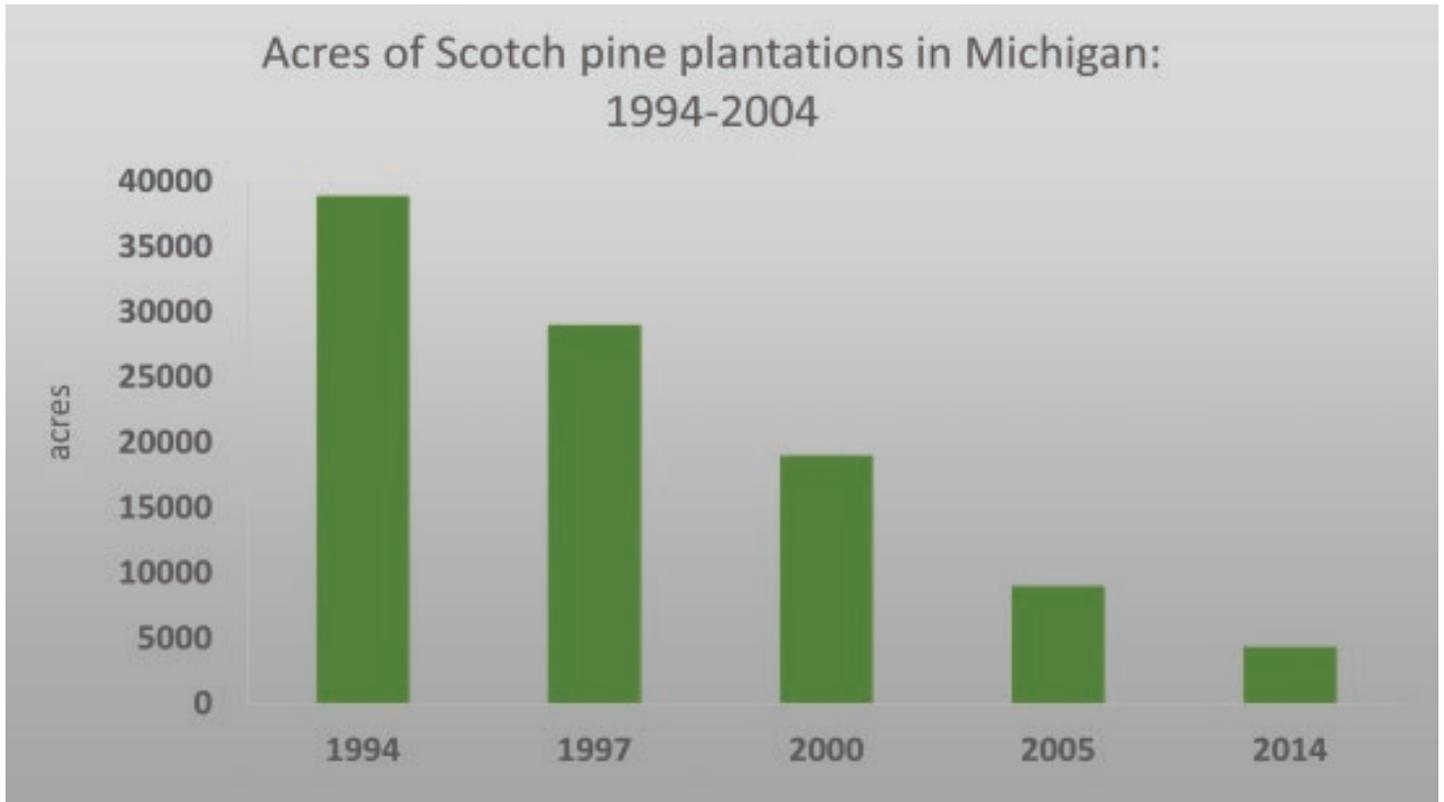




Is There Still a Place for Scotch Pine?

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Scotch pine (*Pinus sylvestris*) has long been the mainstay of the Christmas tree industry in Michigan. For many decades, Scotch pine was the leading species grown in Christmas tree farms in Michigan and surrounding states. As recently as 1994, Scotch pine was grown on nearly 40,000 acres and made up over half of the Christmas tree acreage in Michigan. That situation has changed dramatically over the intervening years as the overall Christmas tree acreage in Michigan has decreased and growers have switched to other species: primarily Fraser fir but also Canaan fir, concolor fir, and Black hills spruce.



Trend.jpg Production of Scotch pine in Michigan has decline steadily since the mid 1990's. Source: USDA National Agricultural Statistics Service.

Why the move away from Scotch pine?

Several factors have contributed to the decline of Scotch pine production in the Great Lakes region since the 1990's. First, as customers have gained experience with Fraser fir and other firs, they have become accustomed to the scent and elegant appearance of these

species. After a few holiday seasons of having a Fraser fir in their home, many consumers find that Scotch pine quickly pales in comparison. From a production standpoint, Scotch pine has a myriad of disease and pest issues that require constant vigilance from the grower. I spoke with two Michigan producers that still grow significant quantities of Scotch pine, Dan

Wahmhoff of Wahmhoff Farms Nursery in Gobles, MI and Rex Korson of Korson's Tree Farm in Sidney, MI. Both growers concurred that managing pests and diseases is one of the biggest challenges in producing quality Scotch pine. Wahmhoff has developed a management program for brown spot needle blight and Lophodermium needlecast and he notes, "We scout

Growing Scotch pines enables producers to target a range of price points. Photo: Hidden Pines Christmas Tree Farm.



