



SIP Benchmarking

Sustainable Intensification in Practice
Morley, Wymondham
25 October 2017



SUSTAINABLE INTENSIFICATION
RESEARCH PLATFORM

Benchmarking opportunities...

benchmarkmyfarm.co.uk :

- allows you or your group to identify Sustainable Intensification (SI) opportunities that exist and are appropriate to you:
 - environmental
 - social
 - economic
- uses key metrics for SI derived in SIP1
- uses high quality source of data from the Farm Business Survey (FBS)
- allows group members to share data





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SIP2 Benchmarking pedigree

Our work draws on experience from:

- over ten years of benchmarking at www.farmbusinesssurvey.co.uk used by approaching 15,000 users per year
- original development of a benchmarking system in 2002
- environmental benchmarking project 2011
- awareness of SIP 2 work on decision support systems:
 - 6 focus groups
 - 75 farmer interviews
- independently verified data sources
- refined through stakeholder feedback



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Metrics of SIP

Headline results:

(Peer match)

- carbon (related to output)
- ecology (features and techniques)
- land use (Diversity Index)
- fertiliser (related to output)
- social (mainly opportunities for meeting people)





Easy and effective

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- Minimal barriers to entry:
 - Instant results for whole of England
 - Well targeted results after peer matching
 - Reward for further data input
- Focused on key metrics
- Logical interface and uncluttered, clear appearance
- Secure, free-to-use environment
- Independently verified data sources (FBS)
- Refined through stakeholder feedback





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Peer Benchmarking

- Enter cropping, stocking and county, to 'define your farm'
- SIP Benchmarking searches 2000 farms in the FBS dataset
 - And identifies similar farms - Calculates peer results
 - Results within 1 standard deviation of my farm or
 - Minimum of 25 farms
- Comparison is unique to your farm
- This method avoids simplistic farm classifications



benchmarkmyfarm.co.uk

Demonstration





Visitors Register (authenticated)

Try: <https://www.benchmarkmyfarm.co.uk/Account/Register>

Sustainable Intensification Benchmarking

Dashboard

About/Contact

Register

Log in

Register.

Create a new account. SIP benchmarking is now in *Beta* testing - contact jcm24@cam.ac.uk - please register and tell us about your experience/suggestions. For more information see "About".

Email

Password

Confirm password

Register

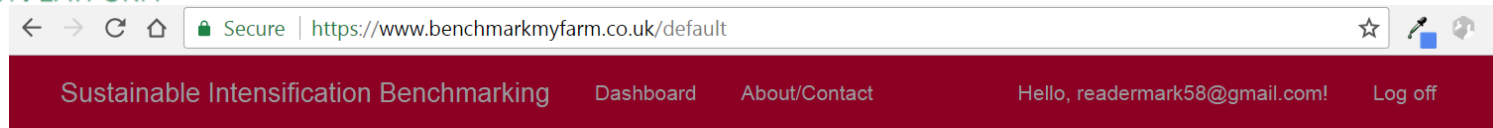
8+ characters,
1 Upper case,
1 Lower case,
1 #;'[](! and
1 Number





Familiarise with Screen

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My Progress

Match Similar	Carbon	NPK	Land Diversity	Social	Ecology
FBS Values					
My Values					
Progress					
<input type="checkbox"/> 0%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

hide introduction

Sustainable intensification of farming involves simultaneously increasing farm output and competitiveness, whilst protecting the countryside and enhancing the environment. Find out more about the Sustainable Intensification Research Platform at www.siplatform.org.uk.

Use SIP benchmarking system to compare your business to farms that are similar to yours, based on results from 1000 farms participating in the Farm Business Survey in 3 steps:

Step 1: Complete the details at "Match to Me to Similar Farms" to ensure that you have the best match for comparison.

Step 2: Compare the social and environmental performance of your farm to similar farms here.

Step 3: Read the results.



