Supplementary Materials

Figure S1. Time series of soil CO_2 emission from a) CON, b) BX, and c) B2X plots with Man-Kendall trend. Ƭ is positive when the trend increases and negative when the trend decreases. The P-value indicates the significance of the trend.

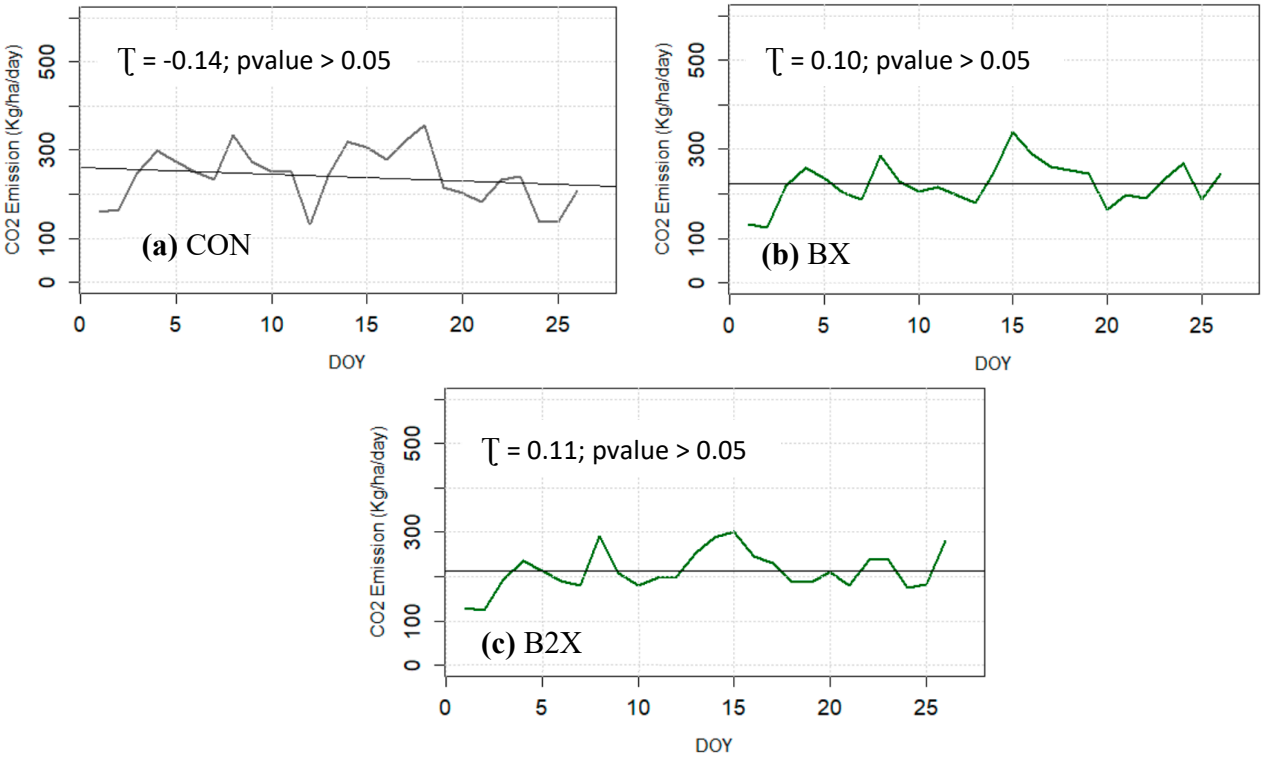


Table S1. Training and testing of MLR and GAM: The training and testing of MLR and GAM are performed to evaluate the model performance for all chicken and dairy plots. Here, the dataset was split into 70% for training and 30% for testing, and the test results were evaluated using Pearson correlation (r) and Root Mean Square Error (RMSE). The test results are illustrated in the following Table.

Treatment		**r-value**	**RMSE**
Chicken	MLR	0.45	86.9
Dairy		0.48	67.6
Chicken	GAM	0.56	76.6
Dairy		0.49	66.5