

Newsletter

Person County Center

January/February/March 2016

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RANDOM NOTES FROM LEFT FIELD

Paul Westfall
County Extension Director

CHANGES TO THE NEWSLETTER

Starting with the January 2016 issue, the Person County Cooperative Extension Newsletter will be published once per quarter. The rest of the year, issues will be published in April, July, and October. The reason for doing this is pretty simple – this will save a lot of money through the year – budgets are tight and getting tighter! Another cost-saving move that we would like to take is to gather email addresses and use those to electronically deliver the newsletter to folks. We realize that there are parts of the county that do not have high-speed internet access, and some people just like to have a real newsletter to read, so we will continue to print some copies and have them available. It's just that postage is pretty high and likely to go higher (I have never seen rates go down) and email is free. That means budget savings, which is important.

When folks share their email addresses with us, we would also like to know about other communications that they would like to have via email. Examples might include pest alerts for both commodity crops and home gardens, nutrition education classes, information about Very Important Parents or Youth Enrichment Services, or information and updates from the 4-H program. Email and social media can get notices out about meeting dates and event information very quickly and is there to check on to verify dates, times, and locations.

Please compose an email to debbie_harrelson@ncsu.edu or call the Person County Cooperative

Extension Center at (336) 599-1195 to begin receiving the newsletter and other communications via email.

If your name and address are already in our database, we will simply add your email address to the database, and information of interest will be sent electronically. Folks that are new can let us know their areas of interest and we will set up the new record accordingly.

Information that we would appreciate includes the following:

- Name
- Phone Number
- Address
- Email Address
- List areas of interest

Again, please send this information via email to the address listed, or just give us a call and we'd be happy to update our records over the phone while having a good conversation.

We all certainly appreciate everyone's understanding as we move ahead with changes to help the Cooperative Extension Service be even more "high-tough and high-tech".

PCBA BEE SCHOOL DETAILS

The Person County Beekeepers Association (PCBA) will again this year be having a Beginning Beekeeping Class. The class begins on **January 14, 2016** and will continue for nine weeks and also have a field day. The classes will be on Thursday evenings from 7-9 pm in the Person County Office Building Auditorium, which is located at 304 South Morgan Street. The cost is \$50 per person or \$75 per couple.

Persons with disabilities and persons with limited English proficiency may request accommodations to participate in activities mentioned in this newsletter. Please contact this office at 336-599-1195 during business hours at least 3 days prior to the event to discuss accommodations.

This course designed for beginners is also a great refresher for current beekeepers to enhance their general beekeeping skills. Our knowledgeable instructors will cover the history of beekeeping and getting started to seasonal management and the treatment of pests and diseases. This course has it all! The option to take the written certification exam will be available during the last

scheduled class and field day meetings. Class size is limited. Pre-registration is not required but is recommended. To reserve a spot, contact Debbie Harrelson at the Extension Office at 336-599-1195 or complete the pre-registration form at www.personcountybeekeepers.org



FIELD NOTES

Gary Cross, Extension Area Agent
Agriculture
Person and Granville County

NOTICE TO TOBACCO FARMERS WHO DELIVERED TOBACCO TO FLUE CURED TOBACCO COOPERATIVE STABILIZATION CORPORATION IN 1967 THROUGH AND INCLUDING 1973

From Tommy Bunn, President/Secretary
U.S. Tobacco Cooperative Inc.

In the late 1970's for 1967 through and including 1973 crops, Flue Cured Tobacco Cooperative Stabilization Corporation ("Stabilization") issued Certificates of Interest in Capital Reserve to its members who delivered tobacco to Stabilization for any year listed above ("Certificate").

We are pleased to offer to redeem the Certificate of any certificate holder who voluntarily accepts this offer. This is not a mandatory redemption; it is an offer, which may be accepted only at your election. You are under no obligation to accept it, and if you elect not to accept it, you will retain all rights in and to the Certificate, and your Certificate will be subject to redemption in the same manner as if there had been no offer.

Any Certificate holder (including heirs, beneficiaries and/or estate administrators of deceased Certificate holders) who would like to accept this redemption offer should call 1-877-277-7422 for more information. To obtain a redemption application form, you can go to the following website: www.tobaccocheck.com and click on the Application Form at the top of the page. You may also request a redemption application form by mail, by sending a self-addressed stamped envelope to:

Certificate Redemption
1304 Annapolis Drive
Raleigh, NC 27608

THE DEADLINE FOR SUBMITTING A PROPERLY DOCUMENTED REDEMPTION APPLICATION IS February 29, 2016. Applications postmarked after February 29, 2016, or faxed or emailed after February 29, 2016 or not properly completed or sufficiently documented by February 29, 2016 will not be processed.

2016 GAP RECERTIFICATION TRAINING

The 2016 Regional Tobacco Production Meeting and GAP Recertification Training has been scheduled. A meeting is scheduled for **Tuesday, January 19, 2016** beginning at 9:00 am at the Granville County Expo Center located at 4185 US Hwy 15 South in Oxford, NC. The same meeting will be held on **Wednesday, January 20, 2016**, at the Caswell County Civic Center, 536 Main Street East, Yanceyville, NC. This meeting will begin with registration and breakfast at

8:30 am followed by the program at 9:00 am. Both meeting will conclude around 12 noon with lunch.

You will receive re-certification for the GAP training as well as 2 hours of pesticide "X, D, N, O" credits. You must bring your GAP and NCDA Pesticide Cards when you come for scanning. Pre-registration is required by January 15th and you can pre-register by calling 336-599-1195.

If you have questions concerning requirements or recommendations for GAP training, please contact your tobacco company representative. For other questions, please contact Gary Cross at 336-599-1195.

Tobacco Disease Management in Greenhouses

Taken from Plant Pathology Publication by Tom Melton
The largest problems in growing tobacco are diseases. With close proximity of plants, wetness, and varying temperatures, an ideal environment for disease is created. The most common diseases are Rhizoctonia, Pythium Root Rot, and Sclerotinia collar rot. Pathogens that cause disease may enter through vents, in contaminated soil, on workers' hands, in water, on flats, on tools, etc. The key to managing diseases in greenhouses is to keep pathogens out of the greenhouse and manage environmental conditions to keep humidity low and float water temperature cool.

Greenhouse sanitation:

- Sanitation helps ensure that pathogens do not have the opportunity to come in contact with plants and cause disease. All precautions should be taken to ensure that field soil or used media does not enter the greenhouse.
- Polystyrene trays should be sanitized using 3lb/ 1000 cu ft. of methyl bromide for 24 hours and allow to air dry for 48 hours. In the next few years there be a very hard and thick plastic tray coming on the market which will last longer and can be sanitized more easily.
- Use new media and never reuse old media. Never use field soil or attempt to sterilize field soil again.
- Black shank and Pythium root rot have been brought into greenhouses by use of pond water. Pond water should not be used in the greenhouse environment.
- Mowers that are used to clip plants need to have their under-carriages washed and sanitized with 50% bleach solution at least between every clipping.
- If disease appears to be developing, remove trays that show any symptoms of disease. Bury or burn the contents of those trays and store the trays in an enclosed environment away from the greenhouse.

