

THE BULLETIN

of the

UNITED STATES GOLF ASSOCIATION GREEN SECTION

PUBLISHED BY THE U. S. GOLF ASSOCIATION GREEN SECTION AT ROOM 7207,
BLDG. F, 7TH AND B STS. N. W., WASHINGTON, D. C.

Entered as second-class matter April 21, 1926. St the post office at Washington, D. C., under Act of March 3, 1879
EDITORIAL OFFICES: P. O. Box 313, PENNSYLVANIA AVENUE STATION, WASHINGTON, D. C.

WASHINGTON, D. C., JANUARY, 1930 (SUPPLEMENT)

INDEX TO VOLUME 9 (1929)

- Accounting in Detroit District Golf Association, 34
cost grouping, 200
- Acid phosphate, description and chemistry of, 124
soils and fairway turf, 59
soils, persistence of certain grasses and weeds on, 202
- Activated sludge, tests of as fertilizer on 12 demonstration turf gardens in 1929, 214, 217
- Agriculture needs strengthened research, 126
- Algonquin Golf Club, control of brown-patch at, 179
- Alkaline soils: fairway, 59; bent greens, 77; neutralizing, 112; persistence of grasses on, 202
- Aluminum sulphate, 130
- Ammonia in terms of nitrogen, 17
- Ammonium phosphate: in disease control, 85; tests of as fertilizer on demonstration turf gardens in 1929, 214, 216
sulphate: compared with nitrate of soda, 57; effect of on turf diseases, 82, 110; neutralizing alkalinity, 112; tests of as fertilizer on 12 demonstration turf gardens in 1929, 214, 217
- Annual bluegrass, tests of as putting green grass on 12 demonstration turf gardens in 1929, 218
meeting of Green Section, 22
report of acting chairman of green section research committee for 1928, 23
- Ants: arsenate of lead in control of, 131; borax in control of, 167; bulletins on, 105, 203, 205
- Architecture, books on, 104
- Area of putting green, how to measure, 205
- Arsenate of lead: control of earthworms, 115, 131, 220; control of grubs and ants, 131; control of weeds, 207; experiments with on 12 demonstration turf gardens, 220
- Arsenic, control of cutworms with, 157
- Artificial manure made from straw, 204
- Audubon Country Club, rebuilding putting green at, 140
- Beetle, Japanese: bulletin on, 105; controlling with arsenate of lead, 131; parasites of, 155; poisoned by geraniums, 71; trapping, 119
- Bent grass (see also *Creeping bent*):
diseases of: brown-patch, 76, X2, 111, 131, 179; scald, 82; snow-mold, 134, 166; zonate eye-spot, 71
on acid soils, 202
on alkaline and clay soils, 77
one hundred years ago, 8
seaside, sown on old greens, 177
southern limits of, 16
tests of various bent grasses as putting green and fairway turf on 12 demonstration turf gardens, 218, 219
- Bermuda grass, coarse, ridding greens of, 206
greens: double, 175, 196; winter treatment of, 175, 196
- Bichloride of mercury in control of brown-patch, 82, 179; in control of snow-mold, 134, 166
- Birds: books on, 184; damaging greens, prevention of, 154; destruction of by house cats, 184; hawks and owls, value of, 129; winter feeding, 199
- Bluegrass, annual, tests of as putting turf on 12 demonstration turf gardens, 218
bulbous, for winter greens in the South, 164
fertilizers for, 57
Kentucky: lime and fertilizers for, 57, 77; tests of as fairway turf on 12 demonstration turf gardens, 219; leaf spot and foot rot of, 120; on acid soil, 202
- Bone meal, tests of as fertilizer on demonstration turf gardens, 214, 217
- Bookkeeping, 34, 200
- Books for the greenkeeper's library, 104, 202
- Borax as ant killer, 167
- Brown-patch control, 76, 131, 179
effects of lime and fertilizers on, 82
preventing, 111, 131
- Bulbous bluegrass for winter greens in the South, 164
- Bulletins for greenkeeper's library, 104, 202

