

21. A project: Combination with inert gases during irradiation.
22. The fact that since 1980(WHO) there is no need for more wholesomeness studies - 1 Mrad.
23. Irradiation was proposed as being a very suitable method for expensive food items.

Conclusions were as follows:

1. Food irradiation no longer requires studies on wholesomeness, whereas economic studies on irradiation are still needed.
2. The experience obtained by Japan, Holland, and South Africa will facilitate adoption of irradiation procedures in other countries, particularly in the light of increasing restrictions in the use of insecticides throughout the world.
3. Some further research has to be done to improve the effect of radiation such as the influence of heat before or after irradiation, the use of oxygen or other inert gases, or even toxic fumigants, to increase the radiation effects. Also the integration of irradiation with other methods of food conservation was recommended.
4. A major problem in the introduction of irradiation is the hostility by many people to anything "atomic" as demonstrated mainly in Germany and by the "Greenpeace" movement. So it seems that politics pose the main barrier to the commercial use of food irradiation throughout the world.

#### ROUNDTABLE VIII. ADVANCES IN THE FLUIDIZED BED HEATING OF GRAIN

Discussion Moderator: D. Evans, Australia.

The history of heat disinfection using fluid beds and more recently spouted beds and pneumatic conveyors was outlined. Heat disinfection is basically a simple process but can be adapted to both "high tech" and "low tech" circumstances. Research to date has shown that once the "tolerance - envelopes" of commodities to be disinfested are known, a suitable temperature X time combination can be identified and exploited. In general, heating to 60°C for 20-30 seconds or 65°C for 2-3 seconds appears fatal even to pests within the grain. The pros and cons of heat disinfection vis-a-vis irradiation were considered and the applicability of heat disinfection systems to grain drying and cleaning was noted.

#### ROUNDTABLE IX. PROMISING NOVEL COMPOUNDS OF LOW MAMMALIAN TOXICITY FOR USE IN STORED PRODUCT PROTECTION

Roundtable Moderator: A. Perry, Israel

The moderator presented an overview of the subject of what constitutes low mammalian toxicity, hazards from pesticides and the need to establish more realistic residue levels in stored grains of the developing countries.