Indiana Christmas trees: growers' perspectives.

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Indiana Christmas tree farms provide treasured memories for many a Hoosier family. Even so, Christmas tree farmers are tasked with a variety of challenges, including increased competition from the artificial tree market and large box stores, changing climate conditions, and changes in consumer preferences for a product that takes eight years to produce. The purpose of the current project was to better understand the factors impacting Indiana's Christmas tree industry. This report provides details on what growers are experiencing and the future plans for their operations.

Indiana has witnessed a decrease in Christmas tree farms and the sale of trees over the last 16 years. The number of Indiana Christmas tree farms with sales declined by 40 percent between 2002 and the last Census in 2012, and the number of Christmas trees harvested in Indiana has declined by 55 percent since 2007. The 2012 US Agriculture Census indicated that 189 Christmas tree operations existed within the state in 2012. Given the previous rate of decline, we speculated that 160 would be in existence in 2017. After conducting an exhaustive search that included web scraping (Indiana Agritourism, Facebook, etc.) and communications with the Indiana Christmas Tree Growers Association, we identified 95 Indiana Christmas tree farms in operation. Consequently, we collected 51 surveys from Indiana based Christmas tree growers operating in 34 different counties, and the present report describes the preliminary findings.

DEMOGRAPHICS

The mean age of the respondent farmer was 64 years of age, and the average years of farming as an adult was 27 years (Table 1). Respondents were predominantly male, with female farmers contributing 10.4 percent of the responses. The results from the surveys suggest that 72.4 percent of the respondents have at least two years of post-secondary schooling, with 27.6 percent having a high school diploma with some years in college. Most respondents (66.7 percent) agreed that the tree operation was an important overall part of their farm business, with 20 percent indicating it is not.

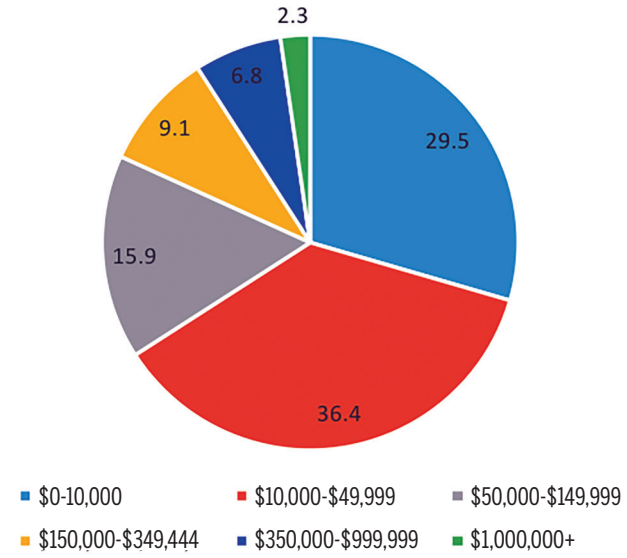
Table 1. Demographic results on age, years farming, and gender.

Respondents' age (years of age)			Years farming as an adult			Gender (%)	
Min.	Max.	Mean	Min.	Max.	Mean	Male	Female
46	84	64	1	60	27	89.6	10.4

FARM OPERATION

The average farm acres planted in 2017 was 147.6 acres per farmer with the mean acreage planted in Christmas trees being 19.7 acres. The median number of acres planted in Christmas trees was 9.5. That shows that 13.3 percent of the land is used for Christmas tree planting and the rest is used for crops such as corn, soybean, pumpkins, gourds, Indian corn, wheat, straw, timber, etc. Most farms are relatively small operations with a few very large commercial /wholesale operations in Boone, Vanderburgh, and Jasper Counties. Nearly 30 percent of farms grossed $10,000 or less, with 36.4 percent grossing between $10,000 and $49,999 (Graph 1); 9.1% of farms grossed more than $350,000. Table 2 shows that there is a stark difference between minimum and maximum acres planted between the different farms, and that is due to the different operation scales of the farms. Table 2 also shows the number of trees sold and replaced by the farmers, and as well the rurality index of where the farms are located. The rurality index categorizes the counties in a spectrum between rural and urban areas (with 0 = very urban counties and 1 = very rural counties). Most are located in counties that are more urban than rural.

Graph 1:
Gross revenue from the 2017 farm operation (%).



