

Population US, food is critical, says Penn State economist

UNIVERSITY PARK — Population growing faster than food production now occurring in Africa and South Asia is the most difficult food problem worldwide, according to a Penn State economist working to improve international agriculture.

Wayne A. Schutjer, College of Agriculture economist, said the worst gap between food production

and food needs is centered in Africa and South Asia where food production per person declined between 1970 and 1980.

"Africa and South Asia are the continents where the largest population growth will continue," he affirmed. "The population of Africa, which stood at 401 million in 1975, is projected to reach 823 million by the next century.

"South Asia, with the current population of 1.2 billion, will surpass 4.1 billion within another hundred years. That many billions," he added, "about equals the population of the entire world back in 1975."

To back his observations, Schutjer said food production in the less developed nations grew at a faster rate than in the developed

nations from 1970 to 1980. Nevertheless, rapid population growth in the "have not" countries allowed almost no additional food per person. In the developed nations, food production per person increased by 8 percent from 1970 to 1980.

The population versus food situation is further complicated by periodic famine among low income groups throughout the globe, closely related to chronic hunger among 750 million people.

For 17 years, Schutjer has conducted studies of international agricultural development. During an 18 month leave-of-absence, he served as the Southeast Asia Program Advisor for the Ford Foundation. Earlier he directed the Research and Training Network of the Agricultural Development Council, a private foundation in New York City. Prior to this he was in the Policy Planning Division of the Agency for International Development, U.S. Department of State.

The Penn State economist said programs and policies are available for the U.S. and other nations to assist "have not" countries in meeting their food needs. Ultimately, however, solutions must be found in the food-

deficit nations themselves, he affirmed.

For "have not" nations to provide adequate food, birth control must be used widely and other social and economic changes must be introduced into agriculture, Schutjer declared.

"It's an old story but one that bears repeating," he said. "Social and economic changes that redistribute income downward provide income to buy food. And farmers need access to land and capital to increase food production - both lacking in many less developed nations."

He indicated the transformation from "have not" to "have" will be difficult, expensive, time-consuming, and not without political turmoil and violence in many countries.

"To redistribute assets and create institutions to benefit the poor and those not well served goes against the existing patterns of wealth and power," he noted.

He concluded that the U.S. can serve a major role in developing agricultural technology for use in the less developed countries. But he said it is not likely that the "have not" nations will welcome foreign assistance in changing the distribution of wealth and power.

Conference outlines progress in livestock, poultry research

ST. LOUIS, Mo. — Animal health and nutrition experts reported current developments in livestock and poultry research at the 29th Annual Pfizer Research Conference recently.

The keynote address was presented by Walter F. Mondale, former Vice President of the United States, who discussed his views on current affairs.

Following are highlights of the research summaries presented:

Ruminant Nutrition

Donald G. Wagner, professor of animal science, Oklahoma State University, reported that in 1980 much research effort continued to be devoted to the understanding of factors affecting more efficient protein production and utilization by ruminants. Many factors appear important in affecting protein degradability in the rumen, bacterial protein synthesis and animal responses to protein or nitrogen supplementation.

A variety of effective methods are being achieved for improving utilization of low quality forages although still not economical. Progress is being made in understanding the factors limiting or enhancing biological output and efficiency of the ruminant system. These include defining limiting amino acids and amino acid requirements for various biological processes, requirements for greater bacteriological protein production in the rumen, factors affecting the nature, efficiency and extent of digestive processes in the rumen vs. lower digestive tract, and the role of buffers and when they appear most useful.

Poultry Nutrition

Edwin T. Moran Jr., professor of poultry science, University of Guelph, Ontario, Canada, reported that energy was the foremost topic of research in poultry nutrition during 1980. Measurement of true energy available from feed and feedstuffs had considerable attention.

Use of fat and carbohydrate forms of energy by the bird were also well investigated. Objectives were not only to meet a requirement for energy but to present a balance between fat and carbohydrate suited to the activity and environment. Also, research interest in a practical approach to measuring amino acid availability gained momentum. Increasing productive efficiency was attempted by altering the manner in which feed is presented.

Diverse mineral and vitamin studies showed phosphorus adequacy and fasting could increase liveability of birds during heat stress, egg size and shell quality could be improved by appropriate manipulation of calcium and phosphorus. Investigations on selenium and vitamin E showed that the metabolic functions of each were discrete yet interrelated.

Swine Nutrition

Trygve L. Veum, professor of animal nutrition, University of Missouri, reported that protein and carbohydrate components of milk can be replaced by more economical ingredients for artificial rearing of pigs. British

researchers got acceptable performance from pigs fed a mixture where 40 percent of the milk protein was replaced with isolated soybean protein. Missouri researchers found glucose basically equivalent to lactose for pigs. They also found that pigs can utilize sucrose at an earlier age (15 to 36 days of age) than was earlier thought.

Laurence A. Davey, manager of animal nutrition research, Pfizer Central Research, Sandwich, Kent, England, presented data showing that the use of Mecadox, a non-antibiotic antibacterial food additive, significantly reduces

multiple antibiotic resistance and the number of R-factor (resistance) carrying strains of E. coli in the gut of pigs.

Steven C. Henry, DVM, Abilene Animal Hospital, Abilene, Kansas, reported on the practical aspects of swine dysentery control. He pointed out that facilities, labor, economics and most of all, commitment, determine the effort and eventual success achieved in dysentery control on a farm. The persistence of pork producers coupled with the knowledge and skill available through veterinary medicine can today make swine dysentery control possible.

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