flyswatter). Biological control of insects may take one of many forms: introduction of a parasite or predator insect, which will reduce the population of the target insect; introduction of large numbers of sterile insects of that species to reduce the population in the next generation; introduction of disease organisms that spread a fatal disease through the target population; use of a hormone to induce sterility in the target population; use of sexual attractants to lure insects into a mechanical or chemical death trap; and development of strains of the crop that are resistant to insect damage.

Scientific interest in biological control is growing. If perfected, its proponents argue, biological control would be cheaper, have fewer, if any, environmental side effects, and be more permanent than the one-year chemical insecticide spray. However, given the difficulties so far encountered in working with biological controls, most of its proponents now argue for "integrated controls"—combinations of many methods, biological and chemical, to deal with a single problem. For example, sterile mating is most effective if the target population has first been reduced substantially by chemical means, so that the sterile males will substantially reduce the proportion of fertile matings that occur.

"Complex" Problems

The state of the art is not well advanced, despite increased federal attention to it (the entomology research division budget has tripled in the last decade while the ARS budget as a whole has not quite doubled). To date, only a handful of the thousands of agricultural pests in this country can be dealt with biologically. Cox says the lack of success is partly due to "terribly complex" scientific and technical problems—many times, he says, ARS scientists seemed on the verge of a breakthrough on one or another pest, when "something went wrong."

There is a surprising amount of trial and error in the entomology division's approach, even though it devotes one-third of its budget to pure research on insects. Cox cites the biological method of plant resistance as an example of this hit-and-miss *modus operandi*. For more than 40 years, the USDA has been working to develop strains of certain crops that will be resistant to pests, and it has had some successes with particular crops: corn has been made resistant to the European corn borer, and wheat

Food Delegates Focus on Poor

The White House Conference on Food, Nutrition, and Health, held from 2 to 4 December, was spared any major confrontation scene but provided an arena for a series of small clashes between activists and go-slowers, consumer and industry representatives.

The 2700 delegates had been invited to discuss a broad range of nutritional problems, but, by the end of the conference, attention turned to one currently controversial subject—federal programs for feeding the poor.

About 1500 of the delegates were educators, scientists, professionals in the fields of medicine and health, representatives of agriculture, food industry people, and government officials. The rest were consumers—spokesmen for various business, civic, student, religious, and community-action groups. This is the first White House conference to include such a large group of consumer advocates.

President Nixon, who keynoted the conference, outlined three general proposals for ending hunger: a guaranteed minimum income of $1600 for a family of four; unspecified reform and expansion of the food stamp program; and establishment of a Commission on Population Growth and the American Future.

The delegates pressed for broader changes, and by the end of the conference the President had promised to extend the food stamp program, within 6 months, to the 307 counties that now have no federal food programs; and to hasten the increase in allotment of food stamps, so that a family of four will get $106 per month (the present allotment can go as low as $58).

Most of the work of the conference was done in some 20 discussion panels. The panels were grouped under the general headings of nutrition of the American people; guidelines for the nutrition of vulnerable groups; nutrition teaching and education; food delivery and distribution; food as it affects the consumer; and what voluntary action groups can do to better nutrition and eliminate hunger.

Most groups began by sticking closely to their assigned topics, but left those topics later to discuss feeding the poor. In almost every group, consumers seemed anxious to exploit their growing confidence and sophistication, but industry people were seemingly anxious to quiet them.

Two panels of special scientific-technical interest concerned food safety and food quality. Their recommendations centered about two themes: that new foods and additives be marketed only after more thorough testing than is now required, and that consumers be told, in detail, what they are getting.

The two panels offered more than 30 specific, mostly technical, recommendations designed to remedy the current deficiencies in the operations of food regulatory agencies.

Most White House conferences require 18 months' preparation, but the food conference was organized in 6 months by Harvard nutritionist Jean Mayer, who also served as chairman. Conference recommendations are now being redrafted by members of the original panels. The report will be given a final shaping by Mayer and will be presented to President Nixon by Christmas. The President has pledged that he will not let the report gather dust on a shelf, and he has also suggested reconvening a followup conference in 1 year, wtih many of the same delegates, to discuss what progress has been made with the recommendations. After the conference, President Nixon met with Mayer and six delegates who had emerged as leaders during the session to discuss their ideas, but Nixon's response to them was noncommittal. In his 8 December press conference, Nixon said he would consider the food conference's recommendations, but he could not give "really sympathetic consideration to" the one recommending a $5500 minimum annual income for a family of four; this, he said, would cost $70 to $80 billion in taxes.—NANCY GRUCHOW