



PESTICIDE *Update*

Vol. XXI - No. 1

Pesticide Section / Food & Drug Protection Division
<http://www.ncagr.com/fooddrug/pesticid/>

Fall 2003

EPA Cites Five Colorado Growers for Failing to Comply with WPS

By Kay Harris, Worker Protection Specialist

Colorado growers put on notice

The U. S. Environmental Protection Agency (EPA) took action against five Colorado growers for violations of the Worker Protection Standard (WPS), a regulation of the *Federal Insecticide, Fungicide, and Rodenticide Act* (FIFRA). In one case alone, EPA proposed a civil penalty of \$231,990 for 229 violations of the WPS and FIFRA. This is the largest proposed federal WPS misuse penalty in EPA history. Four other Colorado growers were issued EPA complaints for failure to post emergency information and pesticide specific application information in a central location. Civil penalties proposed by EPA range from \$2,200 to \$23,320.

John Suarez, Asst. Administrator for Enforcement and Compliance Assurance for EPA, stated that “environmental justice is one of the highest priorities for EPA’s enforcement program, and that

the federal government has little tolerance for growers who place their workers in harm’s way because they fail to comply with the law.”

In North Carolina, WPS regulations are enforced by the NCDA&CS, Pesticide Section under the *N.C. Pesticide Law of 1971*. The regulations are designed to reduce poisoning and injuries among agricultural workers and pesticide handlers by requiring the agriculture employer to provide pesticide safety training, decontamination supplies, application information and emergency assistance. ■

For additional information about the WPS, contact the Pesticide Section or your local Cooperative Extension Service.

NCSU Conducts Di-Syston Exposure Study

*By Jerry Moody (Ag Agent, Avery County CES) and
Dr. Ross Leidy (Professor Emeritus, N.C. State)*

This past spring you might have thought you saw some fellows running around in red union suits in a tree patch. Well, if you did, you were not dreaming! These people were completing a worker exposure study for Di-Syston 15-G (disulfoton), a granular pesticide that is vital to North Carolina’s Christmas tree industry. This product is used to control the balsam twig aphid and the spruce spider mite, two pests of Fraser Fir Christmas trees. The U.S. Environmental Protection Agency (EPA) is currently reviewing its re-registration under the Food Quality Protection Act (FQPA) of 1996. EPA is concerned about applicators being negatively impacted by exposure to Di-Syston. As a result, in 2001 Avery County requested and received a \$14,000 grant from the NCDA&CS Pesticide Environmental Trust Fund to develop a closed-system applicator. If human exposure to Di-Syston is not documented to be acceptable now that a closed-system applicator has been developed, this product may be in danger of cancellation.

The data from the worker exposure study is now being analyzed at a lab in Colorado. Final results are expected in January of 2004. Bayer Corporation awarded the Avery County Cooperative Extension Center (CES) a grant for up to \$65,000 to pay for the analyses. This is the last step in the re-registration process for Di-Syston. Once the data are analyzed, they will be delivered to the EPA in Washington, D.C. Below is a description of the some of the work that was completed by Dr. Ross Leidy, Professor Emeritus of Toxicology at N.C. State University (NCSU).

(See Pesticide Exposure Study, continued, Page 2)

Inside

- *What’s New on the Pesticide Section’s Web Site*
- *Multiple Chemical Sensitivity*
- *Exotic Newcastle Disease*
- *Pesticide Fees Increase*
- *Ask the Inspector*
- *More Changes for Private Pesticide Applicators*
- *NCPB Actions*
- *Applying Pesticides Through Irrigation Systems*
- *Methyl Bromide Phaseout*
- *Crop Protection Mini-Bulk and Plastic Drum Recycling Project*
- *Pesticide Section Gets New Address*

Pesticide Exposure Study

Continued from pg. 1

Objective: The objective of the study was to determine potential worker exposure to disulfoton when using the new applicator to deposit the insecticide at the base of Fraser Fir trees.

Applications: The six individuals performing the applications were North Carolina CES personnel who were experienced with Fraser Fir management practices. Prior to the start of the application, each pesticide applicator put on a one-piece "union suit" that served as the body dosimeter (instrument to measure absorption) to determine the potential dermal (skin) absorption. A tee shirt and shorts were put on over this, and a disposable Tyvek® coverall completed the clothing required by the product. In addition, each applicator wore rubber boots and gloves, a hat and a dust/mist respirator.

The experiment was repeated three times, on April 21, 28, and 29, 2003. Each experiment lasted 4 hours. Weather conditions were monitored every 30 minutes. Each applicator randomly



selected a granular dispenser, and the container (Di-Syston® 15G) was attached. They proceeded to "point and shoot" the 8 grams of granules at the base of each tree. Each applicator got into a routine pace immediately, and the amount of disulfoton applied by each was recorded during replacement of the empty container. The pesticide applicators took one or two breaks over the four hours but did not leave

the treatment area. There were no problems with the treating equipment, and each applicator applied the granules to approximately 2 acres.

Sampling: At the completion of the 4-h treatment period, each individual reported to the sampling station that was set up in the vicinity of the final plots.

Hands: The gloves were removed and a dilute soap solution was slowly poured over the hands for 30 seconds while the applicator scrubbed them. This was followed with an additional rinse with the soap solution. The rinsate was poured into a pre-cleaned, labeled glass jar, sealed with a Teflon®-lined screw cap and placed in a cooler containing Blue Ice®.

Face and Neck: The face and neck were wiped with two, 4 by 4-in. sterile gauze pads wetted with a dilute soap solution. The combined pads were placed in a labeled, pre-cleaned jar and sealed with a Teflon®-lined screw cap and placed in a cooler containing Blue Ice®.

