

THE EVOLVING INTERNATIONAL GRASSLAND CONGRESS

L.R. Humphreys

Department of Agriculture, The University of Queensland, 4072, Australia

ABSTRACT

The locations of the International Grassland Congresses are listed. Analysis of the disciplinary themes of papers presented at five Congresses from 1937 to 1993 indicated a considerable homeostasis of content. The plant genetic base for grassland improvement received most attention, and this, together with plant physiology, plant ecology and soil science contributed 52 to 57 per cent of the subject matter at all five Congresses. Emergent topics are mentioned.

KEYWORDS

International, Grassland, Congress, themes, disciplines, evolution, genetics, systems

INTRODUCTION

Scientists may benefit from developing perspectives about the ground from which the component disciplines of grassland science have emerged and interacted, and which now shape its future directions. The International Grassland Congress has contributed to this evolution and the proceedings of its meetings provide markers for understanding changes in scientific fashion. This brief paper records some aspects of the Congress which are explored more fully in Humphreys (1997).

METHODS

The changing themes which have occupied scientists at International Grassland Congresses, as reflected in the published proceedings, were analysed by identifying 110 topics grouped within ten main disciplinary themes, and additionally including four themes as "miscellaneous": synoptic papers, biometrics, agricultural engineering, and animal production not specifically related to grassland improvement (Table 1). Papers were allocated to each theme according to its major content; this was not necessarily the theme of the Congress session to which it may have been allocated for convenience.

The content of five Congresses which were held at a mean interval of 14 years from 1937 to 1993 was studied; 1937 was chosen as the first Congress which could claim a good international status (365 participants from 37 countries). All five Congresses accepted voluntary papers and were held in regions (Table 2) with a history of research in grassland science. The location of Congresses were Eurocentric (10), with excursions to North America (3), Australia and New Zealand (3), Asia (1) and South America (1) but no Congress has been held in Africa. From 1978 the International Rangeland Congress provided a supplementary role.

RESULTS AND DISCUSSION

The analysis (Table 1) revealed a remarkable homeostasis of disciplinary content during 56 years, although the subject matter within each discipline changed. The science of grassland improvement has relied first on an interest in its plant genetic base, which provided the largest share of papers: criteria of merit for plant improvement, plant introduction and conservation of germplasm, varietal evaluation, plant variety protection and techniques of plant breeding leading to the more recent studies in molecular biology. Plant genetics, plant physiology (a rising market), plant ecology and soil science (the N economy of grasslands a central preoccupation) contributed 52 to 57 per cent of the subject matter at all five Congresses.

Animal nutrition and systems of animal production arising from study of the animal-plant-soil interface were the other key preoccupations of grassland scientists; these received rather less attention in 1937 when more papers were presented with general or integrative themes which were insufficiently specific to be allocated other than to the first category of "styles of grassland development and regional themes".

Soil conservation was a major theme at the 1952 Congress. Other aspects of the environment, such as the reduction of off-farm effects of agricultural development, like stream pollution, were of more recent concern, whilst the threat of global warming was first mentioned at the 1989 Congress. The early focus on increasing production from grassland has been modified by the need for "sustainable development" and metaphors of agriculture now include countryside design; however it might be recalled that the President of the 1937 Congress, R.G. Stapledon, was a leading advocate of national parks in the UK.

Holistic science has always featured in grassland improvement, but in the last three decades there has been a major change of emphasis towards the systematic modeling of the component processes of grassland production and their interaction with each other, and towards systemic studies which would improve the prospects for the realization of change. The deficiencies of reductionist science were referred to at the 1960 Congress but the word "systems" first appeared in the title of a Congress paper in 1966. Papers concerned with systems theory constituted a small proportion even in 1993, but the emphasis moved from a preoccupation with the optimization of processes using hard systems approaches to soft systems methodology involving experiential learning and participatory rural action. The socio-economic perspectives which emerged at the 1981 Congress remained a minor category at these Congresses, but by the 1993 Congress were enlarged by reference to social equity in grassland development, the involvement of farmers in grassland research, and to the larger canvasses of institutional policies with respect to resource transfer and international trade. All Congresses have assisted scientists working in specialized areas to conceptualize their work in wider contexts.

REFERENCE

Humphreys, L.R. 1997. The evolving science of grassland improvement. Cambridge University Press, Cambridge, UK.

Table 1

Themes represented at International Grassland Congresses (per cent papers with main theme)

Year of Congress Congress number	1937 IV	1952 VI	1966 X	1981 XIV	1993 XVII	Mean
Subject theme						
1. Styles of grassland improvement; regional themes	23	18	10	9	16	15
2. Plant genetic base	23	20	19	21	25	22
3. Edaphic constraints	19	13	14	14	11	14
4. Perspectives from plant physiology	9	9	17	15	14	13
5. Ecology of grasslands	6	10	4	6	7	6
6. Grazing systems	4	4	8	8	8	6
7. Nutritive value	4	7	15	10	7	9
8. Continuity of forage supply	7	11	8	10	5	8
9. Systems approach	-	0.4	1	3	3	1
10. Socio-economic perspectives	1	3	3	4	4	3
11. Miscellaneous	3	6	3	1	2	3
No. entries	69	256	220	480	943	

Table 2

Locations of the International Grassland Congress

No.	Year	Location	No.	Year	Location
I	1927	Germany	X	1966	Finland
II	1930	Sweden, Denmark	XI	1970	Australia
III	1933	Switzerland	XII	1974	USSR
IV	1937	UK	XIII	1977	East Germany
V	1949	Netherlands	XIV	1981	USA
VI	1952	USA	XV	1985	Japan
VII	1956	New Zealand	XVI	1989	France
VIII	1960	UK	XVII	1993	New Zealand, Australia
IX	1965	Brazil	XVIII	1997	Canada