



Root Rover

Mechanized crop-thinning device

Yellow B

Root crop thinning is necessary and tedious

Process: Root crops are over-seeded, but then must be thinned for full growth

Problem: Small farms do it by hand, making it a tedious and time consuming process



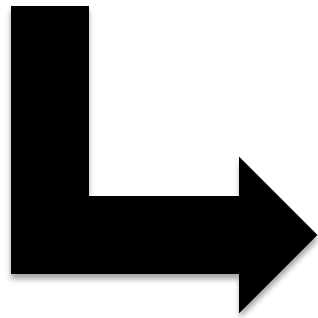
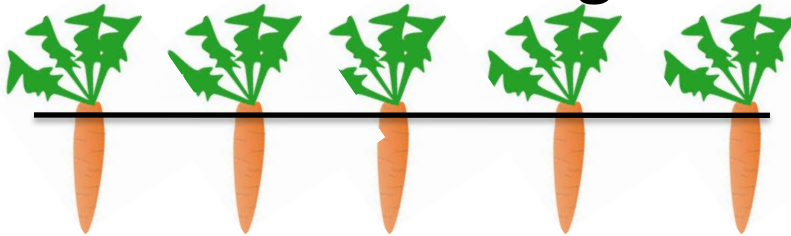
<http://www.vegetablegardener.com/item/3510/thin-plants-for-a-healthy-crop>



