

Utilizing Tube Well Energy to Make an Agriculture Reaper

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ABSTRACT

Tubewells are used on a large scale in India for getting irrigation water from the ground. The high pressure of the outlet water from tube well is getting wasted. This high pressure can be used to make cheapest and eco-friendly reapers for farmers working in medium sized rice fields. The construction consists of an opening on the bottom most portion of the vertical tube well pipe and using a separator there to disperse the pressurised water into two flexible pipes. These flexible pipes should be long enough to cover the entire field. Water at the outlet of these pipes is made to fall on cup-shaped blades. These blades are attached at the bottom of two different columns having spring steel cutters at the top tightly attached to the columns. Thus the column has cutter blades with cutting edge on one side of it. The water pressure causes the cup shaped blades to rotate which therefore causes the column and hence the column with cutter blades to rotate, which cuts the crops. This entire assembly can be moved on wheels throughout the field. In future we can use this thing as diggers by making some modifications.

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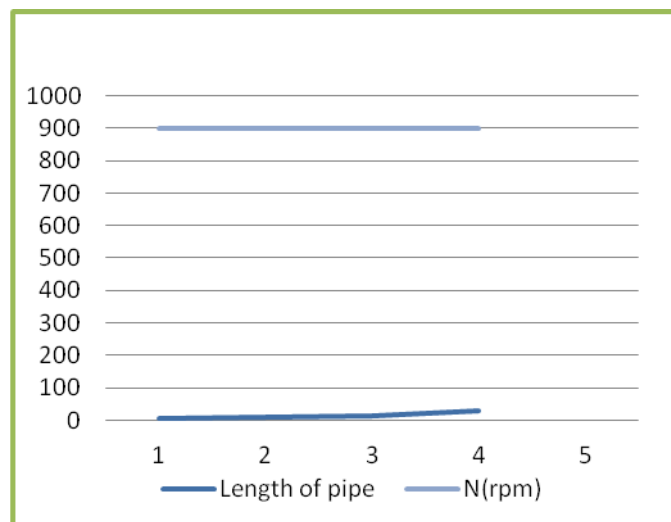


Figure 1 Length of pipe v/s rpm of cutter

Length of pipe(m)	Major Head loss	N(rpm of cutter)
5	13.303	898.206
10	39.909	898.225
30	78.8183	898.226

Figure 2 calculated data

REFERENCES:

- [1] Pak. J. Agri. sa; Vol. 30, No.2, /993
- [2] Bevan, T. 1962. The Theory of Machines.