Change in Regulations for Burning Agricultural Products

Farmers will have more specific guidelines for acceptable outdoor burning under an agreement that state environmental and agricultural officials signed recently. The memorandum of understanding between the N.C. Department of Environment and Natural Resources - Division of Air Quality and the N.C. Department of Agriculture and Consumer Services (NCDA&CS) sets guidelines for acceptable burning at farms, primarily to control diseases or pests as well as some crop residues. Although it remains illegal to burn man-made materials, the state open burning rule allows some exceptions for the burning of plant materials -- such as land-clearing and acceptable agricultural practices, including controlling Christmas tree pests.

"The purpose of this agreement is to better manage agricultural burning so we can minimize the effects of air pollution on people," said DAQ Director Keith Overcash. "Smoke is unhealthy to breathe and harms the environment, but we recognize that there are situations where farmers may need to burn crop debris in order to control diseases, pests and other problems."

Under the state open burning rule, it is always illegal to burn man-made materials such as trash, paper, lumber, tires, plastics and chemicals. The rule allows exceptions for certain burning of trees, crop residues and other vegetative matter but doesn't provide specific guidelines on acceptable agricultural burning. "This agreement provides clear guidance about the acceptable uses of burning for agronomic purposes," said Dewitt Hardee, NCDA&CS environmental programs manager, who worked on the agreement with DAQ staff.

North Carolina law prohibits most open burning because the smoke from outdoor fires can cause serious health problems and pollute the air. For example, a recent study by the U.S. Environmental Protection Agency found that backyard burning of trash from a family of four can emit as much of some toxic pollutants, such as dioxin and furan, as a well-controlled municipal incinerator serving tens of thousands of households. Homeowners can burn yard trimmings -- excluding stumps and logs over 6 inches in diameter -- if it's allowed under local ordinances, no public pickup is available and it doesn't cause a public nuisance. Other allowable burning includes fireplaces, campfires, outdoor barbeques and bonfires for festive occasions. Landowners may be allowed to burn vegetation to clean up storm debris, but they should check first with the nearest DAQ regional office.

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office. People seeking to burn also may need permits from the Division of Forest Resources.

Under the open burning rule, the DAQ can assess fines as high as $25,000 per violation, but most fines are less than $1,000 for first-time offenders. Larger fines can be assessed in cases involving repeat violations and people who knowingly violate the law. For more information on what is allowed and prohibited, visit the DAQ Web site at www.ncair.org.

The memorandum of understanding states:

**Christmas Tree, Nursery and Ornamental Burning**

*Open burning of Christmas trees, ornamental trees, shrubs, and other misc. ornamental plants, and annual prunings from these trees and shrubs, is considered an acceptable agricultural practice by the North Carolina Department of Agriculture and Consumer Services. This applies to all commercial Christmas tree farms, nurseries and greenhouses that grow these plants. Burning will kill many primary insect and disease pests that live in this wood and pose a hazard for nearby Christmas trees, nursery and greenhouse crops. Burning is recommended in a timely manner to prevent the spread of these insect and disease pests to healthy trees, shrubs, and other ornamental plants.*

*Piling, mulching or transferring to landfill increases the risk of spreading disease. Any burning with prevailing winds towards a public road should be a minimum of 250 feet from the edge of the public road. No burning is allowed within 1,000 feet of another property owner's occupied structure without a signed written waiver at the time of the burn from the property owner(s) within the 1,000 feet boundary. Such a waiver must be approved by the Division of Air Quality Regional Supervisor in the respective area prior to the burn being initiated.*

**New Western North Carolina Horticulture Association!**

A new organization has formed to help green industry professionals in the High Country. The Western North Carolina Horticulture Association’s mission is “to serve the needs of members as responsible professionals who promote ethical standards and to encourage the growth and well-being of the landscape industry.” The association is open to anyone involved in the green industry here in the High Country. Memberships range from $50 per individual or company to $25 for employees of member companies. There is also a free student membership for those involved in horticultural or agricultural studies that maintain an overall “B” average.

