

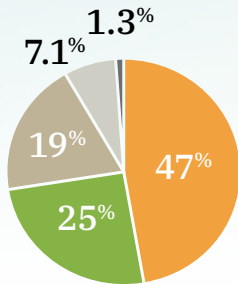
ANNUAL MANUFACTURING OUTLOOK SURVEY



OPTIMISM PREVAILS

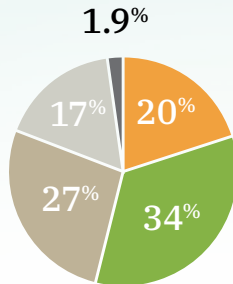
Our Manufacturing Survey shows the industry is feeling pretty good heading into 2022 – but with some major qualifications.

ANNUAL MANUFACTURING OUTLOOK SURVEY



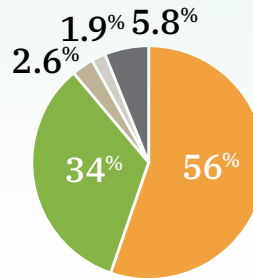
How do you feel going into 2022?

- Somewhat optimistic 47%
- Very optimistic 25%
- Neutral 19%
- A little pessimistic 7.1%
- Very pessimistic 1.3%



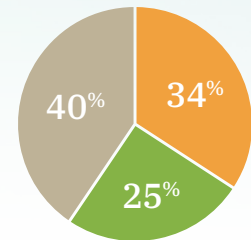
What do you anticipate will happen with your plant's production in 2022?

- Increase 20% or more 20%
- Increase 10-19% 34%
- Increase 2-9% 27%
- Stay about the same 17%
- Decrease 2-9% 1.9%



What are your company's staffing plans for 2022?

- Add to the workforce 56%
- Maintain current levels 34%
- Passively reduce workforce 2.6%
- Actively reduce workforce 1.9%
- Don't know 5.8%



How has your company dealt with COVID on the plant floor?

- We require either vaccination or negative tests 34%
- We require vaccination with few or no exceptions 25%
- We require neither vaccination nor tests 40%

Food & beverage processors are more or less optimistic heading into 2022, according to the results of *Food Processing's* 21st annual Manufacturing Survey.

Almost half (47%) of the 156 respondents said they were "somewhat optimistic" about their companies' prospects in 2022, and another 25% said they were "very optimistic." Only 8% admitted to any pessimism.

The great majority (81%) of the respondents say they anticipate that their plants will increase production next year, with 20% saying the increase will be 20% or more. Only 2% said they expected a decrease. The survey was taken in November 2021.

In addition, a plurality of 47% said they expect their companies to open or add lines or entire plants. Only 5% said they anticipate any mergers or closings of lines or plants, and 38% said they expect things to stay the same.

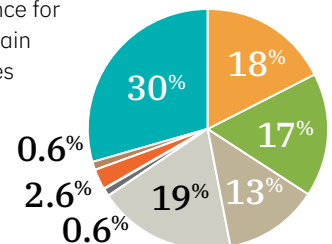
Capital spending was a sign of the general optimism. Almost half (48%) said they anticipated an increase in their companies' capital spending budget. Among these, 18% said they think the budget will go up more than 10%, and another 17% said it will go up from 5% to 10%.

In a list of options for capital spending, the No. 1 choice was process equipment, followed by control systems and packaging equipment. Some of the more interesting responses among "Other" include: "To expand the production to other regions, for instance Asia and Africa"; "Investing in machine

learning and artificial intelligence for better automation and blockchain development"; "Converting lines to control sesame as an allergen"; and one that said simply, "Each plant has a project in the works."

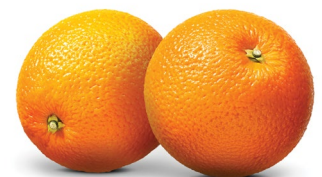
Another indication of optimism comes from staffing plans. A majority of 56% said they think their companies will add to the workforce in 2022, while 34% said they expect to maintain staffing levels. Only 5% think their workforces will be reduced.

