

President's Message



Chris Nicholson

By now all of our transplants are in and we are all at the mercy of the weather. The recent rains have been great for seedlings but not so great for much else. I had hoped that this year would be a bit more on the dry side but thus far we are having no such luck. Ahhh, the life of a tree farmer.

Our twilight meeting was held at Mt. Beth-el Tree Farm and was well attended. Many thanks to Marty McMekin for hosting our group and being so forthcoming with his many years of hard earned knowledge. I always look forward to our get togethers and they never disappoint me.

Our summer meeting is right around the corner and I hope you all can find time to take a day away from your farms and join us. Information and details are in this issue and it is shaping up to be a great day. Join us for a day of information sharing, great food and time spent with colleagues and friends.

The Christmas Tree Promotion will continue on. It is the opinion of our board of directors that this is a step in the right direction for our industry. The success of our industry depends upon thorough research and the funds have been set aside to give us just that. Without research and development of tree species our industry might fall behind even further than it already has.

Our membership is holding at around 125 dues paying members. Every year we seem to lose a few farms and gain a few farms. Our dues have remained low and we have the funds to keep them low and affordable. Our funds have remained

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When Trunks Crack: What Should You Do? Trunk Splitting Explained

by: Jeffrey H. Owen,
Area Extension Specialist, NC University, April 2005

The Symptom:

Under certain climatic conditions, a small percentage of Fraser fir Christmas trees will develop cracks vertically along their trunks. These cracks usually begin at the cut base and extend up one side of the trunk. All of these cracks develop in the wood. The bark may remain intact with small cracks, but will split with larger cracks. Split trunks can develop in the field after the trees are cut, in storage on the farm, during transportation, on the retail lot, or in a consumer's home.

Is it a Problem?

Most concerns about tree freshness related to trunk cracks can be put to rest. This is a problem of fresh trees that lose some of their moisture too rapidly. Given a fresh cut off the base of the trunk and placed in water, trees with cracks will take up water normally for the entire holiday season. Often, cracks will close up as trees take up water. If a tree is very dry or does not readily take up water, it is because the tree has been subjected to excessive drying after the crack developed. Cracks are not directly related to foliage freshness, a tree's ability to take up water, or fire safety (problems that occur after a tree has lost much of its water content). A crack can be a problem with some tree stands. The pin-style tree stand that requires a pre-drilled hole in the center of the trunk may not be tight on a tree with a crack. Other stand types seldom have problems. Where the rare tree is split across the base, few stands may hold it firmly. Some retailers have clamped or screwed cracks closed quite effectively. Since wood and not the bark



of trees take up water, such techniques should not reduce a tree's ability to absorb water. While trunk splitting can clearly be a customer relations concern, it is seldom a functional problem for effected trees. In the retail setting, excessive drying; needle loss; or sun scald are much more critical problems associated with tree freshness. If a tree exhibits these other freshness problems as well as a crack, its freshness may be in question. Care, handling, and exposure directly impact freshness problems. These do not impact the coincidental presence of a crack.

The Mechanism:

Trunk cracks occur in fresh trees that lose moisture rapidly over a short period of time. While the development of cracks is

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Christmas Tree Industry Votes to Continue Research and Promotion Program

The U.S. Department of Agriculture (USDA) announced on June 13, 2019 that Christmas tree producers and importers recently voted to continue their federal research and promotion program.

In the referendum held April 22 through May 17, 2019, 55 percent of Christmas tree producers and importers who voted were in favor of continuing the program. Christmas tree producers and importers who were subject to assessments during the period of September 1, 2018 through March 15, 2019, were eligible to participate in the referendum.

The Christmas tree research and promo-

tion program was developed to strengthen the position of Christmas trees in the marketplace, to maintain and expand markets for Christmas trees and to carry out programs, plans, and projects designed to provide maximum benefits to the Christmas tree industry within the United States. The Christmas Tree Promotion Board has administered the program since 2015.

