

LOOKING FOR POA ANNUA THIS SUMMER

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We are looking forward to continuing the Poa annua research project which is being partially funded by the MGCSA. During the past two summers we have identified Poa annua plants on the Oak Ridge Country Club and Interlachen Country Club greens. There have been substantial differences noticeable between the plants! While most have had poor to only fair quality, some do have interesting characteristics such as dark green color, leaves to the base (as many as six live leaves per tiller), good density, freedom from grain, and traffic tolerance. Some maintain better density than bentgrass. There have also been plants with potential resistance to Anthracnose, Brown Patch, and algae. Some individual plants were recognizable throughout the growing season and are undoubtedly perennial in character. Others were identifiable for a few days or weeks and then disappeared into the over-all background population of less recognizable Poa annua plants.

We are at the point now where we need to know what kinds of grasses are on Minnesota golf courses. The first step is to locate material and to observe it on the courses where it is found. Next, we want to collect some of this material and move it to the University for further study, both outside and in the laboratory and greenhouse. We are hopeful that research with this expanded collection will aid us in reaching our objectives. Perhaps some of these plants will also be useful in the Poa annua breeding program.

Unfortunately, time does not allow our personally following Poa annua performance on all Minnesota courses. Therefore, we are asking for your help.

Undoubtedly each of you has seen spots of grass on your greens and collars which caught your eye some time during the year. There is a strong likelihood that these spots are Poa annua plants. There is the likelihood even more interesting plants will show up with closer inspection. Please watch for them this summer. When you see what appears to be especially favorable performance, make a note listing the date, the characteristic and the plant location. You might even consider moving part of the plant into your nursery to watch it closer. Towards fall we will ask for the information and may request a sample of the plant for further research. However, if you notice something especially interesting or puzzling which you suspect we should know about, please give one of us a call. Howard's telephone number is 612/941-2290. Dr. White's number is 612/624-9206.

Because of close mowing, individual plants on greens

may be a bit difficult to recognize. Often we do so based on the belief that Poa annua plants are of a lighter green color than are bentgrass plants. This is not always true. Through closer observation you may find Poa annua plants which are at least as dark as bentgrass. While the miscellaneous Poa annua population tends to bloom over an extended time period, some plants may bloom once or not at all. Many plants are not distinguishable from their neighbors and look similar. Some plants may be identifiable for only a few days or weeks. Others may be recognizable throughout the season.

A short description of those characteristics which will help you distinguish Poa annua from bentgrass growing on greens is covered below:

- 1) **LEAF TIP.** POA ANNUA leaves have blunt (boat shaped) tips. BENTGRASS leaf tips are tapered and sharply pointed.

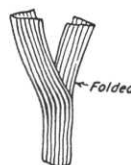


Poa annua

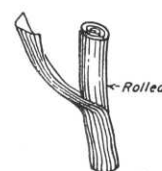


Bentgrass

- 2) **TOP SIDE OF BLADE AND LEAF SHEATH.** Young POA ANNUA leaves will be folded and V-shaped. The upper leaf sheaths will also be folded and flattish in appearance and feel. BENTGRASS leaves are not folded. The emerging young leaves and the upper sheath will be rolled and round. After emergence from the sheath, the blades are flat.



Poa annua



Bentgrass

- 3) **VEINATION-TOP OF LEAVES.** POA ANNUA has one prominent midrib running up the center of the leaves. Side veins are not easily distinguished. When held to light you may be able to see a translucent light-line running either side of the midrib. BENTGRASS leaves do not have a noticeable central midrib. Instead you should be able to spot multiple ridges (veins) running lengthwise uniformly across the width of the leaves.



Poa annua



Bentgrass

- 4) **LEAF COLOR.** POA ANNUA leaves range from light

green to dark green. BENTGRASS leaves generally are rather dark green.

- 5) **LEAF SHININESS.** POA ANNUA leaves are somewhat shiny. BENTGRASS leaves tend to be somewhat duller in appearance and you may notice a "dusty" look to the top side of the leaf.
- 6) **STOLENS.** Stolens are unlikely on POA ANNUA plants growing at greens mowing heights. Spreading occurs through short, near the surface connections which soon rot off leaving each crown as a separate plant throughout most of the year. BENTGRASS plants will usually sprout stolens and spread by this means across the surface of a green.
- 7) **TILLERS PER CROWN.** From late spring throughout summer, POA ANNUA plants appear as groups of similar independent tillers growing together in a relatively roundish configuration. During early spring and fall you may find two or more crowns still connected together. However, the connections soon rot off leaving each crown and tiller independent of the others. Some plants spread more rapidly than do others but not as rapidly as do bent plants. BENTGRASS plants usually will have several tillers growing from a single crown throughout the year.

- 8) **SEED HEADS.** POA ANNUA plants may or may not have seed heads showing. Many plants bloom most of the spring and into the summer. Others produce seed heads for a short time and may bloom only once during the season. A few will not send up seed heads when mowed at greens heights. BENTGRASS does not produce seed heads on greens.

There are other morphological characteristics which aid in identifying POa annua from other species of grasses. These will not be discussed in this article.

While most of you will undoubtedly be able to recognize the above differences without a hand lens, a ten-power lens may aid your identification of these grass plants.

We are planning to spend a week during the late July, early August stress period looking at Poa annua on greens throughout the metropolitan area. We will appreciate hearing from those of you who believe you have interesting Poa annua plants on your course and/or are having a problem growing Poa or bentgrass. Keith Scott has agreed to help set up a schedule for this inspection trip. We will provide more information in the July issue. Later, perhaps next year, we want to extend our observations outstate and to Wisconsin.



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