

SUMMARY

Effect of seeds of Azadirachta indica on reproductive biology and survival of insects were studied.

A comparative study of A. indica (neem) and Ricinus communis (castor) on the survival of Sitophilus sp. showed that both neem and castor seeds are toxic. However it was found that neem was more toxic and effective in reducing the survival period of Sitophilus sp. It was suggested that the antifeedant effect of neem caused mortality in Sitophilus sp.

A study of the antifeedant effect of A. indica seeds on Sitophilus zeamais, Tribolium castaneum and Cryptolestes sp., showed that seed caused antifeedant effect on the insects.

However, it was found that in addition to antifeedant effect, the volatiles of neem seed affected the reproductive biology of insects.

The effect of volatiles of crushed neem seeds on Sitotroga cerealella showed that the normal mating behaviour was disturbed, the number of eggs laid was reduced, the developmental period from egg to adult was prolonged and the larval mortality was increased.

However, the longevity of adult, larval period and the sex-ratio were not affected.

Further effect of the volatiles on insects was examined by blowing the volatiles onto the insects. When neem volatiles were used as odour puff the locomotory activity of insect increased with increased period of exposure to volatiles, but prolonged exposure caused inactive stage.

It is concluded that A.indica seed has an ingredient which should be used effectively in insect control. Its use may be safe to the environment, has low cost and readily available in the tropics. Further investigation on this seed as an effective insect pest control agent will be of significant value.