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Organic Farm & Garden Supplies
Where to find them in the High Country

A few years back, trying to buy organic fertilizers and pest control products in the High Country has been more difficult than it is theoretically at many local stores. For growers and those interested in organic produce, certified organic produce, or just learning about beneficial alternatives to chemical products, the following High Country region has a number of local farm and garden suppliers who can help with the information to get started.

**Boone Stockyards** (828-262-0757)
Boone Stockyards in Deep Gap began stocking an OMRI-listed organic fertilizer, Perdue Micro-Start 3-2-3, in ton-totes a few years back, and the product has become wildly successful for them. The last time I checked with the proprietors, they said that they intended to keep a “warehouse full” of the product on hand and order more whenever supplies became low.

**Crop Production Services** (336-846-3339)
CPS (formerly UAP – on the East Side of Jefferson) carries a mix of OMRI-listed, organic products for disease & insect control, including horticultural oils (JMS Stylet in gallon jug), insecticidal soaps (M-Pede in 2.5 gallon jug), fungicides (Oxidate in 2.5 gallon jug), biofungicides (Serenade in 12 lb. bags), and more. In general, their offerings are geared for commercial-scale growers, but ambitious home gardeners may also wish to invest in their products.

**David Miller Farm Supply** (828-297-4488)
Growers both large and small can find fertilizers such as bone meal (in 4.5 lb. or 24 lb. bags), Neptune’s Harvest 2-3-1 Fish & Seaweed Fertilizer in gallon jugs, ESPOMA Plant Tone (in sizes from 4 lb. to 40 lb. jugs), and Perdue Micro-Start 3-2-3 (in 50 lb. or ton-totes) at David Miller Farm Supply, located in the Zionville area. Their pest control products are made using organic materials, including some resistant to pests such as aphids and mites, which is beneficial for the pest-free environment.

**Eric Grig** (336-982-9118)
Eric Grig is a local (East of Jefferson, near the Way- omer Rd. entrance to New River State Park) grower who is starting a healthy food production farm. At present, he has his Rock Phosphate available for sale in ton-totes, and he will soon also be selling other organic fertilizers (Fish Emulsion, etc.), plus industrial grade uranium, Yakmar Tractors, and more.

**Parsons Farm Supply** (336-246-4359)
Parsons, on the Back Street of West Jefferson, has long been a good source for alfalfa meal and a few other organic “fertilizers,” which they carry as feed. Now they have branched out to carry the full line of organic products offered by Seven Springs Farm Supply (see www.7springsfarm.com/catalog.html), plus Perdue Micro-Start 3-2-3 (in 50 lb. or ton-totes), and a growing list of other organic materials. Their bagged lime is also acceptable for use in organic production.

**Southern Ag & Insecticides** (828-864-8843)
Southern Ag primarily serves larger-scale growers. While the bulk of their business remains conventional fertilizer sales, they have begun to stock some important organic pest control products and can special-order many more. Right now, they stock Casain 1-gallon jug, a Derrisicide also marketed as Rhapsody, Oxidate (in 5-gallon jug), DiPeF DF in 1-bag, Gnatrol, plus their own Certified Naturally Insecticidal Control (a diute spined product) and Triple Action Neem Oil that have been recently listed by OMRI. Southern Ag can also special-order Myco-O (the biological insecticide Beauvaria bassiana), Serenade, Entrust (the full-strength version of Spinosect insecticide) and any other organic materials produced by BioWorks (Plant Shield, Surfact, etc.). Also, they carry a Fish Emulsion in 5-gallon jugs.

**Southern States** (828-864-8883)
Southern States in Boone carries several organic fertilizer products by Espoma and NatureSafe.

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**Broccoli & Brassica field day in Watauga County, August 15, 2011**

Some of the vegetables with the longest heritage in the High Country are in the Brassica family. Also known as Cole Crops, the family includes broccoli, cabbage, cauliflower, mustard, collards, kale, and many other leafy greens. Interest in Brassica crops has grown as nutritionists discover ever-more health benefits from eating these vegetables. Plus, the Brassicas love cooler weather. This makes the High Country one of the few regions in the southeast that can successfully harvest broccoli, cauliflower, and similar crops in July, August, and September. This is a clear market opportunity for High Country vegetable growers. Brassica crops harvested during these summer months have become an important part of the mix that High Country organic growers send to Eastern Carolina Organics for distribution throughout the southeast. While Brassica crops can be part of a profitable High Country vegetable operation, growers must also be ready to overcome pitfalls. Damping Off (pythium and rhizoctonia fungi) can attack seedlings. Inconsistent water can cause hollow stems and other problems. Stressed broccoli will bolt (flower prematurely), and stressed plants also lure in more pest insects. And speaking of insects, there are several species of caterpillars (imported cabbage worm, cross-striped cabbage worm, cabbage looper) that love to eat Brassica leaves. Then, even if a grower navigates all of these hazards successfully, the harvest and post-harvest handling must be carefully managed to preserve the quality of a local and fresh crop.