Body Dosimeter: With assistance, the Tyvek® suit was removed followed by the tee shirt and shorts. Then the union suit was removed and sectioned into the following six samples: upper arms, lower arms, chest, back, upper legs, and lower legs. The samples were wrapped in labeled aluminum foil, placed in a labeled ZipLok® bag and placed in the cooler.



A Collaborative Effort:

This whole process, which began back in November of 1999, has been an inter-agency, cooperative effort. Without the help of all of the members, this project would never have been completed. This group consisted of people from NCDA&CS, the N.C. Pesticide Board, the North Carolina CES (Avery, Watauga, Alleghany, Ashe, and Mitchell Counties), NCSU, North Carolina Christmas Tree Association, all the county grower associations, Avery County Government, Bayer, Select-A-Feed, and the U.S. EPA. All of us working together, using researched-based knowledge and looking for common ground, created an environmentally sound solution for our Christmas tree growers in North Carolina. ■

Disclaimer: Use of product names does not imply endorsement by either the North Carolina Agricultural Research Service or NCDA&CS of the products named nor criticism of similar ones not mentioned.

What's New on the Pesticide Section's Web Site

By Laura Stover, Processing Assistant III

Credit Status Search

Recertification transcripts for commercial and private pesticide applicators are now available online. To locate the desired transcript, search by either the name or the license/certificate number of the applicator. The online transcript gives the following information: license type of the applicator, license/certification number, recertification date, license expiration date, course codes of classes attended, class dates, and the credit hours earned for each licensing subclass. You can find the credit status search on our web site by going to the following address: <http://www.ncagr.com/aspzine/fooddrug/Recert/RTsearch.asp>

Private Applicator Search

By using the private applicator search feature on our web site, you can find all of the private pesticide applicators with active certification in any county. Information such as each applicator's name, address, and recertification date (deadline) can be obtained. To use this feature, go to the following address: <http://www.ncagr.com/aspzine/Fooddrug/PrivData/advsearch.asp>

We are constantly adding and improving pages on our site, and we would really like to hear what you think. Please send your helpful ideas and comments to laura.stover@ncmail.net. ■

Multiple Chemical Sensitivity

By Kimberly Hainge*, Florida Department of Agriculture & Consumer Services

People with MCS report a wide variety of symptoms

Everyone has seen them on the news or heard about someone who has to live in stripped-down rooms to avoid contact with the chemicals that are present in everything from synthetic carpets to laundry soap and perfumes. Even small amounts of common pesticides can cause the sufferer to experience a multitude of debilitating symptoms. These people have been diagnosed with Multiple Chemical Sensitivity (MCS), a controversial diagnosis. Is MCS a real disease or merely a psychosomatic illness, that is a disorder with physical symptoms caused by a mental or emotional illness? Physicians calling themselves “clinical ecologists” argue that MCS is a real disease, but mainstream physicians generally consider the evidence weak. As a result, regulatory agencies have turned a deaf ear...until lately. New views of the interactions between the brain and the body are causing science and regulators to take a new look at MCS. Mr. Robert Axelrad, of the U.S. Environmental Protection Agency, states, “We don’t think there is enough science yet to make any judgment, but we’d like to see studies done.”

Multiple chemical sensitivity (MCS) is the name given by some to a condition in which various symptoms reportedly appear after a person has been exposed to any of a wide range of chemicals. The exposure may occur as a major event, such as a pesticide spill, or from long-term contact with low levels of chemicals, such as in an office with poor ventilation. As a result of exposure, people with MCS develop sensitivity. They have reactions to the chemicals even at levels most people can tolerate. People with MCS report a wide variety of symptoms including headache, fatigue, dizziness, nausea, irritability, confusion, intolerance to heat or cold, earache, muscle pain or stiffness, bloating or gas, skin rash, hives, diarrhea and chest pain.

Other names for MCS are “environmental illness,” “sick building syndrome,” “total allergy syndrome” and “20th Century Disease.” Overlapping disorders are Chronic Fatigue Syndrome, Fibromyalgia Syndrome and Gulf War Syndrome. These syndromes share many of the same symptoms as MCS and often occur together; however, they differ greatly in the methods used for their diagnoses and treatment. Which of these diagnoses a person receives usually depends on the type of specialist he or she sees. Occupational and environmental medicine physicians usually diagnose MCS. It is extremely important that anyone suspected of having any of these syndromes be screened for all of the others as well as for other possible underlying causes of their symptoms. Failure to do so could have serious consequences, as health care providers may overlook potentially treatable conditions.

Many recognized medical groups and societies, including the Center for Disease Control and the American Medical Association, do not consider MCS a distinct physical disorder. There are several reasons for this. First, there is a lack of clinical evidence to support a physical cause for the symptoms. In addition, people with MCS do not develop antibodies in response to chemical exposure, as is the case with an allergic reaction. Further, some

studies suggest that people with MCS have higher rates of mental health disorders such as depression and/or anxiety. The stress involved in the sometime long process of determining the cause of unexplained physical symptoms can actually make the original symptoms worse. Much of the controversy, then, centers on whether the symptoms associated with MCS are caused by physical or psychological factors.

Nicholas Ashford, professor of technology and policy at Massachusetts Institute of Technology, thinks chemicals are one of the most serious environmental problems facing industrialized countries

“We don’t think there is enough science yet to make any judgment, but we’d like to see studies done.”