Research and promotion programs help to expand, maintain and develop markets for individual commodities in the United States and abroad. Since 1966, Congress has authorized the development of in-

dustry-funded research and promotion boards to provide a framework for agricultural industries to pool their resources and combine efforts to develop new markets, strengthen existing markets, and conduct important research and promotion activities. The Agricultural Marketing Service (AMS) provides oversight of 22 boards, paid for by industry assessments, which helps ensure fiscal accountability and program integrity.

See pages 6-7 for upcoming events!

When Trunks Crack *continued from page 1*

related to shrinkage of drying wood, the concept of shrinkage fails to capture the occurrence of cracks in fresh trees with high moisture content. The capillary tension of water inside the wood is the force involved in split trunks. Capillary tension is the force that holds liquid in small tubes such as the liquid in a glass thermometer. As moisture evaporates from foliage of a cut tree, the remaining water in the wood is stretched across the entire volume originally filled — from foliage to trunk. This increases the inward pull of water in the tree trunk — much like the vacuum you would create when sucking on a straw if you were drinking a milkshake. When the force of capillary tension exceeds the strength of the wood, cells rupture and a crack develops. The tensile strength of Fraser fir wood is only about 180 psi. The forces involved in capillary tension have been measured as high as 515 psi — much greater than the strength of the wood. When the cell wall of a vessel collapses, integrity is lost, more cells collapse, and the crack splits open. Trunk cracks are a problem of fresh trees. Research at NC State University has documented the formation of cracks at high moisture content in the wood of Fraser fir, but not after it has dried out. In fact, capillary tension is absent when air fills the vessels in the wood after the water has been lost.

Contributing Factors:

Trunk splitting is a function of rapid moisture loss from cut trees. Cut trees can lose some moisture from the cut end of their trunks, but lose most from the foliage as it respire or breathes. The rate at which tree foliage respire is closely linked to climatic conditions

and tree dormancy. Full sun, high temperatures, and dry winds can pull moisture from the foliage of cut trees. While drought prior to cutting may be a contributing factor to the stresses that initiate cracks, the primary factor is exposure to conditions that dry the tree out rapidly. Cracks can develop the day after rain if newly cut trees are subjected to sun and wind. Cracks have occurred in cold temperatures accompanied by dry winds, but exposure to bright sun and temperatures above 70 degrees are the conditions most likely to result in split trunks. Cracks will develop during a period of severe exposure whether it occurs in the field, in storage, during transportation, or on the retail lot. Since trunks can split during any period of exposure, all handlers must share in the responsibility for tree care.

Recommendations:

When a tree develops a crack follow these recommendations:

- Educate your customers. Give them a copy of this article.
- Explain that cracks develop in fresh trees that undergo rapid drying.
- Be sure to explain that most trees will still readily take up water.
- Keep a few alternative-style tree stands on hand to sell.
- Keep a few large hose clamps on supply to be able to clamp trees.
- Minimize drying conditions that initiate cracks. Manage for increased shade, humidity, and shelter from wind.
- Store and display all your trees in water.



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njchristmastrees.org

Contact Donna Cole, Exec. Secretary, at (908) 735-4658 or email execsecretary@njchristmastrees.org

DESIGNED AT ROWAN COLLEGE AT BURLINGTON COUNTY

Annual Twilight Meeting at Mt. Bethel Tree Farm

The threat of showers didn't dampen the turnout at the NJCTGA annual twilight meeting, held Thursday evening June 20th at the Mt. Bethel Tree Farm in Warren County. Host Marty McMekin introduced his brother Jim and his wife Carole, who both help on



the farm year round, as he outlined his history and current practices at this successful farm. Marty has been growing trees since the 1980's and continues to plant 300 or so transplants every year. He explained how

in his first year of sales he sold only 15 trees, but business soon picked up and he topped out with sales of 600 trees in the mid 90's. He now sells around 300-400 trees per year and is happy with that level of business. He proudly stated he never has had to cull any trees because they became too big to sell.

About 30 meeting participants toured his beautiful concolor firs, Canaan firs, Norway spruce and Colorado blue spruce. We had good discussions about weed control, insect pests and fungal diseases Marty has dealt with over the years. We had lively discussions on shearing techniques and mowing practices. Many of the more experienced growers in attendance reported on techniques they use for weed and pest controls.



