. et al Air and wind dissemination of ascospores of the chestnut-blight fungus. p.493-526. 1915.

Volume 4.

- G-42. Jamieson, C.O. *Phoma destructiva*, the cause of a fruit rot of the tomato. p.1-20. 1915.
- G-43. Roberts, J.W. Sources of the early infections of apple bitter-rot. p.59-64. 1915.
- G-44. Weir, J.R. Observations on *Rhizina inflata*. p.93-96. 1915.
- G-45. Hasse, C.H. *Pseudomonas citri*, the cause of citrus canker. [A preliminary report.] p.97-100. 1915.
- G-46. Edson, H.A. Seedling diseases of sugar beets and their relation to root-rot and crown-rot. p.135-168. 1915.
- G-47. Pool, V.W. & McKay, M.B. *Phoma betae* on the leaves of the sugar beet. p.159-178. 1915.
- G-48. Weir, J.R. A new leaf and twig disease of *Picea engelmanni*. [A preliminary report]. p.251-254. 1915.
- G-49. Kunkel, L.O. A contribution to the life history of *Spongospora subterranea*. [A preliminary report.] p.265-278. 1915.
- G-50. Edson, H.A. *Rheosporangium applanidermatus*, a new genus and species of fungus parasitic on sugar beets and radishes. p.279-292. 1915.
- G-51. Weir, J.R. *Wallrothiella arceuthobii*. p.369-378. 1915.
- G-52. Briggs, L.J. & Shantz, H.L. Influence of hybridization and cross-pollination on the water requirement of plants. p.391-402. 1915.
- A-16. Woodward, T.E. et al Prickly-pears as a feed for dairy cows. p.405-450. 1915. (In cooperation with Bur. animal indus.)
- G-53. Bryan, M.K. A nasturtium wilt caused by *Bacterium solanacearum*. p.451-458. 1915.
- G-54. Brown, N.A. A bacterial disease of lettuce. [A preliminary report.] p.475-478. 1915.
- G-55. Cobb, N.A. *Tylenchus similis*, the cause of a root disease of sugar cane and banana. p.561-568. 1915.

DEPARTMENT OF AGRICULTURE

JOURNAL OF AGRICULTURAL RESEARCH (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 5.

- Number.
- G-56. Edson, H.A. Histological relations of sugar-beet seedlings and *Phoma betae*. p.55-58. 1915.
- G-57. Melhus, I.E. Perennial mycelium in species of *Peronosporaceae* related to *Phytophthora infestans*. p.59-70. 1915.
- G-58. _____ Hibernation of *Phytophthora infestans* in the Irish potato. p.71-102. 1915.
- G-59. Briggs, L.J. & Shantz, H.L. An automatic transpiration scale of large capacity for use with freely exposed plants. p.117-132. 1915.
- G-60. Hedgcock, G.G. Parasitism of *Comandra umbellata*. p.133-135. 1915.
- G-61. Rosenbaum, J. & Zinnsmeister, G.L. *Alternaria panax*, the cause of a root-rot of ginseng. p.181-182. 1915.
- G-62. Carpenter, C.W. Some potato tuber-rots caused by species of *Fusarium*. p.183-210. 1915.
- G-63. Allard, H.A. Distribution of the virus of the mosaic disease in capsules, filaments, anthers, and pistils of affected tobacco plants. p.251-256. 1915.
- G-64. Rand, F.V. Dissemination of bacterial wilt of cucurbits. [Preliminary note.] p.257-260. 1915.
- G-65. Hedgcock, G.G. & Long, W.H. Two new hosts for *Peridermium pyriforme*. p.289-290. 1915.
- G-66. Rosenbaum, J. Pathogenicity and identity of *Sclerotinia libertiana* and *Sclerotinia smilacina* on ginseng. p.291-293. 1915.
- G-67. Long, W.H. A honeycomb heart-rot of oaks caused by *Stereum subpileatum*. p.421-428. 1915.
- G-68. Smith, E.F. & Bryan, M.K. Angular leaf-spot of cucumbers. p.465-476. 1915.
- G-69. Hasselbring, H. & Hawkins, L.A. Respiration experiments with sweet potatoes. p.509-517. 1915.
- G-70. _____ Carbohydrate transformations in sweet potatoes. p.543-560. 1915.
- G-71. Briggs, L.J. & Shantz, H.L. Hourly transpiration rate on clear days as determined by cyclic environmental factors. p.583-650. 1916.
- G-72. Weir, J.R. & Hubert, E.E. A serious disease in forest nurseries caused by *Peridermium filamentosum*. p.781-785. 1916.
- G-73. Harter, L.L. Sweet-potato scurf. p.787-792. 1916.
- G-74. Pool, V.W. & McKay, M.B. Relation of stomatal movement to infection by *Cercospora beticola*. p.1011-1038. 1916.