Mr. Robert Axelrad of the U.S. Environmental Protection Agency

today. Professor Ashford, who is also an advisor to the United Nations Environment Programme, is known for his work on the theory of MCS. The theory suggests people can become sensitized by exposure to one form of contamination so that they are then liable to be affected by a whole range

of other pollutants, including detergents, traffic fumes, tobacco smoke and pesticides.

The Florida Department of Agriculture enforces a state law that creates a registry of persons requiring prior notification of the application of pesticides. The registry is only for *the licensed pest control industry*. To be placed on the registry, the person must have been examined by a qualified physician who is board certified and recognized by the American Board of Medical Specialties in the area of toxicology, allergy, or occupational medicine. They must fill out an application for registration as a pesticide sensitive person. Initial and annual renewal fees are charged. Once the person is registered, his/her name is placed on a written list that is supplied to all licensed pest control companies every three months. Before the company makes a pesticide application to a lawn, plant bed, or exterior foliage surrounding the property on which the primary residence of the registered person is located, the company must notify the person at least 24 hours before the pesticide is applied.

The cause of MCS is unknown, and there are no tests to diagnose MCS. Because little is known about the cause of MCS symptoms, it is not known if the disorder can be prevented. Approaches to treatment vary. Most healthcare providers recommend avoiding the chemicals that seem to trigger the reactions. ■

**Ms. Hainge works as a Referral Coordinator for the Bureau of Compliance Monitoring, Division of Agricultural Environmental Services, FDACS. She is a graduate of Arizona State University and has twenty years experience in both the pest control industry and pesticide regulation.*

Exotic Newcastle Disease: Preparation Can Equal Prevention

By James S. Swanner, Exotic Newcastle Disease and Field Specialist

In the fall of 2002, southern California experienced a deadly infection of poultry that has not been seen in the United States in over thirty years. Exotic Newcastle Disease (END) had found its way across the border with neighboring Mexico and entered the backyard flocks throughout southern California. The virus made its way as far north as Los Angeles and caused the Federal Government to place an area the size of South Carolina under quarantine. This federal quarantine caused severe losses to poultry farmers in California, due to the inability to export poultry products from the infected areas. Even though only twenty-two commercial poultry flocks in California tested positive for Exotic Newcastle Disease, every bird in the quarantined area was destroyed and disposed of in order to stop the spread of the disease. So far the Federal Government has ordered nearly 4 million birds destroyed.

Exotic Newcastle Disease is a highly contagious viral disease that can infect chickens, turkeys, and many other captive and wild birds. If a non-vaccinated bird comes into contact with the virus, it is almost certain that it will become infected. Of the birds that get the disease, as many as 50 to 100 percent will die. In California the birds that contracted END had a death rate of 75 percent. The remaining 25 percent had to be killed due to the very poor quality of life after infection and to prevent the virus from spreading to other birds. If birds recover from the infection, they still have the ability to spread the virus to other birds for more than a year after signs of the disease are no longer present.

Exotic Newcastle Disease is spread between an infected bird to a non-infected bird through direct interactions or by other animals and people carrying the virus to non-infected birds. The virus can be found in the water droplets from an infected bird when it coughs or sneezes and can be found in the bird's tears. People were probably the most common way the virus spread in the California outbreak. Unknowing workers probably picked up the virus by visiting areas with infected backyard birds and then carried the virus to other areas on their clothing, shoes or even their skin. Driving into an area with infected birds and driving out with the END virus is another common way it is spread. Workers can drive into infected areas and easily transport the virus in the vehicle's tires or the interior of the vehicle by wearing dirty clothing and boots after visiting an infected flock.

Signs to Watch For

- A bird infected with END may have trouble breathing. It may cough or sneeze and many times you may see mucus-like discharge from the nose of the bird.
- The bird's behavior may change. A normally active bird will become depressed and have a sunken appearance to its body, with its wings drooped down. The bird's movement becomes uncoordinated and it can be seen walking in circles or it may not be able to move.
- Manure is no longer the normal color or texture. You may see a sudden change to greenish, watery manure.
- The neck and head of the infected bird can become swollen and greatly enlarged, leading to difficulty in eating and drinking.
- Chickens, turkeys, and other egg layers will suddenly stop laying, or the eggs that they do lay are no longer shaped like normal eggs and the shell becomes very thin.
- The most alarming sign of a bird infected with END is a sudden death without any previous signs of illness. If more than one bird is in the same flock, usually many birds will die.

How Can I Prevent the Spread of Exotic Newcastle Disease?

- If you own pet birds, backyard flocks, or commercial poultry, do not allow anyone new around the birds. Do not visit other people with pet birds, backyard flocks or commercial poultry and then work around your birds without showering and changing clothing first.
- If you drive into an area with birds, make sure you wash the vehicle before returning home, especially the tires. Never enter back into your vehicle with dirty clothing and boots.
- Make sure all dead birds are disposed of properly. If you dispose by burial, make sure the hole is deep enough to discourage wild animals from digging dead birds back up.
- If any birds die suddenly and in large numbers, call your local veterinarian or report it to the NCDA&CS at (919) 733-3986. For more information about this contagious viral disease, visit the NCDA&CS, Emergency Programs Division's website (<http://www.ncagr.com/oep/END.htm>) ■

The outbreak in California may only be the start of this devastating outbreak in the United States. If Exotic Newcastle Disease should arrive in North Carolina, it will be very important for everyone to work to eliminate the disease from the state. Knowing what signs to look for and who to call are two ways that everyone can do their part. Prevention of Exotic Newcastle Disease will be easier than trying to eliminate the disease after it arrives.

Pesticide Fees Increase

On June 30, 2003, North Carolina Governor Mike Easley signed legislation that, in part, increased certain fees that are collected by the NCDA&CS, Pesticide Section under the *North Carolina Pesticide Law of 1971*. These fee increases are explained below. Please read this information carefully to determine whether or not the fee increases will affect you.

