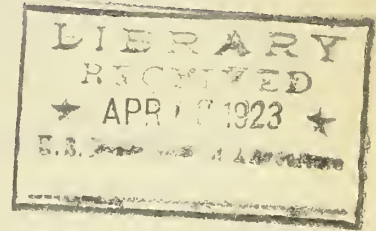


UNITED STATES DEPARTMENT OF AGRICULTURE
LIBRARY

Number 3

Bibliographical Contributions

January 1921.



CHECK LIST OF PUBLICATIONS

Issued by the

BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

1901 - 1920

and by the

DIVISIONS AND OFFICES WHICH COMBINED TO FORM THIS BUREAU

1862 - 1901

Washington, D. C.

UNITED STATES DEPARTMENT OF AGRICULTURE.
LIBRARY
WASHINGTON, D. C.

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

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 1919 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.

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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 enzym 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. 155-166.
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 best 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[aunder], W.? American wines and wine grapes. p.327-329.
(Contrib. from Supt. gard. & grounds?)
1867. _____ Mildew 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 AGRICULTUREMONTHLY 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, 505-506, 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. _____ Microscopic observations. p.42-44, 315-319, 445-448. (Contrib. from Microscopist)
- 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. 1-1378. 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 1-138 were contributed by the various divisions as indicated; numbers 139 - 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 fungus 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 AGRICULTURE

FARMERS' 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, N.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 grain smuts: how they are caused and how to prevent them. 1898. (Contrib. from Div. of veg. phys. & path.)
86. Chestnut, V.K. Thirty poisonous plants of the United States. 1893. (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. Saltmarshes. 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. Eimer: a grain for the semiarid regions. 1901.
140. Rolfs, P.H. Pineapple growing. 1901.
147. Ball, C.R. Winter forage crops for the South. 1902.

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DEPARTMENT OF AGRICULTURE

FARMERS' 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. & Robinson, T.R. Beneficial bacteria for leguminous crops. 1905.
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. Fungus 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. & Robinson, T.R. Inoculation of legumes. 1905.
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. & Orton, W.A. The control of the codling moth and apple scab. 1906. (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. 1903.
253. Duvel, J.W.T. The germination of seed corn. 1906.
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. Bredie, 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. Roselle: 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. Kellerman, 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. & Froy, 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 northwest 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 AGRICULTURE

FARMERS' 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.
424. 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. Froy, 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. McNair, 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. & Hillman, F.H. Red clover. 1911.
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. & Vinall, 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.

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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, catchup, 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.

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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.
561. Fluharty, L.W. Bean growing in eastern Washington and Oregon, and northern Idaho. 1913.
566. 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.

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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. & The control of root-knot. 1915.
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660. Cox, H. R. Weeds: how to control them. 1915. (Rev. 1918.)
661. Thomson, E.H. & A method of analyzing the farm business. 1915.
Dixon, H.M.
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.
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678. Ball, C.R. & Growing hard spring wheat. 1915.
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680. _____ Varieties of hard spring wheat. 1915.
685. Fletcher, W.F. The native persimmon. 1915.
686. Ball, C.R. & Uses of sorghum grain. 1915.
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687. Cox, H. R. Eradication of ferns from pasture lands in the eastern United States. 1915.
688. Chambliss, C.E. & The culture of rice in California. 1915.
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690. Vinall, H.N. The field pea as a forage crop. 1915. (Rev. 1917.)
693. Piper, C.V. & Bur clover. 1915.
McKee, R.
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.

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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.
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736. Whetzel, H.H. Ginseng diseases and their control. 1916.
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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.)

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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, E.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., et 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.

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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-roll 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.
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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 vetch. 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.
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973. Morse, W.J. The soy bean: its culture and uses. 1918.
984. Caldwell, J.S. Farm and home drying of fruits and vegetables. 1918.
990. Evans, M.W. Timothy. 1913.
994. Wallace, E. & Commercial Bordeaux mixtures: how to calculate
Evans, L.H. their value. 1918.
995. McMurrin, 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.
Darrow, G.M. Feb. 1919. (Rev. Nov. 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.
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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.

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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.F. 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.

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| 1153. Morse, W.J. | Cowpeas: utilization. 1920. |
| 1158. Vinall, H.H. &
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| 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. &
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1920. |
| 117C. Piper, C.V. &
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| 1175. Hartley, C.P. | Better seed corn. 1920. |
| 1176. Holbert, J.R. &
Hoffer, G.N. | Control of the root, stalk, and ear rot diseases
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| 1178. Collins, J.F. | Tree surgery. 1920. |

DEPARTMENT OF AGRICULTURE

YEARBOOK

1894 - 1913. In progress.

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

The act of public printing and binding approved January 12, 1895, 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.

