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A short resume of crop and plant protection, entomology-its past, present and future *

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Out of the seven lakhs of insect species estimated to exist in the world, about 10,000 are known to affect plant life. Of these about 500 species of insects are major pests affecting cultivated crops. As far as South India is concerned, nearly 600 insect species have been recorded as having a close relationship with cultivated plants and among these about 200 species are pests. It is with this number that the Crop and Plant Protection Officer (Entomology) has to tackle and devise remedial measures that would satisfy the agriculturist and horticulturist.

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The problem of the control of crop pests had been engaging the attention of a number of eminent workers, like Fletcher, Ramakrishna Ayyar and Ramachandra Rao, even from the early days of the Agricultural Research Institute at Coimbatore, but it was only in recent years — when under the stress of war and famine conditions, the Government itself had to become a stockist of food grains, that the importance of entomology has been adequately recognised.

It is estimated that about 10% of every crop is lost on the average through insect attack in the field and another 5% when the produce is in storage. Thus an agriculturist has to lose nearly 15% of his hard-earned grain on account of insect damage. It is also an undeniable fact that when a serious pest like the red hairy caterpillar or paddy grass hopper devastates large areas, there is a corresponding increase in rural indebtedness in the succeeding years.

In our desperate search for making up the food deficit and stop all imports of food grains by 1951, it has been calculated that if all the pests and diseases of crops in India are effectively controlled, there would be no need for us to go to other countries with a begging bowl. It is however needless to add that for the workers themselves in the Crop and Plant Protection Service it is proving to be a very trying time to rise up to the expectations and demands of the public. It is not always realised that problems can seldom be solved overnight or merely by posting the personnel. The officer and his assistants can by themselves do little, unless there is also available, all the other accessories, such as effective insecticides, efficient appliances and a trained staff. It is perhaps very fortunate that the need for large-scale crop protection has come at a time when a number of very potent insecticides are available in the market. We have now sufficient stocks of all the necessary insecticides like Gammexane, Zinc phosphide, Agrocide and Geusarols at the taluk depots, with reserve stocks at headquarters. It is gratifying to note that the plant protection service has acquitted itself very well already. The paddy growers of Gudivada taluk in Krishna district who were hitherto feeling they had hardly any thing to learn from the Agricultural Department, have openly expressed their opinion now that it is in our Crop Protection Service that they realise the usefulness of the Agricultural Department as it has rescued them from the depredations of grasshoppers and rats, against which they were hitherto helpless.

There is however, considerable scope for improving the Crop and Plant Protection Service. The following are a few suggestions that would help in making the service more effective and more useful to the general public.

1. The strength of the plant protection staff has to be increased in districts like Krishna where extensive work is to be done.
2. The staff must be properly equipped with speedy transport vehicles, proper camping requisites, spraying and dusting appliance.
3. Adequate stocks of chemicals and insecticides have to be built up and kept in strategic centres where from they could be obtained at short notice whenever they are needed anywhere in a particular district.
4. A large amount of publicity is also very desirable to keep the activities and the service rendered by the Plant Protection staff always in the public eye. This would help in a better and greater use being made of the Plant Protection Staff, by farmers, to their better advantage.

Potato tops and sprouts as seed

B.

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Under the stress of wartime and postwar food shortages, new methods of growing potatoes without impairing yields are being explored in various parts of the world, at the Nanjanad Potato Station too, attempts have been made to reduce the seed rate of potatoes by making use of tuber tips and sprouts as planting material. The sprouts were removed from uniform seed tubers and planted in a nursery under shade with 2" spacing. These sprouts were transferred from the nursery to the main field 3 weeks later. On the same day as these sprouts were planted in the nursery, seed tubers with sprouts intact and seed tubers with sprouts removed were planted in the main field. For tuber tips, uniform tubers weighing 2 ounces were taken and tips weighing half an ounce were cut from the crown ends. These were spread over moist gunnies for 48 hours for suberization after which fine sulphur was dusted