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# United States Department of Agriculture,

## DIVISION OF PUBLICATIONS—CIRCULAR 14.

JOS. A. ARNOLD, Editor and Chief.

WASHINGTON, D. C., December 7, 1911.

### PUBLICATIONS OF THE BUREAU OF SOILS.

NOTE.—Application for publications in this list should be made to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C. The editions of some of the publications are necessarily limited, and when the supply is exhausted and no funds are available for procuring additional copies, applicants are referred to the Superintendent of Documents, Government Printing Office, who has them for sale at a nominal price, under the law of January 12, 1895. Applicants are urgently requested to ask only for those publications in which they are particularly interested. The department can not undertake to supply complete sets, nor is it allowable to send more than one copy of any publication to an applicant.

#### REPORTS.

Report of the Chief for 1896.

Same, 1898.

Same, 1901.

Same, 1906.

Same, 1900.

#### REPORTS OF FIELD OPERATIONS.

Field Operations of the Bureau of Soils, First Report, 1899.

Same, Second Report, 1900.

Same, Sixth Report, 1904.

Same, Third Report, 1901.

Same, Seventh Report, 1905.

Same, Fourth Report, 1902.

Same, Ninth Report, 1907.

Same, Fifth Report, 1903.

Same, Tenth Report, 1908.

#### BULLETINS.

[In applying for these bulletins the name of the bureau, as well as the number of the bulletin, should be given, as "Bureau of Soils, Bulletin No. 2."]

Bul. 2. Soil Moisture. A Record of the Amount of Water Contained in Soils During the Month of June, 1895.

3. Same for July, 1895.

10. The Mechanics of Soil Moisture.

14. The Alkali Soils of the Yellowstone Valley, from a Preliminary Investigation of the Soils near Billings, Mont.

22. The Chemistry of the Soil as Related to Crop Production.

27. Experiments in Growing Cuban Seed Tobacco in Texas.

28. Studies on the Properties of a Sterile Soil.

29. Tobacco Investigations in Ohio.

31. Colorimetric, Turbidity, and Titration Methods Used in Soil Investigations.

32. The Absorption of Phosphates and Potassium by Soils.

33. Calcium Sulphate in Aqueous Solutions: A Contribution to the Study of Alkali Deposits.

- Bul. 35. Alkali Soils of the United States.
37. Experiments in Growing Cuban Seed Tobacco in Alabama.
39. Effects of Shading on Soil Conditions.
44. Reclamation of Alkali Soils at Billings, Mont.
46. Improvement of Virginia Fire-cured Tobacco.
50. Moisture Content and Physical Condition of Soils.
51. Absorption of Vapors and Gases by Soils.
52. Absorption by Soils.
53. The Isolation of Harmful Organic Substances from Soils.
54. The Mineral Composition of Soil Particles.
56. The Rôle of Oxidization in Soil Fertility.
58. The Composition of Commercial Fertilizers.
59. Heat Transference in Soils.
62. Fertilizers for Cotton Soils.
63. Reference List on the Electric Fixation of Atmospheric Nitrogen and the Use of Calcium Cyanamid and Calcium Nitrate on Soils.
67. Fertilizers on Soils Used for Oats, Hay, and Miscellaneous Crops.
68. The Movement of Soil Material by the Wind.
70. Some Effects of a Harmful Organic Soil Constituent.
71. Soil Erosion.
72. Barium in Soils.
73. Studies in Soil Oxidation.
75. Lawn Soils.
76. A Review of the Phosphate Fields of Florida.
77. Organic Compound and Fertilizer Action.
80. Examination of Soils for Organic Constituents, Especially Dihydroxystearic Acid.
82. The Effect of Soluble Salts on the Physical Properties of Soils.
83. A Beneficial Organic Constituent of Soils: Creatinine.

#### CIRCULARS.

[In applying for these circulars the name of the bureau, as well as the number of the circular, should be given, as "Bureau of Soils, Circular No. 5."]

