

Emerging Plant-Tech Evidence Guide

NAME _____

DATE _____

PERIOD _____

Emerging work often grows inside an established occupation

Job titles change faster than government career categories. The three specialties below show how technology is changing plant and agriculture work. The salary and outlook figures belong to the **broader BLS parent occupation**, not every exact specialty or local job.

EMERGING SPECIALTY TO INVESTIGATE	BLS PARENT OCCUPATION	HOW TECHNOLOGY CHANGES THE WORK	TYPICAL ENTRY ROUTE	PARENT OCCUPATION EVIDENCE
Precision Agriculture Systems Technician	Agricultural and Food Science Technician	Uses sensors, field samples, maps, and digital records to help monitor crops, water, pests, and production	Usually an associate degree; routes vary	\$48,480 May 2024 U.S. median; 5% growth, 2024-34
Controlled-Environment Plant Scientist	Soil and Plant Scientist	Studies plant stress, nutrients, light, water, pests, and growing conditions in greenhouses or indoor systems	At least a bachelor's degree; some research roles prefer graduate study	\$71,410 May 2024 U.S. median; 5% growth, 2024-34
Agricultural Automation Engineer	Agricultural Engineer	Designs or improves automated irrigation, spraying, harvesting, climate controls, and data-connected equipment	Bachelor's degree in an engineering field	\$84,630 May 2024 U.S. median; 6% growth, 2024-34

WHAT THE CURRENT EVIDENCE SAYS

- BLS reports that agricultural engineers may integrate **artificial intelligence and geospatial systems** and work on precision or automated irrigation, spraying, and harvesting.
- USDA describes precision agriculture as using sensors and other tools to apply resources in the right amount, place, and time.
- USDA-supported specialty-crop projects use sensors, imaging, automation, and machine learning to monitor plant wetness, heat stress, and disease.

Evaluate, do not advertise

An occupation can be important even when its percentage growth is not huge. An “emerging” specialty may mean that the **tasks and tools are changing**, not that the whole parent occupation is brand new.

SOURCES CHECKED AUGUST 8, 2026

- U.S. Bureau of Labor Statistics, Agricultural and Food Science Technicians; Agricultural and Food Scientists; Agricultural Engineers.
- USDA Agricultural Research Service, *Farming With Precision*.
- USDA National Institute of Food and Agriculture, *Automation for Specialty Crops*.

Evidence questions

Which specialty changes most because of sensors or automation? Cite one task and one source fact.

Which specialty has the longest typical preparation route? What responsibility may explain that preparation?

What can the parent-occupation salary **not** prove about one exact specialty or a first job in DFW?
