

2023-2024 Michigan Greenhouse Extension Survey

Summary of Preliminary Findings

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Survey Sample and Response

The first round of this survey was administered to in-person participants at a greenhouse industry group meeting where respondents filled out paper survey forms anonymously. A subsequent online version was sent out via email to greenhouse farmer contact that Michigan State University Extension greenhouse educators Jeremy Jubenville and Jaden Gimondo had. The second round of the paper surveys are currently being delivered by hand to various greenhouse operators identified by Michigan State University Extension staff. To date, we have received responses from XX greenhouse farmers.

Results

Survey respondents were asked to indicate in which Michigan county they produce. Almost all respondents operate in Kalamazoo County, with the rest operating in Van Buren and Ingham counties.

I. Employment and Incentives

Respondents were asked if their greenhouse operation was ever unable to hire all of the employees it wanted to hire during 2023. 47% of operators indicated “yes”. They were also asked how many employees were needed to run their greenhouse at full capacity. The average number of employees needed by our respondents was 38 employees.

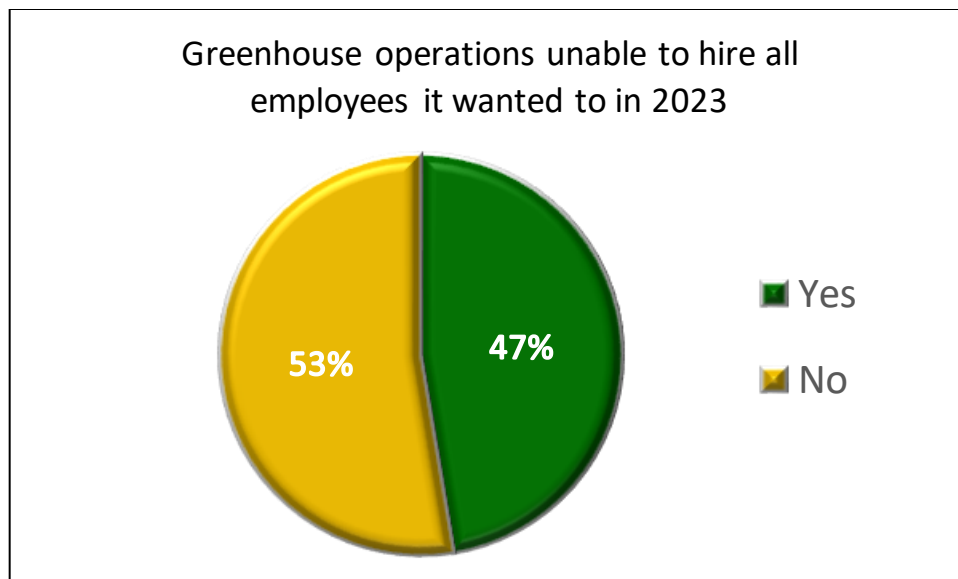


Figure 1. Answer to question: “During 2023, was your greenhouse operation ever unable to hire all of the employees it wanted to hire?”

To estimate if greenhouse operators were running a labor deficit, we asked how many employees were employed during 2023 and how many were needed to operate at full capacity. The average reported labor shortage among all operators (including those who hired more than needed to run at full capacity) was 24%. If we exclude those operators who hired more than they actually needed, the deficit increases to 33%. A third of greenhouse operators could not meet the labor demands needed to run at full capacity.

A variety of incentives can be offered to employees. We asked farmers about the types of employment incentives they offered during 2023. Respondents could select more than one incentive. The most popular incentive offered was schedule/work flexibility (50%), followed by production bonuses (27%), health insurance (14%), and transportation stipends (5%).

