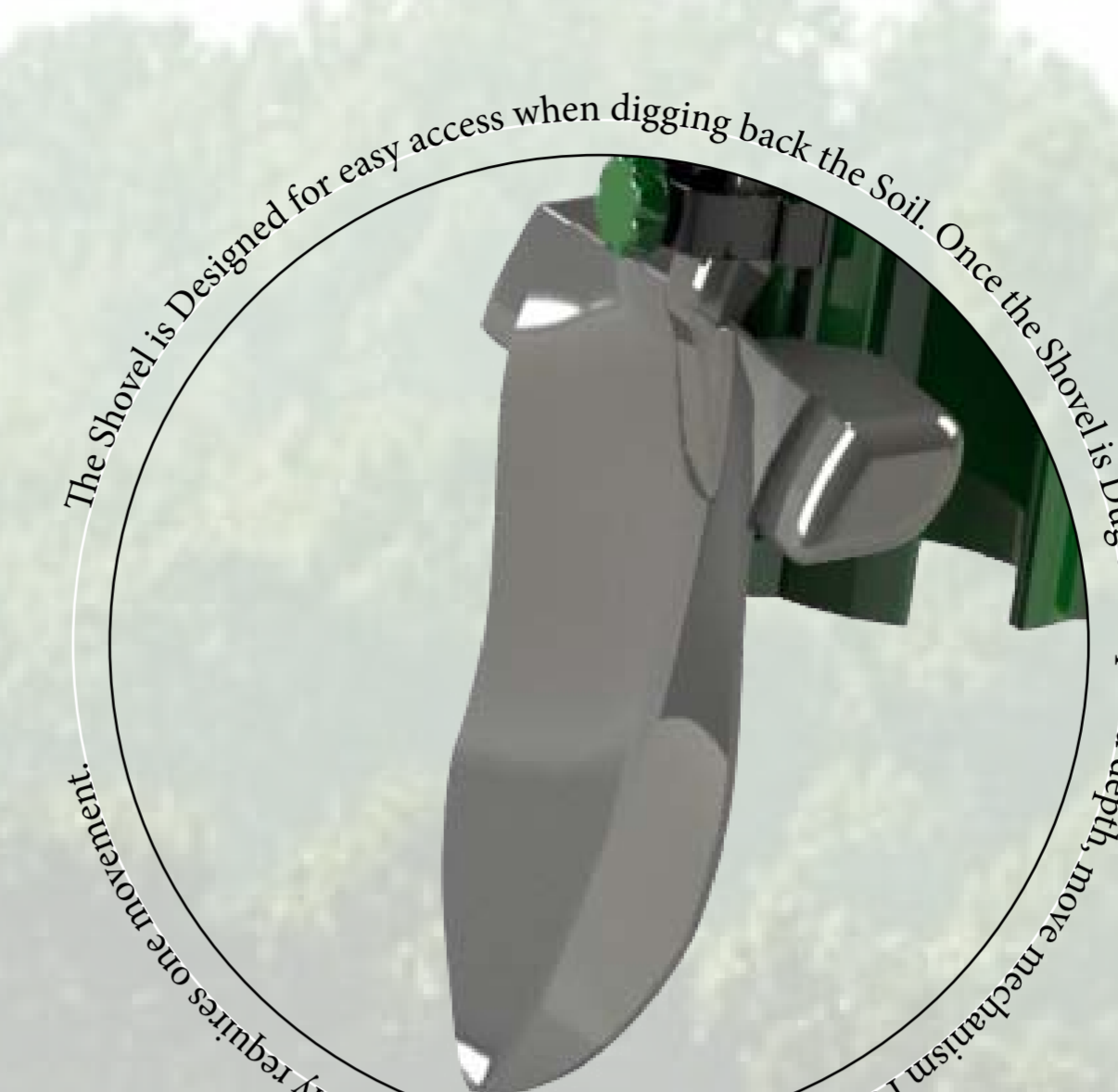
