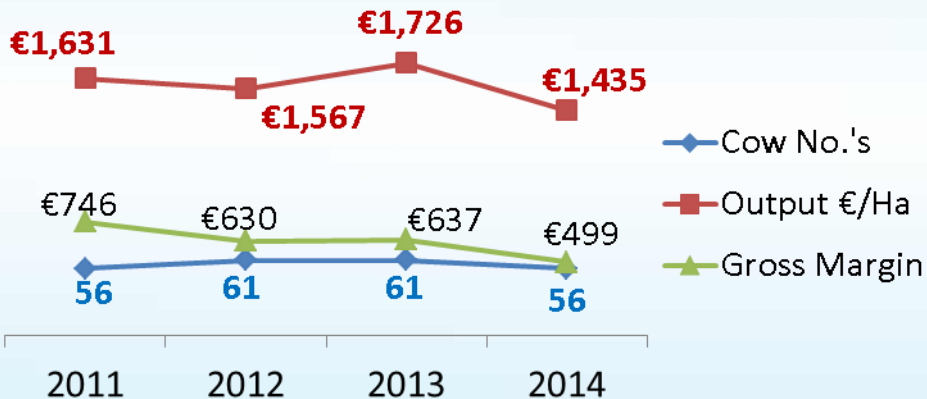
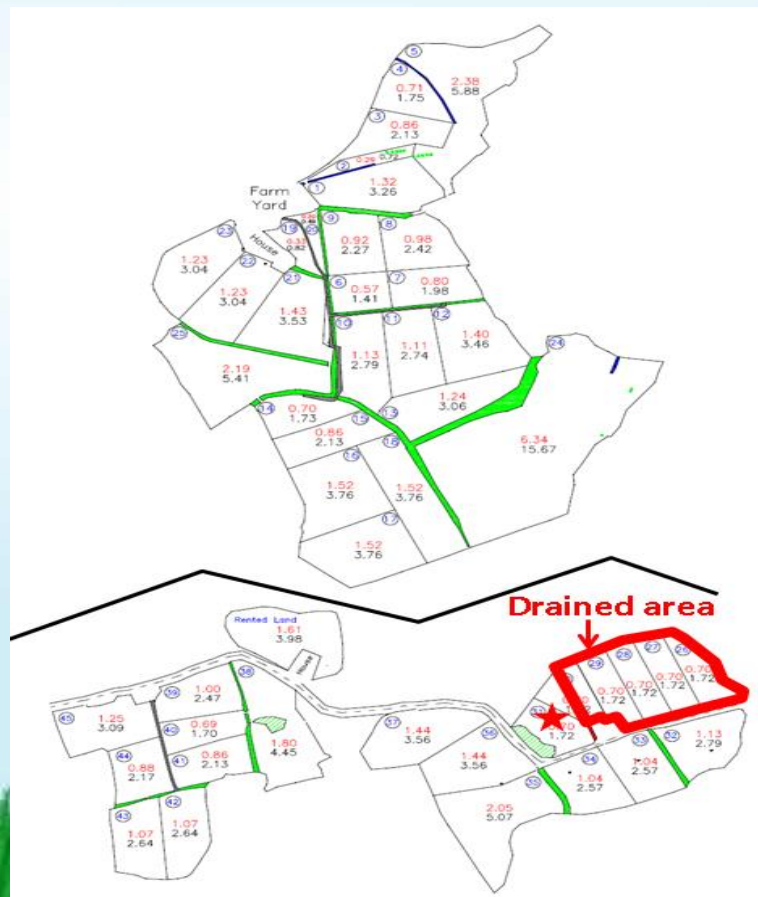


Alan Wood Farm Performance



Key Farm Drivers

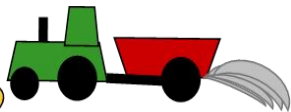
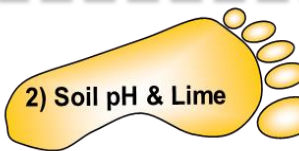
- € 100% AI usage
- € Optimise grass in diet
- € Excellent weanling and cattle thrive
- € Good grazing infra-structure
- € Average Annual Rainfall (1300 mm)



5 Steps to Improving Soil Fertility

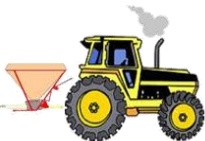
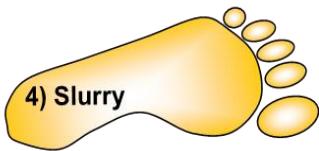
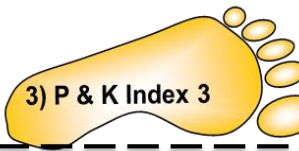
Soil Fertility Summary: Alan Wood's Farm