New Warren County Ag Agent Hank Bignell introduced himself and offered Rutgers assistance to growers. Hank is more of a live-stock expert but is eager to learn about Christmas tree production, a leading crop in Warren County. Hank explained he may not have the answers to Christmas tree grower's questions, but he can find the answers from Rutgers staff statewide.

After the tour, members networked with each other and enjoyed sandwiches, snacks and drinks provided by NJCTGA. As the sun set the group broke up and headed back to their farms to implement some of the practices they just learned about at Mt. Bethel Tree Farm.





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NJCTGA Officers

Chris Nicholson, President

Cnicho6345@aol.com

973-865-6362

Tim Dunne, Vice President

tandmdunne@emabarqmail.com

908-453-2818

Donna Cole, Executive Secretary

execsecretary@njchristmastrees.org

908-735-4658

NJCTGA Directors

Andrew Alpaugh

frstree@comcast.net

609-397-0615

John Curtis

curtistreefarm@gmail.com

908-387-1225

Anne Edwards

wedwards@rcn.com

609-758-7729

Jim Giamarese

giamarese@comcast.net

908-813-9904

Matt Martini

cherryvillefarms@earthlink.net

908-806-4580

Bryan Stimpson

bryan.stimpson@nj.usda.gov

Larry Toth

ltnatoth@comcast.net

609-758-5855

John Wyckoff

wyckoff@emabarqmail.com

908-489-2186

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steady and we do have some money for a rainy day, so to speak. Our board protects our funds as if they were our own. We scrutinize every expenditure and make sure we account for every dollar. Our intention is to keep the association thriving and in good hands, which it is.

Should any of you want to get involved

with being on our board please reach out to either me or one of our board members. We are always in need of helping hands and new ideas which keep us relevant and in good standing.

Enjoy your summer, see you at the summer meeting.

– Chris

NJCTGA Newsletter Ad Sizes & Rates

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7.75" wide x 9.875" high..... \$100

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3.795" wide x 4.863" high..... \$35

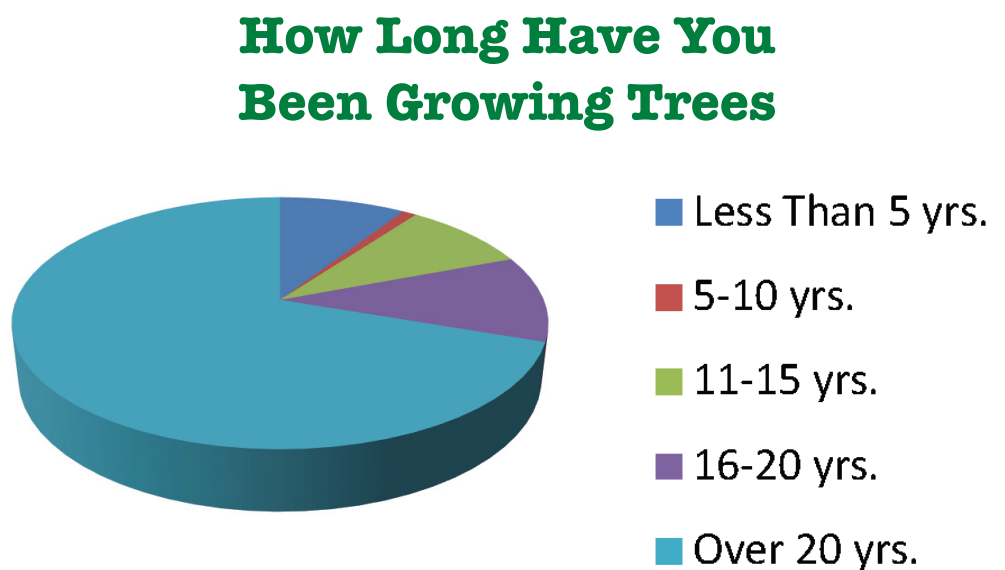
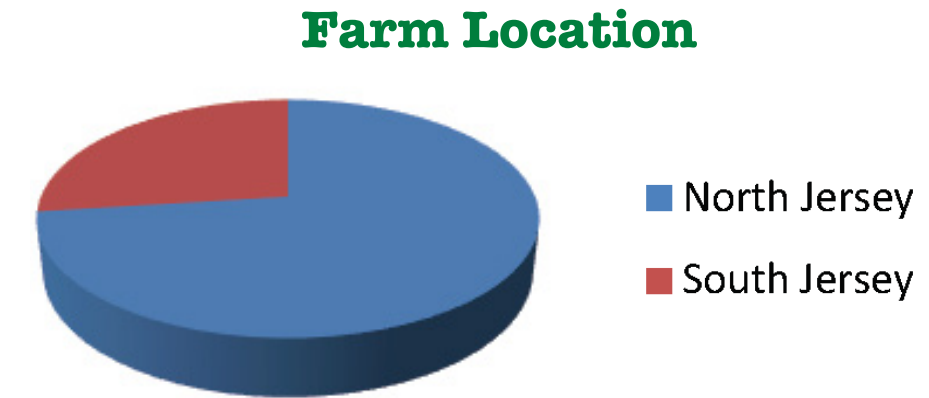
If possible, ads should be submitted in PDF format. Contact Exec. Secretary Donna Cole for additional details.