The association is actively seeking members and is also partnering with the Watauga and Avery Cooperative Extension Centers for educational workshops and trainings that will increase members’ knowledge and skills. The Western North Carolina Horticulture Association meets on the second Monday of each month at 7 PM, with meetings usually held at the Watauga Agricultural Conference Center in Boone. For more information, please contact the Watauga or Avery Cooperative Extension office (828-264-3061 or 828-733-8272). Membership applications can be picked up at either Extension Center.

**Membership Reminders**

Many organizations are in the midst of membership drives, including the Watauga County Christmas Tree Association, the North Carolina Christmas Tree Association, the Boone and Blowing Rock Chambers of Commerce, and High Country Host. Financial limitations are a reality for everyone this time of year, however, joining associations and business chambers can help extend the visibility of your farm business to a wider audience. Consider the expense of marketing yourself independently, and then weigh the expense of joining organizations that attend regional tradeshows, publish visitor’s guides, and reach potential customers beyond the High Country and state lines.

Many memberships also offer educational programs and newsletters to help you keep current on marketing and consumer trends. Don’t delay… many deadlines are approaching, and some are in the “grace period” of accepting members.
Spring Pest Control Decisions
Dr. Jill Sidebottom, NC Cooperative Extension
Mountain Conifer IPM Specialist

The weather so far this year has put many people behind already. Many growers treated last fall with insecticides and are hoping to get twig aphid control this spring from those fall sprays. In fact, in talking with county agents, we estimated that at least 4,000 acres of Fraser fir Christmas trees were treated in the fall and will hopefully skip a twig aphid treatment.

But what options do growers have that didn't treat in the fall? I'll try and list them all below. If anyone has any others they'd like to share, email me and I'll add them. As I go through different materials, I'll be using abbreviations for pests with BWA=balsam woolly adelgid, BTA=balsam twig aphid, SSM=spruce spider mite, HRM=hemlock rust mite, and EHS=elongate hemlock scale.

The first consideration is do you even need to treat for twig aphids? If you aren't cutting out of the trees this year or next, you don't need to control BTA. You should walk through your trees to make sure mites aren't a problem, but you can probably skip treatments.

A second consideration is what have you used in the past for insect control? It's important to rotate materials from different chemical families. In other words, products like Asana and Talstar are both synthetic pyrethroids and so have similar modes of action. Think about what you used in past years, and try to use other products this year. For a complete listing of all the chemical families, go to the “IRAC Mode of Action Classification” (http://www.irac-online.org/wp-content/uploads/2009/09/MoA-classification_v6.3.3_28july09.pdf).

Another consideration is that it doesn't all have to be done in the spring. You can get control of pests in the summer and fall when you have more time and can pick better weather conditions. At the end of this post, I have some possibilities for when to treat if you have all the major pests.

And just a few more words of wisdom: Remember that all pesticides are dangerous to something -- whether the bees in your trees, or the stream insects below your field, or the man putting it out -- so read and follow the label. Labels can change every year, so be sure to read them each spring. Also, be considerate of your neighbors. Remember that getting good coverage is just as important as what material(s) you choose to use. Also remember that if the wind is blowing or if it rains before the spray has dried, you are wasting your time and money. Be sure to scout after using any of these products to make sure they have worked.

Anyway, here is a list of products, their rates, different mixes and what they will control:

1. Horticultural oil -- Use a highly refined oil -- 92% unsulfonated residues or better -- at the full 2% solution -- that is 2 gallons in 100 gallons of water. When applied in March with a high-pressure sprayer, it will control BTA and HRM very well and will help reduce SSM, BWA, and even EHS. Be sure to get good agitation so the oil and water don't separate. We're going to be looking closer at Saf-T-Side oil which won't separate in water to see how well that works.

2. Asana -- Can be used anytime from February through bud break to control BTA (5 oz/100 gallons) and BWA (10 oz/100 gallons). Add a miticide if mites are present. Will also knock down EHS. However, there is also a potential to create problems with HRM and SSM when using Asana -- even the following spring. If BWA control can wait until fall, rust mite problems can be avoided when using this product.

3. Dimethoate -- Use at full rate of 24 oz/acre. From last week of March through bud break will control BTA and knock down EHS, HRM and SSM.