- Circ. 5. Bulk Fermentation of Connecticut Tobacco.
10. The Use of Alkaline Waters for Irrigation.
11. Reclamation of Alkali Land at Fresno, Cal.
12. Reclamation of Alkali Land near Salt Lake City, Utah.
16. Manurial Requirements of the Cecil Silt Loam of Lancaster County, S. C.
17. Manurial Requirements of the Portsmouth Sandy Loam of the Darlington Area, South Carolina.
18. The Wire Basket Method of Determining the Manurial Requirements of Soils.
20. Soils of Pender County, N. C.: A Preliminary Report.
21. Soils in the Vicinity of Brunswick, Ga.: A Preliminary Report.
22. Soils of the Eastern United States and Their Use—I. Norfolk Fine Sandy Loam.
23. Same, II. Norfolk Fine Sand.
24. Same, III. Portsmouth Sandy Loam.
25. Same, IV. Sassafras Silt Loam.
27. Soils of the Eastern United States and Their Use—V. Cecil Sandy Loam.
28. Same, VI. Cecil Clay.
29. Same, VII. Hagerstown Loam.

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- Circ. 30. Same, VIII. Clarksville Silt Loam.  
 31. Same, IX. Miami Clay Loam.  
 32. Same, X. Marshall Silt Loam.  
 33. Same, XI. Knox Silt Loam.  
 34. Same, XII. Carrington Loam.  
 35. Same, XIII. Memphis Silt Loam.  
 36. Same, XIV. Fargo Clay Loam.  
 37. Same, XV. Clyde Loam.  
 38. Same, XVI. Dekalb Silt Loam.  
 39. Same, XVII. Porters Loam and Porters Black Loam.  
 40. Same, XVIII. Wabash Silt Loam.  
 41. Same, XIX. Wabash Clay.  
 42. Same, XX. Trinity Clay.  
 43. The Selection of Land for General Farming in the Gulf Coast Region East of the Mississippi River.  
 44. Soils of the Eastern United States and Their Use—XXI. Norfolk Sand.  
 45. Same, XXII. Norfolk Sandy Loam.  
 46. Same, XXIII. Orangeburg Fine Sandy Loam.  
 47. Same, XXIV. Orangeburg Sandy Loam.  
 48. Same, XXV. Orangeburg Fine Sand.

#### MISCELLANEOUS.

Descriptions of Soil Types Established and Changes in Classifications Since the Publication of Bulletin 78.

#### FARMERS' BULLETINS.

[The Farmers' Bulletins are a series of popular treatises issued by the Department of Agriculture. The following list includes only numbers contributed by the Bureau of Soils. They should be applied for by number, as "Farmers' Bulletin No. 60."]

- F. B. 60. Methods of Curing Tobacco.  
 82. The Culture of Tobacco.  
 83. Tobacco Soils.  
 88. Alkali Lands.  
 257. Soil Fertility.  
 266. Management of Soils to Conserve Moisture.  
 406. Soil Conservation.  
 421. The Control of Blowing Soils.

#### SEPARATE REPRINTS FROM THE YEARBOOK.

[In applying for these publications the number of the separate should be given, as "Yearbook Separate No. 27."]

- Ybk. Sep. 27. Tobacco Soils of Connecticut and Pennsylvania.  
 28. Truck Lands of the Atlantic Seaboard.  
 29. Conditions in Soils of the Arid Region.  
 188. Growth of the Tobacco Industry.  
 211. The World's Exhibit of Leaf Tobacco at the Paris Exposition of 1900.  
 291. Crops Used in the Reclamation of Alkali Lands in Egypt.  
 378. Dark Fire-cured Tobacco of Virginia and the Possibilities for Its Improvement.  
 415. The Use of Soil Surveys.  
 516. Agriculture in the Coal Regions of Southwestern Pennsylvania.  
 526. The Agricultural Duty of Water.

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## SOIL SURVEYS.

[In requesting these publications the full title should be given, as "Soil Survey, Autauga County, Ala., 1908."]

