
In May of 2005, the U.S. EPA released two national assessment documents pertaining to the Federal Worker Protection Standard and the federal pesticide applicator training and certification requirements. The two assessment documents have a combined total of 95 pages, which include well over 100 suggestions.

The wide range of suggestions were provided by the national Certification and Training Assessment Group as well as by representatives from farmworker advocacy groups, commodity organizations, individual growers, the Cooperative Extension Service, state and federal regulatory agencies, and the pesticide industry.

This article highlights only suggestions from the assessments that, if pursued, would likely significantly impact Illinois pesticide applicators, educators, and regulators. Direct or summary statements from both assessment documents are provided below; the probable impacts on Illinois are in italics. Links to the original documents are provided at the end of this article.

1. Worker Protection Standard (WPS): Shorten the 5-year worker retraining interval to between 1 and 3 years. Eliminate the provisions that permit certified Applicators and trained Handlers to be trainers of Workers. Consider changes to the warning sign, central information display, and field posting/notification provisions to find more effective ways to provide intended protections.

Impact/response: Changing the WPS retraining interval will likely have little negative impact; for a variety of reasons, many WPS employers currently conduct training more often than every 5 years. In addition, retraining every 3 years would be consistent with the Illinois pesticide applicator training and certification program. Considering the basic nature of the current required Worker training elements and the range of existing training resources, it is unreasonable to no longer allow certified Applicators and Handlers to train Workers. It is not clear what changes would be made in the application notification process. As long as the changes are practical and improve overall communication, there should be little negative impact.

2. Move Handler training from the WPS regulation to the Federal applicator regulation. Require fit testing and medical monitoring for products with respirator requirements, consistent with OSHA and NIOSH requirements.

Impact/response: The issue of moving WPS Handlers to the Federal Applicator regulation represents a significant change for producers. Employees who are currently being trained as WPS Handlers would need to become licensed Applicators; the impact is further addressed in response to suggestion #4 below. The respirator fit testing and medical monitoring issue also represents a significant change. It is not clear whether the suggestion refers only to cartridge, canister, and supplied-air respirators or if it will also include filtering face-piece respirators (TC-21C “dust masks”). This distinction will make a big difference. Although
some commonly used dry-formulation pesticides require the use of a filtering face-piece respirator, it is currently uncommon to find outdoor agricultural or horticultural pesticide labels that require a cartridge respirator. Regardless, this suggested change would have the greatest impact on individual producers who use soil or grain fumigants as well as on greenhouse operators.

3. Expand the scope of WPS regulation to cover nonagricultural operations.

Impact/response: Assuming that the suggestion intends to encompass landscape maintenance personnel, this would require pesticide safety training for those who currently only mow lawns, prune trees, and perform other landscaping activities that may bring them into contact with pesticide residues. This may mean that the other WPS provisions (centralized posting, restricted entry intervals, etc.) would be extended into this area as well. This suggestion represents a significant challenge to all involved (employers, educators, regulators). An increased demand for bilingual (mainly Spanish) training would be expected.

4. The provision in the federal regulations allowing noncertified users to work under the direct supervision of a certified applicator needs to be reexamined.

Impact/response: For Illinois commercial, commercial not-for-hire, and public pesticide applications, there would be no impact since Illinois law requires all persons making these types of pesticide applications to be certified (a certified Applicator supervises a certified Operator). However, Illinois law allows noncertified persons to mix, load, and apply restricted-use pesticides when supervised by a Private Applicator. Should this exemption be removed at the federal or state level, it will impact many farmers, nurserymen, and greenhouse operators. An increased demand for bilingual (mainly Spanish) training would be expected.

5. Develop and implement a tiered classification system for pesticides, instead of the current single-restricted-use classification system. Establish different competency standards and training levels for users of higher risk chemicals or for applications with high potential for public exposure.