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4. Dimethoate + Savey -- BTA plus SSM control (the Savey controls the mite eggs). Also, Apollo can be used in this manner. Still will only knock down EHS and HRM.

5. Di-Syston 15 G -- There might be some folks who are still using this. It will control BTA and SSM and possibly a brief knockdown HRM. Be sure to apply when there is no wind, and scout after treatment to make sure it worked.

6. Talstar -- Use at full rate of 40 oz/acre. Will give BTA and BWA control from February through bud break. Should also give control of SSM. (Though Talstar doesn't have any activity against mite eggs, it should last long enough to kill the mites that hatch from the eggs). Doesn't control HRM or EHS well.

7. Talstar + Dimethoate -- BTA, BWA, SSM and knockdown of HRM and EHS.

8. Thionex -- Use at full rate of 2/3rds of a quart (about 21 ounces) for BWA control. Wait until mid-April through bud break to get BTA control as well. (It just seems that BTA control is more reliable with Thionex if you wait until all the aphids have hatched out). Add a miticide if mites are present. Has no activity against EHS.

9. Thionex + Dimethoate -- BTA, BWA control and EHS, SSM and HRM knockdown. Some folks have been using this mix without scouting first, thinking that it will control about every pest. But control of mites and scales will only be fair.

10. Envidor -- Use at 18 oz/acre for HRM and 25 oz/acre for SSM control. Therefore, if you add Envidor to any of these products listed above, you will also control these mites. Will it keep the mites from developing later in the year or next year? Probably not. I would prefer seeing people keep on scouting and apply when needed -- not as a preventative.

11. Dimethoate + Asana -- Use Dimethoate at rate of 16 oz/100 gallons and Asana at the highest rate of 10 oz/100 gallons. Will control BTA, BWA, EHS and knockdown SSM and HRM. Wait as close to bud break as possible to get the most out of EHS control. This mix would give better control of EHS in summer.

12. Dimethoate + Prev-Am -- Use Prev-Am at 0.4% solution (50 oz/100 gallons). Will control BTA, EHS and knockdown of SSM and HRM. Prev-Am has burned trees at higher rates, so be careful, but this mix sure smells better than straight dimethoate!

13. Lorsban -- Will control BTA and knockdown SSM and HRM (?). Will also control BWA in March -- but not once woolies start laying eggs. Will control EHS?? We're still looking at this, but it did a great job last October. We've seen some issues with Lorsban burning foliage, so be careful.

So, what would I use if I had everything -- BWA, BTA, SSM, HRM, and EHS? I would probably either use Asana + Dimethoate and continue scouting for the mites to see it they rebound, treating with Envidor if they do, or go ahead and use Asana + Dimethoate + Envidor (which would be rather pricey). Or, I might wait to control my BWA and EHS in the summer with Dimethoate + Asana and just use Dimethoate in the spring -- and scout for mites later on. If you wait until August or September, you should pick up BTA control for the following year. Or I might use oil in March every year to control all these pests.

**Interested in Organic Christmas Trees?**

With consumer interest growing towards more environmentally-friendly products, tree growers are poised to tout the integrated management principles they regularly employ. Scouting for pests and beneficial insects, managing groundcovers, regular soil testing and targeted fertilizing all result in an environmentally-sound Christmas tree.

For those wishing to appeal to consumers seeking organic tree products, North Carolina Cooperative Extension is seeking growers who are interested in experimenting with growing trees utilizing organic methods. Dr. Jill Sidebottom has worked with a few growers already implementing organic tree production, but more research is needed. There are opportunities for growers to experiment with using organic controls for the full tree rotation and also for those growers who would be interested in managing trees organically for the three years prior to harvest.

Please contact the Watauga Coop. Extension at 264-3061 if you would like to work with agents and specialists on developing production guidelines for organic Christmas trees.
Growers should begin scouting their fields in mid-March to access insects that are present in the fields, their population level and areas of the farm in which they occur. Spring pests such as Hemlock Rust Mite (HRM) can be very localized in many instances and can also increase in numbers very rapidly, which makes early detection very important in order to make correct spring pesticide choices of material and location of treatment. Scouting during this timeframe for Balsam Twig Aphids (BTA) on farms that were treated in fall will also assure growers of the success of the fall treatment and allow time for any other pest control that may be needed.

