

1908 - 1918

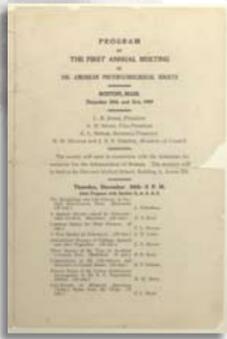
1908 Formation of The American Phytopathological Society—130 charter members

1908 Research begins on the association of *Agrobacterium tumefaciens* with human cancer and similarities in diseases



President 1909
L. R. Jones

1909 First meeting of APS. Meeting was held in conjunction with the American Association for the Advancement of Science (AAAS) on December 30–31 in Boston, MA. This arrangement continued until 1942.



1909 White pine blister rust (*Cronartium ribicola*) is discovered on planted pine trees. The first report of this disease in the U.S. occurred in New York in 1906 on cultivated currants. By the 1930s, the rust had spread throughout much of the white pine areas in the country. This disease is one of the most destructive to white pine and has prevented white pine stands from reestablishing.

1909 *Fungous Diseases of Plants* is published by B. M. Duggar—the first comprehensive American textbook on the subject

1909 The distinction between disease resistance, disease escape, and disease tolerance is made—*Fusarium* wilt work on cotton, cowpea, and watermelon

1909 First demonstration that pectolytic enzymes cause maceration of plant tissue in storage when infected with the bacterium *Pectobacterium carotovorum* (= *Bacillus carotovorus*). The discovery of pectinase in these infections also marked the first virulence factor in bacterial disease. This work stimulated interest in virulence factors for the remainder of the century.



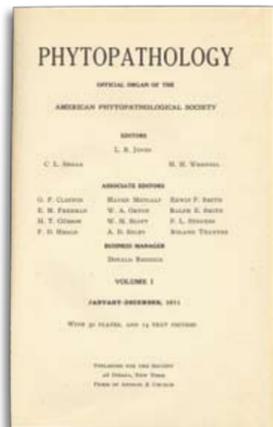
President 1910
F. L. Stevens

1910 Citrus canker (*Xanthomonas axonopodis* pv. *citri*) is introduced into the southeastern U.S. After a massive eradication program to destroy infected trees, the disease was declared eradicated from Florida in 1933 and from the U.S. by 1947. Nearly 40 years later, in 1986, the disease was rediscovered in Florida. Despite recent attempts to eradicate this disease, it has now become endemic in many citrus production areas of the U.S.

1911 The journal *Phytopathology* begins publication in February. The journal is offered bimonthly until 1918, when it transitioned to a monthly journal. The first chair was L. R. Jones, the editors were C. L. Shear and H. H. Whetzel, there were twelve associate editors, and the business manager was D. Reddick.



President 1911
A. D. Selby



Phytopathology journal first edition.

1911 The Local Plant Doctor was needed and predicted. "...[A]s population increases, we shall nurture and develop the science of Plant Pathology. We shall train and send forth a great army of practical Plant Pathologists and trained experts...simply because it will pay."

TABLE II. Showing the comparative results of inoculations of a number of varieties of beans with different strains of *C. lindemuthianum*.

Variation	A ₁	A ₂	B	C	D	E
Detroh	None to very slight	Very slight	Excellent	Excellent	Excellent	Fair to excellent
Imperial	None to very slight	Very slight	Excellent	Slight to good	Excellent	Fair to excellent
Rafagen Wax	Excellent	Excellent	Good			
Wardwell	Excellent	Excellent	Good		Good	Fair to excellent
Blue Pod Butter	None to very slight	Very slight	Excellent	Excellent	Excellent	Slight to excellent
China Red Eye	None to very slight	Very slight	Excellent	Excellent	Excellent	Slight to fair
Navy Pea	Excellent	Excellent	Slight	Slight	None	None to slight to good
Red Kidney	None to very slight	Very slight	Excellent	Excellent	Good to excellent	Fair to excellent
Turtle Soup	Fair to excellent	Fair to excellent	Fair to good			Fair to excellent
Warren	None to slight except a case	Fair to excellent	Excellent	Excellent	Excellent	Fair to excellent
White Kidney	None to slight except a case	Fair to excellent	Excellent	Excellent	Excellent	Fair to excellent
Yellow Cranberry	Fair to excellent	Fair to excellent	Fair to excellent	Excellent	Slight to excellent	Good to excellent
Golden Cluster	Excellent	Excellent	Fair to good			None
Red Marrow	None to slight	Excellent	Excellent	Good to excellent	Excellent	Slight to fair
Golden Rafagen	Excellent	Excellent	None			Very slight

1911 Genetic variability within a pathogen species is demonstrated—pathogen isolates were restricted to certain host varieties

1912 Demonstration that dissimilar nuclei could be associated in vegetative hyphae—Burgeff called the condition "heterokaryosis"

1912 Discovery of the citrus nematode (*Tylenchulus semipenetrans*) in California. Upon the development of soil fumigants, this nematode was proven to be an important citrus pathogen, causing the "slow decline disease".

1912 United States Quarantine Act is enacted—the first national act to prevent insect pests and plant diseases from entering the country. This act was put into effect following efforts to control white pine blister rust in the U.S. It began with Quarantine Number 1, which prohibited the importation of five-needle pines.

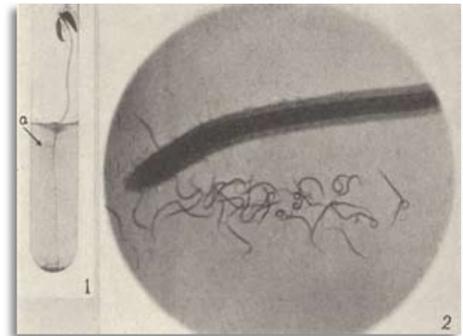
1913 Organic mercury compounds introduced as seed treatments for plant disease control



President 1912
G. P. Clinton



President 1913
F. C. Stewart



1914 First monoxenic culture of a plant nematode—*Heterodera radiculicola*

1914 First APS division formed—Western American Phytopathological Society, renamed Pacific Division in 1915

1915 Stripe rust (*Puccinia striiformis*) of wheat is discovered in the U.S. A visiting scientist with the Royal Agricultural College of Copenhagen, Denmark, F. Kolpin Ravn, identified this disease on wheat cultivars near Sacaton, AZ, while traveling with a USDA crop survey team.

1915 Pectic enzymes produced by plant-pathogenic fungi are implicated in contributing to the ability of the fungus to cause disease

1915 Beginning of an organized effort to eradicate citrus canker from the southeastern U.S. This effort marked the first-ever federal appropriation for this type of effort.

1915 APS is incorporated under the laws of the District of Columbia



President 1914
H. Metcalf



President 1915
H. H. Whetzel



Machinery for nursery stock, 1910.