

## T. SCOTT ABNEY

**Rank:** professor

**Effort Distribution:** 100%R

**Date of Birth:** July 25, 1935

Date of Appointment: July 1991



### EDUCATION:

| Degrees | Year | Institution             |
|---------|------|-------------------------|
| B.S.    | 1960 | So. Illinois University |
| M.S.    | 1964 | So. Illinois University |
| Ph.D.   | 1967 | Iowa State University   |

### ACADEMIC POSITIONS

Research Associate-Corn Pathologist, 1964-1966, Iowa State University

Assistant Professor 1967-1984, Assoc. Professor, 1984-1991, Professor, 1991-present, Purdue University

### OTHER APPOINTMENTS

Research Plant Pathologist, Soybean diseases, USDA,ARS, W. Lafayette, Indiana 1967-present

Plant Pathology Coordinator for USDA-Purdue IPM Project, 1980-1986

IICA/BID Soybean Disease Consultant (Brazil, Argentina, & Uruguay) February & March, 1983

### AWARDS AND HONORS

World Soybean Research Conference, North American representative on Continuing Committee

U.S. Soybean Germplasm Advisory Committee, Invited Soybean Pathogen Representative 1997-00

Soybean Pathogen Coordinator for USDA Specific Coop. Agreements involving *Phytophthora sojae* at Ohio State Univ. & Purdue Univ., and for *Heterodera glycines* at Univ. Missouri & Univ. Arkansas

American Soybean Association/United Soybean Board: Production Research Award 1995

Thesis Research of Graduate Student (Alex Cochran) Directed by incumbent honored:

1998 – NCR APS Meetings, Ames, Iowa

1998 – Dow Agro Sciences – Plant Pathology Scholarship

2000 - Indiana Crop Improvement - Indiana Seed Industry Fellowship

President, Purdue Chapter Gamma Sigma delta, Agricultural Honorary 1995-96

Chairman, North Central Soybean Root Rot Committee 1998

### TEACHING

Graduate Supervision: 2 Ph.D., 1 M.S. students since 1994

Teach BTNY 697 (Seminar in Plant Science), “Fungi Imperfect Section” for BTNY 544 (Plant Parasitic Fungi) and “Soybean Diseases” for BTNY 605; Guest lectures and demonstrations (BTNY 210 and 301)

### EXTENSION

Pest control conferences, field days, grower meetings, “daily” response to inquiries.

### RESEARCH PROGRAM

#### USDA Soybean Pathology Project

##### Research Accomplishments (since January 1994)

Identified seven new physiologic races of *Phytophthora sojae* in 1997.

Described ‘dominant’ races of *Phytophthora sojae* in the 1990s for Indiana soybean fields, and identified “Rps” gene combinations needed to provide effective control of *Phytophthora* root rot.

Co-authored "Sudden Death Syndrome" feature article for Plant Disease Journal in 1997.

Described influence of soybean genotype on rate of seed maturation & its impact on seedborne fungi.

Established role fungal pod infection as inoculum potential & prerequisite to seed infection.

Described the influence of crop rotation, & tillage, on soybean diseases & seed quality.

Shared in release of new soybean varieties with improved disease resistance and yield.

### RESEARCH FUNDING

In addition to USDA,ARS base funding for soybean disease research involving *Phytophthora* Root Rot, Sudden Death Syndrome, Whitemold, and Late Season Seed Infection: Special Funding from USDA, the Indiana Soybean Board, and North Central Soybean Research Programs. (Approximately \$75,000 per year from Grants - ISB and NC SRP)