Commercial Licensing Fees

Effective July 15, 2003, the annual pesticide *commercial* licensing fee will be \$50.00. All new and renewal applications for commercial licenses will be charged the new \$50.00 fee after this date. Commercial ground applicators, aerial applicators, pest control consultants, and dealers are all affected by this increase.

Individuals who work for a governmental agency (federal, state, county, or municipal) and make pesticide applications as part of their responsibilities are considered *public operators*. As in the past, public operators will be issued licenses free of charge. Although a public operator is not assessed a licensing fee, he must still sign an annual licensing application and return it to the Pesticide Section. The new license will be mailed to the public operator's work address.

Fees for *private* pesticide applicators (farmers) have NOT increased. The cost is still \$6.00 for a three-year certification period.

Aircraft Inspection Fees

The *North Carolina Pesticide Law of 1971* requires an annual inspection of any aircraft licensed to apply pesticides in North Carolina. Pesticide inspectors conduct the inspections and furnish decals to those aircraft that pass. Effective July 15, 2003, an aircraft inspection will cost \$25.00. This fee must be paid by check, made payable to NCDA&CS, at the time of the inspection.

Registration Fee

Companies who sell or distribute pesticide products in North Carolina must pay an annual pesticide registration fee. Starting July 15, 2003, the annual pesticide registration fee is \$100.00 per brand or grade of pesticide sold in North Carolina. This fee applies to all pesticide registrations (both new and renewal).

The Pesticide Environmental Trust Fund Assessment fees have NOT changed. They remain, based upon the level of gross sales of the product within North Carolina during the previous year, at either \$25.00 (gross sales equal to or less than \$5,000) or \$50.00 (gross sales of greater than \$5,000) per brand or grade. ■



PESTICIDE
Update

Pesticide Section

**North Carolina
Department of Agriculture &
Consumer Services
Food & Drug Protection Division
Pesticide Section**

1090 Mail Service Center
Raleigh, NC 27699-1090
(919) 733-3556

FAX (919) 733-9796

[http://www.ncagr.com/fooddrug/
pesticid/](http://www.ncagr.com/fooddrug/pesticid/)

Pesticide Update is a quarterly report
of the Pesticide Section.



Please Recycle.

Ask the Inspector

Dwight Seal, District Supervisor, Food & Drug Protection Division

“Ask the Inspector” will be a section featured in future issues of the Pesticide Update. If you have a specific question you would like addressed in this column, please email it to [dwight.seal@ncmail.net](mailto:dwright.seal@ncmail.net)

1. If I have an ornamental and turf subclassification on my commercial applicator’s license, can I spray my customers’ homes for mosquitoes?

An ornamental and turf subclass is designed for making pesticide applications to sites such as golf courses, home lawns, and ornamental plantings to control diseases, weeds and insects that affect the plants grown in these areas. Mosquitoes are not pests of these sites (plants); therefore, an ornamental and turf subclass would not allow the licensee to make applications for these pests. Mosquitoes are complex pests to control, and a thorough understanding of their biology and life cycle is important for an applicator to understand. The Pesticide Section requires any person involved in mosquito control to have a public health subclassification on his pesticide license.

2. I am a private applicator and my neighbor wants me to spray his crops for him. Can I do this?

A private applicator can make an application for another farmer under the stipulation that he receives no compensation, i.e. money. You are allowed to exchange services for your work. This means that the other farmer could bale hay, harvest a crop or do some other similar job for you in exchange for your spray application. If a Restricted Use Pesticide (RUP) is involved, the other farmer must have a private pesticide applicator certification to purchase the RUP. If he does not have this certification, you will need to purchase the RUP. You are responsible for providing the other farmer information about the pesticide application, including your certification number, so that he can comply with the U.S. Department of Agriculture (USDA) Pesticide Recordkeeping Regulations. Remember, since you are the certified applicator, you are responsible for seeing that all applicable rules are followed.

3. Why do I have to keep pesticide application records as a farmer, and who enforces this rule?

Like any business, recordkeeping for a farm is a vital part of keeping a cost/benefit comparison. Other reasons to keep records are to determine control after an application and to maintain information needed for rotation and liability purposes. Some food processors also require records of pesticide applications when buying crops. Although regulations only require Restricted Use Pesticide (RUP) applications to be recorded, you will find it beneficial to keep a record of general use pesticide applications as well. There is no problem in maintaining all application records (both RUP and general use) in a single source (book).

The Pesticide Section has a cooperative agreement to conduct inspections for the USDA Pesticide Records Branch for private pesticide applicators who apply RUP’s. An inspector with the NCDA&CS, Pesticide Section makes random inspections from a list generated from purchasers of RUP’s. The Pesticide Section offers growers a *Pesticide Recordkeeping Manual* free of charge. If you have not received one of the books and would like one, please contact your Cooperative Extension Service or this Department for a copy.

NOTE: Commercial applicators must keep records of RUP applications as set forth in The N.C. Pesticide Law of 1971. Separate regulations apply to commercial applicators; recordkeeping inspections for commercial applicators are not conducted under the cooperative agreement with USDA.

4. If I use a weed & feed type product only on lawns, do I need a pesticide license?

If you use it on another person’s property for compensation (money), then you must possess a commercial pesticide applicator’s license. Because weed and feed type products contain both fertilizer and *herbicide*, these products must be registered as pesticides with the U.S. Environmental Protection Agency (EPA).