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| 6. Galloway, B.T.
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| 8. Webber, H.J. | Fertilization of the soil as affecting the orange in health and diseases. p.193-202. (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 sand and soil binders. p.421-436, 580. (Contrib. from Div. of agric.) |
| 22. Dodge, C.R. | Facts concerning reeve. p.443-460. (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.581-586. (Contrib. from Div. of Bot.?) |

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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.215-222. (Contrib. from Special Agent in charge of Fiber inves.)
41. Chiville, 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.152-174. (Contrib. from Div. of veg. phys. & path.)
- 55.pt.3._____ The pineapple industry in the United States. p.287-292. (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.)
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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.547-560.
- 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.359-354.
- 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.463-484.
1892. In Annual report, Secretary of agriculture, 1892, p.377-402.
1893. In Annual report, Secretary of agriculture, 1893, p.365-387.
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 AGRICULTURE

DIVISION 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, 1896, 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. 103-113.
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. 63-83.
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. 153-164.
1896. In Annual report, Secretary of agriculture, 1896, p. 95-102.

DEPARTMENT OF AGRICULTUREDIVISION OF BOTANYANNUAL REPORTS (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 1837 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]. 1883.
& 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 AGRICULTURE

DIVISION OF BOTANY

BULLETIN (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].
1902.
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. Galbraith, 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. Chayote, 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 tree. 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. Didders 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. Lebeck 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. _____ Camellia tinsele. 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.M. 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. 1892.
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*, *Arhalonium*, 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 Conneliaceae. 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.295-408. 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.i. [1898?]
No. 2. Foreign seeds and plants imported by the Section of seed and plant introduction, numbers 1001-1900. [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.161-178.
- 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.617-626.
- 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.405-416.
- 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.297-303.
- 1894. In Annual report, Secretary of agriculture, 1894, p.195-196.

1889-1893 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.277-296.
- 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 goma 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.36-37.)

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.49-52.

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

DEPARTMENT OF AGRICULTURE

DIVISION OF VEGETABLE PHYSIOLOGY AND PATHOLOGY

BULLETIN

No. 1-29. 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. 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. Stigmone: 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* Nees; 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 violae* 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*, *Pa. 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. 1873.
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. Lamson-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. 1898.)

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.1-25. 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 *Bromis* 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. 1896.
4. Williams, T.A. Renewing of worn-out native prairie pastures. 1896.
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 Idsho 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

ARTICULAR (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 Znaim 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. & Orton, W.A. A cowpea resistant to root knot (*Heterodera radicum*).
18. Woods, A.F. Observations on the mosaic disease of tobacco. 1902.
19. Pieters, A.J. & Brown, 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.E. 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 bamboos 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. Loew, 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.B. 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 citrus 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, 1900-1903. (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. & Kelleman, 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.

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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 pinkroot.
- VI. Oakley, R.A. Orchard grass.
- VII. Kelleman, K.F. & Beckwith, T.D. The effect of copper upon water bacteria.
- VIII. Kelleman, 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, W.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. 1905-1906. (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.

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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.
 Crawford, A.C. Laboratory work on loco-weed investigations.
 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. 1908.
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. 1908.
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.

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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.
Waldron, 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. 1906-1907. (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.R. 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.

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142. Seeds and plants imported. Apr.-June, 1908. (Inventory no.15)
1909.
143. Garner, W.W. Principles and practical methods of curing to-
bacco. 1909.
144. Scott, W.M. & Apple blotch, a serious disease of southern or-
Rorer, J.B. chards. 1909.
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, H. 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, taros, and dasheens.
II. Cook, O.F. Agricultural history and utility of the cul-
tivated aroids.

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Number.

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., 1909. (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. Aaronsohn, 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.

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- Number.
191. Collins, G.N. The value of first-generation hybrids in corn. 1910.
192. Mason, S.C. Drought resistance of the olive in the southwestern 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. Piper, 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. Grima alfalfa and its utilization in the Northwest. 1911.
210. Cook, O.F. Hindi cotton in Egypt. 1911.
211. Kellerman, K.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 plants: 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. Crossbreeding corn. 1912.
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219. Herkel, 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. ~~Meade, 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.)

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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*
Tenny, L.S. *tumefaciens*. 1912.
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
Wood, A.K. genus *Glomerella*. 1913.
253. Ball, C.R. The kaoliangs: a new group of grain sorghums.
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254. Lake, E.R. The Persian walnut industry of the United States.
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255. Smith,E.F. The structure and development of crown gall: a
et al plant cancer. 1912.
256. Cook, O.F. Heredity and cotton breeding. 1913.
257. Cates,J.S. & The weed factor in the cultivation of corn.
Cox, H.R. 1912.
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. 1913.
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*.
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265. Hawkins, L.A. Some factors influencing the efficiency of
Bordeaux mixture. 1912.
266. McBeth,I.G. & The destruction of cellulose by bacteria and
Scales, F.M. filamentous fungi. 1913.
267. McKee, R. & Nonperennial medicagos: the agronomic value and
Ricker, P.L. botanical relationship of the species. 1913.
268. Mathewson, E.H. Tobacco marketing in the United States. 1913.