On the afternoon of Monday, August 15, 2011, Watauga County Cooperative Extension will present a field day on broccoli and other Brassica crop production. It will be held at Watauga River Farms whose owner, Charles Charles, has been growing broccoli for decades. Known locally as ‘Doc Broccoli,’ Parsons within Cooperative Extension will offer a series of classes to guide growers through evaluating and improving their own organic produce safety practices in August and September 2011. Field to Family is a new N.C. Cooperative Extension program developed to educate fruit and vegetable growers about measures to minimize food safety risks. The training focuses on Good Agricultural Practices (GAPs) and managing risks from field to market. The training consists of nine modules, brought to Tier 1 and Tier 2, addressing specific areas of Good Agricultural Practices (GAPs) that provide a comprehensive curriculum developed by leading researchers and Cooperative Extension specialists at N.C. State University and N.C. A&T State University.

The Tier 1 Food Safety course will cover the basics of Fresh Produce Food Safety issues and Considerations for Small Farms, ‘Implementing Food Safety Practices on Your Small Farm,’ ‘Developing a Fresh Produce Food Safety Plan for Your Small Farm,’ and an introduction to GMP certifications and Food Safety Audits – Does Your Farm Need Them? NC Fresh Produce Safety Task Force will then conduct the Tier 2 N.C. Market Ready training workshop on Tuesday, September 27th from 8:30 AM through 5:00 PM at the Watauga County Agricultural Conference Center, 252 Poplar Grove Rd., Boone, NC 28607. Building upon the Tier 1 lessons, Tier 2 will address risk identification and management issues including transportation and traceability, product recalls and liability insurance options, and developing a crisis strategy. Any grower considering GAP certification, whether due to buyer demand or other risk-management considerations, should plan to enroll in both the August and September workshops.

These workshops will benefit not only growers and packing house managers, but also wholesalers and transportation managers who all play an integral role in maintaining the safety of fresh produce as it moves from the field to the consumer. Currently, GAPs certification is voluntary for North Carolina farmers, but, through outbreaks of food-borne illness in other parts of the country have resulted in increased pressure for all farmers to become certified.

The development of the N.C. Market Ready Fresh Produce Safety – Field to Family Initiative was funded with grants from the N.C. Tobacco Trust Fund Commission, Sustainable Agriculture Research and Education (SARE), N.C. Rural Economic Development Commission and USDA Risk Management Agency. N.C. Cooperative Extension faculty developed these resources as part of the N.C. Fresh Produce Safety Task Force. For more information, contact Richard Boylan, 828-264-3061, richard_boyln@ncsu.edu. Learn more at www.ncmarket-ready.org.

Growers wanting further information on Fresh Produce Food Safety issues, concerns, and these upcoming classes can also call the Watauga County Cooperative Extension Service at 828-264-3061.
What about beneficial Nematodes and other "good bugs?"

A few organic farms that can be difficult or impossible to find locally are Beneficial Insects. Whether you are seeking predatory nematodes (microscopic worms which attack ground-dwelling pests) or Green Lacewing eggs, these are living creatures with a short 'shelf life.' Fortunately, there are reputable vendors who can ship to our region via overnight mail. Two web/mail-order suppliers of these "Good Bugs" are:
- Rincon-Vitova (www.rinconvitova.com)
- Arbico Organics (www.arbico-organics.com) Arbico is running a $10 discount offer on orders of $75 or more. Use Promo Code: ARBSUMMER11E. Enter code at checkout or mention when calling. This particular offer expires 8/31/11, but that leaves plenty of time to order beneficial nematodes or other good allies!

Further questions about sourcing organic materials can be directed to the Watauga County Extension center or emailed to richard_boulay@ncsu.edu.

MOSQUITO season is in full swing

BY MIKE WALDVOGEL AND CHARLES APPERSON
Extension Entomology

Rain and warmer weather are closely followed by increases in mosquito activity, particularly with the Asian tiger mosquito. Most people still think of swamps, ponds, etc., as the source of the mosquitoes that show up in their yards. However, in most residential areas the source is more likely to be all of those small and inconspicuous water sources that are prime mosquito breeding sites. So, before people start planning a chemical assault on their yards as the solution to their mosquito problems, they should start with the simpler and more long-term approach of eliminating "collectibles." We don't mean souvenirs; we're talking about all of those objects that collect and retain rainwater.

