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**SEEDS**

# Thunderstorms and Tornadoes

## EXPLORING THE MYSTERIES OF WEATHER

### Tornadoes

These violent, whirling winds are nature's most devastating forces. They vary from a narrow path 100 feet wide to a howling black cloud that can stretch as long as a mile.



Tornadoes are usually small and do not travel far, but the area they cover is destroyed with often death dealing thoroughness. A deafening roar announces a

tornado's approach and everything in its path is generally destroyed completely. Often started by thunderstorms, a tornado begins when a violently rotating column of air under a storm makes contact with the ground – whether you see a funnel or not. Initially, just dust is stirred up, but a column soon takes shape. At its strongest, a tornado usually has a visible funnel and a debris/dirt cloud which holds together in a controlled shape. As it weakens, the funnel shrinks, becomes wobbly, and disappears, leaving only a dusty reminder to disperse slowly in the air.

In the US, several Severe Storm Centers forecast tornadoes year round. In Canada, most tornadoes occur in spring and summer. During this period, the northern hemisphere gradually faces the sun's rays more directly and for a longer time each day. The sun quickly heats surfaces that have been cooler all winter. Warm moist air pushing up from the Gulf of Mexico begins to push rapidly northward where it meets much cooler polar air masses moving south. When these air masses of contrasting temperatures and humidity come in contact, thunderstorms or their more violent offspring, tornadoes, occur.

In operations rooms across the country, technicians have the aid of weather balloons, ground reports and satellite photographs to help them look for potential twisters. Doppler radar is now used to great effect and is able to give a warning up to 30 minutes before a storm hits.

### Thunderstorms

As mentioned above, when warm moist air is pushed violently upward in the at-

mosphere, a thundercloud rapidly develops. The movement of the warmer air to colder regions above sets off powerful updraughts in the thundercloud. These air currents release energy, sometimes forcefully, in the form of heavy rain, hail, lightning, strong winds and occasionally tornadoes.

The simplest description is that summer storms act as a giant instrument for distributing the sun's heat. At the equator, the earth receives more energy from the sun than it loses into the atmosphere. At the north and south poles, more energy scatters into the atmosphere than is received from the sun. Without the winds, the tropics would be unbearably hot and the polar regions unbearably cold. These winds that blow in huge revolving belts around the earth convey the excess heat from the equator toward the poles and cold pole air back to the tropics.

In the northern hemisphere, the jet stream, a fast moving belt of wind, flows from east to west between 5-10 miles above the earth in a looping pattern similar to a huge waving ribbon. As it travels around the earth, the stream causes great eddies called high pressure systems that rotate clockwise between its looping waves.

Between the "highs" are low pressure systems that move in the opposite direction. As the highs and lows move across the middle latitudes with the prevailing westerly winds, they bring alternating systems of fair weather and storms.

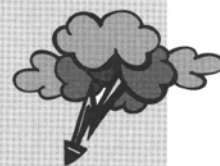
In conclusion, storms have an enormous impact on human lives and property. They do however serve a needed and beneficial function in the overall weather pattern but sometimes are terribly destructive. Environment Canada states June is tornado month, when on average, most tornadoes occur. During a tornado, go to the smallest interior room or stairwell on the lowest floor of the building (the bathroom or basement is often the best choice.) ♦

— summarized by Michael Bladon, sources: "Powers of Nature," National Geographic Society, Washington, DC; Environment Canada

## A Rough and Ready User's Guide to the Probability of Precipitation

### Probabilities

- 0% No precipitation even though it may be cloudy.
- 10% Dry weather with only one chance in ten of snow or rain falling.
- 20% Dry weather still expected.
- 30% Go ahead with your picnic, boating or ski plans but you may have to take shelter.
- 40% An umbrella is recommended. Make alternate plans for outdoor activities that are susceptible to rain. Not a good day to pave the driveway. Keep your fingers crossed!
- 50% It's even Steven on whether it snows or not. Be prepared for all eventualities.
- 60% Want to water your lawn? The odds are favourable that Mother Nature might give you some help.
- 70% Suggest cancellation of outside events. The chances for dry weather have shrunk to three in ten.
- 80% Wet weather likely. Make appropriate plans.
- 90% The occurrence of precipitation is a near certainty. Venture out if you enjoy walking in the rain or playing in the snow.
- 100% Precipitation is a certainty.



— "Probability of precipitation: improving the weather forecast with the aid of numbers," Environment Canada Atmospheric Environment Service Fact Sheet, 1992

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# Rain Bird '7005' Rotor

NEW PRODUCT LAUNCH BY VANDEN BUSSCHE

APRIL 26, 2001. Rain Bird has launched a new, rugged performer for commercial and sports field irrigation applications and named it the "7005."