5. I have several employees who work for my lawn care business. At present I am licensed and do all the spraying. Should one of my employees need to spray, does he also need a license?

An employee can spray a pesticide under your license as long as he is under your supervision. Supervision means that the employee can contact you in a reasonable amount of time. Remember you are responsible for his actions. If you choose to allow an application under your license, advise the employee of your license number in case he is inspected. License renewals have a section for listing the names of people who you authorize to make applications under your license. ■

More Changes for Private Pesticide Applicators

By Colleen Hudak - Wise, Certification, Licensing & Outreach Manager

As most of you know by now, farmers in North Carolina have recently experienced several changes in how they are certified and recertified to use restricted use pesticides. Anyone who wants to apply for initial private applicator certification must now pass a written examination. In addition, all individuals who hold private applicator certification can only qualify for recertification by earning four continuing certification credits.

These new regulatory requirements have made certain procedural changes necessary. The purpose of this article is to discuss some of these procedural changes and to explain who will be affected by them and how.

Transcripts

To help private applicators keep track of the continuing certification credits that they have earned, "transcripts" will be generated. A transcript is simply a complete listing of the courses that the applicator has attended. It will list the date, course code number, course name, and number of credit hours earned in each subclass. To qualify for recertification, a private applicator must attend 2 hours of private applicator safety training ("V") and 2 hours of specialty training ("X") by September 30th of the year in which his certification is due to expire.

Transcripts will be mailed to private applicators beginning in August of each year. Not everyone will receive a transcript. You will *not* get a transcript if your certification has already expired. Also, this year you will *not* get a transcript if your certification is due to expire in 2005 or 2006 and you have not earned any credits.

When you receive your transcript, you should examine it carefully to make sure that you have received credit for all courses that you attended. If you have any questions about your transcript, or you feel that an error has been made, you should promptly call the Pesticide Section (919-733-3556) so that the problem can be resolved. When you call, be sure to have your own class records (date, location, etc.) handy so that you can give this information.

Please note. A transcript is *not* an application for renewing private applicator certification. It should *not* be returned to NCDA&CS with renewal fees.

Applications

NCDA&CS will now send certification and recertification forms directly to private applicators. The North Carolina Cooperative Extension Service will no longer be able to supply these forms or collect fees.

Individuals who have met their recertification requirements by June 30 will be mailed renewal applications during the middle of September. Those applicators that qualify for recertification during the period July 1 through September 30 will receive their renewal applications in November. If you have already earned your recertification credits, but your certification doesn't expire until 2004 or 2005, you won't be receiving a renewal application at this time. (You will receive your application during the year that your certification is due to expire.)

Each form, whether for initial certification or renewal, will contain the following "attestation" statement:

By signing below, I hereby confirm that I am a producer of an agricultural commodity and that I understand my legal responsibilities for pesticide use in accordance with product labels and for direct supervision of all individuals making pesticide applications under my certification.

The private pesticide applicator should read this statement carefully and then sign the application on the line indicated. It is important to understand that only a producer of an agricultural commodity can qualify as a private pesticide applicator in North Carolina. A homeowner who wants to purchase and apply a restricted use pesticide for a structural, ornamental, turf, or other use does not fall under the legal definition of a private pesticide applicator.

You should return the signed application to NCDA&CS along with a \$6.00 check. A new certification card, with a new expiration date indicated on it, will be mailed to you in a couple of weeks. This card provides proof of valid private applicator certification. It must be shown whenever you purchase a restricted use pesticide.

The Pesticide Section looks forward to working with private applicators as these new changes are implemented. If you have any questions, please don't hesitate to call us. ■



NCPB Actions

At the January through July 2003, meetings of the North Carolina Pesticide Board, the following settlement agreements, including license suspensions and monetary penalties totaling \$13,850.00, were approved for alleged violations of the NC Pesticide Law of 1971. Consent to the terms of the settlement agreement does not constitute an admission of guilt to any alleged violation.

Timothy D. Whitfield, Fairfield, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label; and for depositing by aircraft a pesticide on the right-of-way of a public road or within 25ft of the road; and for depositing a pesticide within 100 ft of any residence. Mr. Whitfield agreed to pay a monetary penalty of \$900.

Tyson F. Minor, Greensboro, NC, for the alleged violation(s) of engaging in the business of a pesticide applicator without a license; for failing to pay the original or renewal license fee when due and continuing to operate as an applicator or applying pesticides without a license and for failing to have at least one person at the business location responsible for the application of pesticides for routine pest control situations. Mr. Minor agreed to pay a monetary penalty of \$250.

Christopher C. Rowe, Charlotte, NC, for the alleged violation(s) of making a pesticide application or recommendation not in accordance with the registered label and for applying a pesticide under such conditions that drift from pesticide(s) particles or vapors result in adverse effect. Mr. Rowe agreed to pay a monetary penalty of \$450.

David L. Chandler, Angier, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label and for applying a pesticide under such conditions that drift from pesticide(s) particles or vapors result in adverse effect. Mr. Chandler agreed to pay a monetary penalty of \$300.

Brent C. Strickland, Louisburg, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label and for applying a pesticide under such conditions that drift from pesticide(s) particles or vapors result in adverse effect. Mr. Strickland agreed to pay a monetary penalty of \$400.

Michael J. Cale, Greenville, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label and for applying a pesticide under such conditions that drift from pesticide(s) particles or vapors result in adverse effect; and for failing to provide and wear the label-specified person protective equipment. Mr. Cale agreed to pay a monetary penalty of \$750.