- Never dump old trays, old media, infected plants, and clippings around greenhouses.
- No tobacco products should be allowed in greenhouses.
- Workers who need to step into water beds should first wash and sanitize their boots to prevent black shank and Granville wilt organisms from being spread.
- Walkways need to be concrete, gravel or asphalt.
- Always keep clean work areas and storage areas for trays.
- Keep animals out of the greenhouse because they can carry in disease.

Control of the Environment

Proper ventilation and air circulation are key in preventing foliar diseases such as target spot, collar rot, gray mold and soft rot. Most greenhouses have either no fan ventilation system, a ventilation system where the vents are on the end of the house, or the vents are located on the side of the greenhouse. End vents alone or only side vents are not adequate to reduce moisture in the leaf canopy.



Disease problems begin when conditions are too cool to open greenhouse vents for several days. Newer greenhouses are using Horizontal Air Flow or HAF. These are large diameter fans that move air slowly around the greenhouse in a circular fashion just above plant canopy. This system helps reduce condensation, keeping foliage dry, and eliminates cold spots in the greenhouse, especially during periods when side curtains cannot be opened.

Another supplemental air circulation system, the poly tube, has been adopted by only a few transplant producers, but is widely used in the vegetable industry. The poly tube 2 feet in diameter or larger is hung from the ceiling of the greenhouse and stretched from one end to the other. A pressurized fan at one end of the tube keeps it inflated and an exhaust fan is located somewhere else in the greenhouse. Air exits through two rows of holes that run the length of the tube. The holes are set at 45 degrees from bottom vertical. The advantage of this system is that cold air can be brought in and warmed before the air comes in contact with plants. Fresh dry air can be brought into the greenhouse during cool periods when vents cannot be opened. Poly tubes can provide a supplemental system if needed for better air circulation.

UNDERSTANDING WHEAT TILLERS IS FUNDAMENTAL

The tillering stage of wheat begins with the emergence of lateral shoots from the axils of the true leaves of the main stem of the plant. Tillers are formed from the auxiliary bud located at each crown node. Tillers are an important component of wheat yield because each tiller has the potential to develop grain bearing heads.

Each wheat plant normally develops two or more tillers in the fall when planted at the optimum date. Tiller development will continue until cold temperatures stop plant growth and the wheat goes into dormancy. Tiller production will resume in late winter or early spring as temperatures rise and the plant comes out of dormancy.

Due to cooler temperatures, late-planted wheat may not have any fall tillers and will rely heavy on spring tillers. Spring tillers normally do not yield as well as fall tillers: consequently, fall tillering is important for winter wheat to achieve maximum yield.

Taking a tiller count at FEEKES 3 stage is the first step in determining nitrogen needs in late winter or early spring. To determine tiller numbers count all stems with three or more leaves. Tiller counts below 50 per square foot indicate a need for nitrogen at FEEKES 3. At recommended populations, many plants will have three to four stems plus two to three tillers, thus 50 to 100+ tillers per square foot at FEEKES 3 is considered adequate for maximum yields.

WHEAT STAND

Soon it is going to be time to evaluate wheat stands. This is most important for fields that were planted late and had minimal growth during the fall. To evaluate the stand, you need to determine the number of plants per square foot. Do this by taking a yard stick and laying it along a row.

A plant includes the main stem and the tillers. Count the number of plants in the three-foot row length. Repeat this at several random locations across the field that represent the field condition and determine the average. Multiply this number by 4 and then divide the row width, 6 or 7 inch etc.

For example, if there is an average of 40 plants per 3 feet of row, multiply 40 * 4, which = 160. If the drill was set up for seven inch rows, then 160 divided by 7 = 23 plants per square foot.

Twenty to thirty plants per square foot is considered adequate for maximum yield. If there are only 12- 14 plants per square foot you would only be at 60% of yield potential. You may want to keep the thin wheat as a cover crop and plant another spring crop, or cut it for hay instead of harvesting grain from a thin stand.

Plants /sq. ft.	Yield Potential %
22-28	100%
18-21	90-95%
15-18	75-80%
12-14	60-70%

GROWTH STAGE 30 THE MOST IMPORTANT TIME TO APPLY NITROGEN!

During growth stage 30, small grains switch from producing tillers to starting reproductive growth. This switch occurs in March. If tiller density is less that 50 tillers per square foot, you need to grow more tillers. A nitrogen application in late January and early February may be appropriate, though an Nitrogen application at this time can increase risk of freeze damage, disease, and lodging . If tillering is low, however, an early application of N can help stimulate further tiller development in the last few weeks before growth stage 30. Apply 40 to 70 units of nitrogen in late January or early February if there are 20 tillers per square foot. If there are over 50 tillers per square foot, go ahead and wait until March for the N application, which at that time should be 80 to 120 units of N.

Be careful on early 2, 4-D applications as this can inhibit tiller development and growth. High levels of N applications can cause lodging in tall wheat varieties that are prone to lodging. Treat your wheat crop like you would any other crop that requires high management practices. Wheat can make a good rate of return if the crop is managed properly through out the year.



AMAZING GRAZING

Kim Woods, Extension Agent
Animal Science/Natural Resources

JANUARY CATTLEMEN'S MEETING

The Person County Cattlemen's Association in conjunction with Person County Cooperative Extension will conduct their next educational program on **Tuesday, January 19**, at 7 pm at the Person County Office Building Auditorium.

The topic will be predator control, mainly dealing with coyotes and vultures. Speakers will be Andy Moore, District Supervisor, USDA APHIS Wildlife Services; Evan Matusevich, Wildlife Specialist, USDA-APHIS Wildlife Services and Jason Allen, Piedmont Regional Wildlife Biologist-District 5, NC Wildlife Resources Commission.

Please call our office at 336-599-1195 by January 15th to let us know if you will be attending. This will help us better plan for the meal. Hope to see you on the 19th.

GOAT AND SHEEP MEETING

There will be a regional goat and sheep producer training in Greensboro on **January 20, 2016**. The general session will cover parasites in small ruminants. There will then be concurrent sessions for dairy goat, meat goat and sheep producers. The training is held in conjunction with the NC Sheep Producers Association's annual meeting. After evaluations, lunch, at a cost of \$10/person or \$20/family, the NCSA annual meeting that is open to all will be held. That will be followed by an "Ask the Experts" session with the morning's speakers. Registration is online and can be found at a link on the Person County Extension website at www.person.ces.ncsu.edu For questions, call 336-599-1195.

