**A graphic and textual explanation of the changing trend**



**Description for correlation analysis results**

We grouped the underlying mechanisms by which addition of exogenous organic materials altering the soil organic and inorganic carbon into several pathways that may functioning simultaneously:

**(1) Addition of exogenous organic materials alters** **soil organic and inorganic carbon via soil physical properties.**

Previous studies suggested that both soil organic and inorganic carbon stocks are influenced by soil physicochemical properties [1]. In this study, the soil electrical conductivity (Pearson correlation r = -0.8913, p = 6.95e-07) and soil bulk density (Pearson correlation r = -0.6690, p = 0.0024) and pH (Pearson correlation r = -0.8764, p = 1.84e-06), non-capillary porosity (Pearson correlation r = -0.6690, p = 0.0024) significantly negatively impacted soil organic carbon concentration, soil capillary porosity (Pearson correlation r = 0.5470, p = 0.0188) significantly positively affected soil organic carbon concentration (**Fig.4a, Table.S1**). pH (Pearson correlation r = -0.5491, p = 0.0183) and non-capillary porosity (Pearson correlation r = -0.7809, p = 0.0001) significantly negatively impacted soil organic carbon density (**Fig.4b**). Soil pH (Pearson correlation r = 0.6206, p = 0.0060), electrical conductivity (Pearson correlation r = 0.7769, p = 0.0001), bulk density (Pearson correlation r = 0.6842, p = 0.0017) significantly positively affected soil inorganic carbon concentration, the soil capillary porosity (Pearson correlation r = -0.5763, p = 0.0123), ratio of soil porosity and solid soil (Pearson correlation r = -0.4945, p = 0.0370) significantly negatively impacted soil inorganic carbon concentration (**Fig.4c**). Soil pH (Pearson correlation r = 0.6794, p = 0.0019), electrical conductivity (Pearson correlation r = 0.8451, p = 1.01e-05), bulk density (Pearson correlation r = 0.9896, p = 6.91e-15) significantly positively affected soil inorganic carbon density, total porosity (Pearson correlation r = -0.7147, p = 0.0009), capillary porosity (Pearson correlation r = -0.7848, p = 0.0001), ratio of soil porosity and solid soil (Pearson correlation r = -0.7890, p = 9.94e-05), and water content (Pearson correlation r = -0.7882, p = 0.0001) significantly negatively impacted soil inorganic carbon density (**Fig.4d**). Soil pH (Pearson correlation r = -0.8768, p = 1.80e-06), non-capillary porosity (Pearson correlation r = -0.6724, p = 0.0022), bulk density (Pearson correlation r = -0.6611, p = 0.0028), electrical conductivity (Pearson correlation r = -0.8860, p = 9.96e-07) significantly negatively impacted soil total carbon concentration, capillary porosity (Pearson correlation r = 0.5400, p = 0.0207) significantly positively affected soil total carbon concentration (**Fig.4e**). The soil water content (Pearson correlation r = -0.6106, p = 0.0071) and non-capillary porosity (Pearson correlation r = -0.7167, p = 0.0008) significantly negatively impacted soil total carbon density (**Fig.4f**). Soil bulk density (Pearson correlation r = -0.6946, p = 0.0014), electrical conductivity (Pearson correlation r = -0.9073, p = 2.05e-07), pH (Pearson correlation r = -0.8696, p = 2.77e-06), non-capillary porosity (Pearson correlation r = -0.6435, p = 0.0040) significantly negatively impacted the ratio of organic and inorganic carbon, capillary porosity (Pearson correlation r = 0.5783, p = 0.0119) significantly positively impacted the ratio of organic and inorganic carbon (**Fig.4g**).

In short, the organic matter addition-induced alterations in soil physical properties significantly altered the soil organic and inorganic carbon, and the ratio of organic and inorganic carbon.

