

Multi-author Reviews

Symbiotic interactions between microorganisms and plants

This review is dedicated to the memory of Professor Dr. Peter Martin who died in May 1994.

Introduction

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The German Ministry of Research and Technology (BMFT) supported a joint research program with the title 'Symbiotic interactions between microorganisms and plants with emphasis on the enhancement of crop productivity and improvement of plant health' in two phases, from 1987–89 and from 1990–93. The aim of the program was to characterize naturally occurring symbioses and associations physiologically, biochemically and genetically. Field studies were also carried out with selected microbial strains and a variety of plants. In the second phase, interest was centered on two symbioses, that between legumes and the dinitrogen-fixing bacterium *Rhizobium*, and that between crop plants and arbuscular fungi. The projects on arbuscular mycorrhiza were incorporated into the E.C. Cost Actions 8.10 and 8.21.

In the second phase, ten groups from universities and industry took part with projects of their own. The following seven contributions discuss the main results of these projects in the context of the relevant literature. It

is hoped that the results obtained will provide a basis for future applied studies and for exploitation by industrial companies.

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The following seven manuscripts are dedicated to Professor Dr. Peter Martin, of Stuttgart-Hohenheim, who died on May 27th this year. He was a referee in the first phase of the program, and took part actively, with a project of his own, in the years 1990–1993. All the participants are well aware of the fact that Peter Martin was a major contributor to the success of the whole program. We shall not forget his outstanding progress reports and his lively and helpful contributions to the discussions during our annual meetings.