Late March and early April are opportune times for growers to aggressively control any grasses such as tall fescue, red fescue and quackgrass without risking injury to the trees. In this window before bud swell and bud break, the higher rates of glyphosate necessary to effectively eliminate grass competition can be used without absorption by the buds. Once into mid-April growers should monitor field conditions and reduce rates to a normal chemical mowing rate of 8 ounces per acre if applications are needed. Proper timing of weed control applications is more important than application rate due to the fact that applications made too early will miss many annual weeds that will germinate after treatment and become large quickly, while applications made too late in May can allow weeds to grow too large for desired control along with increasing risk of tree injury if un-calibrated rates are applied.

Growers who have been implementing chemical mowing practices over the past several growing seasons will have a much easier task with spring and summer weed control due to established fields of Dutch white clover which greatly reduces or eliminates annual weed competition by forming a natural weed barrier. This living mulch is also contributing between 60-120 pounds per acre of free nitrogen to the trees through nitrogen fixation. The amount of nitrogen provided is increased by the density of the clover in the fields; the more clover foliage present equals more nitrogen per acre. This nitrogen is slowly released once soil temperatures begin to warm in the spring. Long-term studies are still showing comparable nitrogen levels in tissue samples taken from both fertilized and unfertilized trees grown in clover groundcover. In fields only requiring nitrogen, this is a great opportunity for farmers to save money while not fertilizing undesirable weeds that will compete with trees.

 Clover can be seeded any time between now and June on newly established fields or fields which need to increase clover density. Only use specified Dutch white clover to ensure you get a low-growing variety of white clover. Some unspecified varieties can grow to over two feet tall. A seeding rate of 10-15 pounds per acre, combined with proper chemical mowing practices, will establish a dense groundcover within 12-18 months. Lower seeding rates of 6-10 pounds per acre can be used on fields that have existing clover that needs seeding to thicken up. A lower growing variety of cover crop such as barley, wheat, lespedeza or oats can also be sown to help reduce annual weed competition and add organic matter back to the soil while establishing clover. Normal chemical mowing rates will not damage young clover shoots if applied at least four weeks after germination occurs, unless under drought stress which changes the effects of glyphosate applications on clover.

**Spring Scouting Reminders**  
*By Bryan Davis, NC Cooperative Ext. IPM Technician*

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**AgForum Meeting in Boone**

The North Carolina Agribusiness Council hosts various AgForums across the state with the NC Congressional Delegation. These AgForums are unique in that they provide individuals involved in agriculture with an opportunity to discuss Ag-related issues and concerns with members of the NC Congressional Delegation in a small group setting. These events are held throughout the year, across the state, at unique agriculture-related tourism locations. The event includes a meal, but the focus is on the intense question and answer discussions that take place between you, the Congressional leader and a small group of your Ag peers. The Boone AgForum will take place at the LaQuinta Inn & Suites on either April 7 or 8, 2010, and tree growers and other agricultural commodity groups are strongly encouraged to attend. More details on the specific date and time will be provided by the North Carolina Cooperative Extension, however, they were not firm as of the printing of this newsletter. Please contact the Watauga County Center at 828-264-3061 if you are interested in attending.
Blue Ridge Rural Land Trust and Z. Smith Reynolds Partner to Reach Out to Tree Growers in 2010

To better reach out to tree growers in this region, including Watauga County, Blue Ridge Rural Land Trust is pleased to announce the receipt of a grant in the amount of $25,000 from the Z. Smith Reynolds Foundation. The purpose of the grant is for Blue Ridge Rural Land Trust to enhance its education and outreach efforts regarding land conservation options to farmers and owners of agricultural lands. “In these difficult economic times, the generosity of the Z. Smith Reynolds Foundation will allow us to share information about our services with more people in our seven-county service area -- most importantly traditional farmers and Christmas tree growers”, stated Walter Clark, Blue Ridge Rural Land Trust's Executive Director.

