

CTE: DEVELOPING THE AGRICULTURE, FOOD AND NATURAL RESOURCES WORKFORCE

Career and technical education (CTE) supports America's agriculture, food and natural resources needs by

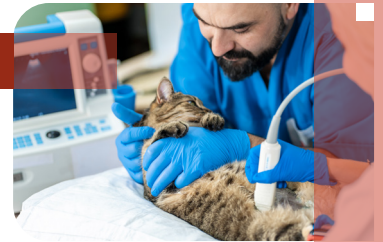
preparing learners to enter this critical workforce, which employs more than **3.5 million**¹ people nationwide.

CTE programs in agriculture, food and natural resources develop students' technical, academic and employability skills through work-based and hands-on learning, ensuring they are prepared to enter a **high-wage, in-demand** career in areas such as animal systems, plant systems, and environmental and natural resources.

This infographic describes a small sample of the career opportunities available in the agriculture, food and natural resources sector.

ANIMAL SYSTEMS

- Demand is high for professionals who care for animals' health: Job openings for veterinary technicians and veterinarians will grow by around **20%**² through **2032**.
- Individuals working with animals are typically **employed** by veterinary clinics, university research farms, food production companies, zoos, animal control facilities and wildlife preserves.
- Experienced veterinary technicians can earn more than **\$54,000**³ per year, while animal scientists who study the nutritional needs and development of farm animals make a median salary of **\$69,000**.⁴
- Associate and bachelor's degrees and higher credentials can **help individuals succeed** in a career in animal systems.



PLANT SYSTEMS

- A new generation of farmers is needed to feed the nation – farm operators' average age is nearly **60**⁵ years old and only **9%**⁶ of farmers are under the age of **35**.
- The job outlook for turf managers who maintain sporting fields and golf courses is excellent and can lead to opportunities as golf course superintendents earning more than **\$100,000**⁷ annually.
- Agricultural and food science technicians can make more than **\$63,000**⁸ per year and job openings for this occupation are growing faster than average.
- A variety of credentials and work-based experiences can help individuals **pursue a career** in plant systems.



ENVIRONMENTAL AND NATURAL RESOURCES

- Investments in the green economy are **increasing demand** for individuals with experience caring for the environment and natural resources.
- Opportunities for technicians who monitor and analyze pollutants and contaminants are growing **faster than average**.⁹
- Individuals who oversee conservation and forestry activities can earn more than **\$64,000**¹⁰ per year, while environmental scientists make a median salary of more than **\$76,000**¹¹ annually.
- Postsecondary and advanced degrees as well as apprenticeships are key to **career growth** within this sub-sector.





CTE:
AND **NATURAL RESOURCES** WORKFORCE

MORE JOBS IN AGRICULTURE, FOOD AND NATURAL RESOURCES

In addition to the careers already profiled, CTE prepares youth and adults for these further occupations:

- Forestry technician
- Wildlife manager
- Sustainability specialist
- Tree surgeon
- Horticulturalist
- Recycling technician
- Livestock manager
- Food and drug inspector
- Aquaculturist
- Crop adjuster

At Northside Independent School District in Texas, students in the Agriculture Science & Technology Academy can develop skills in environmental and natural resources, agribusiness, animal and plant sciences, veterinary medicine and agricultural engineering. Learners have opportunities to engage in internships, participate in livestock shows and earn college credit as well as relevant certifications.

HOW CTE PREPARES THE AGRICULTURE, FOOD AND NATURAL RESOURCES WORKFORCE

CTE programs of study and career pathways prepare secondary, postsecondary and adult learners for the agriculture, food and natural resources workforce in many ways:

- **Courses** in soil science, agribusiness management, veterinary science, agricultural mechanics, large animal care and more spanning secondary and postsecondary education.
- Opportunities to earn **postsecondary certificates and degrees** in animal science, horticulture, agribusiness, agronomy, plant production, environmental science and more.
- Opportunities to earn **industry credentials** from the American Society of Agronomy, U.S. Department of Agriculture and others.
- **Work-based learning experiences** like job shadowing, internships and apprenticeships.
- Competitive events, service learning and leadership development through **career and technical student organizations** such as the National FFA Organization and Future Business Leaders of America.
- **Activities** that build technical, academic and employability skills such as teamwork, communication and problem solving.

Learn More

This Sector Sheet highlights just a few occupations within the agriculture, food and natural resources workforce. To learn more, please visit the U.S. Department of Labor at www.CareerOneStop.org/ ExploreCareers and MyNextMove.org.

Citations

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- ² U.S. Bureau of Labor Statistics. (2023, September). *Veterinary technologists and technicians*. Retrieved from <https://www.bls.gov/ooh/healthcare/veterinary-technologists-and-technicians.htm>; U.S. Bureau of Labor Statistics. (2023, September). *Veterinarians*. Retrieved from <https://www.bls.gov/ooh/healthcare/veterinarians.htm>
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- ⁴ AgExplorer. (N.d.). *Animal biotechnologist: Reproductive or nutritional specialist*. Retrieved from <https://agexplorer.ffa.org/career/animal-biotechnologist>
- ⁵ AgAmerica Lending. (2022, June). *The U.S. farm labor shortage*. Retrieved from <https://agamerica.com/blog/the-impact-of-the-farm-labor-shortage>
- ⁶ Ibid.
- ⁷ Golf Course Superintendents Association of America. (N.d.). *Highlights from the 2023 Compensation and Benefits Report*. Retrieved from <https://www.gcsaa.org/career/compensation-report>
- ⁸ U.S. Bureau of Labor Statistics. (2023, September). *Agricultural and food science technicians*. Retrieved from <https://www.bls.gov/ooh/life-physical-and-social-science/agricultural-and-food-science-technicians.htm#tab-5>
- ⁹ U.S. Bureau of Labor Statistics. (2023, September). *Environmental science and protection technicians*. Retrieved from <https://www.bls.gov/ooh/life-physical-and-social-science/environmental-science-and-protection-technicians.htm>
- ¹⁰ U.S. Bureau of Labor Statistics. (2023, September). *Conservation scientists and foresters*. Retrieved from <https://www.bls.gov/ooh/life-physical-and-social-science/conservation-scientists.htm>
- ¹¹ U.S. Bureau of Labor Statistics. (2023, September). *Environmental scientists and specialists*. Retrieved from <https://www.bls.gov/ooh/life-physical-and-social-science/environmental-scientists-and-specialists.htm>