

# Weeds, Pests and Diseases of Grassland and Herbage Legumes

Monograph No. 29, British Crop Protection Council  
Occasional Symposium No. 18, British Grassland Society

Proceedings of a Symposium held at the  
University of Nottingham  
10-12 April 1985

Edited by  
J. S. BROCKMAN



BCPC Publications  
2A Kidderminster Road,  
Croydon CR0 2UE

BRITISH GRASSLAND SOCIETY

# Contents

	Page
OBJECTIVES OF SYMPOSIUM	ix
PROGRAMME COMMITTEE	x
CHAIRMEN AND SESSION ORGANISERS	x
THE BRITISH CROP PROTECTION COUNCIL	xi
AIMS AND OBJECTIVES OF THE BRITISH GRASSLAND SOCIETY	xii
ABBREVIATIONS	xiii
INTRODUCTION	
Weeds, Pests and Diseases in Grassland and Herbage Legumes — an Overview C. R. W. SPEDDING	1
<b>PART 1. WEED PROBLEMS IN GRASSLAND ESTABLISHMENT</b>	
Occurrence, impact and control of weeds in newly sown leys R. J. HAGGAR, C. J. STANDELL and J. E. BIRNIE	11
The control of weed populations during grass establishment by the manipulation of seed rates T. W. PARR	20
Developments in selected weed control in newly sown leys using ethofumesate mixtures R. WHITEHEAD	29
Experiences in controlling chickweed with various selective herbicides F. B. COOPER and M. V. JACKSON	36
Discussion on Session 1	44
<b>PART 2. PEST AND DISEASE PROBLEMS IN GRASSLAND ESTABLISHMENT</b>	
Incidence, impact and control of insect pests in newly sown grassland in the UK R. O. CLEMENTS and B. R. BENTLEY	49
Pest and disease problems in newly sown grass in The Netherlands J. v. BEZOOIJEN	57
Effects of nematodes on newly sown ryegrass A. SPAULL	65
Permanent pasture rejuvenation and the invertebrate population S. A. ELLIS	73
Effect of soil-borne pathogens on ryegrass and white clover seedlings and their control G. C. LEWIS	82
Discussion on Session 2	90
<b>PART 3. WEEDS OF ESTABLISHED GRASSLAND — IMPORTANCE AND CONTROL</b>	
Incidence of weeds in permanent grassland A. HOPKINS and S. PEEL	93

The nutritional value of common weeds W. P. BARBER	104
Problems and benefits of grass weeds C. DIBB	112
Impact and control of docks in grassland A. D. COURTNEY	120
Impact and control of thistles in grassland A. K. OSWALD	128
The chemical control of bracken ( <i>Pteridium aquilinum</i> ) a review of some agricultural development and advisory service field experiments C. E. FLINT	137
The impact and control of ragwort ( <i>Senecio Jacobaea</i> and <i>S. aquaticus</i> ) in grassland J. C. FORBES	147
Developments in biological control M. P. GREAVES	155
Discussion on Session 3	160

#### PART 4. PEST AND DISEASE PROBLEMS OF ESTABLISHED GRASSLAND

Pest damage to established grassland and the feasibility of control R. O. CLEMENTS and B. R. BENTLEY	165
Seasonal occurrence and single-treatment control of pest damage in established ryegrass D. J. MOWAT and S. JESS	173
Nematode problems of grassland R. COOK and P. A. YORK	180
Assessment of disease in grassland M. R. THOMAS	188
The influence of viruses on grassland S. J. I. HOLMES	195
Disease and the influence of herbage variety — a NIAB viewpoint R. H. PRIESTLEY and M. A. DOHERTY	204
Amelioration of disease in grassland through resistance breeding P. W. WILKINS	213
Discussion on Session 4	218

#### PART 5. SYNDICATE PAPERS

Weeds, pests and diseases of grassland and herbage legumes — a farmer's view R. NEWCOMB	223
Weeds, pests and diseases of grassland and herbage legumes — an economist's view C. J. DOYLE	228

Weeds, pests and diseases of grassland and herbage legumes — an advisory view J. GARSTANG	235
Weeds, pests and diseases of grassland and herbage legumes — an industry view J. R. McB ALLAN	243