Volume 6.

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- G-76. Meier, F.C. Watermelon stem-end rot. [Preliminary paper.] p.149-152. 1916.
- G-77. Smith, E.F. Crown-gall studies showing changes in plant structures due to a changed stimulus. [Preliminary paper.] p.179-182. 1916.

DEPARTMENT OF AGRICULTURE

JOURNAL OF AGRICULTURAL RESEARCH (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 6 (cont.)

- Number.
- G-78. Hawkins, L.A. Effect of certain species of *Fusarium* on the composition of the potato tuber. p.183-196. 1916.
- G-79. Weir, J.R. *Hypodema deformans*, an undescribed needle fungus of western yellow pine. p.277-288. 1916.
- G-80. Pratt, O.A. A western fieldrot of the Irish potato tuber caused by *Fusarium radiculicola*. p.297-310. 1916.
- G-81. Schultz, E.S. Silver-scurf of the Irish potato caused by *Spondylocadium atrovirens*. p.339-350. 1916.
- G-82. Stevens, N.E. Pathological histology of strawberries affected by species of *Botrytis* and *Rhizopus*. p.361-366. 1916.
- G-83. Rand, F.V. & Enlows, E.M.A. Transmission and control of bacterial wilt of cucurbits. p.417-434. 1916.
- G-84. Collins, G.H. Correlated characters in maize breeding. p.435-453. 1916.
- G-85. Harter, L.L. Storage-rots of economic aroids. p.549-572. 1916.
- G-86. Pratt, O.A. Experiments with clean seed potatoes on new land in southern Idaho. [Preliminary paper]. p.573-576. 1916.
- G-87. Hawkins, L.A. The disease of potatoes known as "leak". p.627-640. 1916.
- G-88. Allard, H.A. Some properties of the virus of the mosaic disease of tobacco. p.649-674. 1916.
- G-89. Löhnis, F. & Smith, N.R. Life cycles of the bacteria. [Preliminary communication]. p.675-702. 1916.
- G-90. Briggs, L.J. et al. Mottle-leaf of citrus trees in relation to soil conditions. p.731-740. 1916.
- G-91. Harrington, G.T. Agricultural value of impermeable seeds. p.761-796. 1916.
- G-92. Pratt, O.A. Control of the powdery dryrot of western potatoes caused by *Fusarium trichothecioides*. p.817-832. 1916.
- G-93. Headley, F.B. et al. Effect on plant growth of sodium salts in the soil. p.857-869. 1916.
- G-94. Walters, E.H. & Vise, L.E. Crotonic acid, a soil constituent. p.1043-1046. 1916.
- Minn.-92. Stakman, E.C. & Piemeisel, F.J. Infection of timothy by *Puccinia graminis*. p.813-816. 1916. (In cooperation with Minn. agr. expt. sta.)

Volume 7.

- G-95. Briggs, L.J. & Shantz, H.L. Daily transpiration during the normal growth period and its correlation with the weather. p.155-212. 1916.
- G-96. Melhus, I.E. et al. *Spongospora subterranea* and *Phoma tuberosa* on the Irish potato. p.213-254. 1916.

DEPARTMENT OF AGRICULTURE

JOURNAL OF AGRICULTURAL RESEARCH (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 7 (cont.)

Number.

