

# TIMELY TURF TOPICS

*Issued By The*

**UNITED STATES GOLF ASSOCIATION GREEN SECTION**

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BENJAMIN FRANKLIN STATION

WASHINGTON, D. C.

**MERCURY FUNGICIDES AND ARSENICALS PROVIDED FOR DEFENSE:** Supplies of many mercury and arsenic compounds have been provided for defense purposes. These compounds include calomel, bichloride of mercury, organic mercury seed disinfectants, calcium arsenate, arsenate of lead, Paris green, sodium arsenite, and white arsenic. In the event of a shortage of any of these materials, they are to be made available for agricultural use as insecticides, germicides, and fungicides, according to Preference Rating Order No. P-87 of the Office of Production Management, dated December 13. This order grants a preference rating of A-10 for strictly agricultural purposes.

Plans for the administration of this order have not been completed as yet, but it appears at present as though grass for turf purposes will not be considered as a strictly agricultural crop. This probably means that should there be a shortage of any of these mercury and arsenic compounds, they will not be available for use in turf maintenance on projects unrelated to defense. In compliance with the defense program, therefore, many turf maintenance practices, including the control of diseases, grubs, and weeds, may have to be drastically modified.

It has been reliably estimated that in 1941 approximately 125,000 pounds of metallic mercury were sold for use on golf courses, all of which, through the administration of this order, will be available for defense, should a shortage occur. Comparable figures for the amounts of the several arsenicals used in the maintenance of turf on golf courses are not available.

**REPAIR MACHINES NOW:** All machines and equipment which can possibly be used next season if properly repaired should be taken care of now. So long as it is possible for the manufacturers to get the necessary raw materials for the purpose, repair parts for machines used in agricultural programs will be available. All people using such equipment are urged to assist the defense program by repairing that which they have on hand rather than attempting to replace it with new machines. To avoid delays in spring maintenance programs, this repair work should be started now, particularly if repair parts have not already been ordered.

**BURLAP BAGS:** The jute from which burlap is manufactured is largely grown in India. Because of the far eastern situation and present problems of shipping, the supply of new material imported has been and will continue to be seriously curtailed. Prior to the rapid acceleration of activities in the national defense program, eighty-six percent of the burlap used in this country went into agricultural bags. The suddenly increased demand for burlap sandbags for defense purposes, however, combined with the curtailment of importations of new material may create an acute situation for the users of agricultural bags. Since there are also increased demands for such materials as heavy paper which might be used as a substitute for burlap, the conservation of used or second-hand bags is imperative.

On August 17, 1941, after prices of new burlap had more than doubled what they were a year before, an order of the Office of Price Administration set a ceiling price on new material at 20 percent below the market levels of that date. In order to stabilize the industry, a ceiling price was also placed on second-hand bags on December 16. The price set was that which had prevailed between November 15 and December 6. Our readers, many of whom have been buying large quantities of material in burlap bags, are urged to turn them back into circulation.

## A TURF CULTURE LIBRARY

During the winter months when turf maintenance is at a low ebb in the North is the time for one to get acquainted with the literature on any problems of turf culture which are of particularly vital concern to him. Since requests are frequently received for authoritative books and pamphlets on various angles of the problems connected with the establishment and maintenance of better turf, the accompanying list was compiled. It is hoped that this list may serve as a guide for your reading program this winter.

This list of references should not in any way be considered as complete. Neither should the reader find it necessary to have all of the books and pamphlets included on any one subject. When available, two or more books usually are included under each subject, one representing a complete and authoritative treatise and the other an abridged, less technical and cheaper book. The reader can judge which will be most suited for his needs. Many very desirable references are not included either because they are not readily available, or because their technical nature makes them less useful to the average person interested in turf culture than others which are included.

Under each subject heading, the references are arranged in the following order: books, U.S.D.A. bulletins and circulars, state agricultural experiment station bulletins and circulars arranged alphabetically by states, U.S.G.A. publications, and finally articles appearing in miscellaneous scientific publications. Because of the difficulty the layman may experience in obtaining these latter, very few are included.

Our readers should be reminded that probably the most complete discussion of problems associated with turf culture generally and with golf course construction and maintenance in particular, are to be found in the 13 volumes of the U.S.G.A. Bulletin (1921 to 1933 inclusive) and the 2 volumes of Turf Culture (1939 to 1941 inclusive). Specific mention is made to only a few of the numbers which are particularly indispensable in any turf culture library. Throughout these publications, however, there are hundreds of miscellaneous short articles, mention of which must obviously be omitted in this list.

