

Tree Line



New Hampshire-Vermont Christmas Tree Association

January 2012

Special point of interest:

◆ Farms for Sale?:

On occasion, the NHVTCTA receives calls inquiring about possible tree farms for sale. If anyone has or knows of any, please let Jim Horst know, (802) 447-1900.

◆ Video Resource

Michigan State University extension experts have assembled a series of videos which features experts addressing a wide variety of Christmas tree-related topics, ranging from site and species selection to nutrient and pest management. The information is beneficial to just getting started growing Christmas trees as well as experienced growers. The videos can be found online at: <http://christmastree.anr.msu.edu/Video%20Page.html>

Inside this issue:

Winter Meeting Preview	1
National Association Update	1
President's Message	2
Association contact information	2
Trading Post	2
Inter-planting vs. Block-planting	4
2011 Year in Review	6

Winter Meeting Preview

The NHVTCTA annual winter meeting will be held Tuesday, Jan. 24, 2012, at a new location. After many years of gathering in Barre, Vt., the meeting will be moving—along with the Vermont Farm Show—to the Champlain Valley Fairgrounds in Essex Jct., Vt.

The agenda includes a round-robin discussion on the past sales season and will give everyone a chance to report on and learn about how the sales season went.

Dr. Bob Parsons, UVM extension economist, will then offer a

look at transferring the family farm, with helpful “do’s” and “don’ts” when it comes to selling or passing down the farm.

We’ll also be joined by Dwayne Burkey, a Christmas tree grower and nursery operator from Spartangsburg, Pa. He will discuss the techniques he has developed for successfully growing trees—particularly fraser fir—in heavy soils.

If you have not already registered, on-site meeting registration will be available. Call Jim Horst at 802-447-1900.

Update from the NCTA

By Nigel Manley

If you did not know, on Nov. 8, 2011, we got the final rule to go forward with a Christmas Tree Check-off. Unfortunately, The Heritage Foundation’s Vice President David Addington saw an opportunity to tweak President Obama’s nose by calling the check-off “Obama’s Christmas tree tax,” even though Mr. Addington knew that it is not a tax and that Obama had nothing to do with the creation of the check-off. This misinformation went viral in less than 24 hours.

Our industry and many industries with check-offs responded with calls, interviews and faxes in support, but it was not enough. Twenty-four hours later the

Obama Administration responded to the bad publicity by ordering the USDA to put the check-off on indefinite hold. We are still awaiting further information on the future of the Check-off.

The National Christmas Tree Association issued the following position statement:

“This program was requested by the industry in 2009 and has gone through two industry-wide comment periods during which 565 comments were submitted from interested parties. More than 70% of the growers posting comments, and nearly 90% of the state and multi-state associations that posted comments indicated that they were in favor of the program.”

Continued on Page 7



President's Message

First, let me thank outgoing President and Directors, Jay Weir, Bill Nichols and Phil Kivlin for their service over many years. It is dedication and interest like theirs that keeps your Association running smoothly.

The open December in most areas certainly made harvesting trees a lot easier. For Choose & Cut farms and growers/retailers it brought out a lot more customers this year and sales appear to be up for most of us, especially greenery sales.

Wholesale growers got off to a slow start but orders picked up around Thanksgiving and most of them sold out.

The Winter Meeting promises to be a whole new experience. We are moving with the Vermont Farm Show to Essex Junction and the Champlain Val-

ley Fairgrounds.

By now you should have received your meeting/dues packet and know that the lunch will be catered and on site. You will have an opportunity to visit the Farm Show--all indoors—but only after our meeting of course.

I was pleasantly surprised to learn that Merry Mulch is alive and well in the Burlington area. This mulching program is a great asset for our *real* tree industry. If you would like more information on how to get Merry Mulch started in your area just let us know.

And, as always, your Directors are here to help you with information and answers to your questions.

Mary Lou Schmidt
President

IMPORTANT!!!

The NHVTCTA's fall 2012 meeting will be held this coming September at the farm of Larry and Marlene Downey in Canada. In order to cross the border you must have either a U.S. Passport *or* a U.S. Passport Card *or* a state-issued "enhanced driver's license." Be sure to allow enough time to secure this documentation well before September. Check with your local DMV office or Passport office for more guidance.

Trading Post

WANTED: Looking for a used tree shaker. Contact Paul Lemire at 603-759-2264.



