

TIMELY TURF TOPICS

Issued By The

UNITED STATES GOLF ASSOCIATION GREEN SECTION

P. O. Box 73

BENJAMIN FRANKLIN STATION

WASHINGTON, D. C.

FALL TURF MEETING: The annual turf meeting sponsored jointly by the U.S.G.A. Green Section and the Greenkeeping Superintendents Association will be held at the Arlington Turf Garden on Monday and Tuesday, September 22nd and 23rd. Hotel Hamilton will again be the general headquarters. Reservations should be made early because of the increased demand on Washington hotels due to the defense activities.

The program will begin at Arlington Farm at 9:00 o'clock Monday morning immediately following registration. The program this year has been expanded to two days at the request of visitors who came last year, particularly among them those who traveled long distances. During the two days the experimental plots on the grounds of the Bureau of Plant Industry as well as those in the National Capitol Parks will be reviewed by the members of the Green Section Staff. Visits will be made to experimental areas located on near-by golf courses. Opportunity will be given for small group discussions of any specific problems you may have in mind. There will be speakers on various subjects of common interest Monday afternoon.

Luncheon will be served on the lawn at Arlington at noon on Monday. The banquet will be held at Hotel Hamilton, Monday night.

DRY WEATHER ALTERS DISEASE CONTROL: So far, dry weather east of the Mississippi has reduced the amount and severity of turf diseases. However, it may be expected that with the recent and frequent rains and thundershowers this favorable report may be reversed somewhat. Since there has been less disease, fewer applications of fungicide have been made this season. If wet weather continues and diseases appear, allowance must be made during the first few applications of fungicide for the smaller amounts of mercury used in recent months. With hot weather expected to continue, it is safer to make more frequent applications until a reserve has been built up, than to increase the amount of mercury in any single treatment. For summer rates, see *TIMELY TURF TOPICS*, June, 1940, an article on brownpatch control and the July, 1940 issue, an article titled Summer Fungicide Rates.

ECONOMY FROM THE USE OF RESISTANT STRAINS: Greenkeepers might be wise to consider the use of disease resistant strains of bent grasses which are now all the more desirable because of the present high cost of mercury. It is recommended that anyone interested in them visit the nearest Experimental Green located in the principal golf districts throughout the country. In case of doubt concerning the location of these, reference should be made to a map and an article published in *TIMELY TURF TOPICS* for June, 1940. This office will be very glad to supply any names and addresses upon request.

POA ANNUA A SERIOUS PEST: There have been many reports of unusually severe invasions of Poa annua in bent turf, particularly in the East this season. Unfortunately, no method of control can be recommended. Reports from several of our Experimental Greens verify the observations made over a period of years on the Turf Garden at Arlington, that some of the strains of creeping bent are conspicuously more resistant to invasion by Poa annua than are the commercially available strains.

If you are having trouble with this very persistent pest and there is an Experimental Green in your district, you might be interested in visiting it and observing which of the strains are more resistant to invasion by Poa annua.

July 1941

MERCURY PRICES: The May, 1940, issue of **TIMELY TURF TOPICS** analyzed the mercury price fluctuations from 1904 to 1939 for the users of mercury fungicides. Coincident with the outbreak of hostilities between Great Britain and Germany in September, 1939, the price of mercury rapidly soared reaching a monthly average of \$180.92 per 76 pound flask in March, 1940. At this price level it was considered unwise for clubs to set aside reserves of mercury fungicides. In March, 1941, quicksilver was still selling for \$180.00 per flask, at the end of June, \$190.00.

The future trend of mercury prices may be deduced from the warning issued in a newspaper release dated March 28, 1941, of Leon Henderson, Administrator, Office of Price Administration and Civilian Supply. Mr. Henderson declared that, "The present price of quicksilver is too high and a lower level can and should be reached". He pointed out that the present price is "higher than the average price for any year, is 40 percent above the peak figure agreed upon during the critical period of 1917-18 - when the general price level was much higher than it is now - and represents a 'skyrocketing rise' from the August 1939 price of \$84 per flask".

He further pointed out that the production from domestic mines and imported ore "exceeds the indicated total consumption, including requirements for national defense".

He believes that present prices are already resulting in a trend toward the substitution of other materials for mercury and "that when the mercury trade examines the true demand-supply situation and realizes the present and potential emergency powers of the Government, producers, dealers and consumers will all realize that stocks in the hands of consumers plus the indicated production refute any talk of a 'bottleneck' in this industry, and that the artificial portion of the price structure should be removed".

PREVENTION OF SUN-SCALD: Greens are occasionally observed to wilt badly in the sun following a downpour of rain in which they are left in a water-logged condition for a period of days. If neglected the scald that follows can be serious enough to destroy comparatively large areas and mar the appearance of a green within a remarkably short time.

It is believed that much of the root system dies under conditions of prolonged saturation with water. Practice has shown that if the tops are prevented from wilting until the roots have had a chance to become re-established, serious injury may be averted. It pays to check this condition by frequent but very light sprinklings at repeated intervals during each of these critical days.

