

## Trees, the living assets to farmers

**T**rees are very important for economical crop production. Bio-mass production is very easy from trees than from surface crops, as trees grow pyramidically and utilize 60% more sunlight and more photosynthesis happens and more starch is produced. Again with their huge volume of rhizosphere, trees encourage water percolation and help in recharging ground water, in the absence of which there would have been more soil and water erosion, resulting in heavy crop losses. Trees are capable of utilizing uncontested or unutilized water and plant nutrients from deep soil strata. Trees provide fodder, fibre, food and biomass at very cheaper cost. They also act as wind barriers and check fast winds damaging crops and desiccating soils. They also create micro-climate by their continuous evapo-transpiration helping better crop production. Trees contribute much in increasing humus by dropping their dry leaves which act as mulch and later on they are converted into humus and reduce soil carbon being, mineralized due to tropical temperatures. Humus is very important in improving the soils capacity to hold water and improving the biological activity in the soils, thus helping in yield improvement. Trees play an important role in providing fodder for animals of the farmer even during the drought situations.

In spite of all the advantages that trees offer to farmers, many farmers do not like to plant trees on their cultivated lands, fearing the shade of trees will affect crop yields. However, if trees are planted in wider rows and in east-west direction and raised to a height of 5 meters, the crops get enough sunlight except between 10 A M and 2 P M. i.e. 4 hours. There may be crop loss to an extent of 20% when integrated with trees, but the benefits they get owing to trees will offset these losses. Hence, planting trees and bushes on the edges and bunds helps in more crop yields.

Trees provide shelter and host many beneficial insects (predators) and birds, which are very useful in controlling insect damage in



the crops. Since droughts and untimely rains are very common, it is much safer for farmers, particularly small and rainfed farming communities, to adapt agro-forestry system to be safe and risk free. Since they have trees and regular supply of fodder from trees they can go for backyard dairy or sheep/goat farming to get some additional income. If they have green manure or fodder species among their crop lands, they can cut the branches during the critical period when the crop needs more sunlight. For example, most of the annual crops need more sunlight during vegetative growth period for about only 70 – 80 days. If farmers prune the tree branches during such critical periods there will not be much crop loss. Again, if they have fruit trees, they can thin 1/3 of the smaller branches so that the crops get more sunlight. At times of distress, trees are the living assets which the farmers can bank upon.

*Shri Narayana Reddy is a legendary organic farmer and is one of the most sought after resource persons on ecological agriculture.*

### L Narayana Reddy

Srinivasapura, (near) Marelanaahalli,  
Hanabe Post-561 203, Doddaballapur Taluk,  
Bangalore Rural District, Karnataka, India.  
Mobile: 9242950017, 9620588974



### LEISA India in regional languages



*With an increasing demand from our readers for local language editions, LEISA India is now being brought out in five language editions – Hindi, Tamil, Kannada, Telugu and Oriya. These regional editions include translations of selected articles and are published twice a year – June and December.*