Joel Lineberger, Jefferson, NC, for the alleged violation(s) of handling pesticides in a manner as to endanger man and his environment; for operating faulty or unsafe equipment and for storing or disposing of containers or pesticides by means other than those prescribed on the labeling. Mr. Lineberger agreed to pay a monetary penalty of \$400.

Ronald G. Crumpler, Salemburg, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label; for failing to provide specific information to workers about the pesticide application; for failing to assure that each worker had been trained; for failing to train early entry workers prior to entry into a treated area; for failing to provide decontamination supplies or a decontamination site for workers. Mr. Crumpler agreed to pay a monetary penalty of \$250.

Larry M. Lee, Belhaven, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label; and for depositing by aircraft a pesticide on the right-of-way of a public road or within 25 ft of the road. Mr. Lee agreed to pay a monetary penalty of \$600.

Russell S. Kee, Ayden, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the

registered label; for operating in a careless, faulty or negligent manner; for failing to have at least one person at each business location responsible for the application of pesticides for routine pest control situations and for failing to pay the original or renewal license fee when due and continuing to operate as an applicator or applying pesticides without a license. Mr. Kee agreed to pay a monetary penalty of \$900.

William A. Arledge, Elizabeth City, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label; and for operating in a careless, faulty or negligent manner. Mr. Arledge agreed to pay a monetary penalty of \$500.

Jay L. Ward, Zirconia, NC, for the alleged violation(s) of handling, transporting, or storing pesticides in a manner as to endanger man and his environment; for improper disposal, or storage of any pesticides or pesticide containers in such a manner that may cause injury to humans, vegetation, crops, livestock, wildlife, or to pollute any water supply or waterway; for using a pesticide in a manner inconsistent with its labeling; for failing to thoroughly empty/remove materials from a container by shaking, pumping, pouring, triple-rinsing (or equivalent); for failing to store pesticides in a manner to prevent unauthorized access; for disposing pesticides or pesticide containers so as to cause or allow open dumping and open burning. Mr. Ward agreed to pay a monetary penalty of \$500.

Edward L. Owens, Raeford, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label; and for depositing by aircraft a pesticide on the right-of-way of a public road or within 25 ft of the road; for depositing a pesticide onto a nontarget area in such a manner that it is more likely than not that adverse effect will occur. Mr. Owens agreed to pay a monetary penalty of \$1,500.

Continued on page 11

Applying Pesticides Through Irrigation Systems

By Dr. Henry Wade, Environmental Programs Manager

Applying pesticides through an irrigation system (also known as chemigation) is becoming more appealing to farmers each year. This method of application can eliminate the need for other ground or aerial application equipment. Chemigation can reduce costs and problems associated with pesticide drift to other crops, properties, people, or animals. On the negative side, chemigation can cause contamination of groundwater, ponds, lakes, or streams if **backsiphoning** or direct injection into a water source occurs. Either one of these scenarios is likely if a chemigation system does not have the proper anti-pollution devices installed in the correct locations, or if the devices are not functioning properly.

Laws and Rules

Anyone who is considering applying a pesticide through an irrigation system must realize there are laws and rules that cover this type of application. First, you must always comply with the pesticide product label. Some labels prohibit application with specific types of irrigation systems. Second, you must comply with the chemigation rules, 2 NCAC 9L Section .2000, which were adopted by the North Carolina Pesticide Board. The purpose of these rules is to protect water sources in our state. The anti-pollution devices that are required in North Carolina are necessary to reduce the potential for backsiphoning or direct injection of pesticides into water resources. If the pesticide label and the North Carolina chemigation rules differ, you must follow whichever is the more restrictive.

Anti-pollution Devices

The drip irrigation system that contains a sand media filtration system is increasing in popularity and is being used to apply pesticides to crops across North Carolina. If this system is used on your farm, be sure to include protective features to prevent pesticides from being accidentally discharged (released) into the environment. First, the injection of pesticides into the irrigation line must be on the outlet side of all media filters. Furthermore, a check valve must be installed between the outlet side of all media filters and the point of pesticide injection into the irrigation mainline. Without a properly functioning check valve at this location, the media filters could become contaminated with a single backsiphonage incident. Any subsequent backwashing of the media filters could then result in water or soil contamination. This type of incident would be classified as water dumping or open dumping of pesticides or pesticide dilutions. This would be an illegal discharge of a pesticide in violation of N.C. Pesticide Board rule 2 NCAC 9L .0604. An individual may be subjected to an assessment of a regulatory fine and/or a suspension of his or her license or certification as a result of this type of violation.

In addition to the check valve requirement stated in the above paragraph, chemigation systems must also have several other anti-pollution devices, such as an automatic low pressure drain, inspection port, vacuum relief valve, double check valves, single check valve, flow interruption device, and a **functional systems interlock**. The layout of these chemigation systems can vary depending on the type of components that are used. A revised chemigation brochure has been developed to provide a more detailed explanation of these systems. The brochure also includes drawings of various types of systems. To obtain a copy of this brochure on chemigation and fertigation (using irrigation systems to apply fertilizers), contact the Pesticide Section at 919-733-3556.

The types of irrigation equipment covered by these regulations include, but are not limited to, drip or trickle, center pivot, lateral move, traveler gun, and solid set systems. The regulations do not apply to hand-held, hose-end sprayers that are constructed

so that an interruption in water flow automatically prevents any backflow to the water supply. A hand-held, hose-end sprayer is allowed only on the outlet side of the water hose. The use of a device connected to a faucet or spigot that siphons a pesticide from a reservoir or container is *not* permitted in North Carolina.