- Bird baths – Simply flush them out with a garden hose. The birds will also appreciate the fresh water. For horse owners with water troughs near stalls or out in pastures, one option is to use a product such as "Mosquito Dunks" which contains the 'Bacillus thuringiensis' that is the sterile agent for the Asian tiger mosquito (Aedes albopticus).
- Old cans, tires, etc. – Empty them and get rid of them.
- Outdoor flower pots – Empty the water from the dishes/trays under them. Your plants have plenty of water without the overflow. This also helps reduce fungus gnats problems.
- Built-up debris – Remove all of that built-up debris from your gutters. The water and decaying material attract mosquitoes.
- Tarp – Tarp covering boats, your grill, etc., collect pockets of water that can remain for 1-2 weeks.
- Old vehicles – The bed of that '57 Ford pickup that you've been restoring for the last 15 years can collect water, particularly if the tailgate faces uphill in your yard.
- Kids' pools – If they're not being used by kids, they're probably being used by the mosquitoes. Same thing applies to pools (in-ground or above-ground) that aren't maintained (such as on properties in foreclosure).
- Drainage ditches – They're meant to collect water "temporarily." Keep them free of debris so that water flows out.
- Home ponds – Decorative fish ponds can be a source of mosquitoes if they contain a lot of vegetation which provides hiding places for the mosquito larvae. 'Mosquito Dunks' are an option here.
- Tree holes – When limbs fall off trees, the remaining hole in the trunk can collect water. Flush that out or put a small piece of a mosquito dunk into it.
- Many people ask about treating shrubs in their yard. Mosquitoes "may" be resting there during the day, but whether it "controls" a mosquito problem is debatable. Similarly, people that use outdoor foggers will definitely kill mosquitoes but, depending on the time of day/evening that they use it, they may be missing the peak activity. Two other issues about using outdoor foggers are important.
- Safety is critical. Make sure you're standing upwind from the direction the fog is being applied, and wear appropriate protective equipment to prevent the fog from getting into your eyes and lungs or on your skin.
- Second, know where the fog is going. Some of your neighbors may not want chemicals drifting onto their property (particularly if they're outside eating at the time!). Some thing applies to the automated misting systems that some people have installed on their homes.
- One other point to remember – Mosquitoes have no concept of property lines. Mosquito management takes a neighborhood effort to be truly effective.


Floating Island Plant Nursery

Runoff from nearby roads and ground surfaces flow into the constructed storm water wetland creating a great place for bioremediation to happen in Boone. As the storm water runoff flows through the wetland, the plants, soil, and microbes help break down the pollution.

Nutrients such as nitrogen and phosphorus are great for plants to grow in your garden, but when they leave the land and enter an aquatic system they are considered pollutants. These nutrients increase the amount of...
VOLUNTEERS ENHANCE HABITAT FOR SPRING PEEPERS... and all the other amphibians in the constructed wetland.

T he spring peepers love the constructed storm water wetland in Boone this spring. They have certainly made themselves known through their high-pitched peeping sounds that bring smiles to people's faces. These tiny, well-camouflaged amphibians are rarely seen, but by mid-March their crescendo of sound is a sign that spring is here. In the High Country, we have the commonly found Northern Spring Peeper subspecies, Pseudacris crucifer. You can find (most likely hear) Peeperers in wetlands, marshes, and ponds and even along roadside wet ditches, so long as there are ephemeral water sources that support their eggs and tadpoles throughout the spring months. These tiny frogs, the size of a paperclip, are mainly nocturnal carnivores, ingesting winter hibernation and still survive. Don’t worry about the peepers, they can allow most of their bodies to freeze during winter hibernation and still survive. Their bodies will freeze, but their cells don’t rupture from freezing. They have a natural sugar (glucose) that serves as a kind of biological antifreeze.

Volunteers are adding seed mixes that were harvested last fall to the bare areas of the wetland to create more habitats for all the “critters” that use the wetland. If you are interested in learning more about the constructed storm water wetland, email Wendy_Patoprsty@ncsu.edu.

Rain garden workshop produces a rain garden

The water flowing to the garden consists of two, 4” corrugated pipes draining a rooftop, driveway runoff, and a small grassy swale. The weir construction includes four 4x4 posts and the berm wrapped around the lower level of the garden. Most of the participants stated they would probably be installing a rain garden on their property or construct one for clients or work. Excellent! Every rain garden built helps to protect our water resources in the High Country. For more information on how to build a rain garden, visit www.baec.ncsu.edu/topic/raingarden.

