feeding the minds that feed the world

2017 IFT Employment & Salary Survey Report

Earnings Grow, Wage Gap Shrinks

IFT's biennial Employment and Salary Survey delivers the latest data on the food science profession: what people earn and how they feel about their jobs.



By Mary Ellen Kuhn and Margaret Malochleb

THE BIG PICTURE

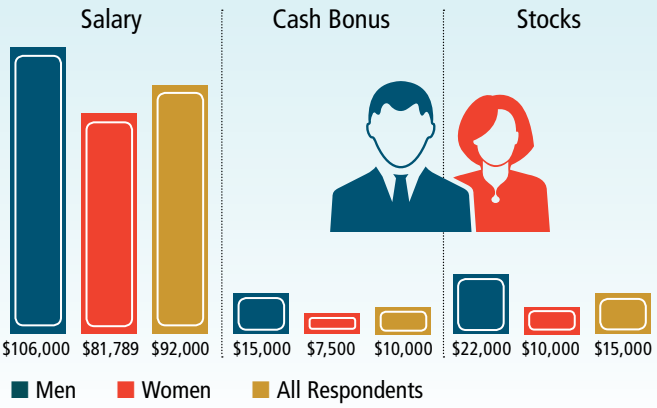
Food science salaries got a bump in 2017, climbing 2.2% to a median of $92,000 after remaining flat in 2015, IFT's biennial *Employment and Salary Survey* showed.* In 2015, with the compensation climate still tepid in the aftermath of the recession of 2007–2009, the median salary was $90,000, the same as in 2013.

Today's economic climate is more positive, however, and the job market is strong, recruiters report. "It's what I would call a candidates' market right now. There are a lot of job opportunities out there," says Tim Oliver, senior partner with food recruitment firm OSI.

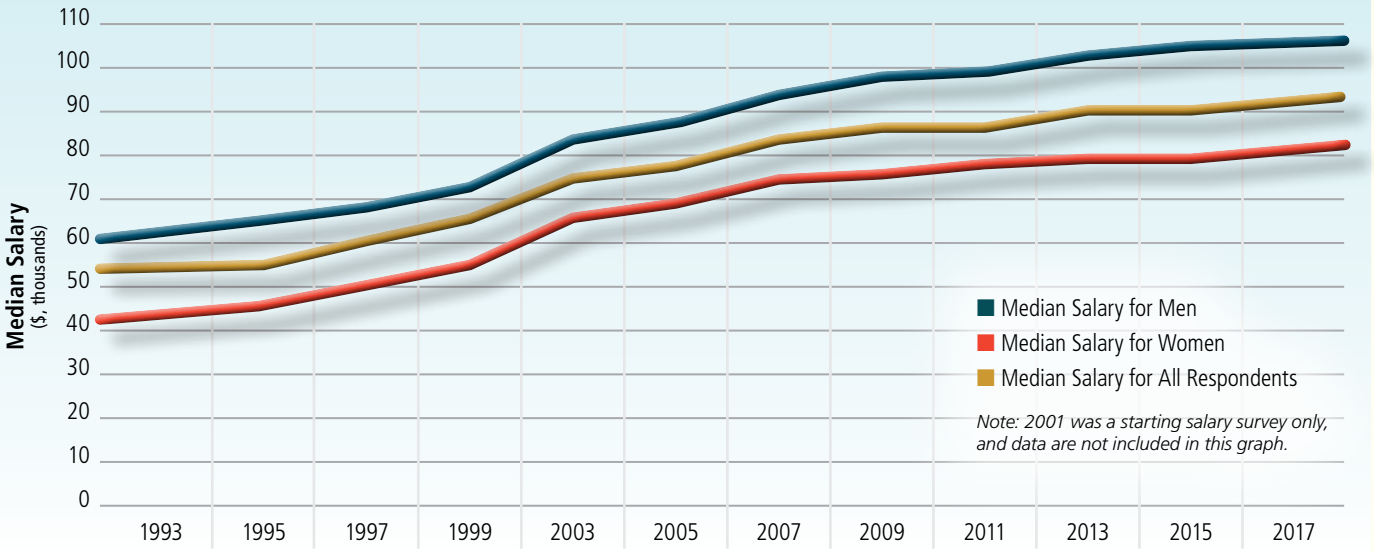
"Salaries have gone up in the last couple of years," adds Moira McGrath, president of OPUS International, a food science–focused executive search firm. "It's a very viable market."

2017 COMPENSATION BREAKOUT

Median Value of Salary, Cash Bonus, and Stocks by Gender, All Degrees, Years of Experience, and Types of Business Combined



TRACKING SALARIES BY GENDER ACROSS THE YEARS



This year's survey, which drew responses from more than 2,500 IFT members in the United States, brought good news for women in the profession: the gap between men's and women's salaries is narrowing. While women food scientists continue to earn just about 77 cents for every dollar that their male counterparts make, that's up from 2015, when women's food science compensation was 75% of men's. In addition, women's salaries are growing faster than men's. According to the survey, the 2017 median salary for women was $81,789, up 3.5%, versus a 1% increase to $106,000 for men. Bonuses for women also increased substantially; in 2017, the median bonus for women who received them was up 25%, or $1,500, to $7,500. The median bonus for men increased by just $100, but at $15,000 was still twice the amount women received.

3.5%
Median pay increase last year

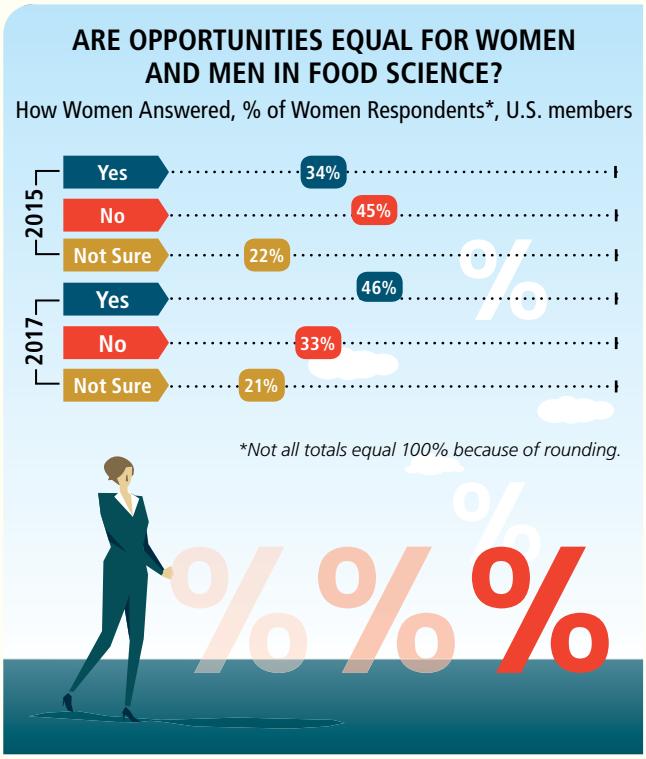
Respondents who received a pay raise last year
71%

*Unless otherwise stated, all salary data cited in this article are for IFT members in the United States.

The survey findings make it clear that times are changing for women working in the science of food. Younger women in the profession have achieved salary parity with men—something that has eluded older women. For men and women in their 20s, median food science salaries are equal at $60,000. For women in their 30s, there is a relatively modest salary gap of 6%, but those in their 40s, 50s, and 60s experience a gender salary gap that ranges between 13% and 15%.

When considering the salary gap between men and women, it should be noted that the percentage of men with PhDs (30%) is nearly twice that of women (16%), and the median salary for those with doctorates is higher than for those with bachelor's degrees or master's degrees. MBA degrees are another strong contributor to higher salaries, and 9% of male respondents have MBAs versus 6% of female respondents.

GENDER EQUITY



WHAT WOMEN HAVE TO SAY ABOUT PAY

Do women think that their opportunities for advancement and compensation in food science are equal to men's? Nearly half (46%) of 2017 respondents say that they are—a substantial increase from the 34% who responded that way in 2015.

The perspective shift may relate to the fact that women in their 20s and 30s represent nearly 31% of all survey respondents, and survey data show that the gender pay gap doesn't exist for those in their 20s and is much smaller for women in their 30s than it is for older women.

The survey included an international component, and women IFT members outside the United States saw gender-related career barriers as less of an issue. More than half (56%) said they felt their opportunities were equal, 24% said they were not, and 20% weren't sure.

PAY EQUITY STRATEGY BACKFIRES

Companies like Google, Facebook, and, most recently, Amazon have been leaders in an initiative to help shrink the gender salary gap by banning recruiters and human resources professionals from asking candidates about their salary history. In addition, more than a dozen states and cities have passed legislation to prevent the practice. Doing so can help level the playing field for women and members of minority groups, who have historically tended to earn less than men, the thinking goes.

Research findings from PayScale, a compensation data and software company, suggest it may not help, however. The company surveyed more than 15,000 job seekers last year and asked them whether they had disclosed their salaries at previous jobs during the process of interviewing for a new position.

PayScale's study produced some surprising results: that women who declined to disclose their salaries were offered 1.8% less than those who did reveal it. "But the opposite was true for men," says Lydia Frank, senior vice president of content strategy for PayScale. Men who did not share salary information received offers that were an average of 1.2% higher than those who did share it.

"Our takeaway is that whether asking the question potentially impacts salaries negatively for women because there's some unconscious bias at work or because some companies are using that number to set pay that is lower than they would have set otherwise … either way, it's bad news," says Frank.

PayScale recommends that employers stop asking job seekers about salary history and "price the job, not the person" by making a data-driven decision based on the value of a position in the current market.



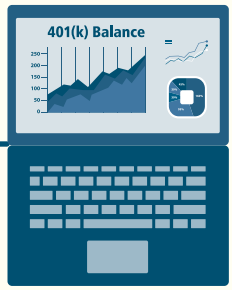
BENEFITS



THE BASICS

+90%

Employers who provide health insurance and vacation time



+70%

Employers who provide dental, vision, life and long-term disability insurance, a 401(k) or other retirement plan, and sick leave

CHECKING UP ON BENEFITS

Benefit packages are fast becoming one of the most important components of total compensation—for employees and employers alike. According to a recent *Employment Confidence Survey* conducted by Glassdoor, nearly four in five employees (79%) prefer new or additional benefits to a pay increase, with health insurance, paid time off, bonuses, and sick days leading the pack in types of benefits valued over a raise.

Of the preceding perks, all—with the exception of bonuses—were offered to 80%–90% of respondents. Other frequently provided benefits include association membership dues, short-term disability insurance, and flexible spending accounts, which were available to at least 60%; and bonuses or performance compensation, maternity/family leave, and tuition reimbursement, which were available to at least 50%.

There's no question that an attractive benefit package plays a major part in employers' ability to recruit and retain employees. Nearly three in five respondents to the Glassdoor survey indicated that benefits and perks were among their top considerations before accepting a job. IFT survey respondents currently looking for a new job also cited benefits as a key factor. "I have been given more responsibility without benefits," said one job seeker. Another noted, "The benefits are not very good at [my current] company. The pay is fine."

When asked about the factors that would motivate them to make a job change, respondents frequently mentioned better benefits, along with higher salary, and work/life balance, choices that reflect the results of a



HOW THE SURVEY IS DONE

The *2017 IFT Employment and Salary Survey*, conducted this past October, drew a 24% response rate among U.S. members, 2,535 of whom responded to the survey. Survey emails were managed by a private consulting firm, which kept all responses confidential. The 2017 survey included some nonmembers in the United States as well as international participants (both members and nonmembers). A total of 3,769 individuals took the survey. Unless otherwise specified, the findings highlighted in this article apply to members based in the United States.

"I think the food industry is exciting and multi-faceted. Everyone can relate somehow to food."