- G-97. Hawkins, L.A. Growth of parasitic fungi in concentrated solutions. p.255-260. 1916.
- G-98. Harris, J.A. & Popenoe, W. Freezing-point lowering of the leaf sap of the horticultural types of *Persea americana*. p.261-268. 1916.
- G-99. Ridgway, C.S. Grain of the tobacco leaf. p.269-288. 1916.
- G-100. Breazeale, J.F. Effect of sodium salts in water cultures on the absorption of plant food by wheat seedlings. p.407-416. 1916.
- G-101. Allard, H.A. A specific mosaic disease in *Nicotiana glauca* distinct from the mosaic disease of tobacco. p.481-486. 1916.
- Wis.-6. Johnson, J. Host plants of *Thielavia basicola*. p.289-300. 1916. (In cooperation with Wis. agr. expt. sta.)

Volume 8.

- G-102. Briggs, L.J. & Breazeale, J.F. Availability of potash in certain orthoclase-bearing soils as affected by lime or gypsum. p.21-28. 1917.
- G-103. Brooks, C. & Cooley, J.S. Temperature relations of apple-rot fungi. p.139-164. 1917.
- G-104. Smith, E.F. Mechanism of tumor growth in crown gall. p.165-183. 1917.
- G-105. Rand, F.V. Leafspot-rot of pond lilies caused by *Helicosporium nymphasarum*. p.219-232. 1917.
- G-106. Rosenbaum, J. Studies of the genus *Phytophthora*. p.233-276. 1917.
- G-107. Colley, R.H. Discovery of internal telia produced by a species of *Cronartium*. p.329-332. 1917.

Volume 9.

- G-108. McBeth, I.G. Fixation of ammonia in soils. p.141-155. 1917. (In cooperation with Calif. citrus expt. sta.)
- G-109. Jensen, C.A. Composition of citrus leaves at various stages of mottling. p.157-166. 1917.
- G-110. McBeth, I.G. Relation of the transformation and distribution of soil nitrogen to the nutrition of citrus plants. p.183-252. 1917. (In cooperation with Calif. citrus expt. sta.)
- G-111. Jensen, C.A. Effect of decomposing organic matter on the solubility of certain inorganic constituents of the soil. p.253-276. 1917.

DEPARTMENT OF AGRICULTURE

JOURNAL OF AGRICULTURAL RESEARCH (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 9 (cont.)

- Number.
- G-112. Briggs, L.J. & Shantz, H.L. Comparison of the hourly evaporation rate of atmometers and free water surfaces with the transpiration rate of *Medicago sativa*. p.277-292. 1917.
- G-113. Collins, G.N. Hybrids of *Zea ramosa* and *Zea tunicata*. p.383-395. 1917.
- G-114. Rosenbaum, J. & Shapavalov, M. A new strain of *Rhizoctonia solani* on potato. p.413-419. 1917.

Volume 10.

- G-115. Smith, E. F. A new disease of wheat. p.51-54. 1917.
- G-116. Wise, L.E. & Walters, E.H. Isolation of cyanuric acid from soil. p.85-92. 1917.
- G-117. Weir, J.R. A needle blight of Douglas fir. p.99-104. 1917.
- G-118. Hahn, G.G. et al. A nursery blight of cedars. p.533-540. 1917.
- G-119. Breazeale, J.F. Formation of "black alkali" (sodium carbonate) in calcareous soils. p.541-589. 1917.
- G-120. Allard, H.A. Further studies of the mosaic disease of tobacco. p.615-632. 1917.
- Minn-19. Stakman, E.C. & Peineisel, F.J. Biologic forms of *Puccinia graminis* on cereals and grasses. p.429-495. 1917. (In cooperation with Minn. agr. exp. sta.)
- K-56. McIndoo, N.E. & Sievers, A.F. Quassia extract as a contact insecticide. p.497-531. 1917. (In cooperation with Bur. of Entomology.)

Volume 11.

- G-121. Cobb, N.A. A new parasitic nema found infesting cotton and potatoes. p.27-33. 1917.
- G-122. Shear, C.L. Eriophthorid of cranberries. p.33-42. 1917.
- G-123. White, O.E. Inheritance studies in *Pisum*. IV. Interrelation of the genetic factors of *Pisum*. p.167-180. 1917.
- G-124. Shantz, H.L. & Peineisel, R.L. Fungus fairy rings in eastern Colorado and their effect on vegetation. p.191-245. 1917.
- G-125. Colley, R.H. Diagnosing white-pine blister-rust from its mycelium. p.281-283. 1917.
- G-126. Brooks, C. & Cooley, J.S. Effect of temperature aeration and humidity on Jonathan-spot and scald of apples in storage. p.287-317. 1917.

