for pre-school children. The FER values for Balamul and Amulspray were found to be 60% lower than for opaque-2 diet. The total weight gain with Balamul and Amulspray was much higher compared to Balahar and opaque-2 maize diet. Such results are not entirely unexpected since the total protein content of Amulspray as well as of Balamul is considerably much higher than in opaque-2 maize. Moreover, the protein of the baby food is of animal origin. In terms of economic and the possibility of rapid production of opaque-2 maize, the latter hold considerable promise.

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1. Mertz, E. T., Bates, L. S. and Nelson, O. E., *Science,* 1964, 145, 279.
2. Munck, L., Karlson, K. E. and Hagberg, A., *Proc. Barley Genet. Sym.,* Washington State University Press, Washington, 1969, p. 544.
3. Singh, R. and Axtell, J. D., *Crop Science,* 1973, 13, 535.
4. Jimenez, J. R., *Proc. High Lysine Corn Conf.* (E. T. Mertz and O. E. Nelson, Ed.), Corn Refineries Association, Inc., Washington, 1966, p. 74.
5. Mehta, S. L., Srivastava, K. N., Mali, P. C. and Naik, M. S., *Phytochemistry,* 1972, 11, 937.
6. Misra, P. S., Jambunathan, R., Mertz, E. T., Glover, D. V., Barbosa, H. M. and McWhirter, K. S., *Science,* 1972, 176, 1425.
7. Gopalan, C., Balavady, B. and Krishnamurthi, B., *Lancet.* 1969, ii, 956.
8. A.O.A.C., *Official Methods of Analysis of the Association of Official Agricultural Chemists,* 10th Ed., 1965, p. 744.
9. Mitchell, H. H. and Carman, G. G., *J. Biol. Chem.,* 1926, 68, 183.
10. Eggum, B. O., "Experimental technique for rats," In : *A Study of Certain Factors Influencing Protein Utilization in Rats and Pigs* (I Kommission hos Landhusholdningsselskabets forlag, Rolighedsvej 26, 1958, Copenhagen, V), 1973, p. 17.
11. Bressani, R., *Proc. High Lysine Corn Conf.,* Corn Refineries Association, Inc,, Washington, 1966, p. 34.
12. Mertz, E. T., *Ibid.,* Corn Refineries Association, Inc., Washington, 1966, p. 12.

PROBLEMS ON HOST SPECIFICITY IN INSECTS

T. N. ANANTHAKRISHNAN
Entomology Research Unit, Loyola College, Madras 600 034

A THREE-DAY symposium was convened by Dr. T. N. Ananthakrishnan, Director, Entomology Research Unit, Loyola College, Madras, from 24th–26th, January 1976, wherein participants from varied disciplines such as Agricultural Entomology, Botany, Zoology, Medical and Veterinary parasitology presented papers.

In introducing the subject, Dr. T. N. Ananthakrishnan stressed the need for an understanding not only of the host range spectrum of pest species, but also their fecundity, comparative growth rate and population dynamics on the varied hosts in order to correctly assess their role as pests. Among several instances he cited from his own work on thrips, he mentioned about *Haplothrips ganglbaueri* known in recent years to seriously infest paddy inflorescence in many areas and how a direct correlation existed between the infestation of this species in the weed *Echinochloa crusgalli* and *Oryza sativa.*

In his key note address on 'Insect nutrition and host plant selection,' Dr. N. C. Pant. Head of the Division of Entomology, I.A.R.I., New Delhi, emphasised the need for basic research and exhorted research workers to investigate aspects of nutrition of the insects of crop plants in depth, to elucidate the factors in the host plants that influence their choice of the pests.

In the three days sessions, about 32 papers were presented and three special lectures delivered. The technical papers covered a wide range of insect and acarine pests and parasites of importance in agriculture, medical, veterinary Entomology and included a discussion of the stimuli in the host plants or animals available to the insects for host selection and the response in them to exercise the specific choice. The groups so dealt with were the aphids, aleyrodids, tingids, membracids, pyrrhocorids, thrips, acridids, midges, anthomyids and mites of cotton, sorghum, millets, rice and other economic plants ; and mosquitoes, fleas, cimicids, mallophagans, ticks and mites ectoparasitic on man, birds and other animals. While the contributions discussed host preferences such as monophagy, oligophagy and polyphagy in terms of morphological, physical, chemical and biochemical factors in the plants or animals as determinants of such

different al behav our, stress was repeatedly laid on the need for a sound taxonomic basis in host specific ty analysis and delineation. In a few papers which dealt w ith insect vectors of pathogens such as v ruses and parasitic helminths, the vectorial specificity and potentials were examined in detail and attributed to physiological criteria within the insects and to ecological conditions bringing the vector and host together. Diverse aspects of host specificity relating to such cecidozoa as thrips, aph ds, coccids and midges in relation to gall production, as well as attempts at a biochemical interpretation of gall formation were also discussed.

Among the highlights of the symposium may be mentioned the three special lectures on 'Biological control of pests' by Dr. T. Sankaran, 'Factors influencing vector status and potential in the transmission of Bancroftian Filariasis by Prof. M. Anantaraman and on 'Some genetic aspects of insect specificity' by Prof. M. Dharmarajan. The advantages of utilising biological agents against injurious pests over other known methods were discussed through numerous instances of success, both in the past and in the present. Current knowledge on the existence of three forms of *Culex pipiens* complex and their relation to periodic and subperiodic, and urban and rural strains of *Wuchereria bancrofti* in different parts of the world and how the influence of filarial strains on the infectiousness and infectivity of mosquito vectors could be studied, were discussed. In the third or valedictory lecture it was elucidated, that host specificity like insecticide resistance, is a pre-adaptive genetic trait and that an understanding of the mechanisms involved in it could generate control or eradication procedures or techniques. Drawing upon several examples from human genetics, such as polymorphism and specificity to parasitic infections, it was explained that gene mutations leading to changes in the protein molecules in the host, could confer an immunity to a particular parasite or invader.

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