2018 Annual Growers Survey Results

In 2018 80 NJCTGA members responded to our annual grower's survey. This represents about 60% of our members and is a great response compared to most surveys. There have not been a lot of changes in the survey results over the last 3 years but several trends are apparent.

As with the last 3 years, about 70% of our members responding are from "North Jersey" - defined as being from Mercer County or Monmouth County and counties north. We also are a very experienced group of Christmas tree growers with about 70% of our growers having more than 20 years experience growing trees. There was an increase in new growers this year as 9% of respondents reported they have been growing trees less than 5 years. Just two years ago in 2016 only 1% were newer growers.

The average size of the NJCTGA member's farms has not changed in the last 3 years and the average farm size remains 5-10 acres in size. One third of the respondents reported planting 500-1000 trees in 2018 and 17 growers reported planting greater than 1000. About 30 % of the growers said they lost less than 5% of their new trees, an improvement over the last few years. I believe the above average rain in July, August and September in 2018 helped reduce seedling and transplant losses. Only 12% of our growers reported irrigation new plantings this year versus 28% in 2016. Most of the folks reporting irrigating were in South Jersey. The number one Christmas tree variety planted in 2016 was Douglas Fir as has been in NJ for many years. However, concolor fir was the second most planted, surpassing Norway spruce this year. Canaan fir and Fraser fir rounded out the top five planted. Most growers use fertilizers and pesticides for management of Christmas trees although 14 growers reported they used no pesticides in 2018 and 3 growers said they used



organic methods for pest control. Equal numbers of growers use manual shears/knives for shearing and mechanical shearing tools. Many growers reported using both types.

Greater than 90% of the respondents this year sold trees. Only the newer growers reported they did not sell trees as they were too small to sell yet. More than half the respondents have been selling trees for more than 20 years. Fifty-nine percent of the growers said they sold as many trees as they wanted to in 2018. Thirty-two percent said they sold less than they wanted to and 9% said they sold more

than they wanted to in 2018. A few growers kept their prices the same in 2018 and equal numbers raised prices and lowered prices this year. Only about 70% of the respondents report information on price of trees and number of trees sold. For those who did provide that information, the average price of trees sold by the foot was \$8.68 per foot in 2018. Growers who sold by the flat price per tree averaged \$51.39 per tree. The average number of trees sold by our growers in 2018 was 497 trees. The range of trees sold is very variable with as few as 20 trees and as many as 2300 reported in 2018.

Welcome New Member!

Garry and Billie Jo Heitz
Heitz Tree Service
Vineland, Atlantic County

**See pages 6-7 for a list
of upcoming
Christmas tree grower events!**

MARK YOUR CALENDARS! MARK YOUR CALENDARS! MARK YOUR CALENDARS!

Exotic Conifer Association (ECA) Summer Meeting

The Exotic Conifer Association (ECA) Annual Field Day will be held on Thursday August 8th, 2019 from 9:00 am - 7:00 pm at the Bustard Christmas Tree Farm in Lehigh, PA. The day will focus on the CoFirGe project.

