Agronomie 21 (2001) 507

Editorial

This special issue is publishing papers corresponding to some of the communications which were presented at the Mediterranean Conference of Rhizobiology, which was organized by FABAMED (Fixation biologique de l'Azote dans le BAssin MEDiterranéen) in Montpellier, July 7–13, 2000.

FABAMED is a cooperative research group which was created during a first meeting in 1994 by agronomists and biologists from Southern Europe and Northern Africa. Their initial purpose was to study factors limiting biological nitrogen fixation in the Mediterranean basin. During a 2nd meeting in 1995, they conceived the research project entitled FYSAME (Nitrogen fixation and yield of grain legumes in salinized Mediterranean zones) which was selected by the INCO (International Co-operation) programme of the European Union for the period 1997–2000. Thereafter the group met in Rabat (96), Granada (97), Tunis (98) and El Arish (99). The latter meeting, which occurred in Egypt, confirmed the opening up of FABAMED to scientists from the Middle East.

Thus, the Mediterranean Conference of Rhizobiology (2000) was the 7th FABAMED meeting. It had the objective of opening up to a broader scientific community dedicated to rhizobiology for Mediterranean areas, and presenting its research strategy to colleagues from Northern Europe, America and Australia. It incorporated the final meeting of FYSAME. Participants of other INCO projects, namely MYRISM (use of Mycorhizal and RhIzobial Symbioses for the Sustainable development of forest in the Mediterranean region), PHIMED (PHaseolus bean cultivation Improvement under semi-arid MEDiterranean conditions by constructing acid- and salt-tolerant rhizobial N_2-fixing symbionts for plant inoculation), and PLADADINFIS (Prevention of LAnd Degradation in the Aral sea region by increasing tolerance of Fixing Nitrogen SYmbiosis to Salinity) joined this conference.

The 70 participants were distributed among the following countries: Israël (2) and Syria (1), as newly represented in FABAMED; Australia (2), Germany (1), UK (1), Switzerland (2), USA and Caribbean (2) as interested in Mediterranean rhizobiology; and Algeria (2), France (21), Egypt (4), Spain (10), Morocco (7), Italy (4) and Tunisia (11) as founder countries.

The newcomers not only represented a geographic opening for the group, but also an opening to new topics and disciplines such as the evaluation of the economic benefit of nitrogen fixation at a systemic level, to molecular approaches. The corresponding communications are grouped within this issue in the following disciplinary order:

(i) Agronomy addressing the role of N_2-fixing legumes in rotations, the economic benefit, the seed yield and the nodule growth and the interaction with another rhizospheric bacteria, namely *Azospirillum*;

(ii) Bacteriology addressing the biodiversity of rhizobia from soils in Mediterranean areas and the specificity in their interaction with the host legume;

(iii) Physiology addressing mechanisms involved in the regulation of symbiotic N_2 fixation and its response to environmental constraints, namely water and phosphorous deficiencies;

(iv) Plant breeding addressing the genetic improvement of N_2 fixation under environmental constraints and the underlying mechanisms and genes.

In conclusion, the range of disciplines represented at the Conference make it possible to look forward to an integrated approach to rhizobiology as the science of interactions between bacteria of the *Rhizobiaceae* family and plants essentially of the *Fabaceae* family. The involvement of the participants in new projects generated during the Conference confirms the interest in a Mediterranean co-ordination in rhizobiology.

J.-J. Drevon