DEPARTMENT OF AGRICULTURE

JOURNAL OF AGRICULTURAL RESEARCH (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 11 (cont.)

- Number:
- G-127. Stevens, N.E. Temperatures of the cranberry regions of the United States in relation to the growth of certain fungi. p.521-529. 1917.
- G-128. Harter, L.L. Podblight of the lima bean caused by *Diaporthe phaseolorum*. p.473-504. 1917.
- G-129. Collins, G.N. & Breeding sweet-corn resistant to the corn earworm. Kempton, J.H. p.549-572. 1917.
- G-130. Piper, C.V. & Structure of the pod and the seed of the Georgia Shull, J.M. velvet bean, *Stizolobium geeringianum*. p.673-675. 1917.

Volume 12.

- G-131. Hasselbring, H. Behavior of sweet potatoes in the ground. p.9-17. 1918.
- G-132. Long, W.H. & Pure cultures of wood-rotting fungi on artificial media. p.33-82. 1918. Harsch, R.M.
- G-133. Brooks, C. & Irrigation experiments on apple-spot diseases. Fisher, D.F. p.109-138. 1918.
- G-134. Collins, G.N. New-plant effect in maize. p.231-243. 1918.
- G-135. Gravatt, G.F. & Gipsy-moth larvae as agents in the dissemination Posey, G.B. of the white-pine blister-rust. p.459-462. 1918.
- G-136. Jensen, C.A. Humus in mulched basins, relation of humus content to orange production, and effect of mulches on orange production. p.505-518. 1918.
- G-137. Carpenter, C.W. Wilt diseases of okra and the verticillium-wilt problem. p.529-546. 1918.
- G-138. Weir, J.R. Effects of mistletoe on young conifers. p.715-718. 1918.

Volume 13.

- G-139. Pratt, O.A. Soil fungi in relation to diseases of the Irish potato in southern Idaho. p.73-99. 1918.
- G-140. Vinall, H.N. & Effect of temperature and other meteorological Reed, H.R. factors on the growth of sorghums. p.133-143. 1918.
- G-141. Enlows, E.M.A. A leafblight of *Kalmia latifolia*. p.199-212. 1918.
- G-142. Jones, F.R. Yellow-leafblotch of alfalfa caused by the fungus *Pyrenopeziza medicaginis*. p.307-330. 1918. (In cooperation with Wisc. Agr. expt. sta.)
- G-143. Long, W.H. An undescribed canker of poplars and willows caused by *Cytospora chrysosperma*. p.331-345. 1918.

DEPARTMENT OF AGRICULTURE

JOURNAL OF AGRICULTURAL RESEARCH (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 13 (cont.)

- Number.
- G-144. Brown, N.A. Some bacterial diseases of lettuce. p.367-388. 1918.
- G-145. Rosenbaum, J. & Ramsey, G.B. Influence of temperature and precipitation on the blackleg of potato. p.507-513. 1918.
- G-146. Allard, H.A. Effects of various salts, acids, germicides, etc., upon the infectivity of the virus causing the mosaic disease of tobacco. p.619-637. 1918.
- G-147. MacMillan, H.G. Sunscald of beans. p.647-650. 1918.
- Ind-3. Osner, G.A. Stemphylium leafspot of cucumbers. p.295-306. 1918.
- Minn-30. Levine, M.N. & Stakman, E.C. A third biologic form of Puccinia graminis on wheat. p.651-654. 1918. (In cooperation with Minn. agr. exp. sta.)

Volume 14.

