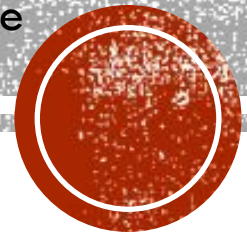




CHRIST MAS TREES

Alex Kissinger

Matthew White



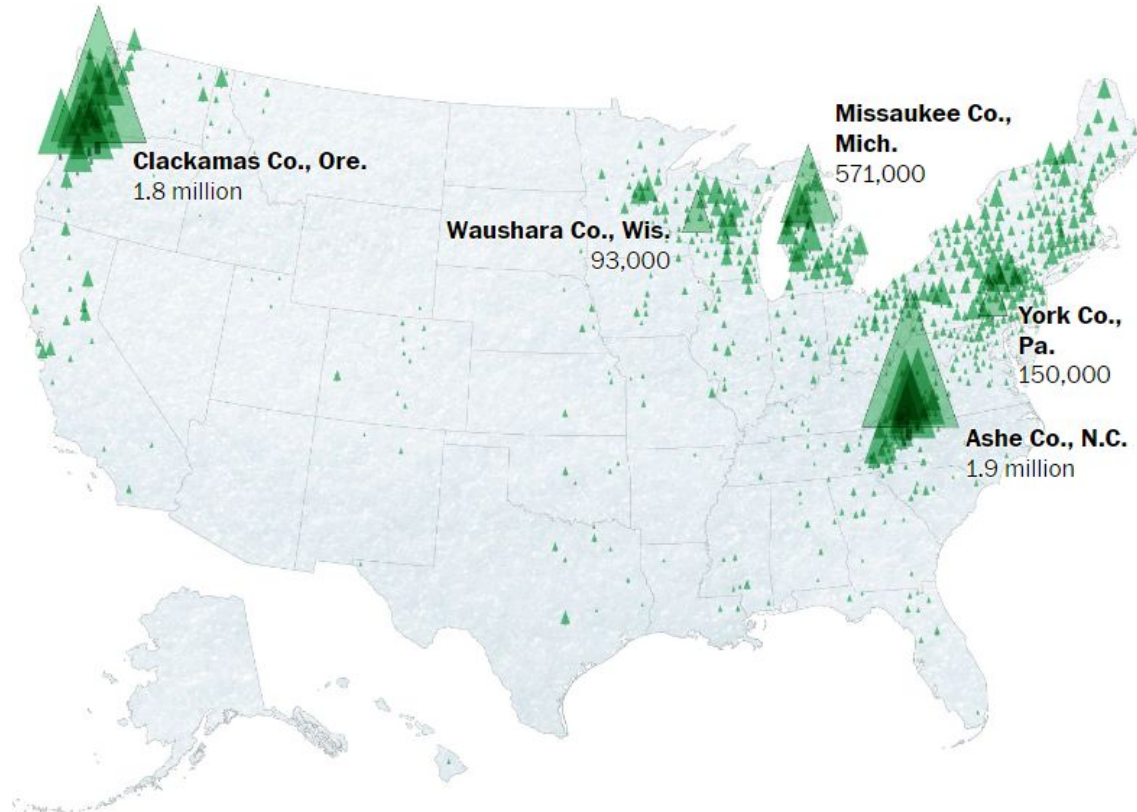


INDUSTRY FACTS

- First U.S. farm is believed to have been established in New Jersey in 1901
- Exports typically go to North American countries
- North Carolina ranks second in cash receipts and production
- Oregon ranks first in cash receipts
- Species include:
 - Fraser Fir
 - Douglas Fir
 - Blue Spruce
 - Red Cedar



U.S. PRODUCTION



- Shifted from natural forests to nurseries and plantation style farms in the 1900s
- Predominantly in Oregon and North Carolina
- Ashe County, NC is the largest producer of Christmas trees
- Predominantly Fraser Fir in NC
- Over 15 million total trees cut in 2017
- Grown in 47 states

Washington Post 2019





PRIOR TO PLANTING

- Christmas trees take many years to reach market size
 - 14 years total from seed to harvest
 - Trees are often 4-5 years old before they are planted in the field
- Growth only occurs once every year during the spring
 - Young trees are susceptible to deer browsing, insects, and drought



COMMON PARASITES/DISEASES

- Elongate Hemlock Scale
- Spruce Spider Mite
- Phytophthora Root Rot
 - Caused by an oomycete
- Prevented or controlled by good management practices such as Integrated Pest Management
 - IPM is a method used to keep pests and pest damage to a minimal level
 - Considers variables such as the land, species, seed source, spacing, and depth planted.