**(2) Addition of exogenous organic materials alters soil organic and inorganic carbon via soil chemical properties**

Previous studies showed that the soil available nitrogen concentration and available potassium concentration increased soil organic carbon density [1]. In this study, the water-soluble magnesium concentration (Pearson correlation r = 0.7443, *p* = 0.0004), alkali hydrolyzed nitrogen concentration (Pearson correlation r = 0.9539, *p* = 8.89e-10), water-soluble potassium concentration (Pearson correlation r = 0.9491, *p* = 1.93e-09), alkali hydrolyzed nitrogen density (Pearson correlation r = 0.6030, *p* = 0.0081), available phosphorus concentration (Pearson correlation r = 0.8023, *p* = 6.19e-05), water-soluble magnesium density (Pearson correlation r = 0.5002, *p* = 0.0345) significantly positively affected soil organic carbon concentration (**Fig.4a**), the water-soluble sodium density (Pearson correlation r = -0.7542, *p* = 0.0003), total salt content (Pearson correlation r = -0.7742, *p* = 0.0002), water-soluble calcium concentration (Pearson correlation r = -0.6600, *p* = 0.0029), water-soluble sodium concentration (Pearson correlation r = -0.7802, *p* = 0.0001), water-soluble calcium density (Pearson correlation r = -0.8062, *p* = 5.34e-05) significantly negatively impacted soil organic carbon concentration, the water-soluble potassium concentration (Pearson correlation r = -0.7653, *p* = 0.0002), water-soluble magnesium concentration (Pearson correlation r = -0.8232, p = 2.72e-05), water-soluble magnesium density (Pearson correlation r = -0.6154, *p* = 0.0066), available phosphorus concentration (Pearson correlation r = -0.7047, *p* = 0.0011), and alkali hydrolyzed nitrogen concentration (Pearson correlation r = -0.7414, *p* = 0.0004) significantly negatively impacted soil inorganic carbon concentration, water-soluble sodium concentration (Pearson correlation r = 0.6792, p = 0.0019), water-soluble sodium density (Pearson correlation r = 0.7260, *p* = 0.0006), water-soluble calcium density (Pearson correlation r = 0.7197, *p* = 0.0008), significantly positively affected soil inorganic carbon concentration (**Fig.4c**), the soil alkali hydrolyzed nitrogen concentration (Pearson correlation r = 0.5135, *p* = 0.0293), water-soluble magnesium density (Pearson correlation r = 0.4769, *p* = 0.0454), water-soluble potassium density (Pearson correlation r = 0.6640, *p* = 0.0027), available phosphorus density (Pearson correlation r = 0.6231, *p* = 0.0057), alkali hydrolyzed nitrogen density (Pearson correlation r = 0.9376, *p* = 9.53e-09), water-soluble potassium concentration (Pearson correlation r = 0.5861, *p* = 0.0106), alkali hydrolyzed nitrogen concentration (Pearson correlation r = 0.5135, *p* = 0.0293) significantly positively affected soil organic carbon density (**Fig.4b**), the water-soluble calcium concentration (Pearson correlation r = -0.6365, *p* = 0.0045), total salt content (Pearson correlation r = -0.7054, *p* = 0.0011) significantly negatively impacted soil organic carbon density, the alkali hydrolyzed nitrogen concentration (Pearson correlation r = -0.8330, *p* = 1.78e-05), water-soluble magnesium concentration (Pearson correlation r = -0.9007, *p* = 3.48e-07), available phosphorus concentration (Pearson correlation r = -0.9468, *p* = 2.74e-09), water-soluble potassium concentration (Pearson correlation r = -0.7690, *p* = 0.0002) significantly negatively impacted soil inorganic carbon density. The soil water-soluble sodium density (Pearson correlation r = 0.9740, *p* = 9.73e-12), water-soluble sodium concentration (Pearson correlation r = 0.8127, *p* = 4.15e-05), water-soluble potassium density (Pearson correlation r = 0.6600, *p* = 0.0029), water-soluble calcium density (Pearson correlation r = 0.9476, *p* = 2.42e-09) significantly positively affected soil inorganic carbon density (**Fig.4d**).

The soil available phosphorus concentration (Pearson correlation r = 0.7973, p = 7.41e-05), water-soluble magnesium density (Pearson correlation r = 0.4903, *p* = 0.0389), water-soluble potassium concentration (Pearson correlation r = 0.9459, *p* = 3.1e-09), alkali hydrolyzed nitrogen density (Pearson correlation r = 0.6102, *p* = 0.0072), alkali hydrolyzed nitrogen concentration (Pearson correlation r = 0.9518, *p* = 1.27e-09), water-soluble magnesium concentration (Pearson correlation r = 0.7331, *p* = 0.0005) significantly positively affected soil total carbon concentration (**Fig.4e**).