Companies who plan to expand their workforces had better be prepared to do a little hard searching, says Barb Renner, vice chairman and U.S. consumer products leader for Deloitte LLP. "I do think that the workers have more leverage, especially since they've worked through this pandemic," Renner says.



Company's capital spending budget for 2022, compared to 2021

- Up more than 10 percent 18%
- Up 5 to 10 percent 17%
- Up less than 5 percent 13%
- About the same 19%
- Down less than 5 percent 0.6%
- Down 5 to 10 percent 2.6%
- Down more than 10 percent 0.6%
- Don't know 30%



Split on the pandemic

The pandemic, naturally, was a major topic of concern – and divisiveness. A plurality of 40% said their companies require neither vaccinations nor testing, and have no plans to do so. Proof of vaccination or weekly COVID tests – the standard that the Biden administration is trying to impose – is being followed, or soon will be, by 34%; another 25% said their companies require, or soon will, vaccinations with few or no exceptions.

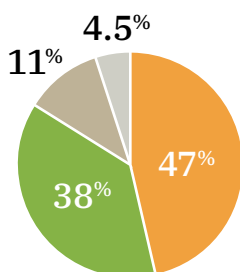
Comments on this question were fairly wide-ranging. “Currently, COVID 19 vaccination has been made compulsory for all employees,” said one. “Cannot afford even one case of pandemic infection,” said another. Another said “Will abide with government regulation.” But this was balanced out by comments like “Mandate illegal in our state & will be struck down by supreme court” and “My body, my choice...FREEDOM.”

The split mirrors that of society as a whole, with some businesses beginning to add “no vaccine required” as an enticement to job ads. In some cases, it’s due to the convictions of the businesses’ owners; in others, it’s a desperate ploy to attract workers in a tight labor market.

“Worker safety” and “worker recruitment,” two themes that play into the above, came in at Nos. 3 and 4 on our list of manufacturing-related concerns. The top two priorities were “food safety” and “cost control.”

One concern that we didn’t offer as an option came up frequently in the comments: supply chain. As one commenter put it: “Supply chain is an issue for us. Cost control was much higher than expected, as we are paying 5-6 times the expected price for ingredients.”

Cost control means dealing with inflation, which will require a higher level of cost management. “With the high price inflation numbers, the majority of the costs are being passed along to consumers, and the major players will continue to manage pricing across their supply chain to establish a new supply and demand curve,” says Tyler Higgins, retail practice lead and managing director at consulting firm AArete.



What are your company's production plans for 2022?

- Expand production by opening or adding lines or plants 47%
- Stay the same 38%
- Don't know 11%
- Consolidate production by merging or closing lines or plants 4.5%

