

Editorial

Dr Ir J. P. van den Bergh has concluded his professional career at the Centre for Agrobiological Research (CABO) at Wageningen, and this is an excellent opportunity to describe his importance for agricultural sciences. That we do so in this Journal is, of course, related to the fact that he was a member of the editorial staff from 1966 to 1986, from 1966 to 1981 together with Prof. Ir J. G. P. Dirven and from 1981 as a member of the extended editorial board.

On 1 January 1954 van den Bergh started his professional career as a Research Assistant with Prof. Dr D. M. de Vries at the Botanical Department of the Central Institute of Agricultural Research (CILO) at Wageningen. As a subject he selected the ecology of white clover (*Trifolium repens*) in old grassland. For this study he worked up the botanical and soil analyses of 1500 old permanent grasslands of which the data were available at the Botanical Department. He concluded this study with a paper in the 1954 CILO annual report entitled 'Een bijdrage tot de oecologie van Witte klaver (*Trifolium repens* L.) in oud grasland' (A contribution to the ecology of White clover (*Trifolium repens* L.) in old grassland).

In 1954 he graduated at the Agricultural University Wageningen, and on 1 October 1955 he took up his post on the research staff of CILO. Here he continued his study into the different combinations of grassland species and the effect of growing conditions on those differences in combination. In addition, he was interested in the population composition of perennial ryegrass and the selective effect of the growing conditions on this composition in old grassland.

He started wondering why certain plant species dominate in a vegetation. For this he elaborated the competition theory designed by Prof. Dr Ir C. T. de Wit for annual plant species, in such a way that it would be also suitable for perennial species. He introduced the term 'relative yields' as a standard without dimensions to measure competition.

In 1959 he started pot experiments under controlled conditions with the species timothy and sweet vernal grass to test this theory. In addition, field experiments were done to test the results from the experiments in the climate rooms. By varying the growing conditions in these experiments, he also studied the effect of this on the competitive ability of the species.

The results of this study are at the basis of his thesis in 1968 'An analysis of yields of grasses in mixed and in pure stands'. One of the most important conclusions was that in sowing permanent grassland preference should be given to a monoculture. In sowing a mixture, there was a great possibility that the species not desired as a dominant might dominate under less favourable growing conditions.

Internationally his study was much in the limelight. Especially his research approach was considered interesting, and as a result various foreign research workers came to him to be trained in his experimental approach. In addition to many articles, van den Berg also shared his know-how with others by lecturing at various universities. Many students came to him to do research in the scope of their studies.

The competition mechanism was not only studied in grassland species, but also in the weed-crop situation. In the scope of this, the research in developing countries was also supported.

By extending the harvest analyses of the competition experiments he tried to get a better idea of the causality of the competition mechanism.

In vegetations which are not mainly used for agricultural purposes, species variation often is the aim. For this van den Bergh also studied the mechanism of coexistence of plant species in a vegetation. This study demonstrated differences in the functions of plant species caused by differences in morphology and physiological behaviour. This applies to both roots and overground plant parts. In this difficult field of research van den Bergh and his co-workers have found various preliminary results and have given a guide to the future to many.

Together with his many friends and colleagues we may state that Paul van den Bergh importantly contributed to vegetation science. We wish him and his wife a long and healthy retirement.

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