

Conclusions

In order to accommodate the world's expanding population, the production of food crops must increase continuously. As there is only a limited amount of suitable new land, the increase will have to be achieved primarily by increasing the productivity of currently farmed areas, preventing degradation of farmland, and using previously degraded land and land previously not used, for example sloping land. Nitrogen-fixing plants have a great potential for improving soil fertility, soil conservation, rehabilitation of degraded wasteland, and stabilising and improving sloping land. With appropriate management, these plants can also provide fodder and fuelwood, thus reducing the pressure on forests, and also food itself. Promoting the use of nitrogen-fixing plants will contribute considerably to sustainable mountain development and should have a high priority in development programmes.

Any increase in the use of nitrogen-fixing plants in agriculture and forestry will lead to a clear reduction in the application of chemical fertilisers, thus reducing production input costs as well as the negative impact of chemical fertilisers on the environment.

The key factor for the successful application of nitrogen-fixing plants is the use of appropriate species. Selection of nitrogen-fixing plant species is therefore a key step; the choice for a specific location and use can be limited. Finding the most appropriate niche for nitrogen-fixing plants in the various agricultural, horticultural and forest systems is a real challenge. For certain localities, selection of appropriate nitrogen-fixing plants is not easy. Different species have their own preferred conditions for growth and development. Species suitable for site A may not be suitable for site B. However, there are several thousands of nitrogen-fixing plants in the natural systems in the HKH region. If the appropriate research is conducted, it should be possible to find suitable plants for specific localities in any agro-ecological zone. Indigenous nitrogen-fixing plants will have the advantage of suiting local conditions. Selection of local or exotic species should be made through field experimentation in different agro-ecological zones.

