

PLANT PHYSIOLOGIST

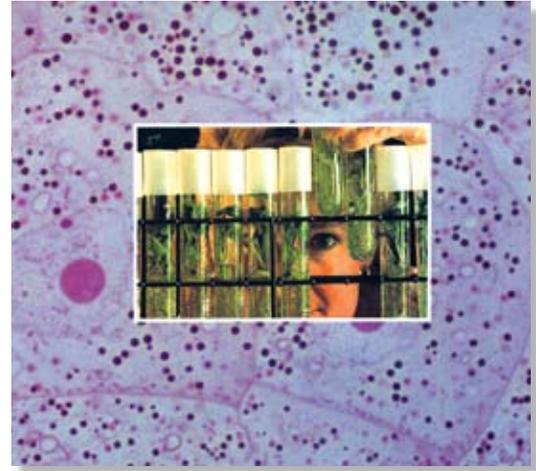


What makes plants work?

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Plant physiologists study the physical, chemical, and biological functions of living plants. They study whole plants, as well as plant cells, molecules, and genes. Plant physiologists often work as members of multidisciplinary teams composed of molecular and cell biologists, biochemists and geneticists, with the broad objective of understanding the function of genes in plants. Recently, advances in the powerful techniques and approaches of molecular biology have made it possible to dissect and understand the role of particular genes. Plant physiologists study the effect of those genes on plant growth, flowering, and seed yield. They also carry out experiments to reveal how plants respond to pathogens and insect pests or to environmental stresses like drought, salinity, pollutants, and high and low temperatures.



Photos: Craig Lending/Brian Larkin, U.S. Department of Agriculture-Agricultural Research Service

Probably because plant physiology is a basic science, most plant physiologists work in academic institutions where they both teach and conduct research. Some are employed by federal and state agencies. A few work full-time for, or as consultants to, industrial and other organizations that have agricultural or related biological interests.

To be a plant physiologist you need to understand botany, chemistry, biology, and mathematics. You must know how to write and communicate well. Because plant physiologists support scientists in other disciplines, they need to know about enzymology, meteorology, horticulture, economics, philosophy and the human condition, politics, history, and how to teach. Plant physiologists must be willing to relocate and must continue their education.

In high school, take [mathematics](#), [chemistry](#), [biology](#), and [botany](#). Develop strong writing and communication skills. Be persistent, inquisitive, and eager to learn, discuss, and accept new ideas. Try working part time in a laboratory.