- Demonstration (continued) :
 Calcium chloride in weed control, 226
 Calomel: brown-patch control, 76, 82, 179;
 snow-mold control, 134, 166
 Canada : experimental plots in, 50; improve-
 ment of golf turf in, 50
 Capital City Club: covering Bermuda greens
 for winter protection, 175
 Changing grasses on putting greens, 176
 Charles River Country Club, demonstration
 turf garden at, 224
 Chicago, new experimental turf garden in, 47
 Chickweed, controlling with arsenate of lead,
 207
 Chinch bug, bulletin on, 105
 Chloride of lime in weed control, 226
 Chlorophenol mercury in brown-patch control,
 179
 Clay in soil determining need for fertilizers, 18
 soil, treatment of, 77, 185
 Clearing land, books on, 104
 Coco or nut grass, control of, 225
 Cold weather, discoloration of turf by, 164
 Colonial bent, tests of as putting green and
 fairway turf on 12 demonstration turf
 gardens, 218, 219
 Compost: made from manure, 226; made from
 straw, hay, or leaves, 204; ridding of
 weed seeds, 167
 Construction costs, 57, 114, 149; creeping bent
 green costs, 114
 Convention of National Association of Green-
 keepers of America, 42
 Corrosive sublimate in brown-patch control, 82,
 179; in snow-mold control, 134, 166
 Cost analysis, 34, 200
 construction costs, 57, 114, 149
 rebuilding greens, 149
 sod nursery costs, 150
 Cottonseed meal, effect of on turf diseases, 82
 Crab grass, controlling, 167
 Creeping bent:
 diseases of: brown-patch, 76, 82, 111, 131,
 179; scald, 82; snow-mold, 134, 166 ;
 zonate eye-spot, 71
 cultivating 100 years ago, 8
 discoloration of by cold weather, 164
 nursery: weed control in, 79; cost of, 150
 on acid soil, 202
 on alkaline and clay soil, 77
 putting green: cost of building, 114, 149;
 quality of turf, 3, 59
 southern limits of, 16
 strains of: changing on greens, 176; mixing
 in greens, 185; tests of on 12 demonstra-
 tion turf gardens, 218
 watering, frequency of, 115
 Cutting turf in early spring, 38
 Cutworms, control of, 156
 turf garden: reports, summary from 12 gar-
 dens for 1929, 210; at Charles River
 Country Club, 224; at Interlachen Coun-
 try Club, 222
 Department of Agriculture, activities of, 157
 Detroit District Golf Association, cost analysis
 in, 34
 Discoloration of turf by cold weather, 164
 Diseases :
 brown-patch, 76, 82, 111, 130, 179
 effects of lime and fertilizers on, 82, 130
 leaf spot and foot rot of bluegrass, 120
 preventive measures in control of, 111
 scald, 82
 snow-mold, 134, 166
 zonate eye-spot, 71
 Douglas, Findlay S.; new president of United
 States Golf Association, 3
 Drainage, books on, 104
 Earthworms: bulletin on, 105; controlling, 115,
 131, 220
 Entomology, books on, 10.5
 Evergreens, transplanting, 202
 Experimental plots: Green Section as an aid to
 the greenkeeper, 49 ; Canadian, 50; in
 Chicago, 47; reports on for 1929, from
 12 gardens, 210; at Charles River Coun-
 try Club, 224; at Interlachen Country
 Club, 222
 Extension work of the Green Section, 5-1
 Eye-spot disease of turf grass, 71
 Fairway on acid soil, 59
 fertilizers, 77, 216, 226
 grasses, tests of at 12 demonstration turf gar-
 dens, 219
 Fertilizers :
 acid phosphate, chemistry of, 124
 ammonia in terms of nitrogen, 17
 bluegrass, 57, 77, 217, 226
 books on, 105
 clay particles in soil determining need of, 18
 commercial : determining value of, 184, 227;
 use of, 165
 complete : balance in, 206; in disease control,
 82; preparation of, 39, 207; to contain
 more nitrogen, 17; value and use of, 130,
 165, 207, 227
 disease control with, 82, 110, 130
 fairway, 77, 217, 226
 manure, artificial, 204
 mixed, 17, 39, 82, 130, 165, 206, 207, 227
 nitrogen : in terms of ammonia, 17; endur-
 ance of in soil, 112
 nitrogenous, effect of on disease resistance in
 hot weather, 110
 odor in relation to value of, 18
 persistence of grasses under, 202
 putting green, 214
 sulphate of aluminum, 130