Perhaps the most ambitious Christmas tree science happening today is a multi-institutional endeavor called CoFirGE. Short for Collaborative Fir Germplasm Evaluation Project, CoFirGE is a nationwide effort whose goals include identifying new species of fir for Christmas trees. There are between 30 and 40 species of firs worldwide, a small handful of which are currently grown for the North American Christmas tree market. Two of today's most popular trees—the Fraser and noble fir—both struggle with a condition called root rot. Caused by the water-mold genus *Phytophthora*, a tree stricken with it can die in a matter of days. It's currently a huge problem in America's biggest tree-growing states, but in Turkey, fir trees are resistant to root rot. So today, through the CoFirGE project, there are species of Turkish fir growing in Michigan, Pennsylvania, Connecticut, North Carolina, Washington, and Oregon, to see how adaptable they are to US climates.

- Tour the CoFirGE test plot of Turkish and Trojan firs and others
- Learn from the experts about the project goals, status, future
- See and hear about the Bustards' exotics: Turkish, Korean, Corkbark
- ECA Inc. business meeting, dinner, social

Hosted by:

Glen & Jay Bustard, Bustards' Christmas Tree Farm

Guest Speaker:

Dr. Rick Bates, Professor of Horticulture, Penn State University

Location:

1240 Owl Creek Drive, Lehigh, PA 18235

Hotel:

Hampton Inn, 877 Interchange Rd, Lehigh, PA 18235

ph: (610) 377-3400

Visit www.exoticconifer.net/events for more details!

National Christmas Tree Association Summer Meeting and Wreath Contest

The 2019 NCTA Board Meeting will be held at the Holiday Inn Express in Dickson City, PA on August 8th 1:00 – 4:00 pm and the Tree & Wreath Contest will be held August 9, 2019 at Roba Family Farms, North Abington Township, PA in conjunction with the Pennsylvania Christmas Tree Growers Association meeting. Hotel reservations can be made in the meeting room block by calling the hotel directly at 570-307-4437 or booking online www.hiexpress.com/dicksoncitypa use the code PCT when booking online.

The bi-annual National Tree & Wreath contest will be conducted on August 9th to select Grand and Reserve Champion growers and wreaths for 2019 and 2020. The Grand Champion growers will earn the honor of providing the tree to the White House and the Reserve Champion growers the honor of providing the tree for the Vice President's residence for 2019 and 2020. The meeting agenda will include a NCTA Board of Directors meeting and a meeting of the Christmas Spirit Foundation Trustees both on August 8th.

The Pennsylvania Christmas Tree Growers Association Summer meeting will be August 9th and 10th at Roba Family Farms, North Abington Township, PA featuring numerous speakers, exhibits and farm tours. Look for registration details on the meeting from the Pennsylvania Christmas Tree Growers Association in the near future.

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MARK YOUR CALENDARS! MARK YOUR CALENDARS! MARK YOUR CALENDARS!

Pennsylvania Christmas Tree Growers Association 2019 Summer Meeting Registration Now Open

This year's PCTGA Summer Meeting held August 8-10 at Roba Family Farms in North Abington Township, PA will be one you won't want to miss! The Mix & Mingle with exhibitors will kick things off on Thursday evening. Then spend two days – Friday and Saturday – at this amazing farm learning from experts, touring the various elements of this robust Christmas tree farm and network with exhibitors to find out the latest and greatest to help your farm be successful. This year's meeting will be packed full of timely information about the Christmas tree business and agritourism for your farm. PCTGA is also excited to announce that we are hosting the National Christmas Tree and Wreath Contest too!

While the full program is being finalized, here is a sneak peek of the tours attendees will have the opportunity to take:

Christmas Tree Farm Tour

Visit the Christmas Tree Farm on over 75 acres of rolling hills. Discover how the Roba Family grows their beautiful trees for nursery and seasonal sales. Unique to their farm is that they grow them almost exclusively on ridges.

Agritainment Farm Tour

Learn about the agritainment business firsthand from a Roba Family Farms tour guide. Visit the corn maze, farm animal center, food areas, and try a few of the farm's attractions.

