



Temperature: The effect of temperature on survival varies with nematode species and strains. Nematode species isolated from temperate regions tend to be more tolerant of low temperature than species isolated from tropical or subtropical regions. Soil temperature determines the activity and efficacy of EPNs. If is too cold, they are inactive and therefore will not seek the hosts. Conversely, if the soil is too warm, they will use up their energy source too quickly.

U.V.: Nematodes will die from ultraviolet light. From a practical viewpoint, the application of EPNs is recommended in early morning, late afternoon or on cloudy days to minimize detrimental effects of desiccation, ultraviolet light and extreme temperatures.

Application Time

Fall & spring: Fall application is a crucial factor to control pest population and their damage. Application from August to the end of September (depending on the weather and soil temperature) when the young instar of European chafer and Japanese beetle larvae are hatched from their eggs would be the an ideal time for EPN application. The 1st and 2nd year grubs of June beetle can also be controlled at this time. Fall applications will decrease grub populations under threshold levels,

which means preventing both fall and spring damage.

Grubs in Ontario generally overwinter as larvae. With increasing weather and soil temperatures, overwintering larvae will move from the deeper soil depth to the upper layer. When soil temperatures rise above 10° C (late April to early May in Ontario), this would be the time for EPN application. The EPN spring application (even against the last instar of pest larvae, which have tougher bodies) can reduce the total number of grubs by reducing the number of fertilized adults in the next months. Note: Spring application will be necessary only if grubs are found in the soil. This application indicates necessity for fall application.

Method of Application

Home gardeners & landscapers: First step is to pre-water the area being treated thoroughly 5-8 cm deep. If EPNs are on sponges, remove sponge from sealed bag and rinse both sponge and bag in a minimum of 4 litres of water to make a concentrate. Stir the concentrate vigorously to suspend nematodes equally as they are heavier than water. Use a hose-end sprayer or pump sprayer to apply immediately (100 gal/2000 ft²). In powder carriers, the nematodes should be diluted in a large amount of water (a minimum of 25 gal) and apply immediately (2.25 gal/ 100ft²).

Turfgrass: For larger areas, nematodes can be applied by using conventional agitating spraying systems such as pump, back-pack, truck sprayers, an overhead/misting sprayer system or soil injecting sprayer. Nematodes can be sprayed using a common type nozzle with an opening ranging from 50 microns to 1 mm. It is recommended to remove the finer screens. Recently, a soil injecting nematode applicator was developed for turfgrass which potentially could increase nematode efficacy and may decrease the cost for application.

Post Application & Monitoring For Controlled Results

Expected time for pest control: It is theoretically possible for EPNs to kill their host after 48-72 hours, but because of natural barriers in the soil, it is highly unlikely this occurs in the field.

Reapplication: The same as all other pesticides, EPN application will not obtain 100% mortality in the grub's population. A percent of beneficial nematodes can survive during the winter in the soil, but to reach a higher level of pest control, reapplication will be necessary.

Conclusion

- Know the pest insect and timing of its life cycle.
- Know the temperature of the soil.
- Know that the larvae are present.
- The soil must be wet to below the level of the grubs.
- Apply in low UV times.
- Water well after application to ensure the nematodes are past the surface layer and down to the root level of the grass.
- Keep the soil watered for 3-4 days after application.
- A spring infestation indicates a fall application must be done.

Shahram Sharififar, Natural Insect Control, 3737 Netherby Rd., Stevensville, ON L0S 1S0, Tel: 905-382-2904, Fax: 905-382-4418, www.naturalinsectcontrol.com, nicbio@niagara.com.








Pro Premier® European Match Goal



The complete goal package



The Kwik Goal Pro Premier® European Match Goal features:

-  4 wheels that allow for easy movement on and off the field
-  Net, net clips and anchors included
-  The Kwik Lock® Net System for easy net attachment and removal
-  All-aluminum construction
-  The Kwik Goal Lifetime Guarantee

Most importantly, the Pro Premier® European Match Goal is
ALL-SURFACE FRIENDLY!