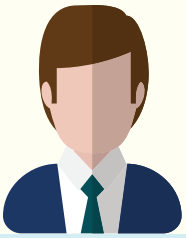


study by the *Harvard Business Review*, which listed 17 benefits and asked respondents to weigh the options when deciding between a high-paying job and a lower-paying job with more perks. At the top of the list of considerations were better health, dental, and vision insurance, followed by flexibility and improved work/life balance.

As the most expensive benefit, health insurance is provided to 95% of respondents, who reported that their employer pays an average of 69% of premium costs (includes both single and family coverage), with a median of $2,000 paid annually by the employee. The rising cost of healthcare is noted in the *Harvard Business Review* study, which calculated the average cost of individual coverage at $6,435 and family coverage at $18,142.

In addition to being a strong consideration in the decision to stay with an employer or seek a position elsewhere, benefits play a significant role in job satisfaction. When asked which factors contribute most positively to their work experience, respondents cited salary, benefits, work/life balance, and, increasingly, freedom and flexibility, among other factors. Summed up one respondent, "It's a mix of salary and benefits, intellectual stimulation, and opportunity to advance."

"I love the creativity and the science behind ingredients."



ON THE UP AND UP

Percentage Change From 2015 Survey and Percentage Who Report Receiving Benefit in 2017

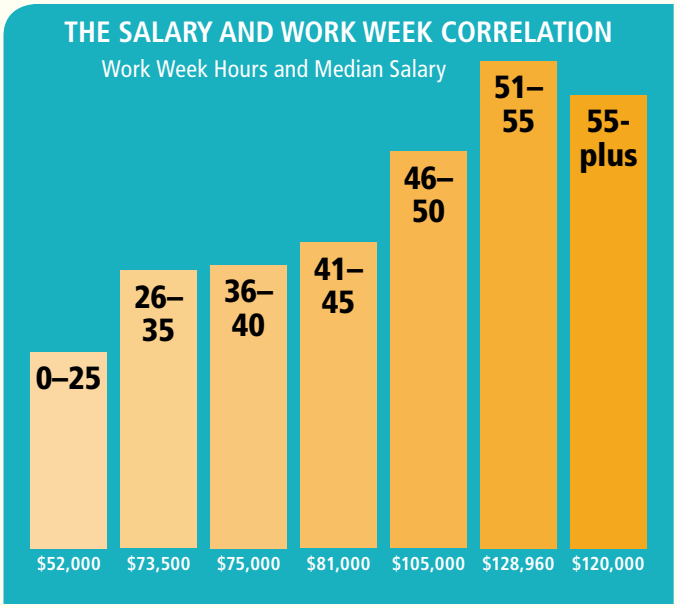
- +14% Sick Leave (80%)
- +9% Life Insurance (77%)
- +8% Vision (79%)
- +7% Flexible Spending Account (66%)
- +5% Telecommuting (48%)
- +4% Flex Time (39%)

LOSING GROUND

Percentage Change From 2015 Survey and Percentage Who Report Receiving Benefit in 2017

- -18% Employee Assistance Program (29%)
- -11% 401(k) or Other Retirement Plan (81%)
- -9% Fitness Facilities (30%)
- -9% Bonuses (56%)
- -9% Long-Term Care Insurance (6%)

PRODUCTIVITY



WHEN TO CALL IT A WEEK

Does logging extra hours on the job pay off financially? Yes, but only up to a point.

Salary survey data show that working more hours generally correlates with earning more money, but the median salary peaks at $128,960 among those with work weeks in the range of 51–55 hours. From there it starts declining.

There's a similar point of diminishing returns for workplace productivity, according to new research by University of California, Berkeley, management professor Morten Hansen. In his new book, *Great at Work: How Top Performers Do Less, Work Better, and Achieve More*, Hansen shares findings from a five-year study of 5,000 managers and employees. That study indicates that top performers work about 50 hours a week but manage their workloads carefully. They work smarter and are highly selective about the projects they take on. Because they have time to focus on them, they are able excel at those projects. "At work, this principle means that we should seek the simplest solutions—that is the fewest steps in a process, fewest meetings, fewest metrics, fewest goals, and so on, while retaining what is truly necessary to do a great job," Hansen wrote in "The Key to Success? Doing Less," an article that appeared in *The Wall Street Journal* earlier this year.



Overlong work weeks have also been associated with health risks. According to results of a meta-analysis published in *The Lancet* in 2015, the risk of developing a stroke increased by a third for those who worked more than 55 hours a week, and there was also some additional risk of coronary heart disease.

WHO EARNS WHAT

Roles	Median Salary
Flavorist	$123,500
Food Engineer	$108,500
Packaging Scientist	$98,600
Technical Sales Representative	$91,250
Product Manager	$91,000
Product Developer	$83,000
Chemist	$82,000
Sensory Evaluation Specialist	$76,000
Research Chef	$75,000
Food Scientist/Food Technologist	$71,820
Microbiologist	$65,000
Quality Assurance/Quality Control (not a supervisor or director)	$57,000



FOR THE LOVE OF FOOD SCIENCE

Most food scientists enjoy their work and find it meaningful. Nearly nine out of 10 survey respondents (86%) report being highly (37%) or somewhat (49%) satisfied with their jobs. As it has in past surveys, intellectual stimulation led the list of sources of job satisfaction, followed by salary and benefits. When asked about what factors most motivate them to make a job change, new challenges and responsibilities was the No. 1response, cited by 36% of respondents, ahead of the second-place response of a higher salary, which was noted by 29%.



"It is a fascinating and fulfilling career," said one respondent. "You learn new things all the time as you work with or create new ingredients. You get to see your creations on store shelves. You might even play a part in solving some of the food crisis situations around the world."

Many cited the diversified, dynamic nature of their roles. "The food industry is ever evolving and provides a fun and fast-paced work environment," said one respondent. Another observed that "food product development is a great marriage of technical skill and creativity"—a theme that was echoed by many.

The majority of respondents (58%) said they would definitely consider the field of food science and technology if they were currently preparing to enter the job market, and another 27% said they would probably do so. Only 1% said definitely not, with 10% unsure and 5% saying probably not.

Although it was ranked second in importance by respondents both as a job change motivator and as a source of satisfaction, compensation clearly is a major contributor to job satisfaction. Those with the highest level of job satisfaction had the highest median salary—$103,400 versus $70,500 for the 1% of respondents who reported being highly dissatisfied.

Among the small group of respondents who would opt for a different career, many complained about the administrative details of the work, especially paperwork and regulatory requirements. "It was really interesting in school, but in the real world, there are mainly QA management and regulatory positions open," said one respondent. "These positions are repetitive, highly stressful, require 50-plus hours a week, and involve a lot of paper pushing." Another put it even more succinctly: "Sick of regulations, restrictions, mountains of paperwork. A cubicle is not my natural environment."

Lack of management support and unrealistic expectations are other stressors mentioned by survey respondents. "It's ridiculous … marketers are looking for unicorn products and consumers are so confused you can't do anything right," one person observed. A handful complained about geographical limitations, including the fact that jobs tend to be concentrated in the Midwest.

Despite the increase in median salary in 2017, just 27% of respondents said they were highly satisfied with their current compensation, but 44% reported being somewhat satisfied.

Stress is a reality for most survey respondents. Nearly seven out of 10 respondents (69%) described their jobs as either stressful or moderately stressful, although just 10% characterized them as highly stressful.



JOB SATISFACTION



HIGHLY PAID = HIGHLY SATISFIED

Level of Satisfaction | Median Salary

Highly Satisfied
$103,400

Somewhat Satisfied
$86,000

Neither Satisfied Nor Dissatisfied
$75,000

Somewhat Dissatisfied
$76,490

Highly Dissatisfied
$70,500



GLOBAL EARNINGS SNAPSHOT

Country	Median Salary	Number of Respondents
Australia	$91,603	17
Brazil	$30,000	13
Canada	$62,400	102
China	$33,000	22
Germany	$100,340	10
India	$12,000	12
Mexico	$31,000	61
New Zealand	$82,800	15
United Kingdom	$56,000	17



The 2017 salary survey invited responses from food science professionals (members and nonmembers) around the world. The response rates were not high enough to be statistically significant in many countries, but median salaries for countries in which the response rate was 10 or more are included here. Currency exchange rates that prevailed at the time of the survey were used to convert salary data to U.S. dollars.

PROFESSIONAL DEVELOPMENT

TOP FIVE LEARNING RESOURCES

Percentage Who Use Them



73% Professional Publications

70% Trade Shows/ Conferences

62% Seminars

59% Webcasts

26% Textbooks

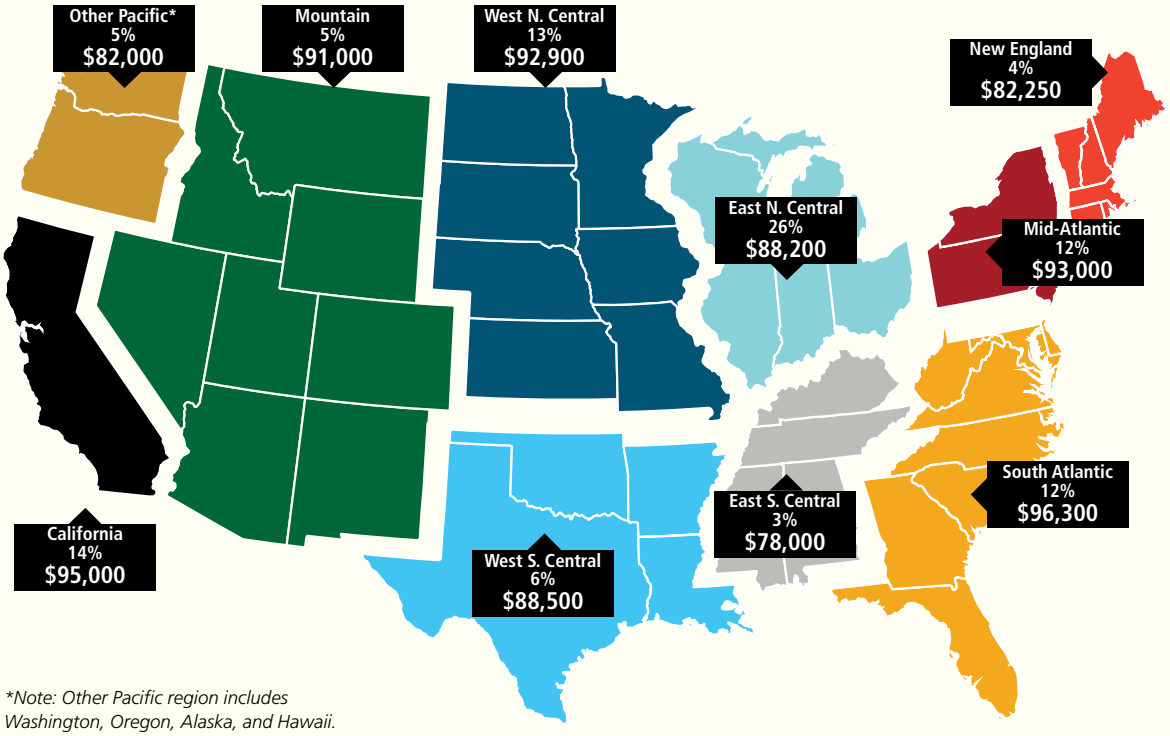
KEEPING CURRENT

Nearly seven out of 10 survey respondents (69%) said that their jobs require them to develop new competencies and skills. Skills related to new technologies were most in demand, sought by 61% of respondents, followed by those related to new government policies like the Food Safety Modernization Act, cited by 49%, and those related to continuous improvement, noted by 46%. Many respondents also noted the need for communication skills and mentioned management training and leadership skills development.