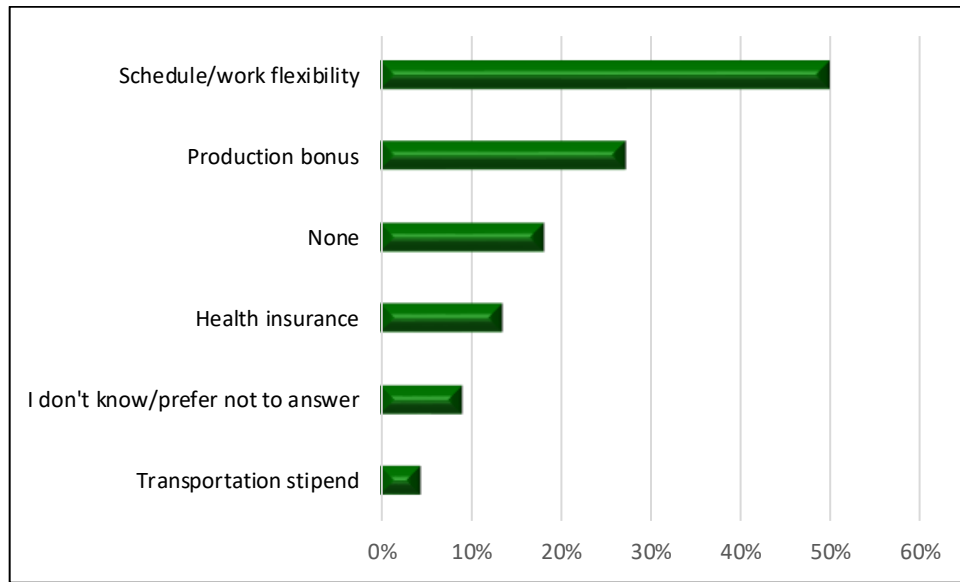


Figure 2. Response to question: “During 2023, what incentives did your greenhouse operation offer its employees?”

II. H-2A Employment

We asked growers if they employed H-2A workers during 2023. Out of the 22 responses we received for this question, 43% responded that they employed H-2A workers during 2023. Those who responded “yes” were asked approximately how many H-2A workers they employ (including those who were hired directly or through a farm labor contractor or other source). The average numbers of H-2A workers employed during 2023 was 13 employees.

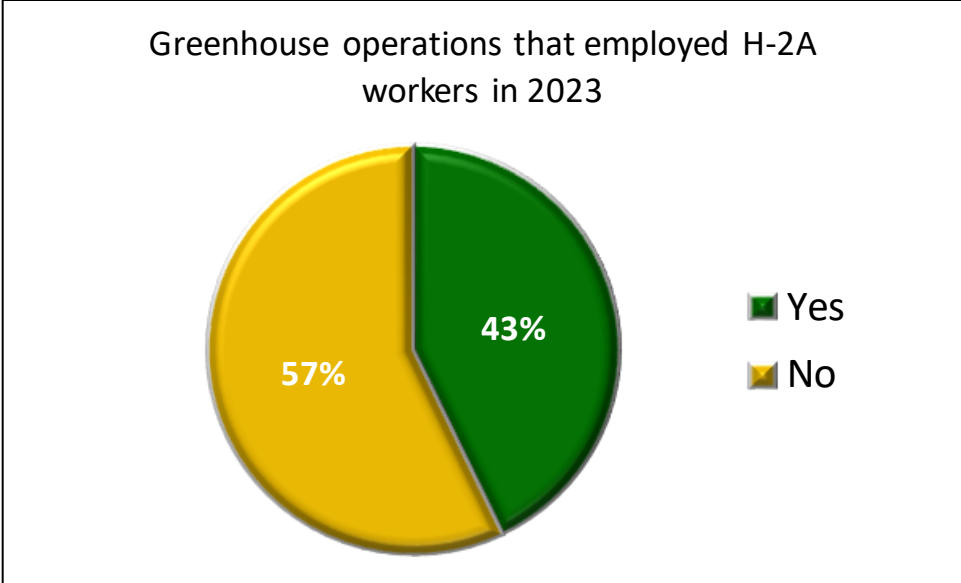


Figure 3. Answer to question: “During 2023, did your greenhouse operation employ H-2A workers either (either directly or through a farm labor contractor or other source)?”