For more information and to order
your Pro Premier® European Match Goals,
contact your local dealer or visit  **KWIKGOAL.ca**



Supervising in 2011 Means More Than Wearing the Hat and a Pay Raise

Terry Piche, Technical Director, Ontario Recreation Facilities Association Inc.

Somewhere in the workplace today a worker is not using a seat belt; is talking on a hand held device while driving or; is not wearing all appropriate safety wear. Each example has accountability if the worker is caught by a governing authority. Failing to properly train workplace supervisors has the same accountability. Today's workplaces are obligated to clearly define and evaluate their supervisory needs. The definition or sanction of such individuals cannot come from the Human Resources Department nor, does it have any connection to compensation or benefit packages. Supervisory obligations are clearly defined in the Occupational Health and Safety Act (OHSA) as: "a person who has charge of a workplace or authority over a worker."

In my observations, park and green-space operations often break their workforce into teams. Each is given a vehicle, a variety of equipment and set tasks to be completed throughout the work day. This work directive is usually completed by the recognized operational supervisor or manager. Each team is then sent on their way, often not in contact with the original operational supervisor or manager for the rest of the day.

The person who is by default leading the team in the field is accepting supervisory responsibilities for both themselves and those under their watch. At this point, the suggested "point person" throws up their hands and states, "this is not my job"! They identify that they are not listed as a supervisor, nor are they compensated for such responsibility. As much as they may wish to side step this workplace obligation, the fact is, should an accident occur, they

OTS HIGHLIGHT
Presented February in
Guelph, Ontario.

will be caught in the backdraft of an investigation with their primary defence being, "I didn't know it was my responsibility"! Regrettably, "not knowing" is an unacceptable legal defence to accountability.



Dermatologists
Your **SKIN**experts

Canadian Dermatology Association
Association canadienne de dermatologie



LET'S WORK AT SUN SAFETY

If you work outdoors, you have a higher risk for developing skin cancer. Protect yourself.

For further information, visit
www.dermatology.ca/outdoorworkers

- Seek shade
- Reduce sun exposure
- Wear long sleeved shirts, hats and long pants
- Use an SPF 30 broad spectrum sunscreen.



Remember, to meet basic acceptable training standards the session must include written materials and a testing mechanism. Merely explaining your workplace culture is not enough!

Selecting a supervisor in any work environment must be done carefully with some logic and supervisory competency must be trackable. The common past practice of promotion to workplace supervisor based solely on seniority or age needs to be re-evaluated. The basic supervisory requirements to be considered in meeting the definition of a “competent person” are defined in the OHSA as being:

- Qualified because of knowledge, training and experience to organize the work and its performance,
- Familiar with the OHSA and the regulations that apply to the work, and
- Has knowledge of any potential or actual danger to health or safety in the workplace (personne compétente).

Consider the team we defined earlier and now take a look at the person who by default (let’s call them supervisor) is in charge of the unit (because this is his/her second summer) and answer these basic questions to their competency:

- What level of knowledge does the supervisor have in respect to internal policies and procedures?
- Has the supervisor received “supervisory” training?
- What level of training has he/she received on the tools and equipment that are to be used?
- Is the supervisor’s 1-year of previous workplace experience adequate for him/her to provide leadership?
- Is the supervisor aware of the OHSA and how it is applied? Is he/she up-to-date on other legislation that may be applied as they go about their other duties (i.e. CSA Standard for Children’s Playspaces & Equipment)?
- Has the supervisor been updated on previous health and safety issues in the workplace?

One of Ontario’s Ministry of Labour (MOL) inspection objectives is workplace supervisor competence. The MOL believes that the basic supervisory abilities

must percolate down from the top of each organization. Failure to properly train workplace supervisors, or not provide adequate worker supervision, will result in fines and or incarceration for extreme circumstance.

