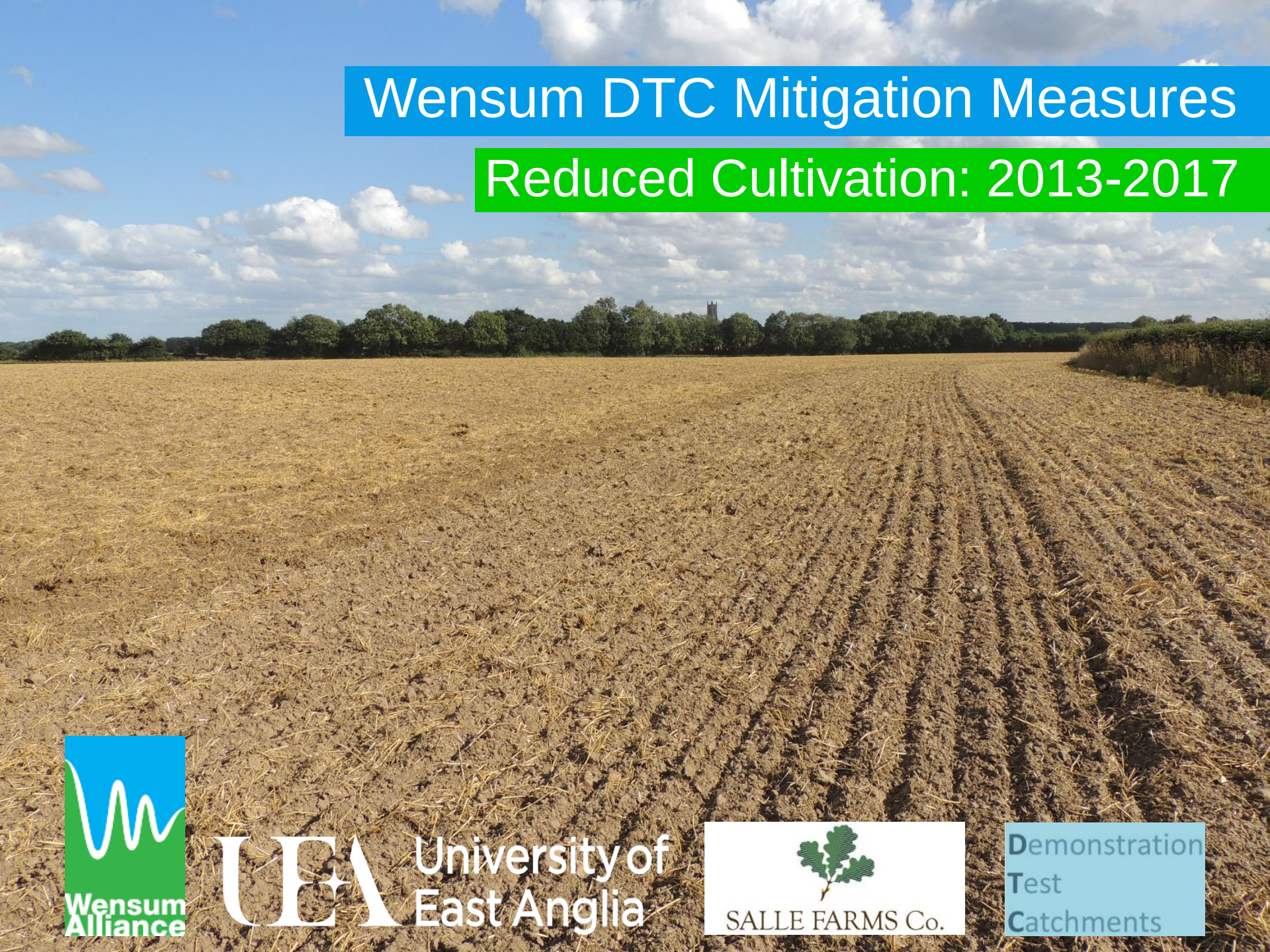
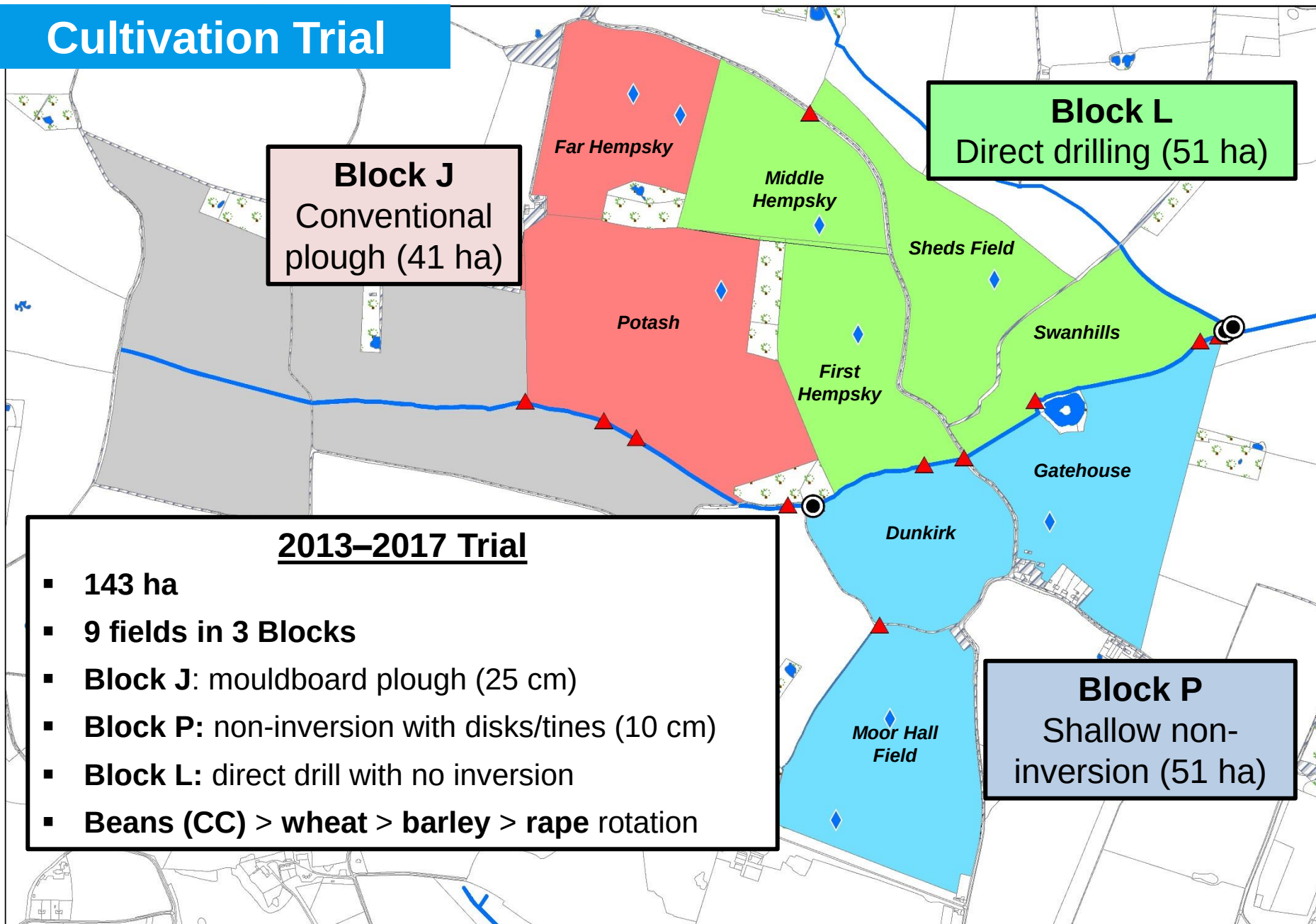