MAPPING OPPORTUNITIES

THE GEOGRAPHY OF FOOD SCIENCE CAREERS

Median Salaries by Geographical Region and Percentage of Respondents by Region



*Note: Other Pacific region includes Washington, Oregon, Alaska, and Hawaii.

TOP FIVE STATES FOR FOOD SCIENCE JOBS*

(States With the Highest Employment Level in the Occupation)

California
New Jersey
Ohio
Georgia
Minnesota

Statistics from the U.S. Bureau of Labor Statistics

FUTURE TRENDS

SIZE MATTERS

Where Respondents Think the Greatest Opportunities Will Be and Where They Would Prefer to Work

Small food start-ups have been getting a lot of press recently, but the greatest number of survey respondents said they would prefer to work for a mid-size company, and—to a slightly lesser extent—thought that was where the most new jobs will be created within the next three to five years.

Company Size	Greatest Opportunities	Preferred Workplace
Small	24%	21%
Mid-Size	42%	47%
Large	13%	16%
Unsure	21%	15%

RESPONDENT PROFILE

MEET THE MEDIAN



Median Age: 42

Median Years in the Profession: 15

Median Number of Employers: 3

Median Years With Current Employer: 5



SURVEY RESPONDENT CLOSE-UP

Number of Respondents	2,535
Response Rate	24%
Men	43%
Women	57%
Men Under Age 30	27%
Women Under Age 30	73%
Highest Degree in Food Science and Technology	63%
BS Degree	41%
MS Degree	26%
PhD Degree	22%
MBA	7%
Employed in Industry*	70%
Employed in Education	9%
Employed in Government	2%

**Data for food/beverage processors and ingredient manufacturers/suppliers combined*

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Employment & Salary Survey Findings

IFT conducts its Employment & Salary Survey biennially. This year's survey shows some changes in compensation levels, including an increase in median salary from $90,000 in 2015 and 2013 to $92,000 in 2017.

The results of past industry surveys have shown a large disparity between the salaries of men and women. However, in the 2013-2017 period, the income gap is narrowing and has disappeared among the youngest professionals in food science and technology.

- The median salaries for respondents age 20-29 are the same for women and men, at $60,000. This represents an increase from 2015, which was the first year in which women's salaries in this age range were slightly higher than men's. This also continues a trend of increases since the median salary decreased between 2009 and 2011.

Other highlights of this report include:

- Median salaries have risen overall, driven by an increase among those who hold master's or doctorate degrees with a corresponding decline among those who hold a bachelor's as their highest degree.
- Geographic patterns in salaries continue to hold, with the highest medians reported in the South Atlantic and West South Central regions and the lowest in the East South Central, Other Pacific, and New England regions.

History and Methodology

The IFT Employment & Salary Survey has a long history. IFT first surveyed its members in the U.S. in 1966. The surveys have served as a valuable resource for members and others practicing in the food science and technology industry, as well as human resources staff in food companies.

A total of 3,769 individuals participated in this year's survey, which includes the traditional base of U.S.-based IFT members and now non-U.S. members and non-members worldwide. The survey was conducted in October 2017 with email invitations sent by a private consulting firm, which kept all responses confidential. The response rate among U.S.-based members was highest, at 24.4%, followed by non-U.S. members at 17.5%, and non-members in the U.S. (9.8%) and outside the U.S. (7.4%).

Readers should note that illustrations are not drawn to scale, percentages may add up to more or less than 100% because of rounding, and not all of the survey questions asked are included in the following data. Unless otherwise specified, survey results reported here are for U.S. members.

Data

General Data

A comparison of the data compiled from each IFT survey shows that changes from recent years are slight. The 2017 survey response rate among U.S. members increased significantly from 2015, returning to levels previously observed in 2013 and 2009 and earlier. The 2,535 respondents allow us to reliably represent industry trends. In general, this report presents findings based on U.S. members, but it also presents some findings from non-members and international members. The overall median salary increased by 2.2% compared to 2015, although the longer-term change is relatively modest—an increase of 4.9% in eight years since 2009. **(Table 1**).

Table 1.

Trends over the past 51 years as indicated by previous IFT surveys[a]

Year	1966	1979	1993	1997	1999	2003	2007	2009	2011	2013	2015	2017
No. of questionnaires sent	7,100	12,370	18,916	19,538	19,478	13,667	11,139	10,874	10,901	10,282	11,178	10,817
No. of respondents	4,959	5,884	7,785	5,933	4,950	3,934	3,078	2,728	1,923	2,456	2,343	2,535
Percentage response[b] (%)	71%	48%	42%	31%	26%	29%	28%	25%	18%	25%	21%	24%
Men (%)	NA	79%	66%	61%	60%	56%	52%	51%b	50%	48%	45%	43%
Women (%)	NA	17%	34%	39%	40%	44%	48%	49%	50%	52%	55%	57%
Men under age 30 (%)	NA	NA	32%	31%	31%	26%	27%	24%	27%	35%	26%	27%
Women under age 30 (%)	NA	NA	68%	69%	69%	74%	73%	76%	73%	65%	74%	73%
Highest degree in Food Science/Technology (%)	17%	30%	41%	43%	44%	45%	44%	47%	54%	48%	48%	63%
BS degree (%)	NA	47%	47%	46%	46%	42%	41%	39%	39%	38%	42%	41%
MS degree (%)	NA	23%	23%	23%	23%	25%	25%	27%	26%	34%	26%	26%
PhD degree (%)	NA	25%	23%	22%	23%	24%	23%	25%	26%	24%	22%	22%
MBA degree (%)	NA	NA	6%	5%	5%	4%	6%	6%	7%	NA	7%	7%
Employed in Industry[c] (%)	74%	76%	67%	66%	68%	66%	69%	70%	68%	66%	74%	70%
Employed in Education (%)	12%	13%	9%	9%	9%	11%	8%	9%	10%	12%	13%	9%
Employed in Government (%)	8%	6%	4%	3%	3%	3%	2%	2%	2%	4%	3%	2%
R&D/Scientific/Technical function (%)	49%	50%	NA%	66%	70%	62%	63%	67%	68%	63%	66%	68%
Management function (%)	22%	20%	28%	10%	8%	10%	10%	8%	6%	8%	7%	6%
Sales & Marketing function (%)	12%	12%	11%	9%	10%	11%	9%	10%	10%	8%	9%	9%
Education function (%)	8%	9%	11%	8%	7%	11%	9%	9%	10%	12%	12%	9%
Government function (%)	NA	NA	9%	2%	2%	2%	3%	2%	2%	2%	2%	1%
Median Salary ($)	$13,000	$24,000–$25,999	$53,000	$60,000	$65,000	$73,150	$84,000	$87,700	$87,000	$90,000	$90,000	$92,000

[a] Surveys conducted prior to 2001 were conducted by mail; surveys after 2001 were conducted via the internet and were sent only to members in the U.S. whose e-mail addresses were known..

[b] The percentage of male respondents was rounded down, and the percentage of female respondents rounded up.

[c] Data only for Food/Beverage Processor and Ingredient Manufacturer/Supplier combined.

Throughout this report, if the number of respondents in any category was fewer than five, the data were not included to ensure reliability of the data points.

Profile of Respondents

The snapshot of the food science industry in **Figure 1** reveals that respondents are employed full-time almost exclusively, although those who are unemployed seem much less likely to complete such a survey.

A steady trend in increasing employment of women in food science continued, with women comprising a more substantial majority than in 2015 **(Table 2)**. In age, respondents are somewhat evenly distributed, with 65% between ages 30 and 59 **(Table 3)**. The field is growing slightly more diverse, with a decreasing number of White/Caucasian respondents compared to previous surveys **(Table 4)**.

Figure 1.

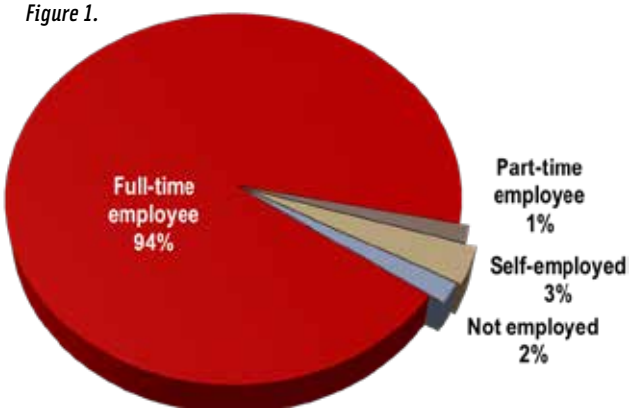


Table 2.

Sex of Survey Participants

All Ages	%
Men	43
Women	57
Under age 30	
Men	26
Women	74

Table 3.

Age Distribution of Survey Participants

Age Range	%
20s	21
30s	25
40s	18
50s	21
60s	13
70s	2

Table 4.

Race/Ethnicity of Survey Participants

Race/Ethnicity	%
White/Caucasian	76
Asian/Pacific Islander	13
Hispanic	5
Black/African-American	4
Other/Mixed	2

The median salary by gender showed an increase of 1.0% among men since 2015 and an increase of 3.5% among women. Men showed a slight increase of $100 in average bonus since 2015 if they received one, while women showed a sharp increase of $1,500, or 25%.

Median stocks awarded increased for both genders, with men who received stock compensation reporting an increase of $2,000 or 10% since 2015, and women reported an increase of $1,000 or 11% since 2015. (These figures are calculated only among individuals reporting this form of compensation.) Total earnings combined, including annual salary and cash bonus and/or stocks if awarded to the individual, show an increase of $1,500 or 1.3% since 2015 for men and an increase of $3,000 or 3.6% for women.

Gender wage disparities remain in the U.S. According to recent data, women's median weekly earnings are 79% of men's.[1]

Table 5.

Median Values of Salary, Cash Bonus, and Stocks by Sex, all Degrees, Years of Experience, and Type of Business combined

	Men	Women	All Respondents
Salary	$106,000	$81,789	$92,000
Cash bonus	$15,000	$7,500	$10,000
Stocks	$22,000	$10,000	$15,000
Total	$120,000	$87,000	$99,000

[1]*U.S. Department of Labor, U.S. Bureau of Labor Statistics, Economic News Release: Usual Weekly Earnings of Wage and Salary Workers, October 18, 2017.*

Table 6.

Median Salaries by Sex, and Age			Total compensation	
Age	Men	Women	Men	Women
20-29	$60,000	$60,000	$61,500	$62,800
30-39	$87,000	$82,000	$97,480	$86,500
40-49	$120,000	$104,500	$139,500	$116,750
50-59	$130,000	$110,000	$150,000	$120,000
60-69	$130,000	$111,600	$150,000	$120,000

Table 6 examines patterns by gender more closely. Median salaries in the youngest age category show parity in salary, and women earn more in total compensation. A salary gap exists in higher age ranges, as women's salaries are 6% lower than men's in their 30s, 13% lower in their 40s, 15% lower in their 50s, and 14% lower in their 60s. This suggests that the traditional gap between salaries by gender will decrease over time among newer hires.

Table 7.

Median Starting Salary ($)			
Year	Men	Women	Overall
1993	$32,250	$25,000	$28,200
1995	$32,000	$30,000	$30,000
1997	$35,500	$31,200	$32,000
1999	$40,000	$37,000	$38,550
2003	$46,000	$40,000	$40,000
2005	$52,800	$44,000	$48,000
2007	$60,000	$45,000	$45,800
2009	$70,000	$44,100	$50,000
2011	$52,000	$43,000	$44,000
2013	$55,000	$50,000	$50,000
2015	$52,000	$50,000	$50,000
2017	$48,250	$51,000	$50,000

Median starting salaries, defined by us as earnings reported by respondents with 0-1 year of experience in the field post bachelor's degree, have remained the same since 2013 at $50,000 **(Table 7)**.