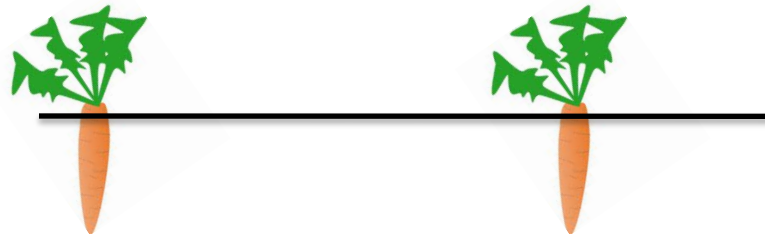
Root Rover

Process

Before thinning

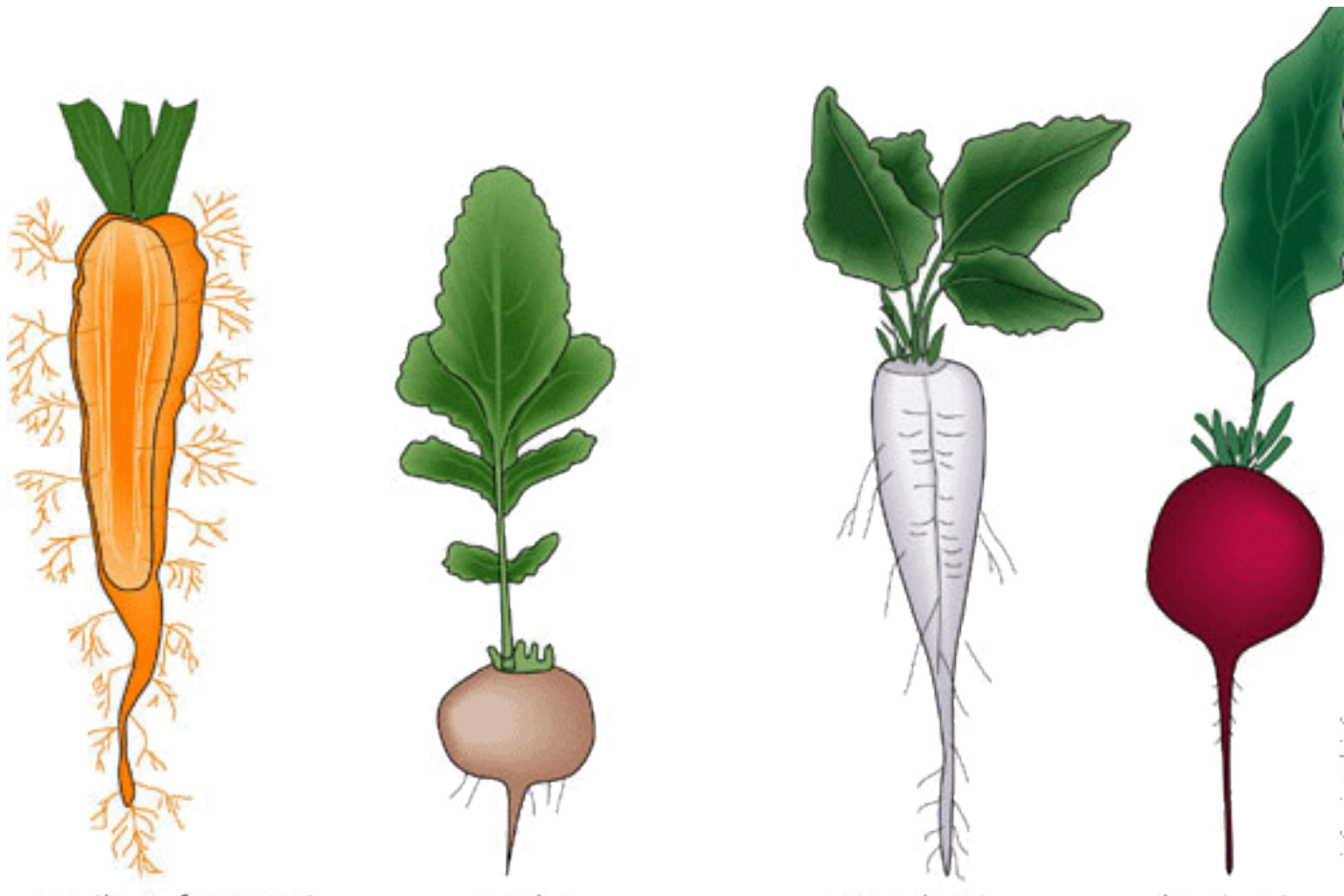


After thinning



Root Rover

Root Crops



http://www.paintthelight.net/BotanyProject/Activities/uses_plants.htm

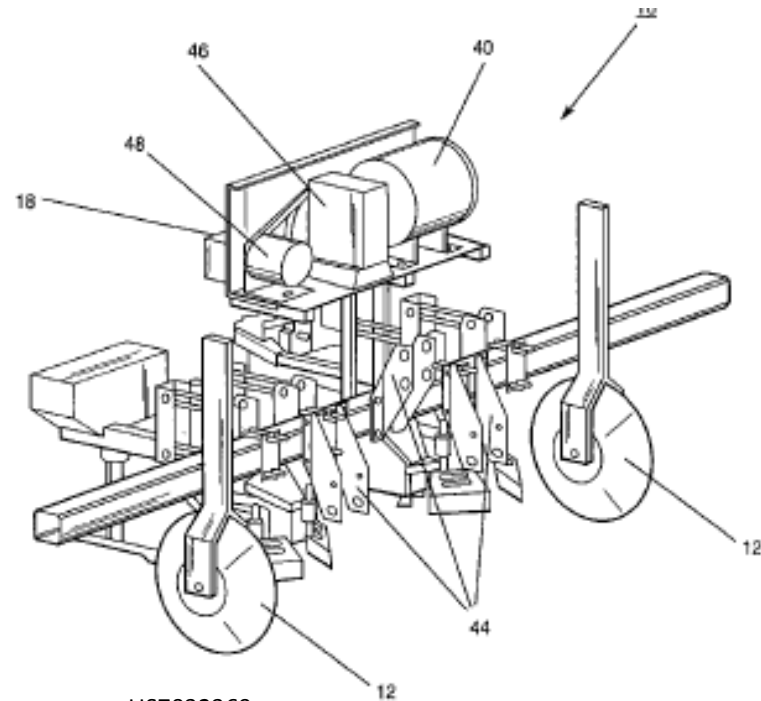


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Existing products do not serve small farms



http://www.grimmeuk.com/veg_tech/harvest_tech.php



Existing solutions are expensive, bulky, high maintenance, and impractical for the small farmer

 **Root Rover**

Local farms confirmed the need for a mechanized crop thinner

- The Farm School-Tyson Neukirch
 - Athol, MA



- Deepening Roots Farm-Bill Gillen
 - Amherst, MA
- Old Friends Farm-Casey Steinberg
 - Amherst, MA



Root Rover

Root Rover is the answer for small farms

- Affordable and easy to use
- Makes the thinning process faster and more cost effective
- Tractor attachment or hand push device