Mountain Keepers sustainable business summit

On September 30, 2011, from 9 a.m. -2 p.m., Drs. Pat Long and Carol Kline of the Center for Sustainable Tourism at ECU will be featured at the Broyhill Inn and Conference Center for the Sustainable Business Summit.

Are you interested in:
- Growing your business with sustainable business practices and principles?
- Exploring sustainable business opportunities?
- Sharing your sustainable business experiences and hearing those of others?
- Hearing tips on how to use sustainable practices and products as a market differentiator for your business?
- If you said “yes” to any of these, you need to attend! The intent of the Summit is to:
  - Offer opportunities to hear from and talk to local business leaders who are successfully incorporating sustainable products or practices in their businesses
  - Provide opportunities for participants to learn how to make their sustainability initiative a market differentiator.
  - Provide “how to” information on how to incorporate sustainability practices in the everyday operations of a business.
  - Allow participants to network and meet other business leaders interested in or actively incorporating “green” practices and products.

The summit is presented by the Mountain Keepers in partnership with Boone Area Chamber of Commerce, Broyhill Inn and Conference Center, and Center for Sustainable Tourism at ECU. For more information or to register, email summit@mountainkeepers.org.

Lichens

Continued From Page 3

There is a common misconception that lichens cause plant damage. Many homeowners fear that a heavy lichen layer on tree or shrub branches is problematic and harmful to the plant. Not so. What IS likely happening is that some other plant stress is occurring (poor growth, lack of nutrition, insect or disease pressure) that will cause normal leaf coverage to be decreased. This decrease in leaf growth allows more light into the canopy of the plant, which the branches and limbs, and lichen can take advantage of this increased light and set up camp.

So fear not . . . lichen is a benign organism that does not attack or kill plants. If you take the time to actually look at lichens up close, taking in the variety of colors and textures they offer, you just might begin to appreciate their visual beauty!

Floating Island

Continued From Page 3

of phytoplankton and algae growth, creating a negative affect on water quality and habitat. Plants are extremely important components of a wetland because they utilize the excess nutrients in the water and provide wonderful habitat for diverse species. Propagating wetland plants can be challenging because the seeds and plants like lots of water and tend to float away. Bill Lord, NC Extension Specialist, was working with tobacco growers down east and noticed how they start their seedlings in floating systems. He modified the tobacco propagation process to work in a wetland setting. So now we have a floating island with wetland species in the Boone constructed wetlands.

The plants growing on “the island” will mine for nutrients in the water column, thereby sequestering even more nutrients. When the plants are ready for harvest, we will plant them in other constructed storm water wetlands.

What you can do at home to reduce nutrients in our environment:
- Purchase Phosphate-free dishwashing detergents! Sixteen states have banned these type products, but they can still be found on the shelves in North Carolina. It’s up to the consumer to be educated!
- Have a soil test done before you add any fertilizer to the lawn and garden! It’s FREE in NC! Stop by the Extension Office to pick up the boxes!
- Have your septic tank pumped. Call Extension with any questions.
- Build a rain garden to capture nutrients from impervious surfaces.
Getting the most from your hay field

It is the end of May, and it finally looks like the weather will be good enough to get some hay cut. Making and feeding hay is the most expensive part of keeping cows. I know that everyone concentrates on rushing to get the hay mowed “while the sun shines”, but you might also want to think about the best ways to store and feed hay.

Hay can start losing nutrients from the day that it is cut. To decrease the losses for hay, the first step is to cut and roll the hay at the proper moisture content. If hay is harvested at 15% moisture, then heating and fire risk will be reduced. If hay is harvested over 15% moisture, then the hay will go through a heating process. This process can result in fires that start inside the bales. Even if the heating doesn’t result in a fire, it can greatly reduce the nutrients in the hay. If you think there is the possibility that the hay will heat, then store it outside for two to three weeks and check it before moving inside. If you are unsure of the moisture content before rolling, the Extension office has a meter that can be used. A compost thermometer can be used after the hay is rolled. If the temperature is 120° or less, then the hay can be stored safely. However, if the hay is in the 130° to 140° range, then the hay should be monitored before storage. The cheapest method to store hay is outside. Losses of hay stored outside can amount to 40-50%. The average found in studies has been 25%. The losses can be reduced by using a location that is well drained and by using poles, pallets, crushed rock, or other materials to prevent the hay from soil contact. It has been found that separating the hay from soil contact can reduce losses down to 16-18%. The bales should be tightly rolled to help shed water. Sufficient space should be left between the bales to allow for air movement.

