

SIMPLY SUSTAINABLE SOILS

Case Study: Longlands Farm



Farmer:	Rob Goodwin
Location:	Derbyshire
Farm size:	178 ha
Farm type:	Dairy
Soil type:	Medium loam
Annual rainfall:	600 - 700 mm
Topography:	Flat

Longlands Farm in Derbyshire is a dairy farm supplying Asda. The farm is managed by Rob Goodwin. This case study looks at the story of the soil management on the farm and covers key soil data from two fields, 'Roadside' and 'Seventeen Acre'. Soil scores have been calculated for 2008 and 2012 'for Roadside', and 2007 and 2011 for 'Seventeen Acre', using the Simply Sustainable Soils booklet available online free of charge via www.leafuk.org/leaf/farmers/simplysustainablesoils.eb - download the booklet, assess your fields and see how your fields compare.

Soil Management at Longlands Farm

Tillage

- Rob both ploughs his land and uses minimum tillage dependant on the weather conditions and cropping.
- Maize is ploughed and sub soiled and barley and wheat are also ploughed in.
- When moving into a two year grass ley, the grass is sown in using minimum tillage.

“We swapped about 6 or 7 years ago because, where possible, min till saves time, diesel and leaves us with a leveller field for grass”

- Rob began using this technique 6 years ago as it saves time and diesel and allows for leveller fields.
- When moving into grass, Rob also noted the benefits to the tilth in the top of the soil and that is all that is required when sowing grass.
- Specific technique will vary dependant on the weather conditions.
- Although the land is sub soiled prior to maize, Rob relies upon the maize to do some deep work in the soil and so rarely needs to subsoil after this point in the rotation.

“Maize does some great deep work in the soil, allowing us to cut down on the amount we subsoil”

Organic matter

- Rob utilises a large amount of slurry and box muck on the land, all originating from the dairy herd.
- 8-10,000 gallons of slurry/ha is added annually for nutrients box muck is also applied to aid the soil structure.
- The fields surrounding the yard often receive enough slurry and box muck so that inorganic fertilisers are not required.

Pasture

- The grass is largely grown for silage purposes but some is grazed.
- Rob has some land in permanent pasture as they are ridge and furrow.
- These are much less productive and have therefore been put into a conservation scheme.



Permanent pasture is much less productive and only remains on fields that cannot be cropped

Inorganic Fertilisers

- Inorganic fertilisers are applied as and when required in solid and liquid form.
- Liquid form is slightly cheaper and it is also more beneficial to the grassland in dry conditions.

Next page... [Field Profile: Roadside >](#)

Field Profile: Roadside

Size: 8.5 ha

Soil type: Medium loam

Aspect: Flat

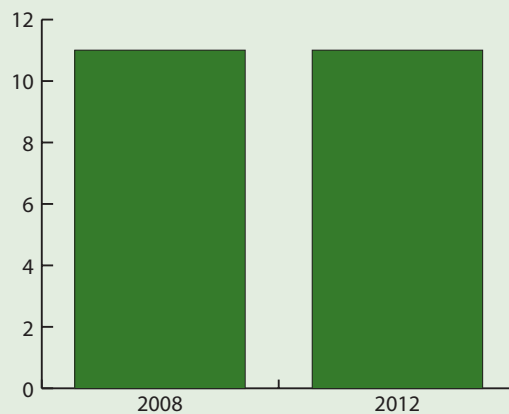
Cropping: Temporary pasture, maize, cereals

Conservation measures: 2 in field trees for ELS



Soil Score

	2008	2012
Step 1 Soil Structure	2	2
Step 2 Drainage	2	2
Step 3 Compaction	2	2
Step 4 Soil Organic Matter Status	2	2
Step 5 Soil pH and Nutrients	2	2
Step 6 Earthworms, Living Organisms and Plant Residues	1	1
Overall Soil Score	11	11



Overall Soil Scores by year for Roadside

The Soil Score is calculated using the [Simply Sustainable Soils](http://www.leafuk.org/leaf/farmers/simplysustainablesoils.eb) booklet, available to download here www.leafuk.org/leaf/farmers/simplysustainablesoils.eb. Why not calculate your score and see how you compare - perhaps you can try some of the changes Rob has made to improve your score!

Soil measurements

	2008	2012
pH		6.7
P index		3
K index		3
Mg index		4
Crop	1st year grass	Maize
Yield	1st cut - 17 t/ha	42 t/ha
Organic Matter Input	10,000 gallons/ha slurry	8,000 gallons/ha slurry, 10 t/ha FYM
N Input	160 + 178 + 165 kg/ha (34.5%)	130 kg/ha (34.5%)
Lime Input		2.5 t/ha

Field Profile: Seventeen Acre

Size: 9 ha

Soil type: Medium loam

Aspect: Flat

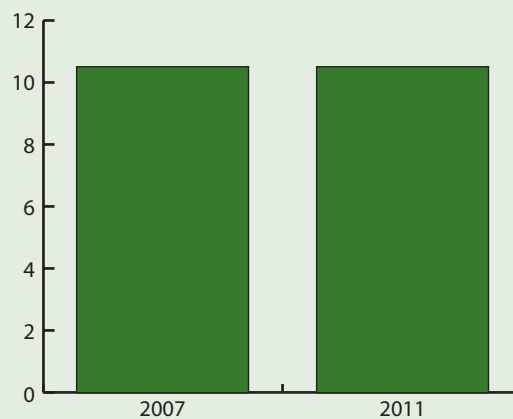
Cropping: Temporary pasture, maize, cereals

Conservation measures: Corner out for ELS



Soil Score

	2007	2011
Step 1 Soil Structure	2	2
Step 2 Drainage	1.5	1.5
Step 3 Compaction	2	2
Step 4 Soil Organic Matter Status	2	2
Step 5 Soil pH and Nutrients	2	2
Step 6 Earthworms, Living Organisms and Plant Residues	1	1
Overall Soil Score	10.5	10.5



Overall Soil Scores by year for Seventeen Acre

The Soil Score is calculated using the [Simply Sustainable Soils](http://www.leafuk.org/leaf/farmers/simplysustainablesoils.eb) booklet, available to download here www.leafuk.org/leaf/farmers/simplysustainablesoils.eb. Why not calculate your score and see how you compare - perhaps you can try some of the changes Rob has made to improve your score!

Soil measurements

	2007	2011
pH	6.5	6.2
P index	3	2
K index	2-	2-
Mg index	3	3
Crop	2nd year grass	Maize
Yield (t/ha)	1st cut - 15 t/ha	44.5 t/ha
Organic Matter Input (t/ha)	Slurry - 10,000 gallons/ha, Urea - 120 kg/ha	Slurry - 9,000 gallons/ha, FYM - 15 t/ha
N Input	223 + 150 + 150 kg/ha (34.5%)	
Lime Input		4.9 t/ha

About LEAF

LEAF (Linking Environment And Farming) is the leading organisation delivering more sustainable food and farming. LEAF works with farmers, the food industry, scientists and consumers to inspire and enable sustainable farming that is prosperous, enriches the environment and engages local communities. LEAF promotes Integrated Farm Management (IFM), a whole farm business approach that delivers sustainable farming. This is one of 23 case studies demonstrating some soil tips from a range of farm, soil and enterprise types, available to LEAF members through myLEAF online.

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The ASDA logo consists of the letters 'ASDA' in a bold, green, sans-serif font.