

Figure S1. Effect of different tillage and cropping systems on aggregate size distribution at 0–5 cm soil depth.

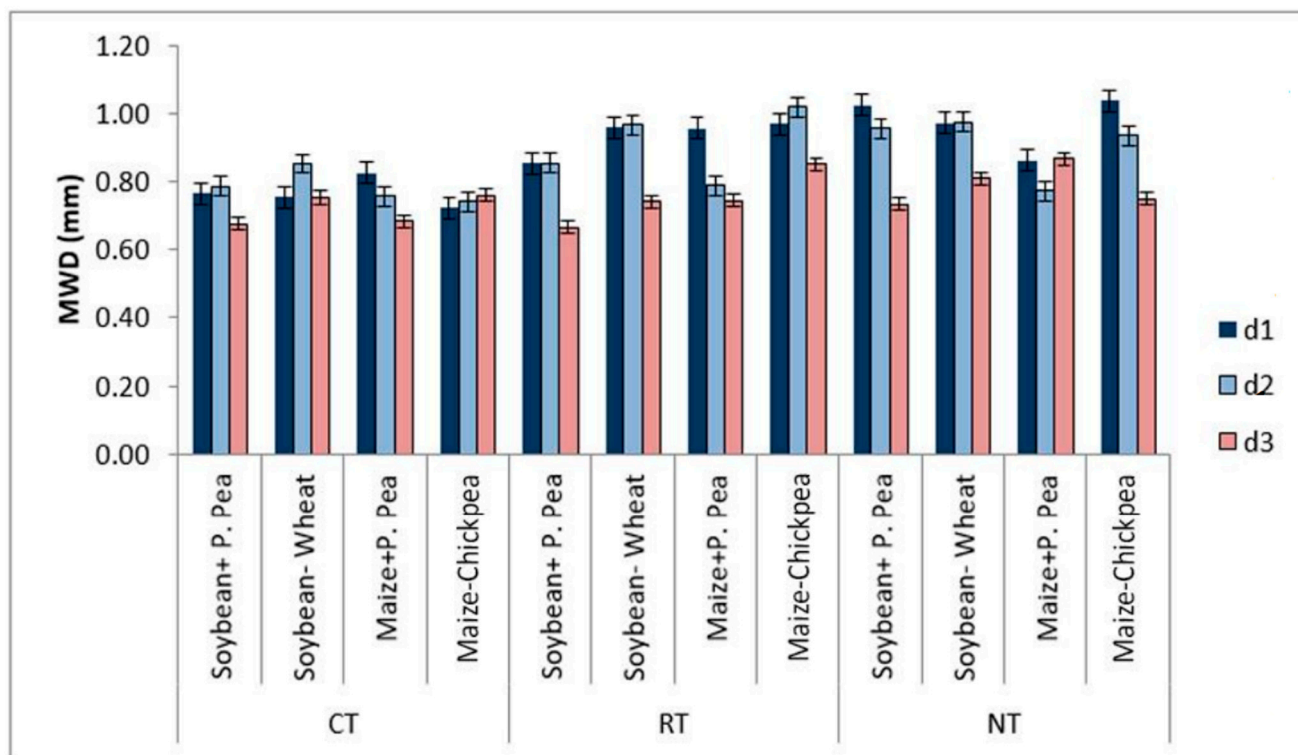


Figure S2. Effect of different tillage and cropping systems on mean weight diameter (mm) at different soil depths (d1: 0–5 cm, d2: 5–15 cm, d3: 15–30 cm).