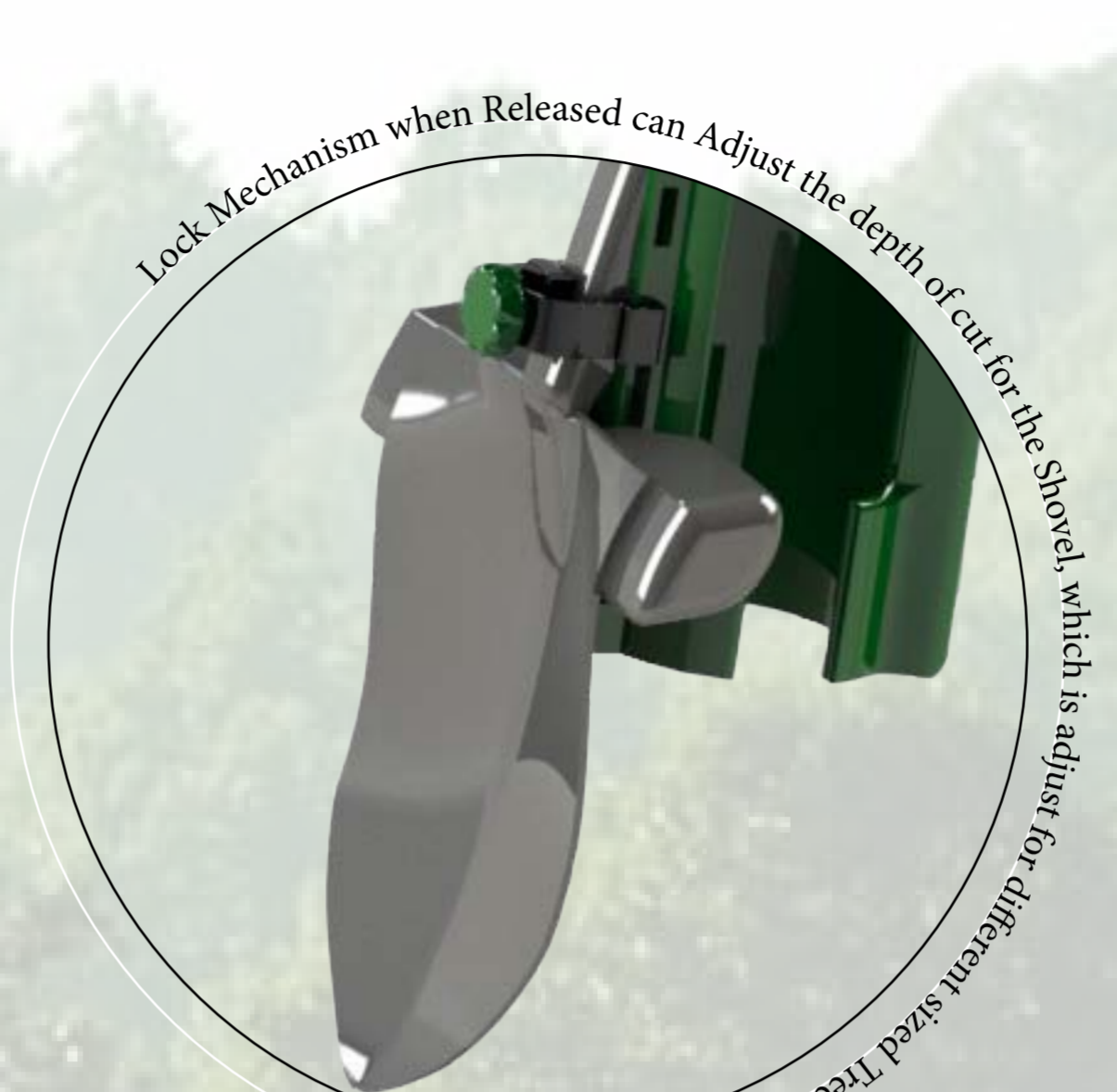