- Fertilizers (**continued**):
 superphosphate, chemistry **of**, 124
 tests of putting green and **fairway** fertilizers on 12 demonstration turf gardens, 214, 217
- Fescue: effect of soil acidity and alkalinity on, 202; fertilizers for, 77; southern limit of, 16; tests of as fairway and putting green grass on 12 demonstration turf gardens, 218, 219
- Flag poles, colors for, 75
- Flytraps, bulletin on, 106
- Foot rot of bluegrass, 280
- Foxtail, yellow, **controlling**, 167
- Gardens. demonstration :
 Canadian, 50
 Charles River Country Club, 224
 Chicago, 47
 Green Section: as an aid to the **greenkeeper**, 49; summarized report on 12 gardens for 1929 season, 210
 Interlachen Country Club, 222
 German mixed bent, tests of on 12 demonstration turf gardens, 218, 219
 Goose grass, **controlling**, 167
 Grain in turf, testing for, 3
 Grasses, books on, 105
 Great **Britain**, **plans** for research **in**, 44, 106
 Green-committee member, **responsibilities** of, 109
 Green Section, annual meeting of, 22, 190
 annual **report** of, 23
 demon&tion turf gardens: as an aid to the **greenkeeper**, 49 ; **reports** from 12 for 1929 season, 210
 extension work of, 54
 organization of, 45
 summer meetings, 102, 118, 158
 Greenkeepers' library, 104, 202
 National Association of America, convention **of**, 42
 Greenkeeping : yesterday and today, 26; books on, 106
 Greens (see **Putting greens**)
 Grubs, **controlling** with arsenate of lead, 131
 Japanese beetle, **71**, 119, 131, 155
- Hay, making artificial manure from, 204
- Humus: artificial made from straw, hay, or leaves, 204; nature of, 192; value and use of, 38, 186, 191
- Ice and snow on greens, 79
- Insecticides, new organic, 199
- Insects, books on, 105
- Interlachen Country Club, demonstration turf garden at, 222
- Inverness **Club**, rebuilding putting green at, 137
- Iron sulphate **in** weed control, 221
- Japanese beetle: bulletin on, 105; **controlling** with arsenate of lead, 131; parasites of, **155**; poisoned by geraniums, 71; **trapping**, 119
- Kentucky bluegrass: lime and fertilizers for, 57, 77, 219; **leaf** spot and foot rot of, 120; tests of on 12 demonstration turf gardens, 219; on acid soil, 202
- Laboratory saves \$4,300, 103
- Landscaping, book **on**, 105
- Lasker, A. D., **experimental** turf garden of, 48
- Lawns, bulletins on, 203, 205
- Lead** &senate : control of earthworms with, 115, 131, 220; control of grubs and **ants** with, 131; control of weeds **with**, 207: **experiments** with on 12 demonstration turf gardens, 220
- Leaf **spot** and foot rot of bluegrass, 120
- Leaves, making artificial manure from, 204
- Library, greenkeeper's, 102, 202
- Lime: effects of on turf diseases, 82; Kentucky bluegrass and, 57 ; neutralizing alkalinity of, 112; tests of value of on 12 demonstration turf gardens, 217; value of, 39, 50, 217
- Manure: artificial made from straw, hay, or leaves, 204; tests of as fertilizer on 12 demonstration turf gardens, 217; use of on fairways, 226
- Measuring the **area** of a putting green, 205
- Meetings, Green Section : annual, 22, 190 ; summer, 102, 118, 158
- Mercuric bichloride, 82, 134, 166, 179
- Mercuric chloride, **76**, **82**, 134, 166, 179
- Milorganite (activated sludge), tests of as fertilizer on 12 **demonstration** turf gardens, 214, 217
- Moles, bulletins on, 203, 205
- Muck** : nature of, **192**; **value** and use of, 113, 191
- Mulching for **controlling** weeds in nursery, 79
- Muriate of potash, tests of on 12 demonstration turf gardens, 214, 216
- National Association of Greenkeepers of **America**, convention of., 42
- Nitrate of potash in disease control, 85
 of **soda**, compared with sulphate of ammonia, **57**
- Nitrogen**: endurance of in soil, 112 ; increase of in complete fertilizers, 17; in terms of ammonia, 17; role of in plant nutrition, 165; synthetic, a shipment of, 16; United States **now** factor in world supply of, 139
- Nursery, bent: cost of maintaining, 150; weed control **in**, 79
- Nut grass, control of, 225

