CHAPTER 7

CONCLUSIONS
Conclusions

1. Present study clearly indicates the potential of PSB on plant growth, soil available P content, P uptake in plants and biochemical constituents of *S. rebaudiana* (ST and R-A) and *A. barbadensis* (aloin-A).

2. The effect of PSB consortium was more pronounced than individual inoculations for all the mentioned parameters in each soil condition.

3. All PSB used in the present study showed variable stimulatory effect on plant growth parameters under different soil conditions. Maximum stimulatory effects were observed in TCP amended soil followed by MRP amended soil and un-amended soil.

4. PSB inoculations showed a marked influence on aloin-A biosynthesis and yield of aloin-A in *A. barbadensis*. The significant increase in the aloin-A content of PSB treated plants emphasizes the potential of an economical and eco-friendly means of achieving higher levels of aloin-A.

5. PSB inoculations did not affect significantly the ST biosynthesis in leaves of *Stevia* plants, however, due to increased biomass production upon PSB inoculations, the total yield of ST content has increased significantly by treatment with *B. gladioli* 10216 in TCP amended soil. Whereas, in rest of the individual PSB treated plants in any soil condition no significant influence was observed on R-A content.

6. Inoculation with *B. gladioli* 10216 and *S. marcescens* 10241 in *Stevia* plants grown in TCP amended soil, showed a marked influence on R-A biosynthesis as well as total yield of R-A content. Whereas, in rest of the individual PSB treated plants in any soil condition no significant influence was observed on R-A content.

7. However, more study is needed to understand the specific mechanisms involved in the enhanced production of biochemical constituents by the application of PSB. The present study has been conducted under greenhouse conditions but the potential of PSB along with other rock phosphate applications needs to be further examined under field conditions. Moreover these PSB can be further tested for other varieties of medicinal plants.