WINTER FORAGE CONFERENCE

The North Carolina Forage and Grassland Council (NCFG) in conjunction with North Carolina Cooperative Extension will be hosting a series of Mid-Winter Conferences throughout the state. The dates and locations are as follows:



February 16	Kenansville	Lois G. Britt Agricultural Service Center
February 17	Statesville	Iredell County Extension Office
February 18	Canton	WNC Regional Livestock Center

This year the conference topics will be tailored to the sites. At Kenansville, bermudagrass and waste management will be the main topics. Speakers include Dr. Dennis Hancock, Extension Forage Specialist for the University of Georgia, and Scott Mathis with Prestage Farms. In Statesville and Canton, fescue toxicosis and legumes will be the subjects. Speakers include Dr. Shane Gadberry from the University of Arkansas, Dr. Miguel Castillo, Forage Specialist at NCSU, Dr. Matt Burns from Clemson University and Joe Davis, cattle producer from South Carolina. Additionally, there will be a NCSU Extension Update and Tradeshow. Each conference will begin at 10 am with registration and an opportunity to visit the trade show prior to that time. Cost is \$45-\$55, depending on when you register and includes 2016 membership in NC Forage and Grassland Council. For more information, give me a call at 336-599-1195.

PIEDMONT REGIONAL BEEF CONFERENCE

The Piedmont Regional Beef Conference will be held on **Tuesday, February 23, 2016** at the Guilford County Extension Office.



This will be a great opportunity to hear from several national and regional experts in the cattle industry. Dr. Harrison Dudley, from NCSU's College of Veterinary Medicine, will talk about the Veterinary Feed Directive and what it means for cattle producers. Dr. Brent Scarlett, with Scarlett Mobile large Animal Service, will talk about heifer selection, and Johnathan Black, Randolph County livestock agent, will present information on evaluating your "employees". Dr. Scott Grenier, from Virginia Tech, will discuss EPDs and Bull Selection. There will be a hands-on session to look at bulls and their EPDs in order to choose the best bull for various farm situations. There will be a trade show and a lunch.

Cost is \$12 (non-refundable) if registered before February 16; \$20 at the door. Registration begins at 9:30 am with the program beginning at 10:30 am. Come out and network with other cattle folks and learn some new ideas in the cattle industry.

HORSE FESTIVAL

Mark your calendars now for the Virginia-Carolina Horse Festival that will be held **March 5**. The location will be the Olde Dominion Agriculture Complex in Chatham, Virginia, which is located at 19783 US Hwy 29 South, Chatham, VA 24531. Festival hours are 10 am-3 pm. There are lots of great events planned throughout the day including a parade of breeds and a freestyle dressage demonstration. There will also be static demonstrations running throughout the day related to horse care. There will be a Kid's Area with fun activities for the little ones. Dealers and vendors will be present so it will be a great time to check out horse related products. Food vendors will also be on-site. All are invited to come learn more about horses, whether you currently own one, are thinking about getting a horse or just think they're great animals. The event is being planned and organized by several Cooperative Extension offices in both North Carolina and Virginia, the SouthEastern Farriers & Horseowners Association (SEFHA), and Averett University. More details will be forthcoming so watch for additional information.

EQUINE HEALTH SYMPOSIUM

The 2016 Equine Health Symposium hosted by the NCSU College of Veterinary Medicine will be held **March 5-6**, at the vet school in Raleigh. Registration is now open.



Each day of this event is tailored for a specific audience. March 5th is focused on the veterinarian, vet tech, vet student, and farriers. March 6th will have two tracks, one for the veterinary/farrier field, and one for the horse enthusiast/owner. This is really great event with phenomenal speakers

Event website and registration:

<https://cvm.ncsu.edu/education/continuing-education/forums-lectures-and-labs/2016ehs/#tabsPnl1-tab-0>

HAY SHORTAGE?

2015 was not the easiest year to put up hay. There was a late cold snap and then a pretty tough dry period. So, not a lot of hay (especially good quality hay) was put up. No matter what species of livestock you have to feed, securing your winter hay needs now would be a good idea. The farther we go into winter, the harder it will be to find hay. Go ahead and get it in your barn now and that's one less thing to worry about. Additionally, testing the hay you have would be good – then you'll know what type of quality you are working with and whether you might need to supplement. Testing costs just \$10 – that's pretty cheap. If you have hay for sale, want to test your hay or have other questions, call the Extension office at 336-599-1195.

BULL MANAGEMENT

Here are some thoughts concerning bulls as we head into and through the breeding season.



Performance:

Observation of bulls is extremely important to make sure they are doing their job. This is especially true for young bulls since they are new to the game. If possible, observe bulls several times during the day to make sure they are accomplishing the following:

- identifying and locating in-heat cattle
- mounting cows successfully
- penetrating and servicing the cow

Also, make sure the young bulls are not ignoring other in-heat cows because they have fallen "in love" with a single animal. A common rule of thumb for young bulls is they can successfully cover as many cows as they are old (in months). For example: a 15-month old bull should not be expected to breed more than 12-15 cows. Observe multi-sire situations closely to make sure one bull is not being dominated by the rest.

Health:

Daily observation of bulls is important to thoroughly examine the bull's health. Determine if he is too thin, injured or no longer interested in cows. Bulls that are injured, unhealthy, or lame are not going to perform well; therefore, they should be removed from the breeding herd and replaced with a healthy bull.

Feet and leg injuries are common among breeding bulls due to the amount of steps they take and the stress placed on the legs when mounting. A bull that can't walk or is reluctant to do so is not going to be able to perform his job and should be replaced. Managers should also observe for any reproductive injuries such as broken penis or hematoma of the penis. These injuries seem to occur most often in multi-sire situations or when young, small-framed bulls are placed in pastures to breed large-framed, aggressive cows. Cuts to the sheath can also occur especially when bulls are trying to get to cows in other pastures. These cuts can occasionally cause adhesions which may make breeding painful or impossible.

Body Condition:

Body condition is also important and should be checked routinely throughout the breeding season. Bulls in extremely thin body condition should be replaced. Remember, young bulls are still growing and may need more energy than the pasture/hay can supply;

therefore, supplementation during the breeding season may be necessary. Four to eight pounds of cracked corn daily should be sufficient to keep them in good body condition. This may require training the bull to come to a special pen to be fed. If this is started before the breeding season begins, it will be much easier.

Interest:

Sometimes, bulls seem to lose their interest in seeking out cows and breeding them. If this happens, he should be replaced or switched to another breeding group.