## PART 6. SYNDICATE DISCUSSIONS

Report of Syndicate 1 R. J. HAGGAR	251
Report of Syndicate 2 C. K. MACKIE	252
Report of Syndicate 3 R. NEWCOMB	254
Report of Syndicate 4 J. JOHNSON	255
Report of Syndicate 5 A. J. H. CARR	256
Report of Syndicate 6 R. O. CLEMENTS	257
Summary of Syndicate Discussions	259

## CONCLUSIONS

Contribution to concluding discussion J. H. D. PRESCOTT	261
--	-----

## CONCLUDING REMARKS

R. J. Wilkins	262
---------------	-----

## POSTER SUMMARIES

Control of common chickweed ( <i>Stellaria media</i> (L) Vill.) in Autumn-sown ryegrass/white clover leys D. H. K. DAVIES, G. SWIFT, M. C. RICHARDS and A. T. CLELAND	269
Pot experiments to assess herbicides for selective control of established thistle ( <i>Cirsium arvense</i> ) in perennial ryegrass T. M. WEST and W. G. RICHARDSON	271
Optimising the control of perennial broad-leaved and woody weeds in established grassland with Broadshot using conventional and novel applicators D. P. BIRD	273
Biological control of bracken M. J. W. COCK	275
Control of cow parsley ( <i>Anthriscus sylvestris</i> ) in Yorkshire dales meadows H. V. LEA and J. JOHNSON	278
Establishment and seed production of common ragwort ( <i>Senecio jacobaea</i> L.) and the spread of hoary ragwort ( <i>Senecio erucifolius</i> L.) T. A. WATT	280

Control of chickweed in autumn-sown grassland J. C. FORBES and E. B. SCRAGG	282
Mixture B, a surfactant additive for improving bracken control by herbicides M. G. TURNER and J. M. SCHOLEY	284
The tolerance of four forage legumes to several herbicides C. J. STANDELL	286
Grass weed control in seed crops of perennial ryegrass E. G. BUDD	288
Forage bromes : high yields but weed problems W. JORDAN and J. INGRAM	290
A new system of grassland renovation with the help of slurry manure in The Netherlands S. J. de JONG and G. BOEKEN	291
Practical pest and weed control in grassland A. R. THOMPSON and J. P. GOODLIFFE	293
An apparatus for extracting frit fly larvae from turf samples P. BLASDALE	295
A comparison of methods of studying root feeding in grassland soils A. CARPENTER, J. M. CHERRETT and J. B. FORD	296
Nematode problems of grassland associated with the plant-parasitic nematode <i>Longidorus elongatus</i> B. BOAG	298
The effect of fonofos insecticide on the establishment of ryegrass P. R. MATTHEWS and A. J. COTTEY	300
A distribution study of bibionid larvae in grassland S. D'ARCY-BURT and R. P. BLACKSHAW	301
Association of slugs with <i>Sclerotinia trifoliorum</i> on white clover M. A. SHAKEEL and D. J. MOWAT	302
Leatherjackets in the West of Scotland J. W. NEWBOLD and R. M. STEWART	303
Improved grassland establishment by the control of frit fly ( <i>Oscinella frit</i> ) with cypermethrin and permethrin applications J. A. PAUL, S. F. WHITTAKER and D. M. HILL	304
The effect of crown rust ( <i>Puccinia coronata</i> ) on the competitive ability and regrowth of ryegrass L. R. POTTER	306
Observations on Drechslera leaf spot on <i>Lolium perenne</i> affected by cadmium J. D. SHOLES and R. C. SHATTOCK	308
Clover stem rot ( <i>Sclerotinia trifoliorum</i> Eriksson) and its control with vinclozolin in West Germany L. F. MAY, R. SAUR and J. S. PECK	309
LIST OF DELEGATES	311

## **Objectives of the Symposium**

1. To provide a forum for the discussion of weed, pest and disease problems in grassland and herbage legumes.
2. To identify major weed, pest and disease problems, both current and likely in the near future.
3. To suggest practical guidelines for economic control.
4. To report recent progress on prevention and control.
5. To detail areas requiring further attention and where new developments may achieve significance.