Chestnut Planter

Ensures the Successful Plantation of Forestry

The Chestnut Planter ensures the successful plantation of forestry as it ensures that the tree saplings are planted at the correct depth every time that that you dig your hole. It ensures that every hole that you dig will be the same for each of the sapling roots to ensure that the sapling has the best possible survival rate once it is planted in to the soil. It also eliminates the need to bend down and place the sapling into the soil as the catching mechanism moves the sapling down in to the soil. It will reduce the stress on both the planter and the Planted Sapling.

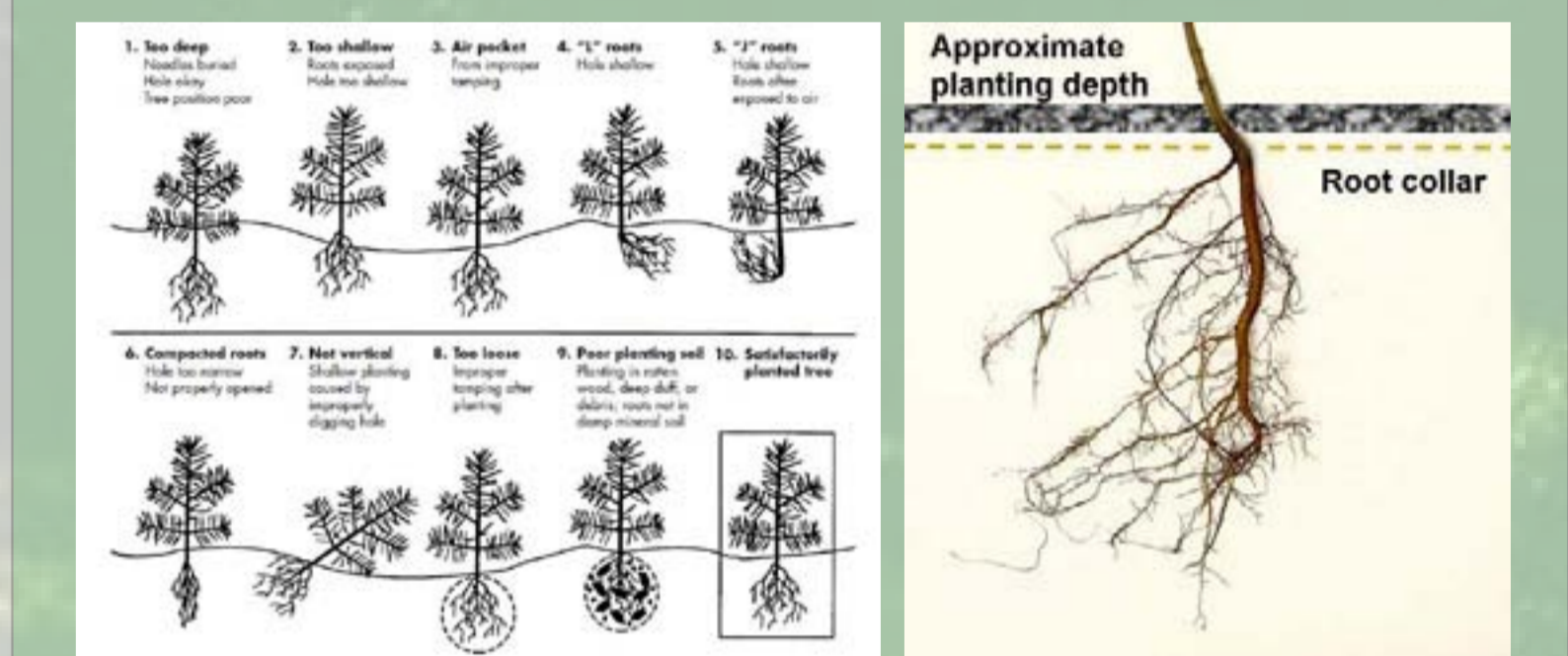


Irish Forestry Facts

- There has been a rapid increase in the area of investing in farming, with a return of between 15% and 30% from the investment.
- In Ireland there is currently over 16,000 landowners who have a plantation of forestry. This plantation includes large and small scale plantation of forestry.
- The farmer receives a forest premium payment of up to €427 per hectare of planted forestry for the first 20 years.
- The value of timber is currently valued at €15,000 a hectare net of costs, with 70% of trees planted being conifer, and the other 30% being broadleaf.
- On average 10.7% of the Republic of Ireland is covered in Forestry with the largest % in Wicklow (land cover 202,483 ha) at 21.53% and the lowest at 3.96% in Dublin (92,156ha).
- Currently 9% of Irish land is forested, however the plan is to increase this figure to 17% of land by 2030.
- The average price to stand a timber in 2002 was €27.28, while this rose to €60.98 in 2010.

Issues around Planting Forestry

Dig, Drop and Pack
 The main issue with planting saplings is that every 8 out of 10 saplings die when they are planted in the soil.
 The main reason that the saplings die is that they are not planted correctly, with saplings being planted too deep, too shallow or that the roots are being pressed down too deep into the soil which results in damaged roots, or bent roots.
 Another issue is with the person who is planting the sapling and the strain on their back when having to plant so many saplings during the day and the damage that planting the saplings can do to a persons back over years of planting forestry.



