SUMMARY

Various insects and mites are implicated in the decline in persistence of some legume pastures in Australia, especially temperate pastures and to a much lesser extent sub-tropical and tropical pastures. The types of damage and the losses which can be caused by these pests to different types of pasture are reviewed.

Insecticide is the most commonly used tactic for the control of pasture legume pests in Australia. Recently, the successful use of aphid-resistant lucerne and annual medics clearly demonstrated the value of resistant plants in reducing damage; resistance to various pests is now being sought in a number of pasture legume species. Numerous attempts have been made to implement biological control for pasture legume pests; a limited number of biological control agents have been successful in some regions but most have been ineffective.

Virtually all of the major pests damaging legume pastures have been accidently introduced to Australia. Contingency control strategies for potential new pests are discussed. Some future research directions are also discussed, in particular the need for damage assessment studies with pasture pests.

INTRODUCTION

Damage caused by insects and mites is implicated in the decline in persistence of some legume pastures in Australia, especially in temperate regions (e.g., Carter et al., 1982; Gillespie, 1983) and to a much lesser extent in tropical and sub-tropical regions (e.g., Lenne et al., 1980). Damage to Australian pastures by insects and mites has been reviewed for temperate, tropical, and sub-tropical regions by Wallace (1970); for the Northern Tablelands of New South Wales by Roberts et al. (1979); for temperate regions by Allen (1987). In addition, the report of Allsopp and Hitchcock (1987) on soil insect pests in Australia includes descriptions of the biology, damage, and control of a number of soil-dwelling pests of pasture which may influence legume persistence.

This paper summarizes the types of damage and the impact of the main insects and mites affecting pasture legume persistence, together with the tactics which are being either used or developed for their control. Contingency strategies for the control of new exotic pests in Australia and some future research directions are also discussed. The paper does not address arthropods affecting...