This versatile sprinkler has a durable rubber cap, a pop-up height of 5 inches (125 mm) (allowing it to clear longer mowing heights), and it can distribute water up to 70 feet (21.34 metres) in radius.

There are many vandal resistant features built-in to the "7005" including "Sneaker Armor," "Memory Arc," a non-strippable drive mechanism, and an available stainless steel riser. "Sneaker Armor" construction withstands persistent kicks from vandals resulting in fewer repairs and the avoidance of potential erosion damage. "Memory Arc" returns a part-circle sprinkler's rotation to the pre-determined setting after a vandal has



twisted a sprinkler out of rotation while the non-strippable drive mechanism keeps the sprinkler rotating.

The "7005" is very versatile. This rotor can perform part circle or full circle operation with ease and offers interchangeable nozzles ranging from 4 US gallons per minute (GPM) to 22 US GPM.

A welcome addition to the fine line-up of Rain Bird rotors, the "7005" promises to deliver many years of trouble free operation in green landscapes and quality sports fields. ♦

Contact Information: see ad on page 15.

## Coming Events

### Mark Your Calendar!

**June 11**

OGSA Spring Field Day  
Guelph, ON

Information: 519-767-3341

**July 15-20**

IXth International Turfgrass Research Conference, July 17

Turfgrass Industry Day, Toronto, ON

Info: 519-767-5009

**July 18-22**

Turfgrass Producers International  
36th Annual Summer Convention

and Field Day, Toronto, ON

Information: 847-705-9898

**August 15**

Sports Turf Association  
14th Annual Field Day

Waterloo Recreation Complex and  
RIM Millennium Park, Waterloo, ON

Information: 519-763-9431

**August 21**

Cornell University Field Day  
Ithaca, NY

Information: 607-255-1792

**October 16-17**

Landscape Ontario

Garden Expo, Toronto, ON

Information: 905-875-1805

**January 8-10, 2002**

Landscape Ontario

Congress 2002, Toronto, ON

Information: 905-875-1805

**January 22-24, 2002**

Ontario Turfgrass Symposium  
Toronto, ON

Information: 519-767-5000

**February 2002; February 2003**

University of Guelph, Turf Managers  
Short Course, Guelph, ON

Info: 519-767-5000 ♦

**Surfing for Turf**

For guidelines on sports field management, check out  
[www.gov.on.ca/OMAFRA/english/crops/facts/sportfld.htm](http://www.gov.on.ca/OMAFRA/english/crops/facts/sportfld.htm).

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# Plant Products Co. Ltd. News Update

CROWN III CRUMB RUBBER AVAILABLE • WELCOME JASON IRETON

PLANT PRODUCTS CO. LTD., Canada's leading supplier to the horticulture and professional turf care markets, is pleased to announce the availability of Crown III Crumb Rubber. For years, turf managers have sought an effective product for use on high-wear areas. Crown III Crumb Rubber is the solution. It's non-abrasive, minimizes injury to the sensitive crown tissue, and reduces scarring of the grass blade. The rubber absorbs and dissipates the impact from traffic, reducing any underlying soil compaction. It's ideal for wear spots on golf courses, athletic fields, parks and other high-traffic areas. Crown III Crumb Rubber lessens resodding costs by reducing turfgrass wear, lengthening the growing season, and reducing soil compaction. Crown III Crumb Rubber also helps conserves wa-



ter and insulates against winterkill. For more information about Crown III Crumb Rubber, call Plant Products Co. Ltd. at 905-793-7000, 1-800-387-2449 or email us at [turf@plantprod.com](mailto:turf@plantprod.com).

## Announcement

Plant Products Co. Ltd. is pleased to announce the appointment of Mr. Jason Ireton to the position of Sales Representative - Turf Division.

Jason comes to us with years of practical turf experience most recently with Conestoga Golf Club as the superintendent.

ent. Jason will be responsible for sales and service to the turf markets in London, Kitchener, Guelph and the Niagara Peninsula.

Please join me in welcoming Jason to our team. Jason will be calling on his customers shortly. However, if you need assistance or information in the meantime, please do not hesitate to contact Jason or myself at our office. ♦

— Harold Van Gool, Sales Manager

"Simplify your life. Don't waste the years struggling for things that are unimportant. Don't burden yourself with possessions. Keep your needs and wants simple and enjoy what you have. Don't destroy your peace of mind by looking back, worrying about the past. Live in the present. Simplify!" — Henry David Thoreau

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