

# KEYNOTE ADDRESSES PRESENTED AT THE SECOND INTERNATIONAL CONGRESS OF PLANT PATHOLOGY, MINNEAPOLIS, MINNESOTA, SEPTEMBER 1973.

## Introduction

### WHY ARE WE HERE?

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I was invited to speak for a few minutes this morning without making a speech. My only mandate is to occupy ten minutes or less of your time. Now that you know why I am here, I propose to spend the rest of my allotted time in trying to figure out why you are here. And that is a complex undertaking.

Collectively you are an awesome and wonderful sight. According to a preliminary count, you number some 1,600 individuals; you have come from at least 60 different countries, with diverse and sometimes conflicting political philosophies and national aspirations. You speak a score or more distinct languages or dialects, and you have various religious affiliations and cultural traditions. Professionally, too, you are very diverse, representing numerous more or less sharply distinct specialties within the vast field of plant pathology. You really are a very heterogeneous group; you are an awesome aggregation of individual intellects. Yet here you are, temporarily under one roof in the "Land of Sky-Blue Waters", prepared to pool your knowledge and ideas for the edification of all. What motivates this spirit of sharing?

There appear to be several general reasons for the "Unity in Diversity" among plant pathologists: enlightened self-interest; a sense of social obligation; and a spirit of human compassion. Of course, motives and reasons for human attitudes and actions seldom exist in chemically pure form; they are likely to be mixed or even contradictory. My statements regarding motivation may therefore be subject to some debate, but I believe and hope they are basically true.

As concerns enlightened self-interest, plant pathologists are extraordinarily sensible scientists. It is necessary for us to be sensible; the nature of our work requires it. Moreover, the international nature of many plant diseases virtually demands international efforts if we are to control them. And surely, the control of plant diseases should still be the primary business of plant pathologists. Accordingly we must strive to run that business wisely and well; otherwise our business will suffer and we ourselves will suffer in diminution of professional opportunity and prestige. Worse still, millions of humble people in the world will suffer the physical pains of hunger if plant pathologists fail to discharge their self assumed obligation of protecting plants against disease.

Because of the very nature of our profession, then, plant pathologists, and other guilds of plant protectionists, have a special social obligation, for we have committed ourselves to safeguarding man's most basic renewable resource—his plants—without which man himself could not exist upon this Earth and plant pathologists would find it a very lonely place indeed. We need to remind even ourselves occasionally of man's basic dependence on plants for food to sustain his own life and that of his friends and foes in the animal kingdom. When

we contemplate the vast variety of plants and plant products which we have undertaken to protect against plant pathogens and other destructive agents, we could be almost overawed by the importance and multiplicity of our responsibilities.

Of course, many guilds of plant scientists contribute to the establishment and maintenance of efficiency in plant production. But plant pathologists have an especially broad and exacting obligation. Not only are they expected to help maintain the health of all kinds of plants while they are still developing, but pathologists are also expected to protect them against deterioration or destruction after they are well-developed and the potential profits from the investments already made in their development are in jeopardy.

Ironically, some of the most fearsome diseases of the world's principal food- and feed-crops become destructively epidemic late in the season, devastating fields which promised a good harvest and blighting the hopes of farmers who expected to reap the reward of their labors. Plant diseases, as well as human diseases, still cause too many human tragedies in too many areas of the modern world. Plant pathologists cannot be indifferent to hunger, famine, and disease, for plant diseases are too often contributing causes. It is only human to try to banish hunger and its tragic consequences insofar as humanly possible.

Plant pathologists are among the most important of all hunger fighters, for we have seen many tragedies of hunger caused by plant diseases. Moreover, we avow that "Healthy plants are our concern", "Plant medicine is our business", or "We aim to elevate plant doctoring to the status of a reliable and respected profession". If we really mean what we say, a genuine feeling of human compassion and realistic altruism should fortify our aims and humanize our efforts toward the conquest of hunger. And may it be so, for the conquest of hunger is essential to the maintenance of our present civilization and the improvement of future civilization.

Historical records show that hunger—the food-population problem—is as old as civilization itself. Many civilizations of the past failed because their science, statercraft, and ethics were inadequate to the essential task of conquering hunger. During the past century, however, science has enabled man to become the potential master of his own fate in problems of human subsistence; it has shown how to reduce the rate of human reproduction humanely and it has shown how to increase the efficiency of food production substantially—and sometimes spectacularly. The sharp decline in the rate of population increase in Western Europe within the present century shows that population brakes can be applied successfully in societies which have the will to apply them. And the sharp increases in food production in recent decades, as exemplified by the "Green Revolution", prove that progress is possible, even in some "areas of lasting

difficulties". Although there is no evidence that plant pathologists contributed significantly to population control, they did contribute very significantly to plant disease control and thereby to the success of a series of "green revolutions".

Whether or not designated as green revolutions, there have been revolutionary increases in acre yields of the world's principal food crops during the past fifty years. The increases came first, of course, in those areas where science was first applied effectively to practical agriculture, where theory and practice supplemented each other. By developing and utilizing better varieties, nourishing them better, and protecting them better against diseases and pests, agricultural scientists helped farmers in various areas to increase yields of wheat, rice, and maize three- or fourfold. And "The Green Revolution" in the Indian Sub-continent, which began about fifteen years ago, has demonstrated that intelligent and concentrated effort can effect revolutionary changes

even in so-called backward areas.

These green revolutions are certainly the most important contributions toward the conquest of hunger in recent times; if continued and adequately supported, they can constitute the greatest contribution of all time. If supplemented by comparable efforts for reducing the rate of population increase, hunger can be at least demoted from a major impediment to a minor one in the progress of civilization. And surely I need not remind you how important plant pathologists are to the attainment of that goal. Individually you can do much; collectively you can do more.

The clock has been ticking, leaving time for a few short words only. So, I hope that this Congress will profit all of you, individually and congressionally; and your countries; and all countries; and all people, especially those who are hungry and needy, wherever they may be.

And may the Guild of Plant Pathology discharge its scientific and human obligations faithfully and well.