Wensum DTC Mitigation Measures

Reduced Cultivation: 2013-2017



Cultivation Trial



Agricultural Equipment

Cultivation

Block J: mouldboard plough



Block P: TopDown + Carrier (non-inversion)



Sowing

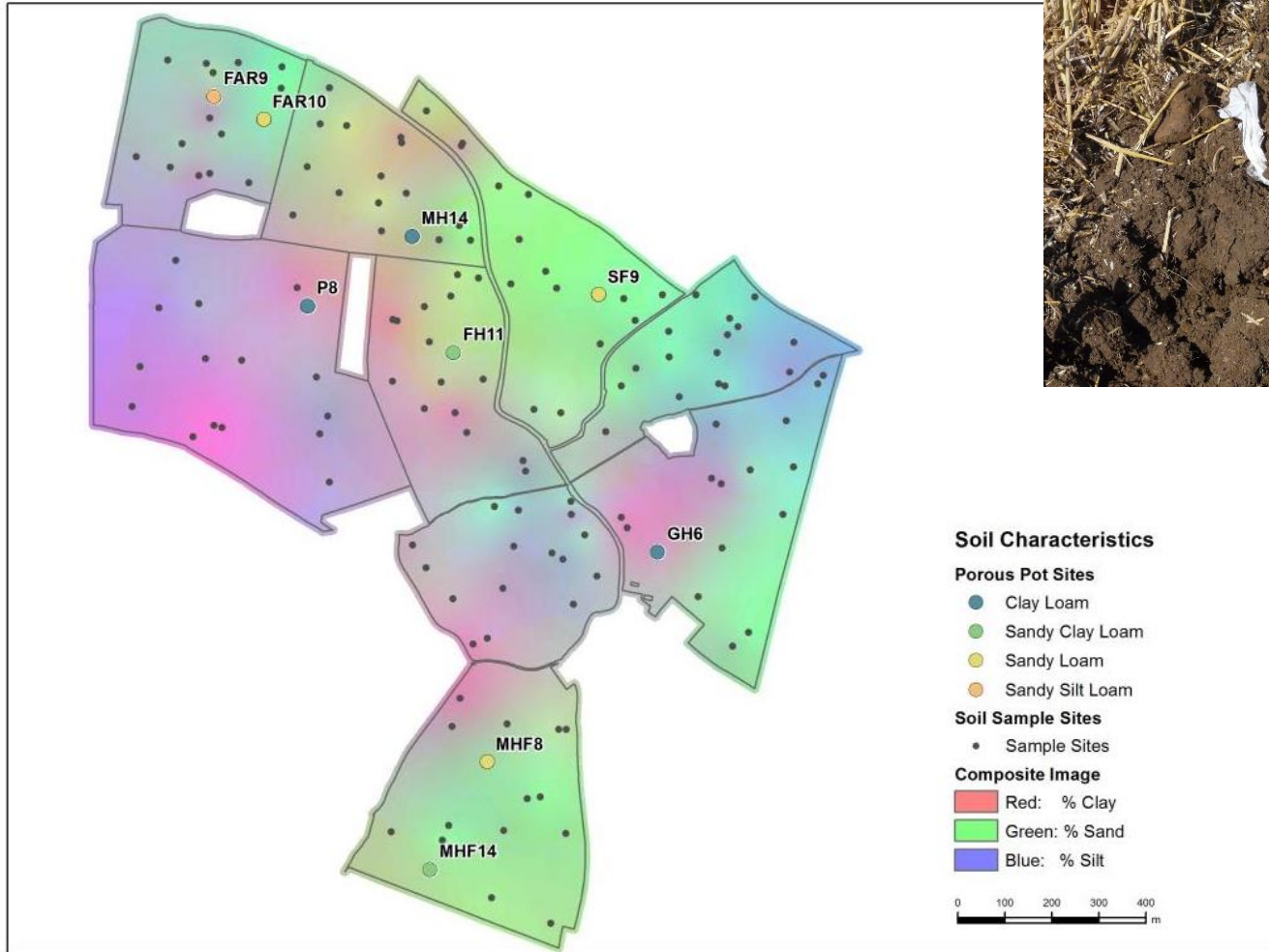
