Becoming a Green Industry Supplier

Growing Fraser Fir in North Carolina

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Growing Fraser Fir in North Carolina
WIFE SAID: "GO BUY A CHRISTMAS TREE, AND A TREE STAND."

AND NOW SHE LOOKS ALL MAD FOR SOME REASON
SEEDLINGS

• Current practices - 75% of seedlings are imported from out of state
• Several growers getting into production to grow seedlings and a few experimenting with raised beds
• Upper Mountain research station has built a greenhouse just for Christmas tree production
• Hope to be growing more of our own seedlings in the upcoming years
LAND FOR TREES

• Majority of Christmas tree land is leased land, probably over 60%
• 30 years ago these farms were mainly dairy farms
• Farmers are battling high land prices
• Now have farms that have 30 years of Christmas trees, seeing heavier diseases in the land
  • 3\textsuperscript{rd} crop soil starts going down
  • Cannot grow any Fraser Firs if Phytophthora is present
  • In past, grew Norway and Colorado Blue spruce where Fraser would not grow
  • Trying to graft onto Momi Fir and Canaan Fir
GRAFTED TREES

• Choose and cut use grafting trees (use in Phytophthora areas)
  • Grafted tree takes longer to grow (at least 3 years longer)
  • Seedlings cost more money (4-5 times cost)
• Not using grafting in wholesale fields
• Huge need for white pine, can use white pine in Phytophthora areas
GROWING TREE

• First 2-3 years growers will cut extra tops out, but will leave top leader full length, huge benefits in leaving crown bud
  • Already has 4 laterals and a good solid terminal - helps to build a fuller tree faster
  • By the time the tree is 5 ft looking for a 12” terminal
• Most people are now planting plug 2
  • One year in greenhouse, lifted out of trays and spend 2 years in bed liners
  • 4”-5” tall with good roots
  • Takes 3 years instead of 5 years to get tree into field
• Grading seedlings – makes fuller trees
TABLETOPS

• Planting fields just for table tops
• Difference in preparing the land
  • Spend at least 1 year to fertilize and lime before they even plant trees
  • Spraying ground cover the year before they ever plant
    • Doing that to get it under control and to get a clover mat started
• Hand planted
• Super manicured, tops are trimmed down 6-8”
• If you do it right, you will have a bushy tight plant
• Most tabletops are harvested all at once
TABLETOPS, continued

• Once you get the soil right, it gets easier and easier to manage
• Planting them on best, most fertile land - per acre you make a lot more on tabletops
• Planted on 2x2 spacing (produces 11,000 trees per acre vs standard 5x5 spacing which produces 1,700 trees per acre)
PLANTING

• We are hand planting more trees now than before
• Tougher terrain
• Scared of dragging a planter in the field (spreading Phytophthora)
• 1 man can plant 1000 trees a day
• 90% of growers cross check when they plant (trees line up in both directions)
• If you cross check that means you can work across the side of the hill and not have to go up and down the hill
• Cross checking normally only on new ground
CLOVER

• A good stand of white clover between the trees will help control each of those problem weeds

• White clover can provide up to 100 lbs of nitrogen per year
  • Can cut need of having to apply nitrogen
  • Seeding clover - Dutch white clover
  • Durana (Pennington) - super white clover
  • Will control weeds, add nitrogen to the ground, will not get over 8” tall
  • Will not choke out little trees
  • Can not use Red Clover - will get tall and choke out
BENEFITS OF PERENNIAL GROUND COVERS

• Protect topsoil from rain (runoff) and sun (oxidation)
• Builds organic matter in soil over time
• Reduce soil temperatures and increase tree root growth
• Reduce germination of annual weeds
• Break the cycle of multiple weed flushes
• Legumes can provide all the required nitrogen
  • White clover is a better weed manager than most herbicides
FERTILIZATION, WEED CONTROL

• Fertilize in spring - fertilization is based on soil reports
  • Pull soil samples every 2-3 years, more than that if having problems
• Weed control - start chemical mowing early in season to catch weeds before 8-10” tall
• Major weeds
  • Horseweed
  • Rag weed
  • Lambs quarter
  • Red fescue
  • Poke
CHEMICAL MOWING

