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TURFGRASS
SCIENCE
PROGRAM

DEPARTMENT OF AGRONOMY

Control of *Poa annua* and *Poa trivialis* in Lawns

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Annual bluegrass (*Poa annua*) and rough bluegrass (*Poa trivialis*) are common weeds on golf courses, but are now becoming a problem on higher mowed turf areas such as lawns and athletic fields. Both of these grasses are considered weeds because they are lighter colored than Kentucky bluegrass and perennial ryegrass. Plus they both tend to thin and die out during the heat and drought of August in Indiana. *Poa annua* is especially noticeable in May and June because of its prolific seedhead production. *Poa trivialis*, on the other hand, rarely produces a seedhead when mowed. Control of *Poa annua* and *Poa trivialis* in lawns is difficult, if not impossible. Thus it may not be economically feasible or practical to attempt control. Instead, it might be better to manage these weeds to keep them alive during the summer and blend them in with the rest of the lawn.

***Poa annua* Biology**

Poa annua is a winter annual that germinates in the late summer/early fall once soil temperatures fall below 70° F. Seedlings mature in the fall, overwinter in a vegetative state, and produce seed in late spring and early summer. Annual bluegrass is a prolific seed producer. An individual plant is capable of producing more than 360 viable seeds. The seed may lie dormant in the soil for many years before germinating. Annual bluegrass flowers and produces seed over several months and at any mowing height. *Poa* grows well under short days and cool conditions, and it will out-compete all other turf species during late fall

and early spring. *Poa* often dies in the heat of the summer (but may survive the stress). However, we now know there are also perennial types of *Poa annua* that will live through the stress of the summer, primarily in northern IN.

Chemical Control

Chemical control of annual bluegrass can be attempted with either preemergence herbicides and/or with a postemergence herbicide called ethofumesate (Prograss). Ethofumesate is applied mainly as a postemergence herbicide, but it exhibits some residual preemergence control. Ethofumesate can be applied to Kentucky bluegrass and perennial ryegrass lawns, but it must be applied by professionals only. Two or three applications of ethofumesate applied between September and December are recommended per year. The applications should be approximately four weeks apart. Results may be seen that fall; however they are usually observed the following spring. Refer to label recommendations for specific instructions.

Most preemergence herbicides on the market can be used in *Poa* control programs. Application timing is very important, so herbicides must be applied in early fall (early-September) prior to *Poa* germination. A second application will be needed in the spring to control spring germinating *Poa annua*. This technique may take many years to reduce the *Poa annua* populations and it will not be effective on the perennial type of *Poa annua*.

<u>Maintenance Practice</u>	<u>To encourage <i>Poa annua</i></u>	<u>To discourage <i>Poa annua</i></u>
Irrigation	Light and frequent	Deep and infrequent
Mowing Height	2 inches or below	3 inches or above
Fertility	Spring N, High N and P when <i>Poa</i> is germinating	Fall N, Low N and P
Aerification	Avoid, <i>Poa annua</i> is favored under compaction	Aerify as often as possible

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***Poa trivialis* Biology**

Poa trivialis is a perennial grass that spreads by stolons forming light green patches in the turf. It is best adapted to shady, moist, or over-watered sites, and because of this, it often appears in mixtures with Kentucky bluegrass and perennial ryegrass recommended for shady areas. Two theories persist about how *Poa trivialis* is introduced to a turf stand. Some believe that *Poa trivialis* grows naturally over most of the world and *Poa trivialis* seeds or stolons can germinate after lying dormant for many years, thus contaminating a

turf stand. Others believe that it is introduced as a contaminant in turf seed and seed producers growers have since self-imposed *Poa trivialis* growing and shipping restrictions to help prevent this.

Control

There is no selective control of *Poa trivialis* today, though scientists are trying to develop one. Nonselective control with glyphosate or glufosinate followed by reseeding may offer the best chance of control of *Poa trivialis*.

<u>Maintenance Practice</u>	<u>To encourage <i>Poa trivialis</i></u>	<u>To discourage <i>Poa trivialis</i></u>
Irrigation	Light and frequent	Deep and infrequent
Mowing Height	2 inches or below	3 inches or above
Drainage	Poor drainage favors	Good drainage to remove excess water
Traffic	Limit all traffic	<i>Poa trivialis</i> cannot withstand traffic

More information and mentioned publications are available at www.agry.purdue.edu/turf