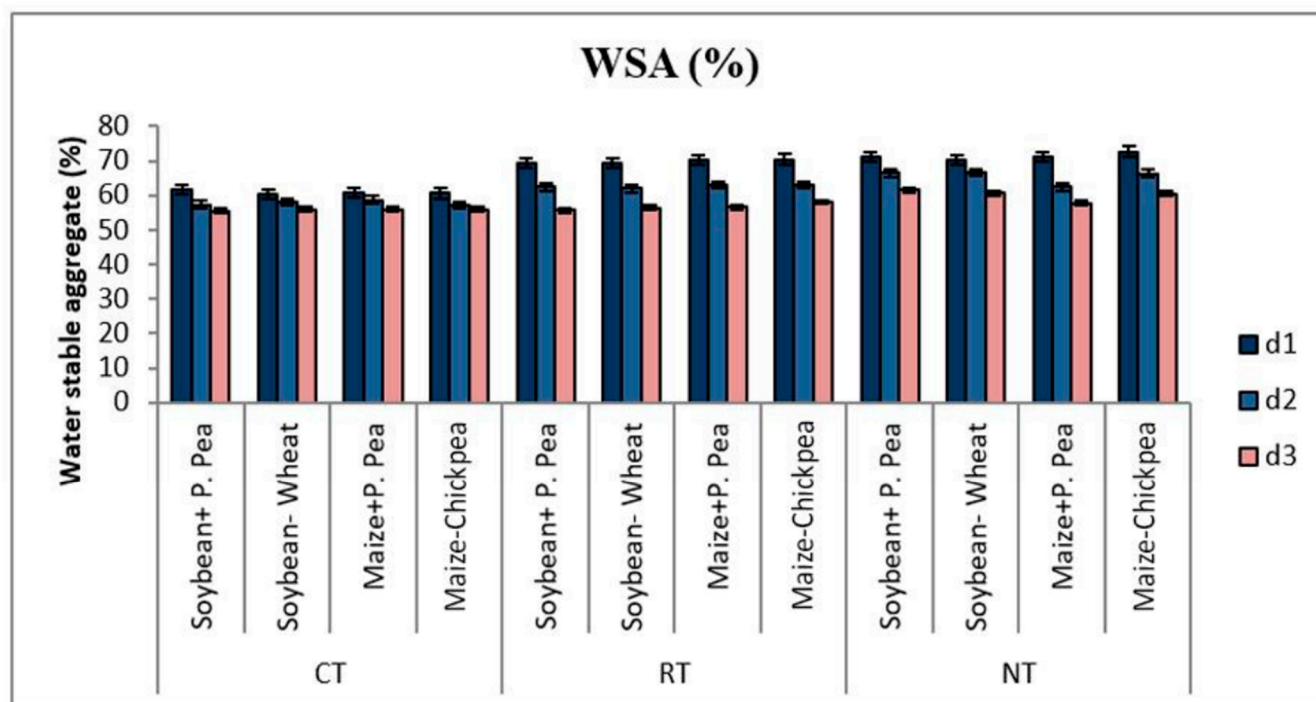


Figure S3. Effect of different tillage and cropping systems on water stable aggregates at different soil depths (d1: 0–5 cm, d2: 5–15 cm, d3: 15–30 cm).

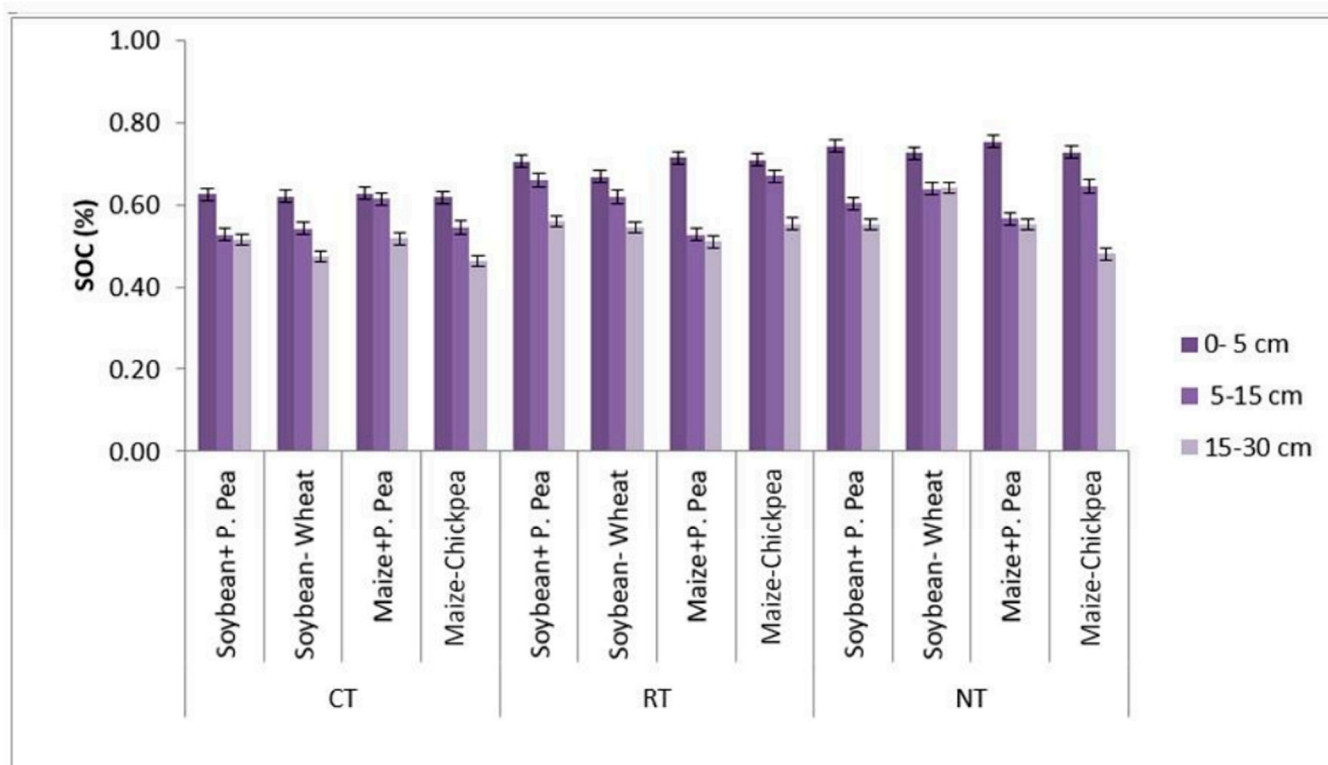


Figure S4. Effect of different tillage and cropping systems on soil organic carbon (SOC) at different soil depths.

