## **Brown-Patch Fungicides**

By John Monteith, Jr.

At this season of the year there is always much discussion as to what chemicals are best for controlling brown-patch. Following the great damage to turf during the summer of 1928 there was evidence of much skepticism as to the value of the common brown-patch remedies. The results at the Arlington Turf Garden and the experiences of many golf clubs would indicate that the common mercuric fungicides are still the most effective chemicals to be used against brown-patch. We can not remind our readers too often that all grass which turns brown is not necessarily suffering from the large or the small brown-A great deal of the loss of turf last season could not be ascribed to either of these diseases. Many of the attempts to check the spread of the browned areas on greens with these fungicides were futile for the simple reason that other diseases or other unfavorable conditions which were not affected by the fungicides were in reality responsible for the damage. In many cases when one treatment failed to check the browning, repeated applications of fungicides and fertilizers were made in an effort to restore the grass to health. In spite of all the warnings against the use of too much or too many chemicals when grass is weakened, it may be safely asserted that in many cases the damage last year was due to injudicious application of chemicals. It must be remembered that there are several diseases of turf and several soil and climatic conditions that are unfavorable to turf production, none of which will yield to brown-patch fungicides.

Experiences last summer showed that when properly used the common mercuric fungicides which we have recommended in recent years are effective in controlling normal attacks of brown-patch. We therefore continue to recommend the use of the familiar remedies now on the market, including bichloride of mercury (corrosive sublimate), calomel, and chlorophenol mercury (Semesan). There are also combinations of bichloride and calomel sold under trade names

which are equally effective.

As we have recommended in the past, we advise the use of fertilizers in addition to fungicides wherever fertilizers are necessary. The fungicide merely checks the disease and the fertilizer then helps to develop a vigorous growth of grass. It must be borne in mind, however, that when greens are abundantly supplied with food they should not be given any further fertilizers when the grass is weakened by brown-patch or any other injury. When grass is not thriving, the common assumption apparently is that it is starved. Such is not necessarily the case, and attempts to force growth by fertilizers may prove disastrous, as many clubs discovered last summer.

It is a common practice to use the mercuric fungicides as a preventive treatment for brown-patch before the disease appears. Before any further applications are made outside of the amount which has normally been found to be necessary, it is well to make sure that brown-patch is present. Furthermore we must repeat our warning to apply mercuric compounds in smaller quantities than normally at such seasons of the year when grass is likely to be injured by chemi-

cal burns.