Annual Bluegrass Culture

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The following study was set up to evaluate the timing of nitrogen applications and fungicide programs for the maintaining of annual bluegrass during the summer stress and winter stress periods. People have become aware over the past few years that annual bluegrass simply does not die from high temperature alone, but a combination of high temperature, insect problems, particularly of the black Ataenius beetle, and diseases such as anthracnose, and Helminthosporium leaf spot. We have now learned that insecticide applications have to be made either at the time the black Ataenius beetle is laying her eggs in thatch or when the grubs are first observed usually in late June or early July. Failing to do this will result in the wilting and dying of the annual bluegrass turf during the summer stress period. There are also two disease problems which occur during this warm weather which are related to the annual bluegrass senescence. One is anthracnose caused by Colletotrichum graminicola and Helminthosporium leaf spot caused by Helminthosporium sorokinianum. The problem is now being referred to as H.A.S. decline of annual bluegrass. A good preventative fungicide program should begin in early June and continue on through September with a mixture of contact type fungicides such as Daconil 2787, Tersan LSR, Acti-dione TGF and Acti-dione Thiram, together with some of the benzimidazole systemic fungicides such as Tersan 1991, Fungo 50, and Clearys 3336, Proturf systemic fungicide and Proturf Fertilizer plus DSB Fungicide. While all the details have not been worked out it would appear that it is important to have the systemic fungicide applied to the turf prior to the advent of warm weather (3-4 days of 85°F plus). It is most severe when high daytime temperature is accompanied by nighttime temperatures above 65°F. In Michigan this means applying a systemic fungicide somewhere between the first and tenth

of July. H.A.S. decline can occur in June, July or August, but is most severe when it occurs in mid-July probably due to the higher nighttime temperatures which occur at this time of year. In 1975 and 1977, the two worst years for turf loss due to H.A.S. decline, the disease occurred between the 19th and 22nd of July. Having the fungicide on prior to this time is very important. For those who cannot afford to be on such a preventative program, a systemic fungicide application should be made following two nights in a row where the temperature stays above 65 degrees.

From preliminary studies nitrogen fertility appears important in reducing the severity of H.A.S. decline of annual bluegrass. It would appear that one-half lb.of actual nitrogen in June, July and August will reduce the H.A.S. decline severity and make the fungicides more effective. Adequate levels of potassium and phosphorus should also be maintained based on soil tests. While good definitive data are not yet available it would appear that high levels of phosphorus favor the development of annual bluegrass. Therefore, maintaining phosphorus levels on the high side will probably help sustain an annual bluegrass turf.