

SESSION 5

DISCUSSION

The opinion was expressed that the main basis for the control of a weed by an insect was that the number of insects should not be appreciably affected by any factor other than the abundance of the host. This enabled the host and the insect mutually to determine their densities. It was further stressed that where a weed existed in competition with a useful plant species, it might be controlled by lesser insect damage. The main advantage, however, of such an occurrence lay in the readiness with which the land freed from the weed was taken over by the useful species. It was quite certain that insects were able to kill their host plants irrespective of the existence of plant competition.

The opinion was also expressed that it was desirable that the conference should specify the weeds that should receive biological control investigation, and, in doing so, it should take into account all important ecological aspects of the weeds concerned.

It was pointed out that control by insects had only been attempted on six weeds in Australia, and in at least one of these cases (prickly pear), the result had been spectacularly successful.

Referring to the extreme caution exercised in the introduction of insects to Australia, a comparison was made with the constant introduction of plant species without effective screening. There seemed to be two entirely different standards for the introduction of insect and plant species.

It was emphasized that when working with such a confused genus as Xanthium, it was necessary to be certain that the species being investigated overseas was identical with the problem species in Australia. It was also important to realize that, when the host plant was eradicated, an even worse species might take over. This was the case in New Zealand where gorse was invading areas of manuka cleared by the manuka blight.

The introduction of gorse seed weevil into Tasmania had not been successful, and even if a 90% reduction in seeds was achieved it would not greatly affect the spread of the weed.

Some investigations were made in Europe before World War II to determine the natural predators of skeleton weed. This work did not produce a satisfactory solution but reports indicated that several southern Russian species might be worthy of investigation.

The effect of the Chrysomela beetles on St. John's wort in the various States was recorded. In New South Wales the areas which have been improved by top-dressing etc. after the attack by the beetle had shown excellent control. Other areas of sheep country, timbered lands or low rainfall districts had shown poor control.

In South Australia many introductions had been made but they had not achieved very much control.

In Tasmania there was only one small area of St. John's wort. This had not spread since the introduction of the beetles and was being controlled.