

Considering a career in food and agriculture

What jobs are available to help feed and fuel the world, care for animals and sustain our environment?

There is estimated to be an average of 104,766 openings in job positions within the food, agriculture, renewable natural resources and environment industries from 2025-2030. 90% of these 104,766 positions will require at least an associate degree, with the other 10% open to those without a degree. Yet, only about 50,000 new graduates with bachelor's or higher degrees in agriculture will be available annually to fill them, leaving nearly 50,000 (or 50%) of jobs available to be filled by other majors. The supply is less than the demand needed. (Source: [USDA, 2025-2030](#).)

As a result, we need people who are not majoring in agriculture to consider rewarding and good-paying jobs related to agriculture. Fifty food and agriculture career profiles, categorized into career clusters or themes, were identified by data from seventeen different universities and prioritized by a team of agricultural professionals in Ohio. The profiles were condensed onto cards. This lesson presents activities using the cards to introduce, and pique the interest of students to new careers.

Materials

Agricultural career cards: contact GNG, download (add to website), or order through [OSU Extension Publications](#) (available October, 2019)

Food product containing soy (example: vegetable/soybean oil, candy bar, cracker box, salad dressing container) Note: check the ingredients list

Plain paper

Writing utensil

Scenario cards (included below)

Agricultural Career Investigation hand-out

Engage: Career connections activity

1. Ask students to partner up.
2. Give them the food product containing soybeans. Say, "When I say go, you and your partner(s) need to list as many careers as you can think of involved with this product-from growing soybeans in fields to finding its way to your table. Be prepared to share and defend your list!"
3. After a predetermined amount of time, ask each group to share one career in round-robin style with everyone. Other groups who have the same or a similar career that is shared should cross it off their lists. Moderate by asking clarifying questions and disqualify careers you believe are not related/relevant to the food product.
4. Continue around until all lists have been exhausted. Award a prize (even just a high-five) to the last team with careers remaining on their list.
5. Reflect: Would you have thought all those careers were linked to this one food product?

Explore: Agriculture career cards scenarios

1. Share the following with students.
 - a. About one out of every eight jobs is linked to the food and agriculture industry, or about 21.6 million jobs in the U.S. However, only 2.6 million of those jobs are on-farm jobs, or about one out of every 100 food and agriculture jobs. Thus, the number and variety of off-farm jobs in the food and agriculture industry are vast, good paying, rewarding, and something students should consider! (Source: [USDA-ERS](#).)
2. Split into small groups and pass out a pack of the agriculture career cards to each group.

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3. Explain that each of these 50 cards highlights a food and agriculture career.
4. Ask participants to arrange the cards into different stacks by career clusters based on their color. The cards are color-coded by career cluster (e.g., cards with a red border are related to animal and dairy sciences).
5. Ask students to take a card and review its layout. What type of information is presented on each card?
6. Assign a scenario to each group. Say, "Your group needs to sort through these cards and identify no more than **ten** careers that you believe would be best suited to solve/address your scenario. Consider the knowledge and skills of each career when you are making your decision. Be prepared to share and defend your choices."
 - a. Alternative: Give two groups the same scenario to see similarities and differences between their choices. These two groups could come together and 'consult' with one another to determine a final group of no more than ten careers.
7. Ask groups to report out and explain their choices.

SCENARIO 1

You have a new idea for an app that would run a piece of equipment remotely on a farm. Who would you choose to help you develop the app and the equipment?

SCENARIO 2

The FDA has issued a recall of a popular food product your biggest competitor produces due to safety concerns. Your company has tasked you with coming up with a new product to take some of their market share away. Who do you recruit to be on your product development team and why?

SCENARIO 3

You are interested in starting an organic farm and market in a rural community. Who do you consult?

SCENARIO 4

Your parents are retiring from farming and bequeathing their crop farm to you. Who do you consult to help you keep the farm running?

SCENARIO 5

You are being required to adopt a nutrient management plan using the 4R methodology (right time, right place, right rate, and right source) on your livestock and crop farm. Who would you consult?