Women's median starting salaries rose slightly, while men's continue to decline since 2013 and women's starting salaries are 5.7% higher

Table 8.

Distribution of Degrees Earned			
Degree	Men (%)	Women (%)	Overall (%)
PhD	30	16	22
Masters	21	30	26
MBA	9	6	7
Baccalaureate	35	46	41
Other/none	4	3	3

The distribution of highest degrees earned **(Table 8)** compared to 2015 shows a small decrease in baccalaureate degrees. In 2017, slightly more women hold doctorates and slightly fewer men hold baccalaureate degrees compared to 2015.

Table 9.

Median Salary by Degree ($)				
Year	Bachelors'	Masters'	Doctorate	MBA
1993	$47,060	$51,375	$65,000	$68,000
1995	$50,000	$54,000	$68,000	$65,000
1997	$54,000	$60,000	$72,000	$75,000
1999	$57,000	$63,000	$76,000	$82,000
2003	$65,000	$73,500	$85,000	$95,000
2005	$70,000	$76,000	$92,500	$100,000
2007	$75,000	$80,000	$98,300	$97,000
2009	$79,000	$85,000	$103,000	$107,500
2011	$80,000	$85,000	$105,000	$103,500
2013	$75,000	$90,000	$95,000	N/A
2015	$78,800	$88,000	$110,000	$120,000
2015	$76,495	$88,000	$112,250	$120,000

The 2017 survey shows that median salaries rose 2.0% for those holding a doctorate, remained the same for those with a master's or an MBA, and declined 3% for those holding a baccalaureate degree **(Table 9)**.

Trends over the past five surveys tell an interesting story, as employees with a bachelor's as their highest degree have seen a 3% decrease in median salary since 2009, while those with a master's, doctorate, or an MBA show increases of 3.5%, 9.0%, and 11.6%, respectively. The labor market clearly is rewarding those with higher education, although annualized salary growth has been relatively modest due to the recession and recovery in the U.S.

Table 10.

Current Employment	Degree in Food Science/Technology
	Yes (%)	No (%)
Full-time Employee	96	93
Part-time Employee	2	2
Self-Employed	2	5

Those who have a degree in food science/technology are more likely to have full-time employment, while those who do not hold a degree in the field are more likely to be self-employed **(Table 10)**.

Table 11.

Highest Degree Earned		
	U.S. Degree (%)	Non-U.S. Degree (%)
Bachelors'	44	27
MBA	7	5
Masters'	27	24
Doctorate	20	40
None/other	3	3

The highest degree earned by U.S. members who earned a degree in the U.S. is most often a bachelor's or a master's, while U.S. members who earned a non-U.S. degree are much more likely to hold a doctorate and are less likely to hold a bachelor's **(Table 11)**. Since 2015 there has been a shift among those with a U.S. degree, with 4 percentage points fewer holding a bachelor's and an increase of 3 points holding a doctorate and 1 point holding an MBA. In contrast, the proportion of non-U.S. degree holders with a doctorate declined sharply by 12 points, those with a master's degree declined 3 points, and the proportion holding a bachelor's rose 13 points. This volatility may be due to the smaller number of respondents among U.S. members holding non-U.S. degrees.

The academic background (highest degree) has some relationship with the primary function where respondents work. Far more (72%) with their highest degree in Food Science/Technology work in an R&D/scientific/technical function, while only 54% of those who did not earn their highest degree in that field did. Those who earned their highest degree in another field are more likely to be working in sales and marketing or management.

Table 12.

Primary Function	Degree in Food Science/Technology	
	Yes (%)	No (%)
R&D/Scientific/Technical	74	60
Management	5	9
Sales & Marketing	6	14
Purchasing	0	1
Consultants	2	3
Government	1	1
Education	10	8
Other	2	3

Academic background (highest degree) influences where respondents work **(Table 12)**. More (74%) with their highest degree in food science/technology work in an R&D/scientific/technical function. Those who earned their highest degree in other fields are more likely to be in sales and marketing or management.

Table 13.

Field of Highest Degree	(%)
Food Science/Technology	63
Business Marketing	11
Nutrition	5
Food Engineering	3
Chemistry	3
Microbiology	3
Meat Sciences/Technology	3
Biological Sciences	2
Agriculture	2
All others	5

Food science/technology continues to represent a majority of highest degrees of respondents **(Table 13)**. Business/marketing declined by 2 percentage points since 2015. Nutrition and chemistry also declined slightly.

Table 14.	
Years of Experience	% of Respondents
0-1	5
2-5	19
6-10	17
11-15	11
16-20	10
21-25	9
26-30	10
>30	18

Years of experience typically show a steady decline in the share that each entry year accounts for over time **(Table 14)**. For example, the first year of experience accounts for 5% of all respondents, each of the four years in the 2-5 year range accounts for slightly fewer respondents, and each year in the 6-10 year category accounts for 3.4% of respondents. However, above this level of experience, every year of experience accounts for about 2% per year of respondents. This suggests that employee retention and/or activity in IFT declined for people who entered the field in 2007 or earlier.

Median salaries increase steadily with total years of experience through the first 25 years or so of respondents' careers **(Table 15)**. Median salaries seem to peak in the 31-35 year range for those with a bachelor's or doctorate as their highest degree. They peak earlier for those with an MBA, and later for those with another master's degree.

Median salary for those with a bachelor's degree peaks at $134,500 for men in the 31-35 year range of experience, while women peak earlier at 21-25 years, then decline slightly in the next 15 years of experience ranges.

Among men with a master's, median salary peaks at $145,000 with 31-35 years and women peak earlier, at $125,000 with 21-25 years.

Among men with an MBA, median salary peaks at $173,375 with 36-40 years, while women peak at $170,500 with 31-35 years (and correspondingly much smaller samples).

Gender-related patterns continue to show a pattern of near-parity among the least experienced individuals, but women show a sharp drop relative to men in the 6-10 years range of experience among those who have a bachelor's as their highest degree.

In contrast, near-parity continues among those with a master's degree through Year 10 and among those with a doctorate, through Year 15. MBAs show a higher differential favoring men out the gate that closes only in the 21-35 year range.

Table 15.			
Degree/Years Since Baccalaureate Degree: Median Salaries			
Bachelor's	Overall	Men	Women
0-1	$50,000	$47,625	$51,500
2-5	$57,000	$56,250	$57,000
6-10	$73,000	$82,750	$69,850
11-15	$92,000	$98,500	$92,000
16-20	$106,545	$110,000	$103,500
21-25	$116,750	$129,000	$112,500
26-30	$118,500	$128,300	$107,000
31-35	$115,000	$134,500	$109,151
36-40	$120,000	$123,000	$105,000
>40	$106,000	$129,250	$72,500
Overall	$76,495	$92,850	$71,000
Master's			
0-1	$55,000	$62,500	$55,200
2-5	$68,000	$70,500	$68,000
6-10	$82,375	$84,318	$82,000
11-15	$100,000	$105,300	$98,000
16-20	$110,000	$117,500	$109,500
21-25	$135,693	$140,700	$125,000
26-30	$120,750	$131,000	$107,000
31-35	$133,000	$145,000	$127,000
36-40	$120,000	$121,000	$113,360
>40	$135,000	$133,500	N/A
Overall	$88,000	$100,000	$84,000

Table 15. Continued			
Degree/Years Since Baccalaureate Degree: Median Salaries			
MBA	Overall	Men	Women
0-1	$49,660	N/A	N/A
2-5	$70,000	$97,000	$66,000
6-10	$95,000	$95,000	$87,000
11-15	$100,000	$120,000	$96,375
16-20	$130,000	$137,500	$113,000
21-25	$125,000	$125,000	$128,750
26-30	$132,000	$131,000	$132,000
31-35	$168,350	$168,350	$170,500
36-40	$143,000	$173,375	$118,000
>40	$140,000	$140,000	N/A
Overall	$120,000	$126,200	$104,000
Doctorate			
0-1	$82,250	$76,400	$82,250
2-5	$80,000	$78,000	$80,400
6-10	$94,000	$96,000	$92,000
11-15	$110,000	$110,000	$113,357
16-20	$120,000	$123,000	$115,000
21-25	$130,000	$135,000	$124,500
26-30	$145,000	$145,000	$142,500
31-35	$142,000	$145,900	$133,250
36-40	$137,850	$147,000	$120,000
>40	$145,500	$150,000	$120,000
Overall	$112,500	$120,000	$101,000

Men with a doctorate peak at the end of their career, at $150,000 in the 40+ year range of experience after a very gentle progression. Women peak in the 26-30 year range at $142,500.

Table 16.

Percent of Response and Median Salary by Location ($)

	%	Median Salary
New England	4	$82,250
Mid-Atlantic	12	$93,000
South Atlantic	12	$96,300
East South Central	3	$78,000
West South Central	6	$88,500
East North Central	26	$88,200
West North Central	13	$92,900
Mountain	5	$91,000
Other Pacific	5	$82,000
California	14	$95,000

Median salaries are highest in the South Atlantic region, followed by California, Mid-Atlantic, and West North Central. The lowest levels are reported in East South Central, Other Pacific (excluding California), and New England **(Table 16)**.

Table 17.

Type of Employer

	%
Food/beverage manufacturer/processor	43
Ingredient manufacturer/supplier	27
Academic/educational institution	9
Consulting	5
Government	2
Food service	2
Independent testing laboratory	2
Other	10

The distribution of U.S. members among employer types shows a resumption of a slow trend away from the food/beverage processor sector, which has dropped from 47% in 2009 **(Table 17)**.

Those who work in the food ingredient manufacturing/supplier category continue to increase, by 2 percentage points from 2015, while academic/educational institutions and consulting remain constant.

Table 18.				
Food/Beverage mfg/processor	**Bachelors'**	**Masters'**	**MBA**	**Doctorate**
Combined	$72,000	$87,000	$118,500	$125,000
0-1 years of experience	$50,000	$60,750	N/A	$82,900
2-5 years of experience	$57,000	$68,521	$70,000	$88,875
6-10 years of experience	$72,000	$80,500	$95,000	$100,000
11-15 years of experience	$86,239	$100,000	$95,000	$133,000
16-20 years of experience	$105,000	$109,000	$118,500	$139,000
21-25 years of experience	$110,000	$138,000	$125,000	$146,250
26-30 years of experience	$113,500	$118,500	$132,500	$152,475
31-35 years of experience	$110,000	$118,500	$165,000	$170,000
36-40 years of experience	$120,000	$120,000	$160,375	$128,667
> 40 years of experience	$103,000	N/A	N/A	N/A
Ingredient mfg/supplier				
Combined	$85,000	$93,480	$128,700	$114,000
0-1 years of experience	$47,500	$55,000	N/A	N/A
2-5 years of experience	$56,000	$70,500	N/A	$88,500
6-10 years of experience	$71,500	$85,100	$110,000	$96,500
11-15 years of experience	$100,000	$100,500	$121,000	$128,825
16-20 years of experience	$109,500	$125,000	$137,500	$130,492
21-25 years of experience	$132,000	$138,750	$138,750	$145,000
26-30 years of experience	$127,000	$118,250	$141,500	$140,000
31-35 years of experience	$125,000	$167,000	$210,000	$196,500
36-40 years of experience	$123,000	$127,500	$105,000	N/A
>40 years of experience	$150,000	N/A	$195,000	N/A
Consulting				
Combined	$81,500	$76,250	$150,000	$110,000
0-1 years of experience	N/A	$32,532	N/A	N/A
2-5 years of experience	$60,000	$66,000	N/A	$63,000
6-10 years of experience	$95,300	$76,250	N/A	$125,000
11-15 years of experience	N/A	$101,500	N/A	$100,000
16-20 years of experience	N/A	N/A	N/A	$140,000
21-25 years of experience	$147,500	$156,000	N/A	$75,000
26-30 years of experience	N/A	$142,000	N/A	$168,500
31-35 years of experience	$90,500	$114,000	N/A	$145,900
36-40 years of experience	$120,000	$30,000	$240,000	$100,000
>40 years of experience	N/A	N/A	$195,000	$100,000
Educational Institution				
Combined	N/A	N/A	$49,660	$100,000
0-1 years of experience	N/A	N/A	N/A	$82,500
2-5 years of experience	N/A	N/A	N/A	$71,000
6-10 years of experience	N/A	N/A	N/A	$80,000
11-15 years of experience	N/A	N/A	N/A	$80,789
16-20 years of experience	N/A	N/A	N/A	$88,500
21-25 years of experience	N/A	N/A	N/A	$112,000
26-30 years of experience	N/A	N/A	N/A	$120,000
31-35 years of experience	N/A	N/A	N/A	$121,500
36-40 years of experience	N/A	N/A	N/A	$155,000
>40 years of experience	N/A	N/A	N/A	$150,000

Table 18 shows how different median salaries can be by degree earned and years of experience.

