

# UPSTATE FORESTRY NEWS



## Serving the Upstate of SC

Spring 2006

*Edited by D. Jason Caudill, County  
Extension Agent, Oconee County*

### Newsletter to be Offered Electronically

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### Strategies for Wildfire Prevention

It's been twenty years since South Carolina's last bad forest fire season, and fire experts are getting edgy. "Bad fire seasons historically occur on 5-10 cycles," said State Forester Bob Schowalter. "We're long overdue."

Wildfire is dependent on three main factors: terrain, fuel, and weather. Effective fire protection strategies must consider all three, requiring an understanding of how each influences fire behavior. Let's take a look at what fire behaviorists call "the big three."

#### **Terrain**

On any site, terrain is the most constant factor . . . generally, you just learn to live with the terrain you have. The main thing to remember: on a sunny afternoon, wildfire can race upslope with such intensity that it is virtually unstoppable.

To protect homes or valuable forest holdings on a steep slope, fuel breaks must be much wider than on flat lands. Wood-shingled houses are especially vulnerable when built on steep slopes. A final point, if you live on steep slope, make sure you have a safety zone in case your escape route is blocked by the fire.

#### **Weather**

Of all the fire behavior factors, weather is the most variable and most unmanageable. While there is nothing to be done about the weather, recognizing dangerous fire weather can help you protect your property.

Two important weather considerations are relative humidity and wind. When the relative humidity is low, forest fuels—dead grasses, leaves, and pine straw—dry out quickly and ignite readily. In South Carolina, fire occurrence can increase dramatically when relative humidity is less than 25%.

Wind generally determines the speed and direction of a wildfire's spread. Obviously, a fire will move faster when the wind is blowing hard.

When the weather forecast calls for high wind and low relative humidity, be especially vigilant. Make sure your water hose is connected to protect your home and postpone any outdoor burning.

#### **Fuel**

Fuel is anything that will burn: pine straw, grass, trees, houses, boats, and barns. And of all the factors affecting wildfire, it is the only one we can control.

To prevent your home from becoming fuel, make sure that it is separated from other fuels. Avoid straw beds adjacent to flammable structures, trim vegetation that hangs over the roof, sweep leaves and pine straw from the roof,

keep grass cut short in the winter, and seal the crawl space so fire can't creep under the house. Information on protecting your home is available at <http://www.state.sc.us/forest/fire.htm>

Forest landowners can manage fuel under their pine stands by prescribed burning or conducting pine straw harvests. Regardless of method, care should be taken to leave a layer of organic matter to protect the soil.

The frequency of raking or burning will depend on how quickly the bed of needles develops. In the coastal plain, fuel reduction may be needed every three years; a five or six year rotation might be appropriate in the upstate.

Assistance in planning prescribed burns and pine straw harvests is available by contacting the SC Forestry Commission or the Clemson Extension Service.

### **The Human Factor**

Ninety-eight percent of all wildfires in South Carolina are caused either directly or indirectly by people. Of the fires caused by people, about half start from careless outdoor burning.

If you burn outdoors, follow the state's outdoor burning laws: notify the Forestry Commission before starting the fire, establish a good firebreak around the burning site, gather enough tools and personnel to manage the fire, and stay with the fire until it is completely safe.

Finally, be alert. Immediately report any suspicious fires or smoke to 911 or to the Forestry Commission Fire Dispatch Center at 1-800-777-FIRE.

### **Invasive Species of the Month:**

Chinese and Japanese Wisteria (*Wisteria sinensis* & *W. floribunda*) By Larry Nelson, Forestry Extension Associate, Clemson University

During the next several weeks of spring, people across the southeast will be treated to a beautiful display of flowers from non-native, Chinese and Japanese Wisteria. These species were introduced to this country in the 1800's as ornamentals and have become a traditional southern porch vine. Most people are unaware that these species, unlike our native wisteria, are considered invasive, noxious weeds.