New Hampshire-Vermont Christmas Tree Association



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2012 Tree Line Publication Schedule


Issue	Ad/Submission Deadline
January	—
June	June 1
September	Sept. 7



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Interplanting vs. Block Planting: Considerations

Excerpted and reprinted with permission from the January 2008 issue of the American Christmas Tree Journal.

*By Randall B. Heiligmann,
Melvin R. Koelling, and
William Cackler*

All Christmas Tree growers are aware of the rather long “growing period” (six to eight years or more) necessary for trees to reach the 6- to 8-foot height that most consumers prefer.

It is also true that most Christmas tree operations were never established with the objective of producing a single crop of trees and then leaving the business. Rather, Christmas tree growers plan for successive harvests by establishing new plantings each year. The “planting strategy” for establishing new annual plantings can be classified into one of two possible approaches – interplanting and block planting.

As the name implies, block planting involves treating the entire block of trees as the management unit, with each block receiving relatively uniform treatment (e.g. weed control, fertilization, shearing, insect and disease control, etc.) as the trees mature. Following removal of all trees, either by harvest or cleanup of non-harvested trees, the area is replanted with new seedlings/transplants. By contrast, with interplanting, the individual tree is the management unit – as each tree is harvested it is immediately replanted the following spring. The new seedling/transplant is planted in close proximity to where the removed tree was located.

Advantages/Disadvantages

A commonly cited advantage associated with block planting is the harvesting of all the trees within a block within a one- to three-year

period. The completely harvested area permits extensive site modification and/or preparation before the next planting of trees. Furthermore, the uniformity of trees within a block facilitates the application of pesticides and fertilizers, as well as annual shearing and some cultural practices, such as mowing.

A disadvantage of block planting is that, because no trees are replanted until the entire block has been harvested and cleared, a significant amount of growing space remains non-productive for several years. Another commonly cited disadvantage is that significant acreage is necessary to maintain this type of a management system. For this reason, effective block planting is usually practiced where plantation size is at least 20 acres, and more commonly, 40 acres or more.

Perhaps the most important advantage to interplanting is that because harvested trees are continually replaced, each acre is fully stocked with trees at all times, thus eliminating the non-productive, or “idle,” land associated with block planting. This results in an increased number of trees being produced from a given area of land, and can, particularly with small or medium-sized choose & cut operations, result in greater net revenue. Another commonly cited advantage is that interplanting maintains an inventory of trees of all sizes/ages within the same, relatively small area. Again, an advantage that is important to the choose & cut grower.

Disadvantages commonly associated with interplanting include difficulty in performing site preparation, increased possibility of damage to small trees during harvest, and increased labor requirements for many cultural practices including tree planting, fertilization and herbicide applications.

Economic Implications

Block planting is by far the most common management strategy used in the United States. However, for smaller operations, interplanting offers the opportunity to increase the number of trees grown on a limited area of land and the potential for greater net revenue. While interplanting should always increase the tree yield from a given area of land, it is difficult to generalize when interplanting will result in greater net revenue. Each operation must be evaluated based on its individual characteristics, equipment, costs and returns, along with the personal expectations of the manager. The objective of this article isn't to persuade anyone to choose a particular planting strategy. Rather, it is hoped that growers contemplating interplanting can use the information provided to evaluate their individual operations.

Yield and Economic Return

Interplanting is really a continuous planting system. One of the greatest benefits is the potential for larger annual harvests and increased revenues in a shorter period of time from a given area of land. To illustrate this, actual case study data will be used to compare the potential yields and economic returns obtained from two plantations, one managed with block and one with interplanting strategies. The choose & cut operation in the study contained areas managed with each strategy. Plantations used to develop the data were comparable in site quality and species suitability, and contained Scotch pine managed on an eight-year rotation. Initial planting was 1,200 trees per acre with replanting the second and third year. Nine hundred trees per acre were harvested annually, with 225 trees per acre

Continued on Page 8

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A Review of 2011 Growing Issues

Editor's Note: Thanks to Bob White for sharing his thoughts on some of the issues facing growers.

By Bob White

This was a challenging year for some farms in our area, high amounts of rain were not kind to trees growing in marginally wet soil areas. On the bright side trees damaged by late season spring frost in 2010 more than recovered in 2011 often becoming very full premium trees this year.

Here are a few thoughts to go along with some past discussions we have had at our meetings, etc.