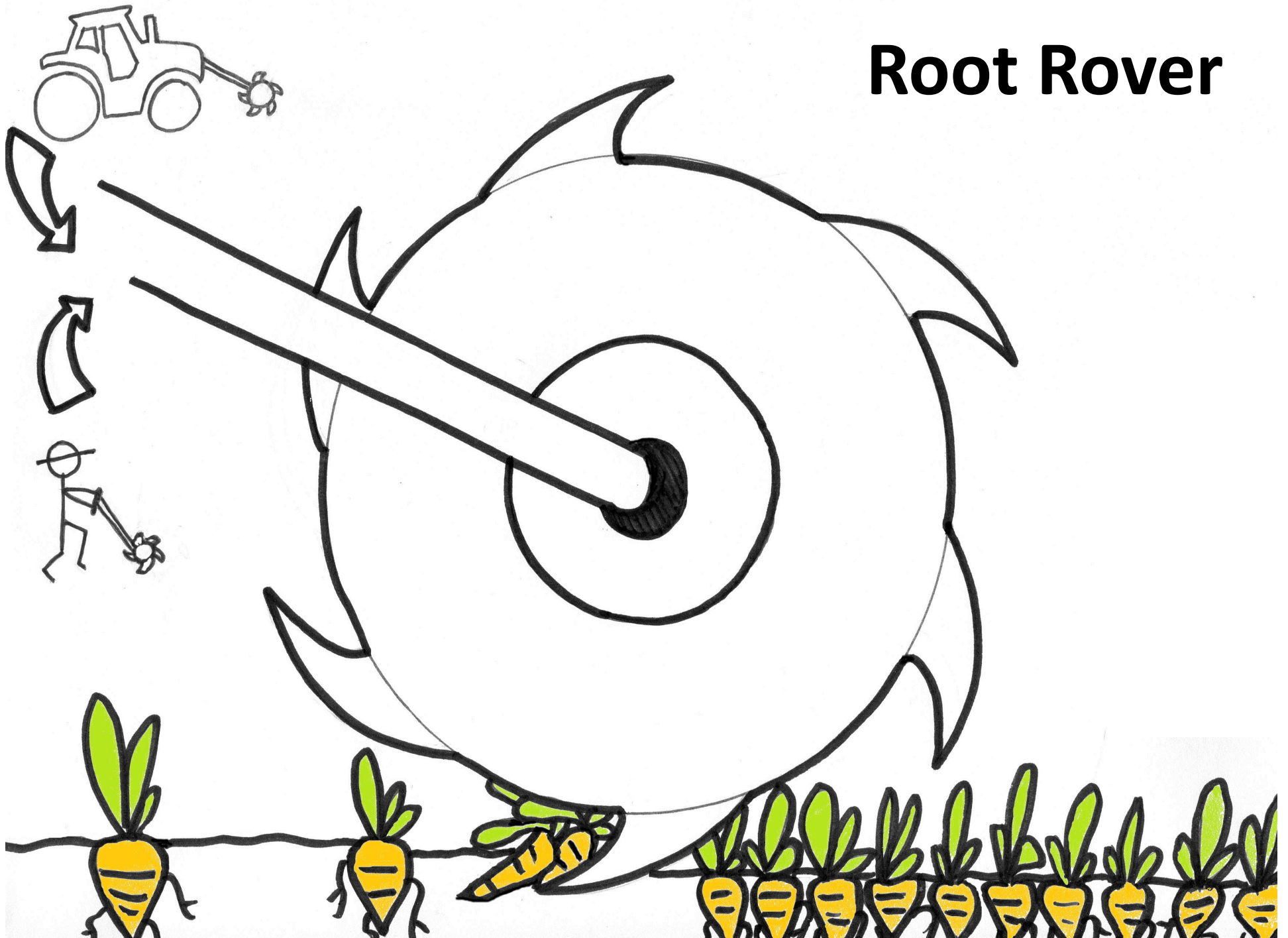


<http://ballebros.netpotential.co.nz/Gallery/Photos/tabid/72/AlbumID/417-22/Default.aspx>



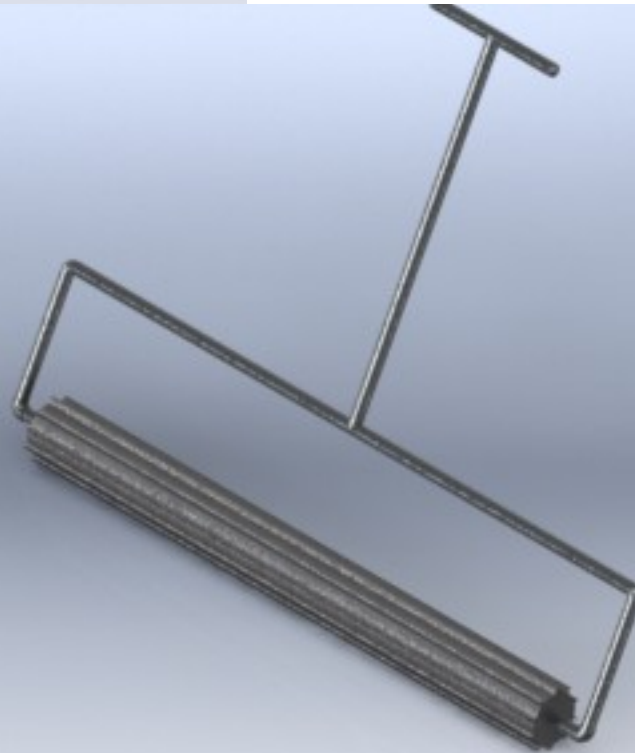
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Root Rover CAD Model



Moving Forward

- Our blade curvature and design were not ideal
- More force needed
- More rigid handle



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