These plants are high-climbing, woody vines that can reach heights greater than 70 ft. Infestations typically form dense growth, overtop and kill sizable trees. When the large trees fall and create openings in the forest canopy, increased sunlight favors growth of numerous seedlings which arise from rooting internodes and from seed. Infestations are also capable of invading new sites by seed dispersal – primarily by water.

In general, wisteria grows at the exclusion of other species, reduces site biodiversity and limits management options such as tree seedling establishment and agriculture. Wisteria is still sold as an ornamental. Please do not plant it. A good substitute is: American wisteria (*Wisteria frutescens*). Recommended control measures include the following herbicide treatments:

#### Foliar Spray

##### July to October:

- Tordon 101 as a 3% solution
- Tordon K as a 2% solution
- Garlon 4 as a 4% solution

##### Jul. to Sep. for successive years when regrowth appears:

- Transline as a 0.5% solution

##### When safety to surrounding vegetation is desired - Sept to Oct with repeated applications.

- Glyphosate herbicide as a 2% solution

### **Evaluating New Pine Plantations**

By Jeff Fellers, County Extension Agent, Union County

Tree planting season has come to an end and many landowners are looking at thousands of new seedlings scattered across their landscape. There are several things you as a landowner may want to know about your newly planted seedlings. For instance, how many trees per acre were planted, will the pines have competition for growing space, and were the pines planted correctly. These questions can be answered by establishing measurement plots in the new pine plantations.

A method that may be used is the establishment of 100<sup>th</sup> acre circular plots. These are established at random throughout the newly planted area. A 100<sup>th</sup> acre plot has a radius of 11 feet and 9.3 inches or 11.775 feet. A permanent stake in the center of the plot will allow you to revisit the plot year after year and compare

growth and competition if you are interested. About one plot per acre should suffice to evaluate your pine plantation.

After you establish your plot, count the number of seedlings that are included in the radius. Since this is a 100<sup>th</sup> acre plot, 7 trees counted “in” would equate to 700 trees per acre. It is good practice to have a tally sheet for each plot. When the evaluation is complete the tally sheets can be compared and averaged for an overall plantation average. Most plantations should average 400 to 700 live seedlings per acre depending on spacing. When a plantation falls below 300 trees per acre, you should consider replanting the site if your objective is timber production.

While on the plot you may want to take into consideration several other factors and make a note on the tally sheet. Are the pines free to grow or do they have competition that will hinder them in the future? If there is competition, you may need to revisit this plot in the future and pursue options for controlling the unwanted vegetation. Are there dead pine trees on the plot? If there are, try to determine the cause of the death. You may want to carefully dig around the pine tree and see if it was planted properly.

Evaluating your pine plantation gives you important information that will help you manage your forest in the future. Evaluations should be done in early summer after planting. This will allow you to check and ensure that your contract with your planting vendor was upheld and allow you to detect early survival problems.

A complete article on evaluating pine plantations can be found at [http://sref.info/publications/online\\_pubs/regional\\_publications/](http://sref.info/publications/online_pubs/regional_publications/). The article is titled ‘Measuring Survival and Planting Quality in New Pine Plantations’.

### **Groundhog Day: The Life and Times of the Weather Predicting Woodchuck**

*By Candace Cummings, Extension Wildlife Associate, Clemson University*

Since 1887, members of the Punxsutawney Groundhog Club in Punxsutawney, Pennsylvania have made quite a to-do over the emergence of the groundhog named Punxsutawney Phil on

February 2<sup>nd</sup>. This much anticipated event traces its origins to Europe where centuries ago Europeans sought to predict the final stages of winter by keeping an eye out for badgers. In this country we watch for the groundhog (or woodchuck), hoping that when it leaves its burrow it won’t see its shadow. Folklore has it that if he is seen on an overcast day, spring will come early. However, if he sees his shadow and is frightened back into his burrow, six more weeks of winter weather will follow.

