

Case Study – Sustainable Woodland Management – Agroforestry Crops



The Need

Many of our river catchments are poorly managed with grazing of the upland areas and compaction of the soils creating rapid runoff. As these areas typically yield poor agricultural crops landowners struggle to see alternative beneficial uses. The compacted soils from years of grazing yield high rates of water runoff due to poor percolation of rainwater down into the groundwater beneath. Changes in rainfall intensity due to climate change are exacerbating this situation resulting in the recently observed floods of 2014

The Solution

The Resilience Centre has been trialling alternative Agroforestry crops for use in upland areas where the trees produce multiple benefits including breaking up any compacted soils increasing rainwater percolation and reducing runoff. Planting of high yielding nut hybrids of Chestnut, Hazel, Walnut and Buartnuts can have significant benefits by yielding high value crops that replace existing protein production from agricultural enterprise. If managed sustainably the woodlands also produce high value timber and edible fungi as well as providing valuable nature conservation habitat.

The Results and Benefits

Well managed sustainable Agroforestry schemes can yield up to 4 tonnes per acre per year of nut crops and between 2-4 tonnes per acre per year of hardwood timber that can be used for a variety of uses including fencing, firewood, gates, Biomass Gasification CHP, structural timber etc.,.

Key Facts:

- Development of Agroforestry crops providing sustainable Timber, Nuts, Fungi and Flood Risk Reduction
- Up to 4 tonnes per acre per year of High Protein Nut Crops
- Between 2-4 tonnes per acre per year of coppiced hardwood timber.
- Habitat Enhancement of upland areas
- Reduction of peak runoff and increased groundwater infiltration = lower flood risk