Prohibition on Connecting a Chemigation System to a Public Water System

Under the chemigation rules, it is illegal to use an irrigation system that is directly connected to a public water system to apply pesticides. When a public water system is used, the water must first be released into a reservoir tank. An air gap at least twice the inside diameter of the fill pipe must exist between the end of the fill pipe from the public water system and the top rim of the reservoir tank.

Inspection and Maintenance of Chemigation System

One of the requirements of the chemigation regulations is that the operator must inspect the **antisiphon devices** and the functional systems interlock during periods of chemigation to ensure they are functioning properly. If parts of the system are defective, they must be repaired or replaced before any chemigation is done. Representatives of the Pesticide Section may at any time inspect an irrigation system to make certain that it complies with the regulations. If the system is not in compliance, the Department will issue a stop-use order. The system must be re-inspected by a departmental representative before the stop-use order can be removed.

Does your chemigation system meet the requirements established by the N.C. chemigation rules? Why not find out? The Pesticide Section will provide technical assistance and will inspect a system to determine if it complies with the chemigation rules. Call the Pesticide Section at 919-733-3556 to be put in touch with the pesticide inspector in your area. ■

Backsiphon. *Flow in the reverse direction from the normal flow in a piping system caused by negative pressure in the supply piping.*

Antisiphon Device. *Any equipment that prevents backflow of a pesticide into any water supply or the backflow of water into a pesticide supply.*

Functional Systems Interlock. *A system used to link irrigation pipes and pesticide injection units, other pumps or supply tanks, so designed that in the event of irrigation pump malfunction, shutdown of the pesticide injection units will occur.*



Methyl Bromide Phaseout

Critical Use Exemptions May Extend Some Uses

By Lee Davis, Registration Manager

Workhorse will be very limited by 2005

As you may have heard, the production, importation, and wide spread use of the agricultural workhorse, methyl bromide, is to be phased out in the United States and other developed countries by January 1, 2005. This action is in response to provisions mandated by the *Montreal Protocol* – an international treaty developed to help protect the earth's atmosphere from various ozone depleting compounds. Over 180 countries have now signed the treaty, which commits them to reducing and/or eliminating ozone-destroying chemicals such as methyl bromide.

According to the U.S. Environmental Protection Agency (EPA), approximately 143,000,000 pounds of methyl bromide are currently used worldwide each year. Of this, the United States uses around 42,000,000 pounds, or 29% of the annual global consumption. Although significant resources are now being devoted to finding effective and economically attractive replacements for methyl bromide, several uses remain vulnerable should methyl bromide disappear completely at the end of 2004. Fortunately, the authors of the *Montreal Protocol* had the foresight to prepare for this possibility and provided provisions for exempting certain critical uses of methyl bromide beyond December 31, 2004. A *Critical Use Exemption* will excuse the stated use from compliance with the treaty for a specified time period; it also dictates the total amount of methyl bromide that can be used during that time period.

On May 10, 2002, the EPA announced that interested parties could begin submitting Critical Use Exemption (CUE) applications. The EPA provided sample application forms and guidance on how to develop an appropriate CUE request. In order for a CUE request to be considered valid, there must be "no technical or economically feasible alternatives" to methyl bromide for the use in question. This standard was established under the treaty and is the core test all legitimate CUE applications must pass. The CUE applications were extremely complex and, in North Carolina, several different stakeholder groups came together to work jointly on uses deemed critical to our state.

U.S. uses around 42,000,000 pounds or 29% of the annual global consumption

In August 2002, a meeting was held at North Carolina State University (NCSU) to begin strategizing and gathering data

needed to complete the applications. Organized by Steve Toth and Dr. Barclay Poling (both of NCSU), the meeting included representatives from several other southeastern states who wanted to join the North Carolina effort. This group, known as the Southeastern Consortium, developed applications for strawberries (fruit production), strawberries (nursery plant production), peppers, tomatoes, and cucurbits (including melons, cucumbers, and squash). On September 9, 2002, CUE applications for these uses were submitted to the EPA for review. A CUE application for tobacco transplant trays was also developed with the help of NCSU personnel, but was submitted separately to the EPA by the Tobacco Growers Association of North Carolina. Other applications submitted by other groups, but which cover uses important to North Carolina interests include turf (sod) and forest nurseries.

In February of this year, the United States submitted a formal CUE nomination package to the Ozone Secretariat of the United Nations. All uses identified as critical to North Carolina went forward. The United States is requesting 21,872,008 pounds of methyl bromide for the uses identified in the CUE applications. According to EPA data, this is slightly more than 1/2 of the methyl bromide consumed by the United States during the recent past. The United States is asking for a two-year exemption.

In November 2003, the Parties to the *Montreal Protocol* will meet in Kenya to make final decisions regarding the production, importation, and use of methyl bromide under critical use exemptions. At that time, several questions will have to be answered. What countries will be granted critical use exemptions? What uses will be covered? How much methyl bromide will be allotted to each country? How much to each use? How will each use be tracked? How long will the exemptions be valid? How will the chemical be allocated at the dealer or applicator level?

During the month of June 2003, the EPA held several meetings across the country to discuss, among other things, the allocation issue. EPA welcomes input on this subject. If you would like to offer suggestions as to how the methyl bromide could be allotted, please contact Marta E. Montoro of the EPA at 202-564-3516. She can also be reached by email at, montoro.marta@epa.gov.