### Birds

- Land Birds East of the Rockies. Reed. Doubleday Doran. \$1.50.  
Methods of Attracting Birds. Trafton. Houghton-Mifflin Co. \$2.00.  
How to Attract Birds. U.S.D.A. Farmers' Bulls. 621, 715, 844, 912.  
Homes for Birds. U.S.D.A. Farmers' Bull. 1456.  
Local Bird Refuges. U.S.D.A. Farmers' Bull. 1644.  
Song Bird Sanctuaries with Table of Trees, Shrubs and Vines Attractive to Birds.  
Peterson. Natl. Assn of Audubon Societies. New York City. Circ. 19. 1937.

### Botany

- Gray's New Manual of Botany, 7th Ed. Robinson and Fernald. American Book Co.  
Elements of Botany, 3rd Ed. Holman and Robbins. John Wiley and Sons. 1940. \$2.75.  
Textbook of Botany. Transeau and others. Harper. 1940. \$4.00.  
Plant Physiology. Meyer and Anderson. Van Nostrand. 1940. \$4.50.

### Chemistry

- First Principles of Chemistry, Revised Ed. Brownlee and others. Allyn. 1940. \$1.80.  
Introductory College Chemistry. Gordon and Trout. Wiley. 1940. \$3.50.  
General Agricultural Chemistry. Hart and Tottingham. McGraw Hill. \$2.50.  
Handbook of Chemistry and Physics, 24th Ed. Chem. Rubber Co. Chicago. 1940. \$3.50.

## Diseases

- Manual of Plant Diseases. Heald. McGraw Hill. \$7.50.  
Elements of Plant Pathology. Melhus and Kent. MacMillan. 1939. \$4.00.  
Outline of Diseases of Cereal and Forage Crop Plants of the Northern Part of the U. S. Dickson. Burgess. 1939. \$3.00.  
Turf Diseases and Their Control. The Bulletin, U.S.G.A. Green Section Vol. 12, No. 4. 1932.

## Drainage

- Drainage in Humid Regions. U.S.D.A. Yearbook Separate 1649.  
Stop Gullies. U.S.D.A. Farmers' Bull. 1737.  
Economical Use of Large Tile for Land Drainage. U.S.D.A. Technical Bull. 269.  
Farm Drainage, Maintenance and Construction. Ill. Agr. Exp. Sta. Circ. 493.  
Proper Spacing and Depth of Tile Drains Determined by the Physical Properties of the Soil. Minn. Agr. Exp. Sta. Technical Bull. 101. 1934.  
Airport Drainage. Clay Products Assn. Chicago.

## Fertilizers

- American Fertilizer Handbook. Published annually. Ware Bros. Co.  
Handbook of Fertilizers, 3rd Ed. Gustafson. Orange Judd Publishing Co. 1939. \$1.75.  
Hunger Signs in Crops, a Symposium. Judd and Detweiler. 1941. \$2.50.  
Theory and Practice in the Use of Fertilizer, 2nd Ed. Bear. John Wiley and Sons. 1940. \$4.00.  
Selecting Fertilizers. U.S.D.A. Circ. 487.  
Home-Mixing of Fertilizers. U.S.D.A. Leaflet 70.  
Phosphorus Deficiency and Soil Fertility. U.S.D.A. Yearbook Separate 1628.  
Residual Effects of Fertilizer. Mich. Quart. Bull. Vol. 18, No. 4.  
Commercial Fertilizers and Soil Acidity. N. J. Agr. Exp. Sta. Circ. 266. 1933.  
Fertilizer Materials and Mixed Fertilizers. N.J. Agr. Exp. Sta. Bull. 651. 1938.  
Experiments with Fertilizers on Bent Turf. Turf Culture Vol. 1, No. 3. 1939.  
Fertilizer Trials on Demonstration Gardens. Turf Culture Vol. 1, No. 3. 1939.  
Effects of Soil Temperature, Acidity, and Nitrogen Nutrition on the Development of Kentucky Bluegrass. Turf Culture Vol. 2, No. 1. 1940.  
Experiments with Fertilizers on Bluegrass Turf. Turf Culture Vol. 1, No. 3. 1939.  
The Bulletin, U.S.G.A. Green Section Vol. 11, Nos. 3, 4, and 5. 1931.  
Improved Fertilizers for Southern Soils. Amer. Fertilizer Vol. 88, No. 13, Vol. 89, Nos. 1, 2, and 3. 1938.

