A MODERATE CROP OF KENTUCKY BLUEGRASS SEED IS REPORTED

Dry weather this season through the Middle West has affected the growth of Kentucky bluegrass not only in fairways but also on farms from which Kentucky bluegrass seed is obtained. According to the estimates of the Bureau of Agricultural Economics of the U. S. Department of Agriculture, the crop of Kentucky bluegrass seed this year is expected to be about half of that produced in 1935.

This summer's drought will undoubtedly result in the killing of large amounts of Kentucky bluegrass on farms as well in lawns, parks and on golf courses. Therefore, there is likely to be an increased demand for Kentucky bluegrass seed for reseeding purposes during the late summer and early fall of this year. The increased demands coupled with a smaller crop have already materially affected the price of Kentucky bluegrass seed and are likely to result in even higher prices before the season is over. Therefore, golf clubs where the drought has resulted in any considerable loss of turf should anticipate their needs as far as possible and get their supplies of seed early. The reseeding should be done in late August or early September to take advantage of favorable fall-growing conditions.

According to the Department of Agriculture figures, the average annual production of rough cured seed in bushels during the past few years is as follows:

Year	Bushels	Year	Bushels
1932	1,400,000	1935	2,700,000
1933	1,300,000	1936	1,200,000
1934	400,000	to	1,400,000

Ten years' average annual production is 1,046,000 bushels.

The factor mentioned as probably the most important cause for lower yield was the unusually dry weather in May and early June.

The stripping of the seed was uninterrupted by rain anywhere this year and the seed was cured quickly under almost ideal conditions, and therefore should be brighter than usual. Unless there is too much lightweight seed, the germination of the seed in the Western District is expected to average better than last year, which was reported below average for that year.

New crop 21-pound seed was being quoted on June 27 by a few dealers at about $18 per 100 pounds, compared with $12 last year, $22.50 in 1934 and $12.50 in 1933 on corresponding dates.

A number of the wholesale seedsmen reported that the spring demands, both domestic and export, for Kentucky bluegrass were unusually good, but doubtless some of this seed was bought for speculation because of the relatively low prices.

In Kentucky the production of rough cured seed was much below average, one-fifth of the yield in 1935, while in the Western District including Missouri, Iowa, Nebraska, Kansas, Minnesota, Wisconsin and a few other States the yield may be about twice the ten-year average and two-thirds of that in 1935. Some of the data on rough cured seed reported is shown for the two sections as follows:

Year	Production in Bushels	
	Kentucky	Western District
1921-30	435,000	611,000
1931	2,300,000	1,200,000
1932	400,000	1,000,000
1933	600,000	700,000
1934	175,000	225,000
1935	900,000	1,800,000
1936	175,000	1,200,000

SEASONAL REMINDERS

Extra Jobs: July and August are, as a rule, the busiest months for the greenkeeping staffs of northern golf courses. Weather conditions are usually unfavorable for growth of turf grasses. Extra work is required for watering, controlling insects and diseases, and for many other jobs incident to nursing grass through these trying months. Club officials can greatly help the cause of better turf maintenance during these months if they will withhold orders for extra jobs which are not absolutely necessary. Individually these odd jobs may appear insignificant but collectively they may divert altogether too much labor and attention from the main task of greenkeeping. It is far better to simply make record of these additional jobs and let them wait, if possible until the fall months when grass naturally gets along with little coaxing.

Reduce Fungicide Rate: During hot, sultry periods it is important to reduce the amount of chemicals used on turf in order to avoid burning. In such periods brownpatch is often active and fungicides are required at frequent intervals to preserve the turf. Rates of application of these fungicides should be reduced, however, to 1/3 or 1/6 the normal rates. Reduced quantities applied frequently are more effective in controlling disease and are much less likely to injure the grass than are the infrequent heavier rates.

Water Shortage: Drought in certain sections of the country has greatly curtailed the use of water on many golf courses. Even though there has been rain in the affected areas there has not been an appreciable increase in the reserve supplies of water. Therefore it is likely that watering operations will have to be curtailed on some courses during the remainder of the summer.

When the water supply is threatened it is well to raise the mowers higher to provide for additional shading of the ground and prevention of excessive evaporation. It is also better to gradually reduce the amount of water that is used than to stop watering operations suddenly. Grass that has been watered in excess, as is so often the case on putting greens, will have a shallow root system and is likely to suffer severely if the watering is suddenly stopped. A gradual reduction in the amount of water will give an opportunity to the plant to adjust itself slowly to changing conditions and it will be able to recover more rapidly in the fall when rains are adequate.