Overall, respondents in food/beverage manufacturing & processors ($86,000) and academic/education ($88,000) earn considerably less than those in consulting ($92,500) and ingredient manufacturers & suppliers ($96,200).

Median salary rose in food/beverage by 7% for employees holding doctorates and by 1% for those with MBAs, while those with other master's and bachelor's degrees each declined by about 1.5% since 2015.

In ingredients, median salary trends were more pronounced. Those with a doctorate or MBA rose 10.7% and 5.5%, respectively. Those holding a master's rose 2.7%, but those with a bachelor's showed a decrease of 4.5% since 2015.

Consulting showed some odd fluctuations over time, with annual salary dropping 24% for those with a master's and 8% for those with a doctorate, while MBAs increased 50% and those with a bachelor's remained stable. In education, median salaries rose 12.2% among those holding a doctorate.

Table 19.

Both Sexes Combined	Bachelors'	Masters'	MBA	Doctorate
Food/beverage manufacturer/processor	$72,000	$87,000	$118,500	$125,000
Ingredient manufacturer/supplier	$85,000	$93,480	$128,700	$124,000
Processing equipment manufacturer/supplier	$81,250	N/A	N/A	N/A
Packaging materials	N/A	$93,318	N/A	N/A
Contract processing/packaging	$61,200	$100,000	N/A	$79,500
Consulting	$81,500	$76,250	$150,000	$110,000
Academic/educational institution	$39,500	$60,000	N/A	$100,000
Private research facility	$95,000	N/A	N/A	$77,500
Food service	$88,000	$96,748	$98,741	N/A
Food retailer	$88,000	$93,000	N/A	N/A
Government	$65,000	$87,000	N/A	$117,362
Independent testing laboratory	$80,000	$102,500	N/A	$96,172
Publisher	N/A	N/A	N/A	N/A
Scientific/trade association	$82,500	$95,400	N/A	$126,000
Other	$80,000	$105,000	$115,500	$120,000
Female				
Food/beverage manufacturer/processor	$70,000	$82,000	$99,450	$113,750
Ingredient manufacturer/supplier	$76,900	$87,850	$131,500	$99,000
Food service	$63,100	N/A	N/A	N/A
Food retailer	$78,000	$70,500	N/A	$100,000
Government	$39,000	$60,000	N/A	$88,000
Independent testing laboratory	$91,000	N/A	N/A	$78,500
Scientific/trade association	$92,700	$80,000	$90,241	N/A
Other	$89,000	$82,000	N/A	N/A
Male				
Food/beverage manufacturer/processor	$85,000	$100,000	$125,000	$128,667
Ingredient manufacturer/supplier	$110,000	$100,050	$123,500	$130,000
Processing equipment manufacturer/supplier	$90,000	N/A	N/A	N/A
Contract processing/packaging	N/A	$125,000	N/A	N/A
Consulting	$112,000	$117,500	$150,000	$117,500
Academic/educational institution	N/A	$55,000	N/A	$107,000
Private research facility	$105,000	N/A	N/A	$75,000
Food service	$83,500	$100,000	$136,500	N/A
Food retailer	$84,000	$110,000	$116,000	N/A
Government	N/A	$95,000	N/A	$120,000
Independent testing laboratory	$85,000	$105,000	N/A	$95,000
Scientific/trade association	N/A	N/A	N/A	$118,000
Other	$94,250	$120,000	N/A	N/A

By degree, private research facilities, food service, and food retail pay the highest median salaries for respondents with a bachelor's as their highest degree attained **(Table 19)**.

Those who have completed a master's earn most in independent testing laboratories and contract processing/packaging.

Those with an MBA earn the most in consulting, while those with a doctorate earn the most in food/beverage, associations, and ingredient manufacturer/suppliers.

Table 20.

Size of Employer	%
<10	5
10-24	3
25-99	11
100-499	22
500-999	9
1-2.49K	12
2.5-4.9K	8
5,000+	30

Table 20 shows that 30% of respondents work for large organizations with 5,000 or more employees, while only 8% work for organizations with fewer than 25 employees. 33% work in organizations with 25 to 499 employees and 29% work for organizations with 500 to 4,999 employees.

Table 21 shows that the highest paying positions are generally vice president or president/owner, and the management category pays considerably more than education, purchasing, sales and marketing, government, and R&D/scientific/technical. Once again, most positions pay progressively more in larger organizations, although the largest firms do pay more than other firms, unlike in 2015 when the next-largest category paid better comparatively for most positions.

Table 21.

General Sector	All sizes combined	<100	100-499	500-999	1,000-4,999	5,00 or more
R&D/Scientific/Technical	$90,000	$78,000	$81,000	$93,500	$92,000	$99,700
Management	$132,500	$132,000	$145,000	$88,500	$110,000	$150,000
Sales & Marketing	$112,000	$97,000	$120,000	$100,000	$111,000	$112,000
Purchasing	$113,000	N/A	$81,446	N/A	N/A	N/A
Consulting	$70,000	$55,000	$60,000	$75,000	$82,500	$80,000
Government	$100,000	$95,000	$125,000	$50,000	$73,000	$118,000
Education	$114,179	N/A	$100,000	$103,612	$122,000	$120,000
Other	$80,055	$90,000	$60,000	$92,000	$76,076	$101,357
R&D/Scientific/Technical						
Vice President	$181,000	$165,000	$156,500	$187,000	$242,000	$250,000
Director of Research	$132,000	$95,000	$129,500	$133,500	$123,000	$172,000
Technical Director	$130,000	$110,000	$118,350	$125,000	$150,000	$150,000
Quality Assurance/Quality Control Director/ Manager/Supervisor	$88,000	$65,000	$79,000	$81,000	$95,000	$100,000
Quality Assurance/Quality Control	$57,000	$53,000	$44,000	$56,000	$60,000	$68,000
Technical Services Director	$112,000	$101,000	$108,000	$128,369	$100,000	$123,000
Laboratory Director	$106,000	N/A	$97,344	$127,000	N/A	$128,500
Product Developer	$83,000	$60,000	$76,000	$84,000	$96,730	$86,816
Chemist	$82,000	$87,500	$75,000	$80,748	$94,500	$72,500
Flavorist	$123,500	$122,000	$75,000	$103,000	$155,500	$170,000
Food Engineer	$108,500	N/A	N/A	$101,000	$90,000	$112,000
Food Scientist/Technologist	$71,820	$60,000	$64,000	$70,000	$73,400	$80,500
Microbiologist	$65,000	N/A	N/A	$40,560	$67,000	$78,500
Nutritionist	$95,500	N/A	N/A	N/A	$101,000	$98,730
Packaging Scientist	$98,600	N/A	N/A	$114,000	N/A	$98,300
Physiologist	$64,000	N/A	N/A	N/A	$47,000	N/A
Research Chef	$75,000	$70,000	$74,000	$91,500	$69,500	$91,000
Sensory Evaluation Specialist	$76,000	$62,500	$78,000	$107,000	$63,000	$85,000
Other R&D/Scientific/Technical	$79,000	$50,000	$67,000	$92,676	$78,326	$100,050
Management (other than R&D, Sales & Marketing)						
President, Owner, Partner, Officer	$162,500	$150,000	$285,000	N/A	N/A	N/A
Vice President, except R&D, Sales & Marketing	$178,000	$177,500	$128,000	$210,500	$187,500	$229,609
General Manager	$138,500	$127,500	$143,500	N/A	N/A	$140,000
Engineering/Processing Director/Manager/Sup.	$128,000	N/A	$124,500	N/A	$150,000	$119,000
Plant Manager/Supervisor	$82,000	N/A	N/A	N/A	$47,500	$73,100
Other Management	$95,000	$100,000	$90,000	$90,000	$85,000	$107,000

Table 21. Continued

Sales & Marketing	All sizes combined	<100	100-499	500-999	1,000-4,999	5,00 or more
Vice President	$150,000	$150,000	$156,000	N/A	N/A	N/A
Director	$147,500	$93,000	$160,000	N/A	$160,500	$153,500
Manager	$115,500	$88,000	$120,000	N/A	$120,000	$106,000
Product Manager	$91,000	N/A	$83,000	N/A	$95,000	$87,000
Market Researcher	$62,000	$97,000	N/A	N/A	N/A	N/A
Sales Representative	$105,000	$88,000	$102,250	$117,000	$111,000	$102,500
Broker	N/A	N/A	N/A	N/A	N/A	N/A
Technical Sales Representative	$91,250	$84,000	$91,500	N/A	$81,000	$93,000
Other Sales & Marketing	$76,500	N/A	N/A	N/A	N/A	N/A
Purchasing						
Purchasing/Procurement Director/Manager	$113,000	$101,500	$97,500	$116,000	N/A	N/A
Purchasing Agent/Buyer	$60,000	N/A	$60,000	N/A	N/A	N/A
Consulting						
Technical/Scientific	$83,000	$80,000	$100,000	N/A	$132,000	$117,250
Management	$117,500	$200,000	N/A	N/A	$140,000	N/A
Other Consulting	$32,500	N/A	N/A	N/A	N/A	N/A
Government						
Management/Administrative	$138,000	N/A	$105,269	$105,000	$136,000	$162,000
Research	$94,688	$78,000	$115,000	$107,224	$94,688	$119,724
Inspection	$55,000	$50,000	N/A	$43,000	N/A	$92,500
Other Government	$100,000	$63,000	N/A	N/A	$122,000	$100,000
Education						
Graduate teaching only	N/A	N/A	N/A	N/A	N/A	N/A
Undergraduate teaching only	$90,000	N/A	$78,500	N/A	$93,000	$79,500
Graduate teaching, some research	$88,000	N/A	N/A	N/A	$88,000	$116,406
Undergraduate teaching, some research	$86,236	N/A	$70,000	N/A	$99,500	$86,472
Research only	$47,476	N/A	$36,000	N/A	$51,250	$82,000
Research, some graduate teaching	$85,000	$85,000	$56,000	N/A	$98,000	$79,500
Research, some undergraduate teaching	$90,000	$121,500	$73,500	$75,000	$87,625	$112,000
Administration	$155,500	N/A	$62,500	N/A	$170,500	$191,631
Extension	$81,789	N/A	N/A	N/A	$91,500	$81,578
Other education	$102,296	N/A	N/A	$120,500	$100,560	$124,000
Other job title/function	$97,707	$87,000	$65,000	$87,000	$99,000	$118,795

Table 22.

	Total Employers, Food-related Profession (%)	Years with Current Employer (%)	
0-1	26	0-1	18
2	23	2-5	37
3	20	6-10	17
4	13	11-15	9
5-6	11	16-20	7
7+	7	>20	12
Median	3.0		5.0 years

On average, food science professionals stay with an employer for several years before moving on **(Table 22)**. Respondents report being a median of 42 years old, with a median of 15.0 years of professional food-related work experience since their bachelor's degree, have had 3 employers thus far during their food-related profession, and report working a median of 5 years for their present employer.