Comparison of Storage System Life, Approximate Cost per 1,000-pound Bale, and Dry Matter Loss:

- Conventional shed: 20 years, $5.00 per bale/yr, 4-7% dry matter loss
- Reusable Tarp on Pad: 5 years, $3.00 per bale/yr, 4-7% dry matter loss
- Bale Sleeve on Ground: 1 year, $3.00 per bale/yr, 4-7% dry matter loss
- Plastic Wrap on Ground: 1 year, $1.50 per bale/yr, 4-7% dry matter loss
- Elevated Stack on Pad (rock plus filter fabric): 20 years, $2.62 per bale/yr, 13-17% dry matter loss
- Net Wrap on Ground: 1 year, $1.50 per bale/yr, 15-25% dry matter loss
- Stacked on Ground: 1 year, $0.75 per bale/yr, 25-35% dry matter loss

*Bales are wrapped. Round Bale Hay Storage in Kentucky AGR-171

Losses can amount to 40-50%. The average found in studies has been 25%. The losses can be reduced by using a location that is well drained and by using poles, pallets, crushed rock, or other materials to prevent the hay from soil contact. It has been found that separating the hay from soil contact can reduce losses down to 16-18%. The bales should be tightly rolled to help shed water. Sufficient space should be left between the bales to allow for air movement.

Comparison of Storage System Life, Approximate Cost per 1,000-pound Bale, and Dry Matter Loss:

- Conventional shed: 20 years, $5.00 per bale/yr, 4-7% dry matter loss
- Reusable Tarp on Pad: 5 years, $3.00 per bale/yr, 4-7% dry matter loss
- Bale Sleeve on Ground: 1 year, $3.00 per bale/yr, 4-7% dry matter loss
- Plastic Wrap on Ground: 1 year, $1.50 per bale/yr, 4-7% dry matter loss
- Elevated Stack on Pad (rock plus filter fabric): 20 years, $2.62 per bale/yr, 13-17% dry matter loss
- Net Wrap on Ground: 1 year, $1.50 per bale/yr, 15-25% dry matter loss
- Stacked on Ground: 1 year, $0.75 per bale/yr, 25-35% dry matter loss

*Bales are wrapped. Round Bale Hay Storage in Kentucky AGR-171

It is important that the area used for storage has good drainage and that you prevent soil contact with the rolls. There are many options available for permanent structures for hay storage. These structures are the most expensive. Existing structures offer some hay storage, but were often designed for other uses and are not convenient for hay storage. If you are using an existing barn or shed, then make sure that water does not enter the structure. The floor should be crushed stone, or bales may absorb moisture. If you are planning to build a hay storage shed, then design it with convenience in mind. A three-sided shed will protect hay from any weather.

Cost of Hay ($/ton) after Storage Losses for Round Bales (Refer to the chart at the top of the page).

The price for feeder cattle is higher now than in the last 20 years. The problem is that fertilizer and feed prices are also the highest they have ever been. Storing your hay correctly can save you money. The table above shows the cost of producing hay after adding storage losses. 4x4 rolls will cost almost $10 more if there is 2 inches of weathering around the outside. I always encourage farmers to adopt practices that increase income. Covering your hay will not bring more income, but it will allow you to keep more of your hard-earned dollars.

### COST OF HAY ($/TON) AFTER STORAGE LOSSES FOR ROUND BALES

<table>
<thead>
<tr>
<th>Bale Dia. Feet</th>
<th>Bale Width Feet</th>
<th>Average Depth of Weathered Layer (in)</th>
<th>Cost of Hay ($/ton) after Storage Losses for Round Bales</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>2</td>
<td>$59.50</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>4</td>
<td>$57.47</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>6</td>
<td>$56.18</td>
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</tbody>
</table>

Assumes a Production Cost of $50/ton

Proceedings of the Kentucky Forage and Grassland Conference Value of Improved Hay Storage (Michael Collins)
Watch for predators, protect your chickens

The practice of raising a small flock of chickens for eggs or meat is becoming popular as more people look to eat food grown closer to home. Every year more people start a small flock. It is a very enjoyable hobby and the great food. Chickens do not require a lot of work and are not too expensive. It does have a major drawback—often chickens end up missing, or at least part of them. The culprit may be a predator. Predators can be relentless when it comes to your flock. A few precautions will keep your chickens happy and healthy.

Don’t start your flock in haste and lack a sound protective chicken house. A good predator-proof house will aid in preventing losses. The chicken house can vary in size and style but still be effective. The most important aspect to have is a foundation that will prevent animals from digging inside. Windows and doors should seal to prevent entry from unwanted visitors. Windows and ventilation strips should be screened with chicken netting or hardware cloth.

The trend for most backyard flocks is to give access to pasture or allow birds to range freely. Both of these practices may allow a predator access to your chickens. If you are making a permanent run attached to the chicken house, then be sure to bury the fence at least eight inches to prevent predators from digging their way into the run. Mesh wire works great but the openings should be less than one inch. I recommend a covering overhead as well; this prevents rats and hawks from getting into the run as well as raccoons and opossums that may climb over the fence to gain access.