- G-148. Harter, L.L. A hitherto-unreported disease of okra. p.207-212. 1918.
- G-149. Edson, H.A. & Shapovalov, M. Potato-stem lesions. p.213-220. 1918.
- G-150. Artschwager, E.F. Anatomy of the potato plant, with special reference to the ontogeny of the vascular system. p.221-252. 1918.
- G-151. Hasselbring, H. Effect of different oxygen pressures on the carbohydrate metabolism of the sweet potato. p.273-284. 1918.
- G-152. Hedgcock, G.G. et al. Piñon blister-rust. p.411-424. 1918.
- G-153. Chilcott, E.C. & Cole, J.S. Subsoiling, deep tilling, and soil dynamiting in the Great Plains. p.481-521. 1918.
- G-154. Harrington, G.T. & Crocker, W. Resistance of seeds to desiccation. p.525-532. 1918.
- G-155. Kunkel, L.O. Tissue invasion by Plasmodiophora brassicae. p.543-572. 1918.
- G-156. Hartley, C. Stem lesions caused by excessive heat. p.595-604. 1918.
- G-157. Hoffer, G.N. et al. Corn-rootrot and wheatscab. [Preliminary paper] p.611-612. 1918.
- Minn.-31. Stakman, E.C. et al. Can biologic forms of stemrust on wheat change rapidly enough to interfere with breeding for rust resistance? p.111-123. 1918. (In cooperation with Minn. agr. exp. sta.)
- Ala.-4. Peltier, G.L. Susceptibility and resistance to citrus-canker of the wild relatives, citrus fruits, and hybrids of the genus citrus. p.337-358. 1918. (In cooperation with Ala. agr. exp. sta.)

DEPARTMENT OF AGRICULTURE

JOURNAL OF AGRICULTURAL RESEARCH (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 14 (cont.)

- Number.
- K-70. Stahl, G.F. & Carsner, E. Obtaining beet leafhoppers nonvirulent as to curly-top. [Preliminary paper] p.393-394. 1918. (In cooperation with Bur. entomology.)
- Ala.-5. Peltier, G.L. & Neal, D.C. Overwintering of the citrus-canker organism in the bark tissue of hardy citrus hybrids. p.523-524. 1918. (In cooperation with Ala. agr. expt. sta.)

Volume 15.

- G-158. Harvey, R.B. Hardening process in plants and developments from frost injury. p.83-104. 1918.
- G-159. Crocker, W. & Harrington, G.T. Catalase and oxidase content of seeds in relation to their dormancy, age, vitality, and respiration. p.137-174. 1918.
- G-160. Carsner, E. Angular-leafspot of cucumber: dissemination, overwintering, and control. p.201-220. 1918. (In cooperation with Wisc. agr. expt. sta.)
- G-161. Harter, L.L. et al. Sweet-potato storage-rots. p.337-368. 1918.
- G-162. True, R.H. et al. Physiological studies of normal and blighted spinach. p.369-408. 1918.
- G-163. See volume 16. following G-171.
- G-172. True, R.H. & Geise, F.W. Experiments on the value of greensand as a source of potassium for plant culture. p.483-492. 1918.
- G-164. Scofield, C.S. Effect of farm manure in stimulating the yields of irrigated field crops. p.493-503. 1918.
- G-165. Jensen, C.A. Relation of inorganic soil colloids to plowsole in citrus groves in southern California. p.505-519. 1918.
- G-166. Hartley, C. et al. Seedling diseases of conifers. p.521-558. 1918.
- G-167. Artschwager, E.F. Histological studies on potato leafroll. p.559-570. 1918. (In cooperation with the Cornell agr. expt. sta.)
- G-168. Jenkins, A.E. Brown canker of roses, caused by *Diaporthe umbrina*. p.593-599. 1918.
- G-169. Colley, R.H. Parasitism, morphology, and cytology of *Cronartium ribicola*. p.619-660. 1918.
- G-170. Lee, H.A. Further data on the susceptibility of rutaceous plants to citrus-canker. p.661-665. 1918.
- Minn-33. Stakman, E.C. et al. Plasticity of biologic forms of *Puccinia graminis*. p.221-249. 1918. (In cooperation with Minn. agr. exp. sta.)

DEPARTMENT OF AGRICULTURE

JOURNAL OF AGRICULTURAL RESEARCH (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 16.

Number.

