

| EVENTS CALENDAR | | | For the most complete listing of natural resource education events, visit the on-line events calendar at https://forestupdate.frec.vt.edu | | |
|---|--|------------------------|---|------------------------------|--|
| Contact | Date | Location | Event | Time | Fee |
| DCR | Jan., Feb., & March | Virginia's State Parks | A variety of events and activities For a complete list, visit: www.dcr.virginia.gov/parks | Varies | Varies |
| MP | Year-round | State-wide | Virginia Master Naturalist Volunteer Basic Training www.virginiamasternaturalist.org/chapters.html | Varies | Varies |
| EP | Jan. 8 - nominations open; June - camp | Appomattox | The 72nd Holiday Lake Forestry Camp Nominations will open in early January. Details and forms can be found at www.dof.virginia.gov . Teens will learn skills in forestry and other natural resources. Forestry Camp is open to Virginia residents aged 13-16 who have not attended before. | All week | Varies |
| WWF | Jan. 26-28 | Virginia Beach | Winter Wildlife Festival Learn what it takes to properly observe and identify wildlife in their natural settings. | All weekend | Varies |
| JMM | Jan. 28 | Montpelier Station | Working Woods Walk Explore beyond the mansion and lawn to the woods of Montpelier and consider society's dependence on this resource then and now. This Master Naturalist-led walk will follow a state-of-the-art trail showcasing forest & habitat tending methods. | 2:00 | \$5.00 |
| VFHP | Jan. 29-30 | Staunton | 26th Annual Forest Health Professionals Conference Hear the latest on emerging pests, existing issues, and other forest ecology and health topics. Recertification credits offered for commercial pesticide applicators; CE credits offered for ISA and SAF members. | 9 - 4:30 9 - 1:00 | \$110* |
| AV | Feb. 12 - May 7 | On-line | On-line Woodland Options for Landowners This 12-week, on-line, self-paced class will teach you the basics of woodland management. Topics covered include: tree ID, woodland ecology, sustainability, soils, mapping, and silviculture. Registration includes a hands-on field trip, and 3 books. | Self-paced | \$45/family |
| AD | Feb. 24 | Culpeper | 14th Annual Woods & Wildlife Conference Join Virginia Cooperative Extension and partners for a full day of presentations and workshops geared towards helping both large and small acreage landowners become better stewards. | 8:30 - 4:30 | \$45/person \$80/couple |
| JG | March 16-18 | Appomattox | Central Virginia Beginning Landowner Weekend Retreat Is woodland management a new concept for you? If so, come spend the weekend with fellow forest owners and natural resource professionals and learn how to get started. A combination of classroom talks, field tours, and hands-on experiences will provide you with the basics. | All day Saturday & Sunday | Individual \$50* Couple \$90* Individual \$100** Couple \$190** |
| *Meal(s) included **Meal(s) and lodging included | | | | | |
| If you are a real estate professional or Commissioner of the Revenue, please visit the Landowner Update website for a schedule of our continuing education classes, Real Forestry for Real Estate. (https://forestupdate.frec.vt.edu). | | | | | |
| *meals included; **meals and lodging included | | | | | |

| EVENT CONTACTS | | | |
|----------------|--|--|--|
| Contact | Name/Affiliation | Phone | e-mail/website |
| DCR | Virginia Department of Conservation & Recreation | 804/786-1712 | www.dcr.virginia.gov |
| MP | Michelle Prysby | 434/872-4580 | www.virginiamasternaturalist.org |
| EP | Ellen Powell | 434-220-9083 | ellen.powell@dof.virginia.gov |
| WWF | Winter Wildlife Festival | 757/385-2990 | VBGov.com/winterwildlife |
| JMM | James Madison's Montpelier | 40/672-2728 x 450 | www.montpelier.org |
| VFHP | Virginia Forest Health Professionals | www.vafhp.org | |
| AV | Andrew Vinson | 540/231-6494 | josephav@vt.edu |
| AD | Adam Downing | 540/948-6881 | adowning@vt.edu |
| JG | Jennifer Gagnon | 540/231-6391 | jgagnon@vt.edu |

Regenerating Pine Forests

By: Peter Eales & Jerre Creighton, Virginia Department of Forestry

Pine forests occupy about 20 percent of Virginia's forested acres, and 65 percent of that total is comprised of sustainable plantations. These forests protect water, soil and air quality, and provide wildlife habitat, recreation, and aesthetic benefits. They also contribute significant financial benefits to the landowner, to forest industry, and to the economy of the Commonwealth. The most common and commercially valuable pine species in Virginia today is loblolly pine. After a harvest or natural disturbance removes most or all of an existing stand (or in some cases when a landowner wants to establish a new forest on former agricultural fields), the ability to quickly regenerate a healthy and productive pine forest or plantation is important for many landowners.