• Use low rates of round up in ounces per acre, not per backpack
• Every backpack sprayer should be calibrated to its owner – some people walk slower/faster, some spray lighter/heavier
• Up until bud break will put out 8-10 ounces per acre, after bud break put out 4 ounces in calibration so as to not hurt foliage
• Calibration is very important to make it work
• After bud break don’t use mist blowers until the first of July
• First of July start shearing, trees are hardened off enough so you can go up to 20 ounces an acre if there is a severe problem
CHEMICAL MOWING, continued

• We know white clover will survive 16 ounces an acre; grass and weeds will not survive
• Most people spray 4 times a year, some growers only have to spray 1 time a year
• 25% of the fields in Ashe/Alleghany counties only have to be sprayed 2 times a year = huge success
• Cheap and effective way to kill weeds
• We cannot go bare ground on mountain side or we lose our topsoil
• White clover is the answer to killing weeds and supplying nitrogen
HARVESTING

• Majority of growers start after Halloween, ensures much fresher tree
• Only trees cut earlier than that are chain store trees and overseas trees (not many containers going out)
• Major growers for chain stores are using palletized trees
• Most trees go out by tractor trailer
  • All trees going south need to be in refrigerated trailers
  • Trees going north can go on flat bed, regular trailer, or refrigerated
HARVESTING - Clear Cutting

• Most growers are going to a 1 year clear cut vs 3 year clear cut
• If they can clear cut the whole field, they end up with 3 groups
  • Good tree (Premium or #1)
  • Decent tree (#2)
  • Brush (Wreath or roping material)
• Advantages of clear cutting in same year
  • Control disease and insect pressure
  • Less time harvesting
  • Can plant back faster, turning a field around quicker
  • Able to keep rotation
• Grower must have greenery operation or use for greenery
Palletizing

- Chain stores demand that trees be palletized so they can unload with forklift
- Loading can be done in 30 minutes instead of 3-4 hours with 10 guys
- Palletized trees must go in refrigerated trailers
- Number of trees in pallet are down about 5 trees from 5 years ago. They were putting in too many trees and trees were getting too hot. Had to get compression out of trees
  - 6/7 Fraser Fir - 35 trees per pallet
  - 7/8 Fraser Fir - 30 trees per pallet
  - 8/9 Fraser Fir - 25 trees per pallet
- Extension has been working last 5 years with palletized trees to get the heating problems taken care of. Have had a lot of success.
PRICING

• Chain store contracts are made in Jan-Feb of the year they are sold; prices can fluctuate in a year but growers are tied to those contracts
• Our tree prices are the highest they have ever been
• Look for prices to be strong for 6 more years
• Mainly due to the shortage of seedlings for the past several years
• Have fewer growers than ever, but have more trees in the ground
• Most small growers are gone
• Prices needed to go up
John Frampton working on most advanced Fraser Fir seed orchard in the world
- Root stock has been planted, grafted clones on root stock in March 2018
- Have come up with a super set of trees, eliminated genes
- Long term project, looking at 20 years
- First ever certified Christmas tree seed, will be available to all NC growers for purchase (money will go back to Research Station)
- Already 1 seed orchard at station
- Station is owned by NCDA. NCSU provides the support (brain power)
TREE OUTLOOK

- Tree outlook for this year is awful, worse than last year
- Growers cut into this year’s trees to meet some demands
- Buyers need to tie up trees NOW if they plan on getting NC Fraser Firs
- Wholesale price for a 6/7 Fraser Fir was as high as $35 in 2018
  - Prices were as low as $8-9 five years ago in glut
  - Prices were $22 six years ago
  - Prices were around $20 in 1980
Any Questions?
PUMPKINS

• Had over 3,000 acres of pumpkins in 2017 (Ashe and Alleghany)
• 90% of growers are Christmas tree growers
• Use the same customers as their tree customers
• Using land on their tree farms that will not grow Fraser Firs (bottom acreage, Phytophthora areas, etc)
• They already have the equipment that they need
• Allows them to bring labor in a month earlier
  • Knowing you already have labor force going into tree season is a huge deal
PUMPKINS – Why North Carolina?