Orchard Agritainment at Lakeland Orchard

Visit the orchard's attraction area with an orchard guide. Discover the thrill of Roba's colossal corn box and ride a fully restored 1951 Allan Herschell Carousel, while learning about their Sunflower Park.

Apples A-Z

Take a wagon ride to the apple orchard and see over 37 varieties of apples on over 15,000 apple trees. Learn about Roba's high-density trellis orchard and find out how to make your apples beautiful and delicious.

For more information and to register for the meeting go to the PCTGA website at <https://christmastrees.org/>

Plan to Attend Our Annual Summer Meeting at Exley's Christmas Tree Farm

The NJCTGA Annual Summer Meeting will be held on Saturday, August 17th from 9 am until 3 pm at Exley's Christmas Tree Farm (number 2) in Monroeville, NJ. Bill Exley and his family provide a very unique Christmas tree experience to customers that include:

- Family sleigh rides pulled by an antique tractor
- Live Santa
- Scavenger hunts
- Family game area
- Fire pit
- Photo opportunities
- Visit with donkeys

A quote from their web site reads "We strive to provide quality Christmas trees that will brighten your holiday. We also have a wide range of holiday activities, and invite you to visit us!"

You can see more about the farm at their website:

www.exleyschristmastreefarms.com



Come out and see a diverse, successful agritourism destination in South Jersey. Enjoy a great catered lunch and discuss Christmas tree growing and marketing issues with your fellow growers. It should be a great day! Look for more meeting information and registration documents coming to your mailbox in July.

2019 Annual Tree Contest at Middlesex County Fair

The 2019 NJCTGA Annual Christmas Tree Contest will be held once again at the Middlesex County Fair in East Brunswick, NJ from August 5th to 8th.

Enter your best trees, see if you can be named Grand Champion and have the NJ Secretary of Agriculture (and the news media) visit your farm in December. Contest rules and the exact date and time for delivering your trees will be coming in a mailing to your home soon.

<http://middlesexcountyfair.com/>



SPECIES PROFILE:

Canaan Fir***Abies balsamea* var *phanerolepis***

by: Ricky Bates, Assistant Professor of Ornamental Horticulture
Department of Horticulture, Penn State University, (814) 863-2198

reprinted from Penn State, College of Agriculture Sciences website

Canaan fir, also called West Virginia balsam fir, is a little known tree that is native to isolated pockets in the mountains of West Virginia and Virginia. Some have suggested that, during the last glacial period, a continuous fir population extended from North Carolina north along the Appalachian mountain range into Canada. As the climate changed, fir in the Appalachian mountains were replaced by other species at lower elevations, isolating balsam fir to the north, Fraser fir at higher elevations in Virginia and North Carolina, and Canaan fir at higher elevations in parts of Virginia and West Virginia. The tree takes its common name from the Canaan Valley northeast of Elkins, West Virginia.

As you might expect, Canaan fir has many similarities to both Fraser and balsam fir in growth and appearance. Unfortunately, this similarity has led to a great deal of taxonomic confusion. It has been suggested that only one species of balsam fir with three varieties be recognized in the Eastern United States: *Abies balsamea* var. *balsamea* (balsam fir), *Abies balsamea* var. *phanerolepis* (Canaan fir), and *Abies balsamea* var. *fraseri* (Fraser fir). In the past, some have also promoted the classification of Canaan fir as *Abies intermedia*, representing a cross between Fraser and balsam fir. Neither of these systems found widespread approval and presently Canaan fir is considered a special ecotype, or variety of balsam fir, whereas Fraser fir (*A. fraseri*) is considered a separate species.

Canaan fir is an attractive medium-sized tree generally reaching 40-55 feet in height and 20-25 feet in width. It exhibits a relatively dense, pyramidal crown with a slender spire-like tip that often imparts a formal appearance. Foliage color is lustrous dark green to bluish green with silvery stomatic bands on the underside of the needles. Needles generally are two-ranked, $\frac{3}{4}$ - 1 $\frac{1}{2}$ inch long and are spreading and uncrowded on the branch. On some trees, the needles tend to be shorter and curved upwards so as to cover the upper sides of the twigs. Significant variation can occur in both tree habit and needle type.

