United Oilseeds & AHDB Joint Seminar Networking lunch

Thursday 21 February 2019

United Oilseeds

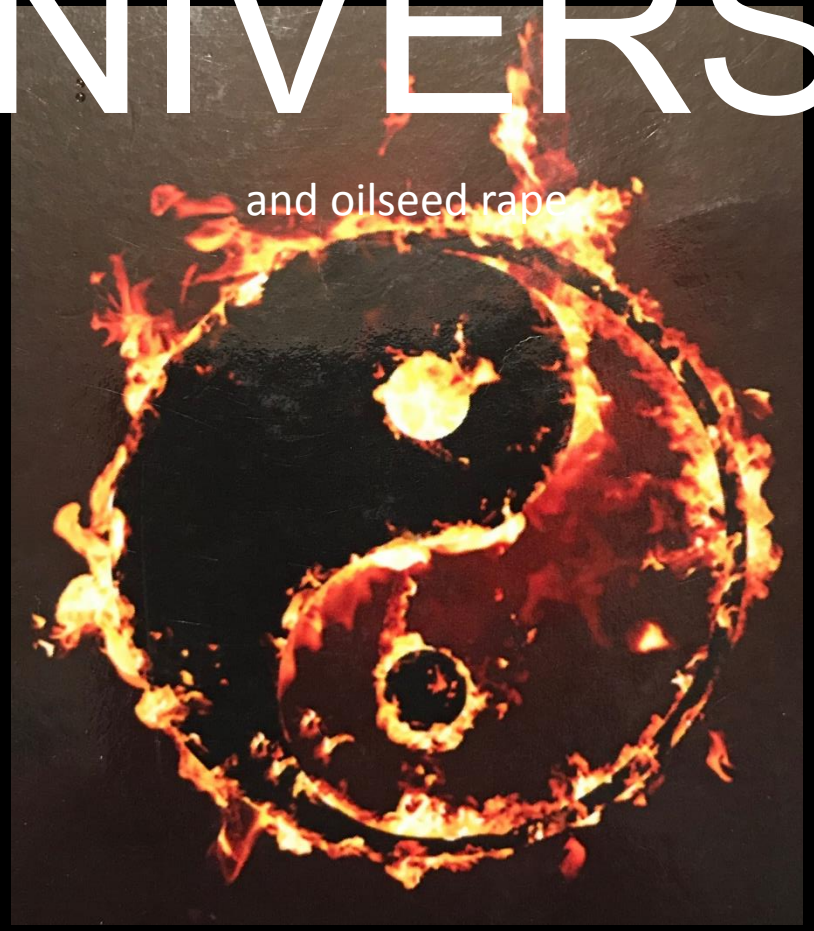
AHDB

United Oilseeds & AHDB Joint Seminar 2019

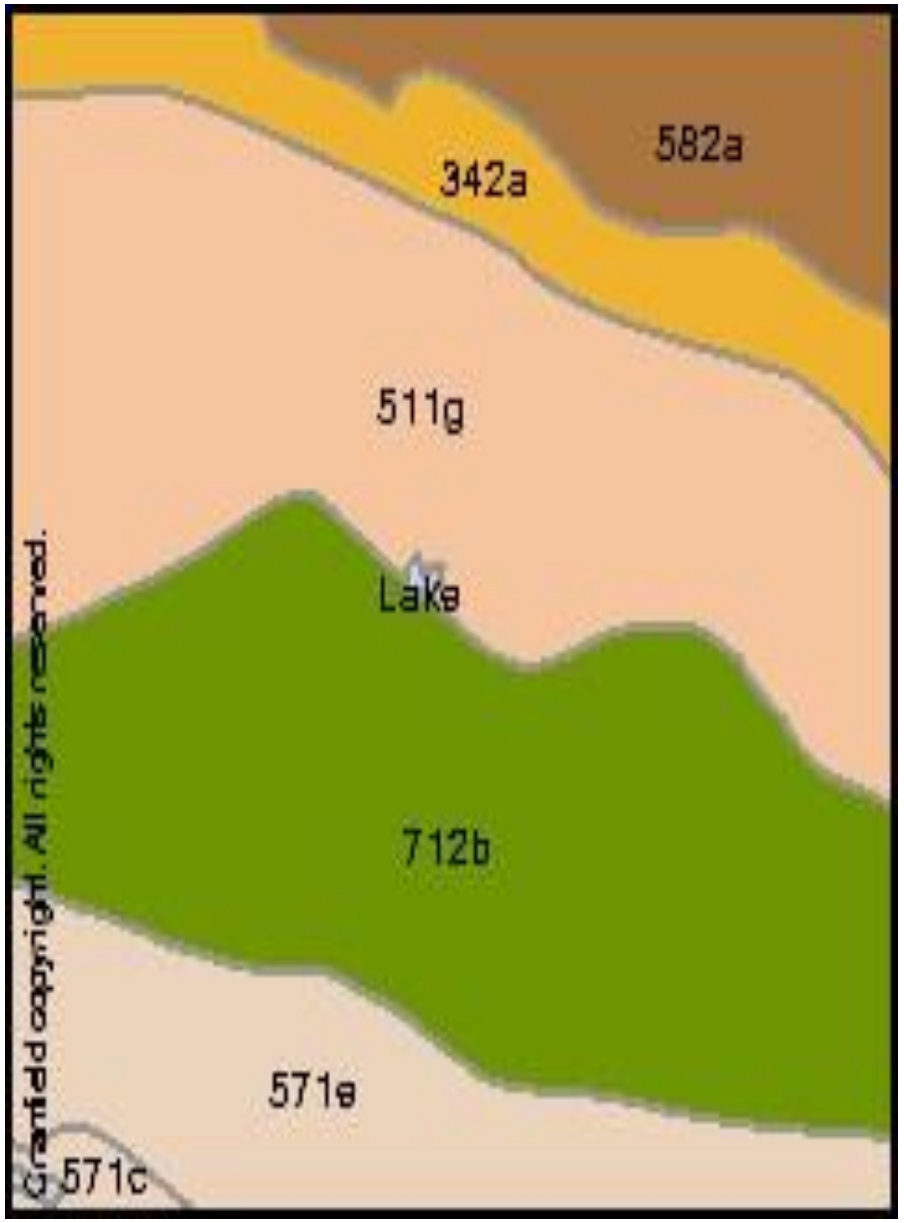
Welcome and introduction

Chaired by Andrew Cragg, United Oilseeds

LIFE , THE UNIVERSE




JOHN DALE
ECO-DRILL



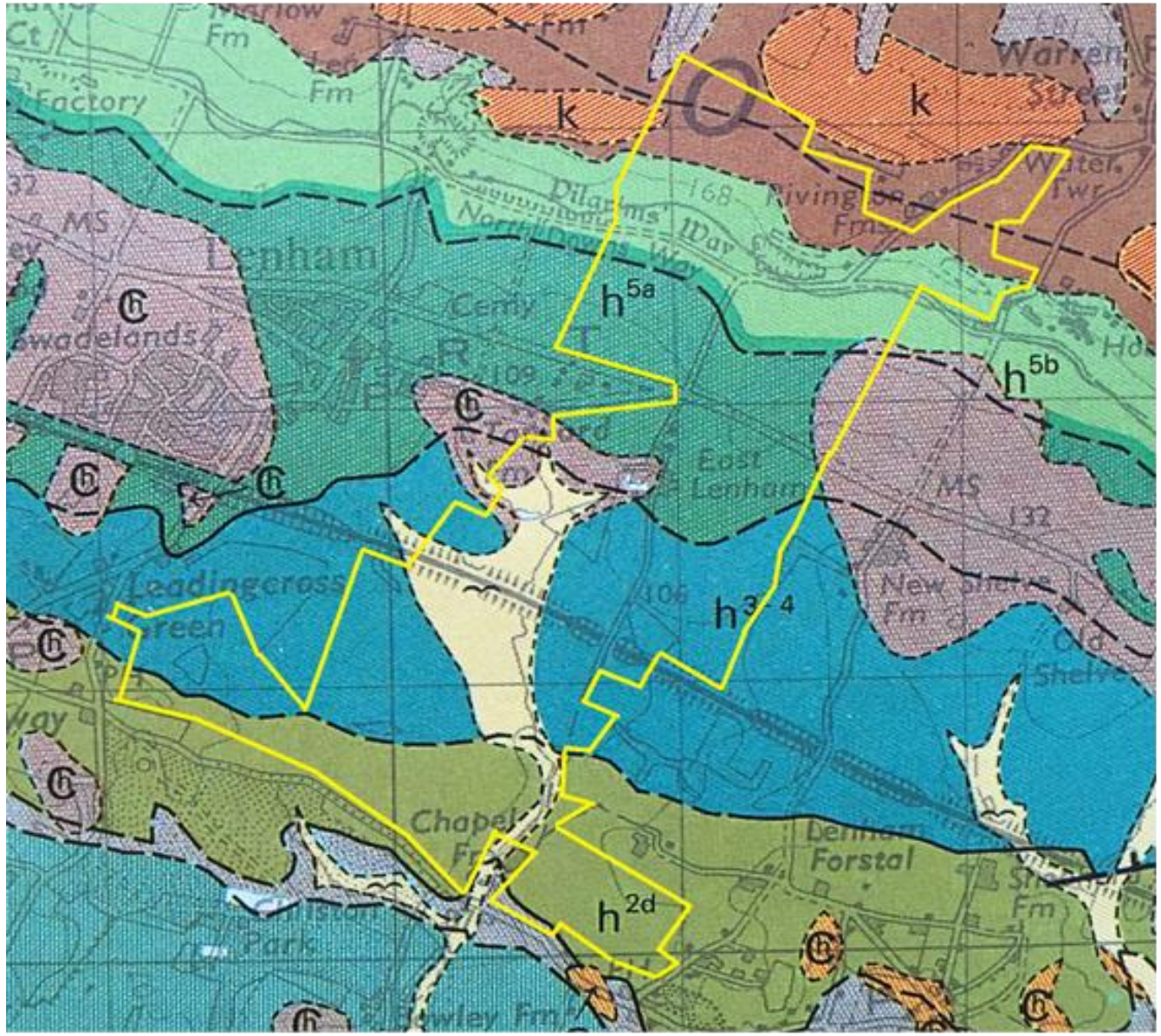
Batcombe