- G-171. True, R.H. Ash absorption by spinach from concentrated soil solutions. p.15-25. 1919.
et al
- G-172. See volume 15 following G-162.
- G-163. Tisdale, W.H. Physoderma disease of corn. p.137-154. 1919.
- G-173. Brooks, C. Apple-scald. p.195-217. 1919.
et al
- G-174. MacMillan, H.G. Fusarium-blight of potatoes under irrigation. p.279-303. 1919.
- Minn-35. Stakman, E.C. & Lavine, M.N. Effect of certain ecological factors on the morphology of the urediniospores of *Puccinia graminis*. p.43-77. 1919. (In cooperation with Minn. agr. exp. sta.)
- Minn-36. Stakman, E.C. et al New biologic forms of *Puccinia graminis*. [Preliminary paper] p.103-105. 1919. (In cooperation with Minn. agr. exp. sta.)

Volume 17.

- G-175. Collins, G.M. Structure of the maize ear as indicated in *Zea-Euchlaena* Hybrids. p.127-135. 1919.
- G-176. Russell, G.A. Effect of removing the pulp from camphor seed on germination and the subsequent growth of the seedlings. p.223-237. 1919.
- G-177. Schultz, E.S. et al Investigations on the mosaic disease of the Irish potato. [Preliminary paper] p.247-273. 1919. (In cooperation with Maine agr. exp. sta.)
- G-178. Stevens, N.E. & Higgins, C.H. Temperature in relation to quality of sweet-corn. p.275-284. 1919.
- Wis-15. Johnson, J. & Hartman, R.E. Influence of soil environment on the rootrot of tobacco. p.41-86. 1919. (In cooperation with Wis. agr. exp. sta.)
- K-76. McInoo, N.E. et al Derris as an insecticide. p.177-200. 1919. (In cooperation with Bur. of Entomology)

Volume 18.

- G-179. Brooks, C. et al Nature and control of apple-scald. p.211-240. 1919.
- G-180. Breazeale, J.F. Response of citrus seedlings in water cultures to salts and organic extracts. p.267-274. 1919.
- G-181. Hawkins, L.A. & Harvey, R.B. Physiological study of the parasitism of *Pythium debaryanum* Hesse on the potato tuber. p.275-297. 1919.
- G-182. Scofield, C.S. Cotton rootrot spots. p.305-310. 1919.

DEPARTMENT OF AGRICULTURE

JOURNAL OF AGRICULTURAL RESEARCH (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 18 (cont.)

- Number.
- G-183. Edson, H.A. & Shapovalov, M. Temperature relations of certain potato-rot and wilt-producing fungi. p.511-524. 1920.
- G-184. Anthony, S. & Harlan, H.V. Germination of barley pollen. p.525-536. 1920.
- G-185. McCulloch, L. Basal glumerot of wheat. p.543-551. 1920.
- G-186. Garner, W.W. & Allari, H.A. Effect of the relative length of day and night and other factors of the environment on growth and reproduction in plants. p.553-606. 1920.
- E-12. LeClerc, J.A. & Breazeale, J.F. Effect of lime upon the sodium-chlorid tolerance of wheat seedlings. p.347-356. 1920. (In cooperation with Bur. chemistry)
- Wis-17. Atanasoff, D. & Johnson, A.G. Treatment of cereal seeds by dry heat. p.379-390. 1920. (In cooperation with Wis. agr. exp. sta.)

Volume 19.

- G-187. Collins, G.N. & Kempton, J.H. A teosinte-maize hybrid. p.1-37. 1920.
- G-188. Sarvis, J.T. Composition and density of the native vegetation in the vicinity of the Northern Great Plains field station. p.63-72. 1920.
- G-189. Weston, W.H. Jr. Philippine downy mildew of maize. p.97-122. 1920.
- G-190. Brandes, E.W. Artificial and insect transmission of sugar-cane mosaic. p.131-138. 1920.
- G-191. Elliott, C. Halo-blight of oats. p.139-172. 1920.
- G-192. Lee, H.A. Behavior of the citrus-canker organism in the soil. p.189-205. 1920.
- G-193. Fulton, H.R. Decline of *Pseudomonas citri* in the soil. p.207-223. 1920.
- G-194. Dickson, J.G. & Johann, H. Production of conidia in *Gibberella saubinetii*. p.235-237. 1920. (In cooperation with Wisc. agr. exp. sta.)
- G-195. Hungerford, C.W. Rust in seed wheat and its relation to seedling infection. p.257-277. 1920.
- G-196. Harris, J.A. Practical universality of field heterogeneity as a factor influencing plot yields. p.279-314. 1920.
- G-197. Schultz, E.S. & Folsom, D. Transmission of the mosaic disease of Irish potatoes. p.315-338. 1920. (In cooperation with Maine agr. exp. sta.)
- G-198. Braun, H. Presoak method of seed treatment: a means of preventing seed injury due to chemical disinfectants and of increasing germicidal efficiency. p.353-392. 1920.