Fraser fir total PH range goes from about 4.0 up to 7.0, at each end of the range the trees often will show heavy stress. In the native mountains the pH is about 4.5, the trees grow slow and often struggle as many nutrients are not available to plants at that level. North Carolina tree consultant Bill Huxster told us that research and years of experience showed 5.5 gave optimal growth and color in their soils. Penn State professor Larry Kuhns told us the best grower in Pennsylvania has pH as high as 6.5 in that soil. In Michigan soils 6.5 pH was not working well at all at the farm I visited this fall. In our region we often start to see negative effects once we get in the 5 range or much above 6. However many darn nice Frasers are growing under 5 pH and a few in the upper 6 range. About the best rule of thumb I can see for our soils is keep the pH between 5.5 and 6 for optimal growth and vigor with Fraser; always using dolomite lime to increase PH when needed.

At Russ Reay's farm a few years ago, members Mike Godzyk and Jay Weir led us on a field tour where we looked at some very stressed transplants, Mike had seen ants cause the problem and suggested something was eating the roots, Russ later dug up some

plants and found root aphids on the roots, he consulted with Dr. Cowles (Connecticut extension), treated for them and has become very happy with the results. As I visit farms in our entire area I look for root aphids and find them at most farms. As Mike showed us the stress caused by bugs eating roots is easy to spot once you know what you are looking for. Several farms have reported having the problem in the past that went away without treatment so there is hope that something naturally can control them over time.

I did find that we cannot drown root aphids and above ground treatments did not work on heavy plug 1st year transplants. Dr. Cowles suggests this likely is because the ball root mass under a plug does not pick up Imidacloprid well enough to kill them. Root dips appear to be a better option to help control these pests on plug transplants once established on your farm.

On another topic, a very noticeable issue that our customers see is any old brown needles inside the bottom of the trees once they are laid on the ground. I have explained this for years to my customers as the natural way a tree responds when sun light can no longer get inside the tree.

Most customers at my farm want their tree put on a shaker to remove any old needles that will come off, most however do not come off. I was surprised to find how much difference there is in the amount of brown needles at different operations. One farm that I visited had no internal needle die off at all on very heavy density full sized Fraser. The same farm has extremely good nutrition practices, which leads me to believe that trees kill older needles for the food or stress instead of a lack of sunshine. This maybe why some years brown

needles are shed more than others.

At our fall meeting, Larry Kuhns explained the importance of keeping stresses away from trees. Bill Huxster and Larry Eckhardt spoke with us about tree nutrition and soil fertility. If we rapidly grow a Fraser to maturity that gets what it wants to grow, the needles can stay green on all internal bottom branches. On the other end of the spectrum trees that struggle, both balsam and Fraser, may only keep green needles from 3 years growth. It is also pretty well understood that post harvest needle retention can be very different on trees that are loaded with nutrients versus trees that are struggling.

In discussions with Mike Ahern preparing for the fall meeting at his farm he brought up a very good point about the cost of fertilizers and if we really need it to grow a good tree. His trees do pretty well with limited fertilizers and soils that were low in some nutrients. We know we can grow a faster, fuller, more vigorous tree with targeted fertilizers but it is also clear we can mess up our soils and trees with general fertilizer use and our practices. There is no one answer that works for every farm.

I looked at my total cost for the last 2 years of multiple corrective treatments including lime and foliar treatments as well. Total material costs were about 20 cents per tree per year. I went from being very discouraged about how the trees looked to being very excited about how they were growing. Hiring an expert who got me out of the mess I had grown into cost another couple cents per tree—to me, money well spent.

Please continue to e-mail me any soil and foliar analysis that you would be willing to share with the NHVTCTA:

Whitechristmasvt@gmail.com

NCTA (continued)

Continued from Page 1

“A group of Christmas Tree farmers and retailers spent nearly three years studying the potential positives and negatives of a checkoff promotion and research program, including looking at other commodities that have similar programs.

“The program is designed to benefit the industry and will be funded by the growers at a rate of 15 cents per tree sold. The program will be administered by an independent 12-member board of small business owners who grow and sell farm-grown Christmas trees and they will be responsible for developing and approving promotional and research efforts to benefit the entire industry. “The program is not expected to have any impact on the final price consumers pay for their Christmas tree. The funds collected after this season will be used to develop promotion and research programs....”

Trees for Troops

On a much more positive note, we once again had a very successful Trees for Troops campaign with more farms participating and more trees donated. The press really took an interest in the 100,000th tree (nationally) to be delivered over the life of the project and we



Military veterans join a crew from Mt. Star Farms and 5th graders from Bethlehem Elementary School to load nearly 500 Christmas trees at The Rocks Estate. The trees were donated by NHVTCTA members and delivered to military bases as part of the Trees for Troops program.

actually reached 102,000.