Upton

Coombe

Denchworth

Fyfield




SIMBA


HORSCH SIMBA

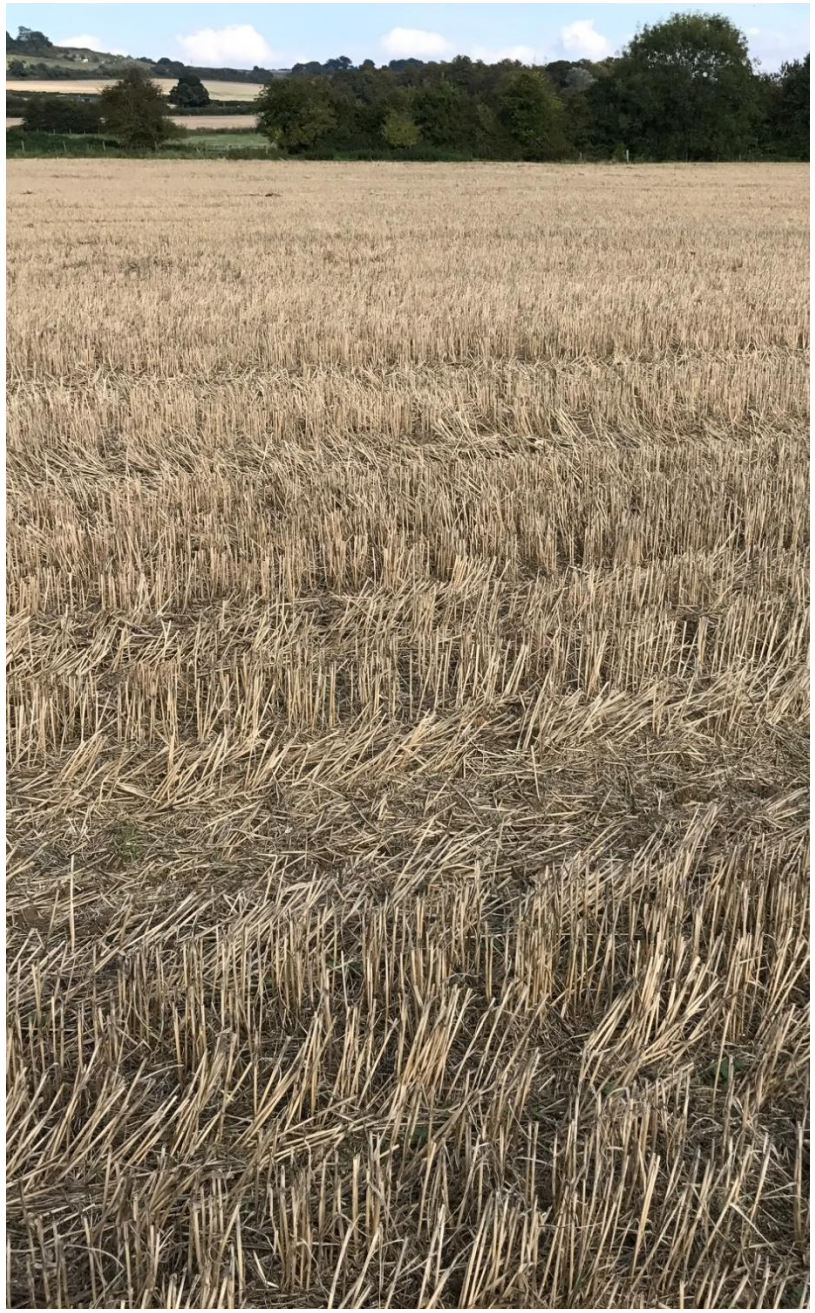

SIMBA HORSCH


VÄDERSTAD
Carrier 500


TECHMAGRI
PROFILAB


DOLBI
AX-4000 SE


JOHN DALE
ECO-DRILL
6m



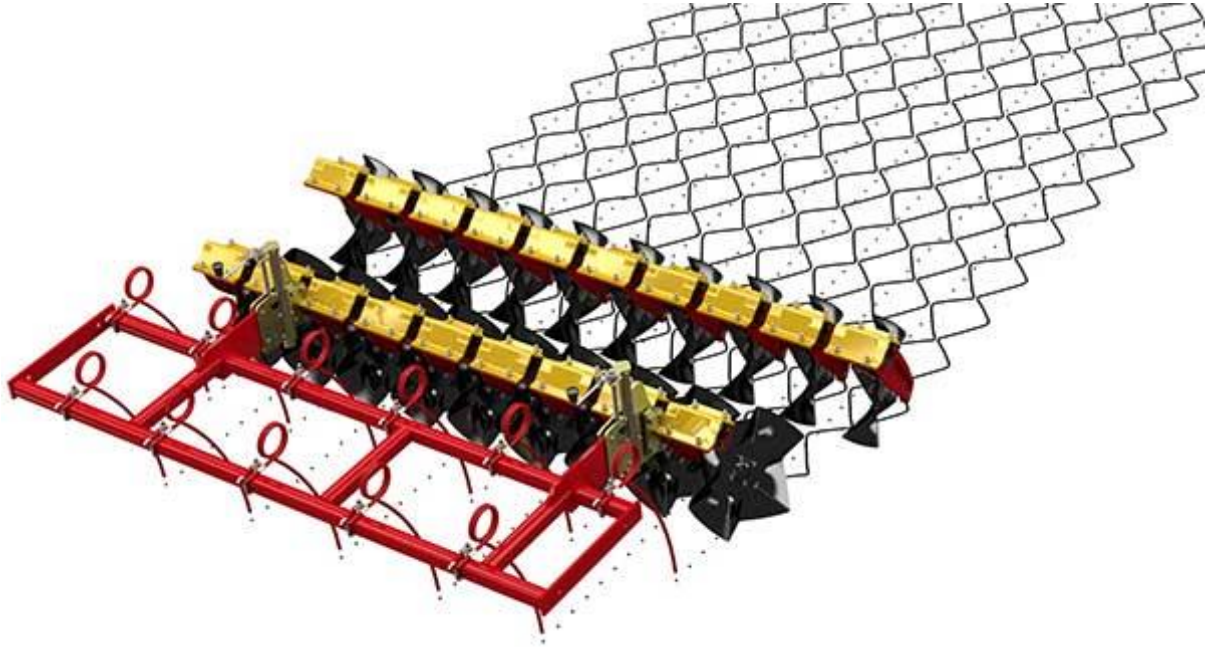

CULTIMULCH


CULTIMULCH

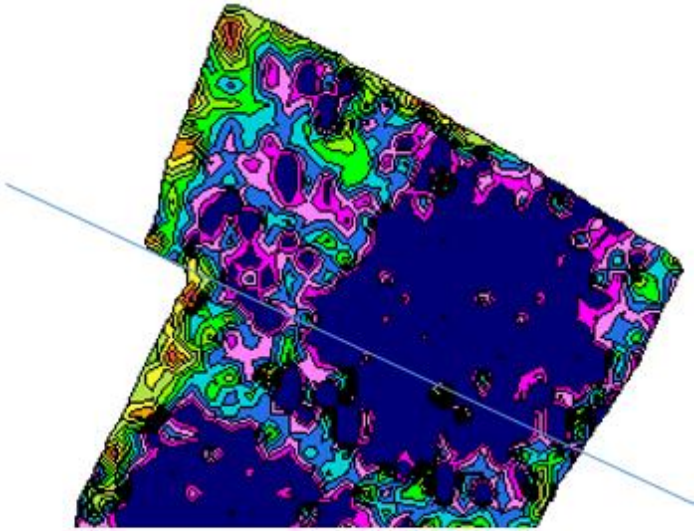
Controversial glyphosate weedkiller wins new five-year lease in Europe