## Grass Seed

- Relation of Temperature and Moisture Content to Longevity of Chewings Fescue Seed. U.S.D.A. Technical Bull. 670.  
Grass Seed Production, Source and Harvesting. The Bulletin, U.S.G.A. Green Section Vol. 10, Nos. 11 and 12. 1930.  
Seed Production of Turf Grasses. Turf Culture Vol. 1, No. 2. 1939.  
The Federal Seed Act. Turf Culture Vol. 2, No. 1, 1940.

## Grasses

- First Book of Grasses, Revised Ed. Chase. W. A. Silveus, San Antonio. 1937. \$1.25.  
Manual of the Grasses of the U. S. Hitchcock. U.S.D.A. Misc. Publ. 200. \$1.75.  
Turf for Golf Courses. Piper and Oakley. The MacMillan Co. 1923.  
The Identification of Grasses by Their Vegetative Characteristics. U.S.D.A. Department Bull. 461.  
Bermuda Grass. U.S.D.A. Farmers' Bull. 814.  
Carpet Grass. U.S.D.A. Farmers' Bull. 1130.  
Important Cultivated Grasses. U.S.D.A. Farmers' Bull. 1254.  
The Use of Bluegrass Sod in the Control of Soil Erosion. U.S.D.A. Farmers' Bull. 1760.  
Crested Wheatgrass. U.S.D.A. Leaflet 104.  
A Study of the Root Systems of Some Important Sod Forming Grasses. Fla. Agr. Exp. Sta. Bull. 211. 1930.  
Velvet Bent Grass for Putting Greens and Other Fine Turf. N. J. Agr. Exp. Sta. Circ. 393. 1939.  
Annual Bluegrass and Its Requirements for Growth. N. J. Agr. Exp. Sta. Bull. 630. 1937.  
Grasses of Oklahoma. Okla. Agr. Exp. Sta. Technical Bull. 3. 1938.  
Putting Green Grasses and Their Management. R. I. Agr. Exp. Sta. Bull. 245. 1934.  
New Varieties of Kentucky Bluegrass. Turf Culture Vol. 1, No. 2. 1939.  
A Dry Land Turf Grass. Turf Culture Vol. 1, No. 2. 1939.  
Common Names of Turf Grasses. Turf Culture Vol. 1, No. 2. 1939.  
Demonstration Turf Garden Reports. The Bulletin, U.S.G.A. Green Section Vol. 12, No. 6. 1932.  
Turfs for Sports Use. Canadian Dept. of Agr. Bull. 148. 1931.  
Commercial Bent Grasses (Agrostis) in Canada. Nat'l. Museum of Canada Bull. 50. 105-126. Ottawa. 1928.

## Insects

- An Introduction to Entomology, 9th Ed. Revised. 1064 pp. 1228 illus. Comstock. Comstock Publishing Co., Inc. Ithaca, N. Y. 1940. \$5.00.  
A Manual for the Study of Insects, 22nd Ed. Revised by Glen W. Herrick. 401 pp. 633 illus. Comstock and Comstock. Comstock Publishing Co., Inc. 1938. \$4.00.  
Characters Useful in Distinguishing Larvae of Japanese Beetle and Other Introduced Species from Native Species. U.S.D.A. Circ. 334.  
Insects Infesting Golf Courses and Lawns. Mich. Col. of Agr. Extension Bull. 125. 1932.

## Insect and Pest Control

- General Information about the Japanese Beetle in the U.S. U.S.D.A. Circ. 332.  
Life History and Control of the Asiatic Garden Beetle. U.S.D.A. Circ. 246.  
Control of the Japanese Beetle and Its Grubs in Home Yards. U.S.D.A. Circ. 401.  
Preventing Injury from Japanese and Asiatic Beetle Larvae to Turf in Parks and Other Large Areas. U.S.D.A. Circ. 403.  
Sod Webworms and Their Control in Lawns and Golf Greens. U.S.D.A. Circ. 248.  
The Bluegrass Webworm. U.S.D.A. Technical Bull. 173.  
How to Fight the Chinch Bug. U.S.D.A. Farmers' Bull. 1780.  
Grasshoppers and Their Control. U.S.D.A. Farmers' Bull. 1828.  
Earthworms as Pests and Otherwise. U.S.D.A. Farmers' Bull. 1569.  
Mouse Control in Field and Orchard. U.S.D.A. Farmers' Bull. 1397.  
Mole Control. U.S.D.A. Farmers' Bull. 1716.  
Insects Injurious to Deciduous Shade Trees and Their Control. U.S.D.A. Farmers' Bull. 1169.  
The Bagworm, an Injurious Shade-Tree Insect. U.S.D.A. Farmers' Bull. 701.  
The Elm Leaf Beetle. U.S.D.A. Leaflet 184.  
Evergreen Insects. Mich. Agr. Exp. Sta. Circ. 141. 1932.  
Larvicides and Contact Sprays used in Mosquito Control. Mich. Quart. Bull. Vol. 22, No. 1. 32-34. 1939.  
The Control of Insect Pests of Lawns and Golf Courses. N.J. Agr. Exp. Sta. Circ. 347. 1935.