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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 batatatis*. 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.

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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. Heidcock, 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.

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Number.

25. Trus, 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.W. 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.P. & 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. Ball, 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. 1910.
& Thompson, J.
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. & Jayne, S.O. Suggestions to settlers on the sandy soils of the 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 sterilization 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. & Robinson, T.R. Legume inoculation and the litmus reaction of 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 southern New Hampshire. 1911. (In cooperation with the New Hampshire College Agricultural Experiment Station.)
76. Kellerman, K.F. The relation of crown-gall to legume inoculation. 1911.
77. Shamel, A.D. A study of the improvement of citrus fruit through bud selection. 1911.
78. Headley, F.B. & Fulkerson, V. Agricultural observations on the Truckee-Carson 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 Nebraska. 1911.

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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.

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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 plant 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. Fungous 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 sort 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.W. 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.

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CIRCULAR (cont.)

Number.

115. Miscellaneous papers. 1913. (cont.)
Cook, O.F. A new system of cotton culture.
Dillman, 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 Himalayan 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.
Scofield, 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.
Vinall, H.N. & Ball, C.R. Feterica, a new variety of sorghum.

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CIRCULAR (cont.)

Number.

123. Miscellaneous papers. 1913.
Cook, O.F. Factors affecting the production of long-staple cotton.
Brand, C.J. & Sherman, W.A. Behavior of seed cotton in farm storage.
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. & Kempton, J.H. Effects of cross-pollination on the size of 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. 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. & Dodge, L.G. Some profitable and unprofitable farms in New Hampshire.
Dewey, L.H. & Goodloe, M. The strength of textile plant fibers.
129. Miscellaneous papers. 1913.
Swingle, W.T. The present status of date culture in the southwestern 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.E. & Nichols, J.E. A simple and economical method of burning lime.
131. Miscellaneous papers. 1913.
Shear, C.L. & Stevens, N.E. Cultural characters of the chestnut-blight fungus and its near relatives.
McClure, H.B. et al. Measuring hay in ricks or stacks.
McKeth, 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.

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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.53-63. 1903.
Pieters, A.J. Kleinganzleben sugar beet. n.d. Reprinted in
B.P.I. Bul. 25, p.68-69. 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.

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[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 (*Melibomia 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.

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[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.
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- 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 seed 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.).

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[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 vilgens*).
- 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 Nebr., Tex., and Kans.; eastern Colo.] 1908.
- Alfalfas (*Medicago sativa*) [Irrigated and humid sections of the western half of the U. S.] 1908.

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[MISCELLANEOUS PUBLICATIONS] UNNUMBERED (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.
- Para grass (*Panicum barbinode*). 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 tingitanus*). 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 distr.) 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.

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[MISCELLANEOUS PUBLICATIONS] UNNUMBERED (cont.)

- Brown, E. Crimson clover seed. 1904. (Contrib. from Bot. invés. & 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 invés.)
- 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 invés.)
- Contents:
Bermuda grass (*Cynodon dactylon*). 1909.
Dwarf milo (*Andropogon sorghum* var.). 1909.
Bromus inermis. 1909.
Italian eye-grass (*Lolium italicum*). 1909.
Kentucky bluegrass (*Poa pratensis* L.). 1909.
Para grass (*Panicum barbinode*). 1909.
Pink kafir (*Andropogon sorghum*). 1909.
Red kafir (*Andropogon sorghum* var.). 1909.

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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 Nebr.] 1909.
- Alfalfa (*Medicago sativa*). [Penn., V. 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 Nebr., 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.
- Yokohama 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.
- Blackhull kafir (*Andropogon sorghum*). 1913.
- Dwarf nilo (*Andropogon sorghum*). 1913.
- Sudan grass (*Andropogon sorghum* var.). 1913.
- Dry-land alfalfa. 1913.
- Millet (*Chaetochloa italica*). 1913.
- Sunac 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.

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[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. & Martin, O.B. Girls' demonstration work: the canning clubs. 1912. (Contrib. from Farmers' coop. dem. work. "A"-79.) 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.)

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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 Hambley 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 farms 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, O. Canning. 1915. (Contrib. from Farmers' coop. dem. work)

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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. 1915. (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.-43.)
- 135. Webber, H.J. Distribution of cotton seed in 1905. 1905. (Contrib. from Seed & plant introd. & distr. S.P.I.D.-43.)
- 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.-45.)
- 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 Rush 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.-51.)

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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.)