- Old and new turf problems as viewed by a green-committee chairman, 30
- Organic fertilizers for fairways, 226
- Organization of the Green Section, 47
- Paper mulch for weed control in nursery, 79
- Paris green for cutworm control, 156
- Pearlwort control, 115
- Peat, nature of, 192; value and use of, 38, 186, 191
- Phosphate of ammonia: in disease control, 85; tests of on 12 demonstration turf gardens, 214, 217
- Phosphatic fertilizers: kinds and chemistry of, 124; use of, 165
- Physics of agriculture, book on, 105
- Poa annua, tests of on 12 demonstration turf gardens, 218
- Poa bulbosa, for winter greens in the South, 164
- Potash: muriate of, tests on 12 demonstration turf gardens, 214, 216; role of in plant nutrition, 165
- Poultry manure tankage, tests of on 12 demonstration turf gardens, 214
- Power sprayer, use of in applying mercuric compounds, 111, 179
- Professional's view of turf problems, 32
- Putter, mechanical, testing turf with, 3
- Putting greens:
 - American, excellence of, 20
 - bent, 59
 - Bermuda: double, 175, 196; improving texture of, 206; winter treatment, 175, 196
 - building, 114, 137, 140, 142, 147, 149
 - changing grasses on, 176
 - creeping bent, cost of planting, 114, 149
 - fertilizers, tests of on 12 demonstration turf gardens, 214
 - grasses, tests of on 12 demonstration turf gardens, 218
 - measuring area of, 205
 - putting qualities of turf, testing, 3
 - rebuilding, 137, 140, 142
 - rolling, 38
 - winter, in South, 164, 166, 175, 196
- Rain, artificial, 108
- Reports: demonstration turf gardens for 1929 season, 210; Green Section, annual, for 1928, 23
- Research: in Great Britain, plans for, 44, 106; need for, 126
- Rhode Island bent (Colonial bent): tests of on 12 demonstration turf gardens, 218, 219
- experiment station, soil studies at, 6
- Rolling in early spring, 38
- Roses, bulletin on, 106
- 'Rotenone, 199
- Rough, cleaning, 37
- Rye grass for winter greens in the South, 166
- Salt in weed control, 226
- Sand, neutralizing alkalinity of lime in, 112
- Scald, nature of and effects of lime and fertilizers on, 82
- Seaside bent: sown on old turf, 177; tests of on 12 demonstration turf gardens? 218
- Semesan, controlling brown-patch with, 179
- Sewage sludge, tests of on 12 demonstration turf gardens, 214, 217
- Shaded areas, improving turf on, 58
- Shallow surface soil, treatment of, 185
- Shrubs, transplanting, 202
- Silt, hard, treatment of, 185
- Sludge, tests of on 12 demonstration turf gardens, 214, 217
- Snow-mold: control of, 166: results of during winter of 1928-1929, 134
- Snow on greens, 79
- Sod cutting, moving, and relaying, 137, 140, 142
- nursery, 150
- Sodium chlorate in weed control, 226
- Sodium nitrate compared with ammonium sulphate, 57
- Soil: acid and alkaline, 59, 62; books on, 105; clay in, determining need for fertilizers, 18; in relation to golf turf, 62; studies at Rhode Island State station, 6; surface, shallow, treatment of, 185
- Sorrel and its control, 221
- Sprayers, power, use of in applying mercury compounds, 111, 179
- Sulphate of aluminum, 130
- Sulphate of ammonia: compared with nitrate of soda, 57; effect of on turf disease, 82, 110; neutralizing alkalinity, 112; tests of on 12 demonstration turf gardens, 214, 217
- Sulphate of iron in weed control, 221
- Superphosphate, definition and chemistry of, 124
- Tax, Federal, on golf course dues and fees, 187
- Tees, grasses for, 59
- Tennis courts, clay, building, 170
- Top-dressing materials: compost, 204; ridding of weed seeds, 167; use of manure in, 226
- Top soil, preparing, 147
- Tractors, bulletin on, 106
- Transplanting trees and shrubs, 202
- Trees: bulletins on, 106; caring for, 19; roadside, 70; transplanting, 202
- Urea: in disease control, 85; tests of on 12 demonstration turf gardens, 214
- Vegetative planting, 79, 114, 149, 150, 176, 185
- Velvet bent: as a lawn grass, 202; tests of as putting green grass on 12 demonstration turf gardens, 218