Thorough bull management will result in a better calf crop. Remember, if there is any doubt about the bull's performance, replace him. It can be very expensive to give him another chance.

AGING HORSES

The past several decades have seen an increase in the proportion of older horses. It is now estimated that horses greater than 16 years of age make up 16 percent of the horse population.

The aging of the horse population can be credited to improved nutrition, preventative care, and health management. Additionally, owners have adjusted their expectations of their older equine partners, thus allowing the horses to continue contributing their experience in the years after peak athletic performance is no longer possible.

Aging is a gradual, irreversible process that affects all body systems. It is estimated that at least 70 percent of horses greater than 16 years of age have a medical problem that requires veterinary attention to maintain health or comfort.

Regular dental care, body condition evaluation, and physical examination are important components of ensuring a healthy, comfortable old-age for your horse.

Common problems seen in the older horse include:

- Declining immune function
- Declining vision
- Poor thermoregulation
- Musculoskeletal problems
 - Sagging of topline and pendulous abdomen
 - Osteoarthritis
 - Suspensory ligament degeneration
 - Laminitis
- Dental problems
 - Missing or broken teeth
 - Malocclusion
- Alterations in body condition
 - Weight loss due to declining feed efficiency, bad teeth, loss of appetite, or concurrent disease
 - Weight gain due to decreased activity or Equine Metabolic Syndrome
- Altered internal organ function
 - Kidney disease
 - Liver disease
 - Cushing's Disease (Pituitary Pars Intermedia Dysfunction)
 - Equine Metabolic Syndrome

Additional resources include:

<http://extension.uga.edu/publications/detail.cfm?number=B1368>

<http://www1.vetmed.lsu.edu/EHSP/Health%20Tips/AAEP%20Horse%20Health/item45481.html>

<http://www.unce.unr.edu/publications/files/ag/2000/fs0009.pdf>

JANUARY BEEF MANAGEMENT TIPS**Spring Calving Herds**

- Begin to gather calving supplies
- Keep late pregnant cows gaining 1.0 lb. per day
- Pregnant heifers and 3 yr. olds should gain 2.0-2.5 lbs. per day
- Keep high quality minerals available
- Review calving assistance procedures
- Stockpile a few gallons of colostrum
- Attend performance tested bull sales and/or order semen for AIS
- Soil test pastures not tested in last three years
- Order clover seed for frost seeding later this winter

Fall Calving Herds

- Begin/continue breeding
- Check cow and bull condition
- Supplement energy to young bulls during breeding season
- Continue to check calves closely for health problems
- Reimplant September and early October born calves that were implanted at birth
- Soil test pasture not tested in last three years
- Order clover seed for frost seeding later this winter

FEBRUARY BEEF MANAGEMENT TIPS**Spring calving herds**

- have all calving supplies on hand and review calving assistance procedure
- move pregnant heifers and early calving cows to calving area about two weeks before due date
- begin calving late in month (some herds)
- check cows 3 to 4 times per day, heifers more often - assist early if needed
- keep calving area clean and well drained
- ear tag and dehorn all calves at birth; castrate male calves in commercial herds
- give selenium and vitamin a & s injections to newborns
- keep late pregnant cows gaining 1.0 lb. per day
- pregnant heifers and 3 yr. olds should gain 2.0-2.5 lbs. per day
- keep high quality, high magnesium minerals available
- vaccinate cows against scours if it has been a problem
- attend performance tested bull sale and/or order AI semen
- frost seed clovers (mid to late in the month)

Fall Calving Herds

- Begin creep feeding or creep grazing calves if desire
- Plan marketing strategy for calves
- Begin feeding high magnesium minerals to prevent grass tetany
- Continue to check calves closely for health problems
- Inventory winter feed supplies
- Frost seed clovers (mid to late in the month)

MARCH BEEF MANAGEMENT TIPS**Spring Calving Herds**

- Move pregnant heifers and early calving cows to calving area about 2 weeks before due date
- Continue calving
- Check cows 3 to 4 times per day, heifers more often - assist early if needed
- Keep calving area clean and well drained, move healthy pairs out of large pastures 3 days after calving
- Ear tag and dehorn all calves at birth; castrate male calves in commercial herds
- Give selenium and vitamin A & D injections to newborn calves
- Feed cows extra energy after calving; some protein may be needed also
- Keep high quality, high magnesium, high selenium minerals available

Fall Calving Herds

- Pull bulls to maintain a 60-75 day calving season
- Remove bulls to bull pasture and check condition
- Begin creep feeding or creep grazing calves if desired
- Plan marketing strategy for calves
- Begin feeding high magnesium minerals to prevent grass tetany
- Make first selection of replacement heifers
- Order fertilizer; start getting equipment ready
- Last chance to frost seed clovers this spring (early in month)

FOOD for Thought**FOOD FOR THOUGHT**

Jennifer Grable, Extension Agent
Family & Consumer Sciences

**EXTENSION & COMMUNITY ASSOCIATION (ECA)
ACHIEVEMENT DAY**

Person County ECA members celebrated their annual Achievement Program on December 3. The program was held in the Person County Office Building Auditorium. Dara Bloom, Local Foods Specialist from NC State University served as our guest speaker highlighting the importance and availability of local foods and how instrumental ECA can be to their efforts.

The following women were recognized as club women of the year for their ECA Club: **Ruth Burch** from Annie Mae Tuck Club, **Gloria Jones** from Bushy Fork Club, **Corene**

Whitfield from Piedmont Club, and **Hazel Thomas** from Reamstown Club. The Volunteer in Extension Education Program was awarded to **Joan Long** while **Hazel Thomas** was picked as overall Club Woman of the Year. The **Bushy Fork Club** took home the Club of the Year.

During 2015, the total of volunteer hours reported was over 7758 hours, saving the county roughly \$178,977. Thanks to all of our ECA members and volunteers whom we rely so heavily on!!

Each year, we recognize those club members that have documented their volunteer hours for both Extension and the community. We recognize their Certified Volunteer Units (CVUs) and after a certain number of volunteer hours, they receive a certificate and pin, or seals to go on their certificates. We had over 25 ECA volunteers complete their reports for 2015 and the following ladies were recognized for achieving over 500 volunteer hours within the past year: **Dorothy Coates, Foy Harrell, Elaine Harris, Cornelia Jay, Naomi Johnson, Betty Jean Mangum, Nannie Smith and Jerri Swann.**


One of the additional aspects to our annual ECA Achievement Day event is the annual Cultural Arts contest. There are 30 different categories that the volunteers can submit an entry into such as sewing, knitting, crocheting, painting, jewelry, crafts, Christmas decorations, quilts, creative writing, etc. Below are the results from the Cultural Arts contest and the blue ribbon winners will head on to the district competition.

