

# Influence of Autumn Cultural Practices

## MAINTAINING YOUR SPORTS FIELDS

**T**here are several maintenance practices that may be performed to improve sports fields for the following year that can help to prevent or decrease winter injury to the turf.

1) Increase surface and subsurface drainage. Much of the winter injury that you recognize as dead areas in early spring can be attributed to ice. Winter thaws tend to accumulate in low lying areas and then refreeze causing turf to die. Topdressing these small depressions with soil that has a little more sand than that in the rootzone is helpful. Large areas that collect water will require some reconstruction.

2) Autumn mowing. Raise the cutting height from one-quarter to one-half inch above that used during the summer. Then for the final mowing of the fall, lower the clipping height a little below the standard summer mowing height. This can make the foliage less prone to snow mould and other winter diseases.

3) Food reserves for winter survival and early spring growth. Late fall fertilization increases turf carbohydrate levels and as a result, increases cold hardiness.

4) Early autumn is a good time to remove thatch and practice core cultivation or

aerification as grass plants respond well by producing vigorous roots and lateral growth which does not require extra mowing. This helps to relieve compaction—particularly after heavy use combined with soaking fall rains.

5) While not perhaps common to many sports fields, fall or late winter is a good time to remove tree branches to thin the canopy (yet without changing the shape of the tree) to allow more light to penetrate the playing surface. Before the leaves fall is a good time to note where shade is the most dense and the turf is thinning. Mulching of leaves when they are dry is an excellent way to provide organic matter to the soil. ♦

— summarized by M. Bladon



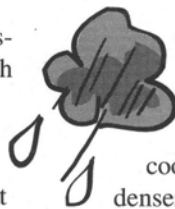
### References

- *GTI Advisor*, "Turf Management: Influence of Fall Cultural Practices," Pam Charbonneau, OMAFRA Turfgrass Specialist, February 17, 1998.
- The Lawn Institute, "Special Topic Sheets: Fall Turf Care," Dr. Eliot C. Roberts, Former Director and Manager.

## Weather Facts

**W**ater vapour is the basic atmospheric ingredient from which comes such forms of precipitation as rain, snow, hail, and sleet. These all originate when water vapour is condensed by the cooling process that normally occurs with the expansion of upward-flowing currents of air.

Clouds consisting of myriads of very tiny water droplets are formed. Before the droplets can fall as precipitation of one kind or another, they must grow to a far larger size. It is believed that they do this when the clouds rise to high altitudes and their uppermost portions drop in temperature to a little below freezing. The water droplets do not freeze at first, but they do become supercooled. As the clouds rise to still higher levels, however, some of the droplets are transformed into ice particles



or ice crystals. These too are quite minute, but gradually become larger by taking moisture from the supercooled water droplets which condenses and freezes on them.

The growing action continues until the ice particles become so heavy that they begin to fall. As they drop through the various layers of the atmosphere, they grow even larger by taking moisture from additional supercooled water droplets, and also by joining with other ice particles.

If the temperature of the atmosphere remains below freezing all the way from high altitudes to ground level, the ice crystals will fall as snow. If the lower layers of the atmosphere are above freezing, the snowflakes turn into raindrops. ♦

### SPORTS TURF MANAGER

Volume 12, Issue 4  
ISSN 1201-3765

is the official publication of the  
**SPORTS TURF ASSOCIATION  
OF ONTARIO**

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### SPORTS TURF MANAGER

is published quarterly by the STA for free distribution to its membership. An annual subscription may be obtained for \$25/year. Please direct advertising inquiries to Lee Huether at the STA office.

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SALES AGREEMENT No. 1461370

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