An important asset of Canaan fir is its ability to grow in areas not well suited to other native firs. It will tolerate wetter soils than Fraser fir and is more resistant to spring frost injury than either Fraser

or balsam fir because of its tendency to break bud late. While Canaan fir will tolerate soils with less than perfect drainage, it performs best in deep, well-drained loam with ample moisture. Some sources indicate that Canaan fir grows well in wet, poorly drained soils. In my experience, the tree languishes under such conditions. Canaan fir thrives in cooler climates and can be successfully planted balled-and-burlapped or from a container in spring or fall. Propagation is almost exclusively by seed derived from seed orchards or native stands of trees in West Virginia. The primary pests of Canaan fir include balsam twig aphid, spider mites, balsam wooly adelgid, and deer.



In recent years, considerable interest has developed in using Canaan fir as a Christmas tree species. Unfortunately, its use as a landscape ornamental has gone largely unnoticed. This handsome conifer deserves wider use in the landscape but may be difficult to find at your favorite garden center. If you need a landscape-sized specimen, you might first check with your local Christmas tree farm.

Name: *Abies balsamea* var *phanerolepis*

Common name: Canaan fir

Hardiness: Zone 4

Mature height: 40 feet to 55 feet

Mature spread: 20 feet to 25 feet

Classification: Evergreen tree

Landscape use: Screening, group planting, formal appearance makes it a suitable accent plant

Ornamental characteristics: Uniform, short ascending branches form a tightly pyramidal to conical formal habit; $\frac{3}{4}$ to 1 $\frac{1}{2}$ -inch long, flat needles are lustrous dark green above with white stomatic bands below; dark violet cones when young, turn gray-brown at maturity.



Interesting Articles and Photos from NJCTGA Publications From Years Gone By

Editors Note – Below see some information on drought conditions for growers in 1999, from a “Needle Points” article by 1999 NJCTGA editor Charles Dupras. What a difference from our rainy 2018 and 2019.

On the average, NJ Christmas tree growers, who did not have irrigation, lost 60% of their 1999 seedlings/transplants compared to only 7.5% loss in fields with irrigation. Needless to say, variations were extreme with some growers having lost 100% of their 1999 planting stock while others losses were only 30%-40%. This variation could be attributed to soil types, depth of top soil, tree species, localized showers, etc. Canaan and Fraser fir suffered the most. Fall and early spring plantings survived better than late spring plantings.

To give you an insight on what some of your neighboring Christmas tree growers experienced in the summer of 1999, here are some reports from NJCTGA Board of Directors farms:

George Black, Blairstown – lost 60% of seedlings planted this year and 20% of last year's planting.

Bob Housedorf, Asbury – experienced 99% loss of seedlings and transplants.

Greg McLaughlin, Robbinsville – average loss for all species 32%, Canaan fir had highest loss, white pine the lowest loss.

Joe Haines, Burlington – luckily none were planted this year, but lost 10% of trees that were in the ground for 2-5 years.

Bob Bruch, Chesterfield – installed irrigation the late 1970's. Where transplants were clean cultivated and irrigated survival rate was 100%. One un-irrigated field had 100% loss.

John Benton, Columbus – lost 50% of stock planted in 1999 and 20% of the stock planted in 1998. Did not experience any mortality in mature trees but they seemed off color.

John Perry, New Egypt – lost 80% of the seedlings planted during the last 2 years and about 50 Norway spruce up to 4 feet in height.

Paul May, Delran – where seedlings were not irrigated, 99% of spring planting died and 20% of last year's 1998 seedlings were lost. One irrigated area experienced only 3% mortality.

Bryan Stimpson, Monroeville – with irrigation experienced an overall loss of 19% of spring transplants. Canaan fir planted in 1998 experienced a 29% loss this year and one block planted in 1995 had 13% mortality this year.

John Curtis, Cape May – 50% of this year's Douglas fir and balsam fir died, Fraser fir were a total loss. 25% of the Canaan fir planted in 1996 died this year.





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