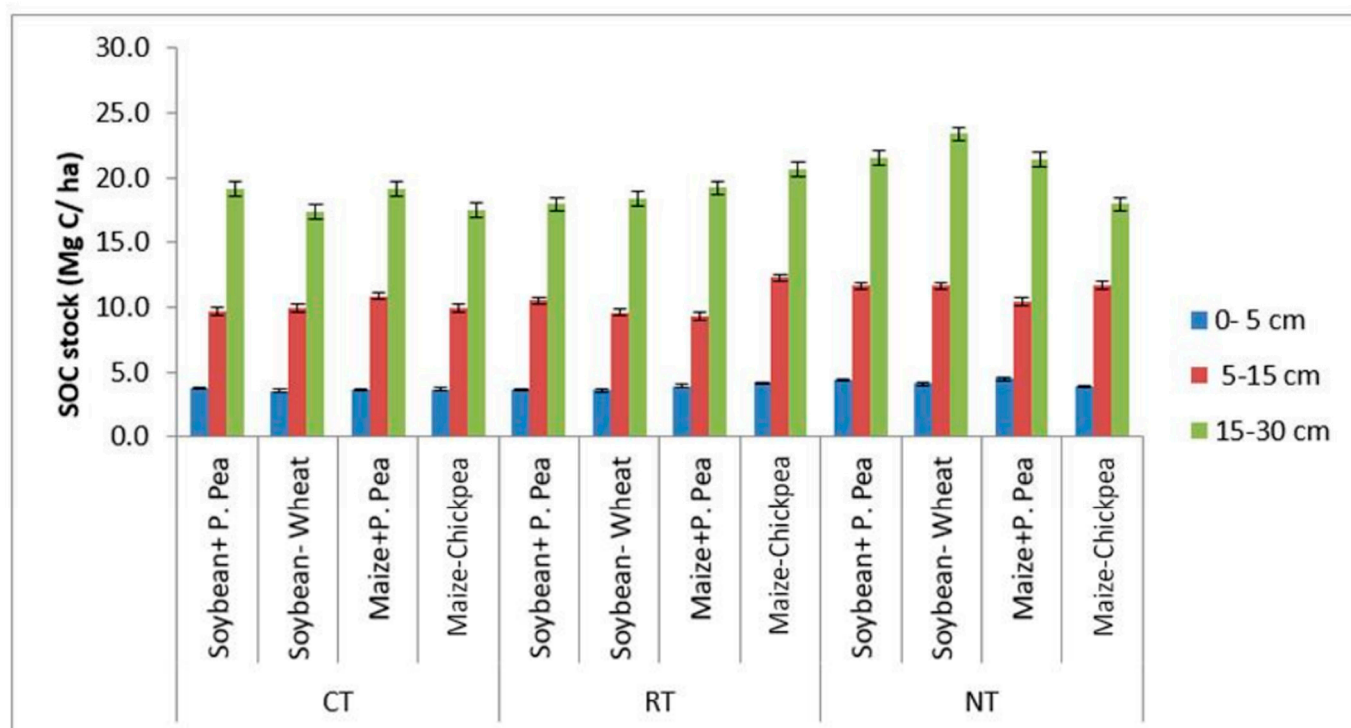


Figure S5. Effect of different tillage and cropping systems on soil organic carbon (SOC) stock (Mg C/ ha) at different soil depths.

Table S1. Temporal variation of mean greenhouse gas flux under different tillage and cropping systems in a Vertisol of central India.

Sampling Date	CO ₂ -C flux (mg C m ⁻² h ⁻¹)											
	18/07/2017			29/07/2017			24/8/2017			17/10/2017		
Tillage System/ Cropping System	NT	CT	RT	NT	CT	RT	NT	CT	RT	NT	CT	RT
Soybean-Wheat	23.56	25.83	19.72	14.87	14.60	13.56	12.01	0.57	2.32	3.05	6.82	10.27
Maize + Pigeon pea (1:1)	4.67	9.17	3.30	13.08	7.88	6.42	2.77	5.77	2.76	35.25	31.63	21.78
Maize-Chickpea	21.83	17.00	14.46	13.70	9.37	14.09	3.89	4.73	13.65	37.85	27.29	22.85
	N ₂ O-N flux (µg N m ⁻² hr ⁻¹)											
	NT	CT	RT	NT	CT	RT	NT	CT	RT	NT	CT	RT
Soybean-Wheat	-230	-549	-2.93	481	-30.5	-224	-1030	350	5.02	-245	0.941	-16.4
Maize + Pigeon pea (1:1)	21	-55.5	-516	4.74	-4.92	-4.08	-513	5.7	0.458	274	-522	88.2
Maize-Chickpea	11.4	465	21.5	-258	15.7	-754	-970	2.31	-7.3	-734	97.2	55.7

CT, conventional tillage; RT, reduced tillage; NT, no tillage.