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by Dr. James B. Beard

TURFGRASS RESEARCH REVIEW

**What are the nutritional
requirements of
annual bluegrass?**

Nutritional Requirements of Poa Annua L.

*F. V. Juska and A. A. Hanson.
1969. Agronomy Journal. 61(3):
466-468. (from the Crops Re-
search Division, ARS-USDA,
Beltsville, Md. 20705).*

The objective of this study was to determine the effect of nitrogen, phosphorus, potassium and soil pH on the growth of annual bluegrass roots and shoots. It was conducted under greenhouse conditions with the annual bluegrass plants maintained at a cutting height of 1.5 inches. Two levels of nitrogen, phosphorus, potassium and lime were incorporated into the root zone of two soils, a loamy sand and a silt loam. Data collected included the amount of shoot growth, weight of crowns, amount of roots produced and the number of seedheads formed.

The higher level of nitrogen fertility stimulated shoot and root growth to the greatest extent followed by the higher level of phosphorus. Potassium had very little

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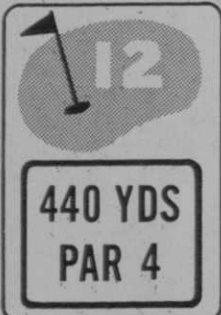
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effect on the rate of shoot growth. Growth was more favorable when a balance in the levels of nitrogen, phosphorus and potassium was utilized. Shoot growth of annual bluegrass was greater at a soil pH of 6.5 compared to 4.5. Seedhead

production was less at a soil pH of 4.5 than at 6.5.

The authors concluded that annual bluegrass can produce more acceptable growth under relatively infertile soil conditions compared to Kentucky bluegrass. However, annual bluegrass is responsive to increased levels of fertility or higher pH levels, particu-

larly on poor, coarse textured soils.

Comments: One approach to controlling weeds is the modification of cultural practices, such as fertility and pH, to the extent that conditions are unfavorable for growth of the weed. The results of this study indicate that control of annual bluegrass by manipulation of the soil pH or the nitrogen, phosphorus and potassium fertility levels is not promising since the optimum levels for growth are quite similar to the optimums for the desirable species. It should be indicated that there are other cultural practices which influence annual bluegrass growth and competitive ability substantially. For example, (a) frequent or excessive irrigation or (b) a close cutting height will favor annual bluegrass growth. □

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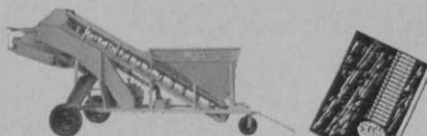
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Other papers of interest:

1. *Phenotypic and genotypic variation and covariation of some quantitative turf characters of Poa pratensis L.* C. B. Berry, D. V. Glover and W. H. Daniel. 1969. Crop Science. 9:470-473. (from the Department of Agronomy, Purdue University, West Lafayette, Ind. 47907).
2. *The how and why of night maintenance.* W. E. Lyons. 1969. Midwest Regional Turf Conference Proceedings. pp. 52-54. (from Lyons' Den Golf, Canal Fulton, Ohio 44614).
3. *Controlling Poa Annua.* W.H. Daniel. 1969. Midwest Regional Turf Conference Proceedings. pp. 86-90. (from the Department of Agronomy, Purdue University, West Lafayette, Ind. 47907).
4. *Southern chinch bug, a new pest of St. Augustinegrass in southern California.* F. S. Mori-shita, R. N. Jefferson and L. Johnston. 1969. California Turfgrass Culture. 19(2):9-10. (from the Department of Agronomy, University of California at Riverside, Riverside Calif. 92502).