Blocks J + P: Rapid drill



Block L: Seed Hawk direct drill



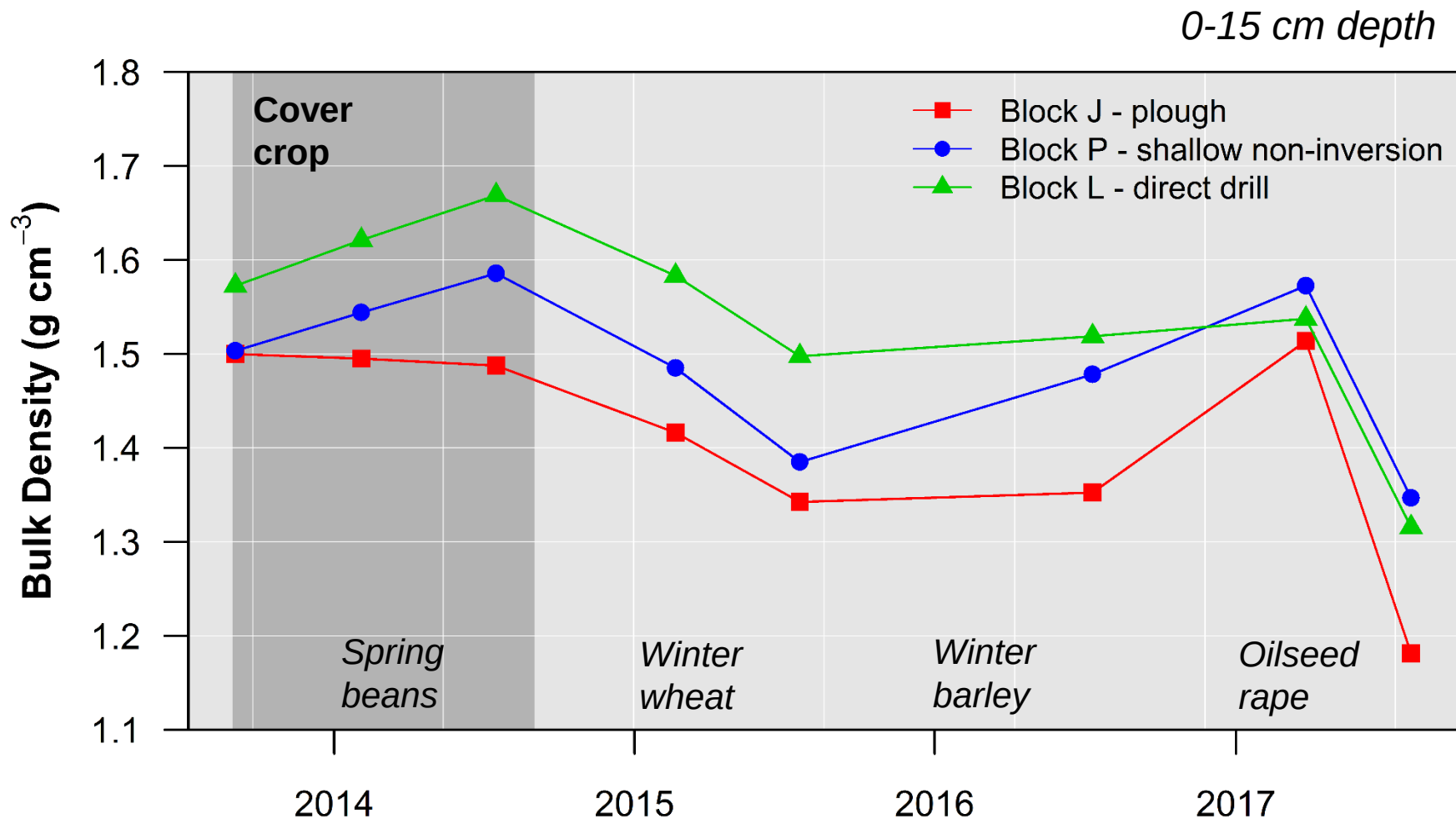
Field Measurements



- Soil texture
- Soil structure
- Infiltration rate
- Bulk density
- SMN
- P, K, Mg indices
- OC content
- Soil biology

