

ROUNDTABLE II. ADVANCES IN BIOLOGICAL CONTROL

Discussion Moderator: R. Arbogast, USA.

We opened our round-table with presentations summarizing recent and current work on the use of parasites, predators, and pathogens for the control of storage pests. Several points emerged from the discussion that followed:

- (1) The frequent occurrence of parasites and predators in association with heavy pest infestations indicates that natural control is often inadequate. It may be possible, however, to overcome this inadequacy by proper manipulation of control measures and augmentation of natural enemy populations by means of periodic releases. An instance was cited in which the parasitic wasp Bracon hebetor provides effective natural control of Ephestia cautella on bagged maize seed when chemicals were used judiciously.
- (2) In some circumstances, the unacceptability of living insects or insect remains would preclude introductions of parasites and predators. However, in other circumstances, these factors are not important, as for example in stored inshell peanuts and in grain stored for seed.
- (3) The interactions between hosts and parasites or predators and prey, are often very complex and more research is needed on these relationships before natural enemies can be used effectively as control agents.
- (4) The future of parasites, predators, and pathogens as practical pest control agents will depend upon development of economical methods of mass production and upon interest in this development by commercial biological control companies.

It was generally agreed that biological control cannot be used in every storage situation but that it could be used to advantage in some, especially as a component of an integrated management scheme.

ROUNDTABLE III. ADVANCES IN THE HOST PLANT RESISTANCE METHOD

Discussion Moderator: J.G. Rodriguez, USA.

There is a lack of research interest in the Host Plant Resistance (HPR) strategy in pest management of stored grains which is more or less directly proportional to the research funding available for studies in this area. The obvious reason for this situation is that grain surpluses occur in the developed countries, and this reflects on funding for this type of research. As you (we) have seen there has been a real dearth of papers in this general area at the Conference. Some of the International Research Centers such as IITA (Ibadan, Nigeria) and CIAT (Cali, Colombia), of course, have excellent programs in HPR, but unfortunately the workers involved are absent from this Conference.