Impact/response: The issue of “prescription pesticides” was the subject of a Council and Agricultural Science and Technology paper dated 8-28-98 (www.cast-science.org). This option was discussed as a way to retain at least some critical uses of certain pesticides that would otherwise be completely lost due to the more stringent Food Quality Protection Act of 1996. According to a 1999 report from the Certification and Training Advisory Group (http://pep.wsu.edu/cetag/pdf/21stCentury1999.pdf), an example of a tiered classification would be 1) consumer/homeowner use products; 2) general or unclassified pesticide products for occupational use; 3) restricted-use pesticide products for occupational use; and 4) restricted “prescription” use products for occupational use. Accordingly, the “prescription use” category would be reserved for specific risk-mitigation situations. Although the likelihood seems remote, a change in pesticide classification could result in training and testing the general public to use pesticides or the removal of all pesticides from general public access. Implementing this suggestion in any form would require an enormous increase in outreach and federal funding.

Conclusion

The U.S. EPA already has acted on some of the suggestions. Other suggestions, such as those outlined above, will require regulatory changes. EPA has indicated that they “will consider these suggestions, and others, in the planned revisions of the pesticide worker safety program regulations.” Which additional suggestions will be enacted, and when, is anyone’s guess.

As I mentioned, the two assessment documents were quite lengthy and contained well over 100 specific suggested changes. Because Illinois certification and training requirements precede and surpass the existing federal requirements, the act of “raising the federal bar” will have considerably less impact here than in most other states.

If you would like to learn more about the Illinois Pesticide Safety Education Program and our accomplishments and impact, consider visiting our Web site (http://www.pesticidesafety.uiuc.edu/about.htm).

Sources


(Bruce E. Paulsrud)

Reducing Damage from Nuisance Urban Canada Geese

The giant Canada goose (Branta canadensis maxima) is the subspecies that during the past 50 years has established large populations in urban areas, which provide excellent habitat. Lawns, golf courses, and business parks combined with retention and detention water impoundments provide both forage areas and nesting habitat. In addition, natural predators such as fox and coyotes are present only in low numbers, and hunting pressure is low. Goose mortality is thus low and nesting success very high.
Although adults can be aggressive during egg incubation, the primary complaint about geese is the accumulation of fecal material, as an adult goose can produce up to 1-1/2 pounds per day. Fecal matter on public walkways and in play and swimming areas raises concerns regarding fecal coliform bacteria.

Many people, though, enjoy seeing Canada geese in urban areas. Some people feed geese, which can make an area even more attractive and increase goose numbers to unnaturally high levels, increasing damage to vegetation and the concentration of fecal matter. Many people feed geese bread, which doesn’t provide proper nutrition.

Although several techniques can be used, a control or reduction program for Canada geese requires an integrated pest management approach. The five basic nuisance control strategies are harassment, exclusion, repellents, habitat modification, and lethal control. Canada geese and their nests and eggs are protected by the Migratory Bird Treaty Act (16 USC 703-711) and in Illinois by state law (520 ILCS 5/2.1). State and federal permits are required to destroy nests and eggs.

Harassment techniques are most effective before geese are established in an area. Geese will tolerate noise, dogs, and high-pressure water sprayers if they have already established nesting and feeding territories. Harassment techniques that physically harm geese are illegal.

Loud devices such as propane cannons and pyrotechnics should be used only after discussing their proper and legal use with local authorities and an Illinois Department of Natural Resources (IDNR) wildlife biologist. These devices are more appropriate for rural areas.

Dogs have also been used to harass geese. However, control by a handler is necessary, and the dog cannot be allowed to catch, injure, or kill a Canada goose. The success of this method depends on the ability of the dog and handler to cause the geese to fly and leave the area. If this is not accomplished, the geese will take refuge on a body of water and wait until the dog leaves. This technique can be very time consuming and therefore very costly.

Exclusion can be very effective when used in conjunction with other nuisance control strategies. The two basic exclusion techniques are overhead grid systems (used with bodies of water) and fencing. While potentially effective, both methods can be expensive and aesthetically objectionable.

An overhead grid system consists of cords spaced 20 feet apart and suspended 3 feet above the water. This technique is best used on bodies of water less than 100 feet across. Because the cords also restrict human access to the water, the grid system is best used in business parks or golf courses where ponds are used only as part of the visual landscape.