For a more comprehensive discussion of the phaseout of methyl bromide, visit EPA's web site on this subject (<http://www.epa.gov/spdpublic/mbr/index.html>). Additional information is also posted on the Pesticide Section's web site (<http://www.ncagr.com/fooddrug/pesticid/>). ■

Methyl Bromide Phaseout Schedule

Methyl bromide production and importation will be reduced from 1991 levels as follows:

- » 25% reduction in 1999
- » 50% reduction in 2001
- » 70% reduction in 2003
- » 100% reduction in 2005

Please note the following are exemptions

- » Quarantine and Preshipment Uses
- » Emergency uses
- » CUEs

NCPB Actions (continued)

Continued from pg. 8

Cullen G. Haddock, Greenville, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label and for applying pesticides under such conditions that drift from pesticide(s) particles or vapors results in adverse effect. Mr. Haddock agreed to pay a monetary penalty of \$250.

Walter C. Lanier, Beulaville, NC, for the alleged violation(s) of providing or making available a restricted use pesticide to a person other than a certified private applicator. Mr. Lanier agreed to pay a monetary penalty of \$300.

Robert W. Luther, Jr., Elizabeth City, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label; for operating in a careless, faulty or negligent manner and for failing to store formulated pesticide products in labeled containers and for storing a pesticide in any food, feed, beverage, or medicine container that was previously used for such purpose, or that is specifically designed to contain those products. Mr. Luther agreed to pay a monetary penalty of \$500.

Craig D. Craft, Hertford, NC, for the alleged violation(s) of depositing a pesticide by aircraft within 300ft of the premises of schools, hospitals, nursing homes, churches, or any building (other than a residence) which is used for business or social activities if either the premises or the building is occupied by people. Mr. Craft agreed to pay a monetary penalty of \$500.

Terry W. Keith, Raeford, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label and for operating in a careless, faulty or negligent manner and for applying pesticides under such conditions that drift from pesticide(s) particles or vapors results in adverse effect. Mr. Keith agreed to pay a monetary penalty of \$150.

George C. Fell, Jackson, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label; for operating in a careless, faulty or negligent manner and for applying pesticides under such conditions that drift from pesticide(s) particles or vapors results in adverse effect; for depositing a pesticide by aircraft onto the right-of way of a public road or within 25ft of the road; for depositing a pesticide within 100ft of a residence; for depositing a pesticide onto any non-target area in such a manner that is it more likely than not that adverse effect will occur. Mr. Fell agreed to pay a monetary penalty of \$1,000.

Clayton E. McLawhorn, Grifton, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label and for operating in a careless, faulty or negligent manner. Mr. McLawhorn agreed to pay a monetary penalty of \$400.

Marcelo R. Flores, Weldon, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label and for failing to dispose of excess pesticides and pesticide-related waste in accordance with labeling requirements. Mr. Flores agreed to pay a monetary penalty of \$900.

James T. Fletcher, Elizabeth City, NC, for the alleged violation(s) of using a pesticide in a manner inconsistent with its labeling; for making a pesticide recommendation or application not in accordance with the registered label; for depositing a pesticide by aircraft onto the right-of way of a public road or within 25ft of the road and for depositing a pesticide onto any nontarget area in such a manner that is it more likely than not that adverse effect will occur. Mr. Fletcher agreed to pay a monetary penalty of \$1,250. ■

For more information about pesticides, contact your local Cooperative Extension Service office.

Free Mini-Bulk Recycling Project

The NCDA&CS Pesticide Disposal Assistance and Pesticide Container Recycling Programs will conduct a free recycling project for farmers, aerial applicators, golf courses, agchem dealers, DOT, etc. to dispose of their old, brittle, mini-bulks and plastic drums. To participate in this free project, contact your agchem dealer or the Cooperative Extension Service, or visit the NCDA&CS website at www.ncagr.com to complete a field survey form. The completed form must be returned to NCDA&CS by December 15, 2003. Letters will be mailed later to notify registered participants of the date and location of the recycling events in their area. If you have any questions, please call Derrick Bell or Royce Batts at 919-715-9023 or 919-733-7366. ■



Pesticide Section Gets New Address

As of August 31, 2003, the NCDA&CS, Pesticide Section has a new address. Please make a note of this NOW. All mail, including license and registration renewals, should be addressed as follows:

**NCDA&CS
Pesticide Section
1090 Mail Service Center
Raleigh NC 27699-1090**

Failure to use the correct address will result in delayed delivery of mail to the Pesticide Section. If you want your renewal to be processed promptly, please remember to use our new address! ■

For More Information

PESTICIDE SCHOOLS AND MATERIALS FOR CERTIFICATION AND RECERTIFICATION

CONTACT: Dr. Wayne Buhler, Dept. of Horticultural Science, Box 7609, NCSU, Raleigh, NC 27695.
Phone (919) 515-3113

CERTIFICATION, LICENSING, AND RECERTIFICATION CREDITS OR TESTING

CONTACT: Mike Williams, Pesticide Section, NCDA&CS, 1090 Mail Service Center, Raleigh, NC 27699-1090.
Phone (919) 733-3556

PRIVATE APPLICATOR RECERTIFICATION CLASSES

CONTACT: Your local Cooperative Extension Service office

COMMERCIAL APPLICATOR AND DEALER RECERTIFICATION CLASSES

CONTACT: Pesticide Section Homepage www.ncagr.com/fooddrug/pestcid

PESTICIDE CONTAINER RECYCLING

CONTACT: Colleen Hudak-Wise, Pesticide Section, NCDA&CS, 1090 Mail Service Center, Raleigh, NC 27699-1090.
Phone (919) 733-3556

PESTICIDE WASTE DISPOSAL

CONTACT: Royce Batts, Food and Drug Protection Division, NCDA&CS, 1090 Mail Service Center, Raleigh, NC 27699-1090, Phone (919) 733-7366 or (919) 715-9023.

PRSRRT STD
U.S. Postage
PAID
Raleigh, NC 27611
Permit No. 821