SPRING/SUMMER EQUIPMENT

- Solo Sprayer
- High Pressure Sprayer
- Fertilize Backpacks





SPRING/SUMMER

- Planting occurs in early spring
 - Mostly done by hand because of terrain
 - Around 1600 trees per acre, depending on desired size at harvest
- Trees are sheared and sprayed during the summer months
 - Roundup is used to control weeds for easier access to the trees
 - High pressure spraying is used to control pests such as mites
- Shearing is done once per year to give the tree its fullness and cone shape
- Tags are used to designate the height and quality of the tree





MARKETING

- Factors that affect market decisions
 - Quality of the crop
 - Plantation location
 - Labor availability
 - Personality of tree farmer or salesman
- Storage and loading areas must be constructed for both markets – wholesale and retail.
- Wholesale
 - Grocery stores, garden centers, etc.
 - Location of grower is not as important
- Retail Lots
 - Owned by the farmer/company
 - Higher gross price per tree when sold through this method
 - Cost of retailing can exceed the additional revenue
- Choose & Cut
 - Consumers come to the farm and pick out their own tree from the field



MARKETING/SAL S



■ Marketing strategies: "The Four P's"

■ Product

- Providing a variety of species, sizes, lengths, wrapping, and tags with tree care instructions for handling enhances customers to purchase the product
- Understanding what buyers want is important

■ Promotion

- Wholesalers buy ads in magazines
- Retailers advertise in local media
- Promotional brochures are sent to repeating customers

■ Price

- Lower prices aren't always good – can reflect poor quality trees

■ Place

- Tree farmers decide the best method to efficiently move their products to customers (wholesale or retail)

■ Sales

- On average, about 25% of trees bought come from a choose and cut farm





HARVEST

- Occurs around the last week of October until the second week of December
 - Orders are received earlier in the year
- Weather can be an issue
 - Large trees can break during baling
- Dependent on migrant labor in wholesale and retail operations
- Choose & cut operations do not actively harvest
 - Rely on customers to cut trees
- Takes two to four years before a field is cleared and ready to be replanted
- Wholesale farms keep trees in cold storage weeks prior to shipping
 - Helps retain the moisture level and keep trees fresh
 - Trees that aren't sold are turned into woodchips and sold as mulch or burned



HARVEST EQUIPMENT



- Saws
 - Bow bars are often used
 - Makes cutting close to the ground easier
- Balers
 - Ties them in twine so that they are easier to ship
- Netters
 - Mostly used at choose & cuts or retail lots
 - Can be used at retail stores with large inventory
- Tractors and trailers
 - Semi trucks are used to ship wholesale and retail trees



Which type of Christmas tree has the lowest carbon footprint?

REAL vs. **FAKE**

6.84 lbs CO₂ per year

17.6 lbs CO₂ per year
over the average 6 year life span

Assuming you keep your artificial tree for the average lifespan of 6 years and you drive about 3 miles to buy your tree.

Reduce Your Footprint

Shop local
If you have to drive more than 10 miles each year to get a real tree, an artificial tree ends up having a smaller footprint.

Keep your artificial tree
If you reuse your artificial tree for many years, it will have a smaller annual carbon footprint than a real tree and keep waste out of the landfill.

Once the festive season is done
Compost your real tree if possible. Artificial trees end up in landfills because they are not recyclable. The longer you keep your artificial tree the less waste you will produce.

Buy a PVC free artificial tree
Most fake trees also contain polyvinyl chloride, or PVC, which produces carcinogens during manufacturing and disposal.