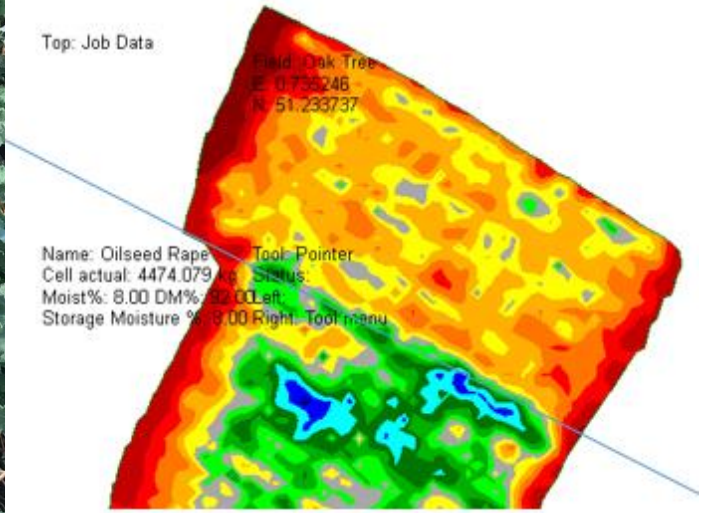
EU votes to reauthorise the pesticide, ending a bitterly fought battle that saw 1.3 million people sign a petition calling for a ban

▲ Protesters wearing masks depicting EU health commissioner Vytenis Andriukaitis (L) and European Commission

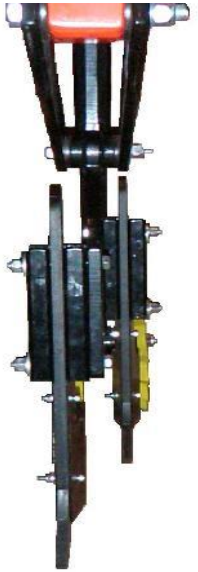



SUMO GLS




Top: Job Data
Field: Oak Tree
E: 0.736246
N: 51.233737
Name: Oilseed Rape
Tool: Pointer
Cell actual: 4474.079 kg
Status:
Moist%: 8.00 DM%: 92.00 Left:
Storage Moisture %: 8.00 Right: Tool menu

12.5 cm row spacing

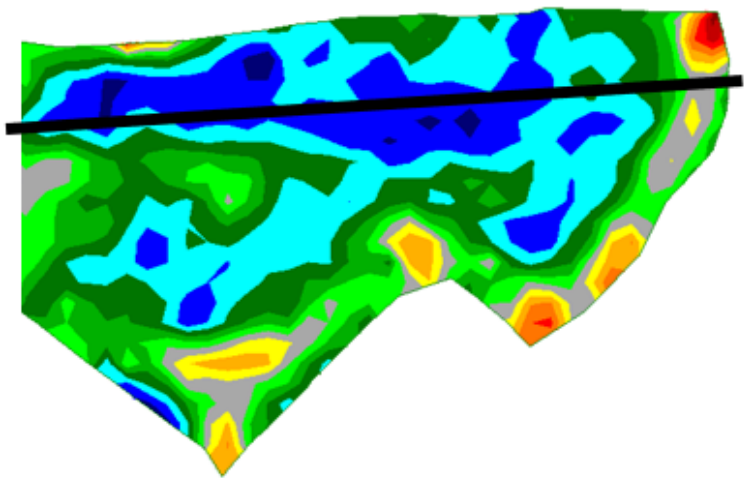


7.5cm band of seed every 25cm

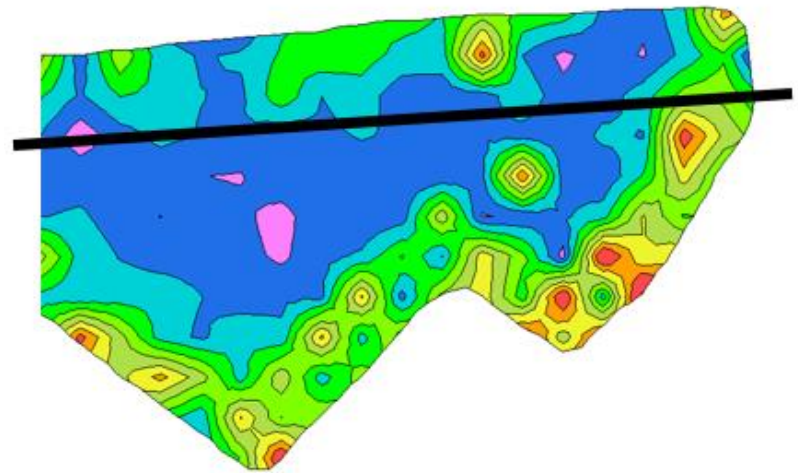
2.5cm between rows for seed and fert applic.


BASE
Biodiversity, Agriculture, Soil & Environment
www.base-uk.co.uk

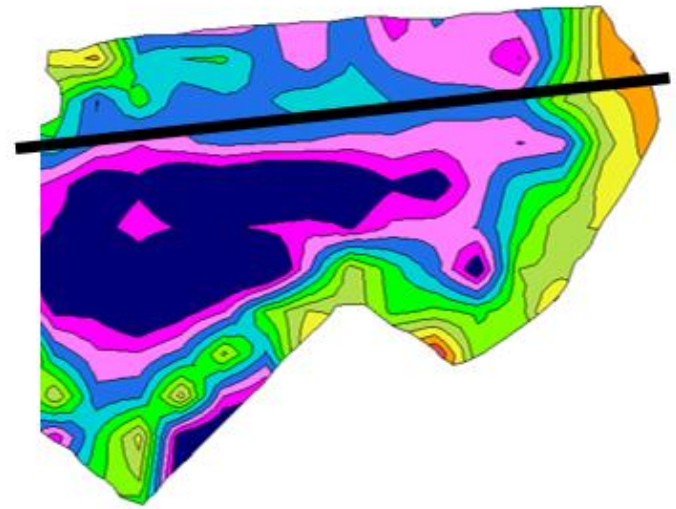
2016



2017



2018



Sustainable farming and conservation agriculture

November Conference 21-11-2018

Belinda Bailey – Sustainable Farming Manager

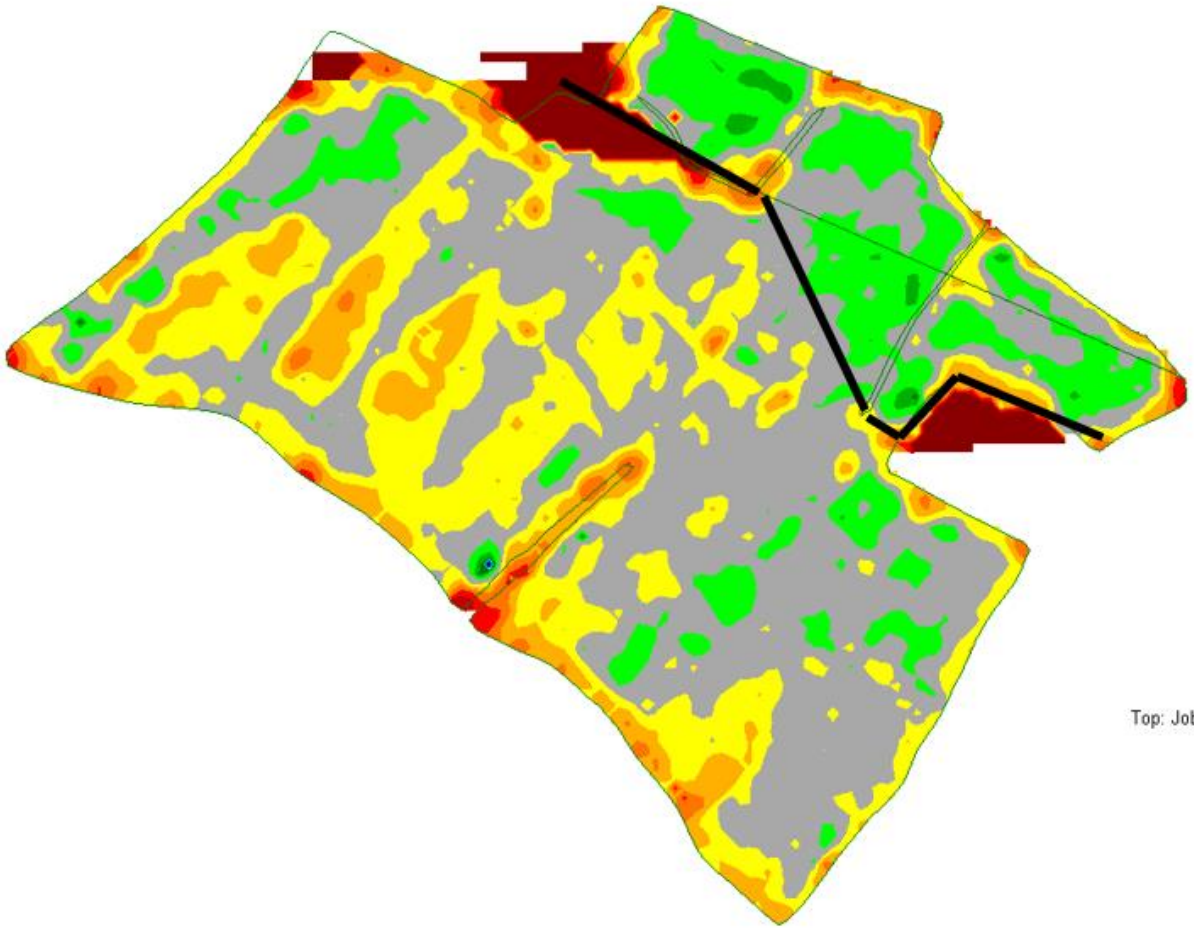
Max Newbert – Field Technical Specialist

