5. CONCLUSION

It was found that cholinesterase inhibition induced by malathion in the brain of rats (a) maintained on usual laboratory diet and (b) those on low protein diet, was almost similar; there being no significant difference in the values of cerebral acetylcholinesterase activity in the two groups of animals.

Similarly the increase in the level of cerebral free ammonia induced by endosulfan in the two groups of animals (those on usual laboratory diet and those on protein deficient diet) was almost the same, indicating that the particular diet did not influence the neurochemical changes induced by the acute administration of the compound.

Endosulfan did not significantly change the level of cerebral or striatal cholinesterase activity in rats.

It was, however, found that the degree of hyperglycaemia induced by malathion was more in animals on usual laboratory diet than those on synthetic or protein deficient diet; The depletion of glycogen
from the brain and liver was also more in malathion

treated hyperglycaemic animals maintained on usual
laboratory diet.

The degree of hyperglycaemia induced by
endosulfan was only marginal and was not influenced
by the particular diet given to animals.

Histological changes induced by endosulfan
in certain organs were also influenced by the particular
diet on which the animals were maintained. Endosulfan
treatment for 60 days produced histological changes
in liver, kidney and testis. The degenerative changes
in these organs were quite marked. The histological
changes were more manifest in animals maintained on
protein deficient diet than those on normal laboratory
diet. Thus the deficiency of proteins in the diet
aggravated the histological damage induced by endosulfan
in certain organs of rats. The GOT and GPT activity
was significantly increased in liver and serum, more
in animals maintained on protein deficient diet than
those on normal laboratory diet.

Thus it seems that the deficiency of proteins
in the diet influences only certain toxic effects,
particularly those which are associated with histological damage in tissues as a result of prolonged treatment; The enzyme activities in damaged tissues may also be influenced by the protein deficient diet. However, the acute neurochemical changes which are usually associated with stimulatory effects, do not seem to be significantly influenced by the protein deficient diet given to animals for 45-60 days.