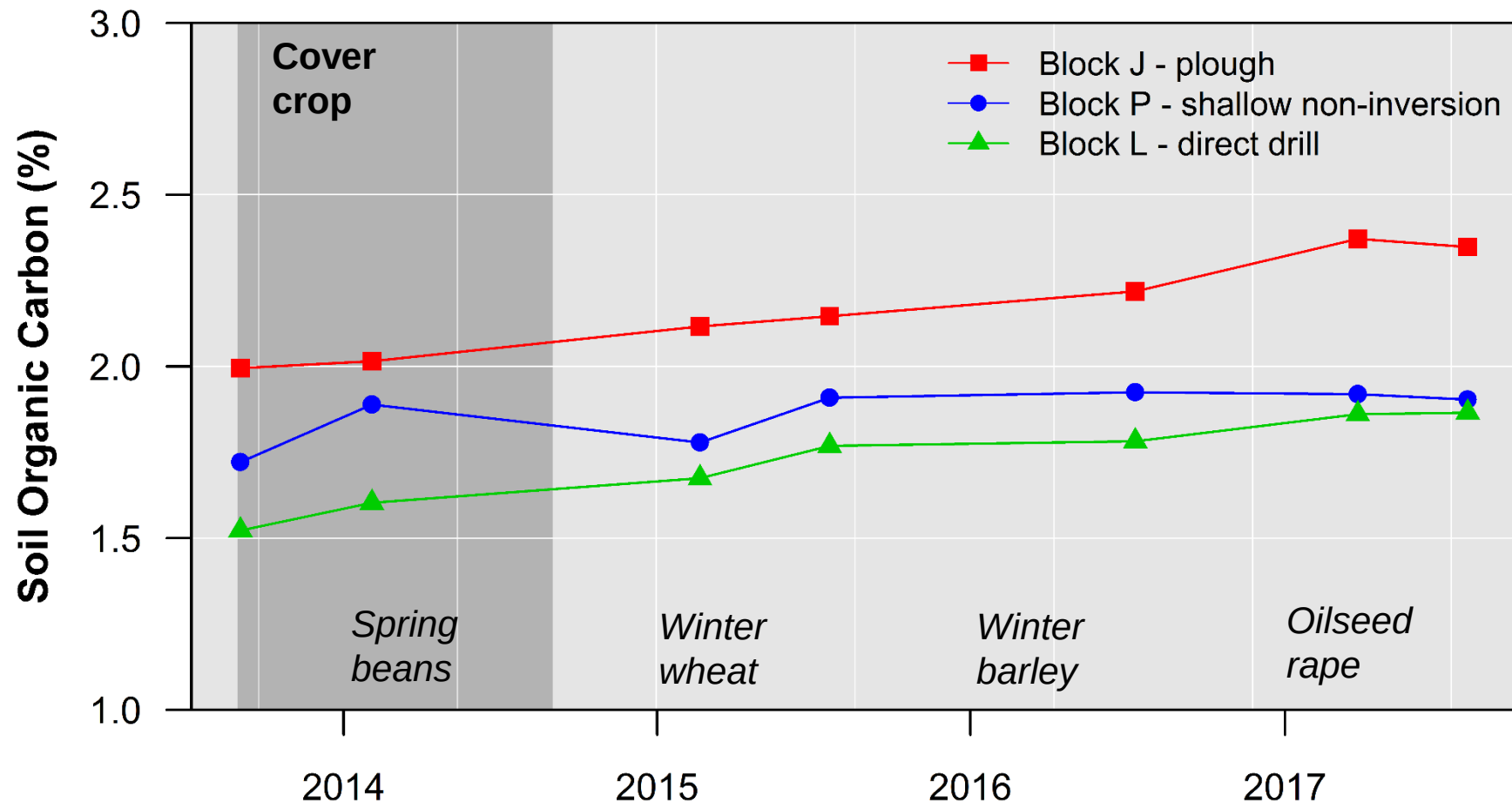
Aim: to assess the physical, chemical and biological condition of the soils

