



Deal Says Air Pollution Damages Annual Bluegrass

Air pollution hasn't been given proper blame for causing damage to golf courses and lawns, says University of Maryland Turf Specialist Elwyn E. Deal.

Plants show harmful effects to air pollution well before humans become uncomfortable, he reveals. An oxidant concentration of about 0.15 ppm is required for human discomfort, but plants begin to show harmful effects at one-third this concentration, Deal explains. Table 1 shows

the susceptibility of common weeds to air pollutants.

Perhaps a closer look at a relationship between air pollution, turfgrass and annual bluegrass around cities should be taken, Deal suggests. Many cases have been cited in which annual bluegrass has continued to die, often with few or no positive disease symptoms apparent and even after fungicides were applied.

High temperatures that the plant cannot tolerate have been blamed for annual bluegrass injury in warmer urban areas, but perhaps a combination of weather and air pollution was the cause of damage, Deal says.

Table 1. Decreasing order of susceptibility of ten common U. S. weeds to three atmospheric pollutants (Benedict and Breen).

Sulfur dioxide	Hydrogen fluoride	Oxides of Nitrogen
*Chickweed	*Nettle-leaf goosefoot	*Mustard
*Mustard	*Chickweed	*Sunflower
*Annual Bluegrass	*Pigweed	*Annual bluegrass
Sunflower	Annual bluegrass	Dandelion
Kentucky bluegrass	Lamb's-quarters	Cheeseweed
Pigweed (Amaranthus retroflexus)	Mustard	Kentucky bluegrass
Cheeseweed	Kentucky bluegrass	Chickweed
Lamb's-quarters	Cheeseweed	Nettle-leaf goosefoot
Dandelion	Sunflower	Lamb's-quarters
Nettle-leaf goosefoot	Dandelion	Pigweed

* Significantly more sensitive than others in list.

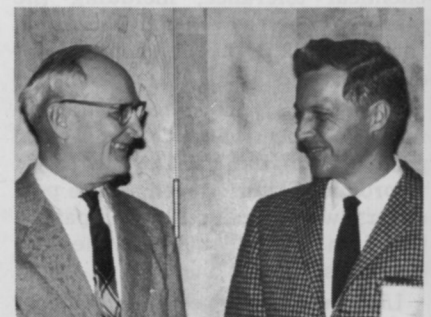
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New officers and Board of Directors for New York State Arborists Association are, left to right: front row, William Herrmann, immediate past president; Fred Micha, 1st vice president; Bill Cadwallader, 2-year director; Stephan Grant, 1-year director; Ira Wickes, Jr., newly elected president; back row, Fred Donovan, 2nd vice president; George Callaway, secretary-treasurer; Carl Lundborg, 3rd vice president; Jack Schultz, 1-year director; and Robert Kessler, 3-year director. Not shown are 3-year Director Douglas Campbell and 2-year Director Edwin Drabek.



William Herrmann, immediate past president of New York State Arborists Association, congratulates this year's president, Ira Wickes, Jr.

Calhoun Is Greens Expert

Charles Calhoun, consulting turfgrass specialist and golf course consultant of Ames, Ia., will have a hand in developing a new Story City (Ia.) golf course, which will be part of a large municipal recreation area.

Calhoun is currently developing grading specifications for tees, greens and fairways. Greens should be of modest contour to provide pleasing yet challenging conditions for the average or novice golfer, he says.