Given that H-2A employees are normally restricted to a maximum of 10 months of work in the US, we asked growers if their operation has employment opportunities for H-2A workers that would last longer than 10 months (if it were allowed). Of the 6 operators that answered this question, only 1 answered “yes”.

We asked growers about the ideal length of time that H-2A employees could remain in the US without having to return to their home country based on their operation’s employment needs.

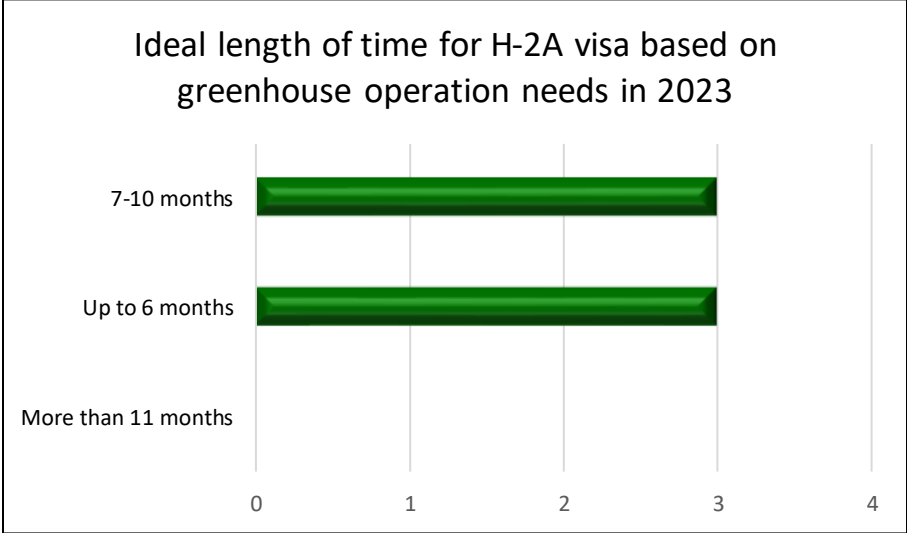


Figure 4. Response to question: “Based on your greenhouse operation’s employment needs, what would be the ideal length of time that H-2A employees could remain in the United States without having to return to their home country?”

III. Perceptions of H-2A Productivity

Of the greenhouse operators who employed H-2A workers, we asked about the perceived productivity comparisons of H-2A and non-H-2A workers. A majority of respondents (57%) indicated that H-2A employees were more productive, followed by 29% who said they were about the same, and 14% who felt they were less productive than non-H-2A greenhouse employees. On average, farmers found their H-2A workers XX% more productive than non-H-2A workers.