• Climate is awesome
  • Need cool nights
  • Need good rainfall

• NC is closer to major cities in south
  • Less time in shipping (perishable product)
  • Shipping costs are therefore less
    (PA, MI, IN, IL have the North covered)

• Produces a hardier pumpkin
That’s All!
State of the Industry

• Major shift in the Christmas tree market
  • Shortages of trees nationwide
  • Strong demand for real trees
  • Check off promotional campaign
  • Steady growth in choose & cut sales
  • Increasing wholesale tree prices
    • Reports of $35 6-7 ft Fraser Fir sales in 2018 ($26-$29 more common)!
    • Reports of some increases for 2019
    • Smaller increases for most wholesalers, especially to mass merchandisers
      • Finally starting to make money again!
      • Or is it price-gouging?
Implications of Increasing Prices?

- Different schools of thought:
  - Get what you can, while you can (we don’t have enough trees anyway!)
  - Don’t charge more than consumers are willing to pay
  - Should the cost of growing a Christmas tree drive the price we charge?
  
In 2003, I estimated total production & marketing costs at $13 per 6-7 foot tree (or almost $18 in today’s dollars)

- And.. speaking of keeping up with inflation:

  A $20 6-7 foot Fraser fir in 1988 should cost $44 in 2019, corrected for inflation

- We still have a long way to go to catch up - if that is even possible

At what price-point do consumers shift to buying fake trees?
State of the Industry

• A very different demographic profile compared to 2008
• Generations of people start and end life stages in “cohorts”
  • Older farmers are aging out unless the next generation joins the operation
• Fewer farms, larger farms
  • are we maintaining or increasing acreage?
  • Just one 1500 acre operation replaces how many small farms?
• Small wholesalers hit hard, especially those who sold to large growers
  • Surviving farms had direct market access (C & C, Retail lots, or out-of-state wholesale markets established through years of trade show investment)
• Fewer Choose & cut farms despite strong markets
• Fewer independent retail lot operators as well
• What are the opportunities for remaining growers?
Choose & Cut vs. Wholesale

• Gross income potential per acre
  • Wholesale: $25 X 1400 trees = $35,000
    • Need greater tree uniformity
    • Need an established market
    • Can be difficult to break into
    • Five years ago growers were happy to get $15 per tree
  • Choose & Cut: $56 X 1500 trees = $84,000 at $8 per foot
    • Different harvest & marketing costs
    • Most farms do not sell “an acre” of trees each year
    • Those that do may employ 25 or more people to assist in sales and crowd management
  • Expanded agritourism enterprises
    • Harvest festivals, Events, Workshops, Adventure tourism, etc. (not pick-your-own?)
North Carolina Christmas Tree Facts

• North Carolina has approximately 1,300 growers producing Fraser Fir Christmas trees on an estimated 40,000 acres.
• Fraser fir represents over 99.4% of all species grown in North Carolina.
• Fraser fir is grown in the far Western North Carolina counties which include Alleghany, Ashe, Avery, Buncombe, Haywood, Henderson, Jackson, Macon, Madison, Mitchell, Swain, Transylvania, Watauga and Yancey.
• The North Carolina Christmas Tree Industry is ranked second in the nation in number of trees harvested and cash receipts.
• North Carolina produces over 20% of the Real Christmas Trees in the U.S.
• The North Carolina Fraser fir Christmas tree is the most popular Christmas tree in North America and is shipped into every state in the U.S. as well as the Caribbean Islands, Mexico, Canada, Bermuda, Japan and other points all over the world.
• The North Carolina Fraser fir has soft, pleasant-to-touch needles, incomparable needle retention, long lasting aroma, and more pliable yet stronger branches for even the heaviest ornaments.
• Individual Christmas tree growers may sell anywhere from a few dozen trees per year to hundreds of thousands of trees per year.