## Insect and Pest Control (continued)

White Grubs in Lawns and Golf Courses. N.J. Agr. Exp. Sta. Circ. 394. 1939.  
Control of Japanese Beetle Grubs. Pennsylvania Dept. of Agr. Genl. Bull. 440. 1927.  
Status of Milky Disease of Japanese Beetle. Turf Culture Vol. 2, No. 2, 1940.  
Investigations Regarding Bluegrass Webworms in Turf. Jour. of Econ. Entomology  
Vol. 26, No. 6. 1933.

## Journals

Golfdom (Monthly). Chicago, Illinois.  
The Greenkeepers Reporter (6 issues a year). St. Charles, Illinois.  
Newsletter (Monthly). Fall River, Mass.  
Parks and Recreation (Monthly). Rockford, Illinois.  
Fertilizer Review (Quarterly). National Fertilizer Association, Washington, D. C.  
The Journal of the Board of Greenkeeping Research. St. Ives Research Station,  
Bingley, Yorkshire, England.  
Turf Culture. United States Golf Association Green Section, Washington, D. C.  
Timely Turf Topics. United States Golf Association Green Section, Washington, D. C.

## Landscape

Concise Dictionary of Gardening. MacSelf. Garden City Publ. Co. 1940. \$1.49.  
Practical Book of Garden Structure and Design. Eberlein and Hubbard. Lippincott.  
1937. \$5.00.  
Trees and Shrubs for Landscape Effects. Coffin. Scribner. 1940. \$3.00.  
Growing Annual Flowering Plants. U.S.D.A. Farmers' Bull. 1171.  
Herbaceous Perennials. U.S.D.A. Farmers' Bull. 1381.  
Transplanting Trees and Shrubs. U.S.D.A. Farmers' Bull. 1591.  
Treatment and Care of Tree Wounds. U.S.D.A. Farmers' Bull. 1726.  
Landscape Plants for Northern Golf Courses. The Bulletin, U.S.G.A. Green Section  
Vol. 12, No. 3. 1932.  
Landscape Work on Golf Courses. The Bulletin, U.S.G.A. Green Section Vol. 10, No. 7. 1930.

## Lawns

You Can Have a Good Lawn. Chicago Park District (Modern Recreation Series). 1938. \$ .25.  
Better Lawns for Homes and Parks. Sprague. McGraw Hill. 1940. \$2.00.  
Lawn: How to Make it and How to Maintain it. Parker. Hale. 1939. \$1.00.  
Practical Lawn Care. Merriett. De La Mare. 1939. \$ .75.  
Practical Lawn Craft. Dawson. Crosby-Lockwood & Sons Ltd. 1939.  
Planting and Care of Lawns. U.S.D.A. Farmers' Bull. 1677.  
Lawns, Planting and Maintenance in Colorado. Colo. Agr. Exp. Sta. Bull. 420. 1936.  
Lawns in Kansas. Kan. Agr. Exp. Sta. Bull. 267. 1934.  
Management of Bent Grass Lawns. Mich. Agr. Exp. Sta. Circular Bull. 156. 1936.  
Date and Rate of Lawn Seeding. Minn. Agr. Exp. Sta. Bull. 355. 1941.  
Development and Care of Lawns. Mo. Agr. Exp. Sta. Circ. 204. 1939.  
Lawn Experiments. Ohio Agr. Exp. Sta. Bull. 613. 1940.  
Lawn Grasses and Their Management. R.I. Agr. Exp. Sta. Bull. 264. 1938

## Miscellaneous

Elements of Accounting. Taylor and Owens. The MacMillan Co. \$1.80.  
Insecticides, Fungicides and Weed Killers. Scott, Greenwood & Son. 1935.  
Clearing Land of Brush and Stumps. U.S.D.A. Farmers' Bull. 1526.  
The Composition of Some Commercial Insecticides, Fungicides, Rodenticides, and Weed  
Killers. Conn. Agr. Exp. Sta. Bull. 398. 1937.  
Plant Propagation. Fairburn. Doubleday Doran. 1936. \$1.00.  
Growth Substances on Turf Grasses. Turf Culture Vol. 2, No. 2. 1940.  
Growth Substances in Plants. Turf Culture Vol. 2, No. 2. 1940.