## ALABAMA.

1908. Autauga County.  
 1909. Baldwin County.  
 1908. Bibb County.  
 1905. Blount County.  
 1908. Calhoun County.  
 1909. Coffee County. (In press.)  
 1908. Colbert County.  
 1908. Cullman County.  
 1910. Dale County.  
 1908. Etowah County.  
 1903. Fort Payne area (parts of Dekalb and Cherokee Counties).  
 1909. Hale County.  
 1908. Henry County.  
 1903. Huntsville area (parts of Limestone and Madison Counties).  
 1908. Jefferson County.  
 1908. Lamar County.  
 1905. Lauderdale County.  
 1906. Lee County.  
 1904. Macon County.  
 1907. Marion County.  
 1905. Montgomery County.  
 1904. Sumter County.  
 1907. Talladega County.  
 1909. Tallapoosa County.

## ARIZONA.

1903. Solomonsville area (part of Graham County).  
 1901. Yuma area (parts of Yuma County).

## ARKANSAS.

1907. Conway County.  
 1903. Miller County.  
 1906. Prairie County.

## CALIFORNIA.

1907. Butte Valley soils (part of Siskiyou County).  
 1907. Colusa area (parts of Glenn, Colusa, Tehama, and Butte Counties).  
 1901. Imperial area (part of San Diego County).  
 1910. Livermore Valley (parts of Contra Costa and Alameda Counties). (In progress.)  
 1901. Lower Salinas Valley (part of Monterey County).  
 1910. Madera area (part of Madera County).  
 1909. Marysville area (parts of Yuba and Sutter Counties).  
 1908. Pajaro Valley area (parts of Monterey and Santa Cruz Counties).  
 1907. Redding area (part of Shasta County).  
 1909. Woodland area (parts of Yolo and Colusa Counties).

## CONNECTICUT.

1903. Connecticut Valley (parts of Hartford County, Conn., and Franklin, Hampshire, and Hampden Counties, Mass.).

## DELAWARE.

1903. Dover area (part of Kent County).

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## FLORIDA.

1904. Gainesville area (parts of Alachua, Levy, and Marion Counties).  
 1910. Jacksonville area (part of Duval County).  
 1909. Marianna area (part of Jackson County).

## GEORGIA.

1904. Bainbridge area (part of Decatur County).  
 1910. Bullock County.  
 1901. Cobb County.  
 1901. Covington area (parts of Jasper, Newton, Walton, Morgan, and Rockdale Counties).  
 1904. Dodge County.  
 1903. Fort Valley area (parts of Macon and Houston Counties).  
 1909. Franklin County.  
 1908. Grady County.  
 1909. Hancock County.  
 1909. Pike County.  
 1905. Spalding County.  
 1910. Sumter County.  
 1908. Thomas County.  
 1909. Tift County.  
 1910. Walker County.  
 1906. Waycross area (part of Ware County).

## IDAHO.

1901. Boise area (parts of Ada and Canyon Counties).  
 1907. Mialdoka area (parts of Lincoln and Cassia Counties).

## ILLINOIS.

1902. Clay County.  
 1902. Dubuque area, Iowa (part of Jo Daviess County, Ill.).  
 1903. Johnson County.  
 1903. Knox County.  
 1904. O'Fallon area, Missouri (part of Calhoun County, Ill.).  
 1903. Sangamon County.  
 1902. St. Clair County.  
 1903. Winnebago County.

## INDIANA.

1908. Allen County.  
 1904. Boonville area (parts of Warrick and Spencer Counties).  
 1906. Greene County.  
 1903. Madison County.  
 1907. Marion County.  
 1904. Marshall County.  
 1905. Newton County.  
 1902. Posey County.  
 1904. Scott County.  
 1905. Tippecanoe County.

## IOWA.

1903. Cerro Gordo County.  
 1902. Dubuque area (parts of Dubuque, Jackson, and Jones Counties, Iowa, and Jo Daviess County, Ill.).  
 1903. Story County.  
 1904. Tama County.

## Soil surveys—Continued.

## KANSAS.

- 1904. Allen County.
- 1905. Brown County.
- 1904. Garden City area (parts of Finney and Gray Counties).
- 1903. Parsons area (parts of Labette and Cherokee Counties).
- 1906. Riley County.
- 1903. Russell area (part of Russell County).
- 1902. Wichita area (parts of Sedgwick and Butler Counties).