<i>Sewing clothing, aprons and other furnishing</i>	Dorothy Coates Piedmont Club
<i>Sewing home furnishing, Banners, flags</i>	Foy Harrell Piedmont Club
<i>Crocheting</i>	Joan Long Bushy Fork Club
<i>Jewelry</i>	Naomi Johnson Reamstown Club
<i>Wreaths</i>	Jr. Weaver Piedmont Club
<i>Christmas Decorations</i>	1st Place Corene Whitfield Piedmont Club 2nd Place JoAnn Howerton Bushy Fork Club
<i>Fine Arts, Oils</i>	1st Place Sylvia Bradsher Annie Mae Tuck Club 2nd Place JoAnn Howerton Bushy Fork Club

SNAP-ED....STEPS TO HEALTH

We have already completed our second grade Steps to Health nutrition program at North Elementary and will be starting our third grade program in the beginning of January. We will focus on teaching nutrition, MyPlate, physical activity, reading nutrition labels, etc. Upon completing that, we will be teaching an eight week older adult program at the Senior Center in the spring followed by a six week chronic disease program at the Roxboro Housing Authority. A huge **THANKS** to ECA members for helping us with this program. If you are interested in volunteering or participating, call us at 336-599-1195.

EAT SMART MOVE MORE WEIGH LESS (ESMMWL)

If you ended up with a few of those extra holiday pounds and want to be sure to get rid of them, you might want to join our Eat Smart  Move More Weigh Less support group that **Weigh Less** will be on **Wednesdays** starting on **January 13** from 12:10 pm—12:50 pm in the Person County Office Building Auditorium. The group will meet until **April 20** with two extra dates built in for snow make-up dates which would carry the program until May 4. The ESMMWL curriculum is based on weight loss strategies proven to work to help participants be successful in both losing weight and maintenance. There is a \$15 registration fee for the 15 week series. Stop by the Extension Center to complete your registration form or download it from our website at <http://person.ces.ncsu.edu>.

FREE RADON KITS

During January's National Radon Action Month, the U.S. Surgeon General and the Environmental Protection Agency (EPA) urge all Americans to protect their health by testing their homes for radon. Radon is a radioactive gas. It comes from the natural decay of uranium that is found in nearly all soils. It typically moves up through the ground to the air above and into your home through cracks and other holes in the foundation. Your home traps radon inside, where it can build up. Any home may have a radon problem. This means new and old homes, well-sealed and drafty homes, and homes with or without basements. Radon from soil gas is the main cause of radon problems. Sometimes radon enters the home through well water. In a small number of homes, the building materials can give off radon, too. However, building materials rarely cause radon problems by themselves. You can find out if your home has an elevated radon level by conducting a simple test. Stop by Room 149 of the Person County Office Building to get your kit while they last. For more information about what you can do to protect your health and take action against radon during National Radon Action Month, please visit www.epa.gov/radon/nram/public.html



"PLAN AHEAD" LUNCH N' LEARN

Our next session is scheduled for **Thursday, January 14** from 12 noon – 1 p.m. and will focus on how to plan ahead for the future by completing your advanced directives. Information will be provided by the Home Health & Hospice of Person County on living wills and medical power of attorney forms. The cost is \$5 and you must pre-register and pre-pay for this event. Call the Extension Office at 336-599-1195 for more information.



LIVING HEALTHY WITH DIABETES

This free 6-week evidence based program developed by Stanford University will be held on **Tuesdays, February 2 – March 22** from 1:30 p.m. – 4:00 p.m. each day at the Person County Library. Call LeighAnn at 597-2204 X 2277 to pre-register. To be eligible for the program you must be diabetic, pre-diabetic or the caregiver of a diabetic.

PINTO BEAN FUNDRAISER

The Person County ECA Council invites you to join them on **Friday, February 5** for their annual pinto bean luncheon. For \$5, you will get beans, cornbread, beverage, and homemade dessert! The fundraiser will take place at the Person County Office Building from 11:30 am – 1:30 pm and will be available for eat in or take out. Proceeds go to a variety of ECA community projects, such as donations to the Christian Help Center, Ronald McDonald House, health fairs in the community, donations to the Lake Waccamaw Boys and Girls Home, Extension programs, etc.

"DON'T WORRY" LUNCH N' LEARN

February is American Heart Month and everyone needs to ask themselves "Do you worry too much? Is it hurting your heart?" Our monthly lunch n' learn session will be **Thursday, February 25** from noon – 1:00 pm. The cost is \$5. We will be discussing some stress management tips, the effects of stress on your heart, and signs to watch out for.

SAFE PLATES

It is that time of year again where our office along with the Environmental Health Department offers a food safety course to help certify restaurant staff in food safety education. The NC State University food safety specialist, Dr. Benjamin Chapman, has been hard at work developing a new nationally approved curriculum, NC Safe Plates, which we will be implementing again this spring. This is a comprehensive program for food service managers and supervisory staff in restaurants, hospitals, nursing homes, child care facilities, and other food-handling establishments. The class is scheduled from 9 am – 12 noon on **March 28-31** with the review and exam scheduled for **April 4**. The early registration fee is \$125 and is due by **March 11**. The fee includes the textbook, exam and certification. The registration form can be found online at <http://person.ces.ncsu.edu>

**MATTER OF BALANCE**

This free 8-week program is designed to reduce the fear of falling and increase the activity levels of older adults who have concerns about falls. Classes run on **Mondays, April 4 – May 23** from 1 pm– 3 pm at Cambridge Hills Assisted Living Activity Room and is open to anyone who has a concern about falling! For questions about the program or to register, call LeighAnn Creson at the Health Department at 336-597-2207 x 2277.

COOK SMART EAT SMART

Our Extension office is currently planning a Cook Smart Eat Smart hands-on cooking class for the spring. It is a four session program with each lasting about 2 ½ hours. A variety of topics such as different ways of cooking, knife skills, food safety, MyPlate nutrition, etc. will be taught. If you are interested in attending, please contact our Extension Office to get on the interested participant list to receive information about dates, time, and cost.

BETTER CHOICES

The Family & Consumer Sciences program will be teaching a free 8-week nutrition program for older adults at the Person County Senior Center. We will start this program in the spring and it is open to the entire community. Each week, we will provide a new lesson on a different nutritional topic along with providing a workbook, informational handouts, and taste tests. If you are interested contact Kim at the Senior Center at 336-599-7484 to get your name on the list. We just ask that you attend a majority of the sessions.

WORKING ARTS

For the past 40 years, our office has hosted an annual Working Arts craft workshop. Due to issues with weather last year and getting snowed out of even our snow dates, we have decided to postpone this event. We are still planning to host it this year but are looking at dates of **November 2-3**. So please put these dates on your calendar and look out for more information!!