DEPARTMENT OF AGRICULTURE

JOURNAL OF AGRICULTURAL RESEARCH (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 19 (cont.)

- Number.
- G-199. Harlan, H.V. Daily development of kernels of Hannchen barley from flowering to maturity at Aberdeen, Idaho. p.393-429. 1920. (In cooperation with Idaho agr. exp. sta.)
- G-200. _____ & Anthony, S. Development of barley kernels in normal and clipped spikes and the limitations of awnless and hooded varieties. p.431-472. 1920. (In cooperation with Idaho agr. exp. sta.)
- G-201. Magness, J.R. Investigations in the ripening and storage of Bartlett pears. p.473-512. 1920.
- G-202. Kunkel, L.O. Further data on the orange-rusts of Rubus. p.501-512. 1920.
- G-203. Brandes, E.W. Mosaic disease of corn. p.517-521. 1920.
- G-204. Harlan, H.V. & Hayes, H.K. Occurrence of the fixed intermediate, *Hordeum intermedium haxtoni*, in crosses between *H. vulgare pallidum* and *H. distichon palmella*. p.575-591. 1920. (In cooperation with Minn. agr. exp. sta.)
- Ala.-6. Peltier, G.L. & Frederich, W.J. Relative susceptibility to citrus-canker of different species and hybrids of the genus citrus, including the wild relatives. p.339-362. 1920. (In cooperation with Ala. agr. exp. sta.)
- Minn-41. Hayes, H.K. et al. Genetics of rust resistance in crosses of varieties of *Triticum vulgare* with varieties of *T. durum* and *T. dicoccum*. p.523-542. 1920. (In cooperation with Minn. agr. exp. sta.)

Volume 20.

- G-205. Coville, F.V. The influence of cold in stimulating the growth of plants. p.151-150. 1920.
- G-206. Hurd, A.M. Injury to seed wheat resulting from drying after disinfection with formaldehyde. p.209-244. 1920.
- G-207. Hahan, G.G. et al. Hypertrophied lenticels on the roots of conifers and their relation to moisture and aeration. p.253-265. 1920.
- G-208. Edson, H.A. Vascular discoloration of Irish potato tubers. p.277-294. 1920.
- G-209. Jones, F.R. & Drechsler, C. Crownwart of alfalfa caused by *Urophlyctis alfalfae*. p.295-323. 1920.
- G-210. Artschwager, E.F. Pathological anatomy of potato blackleg. p.325-330. 1920.

DEPARTMENT OF AGRICULTURE

JOURNAL OF AGRICULTURAL RESEARCH (cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Volume 20 (cont.)

- Number.
- G-211. Jagger, I.C. Sclerotinia minor, n.sp., the cause of a decay of lettuce, celery, and other crops. p.331-333. 1920.
- G-212. Harris, J.A. & Scofield, C.S. Permanence of differences in the plots of an experimental field. p.335-356. 1920.
- G-213. Hawkins, L.A. & Magness, J.R. Some changes in Florida grapefruit in storage. p.357-373. 1930.
- Wis-18. Atanasoff, D. Fusarium-blight (scab) of wheat and other cereals. p.1-32. 1920. (In cooperation with Wisc. agr. exp. sta.)
- Ala.-7. Peltier, G.L. Influence of temperature and humidity on the growth of Pseudomonas citri and its host plants and on infection and development of the disease. p.447-506. 1920. (In cooperation with Ala. agr. exp. sta.)

DEPARTMENT OF AGRICULTURE

DEPARTMENT CIRCULAR

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Numbers 1-151, 1919-1920. In progress.

