A note on bamboo cutting tool

Agency: DRHR, BARC

Introduction:
Bamboo grows in the form of cluster and most of the varieties grow completely within two years. In 2–5 years (depending on the type of species), fungus begins to form on the outside of the culm (jointed stem of bamboo), which eventually penetrates completely. After about 5 to 8 years (depends on type of species and climate), the fungal growth causes the culm to collapse and decay. Hence individual bamboo, depending upon its condition needs to be harvested at particular age and selected bamboo has to be cut and removed from the cluster. For this purpose, a manually operated hand tool for selective cutting of bamboo, without affecting surrounding bamboos has been made.

Bamboo cutting tool:
The original requirement of the tool was received from Bamboo Development Board, Maharashtra. The tool consists of a cutter, cutter holder and extension rod (length varies from 0.5 to 2 m). Cutter, having a length of about 200 mm can be replaced. Cost of the tool is approximately ₹1000.00.

Trials carried out:
Initial trial of the tool was done at BARC, Trombay and subsequently it was used at Murbad forest range, Maharashtra in the month of May 2018. The tool is able to cut selected bamboo from the culm, even if the approach to it is difficult. After satisfactory trial, a set of tools was delivered to Murbad forest range office for their use.

BARC team visited STRC, Gondwana University, Gadchiroli, Maharashtra in the month of December 2018. Bamboo cutter was demonstrated at the Development Centre of bamboo development board. BARC team also visited various bamboo plantation areas in Gadchilroli forest range along with staff from STRC, Gondwana University. Photographs of the trials are given below.

Feedback about the tool:
The tool was demonstrated to Kondegaon Village head and he found it very useful. Head of village explained that matured bamboo becomes hard to cut even with axe, but this tool can cut such bamboo also with least effort. Feedback received from Gondwana University is reproduced below:

- It was observed that the cutter can be used with ease to cut selected Bamboo without affecting surrounding Bamboo
- The bamboo cut without any damage to the whole piece of Bamboo, otherwise there are chances of chipping or breaking of bamboo from the centre
- Few users asked for short length of handle for local use at village level
- They found it safe and injury free for cutting operations

Bamboo cutter
Trials using bamboo cutter
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