New Hampshire and Vermont did extremely well with almost 500 trees donated this year—the most ever. Thank you to all the growers who donated trees this year we could not do the program with out you. Thank you to Bob White, Patrick White and Russ Reay for picking up trees in Vermont and bringing them to the drop off point at the Rocks. Although the change from certificates to actual tree donations was a concern there was no problem at all.

A huge thanks to the Bethlehem Elementary 5th grade classes for their efforts with Trees for Troops and especially to Mt. Star Farms for loading the trees into the two box trucks provided by FedEx.

The trees went to Fort Campbell and to Fort Knox this season. As you can see in the picture FedEx provided hats for the loaders and the Combat Vets also came to help load. The driver brought his wife and daughter as he was also in the reserves.

NCTA Marketing Meeting

The National Christmas Tree Association’s annual “CT Plus Meeting,” which focuses on industry trends as well as marketing and sales strategies, will be held Feb. 18-19 in San Antonio, Texas.

For information on the agenda for the meeting, as well as hotel details, visit the meeting Web site: http://www.christmastree.org/ctplus_2012.cfm#Attend

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Interplanting vs. Block Planting (continued)

Continued from Page 4
 (25%) harvested in year/age 6, 315 trees (35%) in year/age 7, and 360 trees (40%) in year/age 8. For illustration purposes, comparisons will be made between two 8-acre plantations – one managed with a block strategy and one with an interplanting strategy.

Yield

Traditional block planting results in portions of the plantation commonly left unplanted for two or more years. It is this “vacant” land that results in the production of fewer trees per year from block plantations and potentially lower annual economic returns. To illustrate this point, a farm with 8 acres of tillable land will be used as an example. One acre ($\frac{1}{8}$ of the

total land area) of trees is cut each year – 25% from 6 year old trees, 35% from 7 year old trees, and 40% from 8 year old trees – producing an annual yield of 900 trees. No replanting of the harvested areas is done until all of the trees on an acre have been harvested or destroyed at the end of year 8. Once this plantation has gone through one rotation and all age classes are present, 0.85 acre, or 11 % of the total acreage, is always without trees. This is a significant loss in terms of potential yield and income.

With interplanting, individual tree-growing sites rather than entire blocks are the management unit, and trees are planted each spring to replace trees harvested. Over time this leads to a manage-

ment area containing trees of various ages and sizes, either of the same or different species. The key to establishing a plantation managed by interplanting that produces a “relatively” uniform yield is to determine the correct number of acres to plant each year. This annual planting area will be somewhat larger than that used with block planting because the land idle in block planting is being brought into production – in the described example, 0.85 acre.

A good initial estimate of the desired size of the annual planting area can be made by noting the percent of the plantation idle under a rotational planting strategy (11% in the example), then increasing the annually block planting area by that percentage. In the

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current example, 1 acre is planted annually for block planting; the estimated annual planting area for interplanting is 1.11 acres. Note that planting 1.11 acres per year produces a balanced plantation – acres/trees harvested each year equal acres/trees planted the following spring. However, this planting scheme utilizes only 7.94 of the 8 acres available. Increasing the acres planted to 1.12 acres utilizes the entire 8 acres and results in a total annual harvest of 1008 trees. Pursuing an interplanting strategy in the 8-acre plantation, and harvesting 25% of the trees at age 6, 35% at age 7, and 40% at age 8, results in a potential annual yield of 1008 marketable trees – 108 more than a block planting strategy on the same area of land.

Economic Return

Interplanting creates the potential to provide a significantly larger

number of marketable trees from a plantation, but does it provide greater economic return? The answer to that question depends on a variety of factors, including the size of the operation, method of sale, the variability of the land and the amount and form of mechanization.

Block planting is generally the most appropriate for wholesale and many large choose & cut operations. Larger operations, with greater opportunities for mechanization, generally have lower costs per acre or per tree under block management. On larger acreages, these lower costs usually more than offset the higher yields obtained from interplanting. For wholesale operations, block planting results in each year’s marketable trees being concentrated in relatively uniform blocks on limited acreage. This concentration of marketable trees on limited acreage, along with the opportunity to adopt various

forms of mechanized harvesting, results in block planting generally having substantially lower harvesting costs in wholesale operations.