## KENTUCKY.

- 1905. McCracken County.
- 1905. Madison County.
- 1903. Mason County.
- 1910. Rockcastle County.
- 1903. Scott County.
- 1902. Union County.
- 1904. Warren County.

## LOUISIANA.

- 1903. Acadia Parish.
- 1903. Bienville Parish.
- 1906. Caddo Parish.
- 1910. Concordia Parish. (In progress.)
- 1908. East and West Carroll Parishes.
- 1905. East Baton Rouge Parish.
- 1909. Lincoln Parish.
- 1905. Tangipahoa Parish.
- 1907. Winn Parish.

## MAINE.

- 1908. Caribou area (part of Arostook County).
- 1909. Orono area (part of Penobscot County).

## MARYLAND.

- 1909. Anne Arundel County.
- 1900. Calvert County.
- 1900. Cecil County.
- 1907. Eastern area (Queen Anne, Talbot, and Caroline Counties).
- 1901. Harford County.
- 1909. Kent County.

## MASSACHUSETTS.

- 1903. Connecticut Valley (parts of Hampshire, Hampden, and Franklin Counties).

## MICHIGAN.

- 1904. Alma area (part of Gratiot County).
- 1906. Cass County.
- 1904. Owosso area (part of Shiawassee County).
- 1905. Oxford area (part of Oakland County).
- 1903. Pontiac area (part of Oakland County).
- 1904. Saginaw area (parts of Saginaw, Bay, Tuscola, and Huron Counties).
- 1902. Toledo area, Ohio (part of Monroe County, Mich.).
- 1908. Wexford County.

## MINNESOTA.

- 1906. Blue Earth County.
- 1905. Carlton area (parts of Carlton and St. Louis Counties, Minn., and Douglas County, Wis.).
- 1906. Crookston area (part of Polk County).
- 1903. Marshall area (part of Lyons County).
- 1909. Rice County.

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## MISSISSIPPI.

- 1910. Adams County. (In progress.)
- 1909. Clay County.
- 1905. Crystal Springs area (parts of Simpson and Copiah Counties).
- 1908. Holmes County.
- 1904. Jackson area (parts of Hinds and Rankin Counties).
- 1907. Jasper County.
- 1903. McNeill area (parts of Pearl River and Hancock Counties).
- 1908. Monroe County.
- 1906. Montgomery County.
- 1907. Oktibbeha County.
- 1906. Pontotoc County.
- 1907. Prentiss County.
- 1902. Smedes area (parts of Yazoo, Madison, Issaquena, and Sharkey Counties).
- 1901. Yazoo area (parts of Yazoo, Sharkey, and Issaquena Counties).

## MISSOURI.

- 1909. Atchison County.
- 1908. Bates County.
- 1909. Cedar County.
- 1909. Cooper County.
- 1905. Crawford County.
- 1910. Marion County.
- 1904. O'Fallon area (parts of Lincoln, St. Charles and St. Louis Counties, Mo., and Calhoun County, Ill.).
- 1906. Putnam County.
- 1905. Scotland County.
- 1903. Shelby County.

## MONTANA.

- 1902. Billings area (part of Yellowstone County).
- 1905. Gallatin Valley area (part of Gallatin County).

## NEBRASKA.

- 1903. Grand Island area (parts of Hall, Buffalo, and Hamilton Counties).
- 1904. Kearney area (parts of Dawson, Burnside, Phelps, Kearney, and Gosper Counties).
- 1906. Lancaster County.
- 1907. North Platte area (part of Lincoln County).
- 1905. Sarpy County.
- 1903. Stanton area (parts of Pierce, Wayne, Madison, and Stanton Counties).

## NEVADA.

- 1909. Fallon area (parts of Lyon, Washoe, and Churchill Counties).

## NEW HAMPSHIRE.

- 1906. Merrimack County.
- 1909. Nashua area (part of Hillsboro County).

## NEW JERSEY.

- 1901. Salem area (parts of Gloucester, Salem, and Cumberland Counties).

