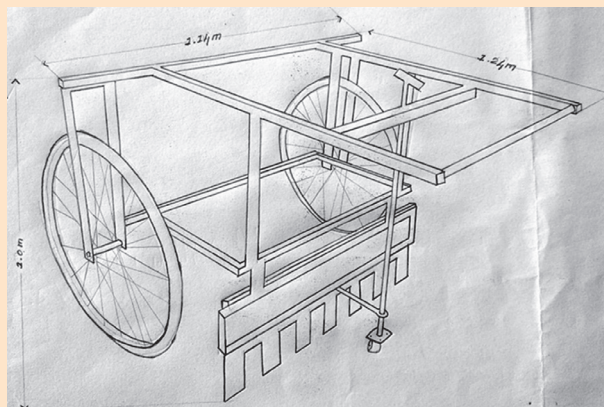


ridges and furrows in the coffee lots, as compared to raking with the gorumane. The effective turning of coffee mass exposes all portion of the coffee lot to the sun-light for even drying.

Further, it was also observed that when coffee mass raker used for raking, the time required for raking reduced by 50% due to the wider coverage of drying coffee mass when compared to the traditional gorumane, which covers relatively a smaller area. Regarding the splitting of parchment cover, the coffee mass raker did not damage the parchment cover. The extent of parchment splitting was minimum in all the parchment coffee lots dried under this study, irrespective of the type of raking methods employed. The locally designed coffee mass raker is very easy to operate and women workers can also handle this without much difficulty.



Specifications	Details
Total Dimensions (LxWxH)	1.24 x 1.14 x 1 m
Total Weight	30 Kg
Material of Construction	Mild Steel, Cycle wheel & Acrylic Sheet
Approximate Cost	Rs.10,000/- per unit

* * *

CYCLIC COFFEE MASS RAKER



Central Coffee Research Institute
Coffee Research Station - 577117
Chikkamagaluru District, Karnataka

Over the last few years, the plantation sector across south India is reeling under acute labour shortage due to migration of workers to urban areas for the better opportunities. This has been adversely affecting the timely adoption of critical operations, which have direct bearing on production, productivity and quality of coffee. The non-availability of labourer in the critical phases of the coffee production forcing the planters to skip certain important cultural operations and post-harvest steps.

The Post Harvest Technology (PHT) division established at CCRI fabricated and evaluated a coffee mass raker. The dimensions of the coffee mass raker are as follow: 1.24 m L x 1.14 m W x 1 m L. The main

components of the coffee mass raker includes a reversible raker made up of acrylic sheet, bicycle wheels and raker frame made up of mild steel. The total weight of the coffee mass raker is around 30 kg. The total cost of coffee mass raker is approximately ten thousand (Rs.10,000/-).

The coffee mass raker was evaluated for its drying efficiency and labour use efficiency. The performance of the coffee mass raker was compared with the routinely followed estate practice for raking (i.e. gorumane). The results indicated that Arabica and Robusta parchment coffee lots raked with the conventional raking tool (gorumane) took six drying days to attain the prescribed test weights of 15.5 and 16.5 kg per bushel/forlit (40 L), respectively which corresponds to a moisture level of 10% (+ 0.5%). While, Arabica

and Robusta parchment coffee lots raked with the coffee mass raker took five drying days. In case of cherry samples, the Arabica and Robusta coffee lots raked with the conventional raking tool (gorumane) took 12 and 11 drying days, respectively to attain the prescribed test weights of 17 and 18 kg per bushel/forlit (40 L), respectively which corresponds to a moisture level of 11% (+ 0.5%). While, Arabica and Robusta cherry coffee lots raked with the coffee mass raker took 11 and 9 drying days. These observations indicated that drying days reduced by one-day for parchment & Arabica cherry samples and two days for Robusta cherry samples. The coffee mass raker rotates the coffee mass very effectively. This leads to the formation of large

Contributors:

Dr. T.N. Gopinandhan (Head)
Mr. T.N. Sandeep (SMS)
Ms. B.B. Channabasamma (RA)

Editorial Committee:

Dr. T.N. Gopinandhan (Head, PHT)
Ms. K. Tintumol (SMS, Entomology)