Information

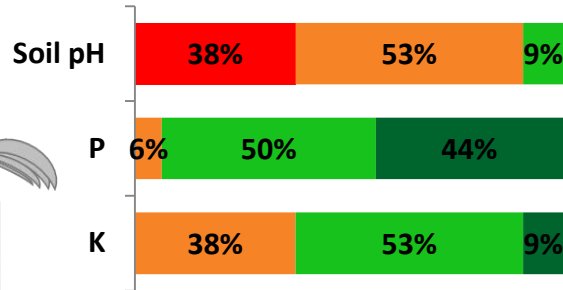


Index	Description
1	Very Low
2	Low
3	Target
4	High

Interpretation

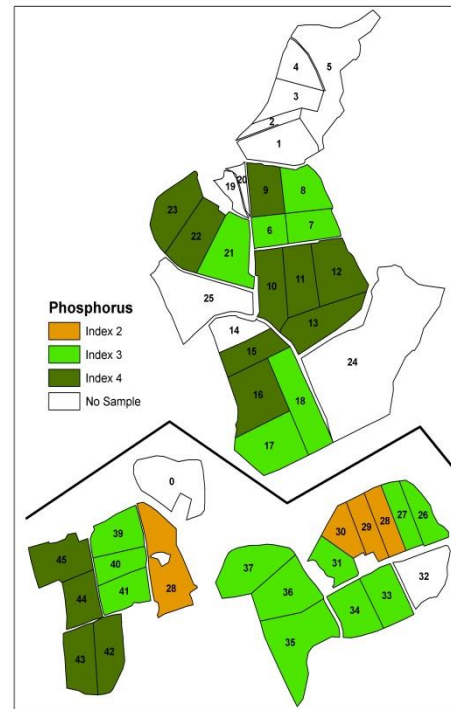
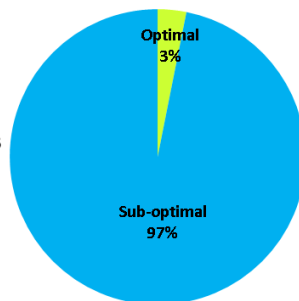


Action



Very low Low Optimum High

Percentage of soils with optimum soil pH, P & K status



Problem Diagnosis



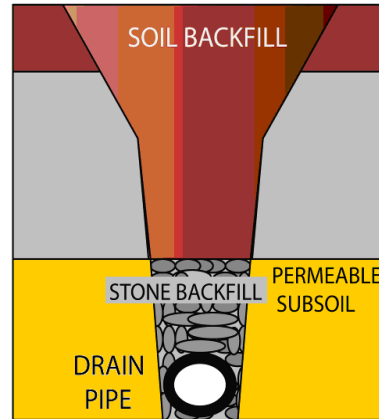
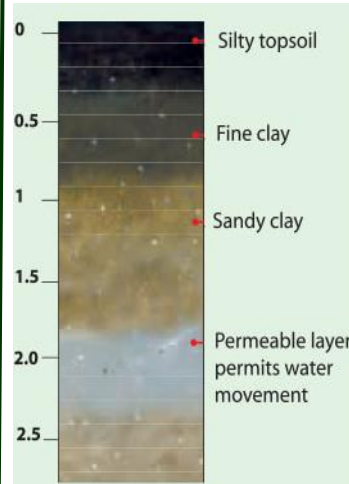
Soil Test pits (at least 2.5m deep)

- Design varies with soil type
- Water enters in permeable layers
- Other layers need help

Groundwater Drainage System

Conventional or deep pipe drains:

- Where a permeable layer will transmit water
- Where water can percolate to watertable
- Most effective way to discharge water

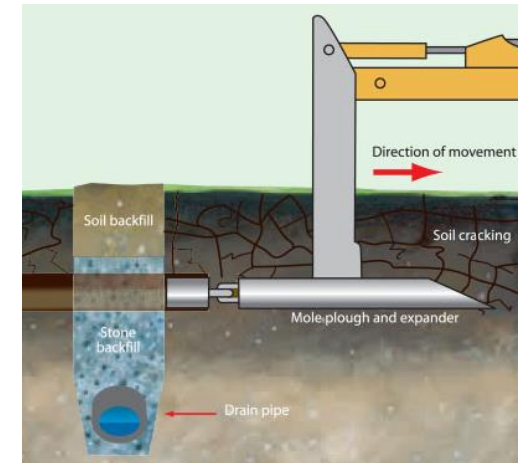


Tapping into permeable layer

Shallow Drainage System

Mole/Gravel Mole drain/Subsoiling:

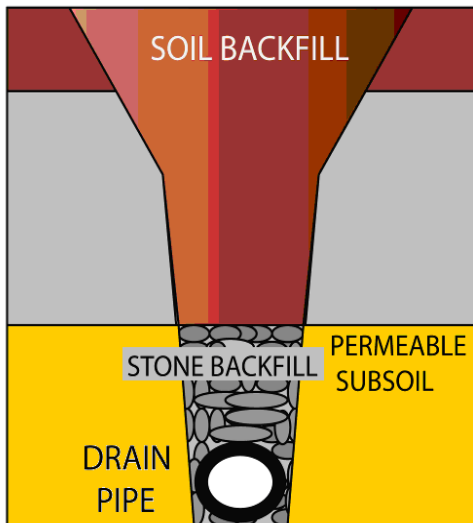
- Aim to fracture and crack the soil
- Effectiveness dependent on:
 - Soil clay/stone content
 - Implement used
 - Weather conditions
- Used In tandem with collector drains



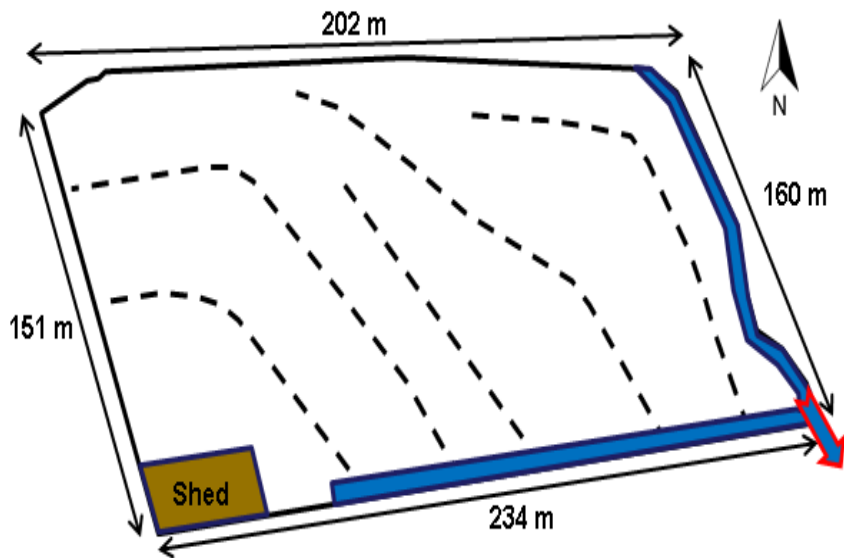
Groundwater Drainage

1.7 m deep drains

- Where a permeable layer will transmit water
- Where water can percolate to watertable
- Most effective way to discharge water



Drainage System Design



- Field drains: 1.7 m depth
- Open drain
- ➔ Outlet (under public road) to lake

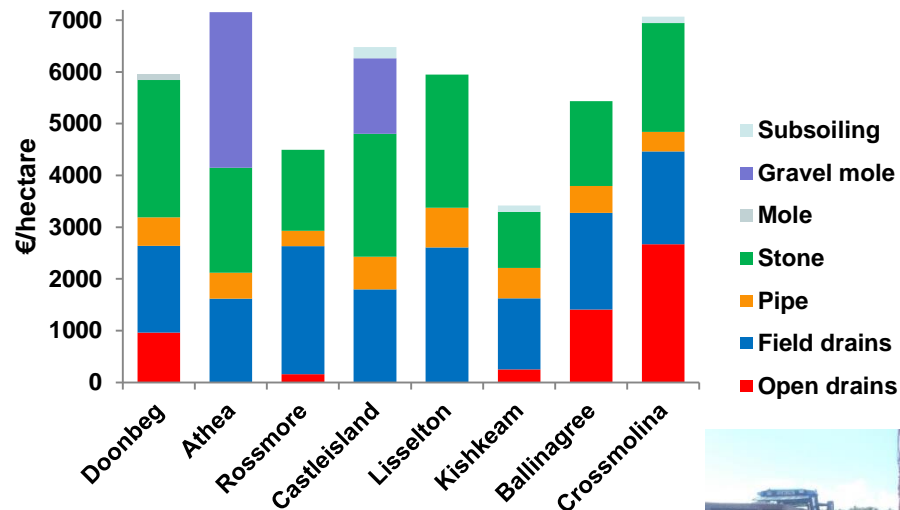


Alan Wood– Drainage Costs

Key points:

- Soil investigation
- Site appraisal
- Drainage system design

Costs	Total/ha
Open drain installation @ €35/hr (76 hrs)	€2,670
Field drain installation @ €35/hr (51 hrs)	€1,790
Drainage pipe @ €1.13/m (338 m)	€380
Drainage stone @ €11.07/t (189 t)	€2,100
Sub-soiling	€125
<u>Drainage cost</u>	<u>€7,065</u>



Decision process:

- Soil fertility
- Farm roadway and water Infrastructure
- Ryegrass pasture
- Drainage