Step 1 - Match Me to Similar Farms



Match to Similar Farms

Visitors see averages of 'all FBS' – without any data entry

Sustainable Intensification Benchmarking Dashboard About/Contact Hello, mark.a.reader58@gmail.com! Log off

SIP: Match to my peers **Select Results** | *The Peer Match section identifies the group of farms within the Farm Business Survey that are most similar to your farm business. These are selected mainly on the basis of cropping and stocking. This method has the advantage of accommodating and comparing a very wide range of farm businesses without imposing artificial classifications that may not be relevant to your farm.*

Sustainability Measure	[code name]	Average of Comparison Farms	Graph my Performance	Number of Farms With	My new value	MyFarm
Winter wheat area (ha)	winter:wheat:area	26		560		0
Winter barley area (ha)	winter:barley:area	6.39		337		0
Spring barley area (ha)	spring:barley:area	5.62		330		0
Oat; rye; triticale area (ha)	other:cereals:area:com	3.91		250		0

Visitors see number of farms in FBS with this measure present



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Click “Calculate” (match to peers)

NB: ZERO's are
also matched!

My Values (as
entered by me)

Sees: Numbers
of Peers “With”

Pullets (average number over year)	growing_pullets	†	1		0
Organic area (ha)		0.000	0		0
Percentage of farmed area rented in	TENANTED_PCT	18	33		32
Easting - choose my 'county' (below) - (metres)	EASTING	558,755	33		609,327
Northing - choose my 'county' (below) - (metres)	NORTHING	277,035	33		262,301

Selects My County
(for proximity
clustering)

calculate results for farms like mine (matched exactly, including on all zero's)

Suffolk



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Complete details

- Land use
- Stocking (if any)
- Inputs/Outputs
- Social/Ecosystem

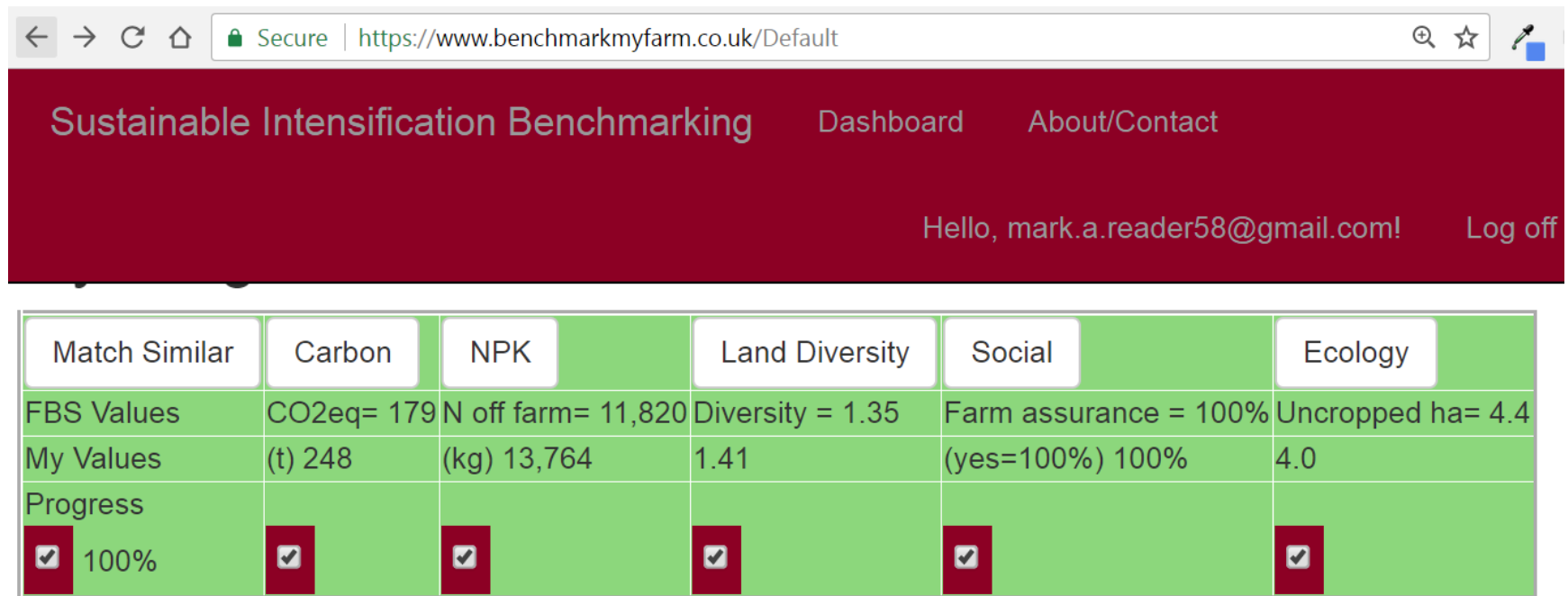
Visitors see
results for
'closest matches
in FBS' –
without
committing any
data