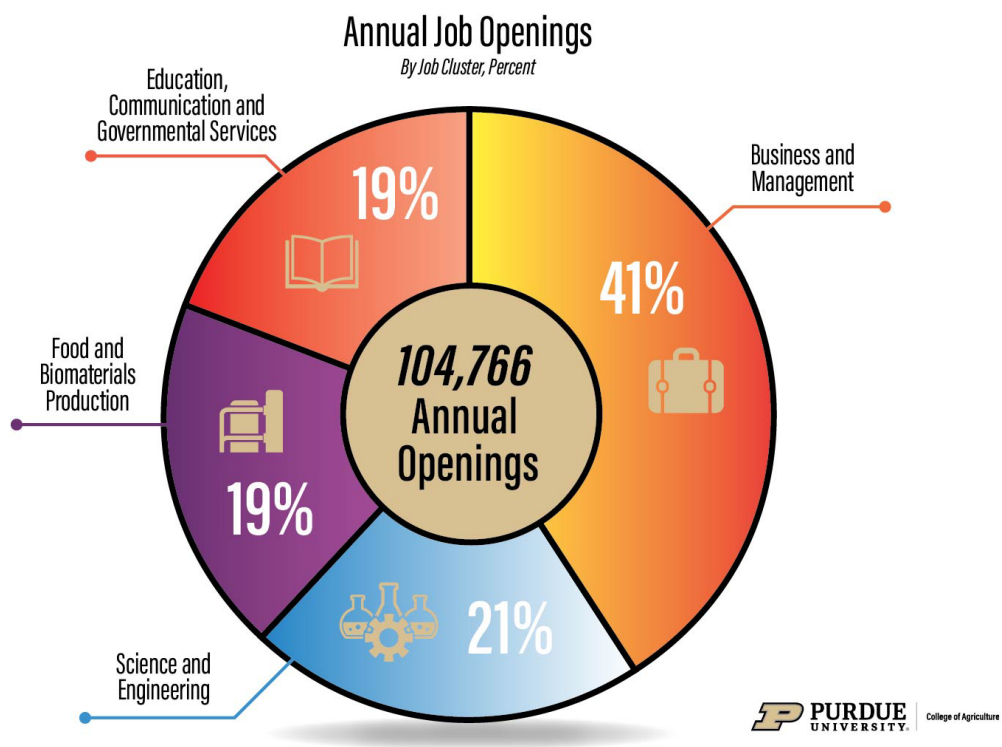
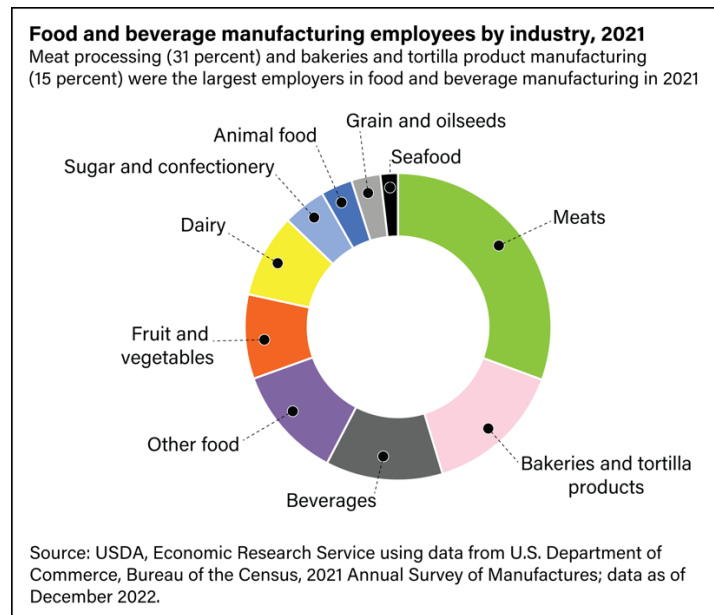
SCENARIO 6

Your local school wants to source more locally grown food, including starting a school garden. They asked you to put a committee together to make recommendations. Who do you choose?

SCENARIO 7

You are hoping to develop a new crop variety that is more resilient to climate change. Who do you consult?

Explain: Analyze the following data



- Ask students to complete an observation exercise using the two charts above, using the three questions:
 - What do you see? Describe exactly what they see.
 - What do you think? Encourage them to use evidence to explain their thoughts.
 - What do you wonder? What questions remain for them?
- Have students discuss their observations and thoughts. Consider having them name careers in each of these areas.

Extension/Elaboration: Consider these additional activities with the agriculture career cards.

1. Pass-out a card to each person and ask them to stand-up and group themselves together by themes: specific salary range (or line-up lowest to highest), education, knowledge, skills, career-cluster (color). Reflect by asking questions such as:
 - Do you see connections between education/training and salary or career cluster and salary? If so, why might that be? Note: median salaries are likely higher now than they were when the cards were created.
 - What types of knowledge do you have in common? Different?
 - What types of skills do you have in common? Different?
 - What are the differences between knowledge and skills? Would you acquire them differently? If so, how?
2. Send students to take [GrowNextGen Agriculture Career Survey](#). Have students find at least one agriculture career card related to their results. Then, have students use their chosen card to re-search more information about the career using the *Agricultural Career Investigation* hand-out.
3. Hand-out cards and ask each person to do an online search for a company that would hire someone in that career, specifically looking for an open job posting. Share with the group.
4. Ask students to sort through the cards and select one that interests them. Pass out the *Agricultural Career Investigation* hand-out and ask them to answer the questions based on their card. Pair and share findings.
5. Send students to <https://grownextgen.org/careers> to explore more information about different food and agriculture career pathways. Show a short career video from <https://grownextgen.org/career-videos> at the beginning or end of each class period.

Agricultural Career Investigation Hand-Out

Use your chosen career card and the internet to answer the following questions.

1. What is the name of this occupation?
2. What duties or responsibilities go along with this job?
3. What skills are needed for this job?
4. What type of personality is needed for this job?
5. What physical requirements or limitations are associated with this job?
6. What educational background is required?
7. What courses should be taken in high school and in college?
8. What is the best type of school to attend to attain the necessary skills?
9. What are some positive aspects of this job?
10. What are some negative aspects of this job?
11. How does this profession help to better society?
12. Name at least two companies who would hire someone for this job.
13. What is the future outlook for this job?