NIAB

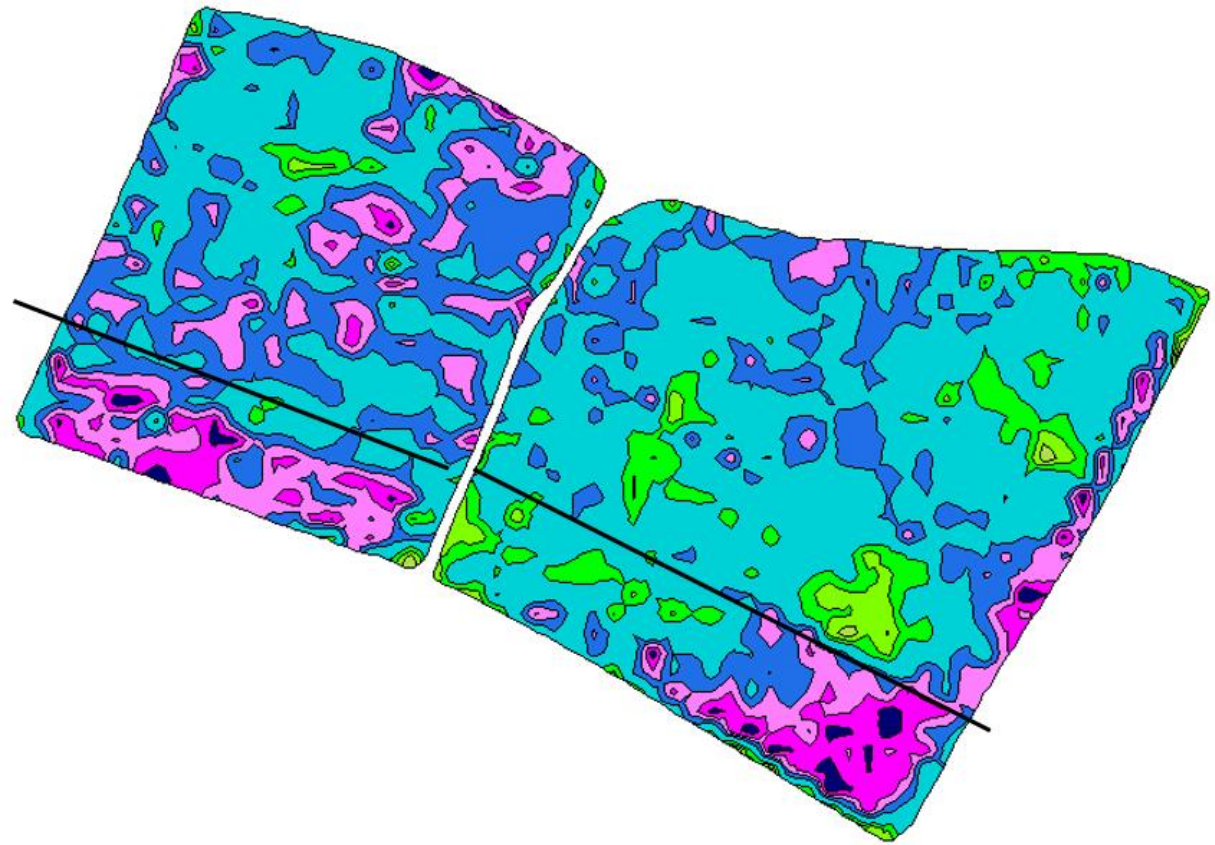
Game & Wildlife CONSERVATION TRUST

syngenta


BetaMaxx
Zwischenfruchtmischung
DSV
RIGOL



Top: Job D

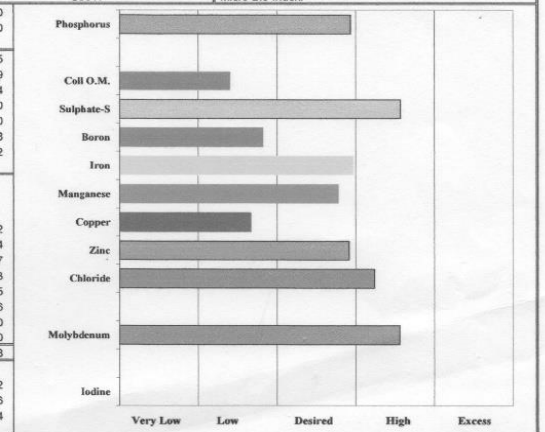


Field I.D:	MOON WARY FIELD ?1	Ha/Ac 40	Sample No: 8498
09/11/2009	LEWSOME		
Crop:	SPRING BARLEY	Lab No: C0017	Micro Bio Index:

Total Exchange Capacity:			11.30
Colloidal Organic Matter %			2.0
Soil Type:	SILT LOAM		
TRACES	BORON	p.p.m.	0.65
	IRON	p.p.m.	679
	MANGANESE	p.p.m.	94
	COPPER	p.p.m.	1.60
	ZINC	p.p.m.	9.10
	CHLORIDE	p.p.m.	48
	MOLYBDENUM	p.p.m.	1.12
	COBALT		

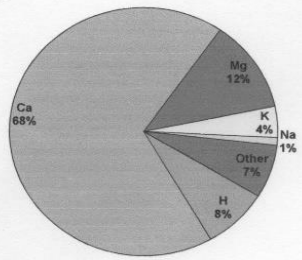
BASE SATURATION PERCENT	
DESIRED Ca : Mg RATIO	68 : 12
FOUND	84:4
CALCIUM	84.47
MAGNESIUM	4.13
POTASSIUM	2.75
SODIUM	1.06
OTHER BASES	4.60
EXCHANGEABLE HYDROGEN	3.00
pH of Soil Sample	6.8

CARBONATE	CALCIUM kg/ha	Desired Value	3442
		Value Found	4276
		Deficit/Surplus	+834
	MAGNESIUM kg/ha	Desired Value	364
		Value Found	125
		Deficit/Surplus	-239
IONS	POTASSIUM kg/ha	Desired Value	402
		Value Found	271
		Deficit/Surplus	-131
	Index		1
	SODIUM kg/ha	Value Found	62
ANIONS	NITROGEN kg/ha	ENR	67
	NO_3 N		
	NH_3 N		
	SULPHATE p.p.m.	Value Found	34
	PHOSPHATES as (P2O5) kg/ha	Olsen Value	
		Desired Value	269
		Value Found	253
		Deficit/Surplus	-16
	P2 INDEX		2
	MORGAN IODINE		
OPTIONS	TOTAL PHOSPHORUS as ppm:		
	TOTAL PHOSPHORUS as P_2O_5 kg/ha		
	SULFUR ppm		
	TOTAL K kg/ha		
	TOTAL Ca kg/ha		
	TOTAL Mg kg/ha		
	TOTAL Na kg/ha		

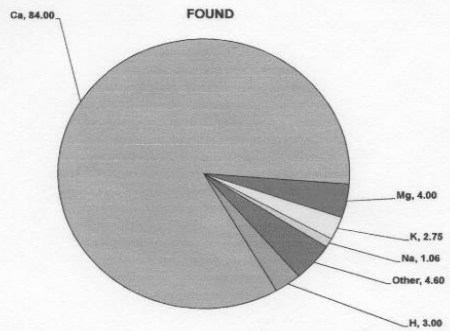


BASE SATURATION

DESIRED



FOUND



PLANT TISSUE ANALYTICAL RESULTS

(On a Dry Matter Basis)