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Number.

- | | | | |
|------|------------------------|---|-------|
| 9. | Vinall, H.N. | Meadow fescue. | 1919. |
| 32. | | Potato wart - a dangerous new disease. | 1919. |
| 42. | Carrier, L. | Perennial rye-grass (<i>Lolium perenne</i>). | 1919. |
| 43. | _____ | Redtop (<i>Agrostis alba</i>). | 1919. |
| 44. | _____ | Italian rye-grass (<i>Lolium multiflorum</i>). | 1919. |
| 45. | Tracy, S.M. | Para grass (<i>Panicum barbinode</i>). | 1919. |
| 49. | | Making and maintaining a lawn. | 1919. |
| 50. | | Sudan grass. | 1919. |
| 58. | Pfaender, M. | Fruit growing on the Northern Great Plains. | 1919. |
| 60. | Aune, B. | The work of the Belle Fourche Reclamation Project Experiment Farm in 1918. | 1919. |
| 62. | Mulford, F.L. | Horticultural exhibitions and garden competitions. | 1919. |
| 65. | Oakley, R.A. | Distribution of tulip and narcissus bulbs in 1919. | 1919. |
| 73. | Letteer, C.R. | The work of the San Antonio Experiment Farm in 1918. | 1920. |
| 75. | Blair, R.E. | The work of the Yuma Reclamation Project Experiment Farm in 1918. | 1920. |
| 76. | Blake, S.F. | Directions for collecting flowering plants and ferns. | 1920. |
| 78. | Russell, G.A. | A machine for trimming camphor trees. | 1920. |
| 80. | Headley, F.B. | The work in 1918 of the Newlands (formerly the Truckee-Carson) Reclamation Project Experiment Farm. | 1920. |
| 84. | Schreiner, O.
et al | Crop injury by borax in fertilizers. | 1920. |
| 86. | Hansen, D. | The work of the Huntley Reclamation Project Experiment Farm in 1918. | 1920. |
| 89. | Piper, C.V. | Kudzu. | 1920. |
| 90. | Meier, F.C. | Control of watermelon anthracnose by spraying. | 1920. |
| 92. | Piper, C.V. | The jack bean. | 1920. |
| 93. | Westover, H.L. | The development of the Peruvian alfalfa industry in the United States. | 1920. |
| 108. | Hansen, A.A. | Chicory: control and eradication. | 1920. |
| 109. | _____ | Cocklebur. | 1920. |
| 110. | Dean, H.K. | The work of the Umatilla Reclamation Project Experiment Farm in 1918 and 1919. | 1920. |
| 111. | Lyman, G.R.
et al | Potato wart. | 1920. |

DEPARTMENT OF AGRICULTURE

DEPARTMENT CIRCULAR(cont.)

CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

Number.

113. Alfalfa. Instructions adapted to Michigan, Wisconsin, and Minnesota. 1920.
115. Alfalfa. Instructions adapted to southern New Jersey, Delaware, southern Maryland, Virginia, Arkansas, Tennessee, and the South Atlantic and Gulf states. 1920.
116. Alfalfa. Instructions adapted to Ohio, Indiana, Illinois, Iowa, Missouri, and Kentucky. 1920.
117. Peruvian alfalfa. 1920.
118. Field pea. 1920.
119. Cowpeas. 1920.
120. Soy bean. 1920.
121. Velvet beans. 1920.
122. Dry-land alfalfa. 1920.
123. Grimm alfalfa. 1920.
124. Spur feterita. 1920.
125. Young, R.A. Forcing and blanching dasheen shoots. 1920.
126. Alfalfa. Instructions adapted to the New England states and New York. 1920.
127. Alfalfa. Instructions adapted to Pennsylvania, West Virginia, northwestern Maryland, and northern New Jersey. 1920.
128. Thompson, H.C. The manufacture and use of peanut butter. 1920.
130. Hansen, A.A. The hawkweeds, or paintbrushes. 1920.
136. Headley, F.B. The work of the Newlands Reclamation Project Experiment Farm in 1919. 1920.
151. Distribution of cotton seed in 1921. 1920.

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