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INTRODUCTORY REMARKS

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At the U.N.E.S.C.O. plant ecology Montpellier Symposium in 1955, Prof. Emberger stressed that "the arid and semi-arid regions of the world are the only areas offering opportunities for the expansion of mankind." It is then obvious that the development of those regions is of the utmost importance.

Though aridity does not exactly mean the same thing to every one, everybody agrees to say that in arid and semi-arid regions water is the limiting factor of the development of economy and welfare.

All resources of technique and science have to be mobilized to solve the problems arising from this water shortage; microbiology, in its field, seems to be able to bring a precious contribution to the development of agriculture and melioration of public health. Microbiological techniques can increase the yield of legumes, control many pests, and preserve silage and food; microbiological methods have to be used for control and purification of potable water, sewage, and waste management. One could think a priori that those microbiological problems are identical to those concerning more humid regions; that is roughly true. But one must understand that in arid and semi-arid environments unique difficulties are to be met that do not appear elsewhere. For instance, soils are very often gypseous and their salt content is very high; these characteristics have various implications. In the case of legume inoculation for instance, one must select salt resistant strains. Moreover, in arid soils desiccation is generally very drastic: the inoculation strains must be drought resistant. In the field of public health, one finds specific problems too; for instance, some human diseases are much more frequent in arid and semi-arid zones than in other zones because of the unique environment conditions.

The papers which are presented at this session deal with but a few problems which are to be encountered in arid and semi-arid regions: problems of soil management essentially and problems concerning public health. Sometimes solutions will be proposed, but more often questions will be put forward awaiting answers which will be given, in the near future, if governments give to applied microbiology the attention it deserves.