Fencing can be used to exclude geese from feeding areas such as lawns or to make an entire pond less suitable for nesting and brood rearing. Fences, which should be at least 30 inches high, can consist of any wire or plastic material with openings no larger than 3 inches by 3 inches. Although adult birds can fly over fences, during the summer adults molt flight feathers, becoming flightless like the goslings. Fences can thus be very effective during summer months.

To reduce access to the area for nesting, fencing is placed at the water’s edge, around the entire pond if possible. This fencing strategy must be in place before the nesting season. Many subdivisions have covenants governing fence design and construction, so check local rules and ordinances before incorporating this technique.

The use of repellents is a relatively new management strategy. One chemical repellent registered for use on turf and lawns is methyl anthranilate, which is in products such as RejEx-IT AG-36 and GooseChase. The product does not repel geese, but rather the bitter-tasting repellant is used to train the geese not to feed where it is applied.

Methyl anthranilate is best used to train geese not to feed where they are especially undesirable, such as living areas of yards. The geese must have an alternate food source or they may learn to tolerate the repellent. This type of repellent is biodegradable and washes away with rain, so it may have to be reapplied during the training period. All repellents are more effective when they are applied at the first sign that geese are using a particular area.

The second repellent, an ultraviolet product called Flight Control, is also considered to be environmentally safe. When geese feed on grass treated with this product, they regurgitate. Because the repellent changes the ultraviolet reflection of the grass where it is applied, it can be seen by the geese, who thus learn to avoid treated locations. Flight Control is also best used in combination with turf areas that are untreated, providing an alternate food source.

The goal of habitat modification is to reduce the suitability of a particular habitat or area for geese. Several modifications can be incorporated, beginning with the elimination of all artificial feeding. Hand feeding of geese concentrates both birds and feces. Artificial feeding can also cause nutrient deficiencies, which can lead to health problems or limb deformities for goslings.

Other waterfowl, including domestic birds, are an attraction for Canada geese. All domestic waterfowl thus should be removed from ponds and lakes where additional Canada geese are not desired.

Landscaping of shorelines can be used to make an area less attractive to Canada geese and their broods. Nonurban populations of Canada geese prefer to exit the water on gently sloping shores and into short-grass habitat. (The short grass provides visibility, which helps protect against predation.) It has been theorized that if vegetation is planted that can grow to 30 to 36 inches, such as prairie plants,
it would interfere with this predator defense mechanism. However, research has determined that geese will use tall grass areas in urban settings, presumably because predator populations are low. Urban populations of geese are now thought to behave similarly to island geese, which also face low risk of predation and use tall grass areas for feeding, nesting, and brood rearing.

Comparative studies of tall-grass vs. short-grass areas for goose grazing have been inconclusive. A 1998 report from the University of Minnesota indicated that three separate studies found that geese prefer short Kentucky bluegrass over prairie plantings. Other research has also shown that geese prefer Kentucky bluegrass and dislike tall fescue. While more work is needed in this management area, it appears that short Kentucky bluegrass would attract geese compared with tall-grass prairie plantings. Tall grass areas in combination with short grass areas might be used to direct goose grazing and activity.

Lethal control of urban Canada goose populations includes targeted early-season hunting programs, egg destruction, and adult capture and euthanization. Any lethal control of Canada geese requires a license or permit. In the case of early-season hunting, a hunting license and state and federal waterfowl stamps are required.

Egg destruction to keep populations from expanding requires state and federal permits, which can be obtained through an IDNR wildlife biologist. Embryos are destroyed before hatching with this strategy; eggs must remain in the nest to prevent the adults from renesting.

Capture and euthanization of Canada geese are not presently being done in Illinois.

There is currently no single management strategy effective for controlling nuisance Canada geese populations, and eliminating the geese is not a feasible goal. Landowners can, however, work with IDNR wildlife biologists to develop integrated strategies with the goal of reducing problems caused by geese. (Dave Shiley, Extension Educator, Natural Resources Management)

A Wealth of Pesticide Information!

Out of curiosity, I checked the Internet search engine Google (http://www.Google.com) to see how many Web sites mention the word “pesticides.” I was surprised to find there are 8,500,000 listings (up from 2,710,000 on this date last year)! Clearly, the Internet is loaded with information about pesticides. However, like you might expect with any topic, some of this information is trash, some of it is incomprehensible (unless you’re trained in toxicology), and some of it is treasure.

