

# 5 m Folding Land Leveler.

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### Project Aim.

My main aim is to design and fabricate a 5 Meter Folding Land Leveller. It levels and grades soil to uneven parts of the field leaving a clean level finish for a seed bed. I hope to design a stone trap which collects stones and reduces labour.

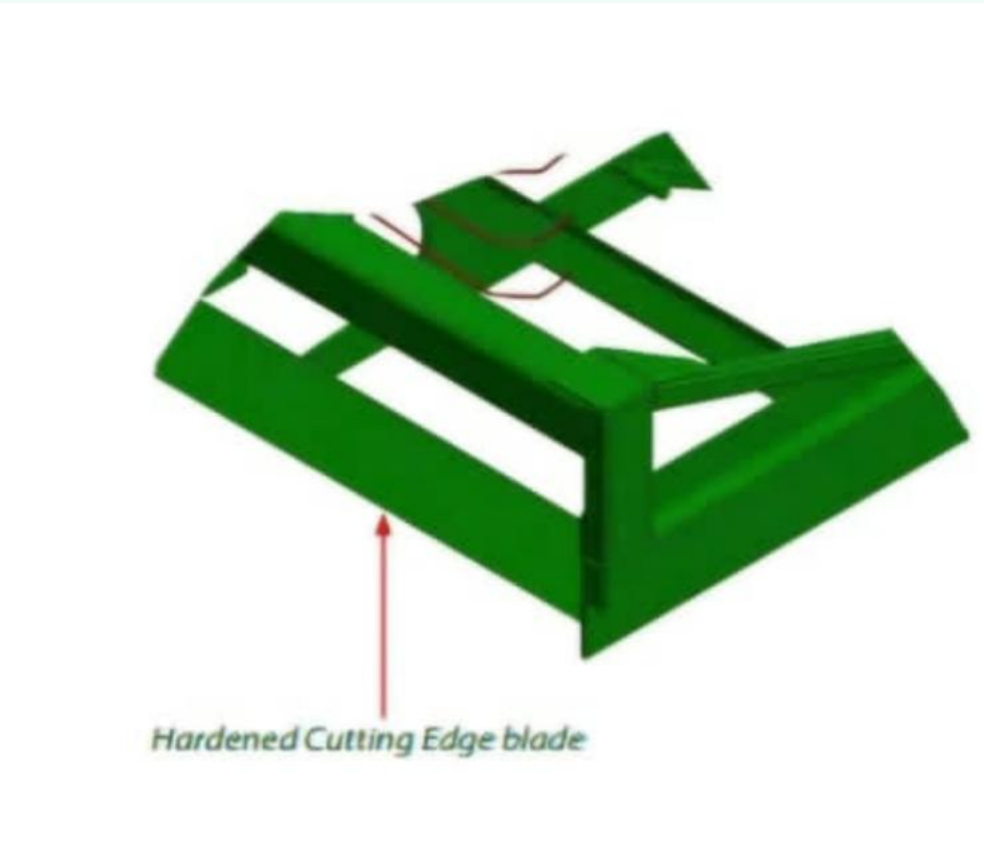
### Background

I come from an anticultural machinery background and focus on grass reseeding and tillage work mainly. At the moment we have a land leveler but it is badly designed and hard to transport as it is 14ft non folding. I would like to make a well designed 5 meter folding for as little cost possible. I visited Samco Agricultural Engineering Sales where is researched there design of a 5m folding LandLeveler. I then took inspirations from there design of there high leveling boarder and hardened cutting edge design I hope to achieve this by modeling my project fully on SoildWorks and researching several different land levelers that are already on sale. This will then allow me to make my own landleveler to a high standard and as cheaply as possible.



### Design

Key points:  
I looked at several different designs and created a solid works model of my design.  
Hardened cutting edge blade. Shaves stones and rocks into the ground breaker without any springing or jumping off the ground.  
The sides are 300mm in height to avoid spillage of soil over the side levelling boards.  
There are 4 levelling blades creating maximum levelling.  
Adjustable trapping bar.: catches stones and is hinge mounted to allow for reversing.  
Hydraulic rams to allow the 1 meter either side to fold up for transport mode.



### Materials

Part	Material
Levelling boards	90x 90 angle Iron
Front frame	120x120 box
Levelling boards	300x2000 200x 2000
Hydraulics	2 hydraulic rams for folding
Stone trap	30 mm diameter round bar, 50x 100 mm rectangular box.

### Conclusion

In conclusion my 5m folding land leveler levels soil and collects stones which would damage other grass cutting machinery to follow. The way that my land leveler catches stone saves time and labour. My design includes hardened cutting edges, hydraulic folding 1m arms each side. Theses ensure optimum performance in the field while still being within the maximum 3m road transport width.