Client: ANDREW BERR
D JOSEPH CAROID
ALDINGTON
AHSFORD

Contact: CHICHESTER CROP (H463)
CONSULTANCY LTD
MANOR FARM
DONNINGTON
CHICHESTER
SUSSEX PO20 7PL

Local Rep: JR
Lab. Ref: H920/2108
Received: 24/05/17
Reported: 26/05/17

SAMPLE NAME: SKYFALL **CROP: WINTER WHEAT**

ANALYSIS	RESULT	INTERPRETATION (Deficient / Low / Normal / High / Excessive)	COMMENTS
Nitrogen (N) [N:S Ratio]	4.62 %		Nutrient status satisfactory.
Sulphur (S) [13.1 : 1]	0.351 %		Nutrient status satisfactory.
Phosphorus (P)	0.465 %		Nutrient status satisfactory.
Potassium (K)	2.85 %		Nutrient status satisfactory.
Calcium (Ca)	0.613 %		Nutrient status satisfactory.
Magnesium (Mg)	0.126 %		Mg is low. Possible causes: low soil Mg, low soil pH, use of high Ca lime, naturally low Mg soil high soil K, high available N.
Manganese (Mn)	63.6 mg/kg		Mn is high. Possible causes: high N/P applications on low pH or low OM soils, low soil pH, soil or fungicide contamination .
Iron (Fe)	97.0 mg/kg		Nutrient status satisfactory.
Copper (Cu)	8.27 mg/kg		Nutrient status satisfactory.
Zinc (Zn)	39.5 mg/kg		Nutrient status satisfactory.
Boron (B)	5.74 mg/kg		B is low. Possible causes: low soil B, high soil pH, highly leached sandy soils or low organic matter soils.

The points summarised above are only meant as a guide to the likely cause of a nutrient problem. It is beyond the scope of this report to consider trace element interactions, lock up etc.

Soil Chemical Analysis

	Index	Result	Low	Marginal	Target	Marginal	High
P	2	23.0 mg/l					
K	3	277 mg/l					
Mg	2	71.7 mg/l					
Organic Matter (LOI)		5.9%					

			Very Acid	Acid	Neutral	Alkali	Very Alkali
Soil pH		7.7					

Where no future crop code has been given, levels are calculated assuming an arable crop. If general fertiliser and lime recommendations have been requested, these are given on the following sheets. The analytical methods used are as described in DEFRA Reference Book 427. The index values are determined from the DEFRA Fertiliser Recommendations RB209 9th Edition.

Microbial Activity

	Index	Result	Very Low	Low	Moderate-Low	Moderate	High	Very High
CO_2 Burst	5.1	176 mg/kg						

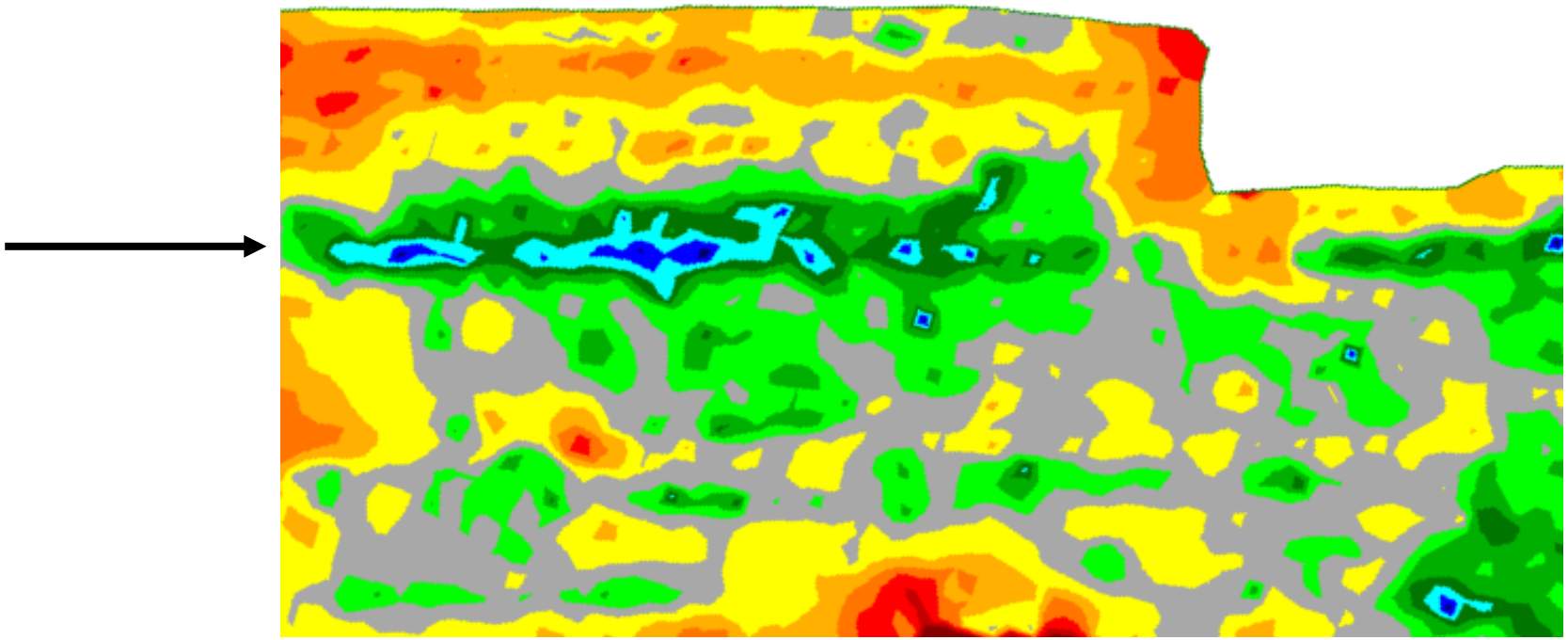
Potential N Mineralisation (kg/ha/yr) - Based on CO_2 Burst

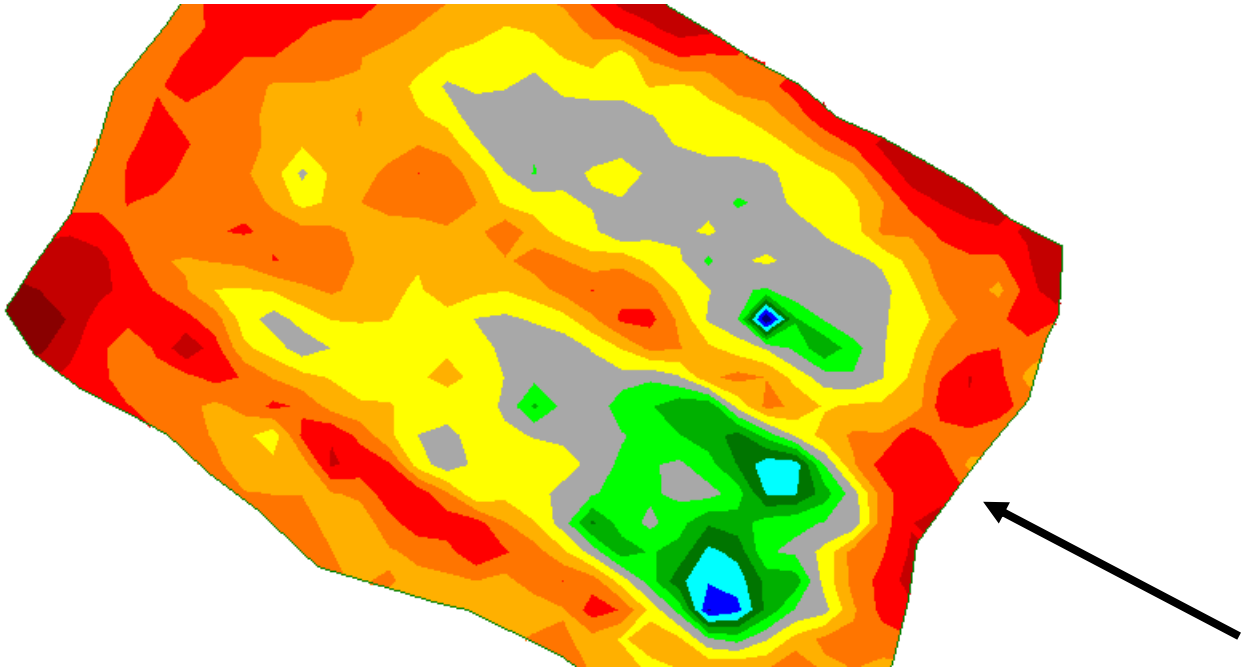
Very Low (<15) | Low (15-25) | Moderate-Low (25-45) | Moderate (45-75) | High (75-105) | **Very High (105-123)**

David Jones

@Cropnuts_agron

Flex 840	20: 8: 0 plus	S
Flex 1163	16: 13: 0 plus	S, Mn, B, Zn
Flex 4071	7: 18: 1 plus	S, Mg, Mn, B
Flex 2844	8: 15: 0 plus	S, Mg, Mn, B
Yara	16.5: 33: 0	
Yara	18:27:00	
Yara	24:18:00	
Yara	08:24:00	
Bio 8301	Urea plus	N, Molasses
Bio 9802	9: 14: 1 plus	S, Mn, Zn
Bio 9806	9: 14: 0 plus	Molasses
Bio 983,1	N 10 plus B	Boron
Bioplus	Biological	N, P, rooting
Bioplus T	Biological	N, P, rooting
Bacillus	Biological	Rooting
Digest	Biological	Digestion
Amino A	Amino acids	Microbial Partner
Trikelp	3 Seaweeds	Microbial Partner
Biostim Xl	Liq Seaweed	Microbial Partner
Flex 466,5	N6 plus Fe	S, Mg, Mn, Cu, Zn, Fe
Flex 466,6	N6 plus	S, Mg, Mn, Cu, Zn
Flex 471,1	N2 plus Fe	S, Mg, Mn, Fe
Flex 471	N2 plus	S, Mg, Mn





Cereal variety mixtures reduce inputs and improve yield and quality - why isn't everybody growing them?