FUTURE FARM OPERATIONS

The responding farmers indicated that 60.4 percent of the primary operators have other non-farm related jobs. 72.3 percent will continue planting trees in the next five years and 85.4 percent will continue selling trees in the next five years. We also asked farmers about their interest in increasing their presence in new markets, specifically looking at tree volume availability, human resource capacity, interest in new markets, and if they have a transition plan in place for their farm operation. Graph 2 suggests that the majority of the responding farmers do not have the tree volume nor the personnel capacity to sell Christmas trees in new markets. From the respondent farmers, 38.3 percent indicated that they have a farm transition plan in place. This includes transition to mostly family members as a tree farm operation, but also just as land without the tree farm operation. Nearly two-thirds (61.8 percent) of farmers noted that their operations have seen an increase in tree shoppers over the last few years, and many of the farmers suggested that they sell all of what they produce. However, 17.7 percent indicated they have witnessed a decrease in shoppers.

Table 2. Farm operation characteristics.

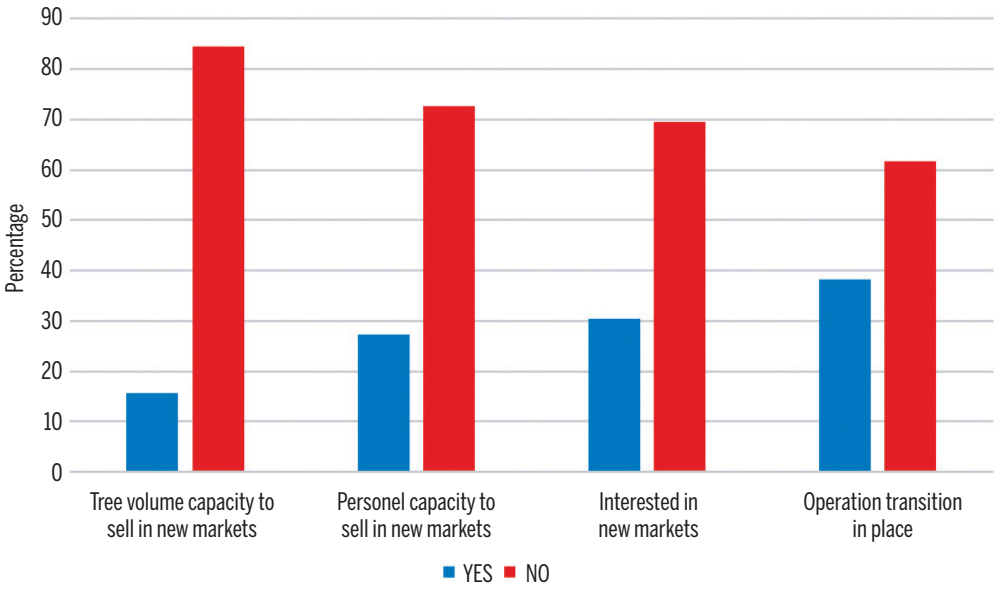
	Minimum	Maximum	Mean	Median
Average acres planted in 2017	1	1950	147.6	17.63
Average acres of planted Xmas trees	0	250	19.7	9.5
Trees sold	0	20000	1465	300
Trees replaced	0	26000	1841	500
Rurality [A]	0.19	0.58	0.32	0.29

[A]: 0 =urban, 1= rural

ELEMENTS AFFECTING FARM OPERATION

Most (59 percent) farmers did not feel competition was adversely affecting their operation, while 24 percent were neutral on the matter (Graph 3). Nearly half (48.5 percent) indicated that they might have too many shoppers, while just over 40 percent indicated shoppers were searching for tree species that they did not have available. Most farmers were neutral on whether or not the closing of other farms affected their operation. The main limitations that the farmers reported for their farm operation were the environmental limitations such as drought conditions especially during 2012, heat waves, growing conditions not being ideal for tree growing, and pest pressures (see Graph 4).