## NEW YORK.

- 1902. Bigflats area (parts of Chemung and Steuben Counties).
- 1905. Binghamton area (part of Broome County).

## Soil surveys—Continued.

## NEW YORK—continued.

1907. Dutchess County.  
 1908. Livingston County.  
 1908. Montgomery County.  
 1904. Vergennes area, Vermont (part of Essex County, N. Y.).  
 1909. Washington County. (In press.)  
 1901. Westfield area (part of Chautauqua County).

## NORTH CAROLINA.

1901. Alamance County.  
 1903. Asheville area (parts of Buncombe, Madison, and Haywood Counties).  
 1908. Caswell County.  
 1906. Chowan County.  
 1903. Craven area (parts of Pitt, Craven, and Jones Counties).  
 1903. Duplin County.  
 1907. Edgecombe County.  
 1909. Gaston County.  
 1904. Greeneville area, Tennessee (part of Madison County, N. C.).  
 1907. Henderson County.  
 1902. Hickory area (parts of Catawba, Lincoln, Burke, Caldwell, Alexander, and Iredell Counties).  
 1909. Lake Mattamuskeet area (part of Hyde County).  
 1909. Pitt County.  
 1900. Raleigh to Newbern (parts of Craven, Jones, Wake, Johnston, Wayne, Green, and Lenoir Counties).  
 1908. Robeson County.  
 1909. Scotland County.  
 1906. Transylvania County.

## NORTH DAKOTA.

1935. Carrington area (parts of Foster and Griggs Counties).  
 1902. Grand Forks area (parts of Grand Forks County).  
 1903. Jamestown area (part of Stutsman County).  
 1907. McKenzie area (part of McKenzie County).  
 1907. Morton area (parts of Morton, Hettinger, and Adams Counties).  
 1906. Ransom County.

## OHIO.

1903. Ashtabula area (part of Ashtabula County).  
 1909. Auglaize County.  
 1905. Cleveland area (parts of Lorain, Summit, Cuyahoga, and Medina Counties).  
 1902. Columbus area (parts of Franklin, Pickaway, Licking, Madison, and Fairfield Counties).  
 1904. Coshocton County.  
 1906. Meigs County.  
 1900. Montgomery County.  
 1902. Toledo area (parts of Lucas, Wood, and Ottawa Counties, Ohio, and Monroe County, Mich.).  
 1905. Westerville area (parts of Delaware, Franklin, Licking, Madison, and Union Counties).  
 1904. Wooster area (parts of Wayne, Stark, and Summit Counties).

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## OREGON.

1903. Baker City area (part of Baker County).  
 1909. Marshfield area (parts of Coos and Curry Counties). (In press.)

## PENNSYLVANIA.

1904. Adams County.  
 1909. Berks County. (In press.)  
 1908. Center County.  
 1910. Erie County.  
 1907. Johnstown area (parts of Cambria, Blair, and Bedford Counties).  
 1900. Lancaster area (part of Lancaster County).  
 1901. Lebanon area (parts of Lancaster, Lebanon, and Dauphin Counties).  
 1903. Lockhaven area (part of Clinton County).

## PORTO RICO.

1902. Arecibo to Ponce.

## RHODE ISLAND.

1904. Entire State.

## SOUTH CAROLINA.

1902. Abbeville area (parts of Abbeville, Anderson, Greenwood, and Laurens Counties).  
 1909. Anderson County.  
 1903. Campobello area (parts of Greenville and Spartanburg Counties).  
 1904. Charleston area (parts of Charleston and Colleton Counties).  
 1905. Cherokee County.  
 1909. Conway area (part of Horry County).  
 1902. Darlington area (Darlington County and part of Lee County).  
 1904. Lancaster County.  
 1907. Lee County.  
 1907. Oconee County.  
 1904. Orangeburg area (part of Orangeburg County).  
 1909. Saluda County.  
 1907. Sumter County.  
 1905. York County.