A.C. Newton & J.S. Swanston

New York Times 27/11/18

Conrad, K. F. et al (2006)

Rapid declines in moths underscore a biodiversity crisis.

Biological Conservation, **132,** 279-91

AHDB (2014), *Encyclopaedia of pests and natural enemies in field crops,* Agriculture and Horticulture Development Board

Clark, S., Szlavecz, K., Cavigelli, M.A. and Purrington, F. (2006) Ground beetle (Coleoptera: Carabidae) assemblages in organic, No-till and chisel-till cropping systems in Maryland. *Environmental Entomology* 35, 1304-1312

Davis, H.N., Currie, R.S., French, B.W. and Buschman, L.L. 2009. Impact of land management practices on carabids (Coleoptera: Carabidae) and other arthropods on the Western High Plains of North America. *Southwestern Entomologist* 34, 43-59.

Dosdall, L.M., Dolinski, M.G., Cowle, N.T. and Conway, P.M. (1999) The effect of tillage regime, row spacing and seeding rate on feeding damage by flea beetles, Phyllotreta spp. (Coleoptera: Chrysomelidae), in canola in central Alberta, Canada. *Crop Protection* 18: 217--224

Holland J. M., Oakley J., (2007) Importance of arthropod pests and their natural enemies in relation to recent farming practice changes in the UK. *HGCA Research Review*, 64

Kennedy, T.F., McDonald, J.G., Connery, J. and Purvis, G. (2010) A comparison of the occurrence of aphids and barley yellow dwarf virus in minimum--till and conventional--till autumn--sown cereals. *The Journal of Agricultural Science* 148: 406--419.

Schmidt, M.H., Lauer, A., Purtauf, T., Carsten, T., Schaefer, M., Tscharntke, T. (2003) Relative importance of predators and parasitoids for cereal aphid control. Proceedings of the Royal Society of London 270, 1905-1909