This article points to several objective and easy-to-understand resources available to anyone who has questions regarding pesticides and their effects on human health and the environment. Whether you’re an individual with a question about a specific pesticide, or a commercial pesticide applicator wanting to improve pesticide-related communications with your clients and the public, these resources should prove useful.

Written for the nontoxicologist, EXTOXNET (http://extoxnet.orst.edu/faqs/index.htm) is a cooperative effort by Extension toxicologists and chemists of five land-grant universities: University of California-Davis, Oregon State University, Michigan State University, Cornell University, and the University of Idaho. From the EXTOXNET home page you can access Pesticide Information Profiles for specific information on health and environmental effects. The Frequently Asked Questions address exposure to pesticides and other toxicants in our environment. Topics include adverse health risks, diet and cancer, food safety issues, household hazardous waste, indoor air pollution, pesticides, safe drinking water, sensitive populations, and soil (gardening and chemicals).

Purdue Pesticide Programs (http://www.btiny.purdue.edu/PPP/PPP_pubs.html) does a tremendous service by producing comprehensive yet easy to read pesticide information. According to coordinator Dr. Fred Whitford, “These publications are written for professionals who work in government, universities, associations, and also for the general public who want to understand pesticide issues beyond the headlines.” Sample publications include these:

- Pesticides and Wildlife (PPP-30)
- Pesticide Toxicology, Evaluating Safety and Risk (PPP-40)
- Pesticides and Ecological Risk Assessment (PPP-41)
- Pesticides and Epidemiology (PPP-43)
- Pesticides and Human Health Risk Assessment (PPP-48)
- Pesticides and Risk Communication (PPP-52)

The National Pesticide Information Center (NPIC) is a toll-free telephone service serving any caller in the United States, Puerto Rico, or the Virgin Islands.

NPIC provides objective, science-based information about a wide variety of pesticide-related subjects, including pesticide products, recognition and management of pesticide poisoning, toxicology, risk assessment, and environmental chemistry. NPIC’s Web site (http://npic.orst.edu) is an excellent resource for these topics as well. Excluding holidays, you can call NPIC 7 days a week from 8:30 a.m. to 6:30 p.m. (CST) at 800-858-7378. You can also contact NPIC by fax (541-737-0761) or e-mail (npic@ace.orst.edu).

(Bruce E. Paulsrud)

Pesticide Update

The following information provides registration status of particular pesticides
and should not be considered pesticide recommendations by University of Illinois Extension.

**Agronomic**

**AFFINITY TANKMIX WITH TOTAL-SOL soluble granules (thifensulfuron-methyl/tribenuron-methyl)—DuPont—** A new combination herbicide for use on wheat, barley, and triticale.

**FRONTIER (dimethenamid)—BASF—** As a result of the IR-4 Project, EPA has established residue tolerances on horseradish at .01 ppm. (FR vol. 70, 5-11-05) [herbicide]

**QUILT (azoxystrobin/propiconazole)—Syngenta—** EPA granted a specific exemption to use in select states on soybeans to control Asian soybean rust.

**Fruit/Vegetable**

**AUXIGRO (GABA)—Emerald Bio Agriculture—** Added to their label for this growth regulator the usage on broccoli.

**BLOOMTIME BIOLOGICAL FD (Pantoea Agglomerans strain E-325)—NAP—** This is a new biological product being developed for control of fire blight in stone fruits.

**CLUTCH (clothianidin)—Arvesa—** A new WDG formulation to use as a soil or foliar treatment on apples and pears to control aphids, codling moth, leafhoppers, Oriental fruit moth, and pear psylla.

**CONTOUR (buprofezin)—Nichimo America—** A new formulation for usage on nut crops, stone fruits, and pome fruits.

**DESPERADO (pyridaben/sulfur)—Wilbur Ellis—** A new combination product to control mites and scab on almonds and stone fruit.

**ELEVATE (fenhexamid)—Arvesa—** Added to their label the control of brown rot in stone fruits, gray mold on cherries, and the directions for postharvest treatment of stone fruits.