Remember, to meet basic acceptable training standards the session must include written materials and a testing mechanism. Merely bringing someone aside and explaining your workplace culture and expectations will not suffice! ORFA, a Parks and Open Space Alliance partner, offers supervisory training workshops to help you meet your supervisory competency training objectives. Please feel free to reach me at tpiche@orfa.com or 416.426.7062 should you wish to investigate this training opportunity further.

SUBMISSIONS

Have a great article idea or job site story you’d like to share? We welcome submissions (including photos) on a variety of turf-related topics. For details, contact Lee at the STA office.



99 John St. North, Box 171
Harriston, Ontario
N0G 1Z0
Phone (519) 338-3840
Fax (519) 338-2510
Email spearese@wightman.ca

**SUPPLIERS OF PREMIUM
TURF SEED PRODUCTS**



Turf Specialist in Cultural Practices & Custom Grows
Drill & Fill • Root Pruning • Aerification • Overseeding • DeepTine • Verticutting

For more information, contact us at
877-727-2100 www.zandersod.com
(Or contact our Turf Specialist, Alexander Dickie directly at 905-505-5014)



and get
it RIGHT!

AERASEEDER



**...for an
easy way to
denser turf.**

100 Union Street, Elmira, Ontario, Canada N3B 2Z2
1-877-467-3478 • www.reistindustries.com



MMM GROUP

SERVICES:

- ▶ Artificial Turf Field
- ▶ Natural Turf Field
- ▶ Track and Field Facilities

SPORT FACILITY DESIGN TEAM:

- ▶ **Harry Kodors, BLA, OALA, CSLA**
Director of Development
kodors@mmm.ca
905-826-4770 ext 1730
- ▶ **Ben Tymchyshyn, BLA, BCSLA, OALA, CSLA**
Landscape Architect
tymchyshynb@mmm.ca
905-826-4770 ext 1734

PROVIDING SPORT FACILITIES DESIGN CANADA WIDE
For further information or to contact any of our offices visit:
www.mmm.ca



Artificial Turf Field
James Jerome Complex,
City of Greater Sudbury, ON

Industry News

KEEPING YOU UP-TO-DATE WITH NEW PARTNERSHIPS & PRODUCTS



Professor Dave Wolyn. Photo by Martin Schwalbe.

Rubber From Dandelion?

It might be a stretch, but Guelph plant breeder Dave Wolyn hopes to coax natural rubber from Russian dandelion to feed a growing global rubber market and to offer a potentially lucrative new crop for farmers in southern Ontario.

This summer, he'll conduct plant trials using dandelion seeds from Kazakhstan and the U.S. Department of Agriculture. Those trials will help determine whether Russian dandelion can become a new field crop for a natural rubber industry. The research is supported by the Sand Plains Community Development Fund in Tillsonburg, Ont., and KoK Technologies Inc. in Penticton, B.C. KoK owner Anvar Buranov has developed a patented process for recovering natural rubber. Wolyn joined the project after Buranov contacted U of G to find a plant breeder. The Guelph professor has bred asparagus since 1988 and developed an award-winning hybrid that now has almost three-quarters of the Ontario asparagus market. "I thought it was exciting," says Wolyn. "You're taking a wild plant and trying to turn it into a crop."

Most rubber is used for making tires. Natural rubber is better for airplane and heavy-equipment tires than the synthetic oil-derived rubber used in car tires.

The only commercial source of natural rubber, the Brazilian rubber tree, grows mostly in Southeast Asia. After rubber trees were transplanted to Asia, a fungus wiped out most of the South American trees.

Rubber forms naturally in dandelion roots and in parts of other plants. Russian dandelion rubber is chemically suited for use in tires and as latex for gloves, mak-

ing it an ideal replacement for rubber tree products, says Wolyn. Unlike other rubber-bearing plants, this dandelion species also contains inulin, a food additive and feedstock for biofuels that might also benefit growers.

