



THE WORLD FOOD PRIZE



1990

JOHN S. NIEDERHAUSER
Researcher, Scientist and Innovator

A PRIZE FOR THE WORLD



The World Food Prize is the foremost international award recognizing outstanding individual achievement in improving the quality, quantity or availability of food in the world.

Conceived by Norman E. Borlaug, Nobel Peace Prize winner for his contributions to world agriculture, the prize recognizes achievements in any field involved in the world food supply, including food and agricultural science and technology, manufacturing, marketing, nutrition, economics, political leadership, and the social sciences. Beyond recognizing personal accomplishments, the prize establishes role models to inspire others.

The laureate receives \$200,000 and a sculpture created by world-renowned designer Saul Bass. The prize is awarded solely on the basis of individual achievement with no consideration of nationality, ethnic origin, political persuasion, sex or age.

LAUREATES

Since its inception, three extraordinary individuals have been awarded The World Food Prize.

The first prize was awarded in 1987 to M. S. Swaminathan, architect of India's "green revolution." Dr. Swaminathan led the introduction of the high-yielding "miracle grains" of wheat and rice to Indian farmers. Today, India is self-sufficient in cereal production.

The 1988 laureate was Robert F. Chandler, Jr., founding director of the International Rice Research Institute (IRRI) in Los Banos, the Philippines. Under Dr. Chandler's guidance, IRRI developed and distributed new varieties of rice with double and triple the yield potential of traditional rice. Largely because of his efforts, famine in Asia was averted in the 1970s.

Verghese Kurien, chairman of India's National Dairy Development Board, was awarded the prize in 1989. As founder of India's "Operation Flood," Dr. Kurien turned the milksheds of India into cooperatives that produce, process and market milk in the country's urban centers. More than six million dairy producers in 50,000 cooperatives are currently marketing milk in 500 cities and towns throughout India.

GOVERNANCE

The World Food Prize is guided by a council of advisors, a group of internationally recognized authorities. The council establishes policy regarding The World Food Prize. Its members represent a wide variety of sciences, disciplines, and professions relevant to food policy making, research, production, processing, and distribution.

The 1990 Prize program is privately funded by individuals, corporations, and foundations.

The Secretariat, Winrock International administers the World Food Prize. In 1991 the Prize's administration will be directed by The World Food Prize Foundation, in Des Moines, IA., U.S.A. The Secretariat will be Iowa State University's College of Agriculture.

THE FRUITS OF HIS LABOR



"We must learn how to feed more people . . . how to feed people more . . . and, thus, have a world at peace."

DR. JOHN S. NIEDERHAUSER

Dr. John S. Niederhauser of the United States is the World Food Prize laureate for 1990. He is being honored for his innovative leadership in advancing the production and consumption of the potato, which ranks fourth among the world's staple foods, after wheat, rice and maize.

During his 43 years in international agriculture, he has become known throughout the world as "Mr. Potato" because of his many contributions as a planner, catalyst, mentor, cooperator, and active participant in potato development programs.

His major accomplishments have been the result of working directly with farmers and scientists in national production programs, in accordance with their needs, priorities, and resources. Under Niederhauser's guidance, Mexico increased its potato production sixfold from 1950 to 1980. During this time, per capita consumption of potatoes more than tripled in Mexico, despite this being a period of rapid population growth.

Working from this Mexican base, Niederhauser cooperated in the development of strong national potato programs in other regions of the world. Among the most successful were those in Pakistan, Bangladesh, Colombia, India, and Turkey. These countries not only more than doubled their potato acreage, but doubled or tripled productivity, and the total national production increased by four to eight times. In these countries per capita potato consumption increased nearly 100% in 30 years. Niederhauser insists that each of these production breakthroughs was the result of a national team effort. But, the one common factor to all was John Niederhauser.

More than 180 scientists, from national programs all over the world, came to Mexico to learn potato production technology in the field, working with Niederhauser and his Mexican colleagues. To organize this international cooperation, he established the Inter-American Potato Program in 1961, and the International Potato Program in 1966. This provided an opportunity for scientists from many countries, working together, to solve food production problems. Such strategies became the keystone for the newly created international agricultural research centers.

