CHAPTER VI
SUMMARY

Increase in human and cattle population, removal of tree cover in favour of agriculture are largely contributing to environmental degradation. The upland ecosystem has become so fragile that if not protected for greater and long term national benefit, the need of rural poor for food and energy will create irreparable Socio-economic problems endangering the ecology of the entire sub-continent. Fuelwood policy Committee (1974) estimated the consumption of the fuel wood of 150 million M$^3$ and National Commission on agriculture (1976) visualised 225 million M$^3$ consumption by 2000 A.D. Similarly, rise in demand for industrial wood from 15.9 million M$^3$ (round) in 1970 to 6.6 million M$^3$ (round) in 2000 A.D. has been projected. According to the Committee on Livestock Feeds and fodder (1974) the availability of concentrates, dry fodder and green fodder in
1973 was only 11.05, 309.00 and 214.5 million tonnes as against the requirement of 19.56, 347.41 and 343.57 million tonnes, respectively. The estimated requirements of livestock feeds in 2000 A.D. are 82.8 million tonnes of concentrates of plant origin, 373.0 million tonnes of dry fodder and 594.8 million tonnes of green fodder, while the availability is expected to be only 77.05, 356.8 and 575.0 million tonnes of concentrates, dry fodder and green fodder, respectively. It is, therefore, essential to find ways and means to bridge the widening gap between requirement and availability of fuelwood, small/industrial wood and feeding stuff for animals.

It was, therefore, felt that, the deficit as visualised to a great extent, can be made good through the practice of agroforestry. In this context an age-old-practice of growing babool in rice fields of Chhattisgarh was found to be fitting well into the agro-climatic conditions of this area. Babool is well known for its value as timber, fuelwood, bark for tanning material, brushwood for fencing and leaves, pods and seeds for cattle feed etc. But, because of the paucity of field data a prediction model (viable balance model as a package of practice) was not available. So the present unit study was undertaken in two babool growing districts i.e. Raipur and Bilaspur of Chhattisgarh region to evolve a model.

10 fields in Raipur and 2 fields in Bilaspur district where babool trees are growing in variable densities were selected for the study. Both, rice and tree productivity data were recorded. Economic loss of rice, gain from babool trees and a balance sheet of return from growing babool trees with rice was prepared. It was found that by growing 100 trees per hectare for a rotation of 12 years, the farmer
makes an additional earning of Rs. 5,833/- per year from sale of babool trees. It is also concluded that if the number of trees per hectare is increased to 150 and rotation period of 8-12 years, the farmer earns still more. So it is recommended that growing 100-150 babool trees per hectare for a rotation period of 8-12 years is a viable balance and can be used as a package of practice in Chhattisgarh region. However, tree harvest before 7 years of age would not be profitable.