4-H GREEN SCENE

Beth Davis, Extension Agent
4-H Youth Development

4-H RECORD BOOK DEADLINE

If you are planning to turn in a 4-H Record Book, they are due **Monday, January 4 by 5 pm**. 4-Hers who complete record books and turn them in can earn Clover Cash to be used for most 4-H activities with a fee (Camp, Summer Fun, Teen Retreat, Congress, State Council Conference, etc.). These youth will also be recognized at the 4-H Awards Program on January 29. There are video clips available to aid in completing record books. To access these videos, please contact Beth Davis, 4-H Agent at 336-599-1195 or beth_davis@ncsu.edu.



**Please Note: When choosing your Record Book Form, please use your 4-H Age (your age as of January 1, 2015).*

JANUARY COUNTY COUNCIL

If you are interested in learning more about Animal Science opportunities in 4-H, we hope you will come to the January 4-H County Council Meeting, scheduled for **Thursday, January 14 at 6 pm**. It will be held in Room 165 at the Person County Office Building and our guest presenter will be Kim Woods, Person County Livestock Extension Agent. Kim will be sharing information about many of the opportunities that are available in the category of Animal Science, including livestock shows, livestock judging, skillathon, horse competitions and more. Please let us know by **Tuesday, January 12** if you plan to attend so we can prepare.

4-H AWARDS NIGHT

You are all cordially invited to attend the 2016 4-H Awards Night! This celebratory event is scheduled for **Friday, January 29** and will be held in the Person County Office Building Auditorium. We will begin with dinner at 6 pm, followed by the awards ceremony at 6:30 pm. We will recognize Person County 4-Hers for their accomplishments in 2015. 4-H Awards Night is a highlight of the year! Please let us know if you plan to attend by **Monday, January 25**.



This year, we are adding two new components to Awards Night. We will have a 4-H Talent Show and Visual Arts Show, showcasing the artistic talents of our youth. Entry forms for both portions will be due the same day as 4-H Record Books, which is **Monday, January 4**. Visual Arts entry items will also be due that day, so that they can be judged ahead of time and displayed at Awards Night. For categories and entry forms, please see the Person County Cooperative Extension Website: person.ces.ncsu.edu or check Person County 4-H on Facebook. If you are interested in volunteering as a judge, please contact Beth Davis at 336-599-1195 or beth_davis@ncsu.edu.

HONOR CLUB & 4-H COLLEGE SCHOLARSHIPS

For 4-Hers who are interested in applying for NC 4-H Honor Club or for a college 4-H scholarship, the deadline to submit is **February 1**. Honor Club applicants must have been in 4-H for 3 years and be at least 16 years old by January 1, 2016. Please contact Beth Davis, if you are interested in applying at 336-599-1195 or beth_davis@ncsu.edu.

VOLUNTEER LEADERS CONFERENCE

The 4-H Volunteer Leaders Conference is designed for adult volunteers to gain a greater understanding of 4-H youth development. There are a variety of workshop sessions and networking opportunities to assist in volunteer development. This event is scheduled for the weekend of **February 6-7** in Raleigh. Volunteers can choose to attend the entire conference, or Saturday only. Early registration is due to Raleigh by January 15. Workshops begin at 8:30 am and the last session ends at 5:30 pm. Person County 4-H will cover the majority of the cost, but we do ask that you pay \$25 to attend.

4-H CAMP

This year, Person County 4-H will be attending camp two different times! We will have traditional 4-H Camp the week of **June 12-18** at Betsy Jeff Penn in Reidsville. This will be for campers ages 8-14. Cloverbud Camp is for campers ages 5-8 and will be held at Millstone 4-H Camp in Ellerbe. This will be Sunday, **July 24-Tuesday, July 26**. The cost of traditional camp is \$150 per camper and the cost of Cloverbud Camp is \$100 per camper. To reserve your spot, you **MUST** send in a \$50 deposit and 4-H Enrollment Form by **February 1**.

TEEN RETREAT

The North Central District will be having 4-H Teen Retreat the weekend of **April 2-3** at Betsy Jeff Penn 4-H Camp in Reidsville. This event is for teen 4-Hers and is a fun weekend filled with meeting new friends, learning new things, and exploring the opportunities available in 4-H. 4-Hers may use Clover Cash to help pay the registration cost. The deadline to register is **March 1** and the cost will be approximately \$85.

FEBRUARY COUNTY COUNCIL

The topic for the February County Council is going to focus on Healthy Lifestyles. Killian Davis, North Carolina 4-H Officer and Stokes County 4-Her will be coming to share her knowledge of this topic as well as 4-H opportunities in this area. The state theme this year is "The 4th H" which concentrates on all aspects of healthy living. This meeting will be **Thursday, February 18 at 6 pm** in the Person County Office Building.

MARCH COUNTY COUNCIL

If you are interested in the topic of Leadership, make sure you attend the March County Council Meeting, scheduled for **Thursday, March 10 starting at 6 pm**. Luke LaHay, North Carolina 4-H President and Nash County 4-Her will be speaking on this topic. Come learn new ways you can become involved in leadership!

SPRING 4-H VOLUNTEER TRAINING

There will be a Spring 4-H Volunteer Training for all Person County 4-H Club Leaders, as well as those who are interested in serving as a 4-H Club Leader. This training will be held **Tuesday, March 15**. Dinner will be provided at 5:30 pm, followed by the training session at 6 pm. The topics being covered include Ages & Stages/Age-Appropriate Activities as well as Service to the Community. Anyone interested in serving as a 4-H Club Leader should contact Beth Davis, 4-H at 336-599-1195 or beth_davis@ncsu.edu.

CENTRAL PIEDMONT JUNIOR LIVESTOCK SHOW & SALE

Any Person County youth interested in showing an animal in the Central Piedmont Junior Livestock Show needs to have their entry packet turned in no later than **March 15**. To receive a packet, please contact Beth Davis or Kim Woods at the Person County Extension Office (336-599-1195). This is a market animal show including market goats, market lambs, market hogs, beef heifers, and market steer. Market hogs and market steers must be on the farm by February 1 and everything else must be on the farm by March 1.

COMMUNITY SERVICE & RESTITUTION PROGRAM

On behalf of the Community Service & Restitution Program, Vicky C. Yeatts, Program Coordinator would like to thank the many work site volunteers for providing opportunities for youth to complete hours. The experiences you've provided these young people have been invaluable and your contributions don't go unnoticed. Thank you to all the staff of the following:

American Red Cross, Mayo Park, Person County Parks & Recreation, Roxboro Housing Authority, Once Again Resell, Christian Help Center, Safe Haven, Person County United Way, Abanitu Organics, Person County Library, Hyco Lake Authority, Zion Christian Center, Person County Animal Services, and Ward Motor Sports.