Soil Structure: bulk density



Soil Chemistry: organic carbon

0-15 cm depth



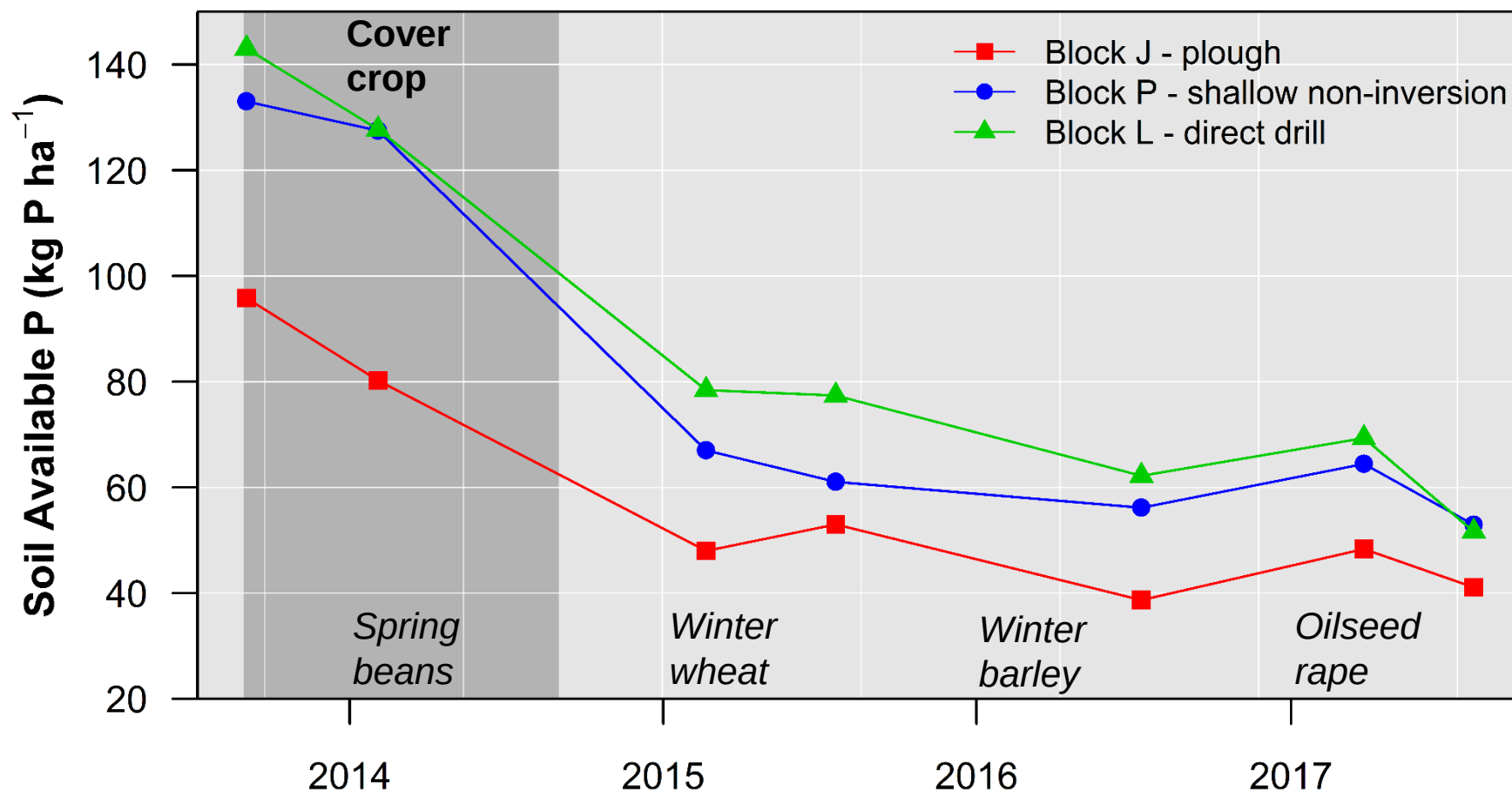
Block J = +18%

Block P = +11%

Block L = +23%

Soil Nutrients: phosphorus

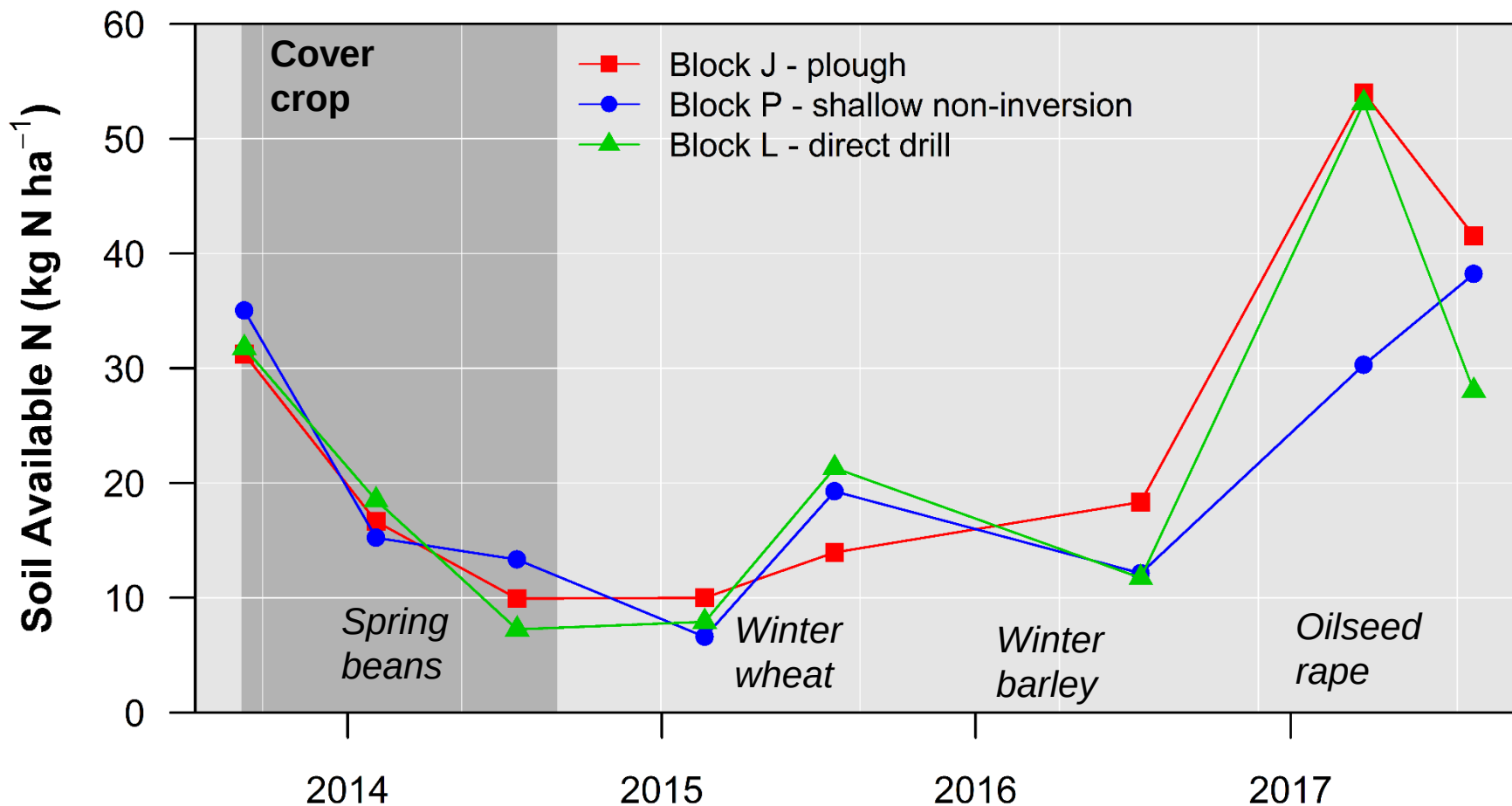
0-15 cm depth



Same trend observed for potassium (K) and magnesium (Mg)