## Soils

Nature and Properties of Soil, 3rd Ed. Lyon and Buckman. The MacMillan Co. 1937. \$3.50.  
Soil Management for Greenkeepers. Cubbon and Markuson. Mass. State College, Amherst, Mass. 1933. \$2.00.  
Soil Physics. Baver. Wiley. 1940. \$4.00.  
Soil Science. Weir. J. B. Lippincott Co. \$3.50.  
Soils and Soil Management. Gustafson. McGraw Hill. 1941. \$3.00.  
Student's Book on Soils and Manures, 3rd Ed. Revised. Russell. MacMillan. 1940. \$2.50.  
Soils and Men. U.S.D.A. Yearbook. 1938. \$1.75.  
Plants as Soil Indicator. U.S.D.A. Yearbook Separate 1655.  
Soil Acidity and Liming. U.S.D.A. Yearbook Separate 1638.  
Soil Organic Matter and Soil Humus. U.S.D.A. Yearbook Separate 1660.  
Peat. The Bulletin, U.S.G.A. Green Section, Vol. 13, No. 4. 1933.

## Water Supply

Spray Irrigation in the Eastern States. U.S.D.A. Farmers' Bull. 1529.  
Tests of Spray Irrigation Equipment. U.S.D.A. Circ. 195.  
Watering Turf and Soil Requisites of Putting Greens. The Bulletin, U.S.G.A. Green Section Vol. 12, No. 2. 1932.  
Effect of Watering Greens on the Occurrence of Brownpatch. The Bulletin, U.S.G.A. Green Section Vol. 13, No. 3.  
The Bulletin, U.S.G.A. Green Section, Vol. 8, No. 7; 1928. Vol. 11, No. 8. 1931.

## Weed Control

Suppression of Weeds by Fertilizers and Chemicals. Long. Lockwood Co. 1934.  
Weeds: How to Control Them. U.S.D.A. Farmers' Bull. 660.  
Poison Ivy and Poison Sumac and Their Eradication U.S.D.A. Farmers' Bull. 1166.  
Wild Garlic and Its Control. U.S.D.A. Leaflet 43.  
Application of Steam in the Sterilization of Soils. U.S.D.A. Technical Bull. 443.  
Control of Weeds with Chemicals. Maryland Agr. Exp. Sta. Bull. 362:374-378. 1934.  
Control of Lawn Weeds and the Renovation of Lawns. Ohio Agr. Exp. Sta. Bull. 619. 1941.  
Lawn Weeds and Their Control. Utah Agr. Exp. Sta. Circ. 117. 1941.  
Dandelion Eradication. Univ. of Manitoba Pamphlet No. 8. 1936.  
The Control of Weeds. Herbage Publication Series Bull. 27. 1940.  
Chemical Weed Killers. Nat'l. Res. Council of Canada Bull. No. 18. 1937.  
Killing Weed Seed in Soil with Chloropicrin. Turf Culture Vol. 1, No. 1. 1939.  
The Control of Crabgrass in a Cemetery. Turf Culture Vol. 1, No. 1, 1939.  
Chemical Weed Control on Lawns and Sport Fields. Turf Culture Vol. 1, No. 1, 1939.  
Large Scale Weed Control with Arsenic Acid. Turf Culture Vol. 1, No. 1. 1939.  
Arsenical Compounds for the Control of Turf Weeds. Turf Culture Vol. 1, No. 1. 1939.

## Weeds

Common Weeds. Standley. Field Museum. 1934. \$ .25.  
Just Weeds. Spencer. Scribner. 1940. \$2.75.  
Weeds. Muenscher. MacMillan Co. 1935. \$6.00.  
Weed Manual. U.S. Dept. of Interior, Bureau of Reclamation, Washington. 1941.  
Dodder. U.S.D.A. Farmers' Bull. 1161.  
Colorado Weeds. Colo. Agr. Exp. Sta. Bull. 403. 1933.  
Some Important Michigan Weeds. Mich. Agr. Exp. Sta. Special Bull. 304. 1940.  
Weeds of New Jersey. N. J. Agr. Exp. Sta. Circ. 219. 1929.  
Weeds of New York. N. Y. Agr. Exp. Sta. Ithaca Bull. 635. 1935.