The truth is, the woodchuck, or groundhog, is a furry butterball in the rodent family who when emerges in late winter, is usually checking for a potential mate—not the weather. Looking a little like a chunky pear with brown grizzled fur, this underground architect, is a true hibernator—as early as September or as late as November, the woodchuck finally waddles down its burrow, crawls into its nest and falls into a deep sleep. Breathing as little as ten times an hour, the woodchuck hibernates while maintaining a body temperature between 37 and 57 degrees. The woodchuck will hibernate until he emerges in late winter to search for a mate. Then the mated pair will resume hibernation until spring. Many animals may sleep during the winter months, but only a few—like the woodchuck-- are true hibernators. Only animals that can store enough food reserves in the form of accumulated body fats are able to hibernate. In addition to the usual white fat which insulates and helps warm the body, hibernating animals have another kind of fat known as brown fat. Cells of brown fat produce body heat up to 20 times faster than white fat.

From late February to early March (depending on latitude), the woodchuck emerges from its burrow and begins to look for a mate--- not his shadow. He does this by sniffing each burrow for a single female. He then wags his tail and enters her burrow hoping she desires his company. Many times she does not, and will throw him out. But he is persistent, and eventually she gives in to his advances. The pair will then sleep some more until the arrival of the young when the female banishes the male again from the burrow.

The burrow system, is an engineering marvel, and kept impeccably clean. With plenty of vegetation like grass, clover or even your vegetable garden around for food, the woodchuck digs a burrow system consisting of a

tunnel system and a few chambers. One chamber is for sleeping and raising young and one is for a toilet area. These burrow entrances are often easy to see in many sloped, grassy or weedy areas throughout the upstate of South Carolina. Often woodchucks can be seen standing guard on their hind legs at the burrow entrances. Communicating with sharp whistles and grunts the woodchuck can warn the colony of danger.

Since woodchucks are herbivores and prefer tender green plants, a favorite dining spot may be your garden. They may ravage beans and peas, and take their fill of carrot tops, lettuce, cabbage and squash. Once a colony of woodchucks is established, it is difficult to get rid of them. If you find yourself in this situation here are a few options: In gardens, the most permanent method of woodchuck control is fencing. A sturdy fence at least 3 feet high will keep out most animals. If woodchucks burrow under, bury the fencing an additional 1-2 feet below ground level. Supplementing the fence with a strand of electrified wire 4 to 5 inches off the ground will help deter them. Removing ground cover, stumps, woodpiles and undergrowth will make the area less inviting. No commercial repellents are registered as effective for woodchucks. However, home remedies like placing a can filled with a pungent substance like pine oil, in the burrow, may encourage the woodchuck to move out. Avoid using this method in spring or summer when young may become stranded inside the burrow. Spraying around the garden with a homemade mixture of ground hot peppers, garlic, water and liquid soap will also repel them.

As a last resort, live traps for woodchucks should be placed near the entrance of the burrow or near the feeding area. Bait the trap with fresh cabbage leaf, apple slices or commercially prepared bait. Late summer is the best time to trap.

So, if he doesn't really predict the weather...I wonder...how much wood could a woodchuck chuck, if a woodchuck could chuck wood?

### **Calendar of Events**

For information on what is going on in your local forest landowners association, go to [www.clemson.edu/oconee/local/fornews2.htm](http://www.clemson.edu/oconee/local/fornews2.htm)

*Dear Readers,*

*This newsletter is being distributed on a regional level every quarter. The columns will be composed and compiled by various experts with the Cooperative Extension Service as well as other agencies. Our intention is to provide landowners with useful and pertinent information. In order for this to be a success, we would like to ask our clientele to offer suggestions for the content of this newsletter. You can provide this by e-mail at [caudill@clermson.edu](mailto:caudill@clermson.edu) or by phone, 864-638-5889 ext. 116. We hope you find this information informative.*

*Sincerely,*

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