Total farm business costs						
plus adjustment for unpaid labour (SCDF)	total factor cost	144,624		33		140,000
Diesel (litres)	FuelOil litres	11,985		32		12,000
Petrol (litres)	PetrolUL litres	2,310		30		2,000
Gas (kWh)	Gas kWh	†		5		0
Electricity (kWh)	Electric kWh	11,580		33		12,000
Straw off farm (t)	StrawOffm_t	†		3		0
Cereal production (t)	CerProd_t	501		33		600
Pea & beans production (t)	PeaBnProd_t	17		16		20
Oilseed production (t)	OilseedProd_t	57		21		80



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Progress bar gives indicators





View Summary and/or Explore dropdowns

Alert if you're in
extreme quartiles
(except in 'Social')

Feasible to view "histogram"
of where you fall in distribution of
peers (non-disclosive / censored)

Sustainability Measure	[code name]	Average of Comparison Farms	Graph my Performance With	of Farms	My new value	MyFarm
Fuel CO2 equivalent emissions (tonnes/year)	FUEL_CODEST	43		33		41
CO2 equivalent emissions from N fertiliser (tonne/year)	NitrogenFert_CODEST	119		31		200
Electricity CO2 equivalent emissions (tonnes/annum)	ELECTRIC_CODEST	6.37		33		6.60
Grazing livestock CO2 emissions equivalent (tonnes/year)	GLU_CODEST	†		6		0
Performance ratio (£Output/£Input - for farm)(%)	performance_ratio	96%		33		107

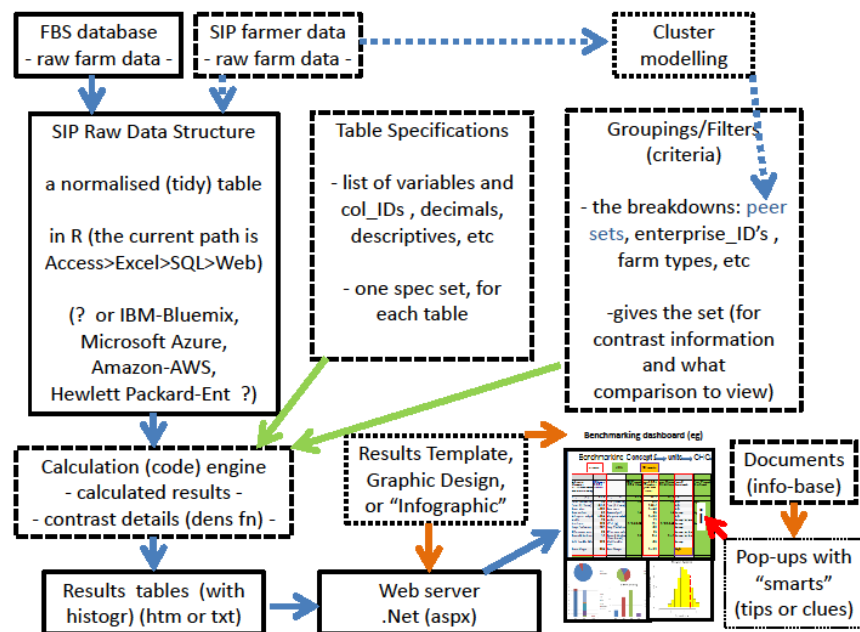


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The Technical Page



Behind the scenes of benchmarkmyfarm.co.uk :



The main site comprises 105MB of data in 202 folders and 624 files.

SIP Benchmarking uses:

dot.Net (2092 lines of code)

SQL server

R (127 lines of code)

Data structure with 333 variables



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benchmarkmyfarm.co.uk

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