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[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, 1909. 1908. (Contrib. from Seed distr.)
432. Shoemaker, D.N. Distribution of cotton seed in 1909. 1909. (Contrib. from Seed distr.)
433. Tracy, W. 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.)

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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 capprifigs. 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. Directions for preparing herbarium specimens of grasses. 1909. (Contrib. from Taxonomic & Chase, A.) & 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 Minidbka 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. _____ The selection of cotton and corn seed for southern farms. 1909. (Contrib. from Farmers' coop. dem. work, "A"-67) Rev. ed. 1912 = no. 747, ?
- [b] _____
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.

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[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 physiol. & 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 physiol. & 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)

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[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. 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.)

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[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.)

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[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. Edison, 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 southwestern 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.

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[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 INDUSTRY[OFFICE 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. Ladino 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 (*Tricholena rosea*). 1915.
27. Red clover (*Trifolium pratense*). 1915.
28. Dwarf hairy sorghum. 1915.
29. Orchard grass (*Dactylis glomerata*). 1915.
30. Teosinte (*Euchlaena mexicana*). 1916.
31. Timothy (*Phleum Pratense*). 1916.
32. Millet (*Chaetochloa italica*). 1916.
33. Bermuda grass (*Cynodon dactylon*). 1916.
34. Cassava (*Manihot utilissima*). 1916.
- 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 ciliaris*). 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. 1916. (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. 1916. P.P.I. - 1. (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 ... 1902-1916. 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, 105, 132, 137, 142, 148, 153, 162, 168, 175, 205, 207, 208, 223, 227, 233, 242, 248, 261, 282; subsequent inventories issued not as bulletins, but with inventory number only.

DEPARTMENT OF AGRICULTURE

BULLETIN

CONTRIBUTIONS 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. Duvel, J.W.T. & Duval, L. The shrinkage of shelled corn while in cars in transit. 1913.
49. Bennett, C.M. & Cooper, 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. Cicutá, 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. Zygadenus, or death camas. 1915. (In cooperation with Bur. animal indus.)
127. Veihmeyer, F.J. The *Nyctogone* disease of mushrooms and its control. 1914.

DEPARTMENT OF AGRICULTURE

BULLETIN (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.V. & Charles, V.K. Mushrooms and other common fungi. 1915.
176. Stuart, W. Group classification and varietal descriptions of some American potatoes. 1915. (Revised 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 enzyme-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. et al. Native pasture grasses of the United States. 1915.
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
214. Chilcott, E. C. et al. Spring wheat in the Great Plains area: relation of cultural methods to production. 1915.
218. et al. Oats in the Great Plains area: relation of cultural methods to production. 1915.
219. et al. Corn in the Great Plains area: relation of cultural methods to production. 1915.
222. et al. Barley in the Great Plains area: relation of cultural methods to production. 1915.
223. Mason, S. C. Botanical characters of the leaves of the date palm used in distinguishing cultivated varieties. 1915.
227. Humphrey, C. J. & Fleming, R. M. The toxicity to fungi of various oils and salts, particularly those used in wood preservation. 1915.
228. Briggs, L. J. & Shantz, H. L. Effect of frequent cutting on the water requirement of alfalfa and its bearing on pasturage. 1915.
238. Shaw, H. B. Sugar beets: preventable losses in culture. 1915.
242. Chilcott, E. F. et al. Corn, milo, and kafir in the southern Great Plains area: relation of cultural methods to production. 1915.
247. Hedgcock, G. G. & Long, W. H. A disease of pines caused by *Cronartium pyriforme*. 1915.
253. Grace, O. J. The effect of different times of plowing small-grain stubble in eastern Colorado. 1915.
268. Chilcott, E. C. et al. Crop production in the Great Plains area: relation 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 Payallup 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. & Cardon, P. V. Custom ginning as a factor in cotton-seed deterioration. 1915.
289. Westgate, J. M., Coe, H. S. et al. Red clover seed production: pollination studies. 1915.
291. Dillman, A. C. Breeding millet and sorgo for drought adaptation. 1916.
297. Salmon, C. Cereal investigations on the Belle Fourche experiment 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 AGRICULTUREBULLETIN (cont.)CONTRIBUTIONS FROM BUREAU OF PLANT INDUSTRY

- Number: 309. Brand, C.J. & Merrill, J.L. Zacatec 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. Scofield, 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. Wooton, 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, C. 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. & Carver, 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 gummy wheat. 1916.
461. Carrier, L. The identification of grasses by their vegetative characters. 1917.
472. Boerner, E. G. Improved apparatus for determining the test weight of grain, with a standard method of making the test. 1916.
478. Thomas, L. M. The origin, characteristics, and quality of burrback wheat. 1916. (In cooperation with Office of markets.)
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V. 1-20. 1913 - 1920. In progress.

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