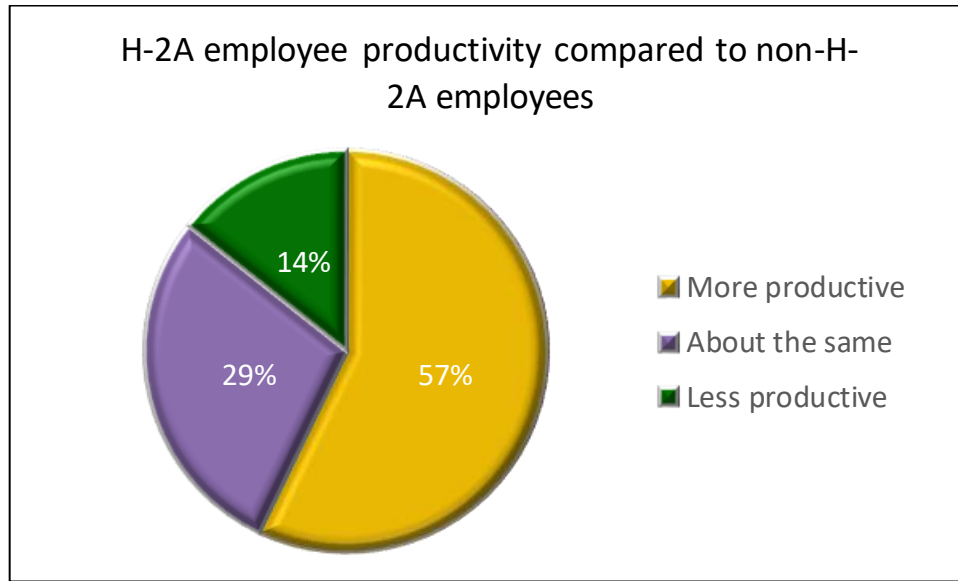


Figure 5. Answer to question: “Are/were your greenhouse operation’s H-2A employees more productive, less productive, or about the same as its non-H-2A greenhouse employees?”

Growers were also asked to estimate the total cost of employing H-2A workers compared to employing non-H-2A workers. On average, farmers reported that their H-2A employees cost XX% more than non-H-2A workers.

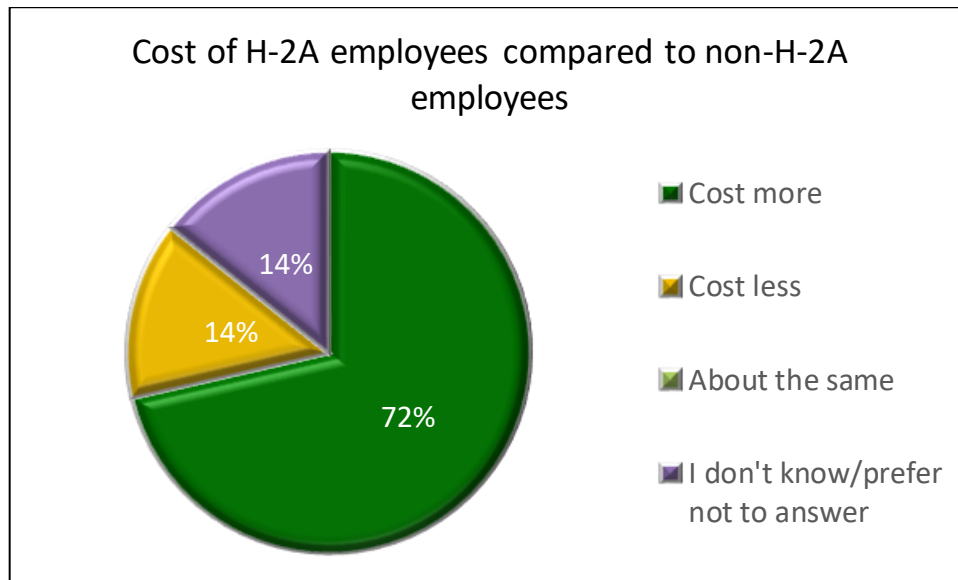


Figure 6. Answer to question: “Considering the total cost of employing H-2A workers, including housing, transportation, meals, and other costs, but not considering differences in productivity, did your greenhouse operation’s H-2A employees cost your business more, less, or about the same as its non-H-2A employees?”

IV. Labor-Saving Technologies

Another solution to labor shortage issues is employing new technology that requires less labor input. 39% of operators responded “yes” to using labor-saving technology in 2023.

