

A third issue relates to accusations that turfgrasses are very high users of water. However, research has shown the evapotranspiration rate of plants, including grasses, trees and shrubs, is related to the amount of leaf area. Subsequent studies document that trees and shrubs use far more water than mowed turfgrasses (5). For example, a 12-inch (300 mm) diameter tree used 80 times more water than the turfgrass area under the tree canopy. World plant distributions further support this premise in that the great grasslands are found principally in the semi-arid portions of the world, whereas the great forests are found in high rainfall areas.

Another perception that often is misunderstood is the assumption by many that pesticides and fertilizers are applied to the entire area of the golf course. However, a survey has shown that on average only 21% of the golf course area is maintained as closely mowed, high quality turfgrass surfaces; while the remainder of the area or 79% is maintained as high cut rough, woodland, water and wetland areas (3). Thus, the environmental status for much of the golf course area provides a favorable habitat for wildlife.

Studies have shown the diversity and number of wildlife found on the golf course exceeds that of both adjacent urban areas and animal-crop-horticultural production areas (5). This should be kept in mind, as many activists would argue that the golf course should have a wildlife species population and diversity similar to the original native landscape. However, this is an idealistic approach that does not recognize the reality of the situation where the alternative more likely is that the land would be used for urban development or production agriculture.

Note: These same historical perspectives and trends may also be considered in relation to other types of turf facilities, such as sports fields and lawns.

References:

1. Beard, J.B. 1973. Turfgrass: Science and Culture. Prentice-Hall, Inc., Englewood Cliffs, New Jersey, USA. 658 pp.
2. Beard, J.B. 1982. Turf Management for Golf Courses. Macmillan Publishing Co., New York, N.Y., USA. 642 pp.
3. Beard, J.B. 1994. Environmental protection and beneficial contributions of golf course turfs. Science and Golf II. Proceedings of the World Scientific Congress of Golf. E&FN Spon, London, England, UK. p. 399-408.
4. Beard, J.B., H.J. Beard, and D.P. Martin. 1977. Turfgrass Bibliography From 1672 to 1972. Michigan State University Press. East Lansing, Michigan, USA. 730 pp.
5. Beard, J.B and R.L. Green. 1994. The role of turfgrasses in environmental protection and their benefits to humans. Journal of Environmental Quality. 23(3):452-460.

Clarification: Concerning the Earthworm Happenings article in the May-June issue the phrase "the environmental quality agency in the United Kingdom has essentially eliminated the use of all effective materials utilized in earthworm control," change all to most. Currently, carbendazim and gamma HCH + thiophanate methyl have registration for the control of worm cast formation in turfs. The question being asked in the UK is whether these remaining registrations may also be rescinded.

UPCOMING JB VISITATIONS:

Provided for Institute Affiliates who might wish to request a visitation when I'm nearby:

- Sept. 23 to 25 - Columbus, Ohio.
- Sept. 28 to Oct. 4 - Rome and Turin, Italy.
- Oct. 18 to 25 - Tokyo, Japan.
- Nov. 3 to 7 - Indianapolis, Indiana.
- Nov. 13 to 15 - Rochester, New York.