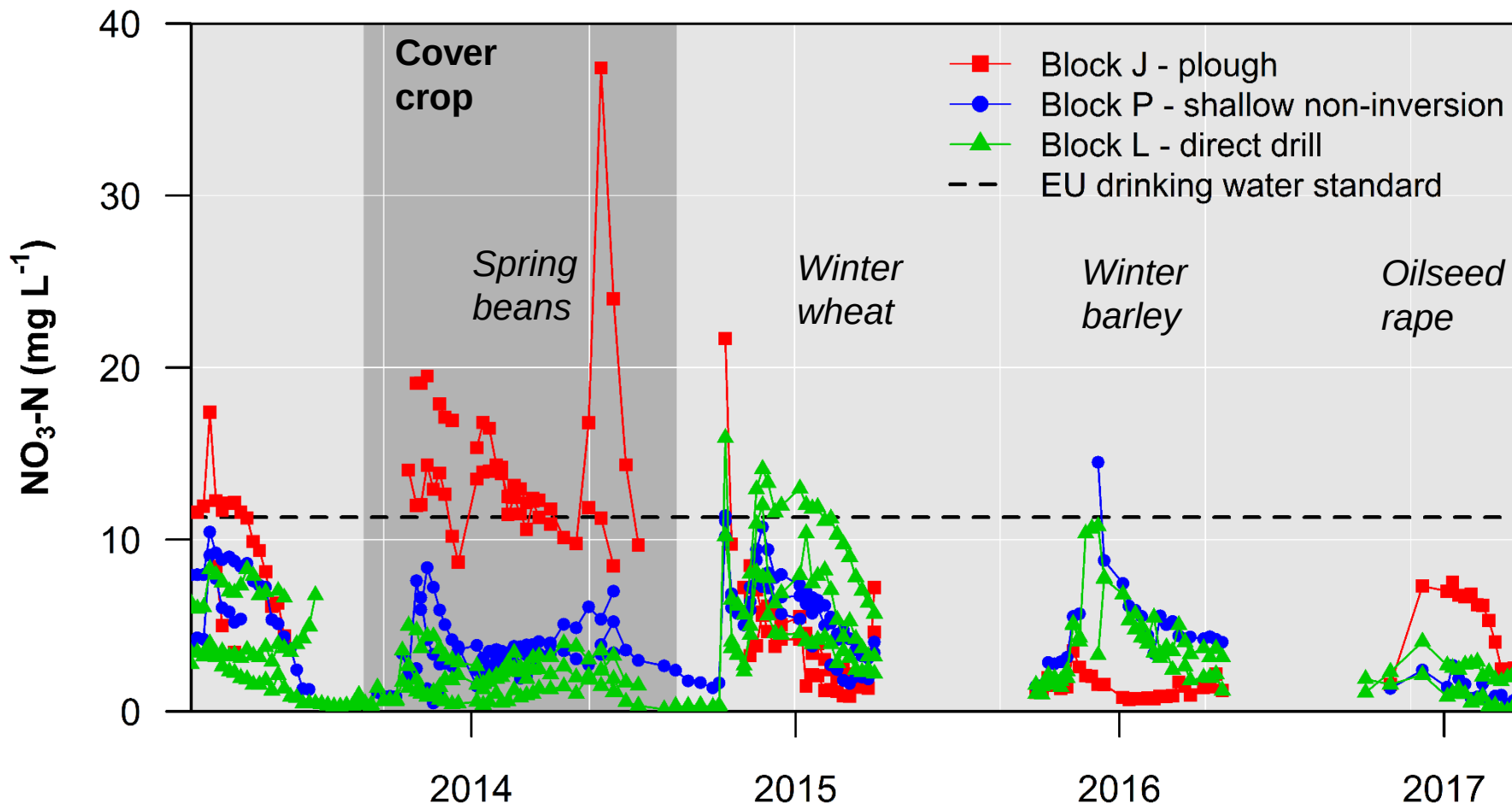
Soil Nutrients: nitrogen

0-15 cm depth



Soil Leaching: nitrogen

Field drains

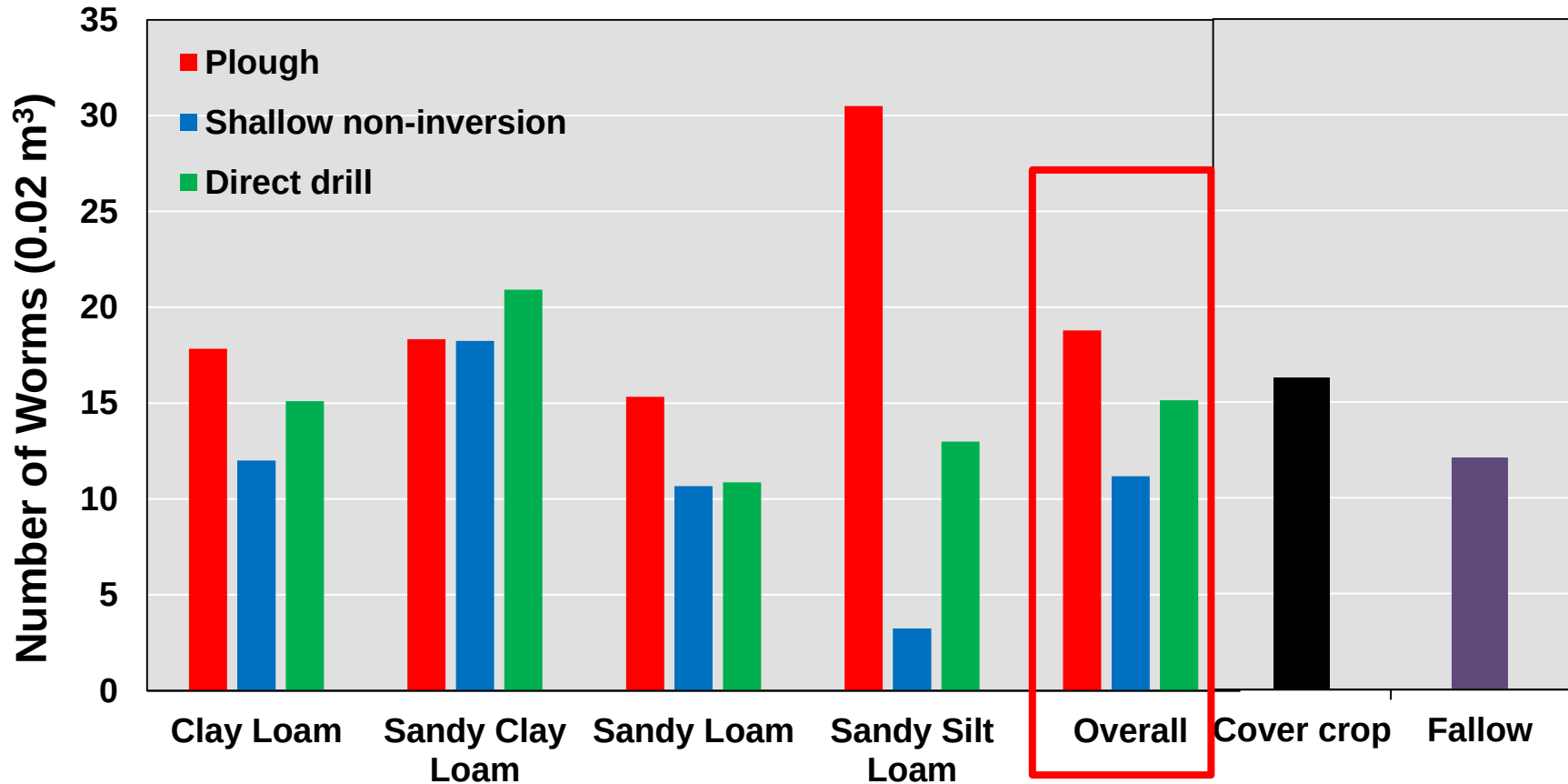


Block J = 3.4 mg/L

Block P = 4.8 mg/L

Block L = 4.5 mg/L

Soil Biology: worm counts



April 2016 | September 2016 | March 2017

Financial Returns: 2013–2017

		2013/14	2014/15	2015/16	2016/17
		Spring beans + CC	Winter wheat	Winter barley	Oilseed rape
Block J <i>Plough</i>	Total cost (£/ha)	589	784	561	600
	Output (£/ha)	1,334	1,694	1,086	1,734
	Margin (£/ha)	745	910	525	1,134
Block P <i>Shallow non-inv.</i>	Total cost (£/ha)	748	782	581	553
	Output (£/ha)	1,506	1,695	1,099	1,729
	Margin (£/ha)	758	913	518	1,176
Block L <i>Direct drill</i>	Total cost (£/ha)	704	788	598	550
	Output (£/ha)	1,435	1,620	1,086	1,613
	Margin (£/ha)	731	832	488	1,063