...and don't forget to restore the balance this holiday season with carbon balanced gifts from TerraPass!

terrappass.com/holiday

RESTORE THE BALANCE THIS HOLIDAY SEASON



MARKET ISSUES/CURRENT EVENTS

Artificial trees

- 23.6 million artificial Christmas trees purchased in 2018
- Natural trees have always outsold artificial tree producers
 - The real tree's marginal lead has decreased over time
- Artificial trees are made from pvc plastic and require disposal at a landfill compared to natural trees being biodegradable
- As natural tree sales have slightly increased, artificial tree sales have more than doubled
 - 9 million in 2004 to 21 million in 2017
- Real trees haven't experienced a decline in sales because of the increase in demand for christmas trees

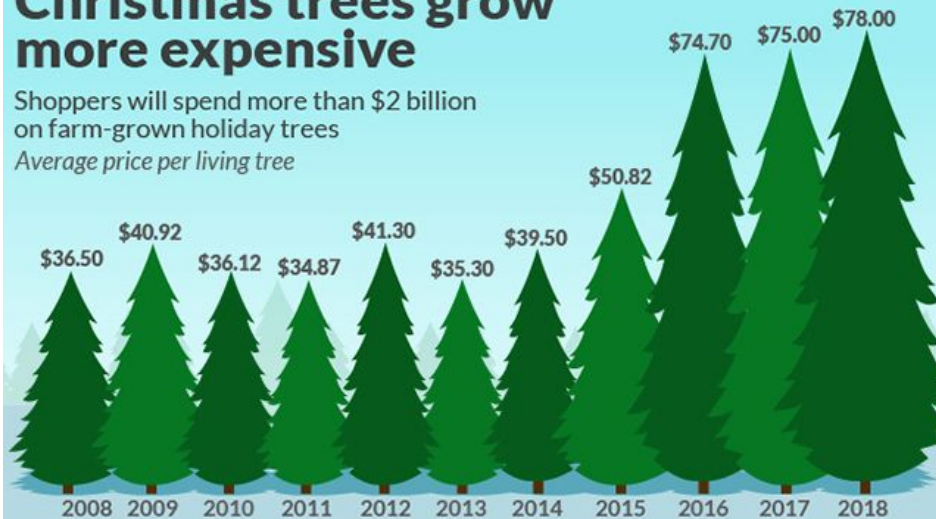
COVID-19 affecting migrant labor

- Farmers are facing delays in the approval and processing of worker's H-2A forms
- A partnership between the Department of Agriculture and the Department of Labor was recently formed to help foreign and local workers in the agriculture industry during this pandemic.

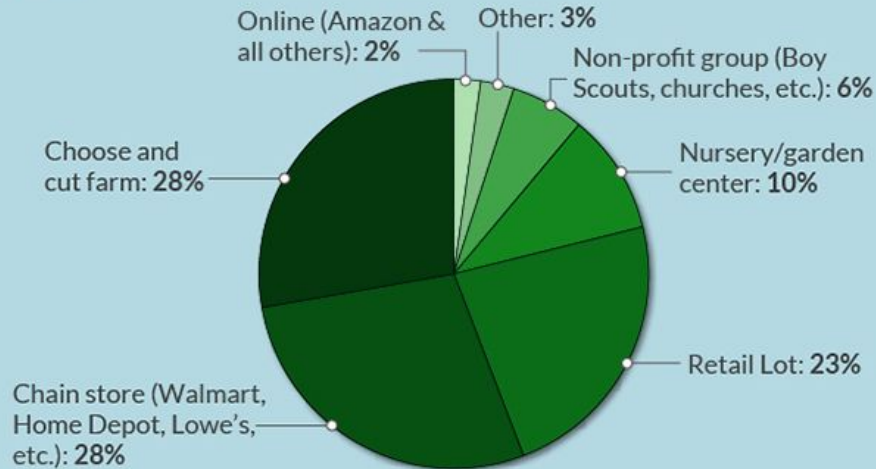


Christmas trees grow more expensive

Shoppers will spend more than \$2 billion on farm-grown holiday trees
Average price per living tree