Table 23.

Benefits Provided by Employer

	(%)
Health insurance	95
Vacation	91
Dental insurance	89
Retirement program (such as 401K)	81
Sick Leave	80
Vision Insurance	79
Life insurance	77
Disability insurance, long term	70
Association membership dues	69
Disability insurance, short term	68
Flexible spending account	66
Maternity/family leave	59
Bonus/performance compensation	56
Tuition reimbursement	50
Ability to work at home	48
Reimburse prof. cert./recertification	40
Flex time	39
CE courses/Webinars via internet	33
Relocation expenses	33
Fitness facilities/club member	30
Employee assistance program	29
CE courses, on-site	28
CE programs, off-site	27
Profit-sharing	17
Severance policy	15
Pension	14
Stock options	13
Legal assistance	12
Company automobile	10
Sabbatical, paid	7
Auto insurance	6
Long-term care	6
Retiree health insurance	6
Sabbatical, unpaid	5
Retiree dental insurance	4
Child care	4
Homeowner's insurance	3
Other benefits	6

More than 90% of U.S. members indicate that their employer provides health insurance and vacation **(Table 23)**. At least 70% have dental, vision, life, and long-term disability insurance, retirement, and sick leave.

Association membership dues, short-term disability insurance, and flexible spending accounts are available to at least 60%, and bonuses or performance compensation, maternity/family leave, and tuition reimbursement are available to at least 50% of U.S. members.

Among the more significant changes from 2015 include far more prevalent sick leave (reported by 14 percentage points more, from 66% in 2015), life insurance (+9 points), vision insurance (+8 points), and long-term disability insurance (+5 points), flexible spending accounts (+7 points), and flex time and ability to work at home (+4-5 points each).

There are decreases in the number who have access to retirement (-11 points), an employee assistance program (-18 points), fitness facilities, bonuses, and long-term care (-9 points each), and relocation and CE online or on-site (-7 points each).

Other benefits offered to fewer respondents in 2017 include association membership dues and professional cert/recertification fees, severance, pension, legal assistance, and off-site CE programs.

Table 24.

Health Insurance: premium paid, coverage

	(%)
Employer share (mean)	69
Employee share	31
Median paid annually by employee	$2,000
Figure includes:	
Self	88
Spouse/partner	50
Children	38
Other dependents	1

Respondents report that their employer pays a mean of 69% of their premium and the employee pays the remaining 31% **(Table 24)**. The employee pays an annual median of approximately $2,000 for their health insurance premiums. This figure generally includes the individual (88%), while 50% report that it also covers their spouse/partner, and 38% also have their children covered.

Compared to 2015, respondents report that employers are covering slightly more of the premium, while they are paying a median of $340 less. The figures in 2017 are slightly less likely to include self, spouse/partner, and children, which helps account for the odd outcome of paying less to cover slightly more.

Table 25.

Median Income ($) by CFS

	CFS Recipient	Non-Certified
Salary	$107,000	$89,000
Bonus	$10,220	$10,000
Stocks	$10,000	$15,000
Combined	$117,189	$97,000

The Certified Food Science (CFS), debuted by IFT in 2013 to recognize applied scientific knowledge and skills of food scientists, has been shown to be a reliable differentiator in earnings of professionals who hold the designation. Professionals who hold the CFS earn a median salary 20% higher than those who do not **(Table 25)**. Although their bonus and stocks are roughly equal or lower when awarded to them, the combined total income is 21% higher for those who hold the CFS.

Table 26.

Satisfaction Level	Median Salary
Highly Satisfied	$103,400
Somewhat Satisfied	$86,000
Neither Satisfied nor dissatisfied	$75,000
Somewhat dissatisfied	$76,490
Highly dissatisfied	$70,500

Those who were highly satisfied with their jobs report a median salary of $103,400, much higher than the median salary of $86,000 reported by those who are somewhat satisfied, and the $70-$77,000 reported by those with lower levels of satisfaction **(Table 26)**.

Measuring Job Satisfaction

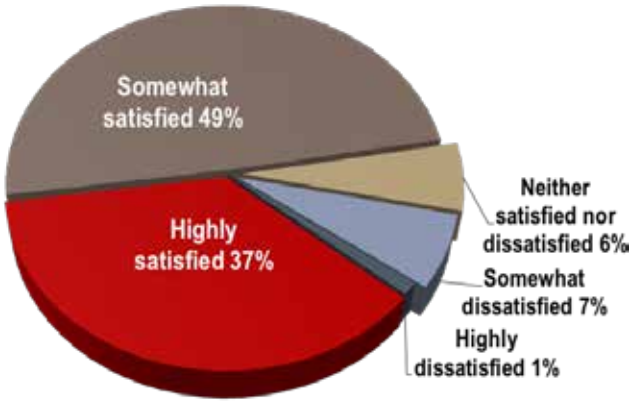


Figure 2. How would you rate your level of job satisfaction?

Sources of Job Satisfaction

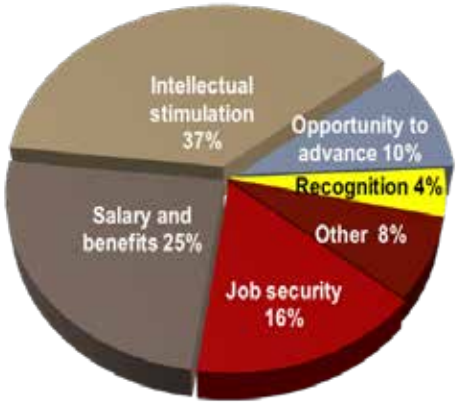


*Figure 3. What factor contributes most positively to your job satisfaction? **

* Total does not equal 100% due to rounding.

The majority of respondents are happy with their jobs: 37% were highly and 49% somewhat satisfied, similar to 2015 levels. Only 8% were dissatisfied and 6% were neither satisfied nor dissatisfied **(Figure 2)**.

Many said that intellectual stimulation (37%), salary and benefits (25%), and job security (16%) were key to their job satisfaction. Opportunities to advance and recognition are sometimes contributing factors. **(Figure 3)**.

Assessing Stress



Figure 4. How stressful is your job?

Table 27.

Stress Level	Median Salary
Highly Stressful	$110,000
Stressful	$98,765
Moderately stressful	$86,000
Occasionally stressful	$80,000
Not stressful	$75,000

Offsetting this high satisfaction is a high level of stress. Many (41%) of U.S. members characterized their jobs as highly stressful or stressful, and another 38% felt it was moderately stressful **(Figure 4)**. Those reporting the highest stress earn the most, while those who report the lowest stress earn the least **(Table 27)**.

Sources of Stress on the Job

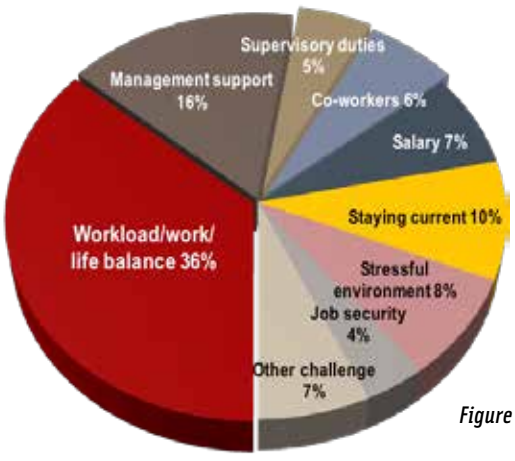


Figure 5. What is the biggest challenge you face on the job?

Workload/work-life balance (36%) is the most commonly reported biggest challenge on the job, followed by management support (16%), and many factors indicated by 4% to 9%, including a stressful environment, keeping current, salary, co-workers, supervisory duties, and job security **(Figure 5)**. Fewer indicate workload/work-life balance (-5 percentage points), but otherwise challenges have changed only slightly since 2015.

Clocking in to the Job

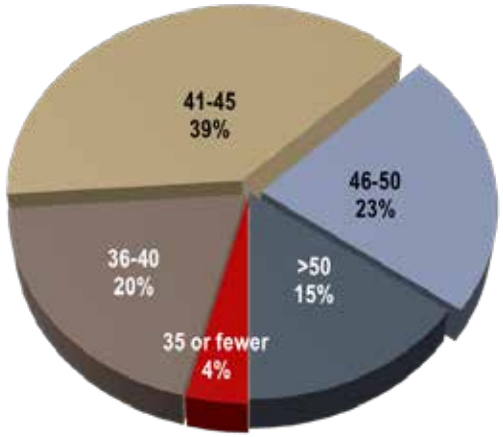


*Figure 6. How many hours a week do you work? **

* Total does not equal 100% due to rounding.

Table 28.

Hours Per Week	Median Salary
0-25	$52,000
26-35	$73,500
36-40	$75,000
41-45	$81,000
46-50	$105,000
51-55	$128,960
56-60	$117,000
>60	$126,800

The median work week is approximately 44 hours, and 15% of respondents indicate that they work more than 50 hours per week **(Figure 6)**. Generally, those who work more are paid more in aggregate. However, when we estimate an average hourly wage equivalent by cohort, we find that average hourly pay peaks among employees in the 51-55 hour range, then declines by more than 15% among those who work more, and by 10% among those who work 56-60 hours **(Table 28)**.

Developing New Skills



Figure 7. What resources are you utilizing to keep your skills current?

Table 29.

Require new competencies /skills	69%
Related to new technologies	61%
Related to new government policies, such as FSMA	49%
Related to new continuous improvement methods	46%
Related to communication	35%

Most U.S. members (69%) have found that they require new competencies and skills to do their jobs. Among those who found they require new skills, 61% report that new technologies are an area where they need to brush up. Almost half report needing new skills related to new government policies (such as FSMA) and/or related to new continuous improvement methods, while adding new competencies/skills related to communication (35%) happens less frequently **(Table 29)**. **Figure 7** breaks out resources that respondents are using to keep their skills current.

IFT Involvement

Table 30.

Expenses and Time for IFT	(%)
Pay for or reimburse IFT membership dues	86
Travel expenses to attend IFT annual event	66
Time off to attend IFT annual event (scientific sessions and food expo)	63
Expenses to attend monthly IFT section meetings	34
Time off to attend monthly IFT section meetings	33
Time off for IFT volunteer work	24
Travel expenses for IFT volunteer work	16
Other support	2
None	3

Most employers pay for IFT membership dues, although the proportion declined 3 percentage points since 2015. At least 60% of respondents also have employers who cover travel expenses and time off to attend IFT annual conventions. Monthly IFT sections meetings are supported by about one-third, and one-fourth report that their volunteer work is supported with time off, although fewer report that travel expenses are covered.

The survey was conducted among a diverse audience, including, for only the second time, non-members in the U.S. and international professionals including members and non-members **(Table 31)**. As Figures 8–10 demonstrate, there are great similarities between U.S.-based members and non-members, and substantial differences among U.S.-based and non-U.S. based respondents.