Capital Spending Priorities

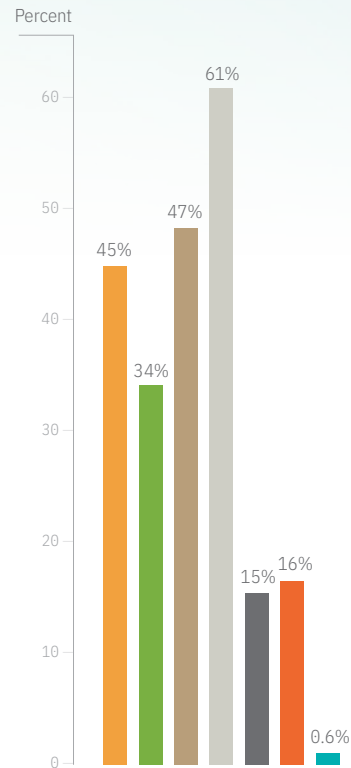
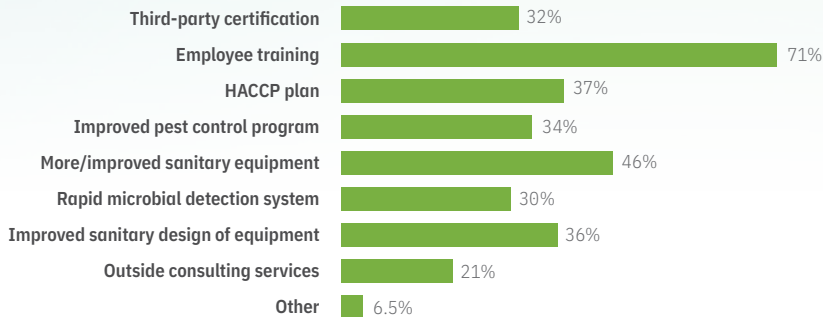
ITEM	RANK	SCORE
Process equipment	1	1,068
Control systems	2	862
Packaging equipment	3	851
Plant and worker safety	4	783
Electronic records	5	744
Software	6	641
Digital field devices	7	636
Robotics and automation	8	625
Laboratory equipment	9	582

For the coming year, please rank, 1st place through 10th place, the importance to your plant of EACH of the following manufacturing issues:

RANK	MANUFACTURING ITEM
1.	Food safety
2.	Cost control
3.	Worker safety
4.	Worker recruitment
5.	Automation
6.	Sustainability issues
7.	Sanitary design of equipment
8.	Better traceability, up and down
9.	Various changes due to COVID
10.	Capacity expansion

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Which practices did, or will, your facility implement for better sanitation and food safety?



Safety and automation

Food safety was the No. 1 concern. Asked to choose from a list of practices to enhance food safety, the most popular option, at 71%, was employee training. More or improved sanitary equipment was the second choice at 46%, followed by “HACCP plan” at 37%.

Comments revealed other paths to follow. Two people mentioned certification from the SQF (Safe Quality Food) Institute. One referred to “improved cleaning chemicals for CIP” (clean in place). Referring to the options offered in the survey, a couple said simply, “These are all ongoing practices we do every year.”

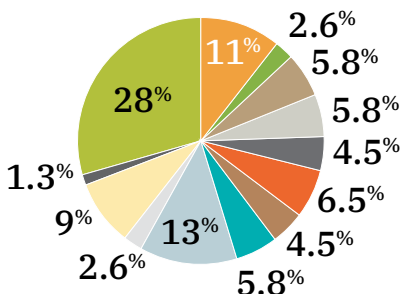
An ongoing challenge for the industry is digital technology and automation, which we ask about every year. The most popular two response were the same as last year: “Replacing paper records with electronic records,” chosen by 61% of respondents, and “Replacing analog devices with digital sensors and meters,” at 47%. (Multiple responses were permitted.)

Several commenters mentioned remote access to equipment, by the equipment supplier and others, but there was some caution: “Due to security issues, we grant only required remote access to machine controls,” one said.

How is digital technology impacting your facility?

- Shifting from local servers to cloud computing 45%
- Providing more remote access to machine controls 34%
- Replacing analog devices with digital sensors and meters 47%
- Replacing paper records with electronic records 61%
- Granting OEMs access to machine controls 15%
- No action/taking a wait-and-see approach 16%
- Other 0.6%

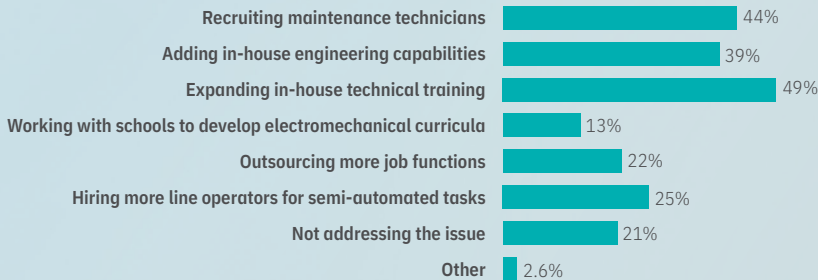
Which category best describes the primary end product of your facility?