These international activities led to the founding of the International Potato Center in Lima, Peru in 1971. This new center is well known for the basic characteristics adopted from Niederhauser's preceding programs: (1) modest headquarters; (2) contractual cooperation with qualified potato research institutions throughout the world; (3) regionalization of activities to give strength and continuity to national program development; and (4) maintenance of a potato germplasm bank to provide a global pool of genetic material.

In 1978 Dr. Niederhauser launched a new strategy in international agricultural development, a Regional Cooperative Potato Program (PRE-CODEPA) involving the national potato programs of Mexico, Central America, Panama, and the Caribbean. By sharing research and training responsibilities, these countries have developed an effective, cost-efficient program to promote potato productivity in the region. PRECODEPA is renowned as a model for regional cooperation in agricultural production and research, and may be the most important development strategy for

technology transfer since the international agricultural research centers were created in the 1960's.

As a scientist, Niederhauser is best known for his research to control potato late blight. Early in his career he identified Mexico as the place of origin of the late blight pathogen that has been a world-wide potato production problem since its sudden appearance in Ireland in the 1840's. Utilizing the resistance found in Mexican wild potato species, Niederhauser and his Mexican colleagues assumed a leadership role in breeding for a durable resistance. This Mexican germplasm has provided the sources of late blight resistance used in potato breeding programs all over the world. Increased resistance means that potato farmers have less need to use expensive chemical fungicides. Furthermore, subsistence farmers throughout the world will be able to grow the potato with more security and at less cost. And these increases in food production would be accomplished by using fewer chemicals, and thus make it easier to maintain environmental quality.

This research led Niederhauser to develop the concept of "horizontal resistance", which has been successfully used in the development of new potato varieties, and has important implications for more efficient production of other food crops in a sustainable agriculture.

Since 1982, Niederhauser has been a consultant for, and a frequent visitor to Poland, the world's third largest potato-producing country. Together with his Polish, Mexican, and U.S. colleagues, he is helping Polish farmers control potato late blight, and use fewer fungicides. This international cooperative project, with Niederhauser as executive-secretary, has expanded to include several other countries. In August 1990, an International Cooperative Potato Late Blight Project was officially formalized by the Mexican Ministry of Agriculture, and was launched by a group of scientists from Poland, Mexico, the United States, Canada, the Netherlands, and the International Potato Center.

Dr. Niederhauser's dedication to improving the world's food supply illustrates the purpose of The World Food Prize. The lives of billions of people have been made better as a result of his research efforts and innovations.



Traditional potato production area.



Dr. Niederhauser with Mexican farmers.
(above)

Dr. Niederhauser began his career as plant
pathologist (corn, wheat and beans).



Mexico City Aztec Little League. Coaches, John
Niederhauser and Norman Borlaug. (below)



CURRICULUM VITAE

DR. JOHN S. NIEDERHAUSER

Born September 27, 1916 in Seattle, Washington, U.S.A.

EDUCATION

Ph.D., Cornell University, 1943

B.S., Cornell University, 1939

Undergraduate Work, Timuriyev Agricultural University
(Moscow, U.S.S.R.), 1935–1936

PROFESSIONAL PROFILE

International assignments with the International Agricultural Program of the Rockefeller Foundation, International Potato Center, Regional Cooperative Potato Program, University of Arizona and others.

New York State Seed Improvement Association: 1938–1943

- Potato Seed Inspector, (1938–1943)

Department of Plant Pathology, Cornell University:
1939–1947

- Instructor (1939–1944)
- Assistant Professor (1945–1947)

Rockefeller Foundation: 1947–present

- Plant Pathologist, Mexican Agricultural Program (1947–1961)

- Director, Mexican Potato Improvement Project (1951–1961)
- Visiting Scientist, Max Planck Institute, West Germany (1960)
- Plant Pathologist, Wheat and Corn Programs (1961–1966)
- Director, Inter-American Potato Program (1961–1966)
- Director, International Potato Program (1966–1972)
- Associate Director of Agricultural Science (1967–1972)
- Consultant to Rockefeller Foundation (1981–present)

Centro Internacional de la Papa (CIP: International Potato Center): 1972–1980

- Co-Founder, Peru (1972).
- Trustee, Board of Trustees (1972–1974)
- Director, Regional Research and Training Program (1972–1975).
- Senior Consultant (1975–1980).