As discussed earlier, conventional wisdom suggests that choose & cut plantations smaller than 20 acres or perhaps up to 40 acres may increase their net return by interplanting.

An 8-acre plantation managed with the block planting strategy contains 1 acre of each age class, and the costs and returns presented represent the costs that will be incurred and gross revenues that will be received from each of the 8 acres in any given year. For example, \$2,828 will be spent managing the trees in their first year, while no gross revenue will be received. Similarly, \$1,898 will be spent managing the acre containing trees in their sixth year, and \$7,200 will be received for trees cut from

Continued on Page 10



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Fraser Fir: North Carolina Seed Source	Spring 2012	2-2	\$0.80

Seed Type	Viable Seeds Per Pound	Price Per Viable seed	Price Per Pound
Balsam Fir: Mountain Strain Vermont Seed Source	26,000	\$0.015	\$390
Balsam Fir: Cooks Strain Vermont Seed Source	14,000	\$0.015	\$210
Balsam-Fraser Hybrids: Vermont Seed Source	13,000	\$0.015	\$195

Questions?? contact Bill Asack evenings 6-8 pm. 1-802-754-6934

Interplanting vs. Block Planting (continued)

Continued from Page 9

that acre. In any given year, a total of \$13,095 will be spent managing all 8 acres in the block managed plantation, and \$28,800 will be received as gross revenue from trees sold from the 8 acres.

In contrast, the 8-acre plantation managed with the interplanting strategy incurs an average annual cost on each acre of \$1,688 and an average gross revenue of \$4,032. In any given year, a total of \$13,504 will be spent managing the 8-acre interplanted plantation, and \$32,256 will be received in gross revenue from trees sold. The total annual return from interplanting of \$32,256 is 12% greater than the \$28,800 received from block planting. This is the direct result of 12% more trees being harvested each year. Total annual expenses for the interplanting strategy were \$409 per acre higher than those for block planting. In this instance, the 8-acre interplanted plantation produced \$3,047 more net annual income than the block plantation.

In this case, interplanting resulted in an increase in the number of marketable trees produced annually and greater net annual income. Note, however, the somewhat higher total annual expenses that were incurred with

interplanting. It is the increase in these latter expenses that may eventually negate the value of the greater yields obtained with interplanting.

Interplanted Plantations

In practice, how, when and if a balanced interplanted plantation is achieved depends on whether a “new” plantation is being established or a block managed plantation is being converted. If a “new” plantation is being established, calculations such as those made above can provide a planting guide for acres to plant each year during the first rotation – in this case 1.12 acres. Needed information concerning anticipated rotation length and harvesting schedule can come from the grower’s own experience or, in the case of a new grower, the advice of experienced growers or extension educators. In theory, the plantation should begin providing consistent annual yields beginning in the final year of the first rotation. However, since the calculations done to determine acres to plant were based on “best estimates,” some adjustments to the planting schedule may be needed after the first rotation to smooth out annual yields. How important this will be depends on the grower’s market and whether or not additional cut trees are purchased to supplement the choose & cut supply.

Several approaches can be used to convert a block managed plantation to one that is interplanted. First, using rotation length and harvest schedule data from a block managed plantation, calculations such as those made above can provide a planting guide for acres to plant each year during the next rotation – again, in our example case, 1.12 acres. If this approach is followed, and 1.12 acres are planted beginning in year 1, a balanced interplanted

plantation with a uniform number of trees harvested will be achieved in one rotation. However, some acreage will remain unplanted during the conversion, as 0.12 acre of the “vacant” 0.85 acre is incorporated into the planting schedule each year.

Another approach is to plant the vacant acreage immediately. This approach will obviously create one disproportionately large age/size class – in our example one of 1.85 acres. This strategy, resulting in an uneven acreage distribution among age/size classes, may be unacceptable to growers desiring a relatively even annual yield from the plantation. Even at increased harvesting rates, it would take many rotations to achieve an even distribution of acreages among age/size classes.

Other Considerations

Interplanting often makes sense from an economic standpoint, but requires alternative approaches to accomplishing many plantation management activities such as site preparation, tree planting, weed control, fertilization, shearing and harvesting. Most of these adaptations result from the variability of tree size/age in individual fields.

Site preparation activities in block plantings are commonly done with no trees present. If needed, control of hard-to-control herbaceous or woody vegetation can be accomplished with an undirected, broadcast spray. With interplanting, application areas will be much smaller and interspersed among existing trees, and will require more time and expense for a “targeted” spray. Pre-plant applications of fertilizer or lime in a block planting can also be broadcast and plowed and/or disked to provide the desired incorporation into the soil.