If you decide to allow your chickens a larger area to roam, then you should be willing to adopt some practices to reduce predator losses. Chickens should not be allowed to roam where they have access to roadways; they can be hazardous to themselves as well as motorists. Let chickens out during mid-day; most predators stalk from dusk until dawn. It is good to close the chickens up every night; most losses occur at night while chickens are roosting. Chickens do not see well at night and will hurdle on the ground if disturbed while roosting.

There are several different animals that can become a predator of chickens. The chance. Family pets are probably the most common predator in our area. These might be your pets or one that belongs to a neighbor. Pets can be extremely hard to control, and you should take precautions to prevent damage. Be sure to check state and local laws before capturing or harming domestic pets.

Racoons, opossums, mink, hawks, and owls are predators commonly found in our area. Birds of prey will attack poultry while in open areas during daylight. The exception is the owl and the hawk at night, but losses can be prevented. Your chickens should be closed in the house at night. Guard dogs can be used to protect poultry in open range but may not be practical for small flocks.

The most effective protection from predators is exclusion. Lock your birds up at night, and give them free access to shelter while on pasture. Identify damage so that the predator can be properly identified. The first thing to look for is any type of tracks that may be present. Dogs usually kill for sport; usually dogs will maul several birds but do not eat the birds. Dogs will usually attack during the day. The weasel family usually attacks the chickens doing damage on the side of the head. Chickens are often found in neat piles with the head and neck slightly consumed. The raccoon and opossum usually visit the coop on a regular basis, often killing one bird on each visit. Raccoons will usually eat only the head and the crop of the chicken, while opossums prefer to eat the abdomen and often will consume eggs that may not have been collected. The foxes and coyotes in our area receive most of the blame for poultry kills. If they are the culprits, the only evidence found will be missing birds. They usually attack in the early morning and can be discouraged by setting birds down in the morning.

Chickens often come up missing with no possible way for a predator to have access to them. This can be one of the most cunning predators we have. This predator is the human variety. If you have a predator-proof coop and run and multiple birds come up missing, then humans being involved should be explored.

One way to discourage predators is an electric fence added around the run. If you allow chickens to range freely, lock them up at night. Grazie chickens in areas that offer protection from hawks and other birds of prey. Keeping a rooster with the hens on pasture will help protect the flock. Rooster’s main job is breeding hens and protecting them from harm. Roosters are great at sounding the danger alarm and keeping his hens together.

Even though predators might add to the challenge of raising your own chickens, the great eggs and meat that you raise will make the effort worth the time and heartache.

Approved methods for livestock mortality disposal

- Disposal in a landfill—Must be a DENR-approved site and within the conditions of the landfill operator.
- Licensed dead stock collector—If all FDA feed ban rules and requirements from the rendering company on the collector are met.
- Composting—The historical answer was “no ruminants may be composted”, but this is now determined on a case-by-case basis depending on whether the end product is disposed of in such a manner that it is unavailable for consumption by other animals. Contact the State Veterinarian’s Office for additional information.

Please keep in mind that these options are acceptable for routine, daily mortality. Mass mortality due to isolated catastrophic incidents (weather, lightning strikes, toxic poisonings, etc.) may require special exemptions as approved by the state veterinarian. Each of the above methods has its own advantages and disadvantages, including availability, cost, inconvenience, and so on.

If you still have questions on how to dispose of routine livestock mortality issues and regarding the options available to you, please contact Dr. Tom Ray in the State Veterinarian’s office at 919/733-7601 or at tom ray@ncagr.gov for assistance.

Taken from The Carolina Cattle Connection Vol. 25 No. 6

LIVESTOCK TIPS FOR SUMMER

- Provide clean, fresh water at all times
- De-worm the cow/herd if not done earlier
- Watch for eye and foot problems
- Vaccinate calves
- Prepare bull paddocks; remove bulls after 60-90 day breeding season
- Develop a marketing strategy for calves
- Keep sheep and goat hooves trimmed
- Use integrated parasite management to prevent losses in sheep/goats
- Keep mineral available
- Watch cows for flies and implement a good fly control program
- Check back ruts and dusters and fill weekly
- Prepare to mow second cutting hay
- Plan a storage strategy for your hay crop
- Clip pastures as needed to reduce seed heads
- Plan for winter-feeding and prepare to stockpile forages
- Control summer pasture weeds
- Purchase hay if needed
- Take soil samples and prepare for fall seeding

FAMILY & CONSUMER SCIENCES

SAVE THE DATE!