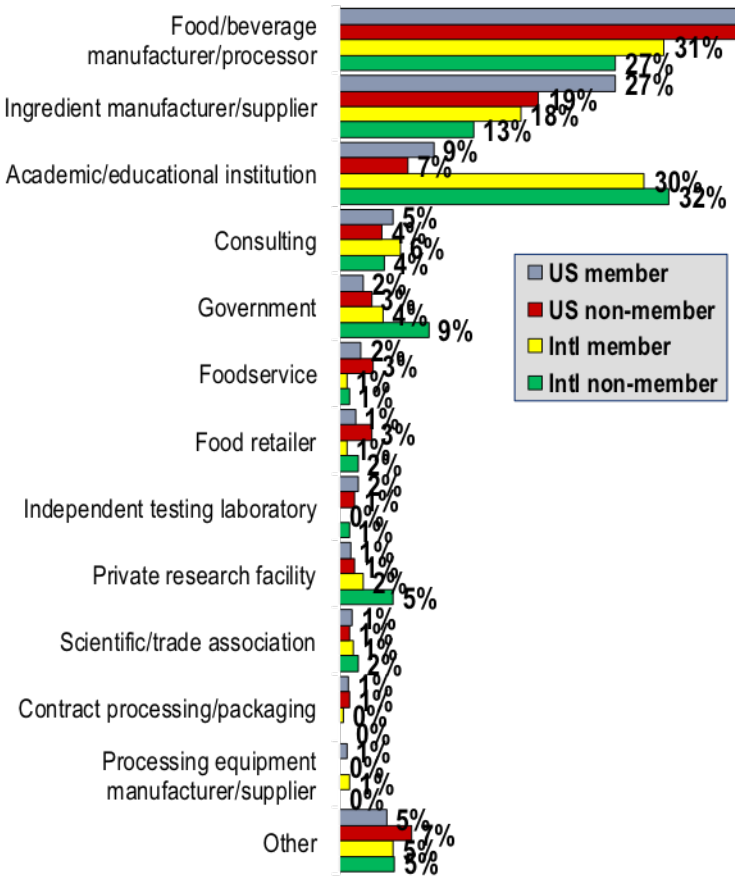
Although a majority of international members and non-members are men, a majority of respondents in their 20s are women in all three segments. About half of international members and non-members hold a doctorate.

Table 31.

Characteristics of Non-members and Non-U.S. Respondents	International Members	International Non-members	U.S. non-members
Number of respondents	360	169	692
Percent of return	18%	7%	10%
Men (%)	57%	53%	35%
Women (%)	43%	47%	65%
Men under age 30 (%)	26%	20%	24%
Women under age 30 (%)	74%	80%	76%
Highest degree in food science/technology (%)	51%	55%	65%
BS as highest degree (%)	24%	16%	45%
MS as highest degree (%)	20%	25%	31%
MBA as highest degree (%)	5%	8%	5%
PhD as highest degree (%)	48%	50%	17%
Employed in industry (%)	49%	40%	69%
Employed in education (%)	30%	32%	7%
Employed in government (%)	4%	9%	3%
Median salary (%)	$60,000	$38,284	$85,375

Industry by Membership Type

Figure 8.

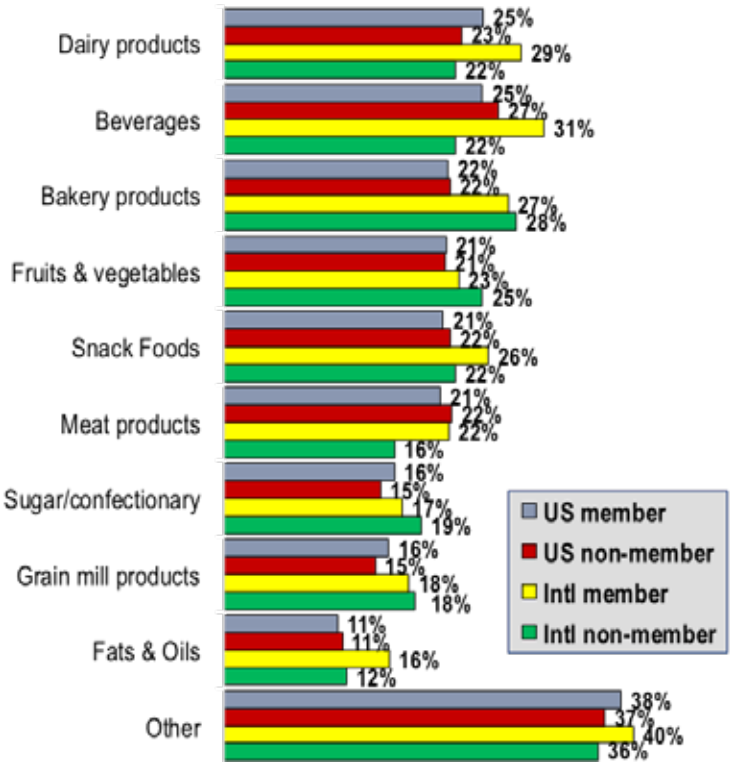


Generally, U.S.-based non-members are more likely than members to work in food/beverage manufacturer/processors and are less likely to work in ingredient manufacturers/suppliers.

Non-U.S. professionals are more likely to work in the academic setting.

Product Interests by Membership Type

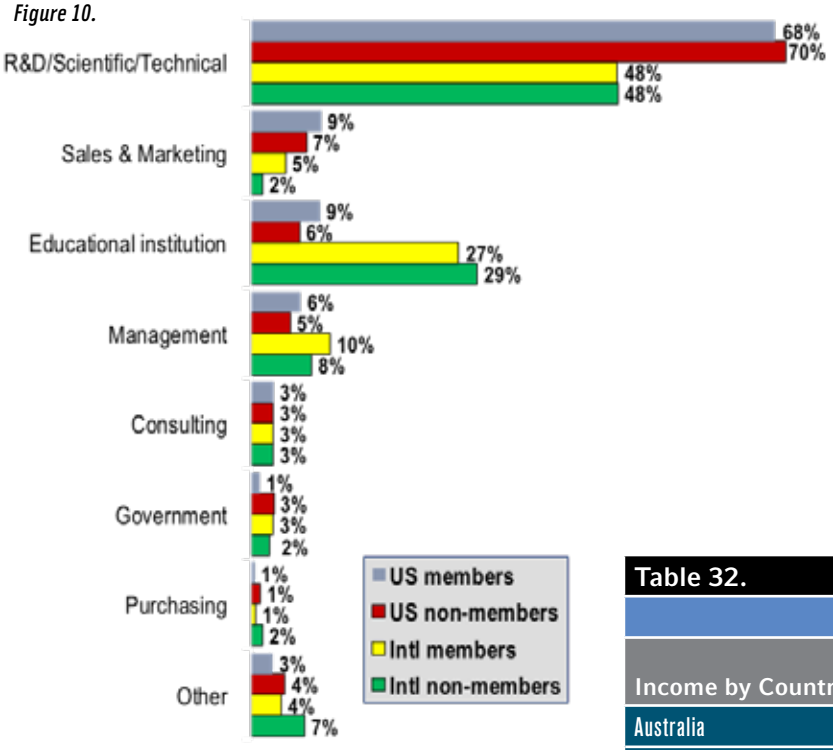
Figure 9.



The actual industries that respondents work in in any sector varies only slightly among U.S. members, non-U.S. members, international members, and international non-members.

Employment Status by Membership Type

Figure 10.



Based on their survey responses, U.S. members are slightly more likely to be in sales and marketing, management, or an educational institution compared to U.S. non-members, who are more likely to be in the R&D/scientific/technical jobs.

Non-U.S. professionals are far more likely to work in an educational institution and less likely to work in R&D/scientific/technical jobs.

International members are more likely than international non-members to work in education or a management role, and are less likely to work in government or an R&D/scientific/technical role.

Compensation levels were collected among international members and non-members by country **(Table 32)**.

We used currency exchange rates prevailing at the time of response to convert to U.S. dollars to provide a more reliable basis for comparison.

The same rules were applied here to present data with adequate reliability although, of course, the occupations, years of experience, etc., will account for some of the differentials we see among countries and across continents.

Table 32.

Income by Country	N.	Median Salary	Median Total Compensation
Australia	17	$91,603	$91,603
Brazil	13	$30,000	$40,248
Canada	102	$62,400	$66,300
Chile	7	$58,000	$58,000
China	22	$33,000	$35,750
Costa Rica	5	$20,000	$21,000
Germany	10	$100,340	$109,040
Greece	7	$21,994	$21,994
Saudi Arabia	5	$42,765	$52,000
Switzerland	7	$110,000	$130,000
India	12	$12,000	$12,202
Ireland	9	$87,000	$87,000
Italy	7	$28,000	$28,000
Japan	5	$74,800	$105,600
South Korea	7	$50,000	$50,000
Mexico	61	$31,000	$42,220
Netherlands	6	$74,633	$76,315
New Zealand	15	$82,800	$84,180
Nigeria	11	$5,000	$5,500
Philippines	4	$11,400	$19,795
Singapore	8	$61,635	$74,241
South Africa	6	$68,511	$72,575
Spain	6	$60,900	$62,640
Taiwan	4	$45,000	$55,000
Thailand	7	$62,000	$72,000
United Kingdom	17	$56,000	$56,000

Following are the questions that were included in the 2017 IFT Salary Survey.

1. **What is your membership status?** ☐ Current ☐ Former ☐ Never been a member

2. **In what country do you work?**

3. **Which of the following describes your current employment situation?** *(Check only one.)*
   ☐ Full-time employee ☐ Part-time employee ☐ Self-employed ☐ Not employed

4. **Which best describes your current employment status?**
   ☐ Seeking full-time employment ☐ Seeking part-time employment ☐ Seeking temporary employment
   ☐ Not seeking employment

5. **How long have you been out of work?** ☐ 0-6 months ☐ 7-12 months ☐ More than 12 months *[Skip to end of survey]*

About Your Job

1. **Approximately how many hours a week do you work?**
   ☐ 15 or fewer hours ☐ 21-25 hours ☐ 31-35 hours ☐ 41-45 hours ☐ 51-55 hours ☐ More than 60 hours
   ☐ 16-20 hours 26-30 hours ☐ 36-40 hours ☐ 46-50 hours ☐ 56-60 hours

2. **How would you rate your level of job satisfaction?**
   ☐ Highly satisfied ☐ Somewhat satisfied ☐ Neither satisfied nor dissatisfied ☐ Somewhat dissatisfied ☐ Highly dissatisfied

3. **What factor contributes most positively to your job satisfaction?** *(Check one.)*
   ☐ Job security ☐ Intellectual stimulation ☐ Opportunity to advance ☐ Recognition ☐ Other *(describe)*

4. **How stressful is your job today?**
   ☐ Highly stressful ☐ Stressful ☐ Moderately stressful ☐ Occasionally stressful ☐ Not stressful

5. **What is the biggest challenge you face on the job?** *(Check only one.)*
   ☐ Workload/work/life balance ☐ Salary ☐ Staying current
   ☐ Management support ☐ Stressful environment
   ☐ Supervisory duties ☐ Job security
   ☐ Co-workers ☐ Other challenge *(describe)*

6. **How long do you expect to stay with your current employer?** *(Check one.)*
   ☐ Not long, I am actively searching ☐ For 1-3 years, not actively searching ☐ For 4-10 years ☐ For 10-20 years
   ☐ Longer than 20 years/until I retire

6b. **For what reasons are you looking for a new job now, if applicable?**

7. **When you consider a job change, what factor motivates you most to make the change?**
   ☐ Higher salary
   ☐ Better benefits
   ☐ Better work/life balance
   ☐ New challenges and responsibilities
   ☐ Other (describe)

8. **Have you found that you require new competencies/skills to do your job?** ☐ Yes ☐ No
   If yes, in what areas have you required new competencies/skills? *(Check all that apply.)*
   ☐ Related to new technologies ☐ Related to communication
   ☐ Related to new government policies, such as FSMA ☐ Other *(describe)*
   ☐ Related to new continuous improvement methods

9. **What resources are you utilizing to keep your skills current?** *(Check all that apply.)*
   ☐ Webcasts ☐ Trade shows/conferences ☐ Online discussion forums
   ☐ Professional publications ☐ Seminars ☐ Classroom college courses
   ☐ Textbooks ☐ Online college courses ☐ Other (describe)

10. **If you were currently preparing to enter the job market, would you consider the field of food science and technology?**
    ☐ Yes, definitely ☐ Yes, probably ☐ Unsure ☐ Probably not ☐ Definitely not

11. **Why or why not?**
    If not, what discipline or profession would you opt for instead and why?

