



TURFAX™

of the International Sports Turf Institute, Inc.

The International Newsletter about Current Developments in Turfgrass

©1995 International Sports Turf Institute, Inc., - All rights reserved.

Volume III Number 5

September-October 1995

CONTENTS

- Moss Management.
- New Publication Available.
- JB Visitations.
- JB Comments - Artificial Turf Trends.
- Upcoming International Events.
- Upcoming JB Visitations.
- Bentgrass (*Agrostis* spp) Genotype Characterizations for 1994 in Torino, Italy.

MOSS MANAGEMENT

Moss is a plant in the class Musci within the division Bryophyta. Most of the mosses that develop as problems in turf areas are green in color. This means they are most likely to develop in turfs which have been thinned or damaged to the extent that openings in the turf allow sunlight to reach the surface, whereon the moss initiates growth. The Metropolitan Golf Association of New York funded a study at Cornell University under the direction of Dr. Norman Hummel which focused on methods for the chemical and cultural control of moss in turfgrasses. Dr. Hummel's work showed the following chemical controls to be effective, especially when combined with specific cultural practices.

In early spring, the application of hydrated lime at 2.5 kilograms per 100 square meters (5 lbs/1,000 sq ft) is effective in burning back the moss.

Then approximately a month after the hydrated lime application and also again in the fall, there are several options in terms of pesticides for the control of moss. The most effective treatment Hummel found was the Scotts Crabgrass Killer which contains a combination of bensulide and oxadiazon. The product is labeled for use on putting greens and provided 83% moss control in a single application under the conditions of the study in New York. It was noted however that the treatment did cause some discoloration to the creeping bentgrass (*Agrostis stolonifera* var. *stolonifera*). Other controls that provided from 53 to 74% control of the moss were siduron and bentazon. Both were safer to use than the bensulide and oxadiazon combination. The mode of action of these chemicals was chronic in nature with several weeks passing following application before a significant decrease in the moss population was observed.

Dr. Hummel's studies indicated that chemical control of moss was maximized by key adjustments in the turfgrass cultural practices. Enhancing the shoot density and health of the turfgrass is important. The best contributing cultural practices consisted of core cultivation followed immediately by a sand topdressing to enhance surface drying. Deep spiking also was beneficial when used in combination with core cultivation. These soil management practices were further maximized when combined with high rates of nitrogen (N) and iron (Fe). For example, moss was eliminated over a period of 2 growing seasons on plots that initially contained 40% moss by increasing the nitrogen rate to 0.4

kg/100 m² (0.8 lb/1,000 sq ft) per growing month. In addition, iron applications at a rate of 170 g/100 m² (6 oz/1,000 sq ft) per growing month was beneficial during the first year, but had no effect during the second year.

To summarize, an early spring application of hydrated lime, followed about a month later and in early fall with an effective herbicide are the first steps in controlling moss. By increasing the nitrogen level during this treatment time the competitive advantage of the turfgrasses is further enhanced at the expense of the moss. It also should be recognized that judicious irrigation and maximizing surface and internal drainage in the soil profile are important in providing an environment that is less favorable for moss growth.

NOTE

The ISTI office will move to the winter location in College Station, Texas the week of October 22.

ISTI Chief Scientist: James B Beard
TURFAX™ Production Editor: Harriet J. Beard

The goal of the six issue per year TURFAX™ newsletter is to provide international turf specialists with a network for current information about turf. This newsletter is faxed to all Institute Affiliates that use the ISTI technical assistance services on an annual basis. Faxing is more costly, but ensures quick delivery to those outside the United States.

For non-affiliates, a TURFAX™ subscription is available by annual payment of U.S. \$60.00. Payment may be made by sending a check to the address given below. Foreign orders please send a check or money order on a U.S. bank.

Direct inquiries to:

International Sports Turf Institute, Inc.
1812 Shadowood Drive
College Station, Texas 77840 USA
Telephone: (409) 693-4066
Fax: (409) 693-4878

NEW PUBLICATION AVAILABLE

Proceedings of the International Symposium on Soccer Fields. by the Committee of International Symposium on Soccer Fields. Soft Science, Inc., 170 pages. (1994).

This proceedings contains the papers presented by 6 lecturers invited to participate in this international symposium on soccer fields. Topics include the following: (a) Present situation and future trends of world soccer fields with special reference to construction and maintenance problems-by Dr. James R. Watson, (b) The scientific basis for soccer pitch construction and maintenance by-Dr. William A. Adams, (c) Root zone mixes, turfgrass selection, and maintenance on the World Cup soccer fields in the U.S.A.-by Mr. Stephen T. Cockerham, (d) The construction and maintenance of soccer pitches in Europe- by Mr. Jeff Perris, (e) A new technology for sports field construction with the randomly oriented, interlocking mesh elements and its actual use case history-by Dr. James B Beard, and (f) Indoor turf/ World Cup 94 project update-by Dr. John N. Rogers III. The text is presented in both English and in Japanese.

Contact: Mr. Susumu Yoshida, Soft Science, Inc., Soft Science Publications, Nishiyama Akasaka Building 7F, 15-18, Akasaka, 2-chome, Minato-ku, Tokyo 107, Japan.

Phone: 81-3-3505-4341

Fax: 81-3-3505-4559

NAME CHANGES:

Plant taxonomists have clarified the scientific names of several turfgrasses:

- Creeping bentgrass - *Agrostis stolonifera* var. *stolonifera*.
- Colonial bentgrass - *Agrostis capillaris*.
- Hard fescue - *Festuca longifolia*.
- Redtop - *Agrostis gigantea*.