Quality Scotch pine can be grown on a range of sites. Photo: Hidden Pines Christmas Tree Farm.



Lophodermium needlecast (shown here) and brown spot needle blight are major disease issues in Scotch pine production. Photo: USDA Forest Service - North Central Research Station, Bugwood.org.jpg



regularly for insect pests, particularly pine needle scale, tortoise scale, and sawflies.” Korson also has a systematic scouting program for insect pests. To help reduce disease pressure, Korson relies on good air flow through his plantations. He notes, “We find that good spacing and good weed control help promote good air flow making a less conducive environment for pathogens.” Other diseases and insect pests that Scotch pine growers must contend with include gall rust, Diplodia tip blight, Zimmerman pine shoot moth, and pine root collar weevil. Moreover, in addition to requiring careful attention to insect and disease management, Scotch pine usually lose color in fall and winter and require an application of colorant before harvest.

Why grow it?

Given the declining market for Scotch pine and the challenges in producing quality trees, it seems reasonable to ask, “Why grow it?” Both Korson and Wahmhoff acknowledge the market for Scotch pine has declined, but it hasn’t gone away, either. Research surveys consistently find that tradition plays a major part in holiday purchasing decisions. For many households in the Midwest, Scotch pine represents the Christmas tree they grew up with, resulting in solid demand. Moreover, Wahmhoff points out, “For some consumers there is still a bit of sticker shock when it comes to Fraser fir. Having Scotch pine in the mix allows us to be a one-stop shop for our wholesale customers, where we have trees at price points from Scotch pine to Fraser fir with spruces and other firs in between.”

Also, Scotch pine often requires less time to produce a salable tree than species that sell at a higher price, so the net return per year can be more competitive than final sale prices may suggest.

Another reason to grow Scotch pine is that unlike Fraser fir, which needs optimum soil and site conditions, Scotch pine is adapted to a broad range of site conditions. The contrast in the site requirements of the two species reflects their natural distributions. Fraser fir is native to a few isolated, high elevation sites in the southern Appalachians with acidic soils and high rainfall. In contrast, Scotch pine has the largest native range of any conifer in the world, ranging across Europe and Asia from Scotland to eastern Siberia. Across this range Scotch pine grows on poor soils, including calcareous and rocky soils and occurs in areas with as little as 8" of annual precipitation and where temperatures as low as -83 deg. F have been recorded. Because of Scotch pine's broad adaptability, growers find

that they can plant it on sites that will not work for many other species.

Both Korson and Wahmhoff noted that growing Scotch pine allows them to spread their workload out during the year. Unlike firs, spruces, or Douglas-fir, pines must be sheared in early summer, typically between early June and mid-July. Korson points out, "Shearing Scotch pine fills a lull in our summer work for the crews between the time we are done picking cones on Fraser fir and before we start shearing other species." Growing Scotch pine also allows growers to spread out their harvest workload. Scotch pine has excellent needle retention and good tree keepability so producers often start their harvest season by cutting Scotch pine, allowing other species to accumulate additional chilling hours to improve needle-set before they are harvested.

Tips for growers

Although the market for Scotch pine is not what it was 30 years ago, there may still be a place for Scotch pine in the

product mix for some growers. Before embarking on a Scotch pine planting, growers need to take several factors into account. Having a clear insect and disease management plan is essential to growing quality Scotch pine. Managing needle pathogens will likely require a fungicide spray program, and regular scouting is needed to stay ahead of insect outbreaks. Starting with a good seedling stock from a good seed source is also essential. Korson relies on a Casadeen French seed source, which has longer needles than typical French seed sources. Wahmhoff grows a Pike Lake, another French seed source and obtains seed from his own seed orchard. He also grows Scottish highland and Belgium sources in his nursery. The Forestry department at Michigan State University has developed an improved Scotch pine seed orchard. Growers that are interested in obtaining seed from the orchard may contact Paul Bloese, Tree Improvement Supervisor at the MSU Tree Research Center (bloese@msu.edu). For growers that are

Pine needle scale and tortoise needle scale are pests of Scotch pine. Photo: Great Lakes Christmas Tree Growers' Facebook Page.



Zimmerman pine moth can destroy shoots and branches of 2-needle pines including Scotch pine. Photo: Phil Pellitteri, University of Wisconsin- Entomology Dept, Bugwood.org





accustomed to shearing firs or spruces, it is critical to remember that pines need to be sheared during in early summer – ideally when candles are fully extended and current year needles are about one-half their final length. Wahmhoff suggests starting to shear Scotch pines when they are about 2-3 years old to avoid too much ‘stretch’ as pines won’t fill in as well as other species. For more details on shearing Scotch pine, please see Tom Trechter’s article in the Spring 2020 issue of the Great Lakes Trade Journal.

REFERENCES

Skilling, D.D. Scotch pine. *IN* Silvics of North America, USDA Forest Service, Agriculture Handbook 654.

USDA Forest Service Christmas Tree Pest Manual, 3rd edition. USFS Publication NA–FR–02–14. ▲

Scotch pine or Scots pine?

Scotch pine is also referred to as Scots pine, particularly in the forestry literature. The naming has also engendered some controversy as sources note that people from Scotland may consider the term ‘Scotch’ offensive. According to the Oxford dictionary, “Scotch is now less common, being disliked by many Scottish people (as being an ‘English’ invention) and now regarded as old-fashioned in most contexts. It survives in certain fixed phrases, as for example Scotch broth, Scotch mist, and Scotch whisky.” ‘Scotch pine’ is also included in these fixed or traditional phrases.