

SUMMARY

In Part I the present importance of Murdannia nudiflora (L.) Brenan as an obnoxious weed of lawns is emphasised. The confusion concerning the nomenclature and taxonomy of Murdannia is discussed and reasons forwarded why the plant studied should no longer be known as Aneilema nudiflorum. (L.) Wall.

A full botanical description of the plant is provided followed by observations on its geographical distribution, habitat, communities and response to biotic factors.

Morphology and perennation of the plant is dealt with at length, describing its vegetative and reproductive habit and reasons are offered for the weed's success. The life history of M. nudiflora is very closely adapted to its environment in Trinidad.

The chromosome number of this species of Murdannia is $2n = 20$.

The series of germination and viability trials set up to examine the dormancy of the seeds is described and the results discussed. It is concluded that the seeds have a dormancy period of five to six months which is broken naturally in the soil, that the dormancy may be broken artificially and that light is necessary for germination. Reasons for this dormancy are offered in the light of the results available. Viability of the seed is certainly less than two years.

An investigation for the presence of inhibitory substances in mature plants and seeds of M. nudiflora is described and it is concluded that neither the seeds, stems, roots nor leaves possess a substance which inhibits the germination of "Svenno" wheat seeds.

The seedling morphology, effective reproduction and economic importance of the plant are discussed.

In Part II the control of mature M. nudiflora as a pure stand in trays in the herbicide greenhouse and growing with three selected lawn grass species in the field is described. Of the herbicides used it is concluded that Fenac was the best for the control of the mature weed, although it is rather expensive and not yet readily available in Trinidad.

Recommendations for future study of the biology and control of M. nudiflora are suggested.

The layout of this project closely follows that suggested for plant geography in the revised schedule of the Journal of Ecology (1958).