How it Works

1. Setting Depth Control of Shovel

Loosen the lock shovel mechanism that is bolted through the shovel.

Open out the two brackets and move the shovel up the shovel moving mechanism



3. Opening and Closing the Catch mechanism.

the connector cable that opens up the catch mechanism.

The catch cable wire catches in under the connector which attaches on to the handle press. the wire stays under tension.

The wire stays under tension.



2. Movement of Inside Core Sapling Planter.

Controlled by the handle of the chestnut planter.

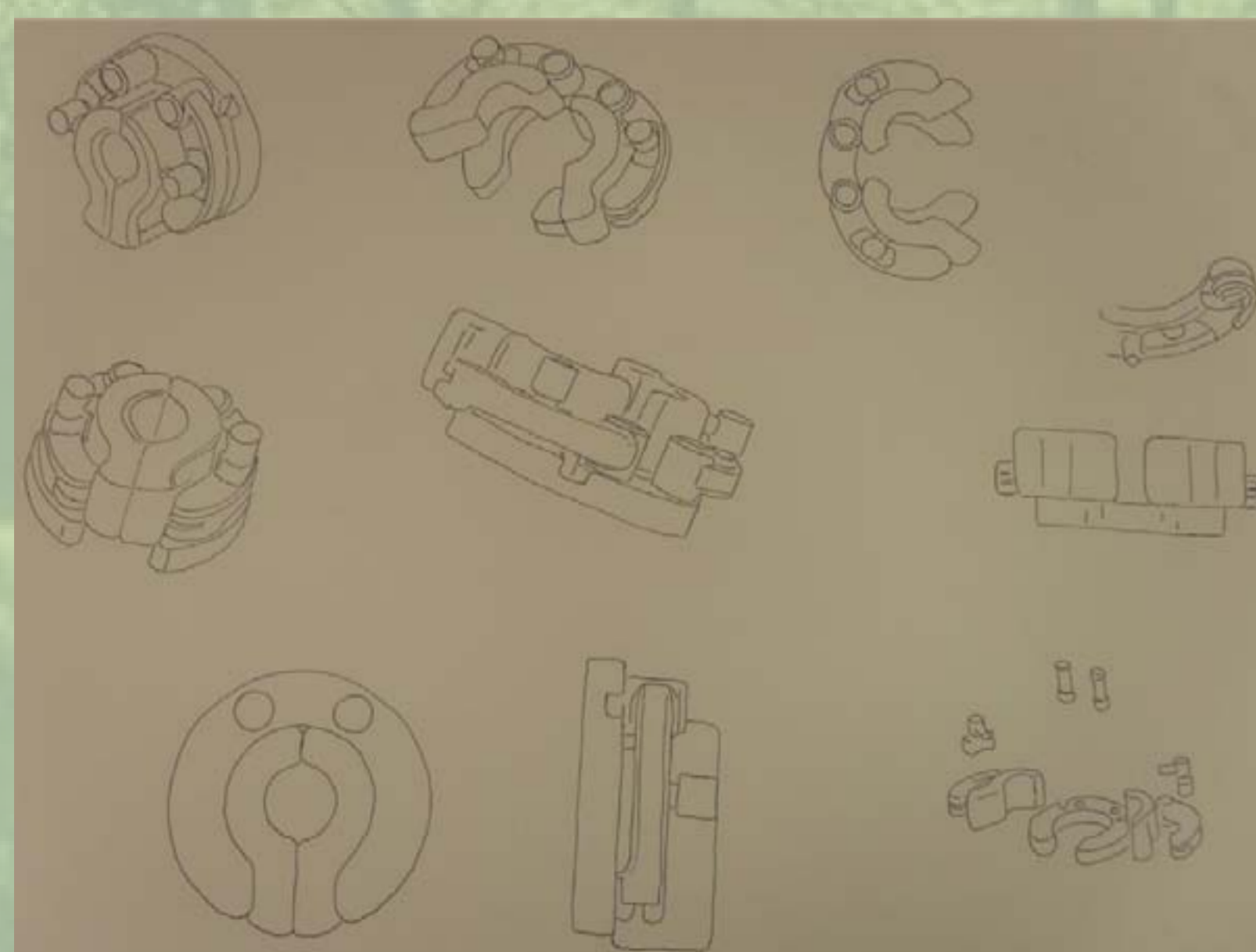
The main core is double plated on the inside for a distance so when the inside core sapling planter moves back up that this part will take the pressure off the handle when the gas spring is fully extended.