- Baked goods 11%
- Breakfast cereals/grain products/pasta 2.6%
- Beverages (non-dairy) 5.8%
- Condiments/Sauces/Jams/Jellies 5.8%
- Confectionery 4.5%
- Dairy (includes milk, cheese, ice cream or any dairy product) 6.5%
- Frozen Dinners 4.5%
- Fruits and vegetables 5.8%
- Further processed foods and specialties 13%
- Herbs/Spices/Dry flavorings 2.6%
- Meats/poultry/seafood (fresh or frozen) 9%
- Snack foods/chips 1.3%
- Other 28%

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How is your organization addressing staffing needs?

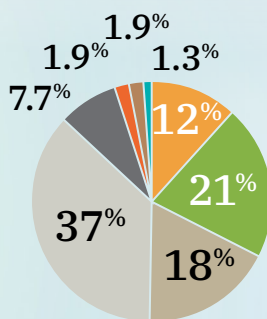
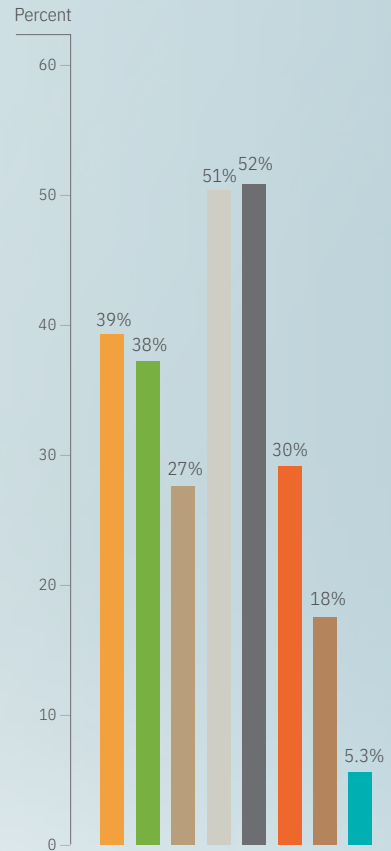


A big part of the challenge for automation is establishing a workforce that can handle it reliably. Our survey presented a list of options, with multiple responses permitted. The most popular one, at 49%, was “expanding in-house technical training.” No. 2, at 44%, was “recruiting maintenance technicians.”

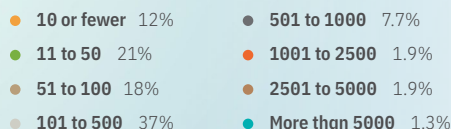
Some of the comments offered some additional perspective. “We are simply seeking [workers who can handle automation] in the workplace. We have added programs to work with new employees out of college to address needs,” said one. “Still TBD as we determine the exact equipment upgrades to be installed,” said another.

Our survey also included the opportunity for miscellaneous comments, about whatever is on the respondents’ minds. Some of the more interesting ones include:

- “Getting more raw produce from a limited number of agricultural fields.”
- “Constantly changing rules and regulations at all levels of government need to be addressed more.” ■



How many employees at your facility?



Maintaining production and packaging systems in today’s food and beverage plants is essential. What strategies, tactics and tools does your organization use to optimize asset use?

- Additional maintenance technicians are being hired: 39%
- Condition monitoring tools are being used to drive preventive maintenance efforts: 38%
- Personnel skilled in electro-mechanical systems are being recruited: 27%
- On-the-job training programs are being added to expand maintenance workers’ skill sets: 51%
- Routine maintenance duties are being assigned to machine operators: 52%
- Third-party maintenance services are complementing inhouse personnel: 30%
- CMMS and asset-management programs are playing a larger role in managing maintenance activities: 18%
- Responsibilities for replacement-part inventories have been outsourced: 5.3%