KENTUCKY BLUEGRASS SEED CROP IS AMPLE: In spite of a drought in Kentucky and excessive rain elsewhere which led to rumors that a shortage in the production of Kentucky bluegrass seed was inevitable, a recent check-up with the Agricultural Marketing Service, U.S.D.A. shows that the crop this year is more than enough to meet our domestic needs. There is also enough to meet our normal export trade as well.

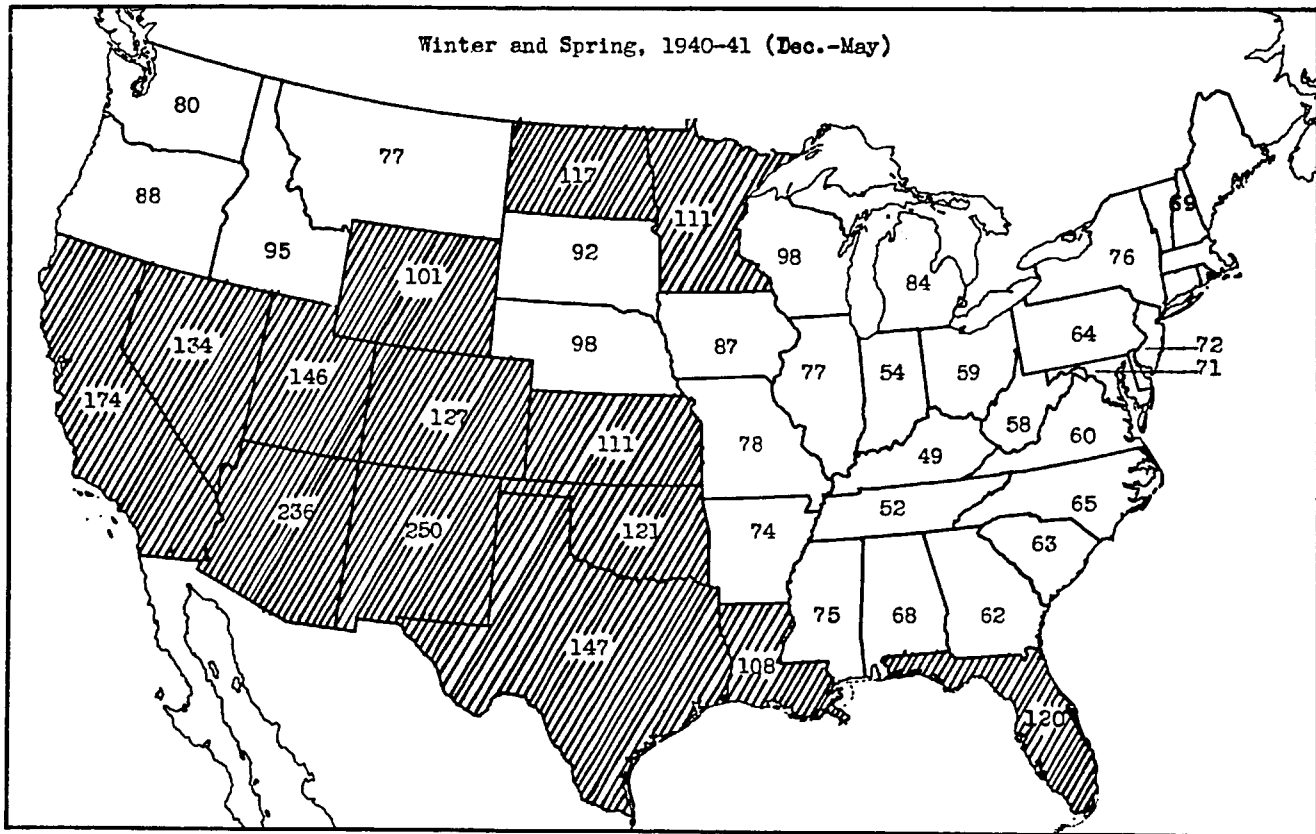
While it is a fact that the dry weather in Kentucky and Ohio has made losses in cleaning greater, most of the seed comes from states farther west where there has been ample rainfall. The increased production from Nebraska and Minnesota will almost offset these losses.

While the total production this year is not quite as high as in 1940, it is ahead of the average for the past 5 years by some 200,000 bushels, and the amount of seed carried over into 1941 was 10,000,000 pounds as opposed to 5,000,000 pounds for 1940.

WEBWORMS ON GREENS IN DRY WEATHER: During prolonged periods of dry weather with little or no succulent growth appearing on the unwatered turf, webworms tend to concentrate in artificially watered areas of grass. When laying their eggs, the moths seem to seek places of luxuriant growth, and the destructive worms that hatch out 7 to 10 days later are usually more abundant there. Thus well-kept lawns and golf greens offer ideal conditions for the egg-laying activities of these moths and suffer the most extensive injury. Suggestions for the control of webworms were included in an article appearing in **T.T.T.**, June, 1940.