Poison Ivy: During recent years poison ivy has been neglected along with other weeds on many golf courses. It now has become too generally distributed and troublesome. A comparatively cheap but effective way of killing this pest is with the use of sodium chlorate. The best time to use this chemical is in August.

A method found to be effective is to spray the foliage of poison ivy with a solution of sodium chlorate in the proportion of 1½ pounds of the chemical to 1 gallon of water. The best results are obtained when the spray is used during a period of hot, sultry weather following a few cloudy days and occasional showers, as occur often in August. Enough of the liquid should be used to thoroughly wet the foliage without causing dripping from the leaves. This spray can be used for killing poison ivy around the trunks of trees provided the material is not applied so heavily that there is a large amount of dripping from the leaves. If there is any excess dripping there may be some injury to the trees.

In using sodium chlorate care should be taken to avoid getting the material on clothing or any other material that will burn.

Peat or Muck: On some golf courses there are deposits of peat or muck which form excellent material for mixing in topdressing. This material can be more easily and quickly moved during periods of drought than at other seasons.

Summer Fertilizing: Turf that is not forced too vigorously with fertilizer during the summer months will present less maintenance difficulties than turf that

is over-fertilized. Even though the greens look slightly yellow and starved at this time it is well to withhold much fertilizing for at least another month. Where unusual damage has occurred from disease attacks and other causes, a light application of fertilizer will prove to be a great aid in hastening recovery, if the greens have previously been kept rather undernourished.

Algae on Greens: During the summer months, particularly in moist periods, areas of turf where the grass is rather thin are likely to be covered with a green scum. This scum is produced by a growth of minute plants known as algae. Excessive watering also encourages their growth.

The growth of algae can be checked by applications of corrosive sublimate at the rate of 1 ounce to 1,000 square feet. In cases where heavy layers of scum have dried out and formed a paper-like crust, it is advisable to go over the affected areas with a hand rake to break up the crust and to then apply a light topdressing.

Controlling Algae in Ponds: During July and August ponds and other water hazards are often covered with a green scum of algae. This growth is likely to accumulate near the edge of water and as it decays it gives off a strong, unpleasant odor. The growth of algae can be checked in ponds by the use of copper sulphate. The rate of application is 1 pound of copper sulphate to a million gallons of water. In calculating the number of gallons to be treated, take the cubic capacity of the pond and multiply it by 6.25. The copper sulphate is placed in a burlap bag which is dragged through the water until the chemical is all dissolved.

Watering greens: Late in summer greens are inclined to become thin and somewhat discolored and there is always a tendency to attribute the injury to lack of water. The recovery of many greens is delayed rather than speeded by the use of excessive amounts of water, especially during July and August.

Pythium disease: A common cause of injuries to putting greens during extremely hot weather is a fungus known as Pythium. As yet there is no satisfactory fungicide to control this disease. The hot weather of this summer has been favorable for the development of the pythium disease but the damage has been much less than would have been the case had there been an abundance of rainfall along with the excessive heat. Where greens have been watered in great excess, however, there has been much damage from this fungus. A more judicious use of water is the only remedy now known for this disease and under most conditions this remedy proves adequate.

Spiking greens: During dry periods such as have prevailed this summer there is likely to be much injury to turf through the drying out of the surface soil in irregular patches. These areas usually occur on the higher portions of the green or on slopes that are more wind-swept than the rest of the green. Ordinary sprinkling will not prove sufficient to help the grass recover from this injury. Spiking with a spike roller or with a fork to enable water to penetrate more rapidly will aid in the recovery of these dry areas. Special hand watering, however, is essential to assure a thorough moistening of the soil to a depth of several inches. After spiking and rolling, these dry areas should be tested by cutting into them with a knife or with some soil sampling device to make sure that there has been sufficient water added to wet the soil to a depth of several inches.

Remove Crabgrass Early: The most effective way to reduce next year's crop of crabgrass is by preventing the production of seed this season. Crabgrass is an annual plant which produces seed during late summer and fall. This seed remains in the ground and germinates the next spring. Often the removal of crabgrass from greens is delayed until after it has matured much seed. The weeding operation can be done more rapidly when the plants are small than when they are old enough to produce seed. The scars where the weeds are removed will be smaller if they are taken out while they are young. It is well also to remove crabgrass before it goes to seed at the edges of the green, especially from the mounds from which seed may be easily washed to the putting green.

Compost Piles And Soil Beds: Large quantities of weed seed are planted on putting greens through the medium of topdressing. At this season when weeds are producing seed freely it is important to give special attention to compost piles and soil beds to prevent the production of weed seed on or near the source of topdressing material.