**EXILIS PLUS (BAP)—Fine America Inc—** A new formulation for this growth regulator for use on apples to increase size.

**EXOSECT—** The English company has introduced into the U.S. market a number of pheromone trap products under the Exosect label. They are for codling moth, tomato pinworm, Oriental fruit moth, peach twig borer, and the grape berry moth.

**JUDGE (fenhexamid)—Arvesa—** A new formulation to control brown rot and botrytis on stone fruits.

**LINDANE—** EPA is revoking tolerances for most uses of this product. Tolerances on broccoli, Brussels sprouts, cabbage, and cauliflower expire on 4-26-07; Tolerances on collards, cucumbers, kale, kohlrabi, lettuce, melons, mustard greens, okra, dry bulb onions, pumpkins, spinach, squash, and Swiss chard expired on 6-10-05. (FR vol. 70, 4-15-05) [insecticide]

**scholar (fludioxonil)—Syngenta—** Added to their label the postharvest usage on pome fruits, kiwi fruit, and yams. [fungicide]

**THIRAM—Taminen Inc—** The company has requested EPA to cancel the registration for this product on apples. The comment period expired on 5-27-05. (FR vol. 70, 4-27-05) [fungicide]

**valor (flumioxazin)—Valent—** As a result of the IR-4 Project they have proposed to EPA to establish residue tolerances in strawberries at .1 ppm. The comment period expired on 5-9-05. (FR vol. 70, 4-8-05) [herbicide]

**turf/ornamental**

**CYGNUS (kresoxim-methyl)—Scotts Co.—** Added to their label the usage on Norway maples. [fungicide]

**FORBID 4F (spiremefen)—Bayer Environmental Science—** A new product for use on ornamentals to control various insects, white flies, and mites.

**medallion (fludioxonil)—Syngenta—** Added to their label the usage on additional turf diseases and added the statement “Not for homeowner use.”

**MILLENNIUM ULTRA 2 (2,4-D/clopyralid/dicamba)—Nufarm—** A new 3-way herbicide for use on ornamental lawns.

**SURGE (2,4-D/dicamba/MCPP/sulfenzone)—PBI Gordon—** A new 4-way herbicide for use on turf.

**VIPER (2,4-D/dicamba/MCPP)—Nufarm—** A new weed-and-feed formulation for use in residential turf.

**WIL-POWER (2,4-D/MCPA/triclopyr)—Nufarm—** A new 3-way herbicide for use on ornamental turf and sod farms.

**Structural**

**EXTINOSAD (spinosad)—Elanco Animal Products—** A new formulation used to control houseflies and darkling ground beetles in and around agricultural animal premises.

**INSIDE OUT (fipronil/chlorfenapyr)—BASF—** A new combination insecticide that can be used for general insect control inside and outside buildings.

**OFF SKINTASTIC (picaridin)—SC Johnson—** A new insect repellent to use as a substitute for DEET as a mosquito repellent on skin.

**OPTIGARD 2T (thiamethoxam)—Syngenta—** A new formulation to control termites, beetles, and carpenter ants in wood structures.

**OVO CONTROL (nicarbazin)—InnoLytics LLC—** Proposed to EPA to register this new active ingredient to control the hatchability of pigeon and Canadian geese eggs. The comment period expired on 5-6-05. (FR vol. 70, 4-6-05)

**VAMPIRE (pyrethrin)—MGK—** A new formulation to be used on livestock and indoor and outdoor areas to control various insects.
product to control the Varroa mite in beehives.

**CHATEAU** (flumioxazin)—Valent—Added nightshade to the list of weeds controlled.

**CHOPPER** (imazapyr)—BASF—Added to their label additional brush and wood tree species controlled and also the application along forest roads.

**DEMON MAX** (cypermethrin)—Syngenta—A new formulation to replace Demon EC and Demon TC. [insecticide]

**DURANGO** (glyphosate)—Dow Agrochemicals—A new formulation for usage on various crops. [herbicide]

**GAUCHO 600F** (imidacloprid)—Gustafson—Added to their label the control of grape colapsis, thrips, white grubs, tafson—registration for this product. (EPA issued an order to cancel the use on grapes, field crops, small fruits and berries, ornamentals, noncrop areas. Also added for usage on stored seed and canola, rape seed, mustard, and triticale.