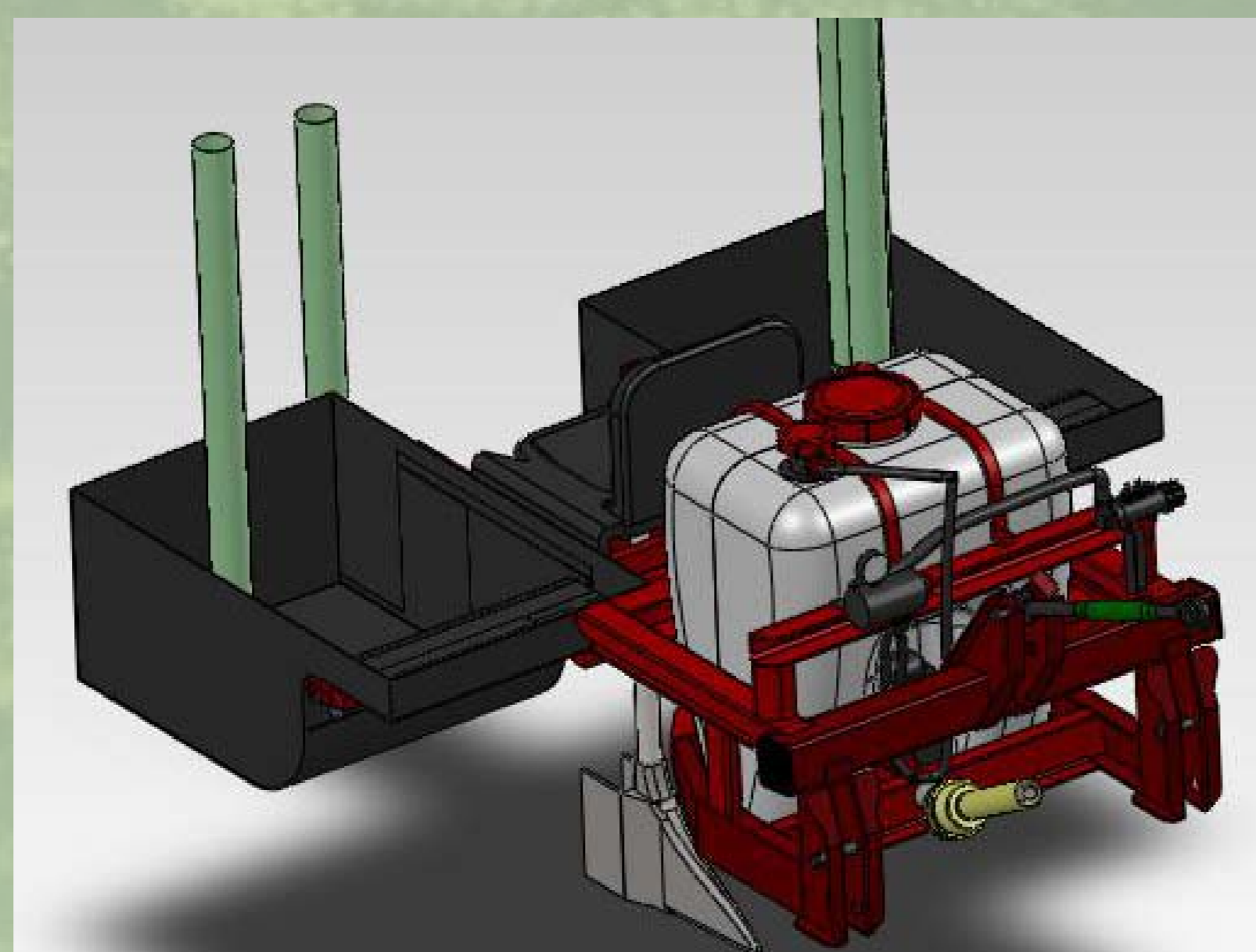
4. Placing in and removing Tree Sapling from Chestnut Planter.

It is important to ensure that the saplings roots are placed on the underneath of the planter to ensure the successful plantation of the sapling.

Lift the chestnut planter up and away from the planted sapling



Drawings



Development Drawings



Test Models



Final Model



Exploded View