Salary

1. **What are your total earnings from your primary job during the past 12 months?**
   Current annual salary* $ _____
   Total dollar amount of cash bonuses received $ _____
   Total value of stocks received as part of professional income $ _____
   **Excluding bonuses, benefits, any earnings from other employment, overtime work, summer teaching, or other supplemental earnings.*

2. **In what currency is your response for Question 1?** *(Use drop-down menu.)*

Dollar: U.S.	Yen: Japan	Rupiah: Indonesia	Dinar
Dollar: Canadian	Won: South Korean	Ruble: Russia	Other currency (specify below)
Euro	Renminbi yuan: China	Real: Brazil	
Pound: Great Britain	Rupee: Indian	Baht: Thailand	
Dollar: Australian	Rupee: Pakistan	Peso	

   If another currency than listed in question 2 above, please describe:

3. **Did you receive a pay raise in the past 12 months?** ☐ No ☐ Yes: If yes, what was your previous annual salary? _____

4. **How satisfied are you with your current compensation?**
   ☐ Highly satisfied ☐ Somewhat satisfied ☐ Neither satisfied nor dissatisfied ☐ Somewhat dissatisfied ☐ Highly dissatisfied

Benefits

1. **What benefits does your employer make available to you and other employees?** *(Check all that apply.)*

☐ No benefits

Insurance
- ☐ Health insurance
- ☐ Dental insurance
- ☐ Disability insurance, long-term
- ☐ Disability insurance, short-term
- ☐ Flexible spending account
- ☐ Vision insurance
- ☐ Life insurance
- ☐ Auto insurance
- ☐ Homeowner's insurance
- ☐ Retiree dental insurance
- ☐ Retiree health insurance

Time off/Leave
- ☐ Sick leave
- ☐ Ability to work at home
- ☐ Flex time
- ☐ Vacation
- ☐ Maternity/family leave
- ☐ Sabbatical, paid
- ☐ Sabbatical, unpaid
- ☐ Severance policy

Non-pay Financial Support
- ☐ Retirement program (such as a 401K)
- ☐ Pension
- ☐ Profit sharing
- ☐ Bonus/performance compensation
- ☐ Stock options
- ☐ Relocation expenses

Professional Development
- ☐ Association membership dues
- ☐ Tuition reimbursement
- ☐ Continuing Ed (CE) courses, on-site
- ☐ CE courses/webinars via Internet
- ☐ CE programs, off-site
- ☐ Reimburse fees for professional certification/recertification

Other Benefits
- ☐ Child care
- ☐ Company automobile
- ☐ Employee assistance program
- ☐ Fitness facilities or fitness club membership
- ☐ Legal assistance
- ☐ Long-term care

☐ Other benefits or special perks (describe)_____

2. **Which of the following IFT-related items does your employer provide?** *(Check all that apply.)*
   - ☐ Pay for or reimburse IFT membership dues
   - ☐ Time off for IFT volunteer work
   - ☐ Travel expenses for IFT volunteer work
   - ☐ Time off to attend IFT annual event *(scientific sessions and Food Expo)*
   - ☐ Travel expenses to attend IFT annual event
   - ☐ Time off to attend monthly IFT section meetings
   - ☐ Expenses to attend monthly IFT section meetings
   - ☐ Other support *(describe)*

IFT Programs & Services

1. **Did you use IFT's Career Center at the most recent IFT annual meeting?**
   ☐ Yes ☐ Was aware but did not use ☐ Was unaware ☐ Did not attend annual meeting

2. **During the past year, did you use IFT's Career Center services other than at the IFT annual meeting?** ☐ Yes ☐ No

3. **Did you get your current or most recent job through use of IFT's Career Center services?** ☐ Yes ☐ No

4. **Do you currently hold the Certified Food Scientist (CFS) credential?**
   ☐ Yes, I earned it through the exam ☐ Yes, I earned it through the One-Time Alternative Assessment
   ☐ No *[Skip to 6 if C5.1 or C5.2]*

   4a. **If you do not currently hold the CFS credential, what is the likelihood that you'll pursue it within the next five years?**
   ☐ Extremely likely ☐ Somewhat likely ☐ Unsure ☐ Somewhat unlikely ☐ Extremely unlikely

5. **To what extent would an individual's attainment of the Certified Food Scientist credential influence your organization's hiring and promotion decisions?**
   ☐ Significant influence ☐ Moderate influence ☐ Slight influence ☐ No influence

   5a. **Which of the following benefits that the CFS program aims to provide to the food science profession are most important to you?** *(Select all that apply.)*

   ☐ Increased credibility by the public
   ☐ Increased credibility by other professionals
   ☐ Increased credibility by peers
   ☐ Promotion/career advancement
   ☐ Increased monetary compensation
   ☐ Increased marketability
   ☐ Improved job security
   ☐ Employer recognition
   ☐ Peer recognition
   ☐ Test of your competence
   ☐ Pride/personal satisfaction
   ☐ Other benefits (describe)

6. **Did earning the CFS have an impact on any of the following?** *(Select all that apply.)*
   ☐ Promotion/career advancement ☐ Increased monetary compensation ☐ Increased marketability

About You: Professional Profile

1. **Which of the following best describes the business/activity at your work location?** *(Check all that apply.)*

   ☐ Food/beverage manufacturer/processor
   ☐ Ingredient manufacturer/supplier
   ☐ Processing equipment manufacturer/supplier
   ☐ Packaging equipment manufacturer/supplier
   ☐ Packaging materials manufacturer/supplier
   ☐ Instrument manufacturer/supplier
   ☐ Contract processing/packaging
   ☐ Consulting
   ☐ Academic/educational institution
   ☐ Private research facility
   ☐ Foodservice
   ☐ Food retailer
   ☐ Government
   ☐ Independent testing laboratory
   ☐ Publisher
   ☐ Scientific/trade association
   ☐ Other (describe)

2. **What is your primary job title/function?** *(Select one.)*

R&D/SCIENTIFIC/TECHNICAL
- □ Vice President
- □ Director of Research
- □ Technical Director
- □ Quality Assurance/Quality Control Director/Mgr./Supervisor
- □ Quality Assurance/Quality Control *(other than Director/Manager/Supervisor)*
- □ Technical Services Director
- □ Laboratory Director
- □ Product Developer
- □ Chemist
- □ Flavorist
- □ Food Engineer
- □ Food Scientist/Technologist
- □ Microbiologist
- □ Nutritionist
- □ Packaging Scientist
- □ Research Chef
- □ Sensory Evaluation Specialist
- □ Other R&D/Scientific/Technical

MANAGEMENT *(other than R&D, Sales & Marketing)*
- □ President, Owner, Partner, Officer
- □ Vice President *(except R&D, Sales & Marketing)*
- □ General Manager
- □ Engineering/Processing Director/Manager/Supervisor
- □ Plant Manager/Supervisor
- □ Other Management

SALES & MARKETING
- □ Vice President
- □ Director
- □ Manager
- □ Product Manager
- □ Market Researcher
- □ Sales Representative
- □ Broker
- □ Technical Sales Representative
- □ Other Sales & Marketing

PURCHASING
- □ Purchasing/Procurement Director/Manager
- □ Purchasing Agent/Buyer
- □ Other Purchasing

CONSULTING
- □ Technical/Scientific
- □ Management
- □ Other Consultants

GOVERNMENT
- □ Management/Administrative
- □ Research
- □ Inspection
- □ Other Government

EDUCATION
- □ Graduate teaching only
- □ Undergraduate teaching only
- □ Graduate teaching, some research
- □ Undergraduate teaching, some research
- □ Research only
- □ Research, some graduate teaching
- □ Research, some undergraduate teaching
- □ Administration
- □ Extension
- □ Other Education
- □ Other Job Title/Function (describe)

3. **How many people in total work for your employer at all locations?** *(Please use drop-down menu.)*
□ <10 □ 10-24 □ 25-99 □ 100-499 □ 500-999 □ 1,000-2,499 □ 2,500-4,999 □ 5,000+

4. **Is your employer an educational institution?** □ Yes □ No *[skip to next section if no]*

5. **What is the highest degree your educational institution offers?** *(Check only one.)*
- □ PhD or equivalent
- □ Master's degree or equivalent
- □ Bachelor's degree or equivalent
- □ Associate's degree or equivalent

6. **Is your educational institution:** □ Public □ Private

7. **What is your basic contract period?**
□ 9 months □ 10 months □ 11 months □ 12 months

8. **What is your academic rank?**
- □ Full Professor
- □ Associate Professor
- □ Assistant Professor
- □ Visiting or Adjunct Professor, Instructor, Lecturer
- □ Non-teaching research appointment
- □ My institution does not have ranks
- □ Other *(specify)*

9. **Have you been granted tenure?** □ Yes □ No, on tenure track □ No, on non-tenure track □ Not applicable

10. **In the next three to five years, where do you think the most jobs will be created for science of food professionals?**
- □ Small, entrepreneurial companies
- □ Mid-sized companies
- □ Large companies
- □ Unsure or no opinion

11. **Given a choice, where would you prefer to work?**
- □ A small, entrepreneurial company
- □ A mid-size company
- □ A large company

Why? _____

About You: Personal Profile

1. **What is your gender?** □ Male □ Female

2. **Please tell us the following regarding your personal history:**

What is your age? _____

How many years of professional food-related work experience have you had since you received your bachelor's degree (excluding time spent in full-time course work toward an advanced degree)? _____

How many employers in your food-related profession have you had since you received your bachelor's degree? _____

How many years have you worked for your present employer? _____

In which country did you receive your bachelor's degree? _____

In which country did you receive your highest educational degree? _____

3. **Which educational degrees have you earned?** *(check all that apply)*
- □ PhD or equivalent
- □ Master's degree or equivalent
- □ MBA
- □ Bachelor's degree or equivalent
- □ Associate's degree or equivalent
- □ No degree
- □ Other *(describe)*

4. **Which of the following best describes the field in which you received your bachelor's degree and your highest degree** *(if applicable)*?

	Bachelor's	Highest degree
Agriculture	□	□
Agricultural Engineering	□	□
Biological Sciences	□	□
Biotechnology	□	□
Business/Marketing	□	□
Chemical Engineering	□	□
Chemistry	□	□
Culinary	□	□
Dairy Science/Technology	□	□
Engineering *(other than Agricultural, Chemical, and Food)*	□	□
Food Engineering	□	□
Food Science/Technology	□	□
Law	□	□
Meat Science/Technology	□	□
Microbiology	□	□
Nutrition	□	□
Packaging/Packaging Engineering	□	□
Other	□	□

5. **What is your race/ethnicity?** *(Check the one that best describes you.)*
   - □ Asian/Pacific Islander *(of Chinese, Indian, Japanese, Korean, Filipino, etc., ancestry)*
   - □ Black/African-American
   - □ Hispanic *(of Spanish-Caribbean, Spanish-Central American, or South American ancestry)*
   - □ Native American Indian/Native Alaskan
   - □ White/Caucasian
   - □ Other *(describe)*

6. **Do you feel that your opportunities for advancement and compensation in the profession are equal to men's?**
   □ Yes □ No □ Unsure

7. **What challenges, if any, have you faced as a woman working in the food science profession?**

Thanks!

Everyone who responds to this year's survey will receive an electronic Executive Summary and will see an article in *Food Technology* magazine. To qualify for the drawing for one of five American Express $100 gift cards, please provide your name and email below. Note that this data will not be stored with your survey response to protect your confidentiality. It is only used by us for the random drawing.

Name: _____ Email: _____