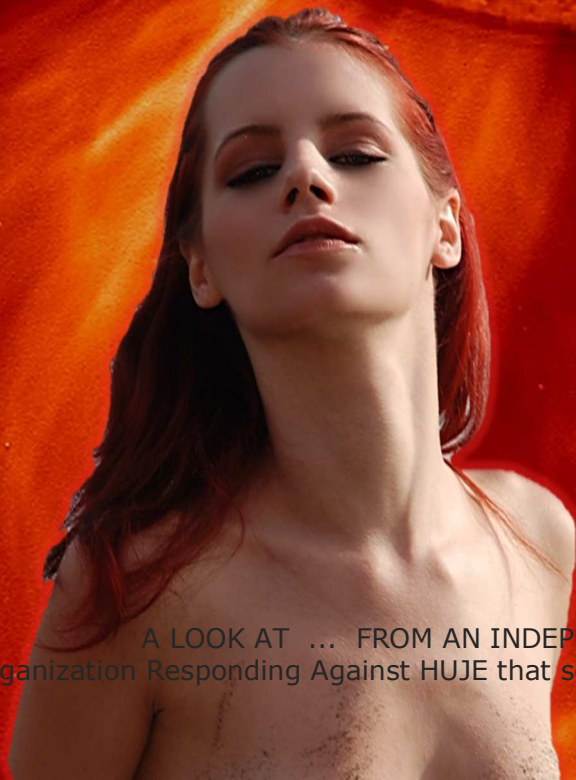


A Look At ...



FON
force of nature

A LOOK AT ... FROM AN INDEPENDENT PERSPECTIVE from
National Organization Responding Against HUJE that seek to harm the Green Space Industry (NORAHG)

Summer Stress on Turf

A Look At Syringing Practices

Kentucky State University

Selected and adapted excerpts

Description of Syringing

Syringing is applying a very light amount of water to cool the surface of turf.

Water is used to cool the grass blades ONLY, and NOT to give turf something to drink.

Syringing is NOT watering or irrigation.

Syringing is a light application of water, intended to moisten the leaves but not the soil.

Often used for cooling turf, syringing can alleviate moisture stress for a short time until soil moisture can be replenished.

Objective of Syringing

In order TO AVOID SEVERE DAMAGE OR DEATH DURING HEAT STRESS, the goal of syringing is to maintain the surface of turf at a temperature BELOW 30 DEGREES CELCIUS (85 DEGREES FAHRENHEIT).

After an extended period of heat stress, the LETHAL temperature for turf is usually 40 DEGREES CELCIUS (100 DEGREES FAHRENHEIT).

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Likely Locations for Syringing

High maintenance turfgrass areas, like golf courses and athletic fields, will need to be syringed in order to reduce heat stress.

Putting greens require the MOST syringing.

Home lawns do not typically need to be syringed — however, if the home lawn begins to suffer from heat stress, irrigation should be scheduled early the next morning.

Advantages of Syringing

Syringing of golf course turf and sport fields is VERY IMPORTANT FOR THE SURVIVAL OF TURF DURING PERIODS OF HEAT STRESS.

The practice of syringing DECREASES THE TEMPERATURE OF TURF, hence minimizing effects of heat stress.

Like any other living organism, turf reacts to temperature, and if it gets too hot for too long, it can die, even if there is enough water in the soil.

In particular, putting greens composed of ANNUAL BLUEGRASS (*Poa annua*) are especially sensitive to heat stress, and must be syringed throughout the summer to keep them from over-heating and dying.

Furthermore, the practice of early-morning syringing will DECREASE TURF SUSCEPTIBILITY TO DISEASES such as Anthracnose Foliar Blight that are stimulated by dew and guttation moisture.

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Effect of Syringing

While syringing, water droplets land on the leaf blades, and, as they begin to evaporate, HEAT IS PULLED FROM THE PLANT AND RELEASED INTO THE AIR.

Manual Syringing

Syringing putting greens can be performed with a sprinkler system, but this is a sure-fire-way to over-water the green and eventually create more problems like algae — a sprinkler system is designed to put out a lot of water in a short amount of time.

Over-watering during periods of heat stress will flush high temperatures into the root-zone, and lead to a further decline of the roots.

