

3. Object of the Present Investigation

It could be seen from previous chapters that there is dearth of knowledge on nodulation status of the wild tropical legumes. So far only about 16% of wild leguminous species have been examined for presence or absence of nodules. There is a dire need, therefore, to carry out a detailed study on nodulation status of these leguminous species.

Investigations on legume-rhizobia symbiosis in natural communities of tropical regions are limited mostly to observations on species nodulation only and very few attempts have been made to study the root nodule bacteria associated with the wild tropical legumes, since, most of the research work done on the rhizobia is concentrated on the rhizobia in the temperate regions or associated with agriculturally important crops.

Although the possible use of rhizobia from wild legumes for increasing yield of cultivated pulse legumes has been demonstrated very few efforts have been made for their actual application.

Following studies were, therefore, undertaken in the present investigation on wild legumes from the three agroclimatic zones of Western Maharashtra viz,

- 1) Heavy rainfall zone - Zone covering coastal area and the Western Ghat receiving high rain fall (2500-3000 mm).

- 2) Transition tract of assured rain fall : Zone receiving rain fall 700-2500 mm.
 - 3) Drought prone affected area : Zone receiving rainfall upto 700 mm.
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- 3.1 Studies on the nodulation status and nodule morphology of wild arboreal and herbaceous legumes, which were not studied previously.
 - 3.2 Studies on cultural, biochemical and physiological characteristics of the root nodule bacteria associated with these legumes.
 - 3.3 Studies on serological and symbiotic characteristics of these strains and to screen better nitrogen fixing strains.