

Summary of Session 2 : Current development and future orientation of technology for grain storage and preservation in the tropics

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The Second Session concerned current development and future orientation for grain storage and preservation in the tropics. There were five speakers covering the immediate topic of replacing methyl bromide and examining in more detail two of the more promising technologies that do not involve chemicals, namely hermetic storage and biological control. Then grain quality aspects were considered in terms of minimizing aflatoxin problems and quality control in the humid tropics. I shall try to find some common ground.

I described some of the alternative technologies that can replace methyl bromide fumigation as it is phased out in response to concerns on its role in the depletion of the ozone layer of the atmosphere. I outlined the requirement for alternative technologies and indicated which of them should have some prospect of adoption.

Mrs Caliboso gave an excellent review of hermetic storage beginning from prehistory times to current applications throughout the world. She then outlined the principles developed for safe storage of grain using this technology. She described studies in the Philippines on Israeli-developed hermetic storage units and the role these could play in emergency storage and preservation of a range of agricultural products.

Dr. Nakakita's presentation covered the vital area of biological control as an element of pest management systems that have to be developed to meet the challenge of reducing dependence on pesticides. Biological control has contributed significantly to solving often intractable pest problems and sometimes with very spectacular success. It is essential that these studies be encouraged and expanded in our research programs.

Dr. Siriacha addressed one of the most important subjects concerning food production today. Aflatoxins are a major constraint in public health programs in the tropics and their effects are compounded by their presence in excessive quantities in lower grade commodities which can be the staple diet of the poorer sections of the community and who, of course, are already suffering from nutritional deficiencies. She addressed the issues of aflatoxin incidence and the various measures that can be taken for practical management of the problem.

Dr. Sidik gave a polished performance on integrated pest management in the tropics with particular reference to the Indonesian experience in developing such strategies and implementing them. Emphasis was placed on quality control beginning at procurement and progressing through storage and distribution to consumers.

The single common thread that ran through all the discussions was that effective technology transfer must be pursued more aggressively. It was evident that technology that could address many of the problems was available but it was underutilized. Organizations must be more proactive in communicating to potential end-users, firstly information on the technol-

ogy and the demands of the market and then providing the resources that will facilitate the mechanisms for effective implementation of the new technology. This approach would certainly be consistent with the resources and capability that JIRCAS could channel into food security and certainly would be most cost-effective .