

PLANT PATHOLOGY

Plant pathology is the study of plants and their pathogens, the process of disease, and how plant health and disease are influenced by factors such as the weather, nonpathogenic microorganisms, and plant nutrition. It encompasses fundamental biology as well as applied agricultural sciences.

Plant pathology involves the study of plants and pathogens at the genetic, biochemical, physiological, cellular, population, and community levels, and how the knowledge derived is integrated and put into agricultural practice. Prerequisite to effective research, teaching, and extension in plant pathology is a breadth of interdisciplinary interest and knowledge, in a department and in its individual members, reaching from ecology to microbiology, from meteorology to applied mathematics, and from molecular biology to communication skills.

Plant pathology is a field that thrives in, and makes its greatest contribution to, comprehensive institutions like the University of Wisconsin–Madison where the proximity and complementarity of basic sciences and the other applied agricultural sciences are exceptionally strong.

Undergraduates in plant pathology can choose between two focus areas. The plant–microbe biology focus area has courses in basic math and sciences, including biology, chemistry, and physics, along with upper-level courses in plant pathology, biochemistry, and microbiology. This focus area is geared toward students who have an interest in receiving a broad education in the basic sciences or plan to pursue a graduate or professional degree. The plant health and industry focus area includes some courses in basic math and sciences, as well as additional courses in agriculture and economics/management and upper-level courses in plant pathology, entomology, and other agricultural sciences. This focus area is designed for students who intend to work in industry after receiving their undergraduate degree. More information about careers in plant pathology is available from the department.

For those interested in graduate studies, the Department of Plant Pathology offers a broad program leading to MS and PhD degrees, which is described in the Graduate Guide (<https://guide.wisc.edu/graduate/>).