Where real Christmas trees were purchased
In 2018

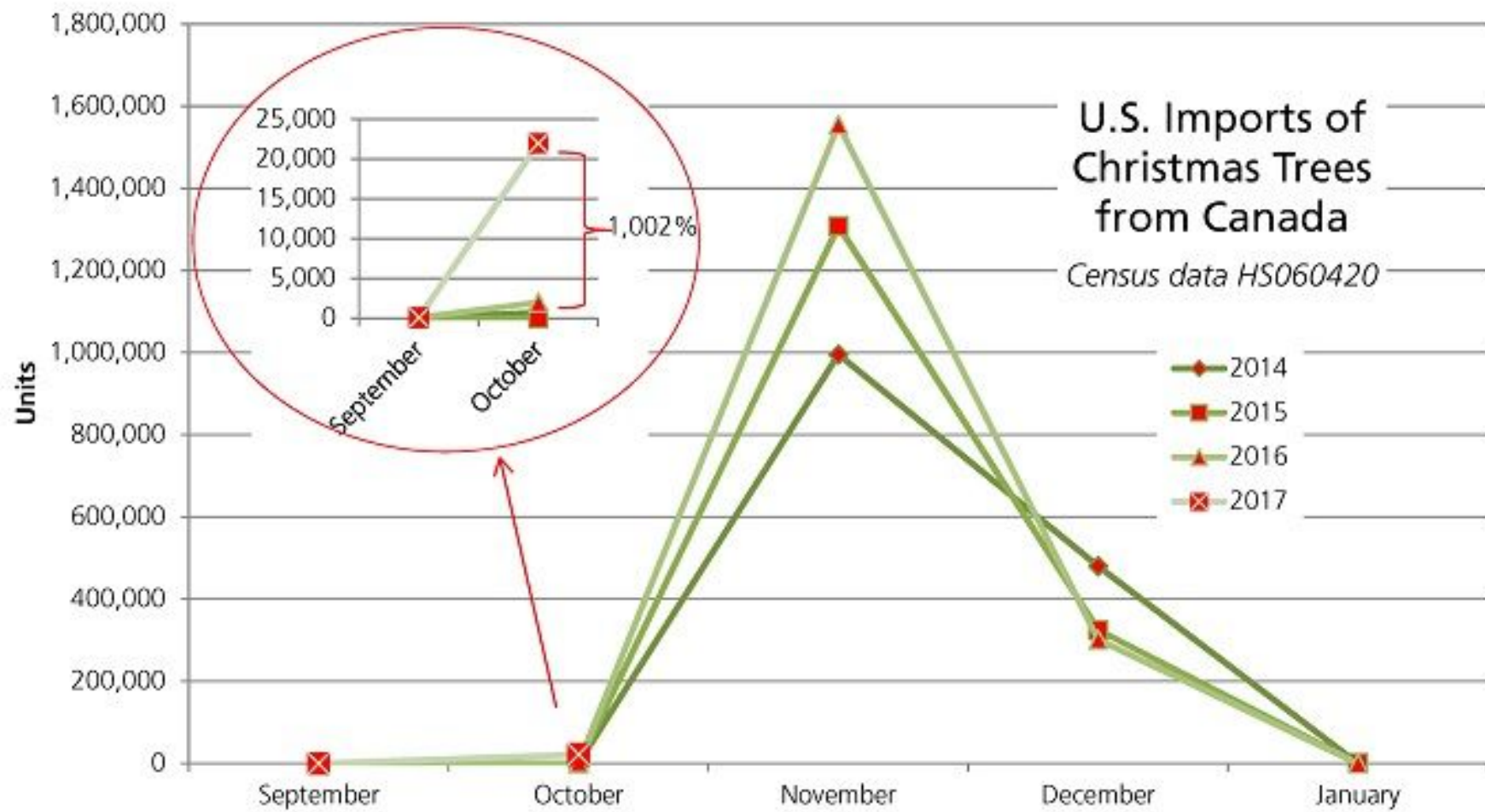


Source: National Christmas Tree Association

CHRISTMAS TREE SHORTAGE

- Because of the 2008 recession, less trees were planted
- Effects from the crop planted in 2008 wasn't seen until 2016 harvest time
 - The supply has hardly met the demand since 2015
 - Never witnessed a true shortage where no trees were available
 - Some growers are cutting trees early
- In 2019, the average price was \$99 and 32.4 million were sold





SOURCES

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