**KAPUT-D** (diphenacine)—Scimetrics Ltd.—A new rodenticide bait for the control of pocket gophers in lawns, golf courses, rangelands, and noncrop areas.

**KICKSTAND PGR** (IBA)—Helena Chemical Co.—A new formulation of this growth regulator for use on vegetable crops, field crops, small fruits and berries, ornamentals, and sod farms.

**MOCAP** (ethoprop)—Bayer Crop Science—EPA issued an order to cancel the registration for this product. (FR vol. 70, 4-27-05) [insecticide]

**ORIUS** (tebuconazole)—Makhteshim Agan—A postpatent formulation will be available this year for various fruit trees, grapes, and peanuts. [fungicide]

**RECOIL** (glyphosate/2,4-D)—Nufarm—A new combination herbicide for use on various crops.

**RIMON** (novaluron)—Crompton—Added to their label the usage through chemigation systems on potatoes. Also added the control of the European corn borer.

**SHOWCASE** (isoxaben/oxylurfen/trifluralin)—Dow AgroSciences—A new combination herbicide to control broadleaf weeds and grasses in field-grown ornamentals, nonbearing fruit and nut trees, and noncrop areas.

**SILENCER** (lambda-cyhalothrin)—MANA—A new postpatent insecticide for use on cotton, alfalfa, rice, vegetables, soybeans, cereals, sorghum, and peanuts.

**STALKER** (imazapyr—isopropylamine salt)—BASF—Added to their label the usage on grass pastures and rangelands. [herbicide]

**SUSPEND SC** (deltamethrin)—Bayer Environmental Science—Added to their label the control of stored grain insects in warehouses and seed treatments.

**TALSTAR ONE MULTI** (bifenthrin)—FMC—A new formulation for use on residential areas, ornamentals, turf, parks, industrial buildings, etc. [insecticide]

**TRIGGER** (clotebodin)—Albaugh—A new off-patent formulation used to control grasses in various crops.

**ULTRATEC 100SC** (deltamethrin)—Valent Bio Science—A new product to control various insects, spiders, fleas, and ticks on decks, lawns, and walkways.

**VENOM** (dinotefuran)—Mitsui Chemicals/Valent—Plans are to introduce this new insecticide in the U.S. for use on fruit trees, vegetables, and field crops later this year.

**WESTAR** (beclazinone/sulfometuron-methyl)—DuPont—A new combination herbicide for usage in forestry and noncrop sites.

**Other**

**ARVISTA**—The U.S. subsidiary of Arysta has obtained from Bayer Crop Science exclusive marketing rights to the new fungicide Fluoxastrobin in the U.S., Canada, and Japan to market it worldwide on turf and ornamentals.

**ARYSTA LIFE SCIENCES**—The company has purchased from Bayer Crop Science the worldwide rights to the Amitraz insecticide/miticide business. They will continue to market the product under the Mitac, Ovasyn, Ovasin, Trazon, Zipak, and Bumetrade names.

**BECKER UNDERWOOD**—The company has purchased from Certis USA their beneficial nematode business. This includes the products Bio Vector and Millenium. Becker Underwood already produces the beneficial nematodes sold as Nemasys, Nematac, and Nemaslug.

**DOW AGROSCIENCES**—The company has opened the world’s largest granulation plant in France for Dithane (mancozeb) fungicide.

**INSIGNIA** (pyraclostrobin)—BASF—Added to their label the following turf sites: residential and ornamental lawns, recreational areas (except athletic fields), and sod farms. [fungicide]

**MAI**—Makhteshim Agan—The company will purchase 70% of the Hungarian distribution company Biomark Trading House.

**MONSANTO**—The company plans on marketing in the U.S. their RR Flex Cotton for the 2006 season. It has increased tolerance to glyphosate, which allows a wider application window. Also, the company is in a licensing agreement with the University of Nebraska to develop genetically modified crops that are resistant to the herbicide Dicamba.

(Michelle Wiesbrook; unless otherwise noted, adapted from Agricultural Chemical News, May and June 2005)