

John R. Elkins

Dr. John Rush Elkins has dedicated most of his 34-year professional career to restoring the American chestnut tree to forests throughout West Virginia.

He has worked with the American Chestnut Cooperators' Foundation and used large blight-infected, surviving trees to produce trees with enhanced blight resistance. Thousands of seeds were then distributed throughout the Appalachian Mountains to identify those with strong defenses to the disease.



He collaborated with the Appalachian Farming Systems Research Center (AFSRC) and several other government and industry agencies on research projects to determine what impact such factors as air temperature and elevation have on disease susceptibility. The results garnered from those studies have been used as fundamental guidelines to select locations

for investigations of blight-resistance mechanisms.

As a chemistry professor at Concord College, he has mentored many students in applied research and enhanced their classroom laboratory experiences. He employed two undergraduate students to assist him with his research projects at the AFSRC. Those students are now working on doctoral degrees at Johns Hopkins University in Baltimore, Md. He has encouraged many others to further their studies.

Elkins developed grafting techniques that combine portions of young blight-resistant American chestnut trees with native root stocks. The process was intended to genetically safeguard the trees for resistance, use existing root systems, and hasten the blight-resistance behaviors in the species' natural environment. He has taught these grafting and tree preservation techniques to local residents and improved the introduction rate of blight-resistant trees into the state's forests.

The trees produced from his studies have shown enhanced resistance, but not immunity, to the blight fungus. Elkins' research has shown that the canker expansion on blighted trees can be stopped with the initiation of the blight virus at the infected site. Through Elkins' dedicated research, the American chestnut tree is poised to make a glorious return to the forests of West Virginia.