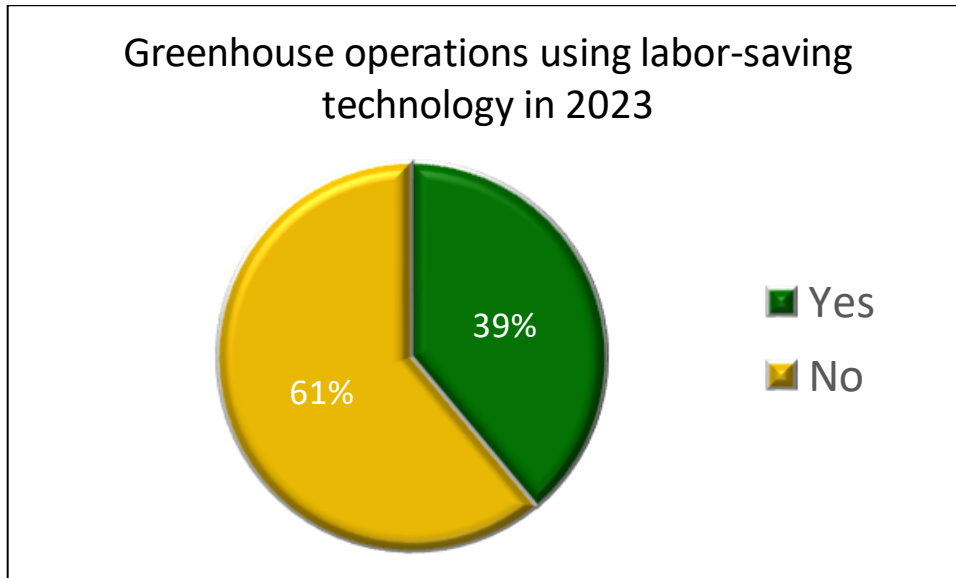


Figure 7. Answer to question: “During 2023, did your greenhouse operation start using any new labor-saving technologies to reduce the number of employees it requires?”

The most popular labor-saving technology employed by the greenhouse operators in our survey was production/inventory counting, monitoring, and scoreboard display systems (43%), followed by automated substrate mixing and delivery systems (29%), robotic liner, plug, or cutting planting automation (29%), transportation automation (14%), and automated container label machinery (14%).

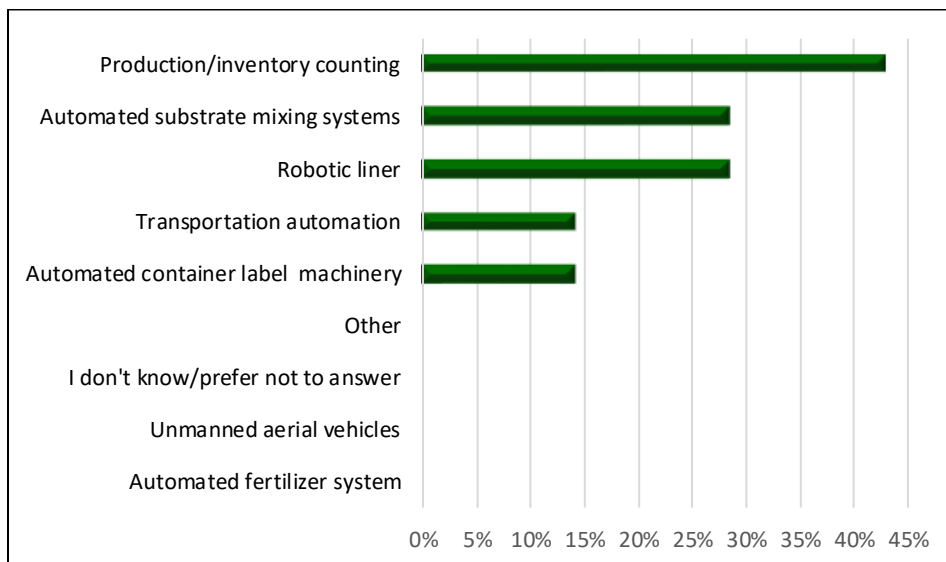


Figure 8. Response to question: “During 2023, which new labor-saving technologies did your greenhouse start using?”

We asked growers to estimate the approximate cost of the new labor-saving technologies they started using in 2023. 60% of respondents answered that the new technology cost less than \$100,000 and 40% answered that it cost between \$100,000-249,999. None answered that it cost more than \$250,000.