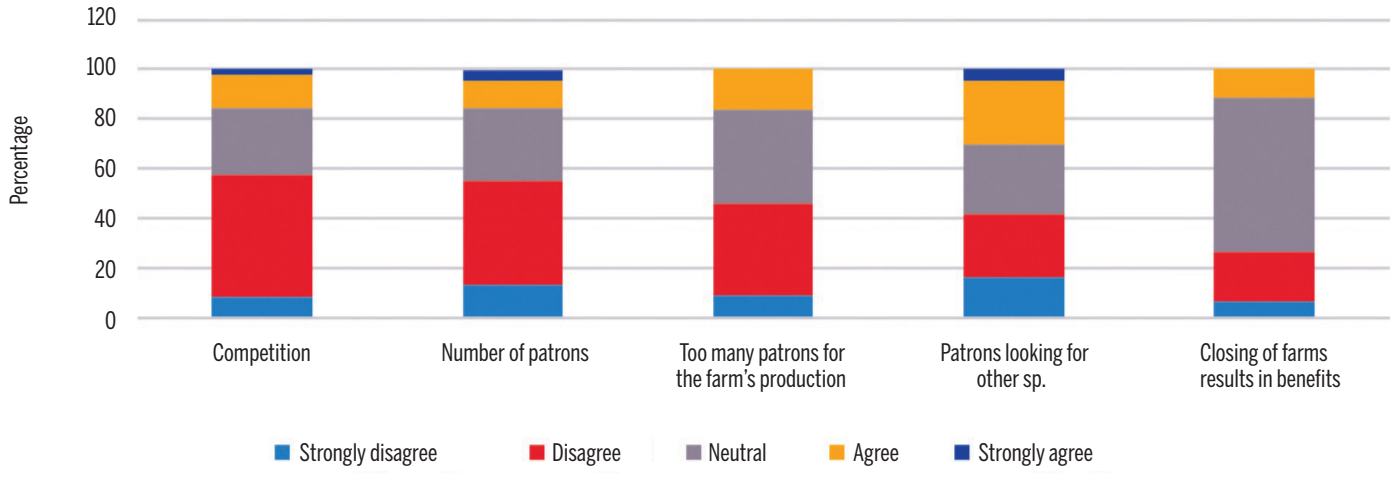
Graph 2:
Future directions for farms



SUMMARY

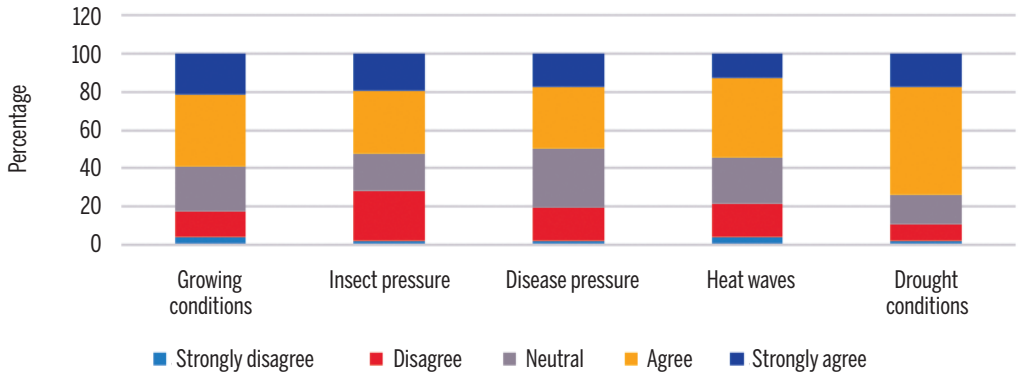
Overall, we found that Indiana Christmas tree farms seem quite balanced with the number of trees they are producing, the number of consumers visiting their operations, and their capacity (both trees and personnel) for growing and selling trees. If anything, there appears to be too much demand for the current supply of Indiana-grown trees. Additionally, survey results indicate that a significant number of farms have ceased production/selling or will cease production/selling in the next 5-10 years. Taken together, a bottleneck appears to be forming in the supply chain that will hinder Indiana families from acquiring trees grown in Indiana (particularly when one accounts for the 2012 drought, loss of planted stock, and its absence from the 2018-2021 market). There was a small majority of farms that would like to see an increase in sales (15.6 percent indicated they have more trees than they can sell). Other important findings include the following:

Graph 3:
Feedback on Christmas tree shoppers: elements affecting farm operation



- Farmers reported that consumer demand for Indiana Christmas trees has increased, and many farmers reported selling out last season,
- The majority of the farm operations are not interested in new markets, as they do not have the personnel capacity to satisfy the needs of new markets.
- Farmers indicated that a growing number of consumers prefer buying tree species that do not grow well in their area. Consumer preference for certain species is a barrier because certain varieties are not well suited for the growing in common Indiana soils, or in the Indiana climate.

Graph 4:
Environmental limitations as reported by farmers.



Overall, our results indicate that opportunities exist for new and beginning farmers to enter into the Christmas tree industry. Current supply is unable to keep up with the demand, and many farmers are aging out of the industry. Farmers interested in getting into the industry should consider adding trees to their marginal grounds unsuitable for row-crop cultivation. Additionally, specialty crop and diversified farms may consider Christmas trees as an option to bolster their farm's economic sustainability, particularly in the off-season when sales of fruits and vegetables are likely low.