HORTSHORTS

Carl Cantaluppi, Extension Area Agent
Urban & Commercial Horticulture
Person and Granville County

VEGETABLE GARDENING IN NORTH CAROLINA

If you have never grown a vegetable garden, or even if you are an experienced vegetable gardener, consider obtaining a copy of "Home Vegetable Gardening," a publication from the NC Cooperative Extension Service. In it, you will find information about selecting a garden site, planning the garden by drawing a map, and following a table that shows the amount of plants or seeds to use, suggested varieties, planting dates, spacing between plants in the row and between rows, and the days it takes for that particular vegetable to mature.

It also covers soils and fertilization, garden tools, fall gardening, watering, weed control and mulching, insect and disease control, harvesting, composting and much

more. To obtain your copy, call 336-599-1195 and ask for the Vegetable Gardening in North Carolina publication.

STARTING VEGETABLE AND FLOWER SEEDS INDOORS

Did you ever want to try growing flower and vegetable seeds at home but didn't know where to start? Just one call to the Person County Cooperative Extension Service can get you a fact sheet entitled "Starting Plants From Seeds". This publication will tell you all you need to know about growing healthy plants indoors. Topics include:

1. Selecting Seeds for Planting;
2. Containers for Sowing Seeds;
3. Soil Mixes and Other Growing Media;
4. Seeding
5. Damping-Off;
6. Growing Seedlings;
7. Transplants and
8. Moving Plant Outdoors.

For tender plants, we generally refer to May 5 for our frost-free date, meaning that we still have a 5% chance of frost on May 5. Certain kinds of flowers and vegetables need to be seeded at different times before the frost-free date to allow the seedling to grow indoors before transplanting outdoors.



So when looking at the charts in the above fact sheet, use May 5 as the last frost date in our area and then back up however many weeks it states before the last frost to plant seed indoors. For cool season vegetables like cabbage, cauliflower, and broccoli, use April 15 as the last frost date, as these vegetables can tolerate light frosts.

Call the Person County Extension Office at 336-599-1195 to receive your copy of "Starting Plants from Seeds."

USE PROPER LIGHTING FOR STARTING SEEDS INDOORS

If you are planning to start vegetable and flower seeds indoors this spring, there are a few things you should know about the kinds of artificial lights and how they should be used. Special plant-raising tubes are not necessary for starting vegetable plants, plant physiologists have found.

"The main differences between grow tubes and standard fluorescents are that they cost a great deal more and that the light they deliver is for cosmetic effect and not based on any horticultural responses," explained Dr. Henry Cathey of the U.S. Dept. of Agriculture in Beltsville, MD. "Grow tubes just make plants look better, and unless you need theatrical lighting of plants, standard fluorescent tubes will do."

According to Dr. Cathey, grow tubes have an advantage over fluorescents at first because they put out more light. But because they're not as efficient as fluorescents, they burn out faster. "After six months, the special grow tubes deliver half of the light they did when new," Dr. Cathey said. After a year, cool white or warm white fluorescents will give more light than grow tubes.

Plants do well by mixing cool white and warm white fluorescents in each fixture, providing plants a wide enough range of the light spectrum to thrive. How much light do seedlings need? Two standard four foot shop light fluorescent fixtures, each containing two, four foot "cool" white tubes will illuminate a 1 1/2' X 4' area.

Because seedlings need more intense light than mature plants, keep tubes as close as possible to leaves, short of touching them. For the first month after germination, never have them more than three inches away. Then, as seedlings begin to grow, keep lamps within an inch or two of leaves and maintain this close distance, even as plant height increases. Buy the longest tubes to fit into your area. There are two reasons for that. First, light at the ends of the tubes tend to be weaker than in the center. The strongest light is in the middle quarter of the tube. Second, the more artificial light space available, the more seedlings you'll raise and the greater diversity of crops you'll harvest.

Try to avoid using tubes under three feet long if you can. They are inefficient and cost more to run than they're worth. Every other day, turn the flats so that the outside seedlings are under the middle of the light to prevent the seedlings at the ends from getting leggier than those in the center where the light is more intense. If plants get no outside sunlight, keep them under the grow lights for 18 hours a day. You can install a timer to automatically turn the lamps on and off.

To make the most of reflected light, paint shelves, tables, or boards with flat white latex. This will give plants more light for the same power output. Also, tuck sheets of aluminum foil under the flat and wrap sheets around the top of the grow light fixture, around the lamps.

Fluorescents work at peak intensity when first installed, then "blacken" with age and gradually lose light efficiency. After three months, a fluorescent tube gives 10% less light than it originally gave. A standard, 48-inch-long light fixture will cost you from \$12.00 to \$20.00, but they're often on sale, so keep an eye out for bargains. For best plant growth, it's wise to replace fluorescent tubes once a year, even if you used them only during the previous spring. When measured against the hardy transplants you'll set out each year, the cost of new tubes is a worthwhile expense.

CONSIDER GROWING YOUR VEGETABLE TRANSPLANTS

Growing your own transplants is a challenge, and it's fun. Besides, you can realize a number of benefits by growing your own vegetable transplants. The major advantage is having plants of the varieties you want. You can grow just the number you need of each, and produce them as you want them. The hazard of importing pest problems is also reduced, and because you control the germination conditions, you get the maximum number of plants from costly seed. Vegetable plants can be grown under lights indoors, in cold frames, hotbeds, or plastic greenhouses.



Any shallow containers with drain holes can be used for growing transplants. For germinating, the flat inserts with narrow depressions for starter mix are very convenient. They are available at most garden stores. The medium for germinating seed should be sterile and uniformly fine. It should be well aerated and well drained, yet have good water retention properties. The commercial artificial starter mixes, available from garden centers, hardware stores, or greenhouses are excellent. You may use the same medium for growing the small plants up to transplant size.

Cool Season Vegetables

Four to six week old transplants of broccoli, cabbage, and cauliflower survive well in the garden and are frost tolerant. These vegetables can be started from seed indoors in early to mid-February. They can be transplanted into the garden early to mid-March. Optimum soil mix temperatures for germination indoors is 70 to 80°F. Seedlings should emerge in 5-7 days. Growing temperatures should be 60 to 70° F. during the day and 50 to 60° F. at night.

Warm Season Vegetables

Tomato transplants 6 to 8 weeks old may be set out after the danger of frost is past, during early to mid-May. Seed germination should occur in about 6 days with 75 to 80°F

soil temperatures. Tomato seeds should not be started indoors until mid-March.