Block L: Lowest fuel/labour costs | highest pesticide/fertiliser inputs | Lower yields
Margins 4 – 10% below Block P



Wensum DTC Mitigation Measures

Sediment traps: 2016–2017



UEA University of
East Anglia



Demonstration
Test
Catchments







**Constructed
October 2016**

£15,000

Funded by *Norfolk
Rivers Trust &
Broadland Catchment
Partnership*



www.wensumalliance.org.uk

3 x Roadside sediment traps

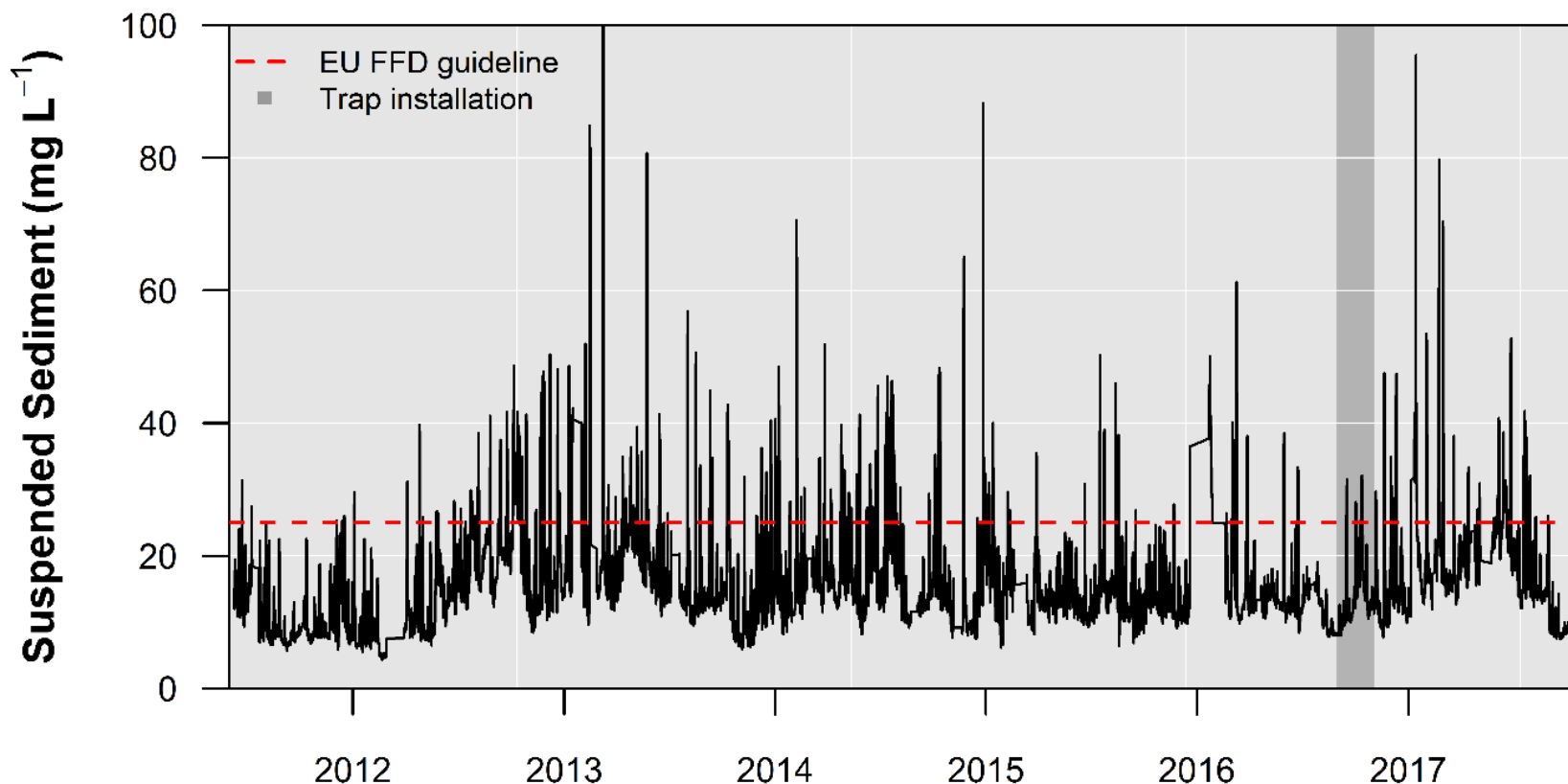


Trap 1
24 ha

Trap 4
24 ha

Trap 3
4 ha

Monitoring Trap Performance



	Pre-installation	Post-installation	Change
Suspended sediment (mg/L)	15.9	18.2	+14%
Flow (L/s)	26.5	10.2	-62%
Sediment load (kg/h)	1.81	0.84	-54%

Monitoring Trap Performance

17 storms events