A mature, twice-thinned loblolly pine plantation near Wakefield provides and protects environmental services, such as clean water and air, while also providing timber for wood products. Photo by: Jennifer Gagnon, Virginia Tech.

direct seeding evolved as an approach that mimics natural regeneration. It entailed collecting seeds and then spreading them across a harvested site as a source of new seedlings. The approach was used to offer increased control over seed quantity, genetics, and the spacing and distribution of the resulting seedlings. But the approach was more expensive and required more labor than natural regeneration, yet still presented most of the same disadvantages.

Neither natural regeneration nor direct seeding is commonly practiced or recommended for regenerating pine forests in Virginia today. This is due to the advent in the early 1900's of nurseries to produce pine seedlings for planting (also classified as artificial regeneration). This represented a quantum leap in the ability to quickly restore harvested or otherwise disturbed pine forests to a healthy and highly productive state. Today, the most common method of regenerating pine in Virginia, and the Southeast US overall, is planting nursery-grown seedlings at a pre-determined spacing, using either hand crews or machines. The Virginia Department of Forestry (VDof) began its tree nursery program in 1916. Since that time, the Agency's nurseries have grown 2 billion tree seedlings that have been planted across the Commonwealth. Approximately 60,000 acres in Virginia and more than 750,000 acres across the Southeast are planted in loblolly pine alone each year.

Planted pine seedlings are one year old when planted and come from a nursery where they have received water, fertilizer, and insect/pathogen protection as needed. This results in vigorous seedlings with excellent survival and a high potential for rapid, healthy growth. The landowner can have confidence in the resulting stand density (trees per

acre) and spacing, which optimizes resource availability for each tree. In addition, by selecting and breeding individual trees with desirable traits (a process known as tree improvement) over the last 65 years, the VDof's nursery, several universities, and forest industries have collaborated to develop loblolly pine seedlings that grow straighter and much faster (up to twice as fast in the first six years after planting) than those available in the past.



The Virginia Department of Forestry grows loblolly pine seedlings in the sandy soils at the Garland Gray Forestry Center in Courtland (left). In spring 2017, Garland Gray shipped out over 30 million seedlings (right). Photo by: Jennifer Gagnon, Virginia Tech.

Tree planting costs more than natural regeneration or direct seeding, and close attention to seedling care and planting quality are critical. Landowners who view their pines as a crop to generate income may want to include additional activities, such as control of competing vegetation, applying fertilizer, or selective thinning to remove some of the trees as the stand matures, to maximize returns. For many of these activities and for many landowners, financial assistance programs administered by the VDof are available. The Virginia Reforestation of Timberlands Program (RT) is particularly helpful in assisting landowners with the cost of site preparation, tree planting, and follow-up improvement work. A VDof forester can help determine the appropriate actions and expected costs and direct you with what programs may be helpful in meeting your objectives. You can find your local VDof forester's contact information at www.dof.virginia.gov. Even without cost-share advantages, investing in pine regeneration by planting and managing plantations offers financial returns comparable to many other investment options.

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Resources for Regeneration

Getting ready to harvest your timber? Interested in planning for the regeneration of your next forest? Here are some additional resources to help you get started:

Virginia Department of Forestry

- Find your local forester: <http://www.dof.virginia.gov/locations/index.htm>, 434-977-6555
- Purchase seedlings: <http://www.dof.virginia.gov/nursery/index.htm>
 - Augusta Forestry Center, 540-363-5732
 - Garland Gray Forestry Center, 804-834-2855
- Learn about cost share programs that may help you pay for your regeneration project: <http://www.dof.virginia.gov/costshare/index.htm>

Private consulting foresters

- <http://www.dof.virginia.gov/services/consultant-forester.htm>

Publications

- Best Genetics in Loblolly Pine: http://www.dof.virginia.gov/infopubs/_forestry-topics/FT0001-VAs-Best-Genetics_pub.pdf
- Forests of Virginia: Importance, Composition, Ecology, Threats, and Management: <http://www.virginiamasternaturalist.org/uploads/2/1/8/6/21860850/465-315.pdf>
- Preserving Longleaf Pine in Virginia: http://www.dof.virginia.gov/infopubs/_forestry-topics/FT0008-Preserving-Longleaf-Pine-In-VA-2007-09_pub.pdf