UNUSUAL WEATHER: Throughout most of the country those who are caring for turf, like farmers, usually find justification for complaints that there is either too much or too little rainfall. This season has been no exception. In fact, it will doubtless be talked of among weather reporters in this country for years to come because of its epic proportions in both wet and dry extremes.

The Weather Bureau reports that the 6-month period, December 1940 to May, 1941 inclusive, was the driest on record in all states from North Carolina and West Virginia northward and north eastward, and in Georgia, Tennessee, Kentucky, and Ohio.



The nearest comparable year through the winter and spring season was 1930, with its record-breaking drought in eastern sections of the country, being then the most severe from the central Mississippi Valley eastward. For this area, the spring of 1941 had less rainfall than that of 1930 in Pennsylvania, New Jersey, West Virginia, Virginia, Tennessee, Kentucky, Ohio, Indiana, and Iowa. The severe injury to turf in the 1930 drought was due largely to its extension through the summer season when it was accompanied by extremely hot weather and excessive evaporation.

From the map it will be seen that this year the drought extended as far as the Mississippi and Missouri River Basins, whereas the southwest portion of the country had excessively heavy precipitations reaching proportions where it was destructive in certain portions of the southern Great Plains. In some areas, especially in Oklahoma, the continued heavy rains were accompanied by high winds and floods. California, Arizona, and New Mexico had rainfall far above their normal quotas, averaging for the winter and spring months 174%, 236%, and 250% respectively, whereas the northwestern states of Washington, Oregon, Idaho, and Montana actually suffered from some deficiency.

WEED SEED CONTAMINATE COMPOST: Compost piles must be kept free of annual weeds which ~~are about~~ to flower and set seed. If allowed to remain undisturbed, the compost will be heavily infested with weed seeds by the end of the growing season.

The offending plants should be killed as often as they appear in the immediately surrounding areas. An effective method is to apply a spray of sodium arsenite at the rate of $\frac{1}{2}$ to 1 pound to 1,000 square feet. This should be applied to the foliage in the afternoon of a hot sultry day to obtain the greatest degree of burn. Hoeing is the next most efficient method provided the weeds are cut below the surface of the ground. A scythe is not recommended as many noxious weeds will send out shoots from the stumps that are left.

ACREAGE IN TURF. - ROAD SHOULDERS: It has been estimated that along the 3,000,000 miles of road in this country there are 10,000,000 acres which are or should be in turf. This 10,000,000 acres equals the area available for crops in the entire state of Pennsylvania, according to figures of the 1940 census, or approximately one-third the total area of the state of Pennsylvania.

MERCURY SUBSTITUTES: From the extensive scientific tests which are now being made on the control of turf diseases in which a large number of non-mercury organic compounds are included, it is probable that certain fungicides will be found that will not only be as desirable to use as bichloride of mercury, calomel and organic compounds of mercury, but at the same time can be supplied in quantities at more favorable prices. At present prices, there is a tendency to buy poorer grades of mercury fungicides with correspondingly lower content of mercury. The result can only mean poorer disease control. It is regrettable that certain firms will possibly find the present situation conducive to the introduction of new and improperly tested mercury substitutes of doubtful value or perhaps the introduction of old and relatively inefficient products, sold under new trade names. In making a selection, one should be guided by the mercury content of the product and greater care than ever should be exercised to avoid purchasing fungicides with mercury content lower than that required by law.

CONTROLLING GREEN SCUM IN PONDS: Those in charge of turf frequently have the care of ponds and pools. During the summer months ponds and pools commonly become covered with a green scum which is composed of a growth of microscopic plants known as algae. Instead of developing a green scum the water has been known to turn blood-red in color from the same cause. In addition to spoiling the appearance of the water, the algae eventually decay, giving off a very unpleasant odor. It is consequently desirable to control the growth before it is given an opportunity to accumulate conspicuously.

It is possible to check the growth of algae without injuring fish or other forms of animal and plant life by using finely powdered copper sulfate (blue vitriol) at the rate of 1 pound to a million gallons of water. According to the Bureau of Fisheries, it has been established that $2\frac{3}{4}$ pounds of copper sulfate per 1,000,000 gallons of water will not kill such fish as suckers, carp, large mouth black bass, pickerel, goldfish, yellow perch, sunfish, and catfish. Trout are less resistant to the poisonous action of copper sulfate, a dilution of $1\frac{1}{8}$ pounds of the chemical in 1,000,000 gallons being the safe limit of strength for them. This small amount of copper sulfate is not likely to be injurious to turf when the treated water is used for watering.

If the water is particularly hard, the rate mentioned above may have to be increased. The number of gallons of water in the pond may be determined by calculating the volume in terms of cubic feet and then multiplying this figure by 7.5 which is the number of gallons in a cubic foot.

The copper sulfate is best applied by placing it in a flannel bag of heavy texture and by trolling the bag rapidly through the entire area of water until the chemical is completely dissolved.

It can not be expected that one treatment will rid the water of algae for the season. The treatment should be repeated whenever the scum begins to accumulate. If numerous treatments are required some injury to fish and other aquatic life feeding in the water may result.