Continued on Page 12

SEEDLINGS FOR SALE

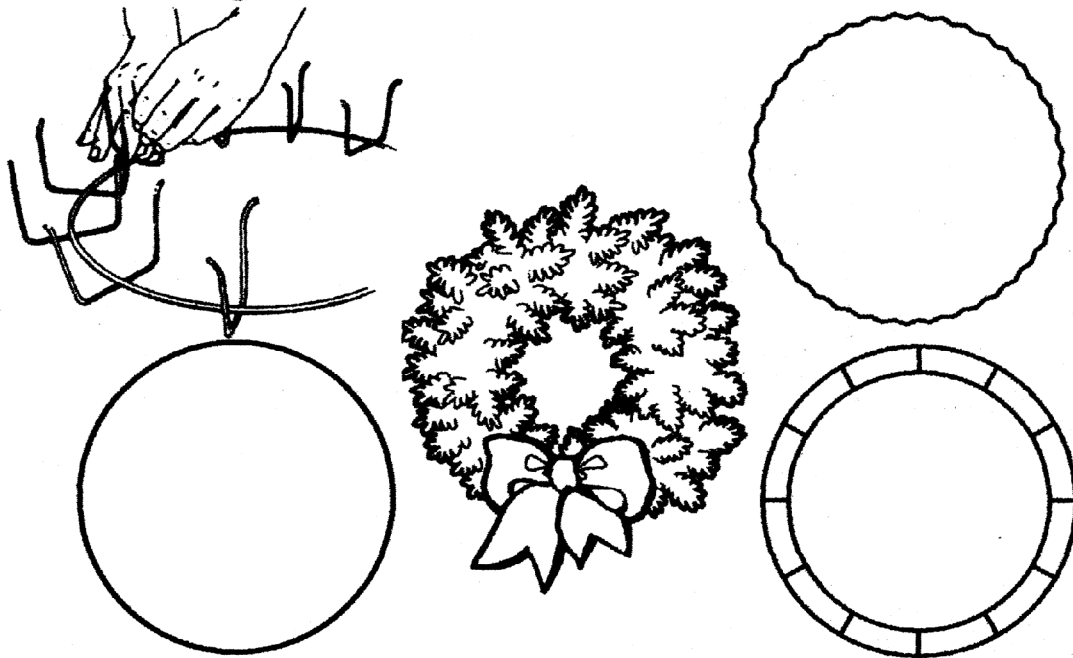
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Tree Styles (continued)

Continued from Page 10

“Hand” planting in an interplanted plantation, whether by auger, shovel or planting bar, will take more time than a conventional planting machine. In our case study, 50 trees were auger planted per hour by a two man crew. Depending on grower preference, weed control methods when interplanting may or may not be different from those employed when block planting. Mowing may take slightly longer to accommodate trees of different sizes in the same row. Residual herbicide application is commonly done in one of two ways. The first is to apply residual herbicides annually to all trees, irrespective of age/size. The other strategy is to modify spray equipment with an on/off valve so herbicide application can be discontinued when desired.

Similarly, nitrogen or other fertilization of established trees in

interplanted plantations may or may not be different than those employed when block planting. Many growers who utilize interplanting apply fertilizer by hand. Application rates are adjusted according to tree size, specific fertilizer material, and soil characteristics. How shearing activities are affected by interplanting depends on the nature of the interplanting and the sophistication of the grower's shearing strategies. In plantations containing a single species, the timing of appropriate shearing may vary by tree size, necessitating more than one “pass” through the plantation to shear all trees. Similarly, in plantations containing multiple species, two or more “passes” through the plantation may be required.

In regards to insect and disease concerns, growers with successful pest management strategies in block plantings should be

equally successful with interplanting. Growers with less than satisfactory pest management practices may find that interplanting increases their problems.

Concern is often expressed that the smaller trees interspersed among those to be harvested will be damaged during the choose & cut harvest. Experience suggests that this does occur, but in most interplanting operations the loss is not excessive. Additionally, much of the perceived damage can be addressed through staking damaged trees following the harvest season.

Growers contemplating interplanting on all or part of their operation should carefully evaluate the effects of interplanting on yield and on the costs and returns of their individual operation. Following the yield and cost and return models presented in this article may provide a guide for that evaluation and decision process.



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