- Water supply, bulletins on, 106
- Watering : early-morning, in brown-patch control, 131; frequency of, 115; quantity of, 123
- Weather lore frequently reliable, 36
- Weeds :
- bulletins on, 106
 - controlling: by fertilizing, 39 ; with paper mulch. 79. : with arsenate of lead, 207; **with iron sulphate**, 221; with salt, **sodium** chlorate, and calcium chloride, 226
- Weeds (continued) :
- coco, 225
 - effect of soil acidity on, 202
 - introduced in compost, 167
 - nut grass, 225
 - pearlwort, 115
 - sorrel, 221
- Winter greens in the South, 164, 166, 175, 196
- Zonate eye-spot disease of turf grass, 71

AUTHORS' INDEX

- Arnott, R. F. Old and new turf problems as viewed by a green-committee chairman, 30
- Aston, William H. Essentials of cost grouping, 200
- Beckett, Howard Covering Bermuda greens for winter protection, 175
- Bohne, C. O. A rapid resodding job, 140
- Bryant, J. W., Jr. Green cost analysis, 34
- Dachnowski-Stokes, A.P. Peat and muck, 192
- Dahl, Arnold S. Results of snow-mold work during winter of 1928-1929, 134
Zonate eye-spot disease of turf grass, 71
- Drechsler, Charles Leaf spot and foot rot of bluegrass, 120
- Goetz, A. J. Brown-patch and its control at St. Louis, 179
- Hinman, Thomas P. Double Bermuda greens and their treatment, 196
- Hyde, Arthur M. Agriculture needs strengthened research, 126
- Kidd, Harry P. The Metropolitan district green section, 47
- Kuykendall, Roy Control of coco or nut grass on southern golf courses, 225
- Lipman, J. G. Soils in relation to golf course turf, 62
- McAtee, W. L. Preventing birds from damaging greens, 154
- McRostie, G. P. Improvement of golf turf in Canada, 50
- Mackie, John B. A professional's view of turf problems, 32
- Monteith, John, Jr. Brown-patch fungicides, 76
Changing grasses on putting greens, 176
Cultivating creeping bent a hundred years ago, 8
Demonstration turf garden reports: summary of reports from twelve gardens for 1929 season, 210
Some effects of lime and fertilizers on turf diseases, 82
Testing turf with a mechanical putter, 3
Use of peat, muck, and humus on golf courses, 191
- Morley, John Greenkeeping yesterday and today, 26
- Pahl, Erich W. Demonstration turf garden at Interlachen Country Club, 222
- Rockefeller, William J. Cutting, moving, and relaying sod, 137
- Tregillus, C. A. The new experimental turf garden in Chicago, 47
- Vanderpool, Wynant D. The organization of the Green Section, 45
- Walton, W. R. Cutworms on golf greens, 156
- Welton, Kenneth Building clay tennis courts, 170
Green Section extension work, 54
Rebuilding the putting green, 142
- Westover, H. L. Annual report of the United States Golf Association Green Section research committee for 1928, 23
- Wilson, F. H., Jr. Demonstration turf garden at Charles River Country Club, 224
The new Green Section demonstration plots as an aid to the greenkeeper, 49