Even though it is labour intensive, syringing is preferably performed BY HAND, with a hose and nozzle, so that water can be directed in a controlled manner to hotter, drier areas.

Timing of Syringing

Syringing will need to be performed SEVERAL TIMES PER DAY when temperatures are high.

Typically, hot spots will need to be syringed 1 TO 4 TIMES A DAY, usually DURING EARLY TO MID-AFTERNOON.

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EXAMPLE OF THE EFFECT OF SYRINGING A PUTTING GREEN COMPOSED OF CREEPING BENTGRASS FOR STABILIZING SURFACE TEMPERATURE

(Adapted from Beard, 1979)

Surface temperature of putting green

Time of day	With syringing	With NO syringing
10:00	20 degrees Celsius	20 degrees Celsius
12:00	27 degrees Celsius	29 degrees Celsius
2:00	27 degrees Celsius	33 degrees Celsius
4:00	24 degrees Celsius	30 degrees Celsius
6:00	21 degrees Celsius	23 degrees Celsius
8:00	16 degrees Celsius	16 degrees Celsius

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A LOOK AT is a report presented by National Organization Responding Against Hujer that seek to harm or misinform the Green Space Industry (NORAHG). It is a series of Reports destined for the Green Space Industry, nationwide across Canada, the United States, and overseas. A LOOK AT has been developed for the education and entertainment of the reader by providing TECHNICAL INFORMATION WITH COMMENTARY.

A LOOK AT is TOTALLY INDEPENDENT of any trade association or business operating within the Green Space Industry. Don't thank us. It's a public service. And we are glad to do it.

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The information presented in A LOOK AT is for preliminary planning only. Before making a final decision, the turf manager is expected to obtain trusted expert advice from extension specialists, local distributors and/or agronomists. All decisions must take into account the prevailing growing conditions, the time of year, and the established management practices.

All products mentioned in A LOOK AT should be used in accordance with the manufacturer's directions, and according to provincial, state, or federal law. For the official advantages, benefits, features, precautions, and restrictions concerning any product, the turf manager must rely only on the information furnished by the manufacturer. The mention of trade names does not constitute a guarantee or a warranty.

A LOOK AT, and its various incarnations, is the brainchild of William H. Gathercole and his colleagues.

Here is a brief summary of Mr. Gathercole's career —

Fields of study — Horticulture/Agriculture, Mathematics, Physics

Alma mater — McGill University — University of Guelph — the first person ever to obtain university degrees and contribute to both the professional lawn care and golf maintenance industries

Expertise in — environmental issues and environmental terrorism — turf and ornamental maintenance and troubleshooting — history of the industry — sales and distribution of seeds, chemicals, fertilizers, and equipment — fertilizer manufacturing

Notable activities — worked in virtually all aspects of the green space industry, including golf, professional lawn care, distribution, environmental compliance, government negotiations, public affairs, and workplace safety — supervisor, consultant, and, programmer for the successful execution of hundreds of thousands of management operations in the golf and urban landscape, as well as millions of pest control applications — advisor, instructor, and trainer for thousands of turf and ornamental managers and technicians — pesticide certification instructor for thousands of industry workers — founder of modern professional lawn care industry — writer for industry publications and e-newsletters — the only true reliable witness who intervened in the development of prohibition in the town of Hudson, Quebec

Special contributions — creator of the exception status that has allowed the golf industry to avoid being subjected to the prohibition of pest control products — creator of the signs that are now used for posting after application — co-founder of annual convention for Quebec golf course superintendents — the major influence in the decision by Canadian Cancer Society to stop selling for profit pesticide treated daffodils — retired founder of A LOOK AT and FORCE OF NATURE e-newsletters

Notable award — man of the year for contributions leading to the successful founding of Quebec professional lawn care industry, which served as a beach-head against activism in the 1980s and 1990s

Legacy — for fifteen years, the strategies designed and implemented by Mr. Gathercole and his colleagues ensured the control of environmental activists, providing peace for the entire modern green space industry across Canada — orchestrated, with his colleagues, legal action against activists in the town of Hudson, Quebec

Mr. Gathercole is now retired, although his name continues to appear as founder of A LOOK AT and FORCE OF NATURE e-newsletters.



A Look At ... From an Independent Perspective