Editorial

CPS and APS Sponsor the Glenn Anderson Lecture on Security of the World Food Supply

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Robert Glenn Anderson (1924–1981)

The Canadian Phytopathological Society is pleased to be meeting again with the American Phytopathological Society at Grand Rapids, Michigan, in August. Joint meetings of our societies have become a tradition, and with this meeting, we add a new component to our joint endeavors—the Glenn Anderson Lecture. This lecture series, on the security of world food supply, was approved by both societies in 1986, and an endowment fund was established at that time. It is planned that the lecture will be presented at joint meetings of the two societies. The meetings at Grand Rapids provide the first such occasion since the initiation of the fund.

Norman Borlaug, Nobel Laureate, will present the first lecture. Dr. Borlaug's participation has special significance, as his contributions and those of the late Robert Glenn Anderson are closely linked. Unfortunately, the contributions of Glenn Anderson are probably less well known in the United States and Canada than in developing countries. The purpose of this editorial is to review some of Dr. Anderson's contributions. (A more detailed description of his career is given in *Agronomy Journal* 74:220, 1982.)

Dr. Anderson, whose scientific career began in 1946 following service with the Royal Canadian Air Force, first studied entomology and then plant breeding and genetics. After a brief period as a faculty member at the University of Saskatchewan, he joined Agriculture Canada and studied the genetics of rust resistance in wheat. In 1964, under the auspices of the Rockefeller Foundation, he went to India as wheat breeder and joint coordinator of the All-India Coordinated Wheat Improvement Program. Plant breeders in India had just begun an intensive program of breeding dwarf wheat varieties, using material supplied by Dr. Borlaug in Mexico, and it was Dr. Anderson's task to help them make the best of this opportunity.

In India, Dr. Anderson molded one strong team out of a large number of research workers belonging to many different institutions at numerous locations. The success of this integrated effort can be measured by the fact that wheat production in India rose from an average 10.9 million metric tons for the period 1959–1964 to over 26 million metric tons during 1971–1972. (The 1988–1989 harvest was 54 million metric tons!) There were many aspects to the program, including organization of a national disease survey and surveillance program. Agronomic practices that could bring out the best from the new wheat varieties were standardized. Demonstrations were carried out in farmers' fields, and a dynamic extension program to carry the latest results of research to farmers was initiated. To quote a colleague from India, "Farmers, extension workers, administrators, mass communication men, and scientists were all forged into a team comparable to the best symphony orchestra of the world. Dr. Anderson had a dominant role in developing this orchestrated effort."

At the same time, Dr. Anderson also indirectly played a key role in the doubling of wheat production in neighboring Pakistan. At a time when there were no diplomatic relations, and at times open warfare, between India and Pakistan, Dr. Anderson was still able to gain the respect and trust that allowed him to provide this effective leadership in the wheat-breeding program of Pakistan.

The successes in wheat production in India and Pakistan were accomplished by developing a crop production "package" that made the most of all of the resources available at that time. However, Dr. Anderson realized that the useful life span of the new wheat varieties would be finite because of the speed with which diseases and pests evolve, so he was anxious to return to the business of finding and exploiting new germ plasm. Consequently, in 1971 he joined Dr. Borlaug in Mexico as associate director of the International Maize and Wheat Improvement Center (CIMMYT) and assumed the position of director when Dr. Borlaug retired in 1979.

At CIMMYT, until his untimely death in 1981, Dr. Anderson worked with a distinguished group of plant breeders to improve crops grown in developed and, particularly, developing countries. An important component of that program was the training of scientists from throughout the world. During that period, he also served as a spokesman for agriculture and traveled extensively to advise and assist national governments in analyzing and overcoming their production problems. He held to the belief that "development depends on local people having confidence in themselves and in their own people." He constantly worked to convince government policymakers that the inputs for the success of the new technologies must be available to small farmers at reasonable prices, and that these farmers must be assured of reasonable prices for their crops at harvest time. Two decades later, economic policy continues to be a major factor in determining whether the small farmer benefits from the new technology.

As we enter a decade in which environmental concerns, including global climatic change, will play an increasingly dominant role in food production, there are lessons to be learned from Dr. Anderson's career. Probably the most important lesson is about leadership. Dr. Anderson had outstanding leadership ability. What makes a good leader? The following description written by Dr. Borlaug in 1975 gives us some insight:

"Dr. Anderson is always positive and enthusiastic. He will never ask anyone to do something he himself is not willing to do. He has deep compassion and understanding for those with less talent and experience than he has. These attitudes he transmits to his colleagues, and it is reflected back and evolves into a team spirit."

A second important lesson is that leaders and scientists with a multidisciplinary background are needed. Glenn Anderson had an unusually broad outlook on food production and how, based on the understanding of the day, to use world land resources to the best advantage. With our pressure to educate, hire, and promote "specialists," are we eliminating such people from our agricultural educational and research systems? We must ensure that we are training young scientists who can mold the best science of tomorrow into cropping strategies that enhance production while protecting the environment. Can we meet the challenge?