Pepper and eggplant transplants should be 6 to 8 weeks of age to be transplanted into the garden in mid-May. Seed should be started indoors during early March, with seeds germinating in about 2 weeks.



As soon as developing seedlings have their first pair of true leaves (the leaves that emerge after the seed leaves emerge), they need to be transplanted into individual containers such as styrofoam cups. Handle them by the leaf, not by the stem, so that you don't crush them. Give them enough room. Crowded plants become spindly and weak.

Since seedlings of vine crops (cantaloupes, cucumbers, watermelon, and squash) do not transplant well if stems and roots are injured, and they are warm season vegetables, easily injured by frost, sow seeds directly into the garden in mid-May.

Remember to use fluorescent lighting indoors if you don't have a cold frame or a greenhouse to start your transplants and never keep the lights more than 3 inches above the plants at any time, or they will become tall and spindly.

On April 15, we still have a 50% chance of frost to occur in our area. Remember that the chance of frost occurrence does not decrease to 5% until early May. Putting out warm season vegetables in the garden before that time increases the risk of plant death due to freezing temperatures.

HOLD THE PRUNING TOOLS!

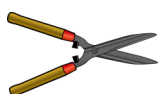
For those with the urge to prune fruit trees and grapes now, hold on and put the pruning tools away for now. I know that many of you are raring to go once all the leaves have fallen, but now is not the best time of the year to prune. In fact, pruning now may cause problems later on in the year.

We will be getting several days of freezing or below freezing temperatures throughout the winter. After several days of cold temperatures, winter injury or dieback will occur on the tips of the branches. It's best to wait until the cold period has passed so that you will remove winter injured branches as you prune. If you prune now, you will get winter injury on what you leave behind.

Also, the stone fruits (peach, plum, cherry, apricot) have more tender wood than apple and pear. They're more apt to winter injure so it's a good idea to delay the pruning of stone fruits until early-mid March. It's o.k. to prune stone fruits if you see buds starting to break. It does no harm. If you prune back a grape vine and it starts to "bleed" that is, the sap starts to drip like a faucet out of the cut vine, that is o.k. and does not hurt the vine.

If you have a large amount of fruit trees, you can start pruning apples and pears around mid-late February and delay pruning the stone fruits and grapes until mid-March.

A fruit tree pruning demonstration will be conducted in the Spring. Information regarding date, time and location will be provided later.



PRUNING DECIDUOUS SHRUBS

February is the month of the year when gardeners are eager to get out and do something in the landscape. One chore that can be taken care of now is pruning certain shrubs. Often, gardeners approach pruning with fear but it is not as difficult as it may seem. Remember, not all shrubs need to be pruned and certain shrubs should not be pruned at this time of year. Shrubs are pruned to maintain or reduce size, rejuvenate growth, or to remove diseased, dead or damaged branches.

Deciduous shrubs are those that lose their leaves each winter. Evergreen shrubs maintain foliage all year. Deciduous shrubs are placed into three groups:

- (1) Those that flower in the spring on wood produced last year,
- (2) Those that flower later in the year on the current season's growth.
- (3) Those that may produce flowers but those flowers are of little ornamental value.

Shrubs that flower in the spring should not be pruned until immediately after flowering. Though pruning earlier will not harm the health of the plant, the flowering display will be reduced. Examples of these types of plants include forsythia, lilac, azaleas, camellias, rhododendron, gardenias, and climbing roses.

Shrubs that bloom on current season's growth or that do not produce ornamental flowers are best pruned in early spring. Examples include Rose of Sharon, Spirea, crepe myrtle, and Butterfly Bush.

Pruning during the spring allows wounds to heal quickly without threat from insects or diseases. There is no need to treat pruning cuts with paints or sealers. In fact, some of these products may retard healing.

There are three basic methods used in pruning shrubs -- thinning, heading back, and rejuvenating.

Thinning is used to thin out branches from a shrub that is too dense. It is accomplished by removing most of the inward growing twigs by either cutting them back to a larger branch or cutting them back to just above an outward facing bud. On multi-stemmed shrubs, the oldest canes may be completely removed. This method can be used on nandina, taking the old, thick canes out at ground level.

Heading back is removing the end of a branch by cutting it back to a bud and is used for either reducing height or keeping a shrub compact. Branches are not cut back to a uniform height as this will result in a "witches broom" effect when indiscriminate topping is done, giving the shrub a "haircut".

Rejuvenation is the most severe type of pruning and may be used on multi-stemmed shrubs that have become too large with too many old branches to justify saving the younger canes. All stems are cut back to 3 to 5 inch stubs. This works well for spirea, forsythia, pyracantha, nandina, hollies, mock orange, shrub roses and flowering quince.

TIME FOR PRE-EMERGENCE WEED CONTROL IN YOUR LAWN

Mid-February is the time to think about granular preemergence herbicides for summer annual grass control in your lawn, such as smooth crabgrass and goosegrass.

Understanding how the various preemergence herbicides work is necessary if optimum weed control is to be obtained. One of the most commonly used family of preemergence herbicides is the dinitroanilines (sometimes referred to as DNA's). Individual herbicides in this family include Barricade, Team, Pendimethalin, Surflan, and Balan. Dimension herbicide does not belong to the DNA family although its mechanism of action is very similar. These herbicides are widely used for preemergence annual grass control in established turfgrasses. Generally, they provide good weed control if applied correctly. By understanding how this family of herbicides provide weed control, it becomes more clear as to how they should be utilized.

First of all, DNA's do not prevent weed seed germination. As the seedling germinates, the herbicide is absorbed by young roots and emerging shoots and cell division is inhibited causing plant death in susceptible species. Therefore, for optimum control, it is necessary to apply these herbicides prior to expected weed germination. This causes a chemical herbicide barrier at the soil

surface. As weeds begin to germinate, they encounter this herbicide barrier, absorb the herbicide and fail to emerge. Because this family of herbicides is not very water soluble and readily binds to soil particles, they tend to remain near the soil surface and do not leach through the soil profile. Therefore, this chemical barrier remains intact until soil microorganisms and other factors degrade the herbicide over time.

Applying these products well in advance of expected germination is acceptable. Many people express concern over the herbicide degrading more quickly (therefore a breakdown in control) if they are applied several weeks prior to expected germination. But because these herbicides are primarily degraded by soil microbes, and because soil microbes are less active in cooler soils, degradation does not proceed at the same rate when the soil temperature is 45°F versus 70° F.

Remember to buy the granular herbicide by itself and not in combination with fertilizer, such as "weed and feed" products. February is not the time to fertilize cool season grasses like fescue. Fertilizing fescue in February will make it easier for the grass to contact brown patch fungus disease, which will kill the grass during the hot and dry summer months.

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COOPERATIVE EXTENSION

Empowering People, Providing Solutions

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