Celebrate the abundance of the Blue Ridge Mountains while supporting local farms in Watauga, Ashe, Wilkes, Avery, and Alleghany Counties. Join Blue Ridge Women in Agriculture (BRWIA) for the 2011 High Country Farm Tour, August 6th and 7th, 2-6 PM.

Along the way, you’ll have the opportunity to participate in wine and cheese tastings and watch demonstrations of fiber arts, worm composting, and mushroom production. This is your chance to learn more about raising alpacas, llamas, chickens, goats, horses, and other farm animals. You’ll be able to
Family & Consumer Sciences celebrates 100 years of service to N.C. families

BY MARGIE MANSURE
Extension Agent, Family & Consumer Sciences

On May 25th, a celebratory event at N.C. State University marked the 100th anniversary of North Carolina Cooperative Extension’s Family & Consumer Sciences program. 1911 marked the beginning of the Home Demonstration Program in North Carolina that later became “Home Economics” and is known today as Family and Consumer Sciences (FCS). Today, FCS professionals serve citizens in all the state’s 100 counties and the Eastern Band of the Cherokee Nation.

The celebration began with the unveiling of a book on North Carolina FCS’s 100-year history, Ordinary Women, Extraordinary Service. The book features pages on Extension Home Demonstration Clubs in every county that describes the many ways they helped move their communities forward. Currently, these clubs are called Extension and Community Association, and there is an active group in Watauga. Books are available for purchase at the Extension office, 971 West King St. It’s interesting to see how cycles work. In the early 1900s, Home Demonstration Agents taught women in the rural communities how to safely can tomatoes, make jams and jellies, and even bread baking. They taught about the importance of a balanced diet and good nutrition and gave gardening advice.

Later, they addressed other matters of the home, such as giving childcare advice, sewing draperies, updating kitchens, and hat making.

As the current Family & Consumer Sciences Extension Agent with credentials as a Registered Dietitian, my work in the community looks similar to the Home Demonstration Agent of 100 years ago. I’ve offered numerous cooking demonstrations and canning classes, taught school children all the way to older adults about the importance of good nutrition, and have organized gardening classes for adults and children in schools.

While our communities have changed with technology, some basic needs never change. I just hope we don’t circle back around to hat making!

N.C. Cooperative Extension partners with 10% campaign to promote local foods

BY MARGIE MANSURE
Extension Agent, Family & Consumer Sciences

It is the season to find fresh food. We are encouraging everyone to purchase at least 10% of their food from local growers and food producers this season, and sign up for the 10% campaign on the website (www.10percentnc.com). Campaign participants will receive one weekly e-mail reminder to report how much money they spent on local food. The website will show consumers how their dollars spent on local foods grow.

In addition, the 10% Campaign website provides a “Find Local Foods” page with links to help consumers find local food and farm products in their own communities. A “Learn More” page includes links to information on a variety of partner organizations, such as Slow Food USA and Eat Smart, Move More NC.

There are also links to educational information on topics ranging from how to set up a workplace community-supported agriculture program to how to cook seasonal, local products.

North Carolinians spend about $35 billion a year on food. If each person spent just 10 percent on food locally – roughly $1.05 per day – then approximately $3.5 billion would be available in the state’s economy. A vibrant local food economy will support farms, food and manufacturing businesses and create jobs.

Participating in the 10% campaign will give us an objective measurement of the growth in demand for locally-grown and produced food. This will help bring in grant funding for infrastructure enhancements and for investors to see that putting money into local food efforts will pay off.

Plus, infusing fresh and flavorful fruits and vegetables into diets can significantly reduce diet-related dis-

Food prices not rising like petroleum

BY MARGIE MANSURE
Extension Agent, Family & Consumer Sciences

Talk around town is how much it takes to fill the tank these days. According to the U.S. Energy Information Administration, the average cost of a gallon of gas in our region has risen ninety cents over the past year. The United States imported about 51% of the petroleum, which includes crude oil, in 2009. Crude oil prices are currently at their highest level since 2008. Oil markets will continue to tighten over the next two years given expected robust growth in world oil demand and slow growth in supply. These conditions result in an expected drawdown of global petroleum stocks. (www.eia.gov)

Food production in the U.S. relies heavily on petroleum. But far less than the industrial food system that has been created over the past 60 years. Our family farms have smaller machinery and use fewer inputs such as fertilizers and pesticides. The food produced travels just a few miles to plate, instead of the typical 1,500. When small farms are supported, demand is increased and agriculture becomes a viable career for those who want a different lifestyle or are unemployed due to globalization.

More local farms mean better community food security and a stronger local economy.