A rubber shortage during the Second World War prompted scientists to study rubber from Canadian-grown plants, including Russian dandelion. They found that the plant grew well in southern Ontario, but they dropped the project after the conflict ended.



Wolyn said the Canadian Food Inspection Agency will release a review of Russian dandelion under invasive species regulations. He said American studies in the 1940s found the plant unlikely to overrun native plants.

Prof. David Wolyn is in the Department of Plant Agriculture and can be reached at 519-824-4120, Ext. 53092 or 56469, dwolyn@uoguelph.ca.

— University of Guelph news release

Selectus Seed Brand Officially Launched In Spring by Plant Products



PLANT PRODUCTS CO. LTD. officially launched its new Selectus brand line of seed products on May 5 with a ribbon-cutting ceremony at its Brampton, Ontario plant. Guests toured Plant Products' new state-of-the-art blending facility.

"With this initiative, Plant Products has become a direct source of seed products from the breeder to our customers," said John Lewandowski, President of the company. "We have worked hard to deliver a quality reliable product for the 2011 season. This product line makes sense both for us and our customers."

Plant Products is a Canadian-based company that has been manufacturing quality water-soluble fertilizers and marketing plant protection products for nearly 70 years. Since its beginnings, the company has continued to expand distribution, and today markets a full range of horticultural products throughout Canada to all horticulture markets, including turf markets. Visit www.PlantProd.com or telephone 1-800-387-2449, 905-793-7000

Now Available From G.C. Duke!

CUSHMAN'S LATEST OFFERING is a 22 hp diesel 4x4 utility vehicle with user-selectable 4WD, an automatic transmission with selectable gear ratios, 4-wheel independent suspension and standard 25" all terrain tires. With its large 1,600 lb payload capacity and 1,300 lb towing capacity, the Cushman 1600XD is ideal for hauling heavy loads on rough terrain. A full ROPS, 3-point seatbelts and ergonomic cockpit with standard windshield and roof provide operator safety and comfort. An optional hydraulic system provides power for post drivers, augers, plows or other implements needed to get the job done. Call G.C. Duke Equipment Ltd. today for more information or a free demonstration: Burlington, 905-637-5216; Toronto Area, 905-338-2404; Toll Free: 1-800-883-0761; www.gcduke.com.



Turf Trades. Online Employment Listings.

Are you advertising a position? Are you searching for a job? Target your audience or refine your search with Turf Trades, an online resource for all staffing levels and areas of the sports turf industry. Employment Bulletin Board ads run for 60 days with an additional 30 days available at 1/2 the price. Cost including HST is \$84.75 for STA members and \$113 for non-members for the initial 60 day period. Contact Lee at the office for further information.

INDUSTRY NEWS

Industry press releases are a benefit offered to annual advertisers. Contact the office for details.

TURF CARE APPOINTED SALSICO DISTRIBUTOR

EFFECTIVE IMMEDIATELY, Turf Care has been appointed the Salsico distributor for both the Ontario and Quebec marketplace in the landscape, golf and municipal industries. This is a promising fit to the "Total Solutions" we offer all our customers.

Since 1979, Salsico, Inc. has built its reputation on quality and service. Salsico provides products to the municipal, rental, golf course, commercial lawn care, tree care, construction and agricultural industries with a product line-up including greens rollers, wood chippers, chippers/shredders/vacuums and slicers/seeder. These products are built with solid, durable construction, quality components and the standard features that should be standard. This, coupled with quality service and support, are the hallmarks of Salsico equipment.



Turf Care is the exclusive Toro distributor in Ontario and Quebec. Other allied suppliers Turf Care proudly represents include Tycrop, Buffalo Blowers and Yamaha Golf Cars. With attractive financing packages available from Turf Care Financial, any of these products can be yours.

For quotations, demos and information on Salsico products, please contact Jamie Worden at 647-222-2212 or visit www.turfcare.ca.