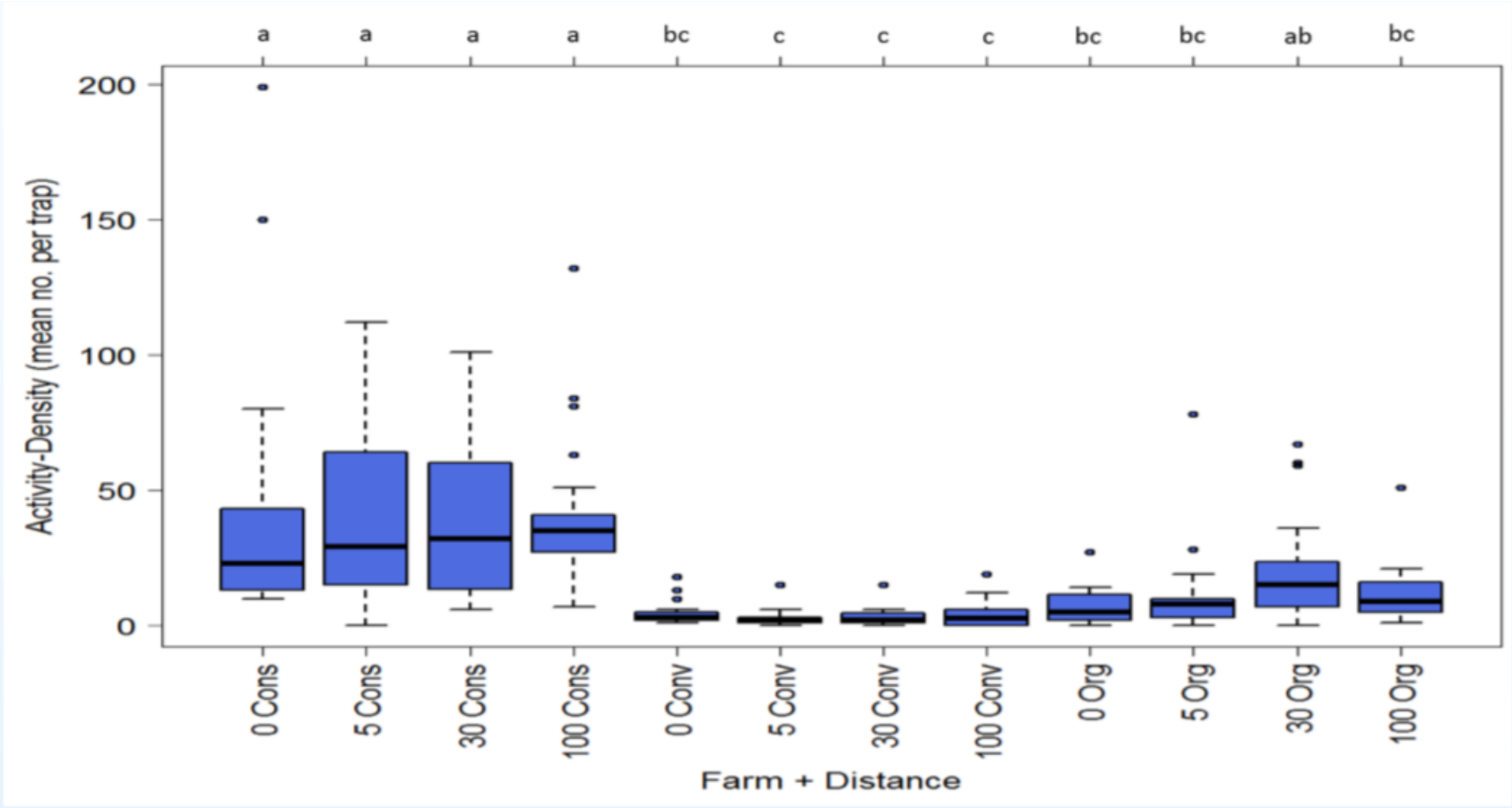


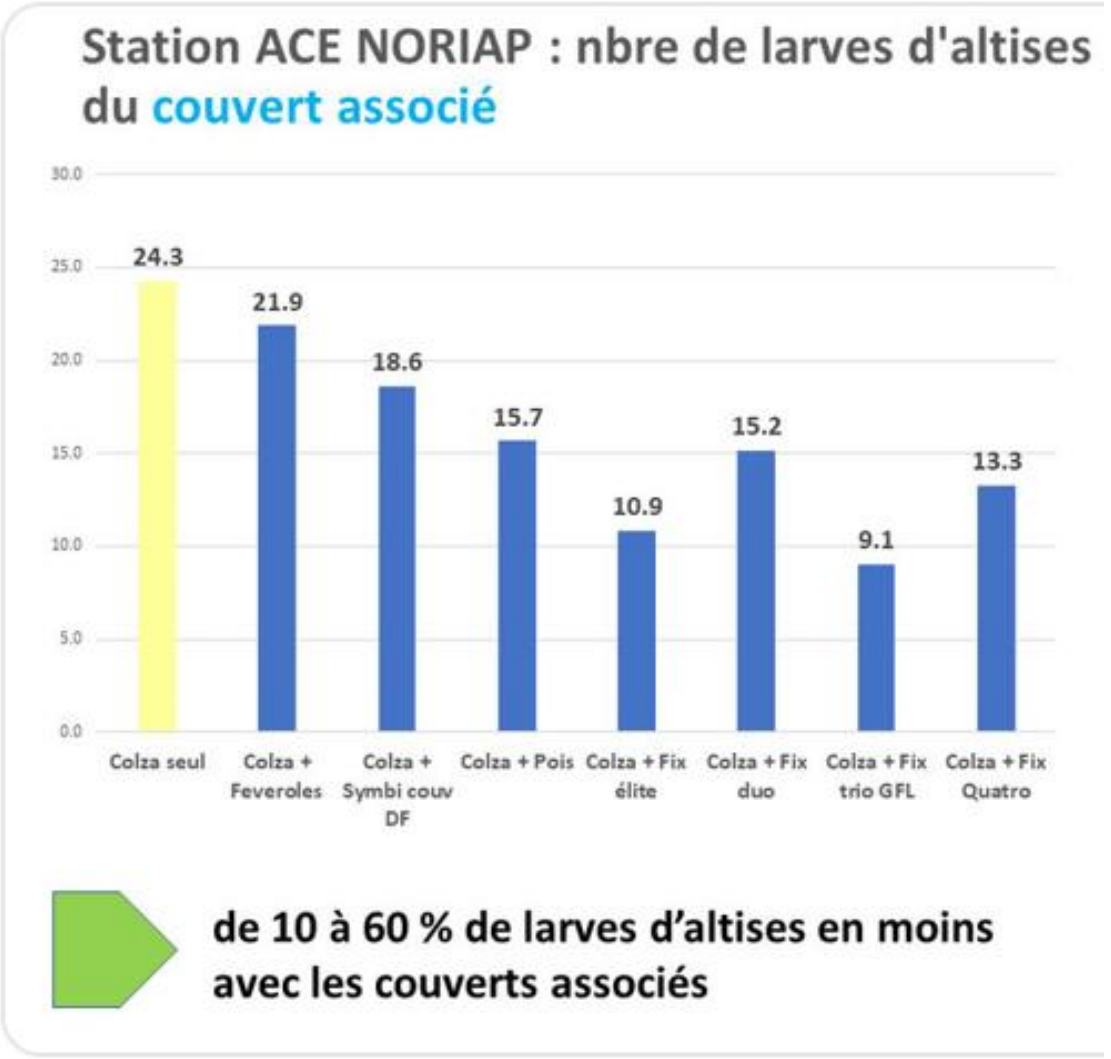
Figure 3. Mean carabid activity-density on farms at different distance into crop in 2014

S. Springate & J. P. Haggar Natural Resources Institute,
University of Greenwich, UK

Thanks to Andrew Lingham

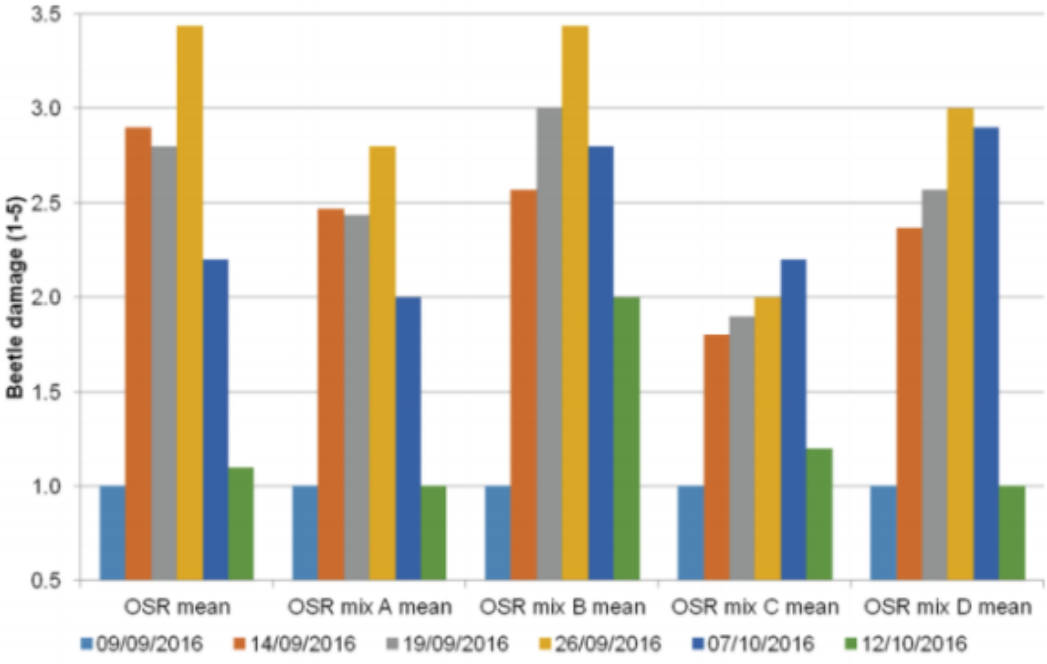
Caroline Nicholls @AgriCaroline · Jan 31

PhD student @AEHarper48 The more stubble left the more web aphid killing spiders will weave 🕷 🕸 @BCPC1 #BCPCPestReview

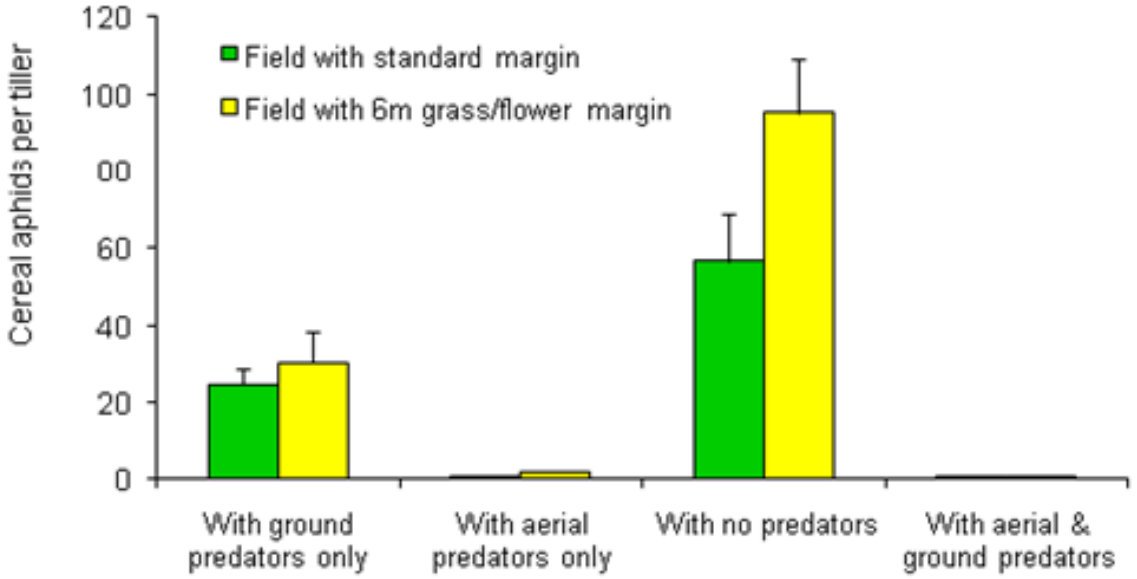


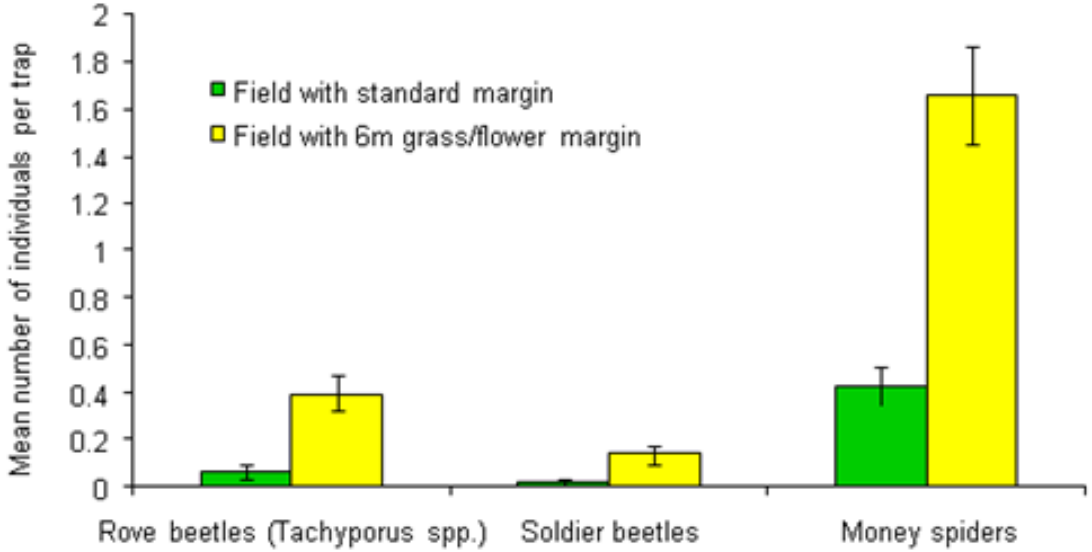
the effectiveness of intercropping on crop pest damage
"often varies unpredictably" Trenbath 1993

Figure 1. Cabbage stem flea beetle damage interactions with companion crop mixtures – Morley – mean of three OSR seed rates



Housing Shortage ?