We can all do our part in supporting the growth of our local food system by patronizing farmers’ markets, joining CSA (community supported agriculture) programs, and growing vegetables at home. As food prices continue to rise, we will all be glad we did.

Blue Ridge Women in Agriculture seeks volunteers!

Blue Ridge Women in Agriculture (BRWIA) is seeking volunteers to assist farmers participating in the 2011 High Country Farm Tour. Volunteers will spend the day on a beautiful farm while helping to direct parking, greet and register visitors, and accept payment for farm tour tickets, BRWIA tote bags, and cookbooks. In exchange for volunteering on one day of the tour, volunteers will receive a free ticket to attend the other day of the tour. The High Country Farm Tour is not possible without the support of volunteers. Together, we can strengthen our local food system. Sign up to volunteer with BRWIA by emailing contact@brwia.org.

Continued On Page 8

Congratulations to Emily and Leslie Cornett

Emily and Leslie Cornett recently won the district level. Emily Cornett received a silver award for her project record, and Leslie Cornett won a gold. Both explored the category of Communications and Expressive Arts.

4-H Super SUMMER

4-H Super Summer is in full swing. Youth are growing green as they explore a variety of topics from butterflies and other insects to gardens and plants. In science classes, youth explore where some of our common fabrics, such as denim, come from and how they get colored. They get to see some sheep and try out some plant dyes. In food culture, they explore the world and make some foods and crafts from other cultures. Some spaces are still available for July sessions. Check the 4-H blog (wataugacountyc4h.blogspot.com) or come by the Extension office for registration information.

Summer would not be complete without the annual trek to 4-H camp. Watauga County 4-H to
## CALENDAR

<table>
<thead>
<tr>
<th>JULY</th>
<th>AUGUST</th>
<th>SEPTEMBER</th>
<th>OCTOBER</th>
<th>NOVEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 Plant Clinic, Blowing Rock Farmers’ Market, 4-6 pm</td>
<td><strong>5 Pony Express Mountain State Fair Entry Pickup</strong></td>
<td>6-8 pm, Agriculture Conference Center</td>
<td>11 Cattlemen’s Meeting</td>
<td>8 Cattlemen’s Meeting</td>
</tr>
<tr>
<td>28 Mountain Greenery Field Day and WCCTA Annual Meeting (Pesticide recertification credits available to participants. Call for details.)</td>
<td>6-7 High Country Farm Tour, 2pm-6pm</td>
<td><strong>18 Pesticide Continuing Education Class, V Training, 3-5 pm, Agriculture Conference Center</strong></td>
<td>13-23 NC State Fair, Raleigh, NC</td>
<td>15 Fencing Options for Horse Operations</td>
</tr>
<tr>
<td>28</td>
<td>15 3-6 pm, Broccoli Field Day</td>
<td>18 Pesticide Continuing Education Class, V Training, 6-8 pm, Agriculture Conference Center</td>
<td>18 Equine Deworming Program</td>
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</tr>
<tr>
<td>16 Pesticide Continuing Education Class, X Training, 3-5 pm, Agriculture Conference Center</td>
<td>16 Pesticide Continuing Education Class, X Training</td>
<td>18 Plant Clinic, Blowing Rock Farmers’ Market, 4-6 pm</td>
<td>8:30am-5pm, Fresh Produce Safety Tier 2, Advanced Training, Watauga County Agricultural Conf. Center</td>
<td>8 Cattlemen’s Meeting</td>
</tr>
<tr>
<td>16 Pesticide Continuing Education Class, X Training</td>
<td>30 10am-6pm, Fresh Produce Safety, Tier 1 Training, Ashe Co.</td>
<td>17 Cove Creek Farm Heritage Day</td>
<td>30 Sustainable Business Summit, 9am-2pm, Broyhill Inn &amp; Conference Center</td>
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</tr>
</tbody>
</table>

### OUR MISSION:

“North Carolina Cooperative Extension partners with communities to deliver education and technology that enrich the lives, land and economy of North Carolinians.”

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**Looking for something to do this summer?** Why not create an entry for the Mountain State Fair. Grow a beautiful flower or giant squash. Create an amazing recipe. Or, if you create a wonderful piece of art, you can enter it -- drawings, crafts, recycled art and more. The fair makes it easier for us to participate with the Pony Express. They will come pick up your non-perishable items and return them after the fair! You can drop off your items by August 5 (tentative date) at the Cooperative Extension office.

See what competitions you can join in on at [www.mountainfair.org](http://www.mountainfair.org). Watauga County 4-H has a listing of youth competition categories which you can download from [watauga4h.blogspot.com](http://watauga4h.blogspot.com), or contact the Extension office for information.

The event goes from September 9-18 in Fletcher, NC.