

# Creation of Bamboo Forests for Paper Industry in Madhya Pradesh

M. A. WAHEED KHAN

Within Madhya Pradesh, the main pulpwood consuming industries are (a) National Newsprint & Paper Mills, *Nepanagar*, and (b) Orient Paper Mills, *Amlai*. Presently, the consumable pulpwood is collected from far a field by both these mills. Simultaneously efforts are afoot to create usable pulpwood plantations around these mills only.

Around *Nepanagar*, Forest Department is creating large-scale plantations of Mysore Gum. Such a hardwood may be used in the *Nepa Mills*, in conjunction with traditional pulpwood of bamboos. No plantings of bamboo are done around *Nepa Mills*. The plantations of Mysore Gum have also not shown much promise. Usually, they are less stocked than expected. Under the prevailing climatic conditions, and plantation techniques of soil working and planting as adopted, the individual trees of Mysore Gum have attained fair height growth, but B.H.G. attainment is almost stagnant. This peculiar behaviour reduces the unit area productivity of usable pulpwood to a great extent, and the age at which the plantation crop may be harvested for pulping is increasing inordinately. All this is not a happy augury in arranging pulpwood availability in close vicinity of the Mill. Bamboo will continue to be brought from far off localities.

M. A. Waheed Khan, I.F.S. Conservator of Forests, Working Schemes Circle, REWA (M. P.)

For the O.P. Mills, *Amlai*, the situation is still the worst. Here, bamboo is the main type of pulpwood largely consumed in the Mill. Yet the departmental efforts are solely concentrated in raising plantations of Mysore Gum. As compared to the *Nepanagar* plantations, they are grossly understocked and B.H.G. development is equally poor. The Mill authorities have also been given a limited area on lease in *Amkantak* to raise their own pulpwood plantations. The leased area carries poor to medium quality *sal* forest, and the Mill authorities are to keep this growth in tact, yet may create their own plantations. Accordingly, underplanting of Mysore Gum is in vogue. This is a sheer waste of money, labour and time, as the light-demanding Mysore Gum can never be expected to flourish as under-shade crop. The planting efforts, so far made, are worth nothing.

It has also been reported recently that Mysore Gum is not a suitable species for groundwood pulp; the way in which it is expected to be used in the *Nepa Mills*. Accordingly, the Mysore Gum plantations raised around the *Nepa Mills* and the O.P. Mills are hardly of any use in providing pulpwood to these mills.

An urgent change is necessary in raising pulpwood plantations, at both these centres. The main efforts should be concentrated, as follows:—

**Nepa Mills :**

(1) Further planting of Mysore

Gum should cease forthwith.

(2) The existing Mysore Gum plantations be treated to :

- (i) Conserve moisture through adequate soil working ;
- (ii) Irrigation be provided, wherever possible,
- (iii) Chemical fertilizers be judiciously be applied, and
- (iv) Chemical insecticides may be spread, if a necessity so arises.

(3) Henceforth, only irrigated plantations be raised. There is enough irrigation potential in the area. An outstanding example is the *Mandwa anicut*. Even water from the *Tapti* water storage project may be made use of by providing lift-pumps.

(4) The annual planting should be arranged as follows:

<i>Dendrocalamus strictus/Bambusa vulgaris</i> . . . . .	80% of the area
<i>Albizia procera/Delonix regia</i> . . . . .	20% of the area

(5) The irrigated plantations be provided with chemical fertilizers and insecticides.

(6) The cultural operations should be so designed and implemented that each stem in a plantation grows at a fast rate and produces the maximum at the expected age of harvesting.

(7) The management of trees crops should be arranged at 6 to 8 years rotation.

**O. P. Mills :**

(1) The undershade planting of Mysore Gum by the Mill authorities,

growing species should be raised within economic radius from the existing or proposed paper mills. Once this principle of land use is accepted the future planning and identification of industrial catchments will be easy and feasible.

22. In conclusion it is suggested that there is need for a greater co-ordination and consultation in the planning and execution of Industrial Plantations Programmes between the State Forest Departments and the paper mills. A larger degree of cooperation from the paper mills will only be in the interest of forestry and the pulp and paper industry.

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at Amarkantak, should cease forthwith.

(2) The Amarkantak leased are be allowed to be clearfelled and planted with tropical pines, as such a potential exists there.

(3) Departmentally - raised Mysore Gum plantations be treated as follows :

- (i) In well-stocked patches :
  - (a) Conserve moisture through adequate soil working,
  - (b) Irrigation be provided, wherever possible,
  - (c) Chemical fertilizers be judiciously applied, and
  - (d) Chemical insecticides may be spread, if a necessity so arises.
- (ii) In blanks and grossly understocked patches :
  - (a) The existing growth be clearfelled,
  - (b) Plantings of *Dendrocal-*

*mus strictus/Bambusa vulgaris* be carried out,

- (c) Soil working to conserve moisture and application of chemical fertilizers and insecticides should be necessary operations,
- (d) Irrigation be provided, wherever possible.

(4) The Mill be leased additional land around it in the plains and not at Amarkantak, to raise highly productive bamboo plantations through irrigation and use of chemical fertilizers and insecticides. Such lands are available plentifully, and presently do not carry much forest growth of any consequence. The main features of such a lease may be as follows :

- (i) Considering the annual requirement of pulpwood in the Mill, the extent of area may be worked out on the basis of 10 tonnes per hectare per year,

plus 20 per cent extra land.

- (ii) The Mill must raise only irrigated plantations of *Dendrocalamus strictus/Bambusa vulgaris*. with judicious use of chemical fertilizers and insecticides.
- (iii) The lease period may range from 50 to 99 years.
- (iv) The lease amount, per unit area per year, may be calculated on the basis of revenue presently derived from these areas. It is negligible.
- (v) The lease amount may remain subject to revision, every tenth year.
- (vi) The lease period should remain renewable.
- (vii) At the expiry of the lease, the Mill should hand over the leased area, fully stocked with crop, together with all the ancillary equipment and installations for continued management of such crops.