## PUBLICATIONS (since January 1994)

- Abney, T. S., Shaner and Cochran A. J. 2000. *Sudden death syndrome of soybeans*. Proc. 2000 Midwest Soybean Conference July 2000. P. 37-42.
- Cochran, A. J. and Abney, T. S. 2000. *Phytophthora root rot of soybeans: Dominant races and strategies for effective control*. Proc. 2000 Midwest Soybean Conference, July 2000. P. 43-38.
- Cochran, A. J. and Abney, T. S. 2000. *Influence of Rps1-k and tillage on population dynamics of Phytophthora sojae*. (Abstr.) Phytopathology 90 :(6s) 15.
- Abney, T. S., Melgar, J. C. and Cochran A. J. 1999. *Pathogen strains and disease resistance genes*. Proc. World Soybean Res. Conf. VI: 86-87.
- Cochran, A. J. and Abney, T. S. 1999. *Rps gene combinations needed to control diverse pathotypes of Phytophthora sojae*. (Abstr.) Phytopathology 89:s104.
- Melgar, J. C., Abney, T. S., Schultze, D. G. and Huber, D. M. 1998. *Manganese accumulation in hypocotyl lesions of soybeans inoculated with Phytophthora sojae*. Honduras Forestry Journal.10:80-92.
- Wilcox, J. R., Abney, T. S. and Christmas, E. P. 1998. *Public soybean varieties for Indiana (1998)*. Purdue Univ. Coop. Ext. AY-270. 5p.
- Abney, T. S. 1997. *Current status of new and important races of Phytophthora attacking soybeans in the Midwest*. Proceedings of Illinois Agr. Pesticides Conference. Univ. of Illinois Coop. Ext. Service, Urbana, Illinois. pp104-105.
- Abney, T. S., Melgar, J. C., Richards, T. L., Scott, D. H., Grogan, J. and Young, J. 1997. *New races of Phytophthora sojae with Rps1-d virulence*. Plant Dis. 81: 653-655.
- Hershman, D. E. and Abney, T. S. 1997. *Results of a Phytophthora sojae survey in Kentucky*. Proc. of 24th Southern Soybean Disease Workers Conference. Ft. Walton, FL. p17.
- Roy, K. W., Hershman, D. E., Rupe, J. C. and Abney, T. S. 1997. *Sudden death syndrome of soybean*. Plant Dis. 81: 1100-1111.
- Wilcox, J. R. and Abney, T. S. 1997. *Registration of Ahow soybean*. Crop Science 37: 1981-1982.
- Wilcox, J. R., Abney, T. S. and Christmas, E. P. 1997. *Public soybean varieties for Indiana*. Purdue Univ. Coop. Ext. Service Agronomy Guide AY-270. 6pp.
- Abney, T. S. 1996. *The more research we do, the better our varieties get*. (News release by Indiana Soybean Development Council featuring research supported by "Check-off" funds and reported in Manuscript submitted to Plant Disease; Item included in Indiana Prairie Farmer 168(4): 50-51. 1996; Also published in several newspapers and other popular Agriculture Publications: i.e., "Phytophthora Root Rot of Soybean" in Farmers Advance, Farmer's Exchange, Lowell Journal, Cedar Lake Tribune, and New Castle Courier.
- Melgar, J. C., Vierling, R., and Abney, T. S. 1996. *Peroxidase activity in hypocotyl tissues of Glycine max following inoculation with Phytophthora sojae*. (Abstr.) Phytopathology 86::46-47.
- Abney, T. S. 1995. *Factors influencing sudden death syndrome and soybean root health*. Iowa State Univ. Proc. Integrated Crop Management Conf. 1994. pp.45-47.
- Abney, T. S. 1995. *Factors influencing soybean root health*. Univ. Minn. Proc. Crop Pest Management Short Course 1994. 3p.
- Wilcox, J. R. and Abney, T. S. 1995. *Registration of Probst soybean (Reg. No. CV-338)*. Crop Science 35: 1713.
- Wilcox, J. R., Ferris, J. M., Faghihi, J., and Abney, T. S. 1995. *Registration of Bronson soybean (Reg. No. CV-330)*. Crop Science 35: 1207-1208.
- Melgar, J., Roy, K. W., and Abney, T. S. 1994. *Sudden death syndrome of soybean: etiology, symptomatology, and effects of irrigation and Heterodera glycines on incidence and severity under field conditions*. Canadian Journal of Botany 72:1647-1653.
- Abney, S, Melgar, J., Richards, T., Young, J., and Booker, M. 1995. *Soybean SDS yield losses in the Midwest*. (Abstr.). Phytopathology.
- Abney, T. S. and Ploper, L. D. 1994. *Bean pod mottle virus effects on soybean seed maturation and seedborne Phomopsis spp*. Plant Disease 78: 33-37.
- Abney, T. S. *Factors influencing sudden death syndrome and soybean root health*. Proc. Integrated Crop Management Conf. Iowa State Univ., Ames, IA. pp 45-47. 1994. and Proc. 1994 Crop Pest Management Short Course. Univ. Minnesota, St. Paul, MN. 3pp. 1994.

