

Socio-economy governs peoples' dependency on forests

A study on fuelwood dependency of buffer zone people of the Shivapuri Watershed and Wildlife Reserve has indicated that, despite restrictions, the people are compelled to use the park resources. Forty percent of the fuelwood source is fulfilled by the reserve whereas 58 percent was covered by the private plantations.

distance, but the socio-economic conditions and ethnicity of the local people that govern the collection of fuel wood most. The Magar, Tamang and Newar who constitute more than 70 percent of the households surveyed, are the one who consume more energy for preparing local wine and certain food stuff. Brahmin,

own woodlots which is very useful to meet the surplus need.

Landless, marginal and small land holders who are deprived of other alternatives have higher dependency on common property resource. Such dependency could be minimised only through the income generating



Lower socio-economic condition compels selling of fuelwood as a means of income. Even the junior member of the family has to give hands on it. Wood security is another aspect that these people have always to think of.

The national and the community forests have negligible contributions. Interestingly, the distance which is often cited as the obstacle to collect fuelwood, has been disproved by the present research. It is not the

Chhetries who are comparatively better off, have small family size, are less dependent on park's fuelwood. This is for the reason that, these people own comparatively larger landholding and have therefore, their

activities.

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Pests attack sissoo in the Terai

Looking at the failure of sissoo in the terai plains, the sissoo entrepreneurs are regretting these days, as to why they desperately planted this species. The reason - trees aged around three years or above are ultimately dying from the root decay which is coupled with stem borer insects.

The way sissoo was gaining popularity for plantation amongst the farmers, the author, with his simple understanding that monoculture often brings about problems, had



indicated towards the possible enigma of sissoo plantation areas of the Terai.

And, as soon as the first problem in sissoo which was due to defoliating insects, were reported at the Forest Research and Survey Centre from the East Rapti Irrigation Project areas of Chitwan District during 1995/96, the centre with the financial assistance of the then Forest Research Project, came into action to counteract defoliation. The Centre recruited an entomologist and studied the problem. The study out-put helped

the Information Section of the Centre to organise in September 1996, a training at five districts (viz. Chitwan, Makanpur, Sarlahi, Sunsari and Morang) to the mid-level forest technicians and sissoo entrepreneurs. The training helped arrest the defoliating insects of the sissoo especially of the lower age groups and of the nursery stage.

Thereafter, immediately came the stage of top-dying in sissoo. A preliminary study on the top-dying of sissoo in the five districts (Sarlahi, Dhanusa, Siraha, Sunsari and Morang) have indicated various manifestations of sissoo such as, browning of leaves; leaves with

seems to be of considerable importance at some places.

Sissoo has been planted almost at every sites such as rice fields, bunds in rice fields, river sides, canal sides, road sides, and for enrichment plantations, etc. indicating towards the variety of soils ranging from stiff clay such as in paddy fields, newly exposed soil deposited along canals, and along sandy river beds. The suitability of soil physico-chemical parameters that best suits sissoo seems not properly attended. The root decay by unidentified pest which is prevalent every where in such stiff soil indicates possibly towards the soil factor that is unfavourable for sissoo.

Control of such infestation in sissoo has been recommended either by the preventive or remedial measures and/or the combination of both. This includes chiefly avoiding plantation on clayey soils, and, in the case of stem and root borers, the treatment of exposed root (up to two feet) of infected plant with five to ten litres of any systemic insecticides (Metasystox @ one millilitre per litre of water) per tree at an interval of ten days is recommended. However, its effect is yet to be proved.

Even if the root decay is due to facultative fungi it is not possible to eliminate them with the help of fungicides so long the trees remain



Spliced root showing decaying cortical layer ; damage of tree trunk by heartwood borer larva

white fungal mycelium on the lower side; leaves defoliated by insects; stem exuding reddish brown sap; stem with small holes of borer insects; stem covered with termites up to a considerable height, and excavated root decaying, brown at the periphery, and some times with offensive odour. Of all manifestations, the latter seems to be of the single most important reason for the untimely death of sissoo (fig 1), however, stem borer (fig 2) also

This is more strengthened by the fact that, sissoo which are growing on alluvial ground along the banks of rivers and stream, on new sandy alluvial well drained and porous soils with sand, pebble and gravel, have no such top-dying.

Plantation management also seems inadequate, and the quality of seeds and seedlings used for plantation are of unknown origin.

growing on stiff clay. The major findings that have been informed to the Tree Improvement Programme of the Department of Forest, suggest to take care of planting sissoo in right place from now onwards.

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