Christmas tree growers alone control over 200,000 acres within Blue Ridge Rural Land Trust's seven counties. “The acres owned by traditional farmers and tree growers in our area place them in a unique position to impact the future -- not only the landscape of our mountain farms and communities but also the water quality and wildlife habitat”, said Walter Clark. Clark continued, “the future health of our farming economy, water and wildlife resources, and our cultural heritage depends heavily on today's farmers. If he or she feels that development of their land is the only option they have, the beauty of these mountains and productive working farms will be diminished for future generations. We would like to present another option.”

Conservation easements are another option for landowners. Conservation easements are a method of keeping the land productive, restricting its development, and easing the stress of inheritance on future generations. Conservation easements are tailored differently for each person and their specific family situation. “Blue Ridge Rural Land Trust wants farmers and tree growers in the area to know we are here to assist them if they choose to protect their farmlands for future generations”, said Joe Potts, Blue Ridge Rural Land Trust's Deputy Director. Potts also said, “support from Z. Smith Reynolds affords us some of the resources needed to go into each of our seven counties to assist willing landowners.”

Blue Ridge Rural Land Trust has experienced recent success assisting in the protection of Pond Mountain in Ashe County, NC. In addition to protecting a large tract of active agricultural land -- the Pond Mtn. project will consist of approximately 1,800 acres when complete -- it is a great example of a commercial Christmas tree farm and a conservation organization joining to protect productive land. Pond Mountain is a rare exception where the land will eventually be owned and managed by the North Carolina Wildlife Resources Commission. It is more common that landowners and their families retain ownership of the land.

Blue Ridge Rural Land Trust, a non-profit, non-governmental organization based in West Jefferson, assists landowners in Alleghany, Ashe, Avery, Mitchell, Wilkes, Watauga, and Yancey Counties through the conservation easement process. If you would like to learn more about Blue Ridge Rural Land Trust, please contact their office at 336-846-2758 or email saveland@brrlt.org.

Calendar of Events

* Please note that the Calibration Workshop scheduled for March 29 has been postponed due to busy grower schedules following a long and wet winter that has prevented field work.

March 19: Landscape Educational Workshop. Held at the B.H. Corpening Forest Training Facility in Crossnore, NC. Contact the Watauga Extension Center to register.

March 22: Watauga County Christmas Tree Association Wholesale Alliance Meeting, 12:30 PM at the Sagebrush Restaurant in Boone. Any wholesale tree grower welcome.

March 29: Watauga County Christmas Tree Association Choose and Cut Meeting, 9–10:30 AM at the Agricultural Conference Center in Boone.

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April 7 or 8: AgForum at LaQuinta Inn & Suites (more details TBA)

April 8: Spring Pest Scouting Update with Dr. Jill Sidebottom and Bryan Davis, 6:30-7:30 PM, Watauga Agricultural Conference Center. One hour of pesticide credit will be applied for.

April 12: Western North Carolina Horticulture Association meeting, 7 PM.

May 25: Scouting Field Day and Calibration, 2-4 PM. The North Carolina Cooperative Extension, Watauga and Ashe Counties, will be holding a Christmas Tree Scouting Workshop in English and Spanish. The field location will be determined the week prior to the workshop. The workshop will include a brief introduction to IPM and tree scouting protocols followed by hands-on field scouting for insects and weeds. The program will cover pesticide recommendations, calibration, and PPE requirements. Scouting will include using a beat sheet, pulling twigs and Balsam woolly adelgid scouting. Please call the Watauga County Extension Center by May 18 to register (264-3061); the location and directions will be provided. Two hours of commercial and private pesticide credits will be applied for this workshop.

May 27: Identification of Landscape Pests and Threshold Levels, 3-4 PM. Watauga Agricultural Conference Center. One hour of private and commercial pesticide credit will be available to participants.

May 27: Pesticide Drift Management, 4-5 PM. Watauga Agricultural Conference Center. One hour of private and commercial pesticide credit will be available to participants.

Newsletter compiled and edited by:

Meghan Baker
Extension Agent, Agriculture
Christmas Trees and Commercial Horticulture

Recommendations for the use of agricultural chemicals are included in this publication as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by North Carolina Cooperative Extension nor discrimination against similar products or services not mentioned. Individuals who use agricultural chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about usage regulations and examine a current product label before applying any chemical. For assistance, contact your county Cooperative Extension agent.