## SOUTH DAKOTA.

1907. Belle Fourche area (parts of Butte and Meade Counties).  
 1903. Brookings area (part of Brookings County).

## TENNESSEE.

1908. Coffee County.  
 1903. Davidson County.  
 1907. Giles County.  
 1906. Grainger County.  
 1904. Greeneville area (parts of Greene, Hawkins, Cocke, and Sullivan Counties, Tenn., and Madison County, N. C.).  
 1905. Henderson County.  
 1904. Lawrence County.  
 1906. Madison County.  
 1908. Overton County.  
 1903. Pikeville area (parts of Van Buren, Bledsoe, Rhea, and Cumberland Counties).  
 1909. Sumner County.



## Soil surveys—Continued.

## TEXAS.

1907. Bastrop County.  
 1908. Camp County.  
 1907. Cooper area (Delta and part of Lamar Counties).  
 1910. Ellis County.  
 1908. Franklin County.  
 1909. Grayson County.  
 1906. Henderson area (part of Rusk County).  
 1905. Houston County.  
 1905. Lee County.  
 1903. Lufkin area (part of Angelina County).  
 1909. Morris County.  
 1903. Nacogdoches area (part of Nacogdoches County).  
 1907. Robertson County.  
 1906. San Marcos area (parts of Hays, Guadalupe, Caldwell, and Bastrop Counties).  
 1909. Titus County.  
 1905. Waco area (parts of Bosque and McLennan Counties).  
 1907. Wilson County.  
 1903. Woodville area (part of Tyler County).

## UTAH.

1904. Bear River (part of Boxelder County).  
 1903. Provo area (part of Utah County).

## VERMONT.

1904. Vergennes area (part of Addison County, Vt., and Essex County, N. Y.).

## VIRGINIA.

1904. Appomattox County.  
 1909. Campbell County.  
 1906. Chesterfield County.

## VIRGINIA—continued.

1905. Hanover County.  
 1905. Louisa County.  
 1907. Montgomery County.

## WASHINGTON.

1907. Bellingham area (part of Whatcom County).  
 1905. Everett area (part of Snohomish County).  
 1905. Island County.  
 1902. Walla Walla area (part of Walla Walla County).

## WEST VIRGINIA.

1907. Middlebourne area (Marshall, Tyler, and Wetzel Counties).  
 1908. Parkersburg area (Wood, Pleasants, and Ritchie Counties).  
 1910. Point Pleasant area, W. Va.  
 1909. Spencer area (Wirt, Calhoun, and Roane Counties).  
 1905. Upshur County.  
 1906. Wheeling area (all of Ohio, Brooke, and Hancock Counties and part of Marshall County).

## WISCONSIN.

1905. Carlton area, Minnesota (part of Douglas County, Wis.).  
 1902. Janesville area (parts of Rock and Dane Counties).  
 1905. Portage County.  
 1906. Racine County.  
 1903. Viroqua area (parts of Monroe and Vernon Counties).  
 1909. Waushara County.

## WYOMING.

1903. Laramie area (part of Albany County).

## RECONNOISSANCE SURVEYS.

1908. Western North Dakota (Adams, Billings, Bottineau, Bowman, Burleigh, Dunn, Emmons, Hettinger, McHenry, McKenzie, McLean, Mercer, Morton, Oliver, Stark, Ward, and Williams Counties).  
 1909. Southwestern Pennsylvania (Allegheny, Armstrong, Beaver, Butler, Cambria, Clarion, Fayette, Greene, Indiana, Jefferson, Somerset, Washington, and Westmoreland Counties). (In press.)  
 1910. Panhandle Texas (Armstrong, Briscoe, Carson, Castro, Childress, Collingsworth, Dalam, Deaf Smith, Donley, Gray, Hall, Hansford, Hartley, Hemphill, Hutchinson, Lipscomb, Moore, Ochiltree, Oldham, Parmer, Potter, Randall, Roberts, Sherman, Swisher, and Wheeler Counties). (In progress.)  
 1909. Puget Sound Basin, eastern part, Washington (parts of King, Pierce, Skagit, Snohomish, and Whatcom Counties). (In press.)  
 1909. Wisconsin (Marquette County). (In press.)

