



On Farm Seed Cotton Cleaning Machine (Axial Flow Pre-Cleaner) CIRCOT's Technology



Need for On Farm Cleaning of Seed Cotton

Cotton is sold in the market based on its grade. Trash content in the cotton is the predominant parameter in deciding the value of the cotton. Due to the presence of high trash content in the cotton, farmer fetches lower price. Presently ginning factories uses cylinder type pre-cleaners with 3 to 6 cylinders depending on the cleaning efficiency required. These pre-cleaners are of high capacity, costlier and require more power and not suitable and affordable to farmers.

On Farm Cleaning of Seed Cotton using Axial Flow Pre-cleaner

Portable single cylinder cotton pre-cleaner is designed and developed by CIRCOT based on axial flow principle for on farm cleaning of cotton. The cylinder length, overall peripheral cylinder diameter and spike length is 1200mm, 443 mm and 115 mm respectively. Optimum cleaning efficiency and output is observed at cylinder speed of 225 rpm. Pre-cleaner removes effectively the large trash particles, sand, dust, kawadi etc. The fibre quality parameters do not get affected by pre-cleaner. It is observed that axial flow pre-cleaner could be effectively used for on farm cleaning of cotton to enhance farm income. It would be also of great use to the cotton ginners, breeder and trader also.



Axial Flow Pre-cleaner in Operation

Axial flow pre-cleaner can be effectively used for on farm cleaning of cotton to realize the better prices for cotton thereby enhancing the farm income.

Cost Economics

Cost of the machine	: Rs. 75,000/-
Cost of operation	: Rs. 44/h
Custom hiring rate	: Rs. 109/h

Benefits of Axial Flow Pre-cleaner

- The capacity of the machine is 650 kg/h.
- The cleaning efficiency of the machine lies between 30-40%.
- Pre-cleaner brings down the trash content by about 0.8-1.5%.
- The cost of operation per hour and per quintal is Rs. 44 and Rs. 6.75 respectively.
- Additional income to farmer per quintal is Rs 54.



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