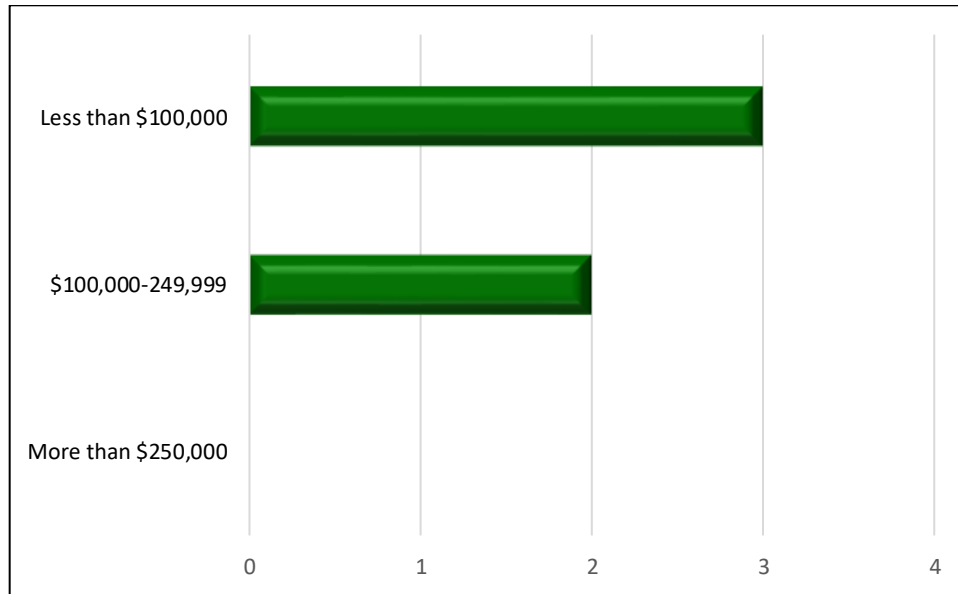


Figure 9. Answer to question: “Not considering any financing charges (such as loan interest), what was the approximate cost of the new labor-saving technologies your greenhouse operation started using in 2023?”

Of those who employed labor-saving technology in 2023, 57% answered that the new technology reduced the labor needs of the operation. They estimated that the technology saved about 5% of labor needs.

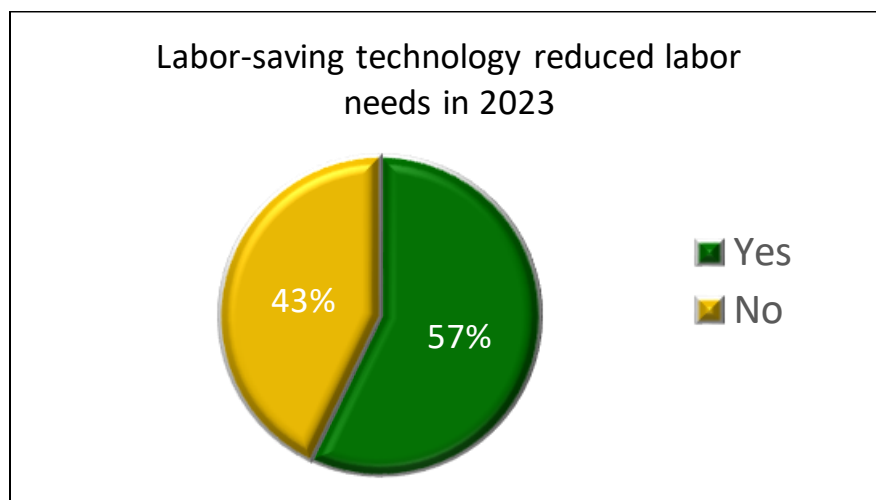


Figure 10. Answer to question: “Did the new labor-saving technology your greenhouse operation started using in 2023 reduce your labor needs in terms of the number of employees required to conduct its normal operations?”

Conclusion