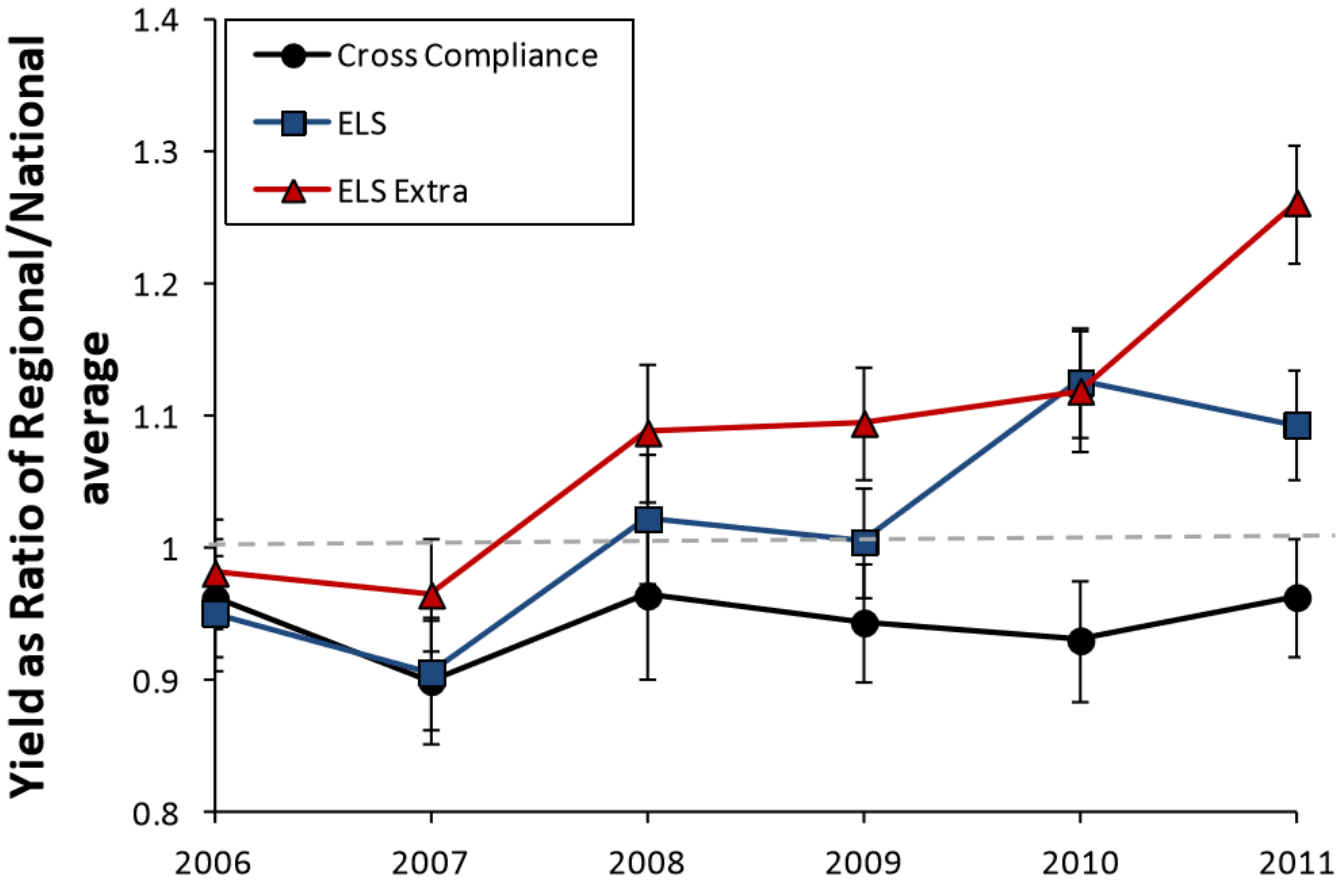




Game and Wildlife Conservation Trust

Centre for Ecology & Hydrology

NATURAL ENVIRONMENT RESEARCH COUNCIL



Less tillage meant better seedbeds – does less spraying mean less pests ?!

Meta-analysis reveals that seed-applied neonicotinoids and pyrethroids have similar negative effects on abundance of arthropod natural enemies
Margaret R. Douglas, John F. Tooker
Published December 7, 2016

Insecticides are used to manage pests, however, in some cases they also disrupt biological control, leading to unintended outbreaks of target or non-target pests (Geiger et al., 2010; Settle et al., 1996; Stern et al., 1959).

Gull H. T., Saeed S., Khan F. Z. A. (2014) Entomopathogenic fungi as effective insect pest management tactic: a review. *Applied sciences and business economics,* 1, 10-18

"Insect pest populations were more than 10 fold higher on the insecticide-treated farms than on the insecticide-free regenerative farms"

(Regenerative agriculture: merging farming and natural resource conservation profitably
Claire E. LaCanne[1], Jonathan G. Lundgren[2]
Published February 26, 2018)

Dr Sam Cook, pollen beetle trapping

“Ploughing buries parasitoids larvae & spraying in wheat kills them”

2017

Hello A & A BARR FARMS Your vehicle with registration GK15BMO has completed unloading at WEALD GRANARY Your sample results for the load are :
ADMIX : 0.9
AROMA : 0
BROKEN : 0
BRUCHID : 3.7
MOIST : 16.1
PESTS : 0 TARE WEIGHT : 14960 GROSS WEIGHT : 44820 NETT WEIGHT : 29860
SADS SDSDS

Feed beans	2,650 t
Human consumption beans	1,650 t

2018

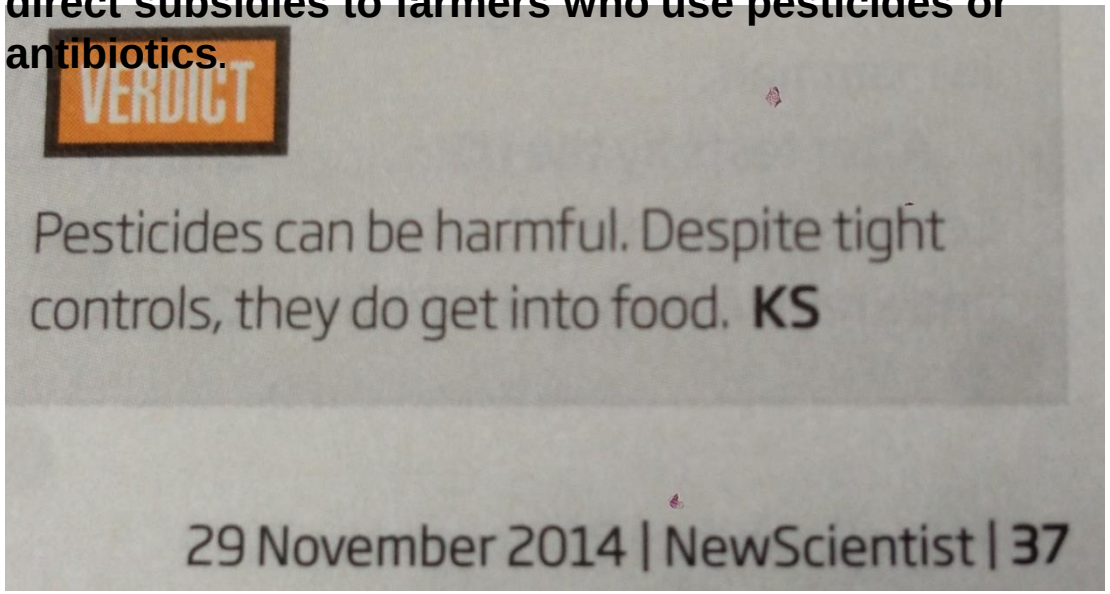
Hello A & A BARR FARMS Your vehicle with registration GU64CZD has completed unloading at WEALD GRANARY Your sample results for the load are :
ADMIX : 2.3
AROMA : 0
BROKEN : 0
BRUCHID : 4.4
MOIST : 12.58
PESTS : 0 TARE WEIGHT : 15040 GROSS WEIGHT : 44300 NETT WEIGHT : 29260
SADS SDSDS

Feed beans	2,505 t
Human consumption beans	43 t

Anti-pesticide farm initiative passes the signature stage

THIS CONTENT WAS PUBLISHED ON JANUARY 18, 2018 3:29 PMJAN 18, 2018 -

Campaigners have handed in 114,420 signatures by Swiss citizens in favour of the "Clean Drinking Water and Healthy Food" initiative, which aims to cut direct subsidies to farmers who use pesticides or antibiotics.



Andrew Barr

a.barr@eastlenhamfarm.co.uk

@EwenMcEwen

United Oilseeds & AHDB Joint Seminar 2019

Thank You

Chaired by Andrew Cragg, United Oilseeds