Programa Regional Cooperativo de Papa (PRECODEPA: Regional Cooperative Potato Program): 1978–1981

- Founder, (1978).
- Coordinator, (1978–1981)

University of Arizona: 1985–present

- Adjunct Professor of Agriculture, Tucson, Arizona, U.S.A.
- Regents Lecturer, University of California (Riverside), 1988

Abundant harvest in the high valleys of Mexico.



- Life Member, Chinese Society of Plant Pathology (Beijing), 1988
- Honorary Diploma, Agricultural Association of Potato Farmers of Toluca Valley (Mexico), 1989
- Plenary Session Speaker, Phytophthora Symposium (Dublin, Ireland), 1989
- Honorary Life Member, Costa Rica Plant Pathology Society (San Jose, Costa Rica), 1990
- Diploma, 14th Annual Meeting of PRECODEPA (San Jose, Costa Rica), 1990

PROFESSIONAL AFFILIATIONS

- American Phytopathological Society
- American Association for the Advancement of Science
- Mycological Society of America
- Potato Association of America
- Botanical Society of America
- European Association for Potato Research
- Netherlands Society of Plant Pathology
- Sociedad Mexicana de Fitopatología
- Asociacion Latinoamericana de Papa
- Indian Potato Association

CIVIC ACTIVITIES

- Founder and Regional Director of Little League Baseball in Mexico and Latin America, 1954–1969

- Board of Directors, American High School, Mexico, 1951–1958
- Board of Trustees, Cape Cod Academy, 1976–1978

HONORS AND AWARDS

- Phi Kappa Phi, 1938
- Sigma Xi, 1943
- Diploma and Founding Member, National Institute for Agricultural Research, Ministry of Agriculture (Mexico), 1964
- Honorary Life Member, Potato Association of America, 1965
- Fellow, American Phytopathological Society, 1967
- Order of Agricultural Merit, Government of Peru, 1968
- Life Member, Indian Potato Association, 1976
- Diploma, Sociedad Mexicana de Fitopatología (Mexico), 1978
- Medal of Merit, Ministry of Agriculture (Mexico), 1981
- Honorary Diploma, PRECODEPA, 1981
- Diploma, University Antonio Narro Saltillo (Mexico), 1985
- Premio Mexico de Fitopatología, Mexican Phytopathological Society, 1985
- Diploma, National Potato Congress (Chihuahua, Mexico), 1987
- Honorary Life Member, Latin American Potato Association, 1987



Popularity of the potato as staple crop.

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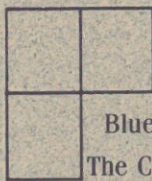
SELECTION COMMITTEE

The Selection Committee is composed of seven distinguished individuals from around the world whose judgment is widely recognized and who are knowledgeable on various aspects of nutrition and food production, processing and distribution, including research, policy development, and business management. Members of the selection committee will remain anonymous, except for the chairman, Norman E. Borlaug, whose achievements in plant genetics research and application earned him the Nobel Peace Prize in 1970.

Norman E. Borlaug, Ph.D., Chairman, World Food Prize Selection Committee,
Distinguished Professor, International Agriculture, Texas A & M University, College
Station, Texas, USA



Mexican farmer—justifiable pride in potato harvest.



Blue Bell Creameries

The Coca Cola Company

ConAgra Charitable Foundation, Inc.

Gerber Products Company

IMC Fertilizer Group, Inc.

International Life Sciences Institute

Kraft General Foods

Eli Lilly and Company

(Elanco Animal Health Division)

McCormick & Company, Inc.

Nabisco Brands, Inc.

Pepsico Foods International

The Proctor & Gamble Company

The Smithsonian Institution

The World Food Prize Foundation