The soil water-soluble sodium density (Pearson correlation r = -0.7472, *p* = 0.0004), water-soluble sodium concentration (Pearson correlation r = -0.7757, *p* = 0.0002), water-soluble calcium density (Pearson correlation r = -0.8008, *p* = 6.53e-05), water-soluble calcium concentration (Pearson correlation r = -0.6640, *p* = 0.0027), total salt content (Pearson correlation r = -0.7802, *p* = 0.0001) significantly negatively impacted soil total carbon concentration. The soil alkali hydrolyzed nitrogen density (Pearson correlation r = 0.9361, *p* = 1.14e-08), available phosphorus density (Pearson correlation r = 0.7746, *p* = 0.0002), water-soluble potassium density (Pearson correlation r = 0.8065, *p* = 5.27e-05) significantly positively affected soil total carbon density (**Fig.4f**).

The soil total salt content (Pearson correlation r = -0.6016, *p* = 0.0083) and water-soluble calcium concentration (Pearson correlation r = -0.5607, *p* = 0.0155) significantly negatively impacted soil total carbon density (**Fig.4f**).

The soil water-soluble potassium concentration (Pearson correlation r = 0.9574, *p* = 4.79e-10), water-soluble magnesium density (Pearson correlation r = 0.5409, *p* = 0.0204), alkali hydrolyzed nitrogen density (Pearson correlation r = 0.5726, *p* = 0.0130), available phosphorus concentration (Pearson correlation r = 0.8166, p = 3.55e-05), water-soluble magnesium concentration (Pearson correlation r = 0.7858, *p* = 0.0001), and alkali hydrolyzed nitrogen concentration (Pearson correlation r = 0.9571, *p* = 5.02e-10) significantly positively impacted the ratio of organic and inorganic carbon.

The soil water-soluble sodium concentration (Pearson correlation r = -0.7943, *p* = 8.25e-05), water-soluble sodium density (Pearson correlation r = -0.7769, *p* = 0.0001), water-soluble calcium concentration (Pearson correlation r = -0.6385, *p* = 0.0043), total salt content (Pearson correlation r = -0.7412, *p* = 0.0004), water-soluble calcium density (Pearson correlation r = -0.8210, *p* = 2.98e-05) significantly negatively impacted the ratio of organic and inorganic carbon (**Fig.4g**).

Altogether, the organic matter addition-induced alterations in soil chemical properties significantly changed the soil organic and inorganic carbon, and the ratio of organic and inorganic carbon.

**(3) Addition of exogenous organic materials alters soil organic and inorganic carbon via soil stoichiometric ratios**

Previous studies showed that soil nutrient stoichiometry ratio had positive or negative effects on soil carbon [2]. In this study, the ratio of alkali hydrolyzed nitrogen and water-soluble potassium (Pearson correlation r = 0.8654, *p* = 3.53e-06), ratio of organic carbon and available phosphorus (Pearson correlation r = 0.8880, *p* = 8.72e-07), ratio of organic carbon and alkali hydrolyzed nitrogen (Pearson correlation r = 0.7282, *p* = 0.0006), ratio of alkali hydrolyzed nitrogen and water-soluble sodium (Pearson correlation r = 0.9180, *p* = 7.93e-08), ratio of alkali hydrolyzed nitrogen and water-soluble calcium (Pearson correlation r = 0.9549, *p* = 7.41e-10), ratio of organic carbon and water-soluble sodium (Pearson correlation r = 0.9864, *p* = 5.65e-14), ratio of inorganic carbon and water-soluble sodium (Pearson correlation r = 0.5705, *p* = 0.0134), ratio of available phosphorus and water-soluble sodium (Pearson correlation r = 0.7910, *p* = 9.27e-05), ratio of organic carbon and water-soluble calcium (Pearson correlation r = 0.9957, *p* = 5.4e-18), ratio of organic carbon and water-soluble potassium (Pearson correlation r = 0.9753, *p* = 6.46e-12), ratio of available phosphorus and water-soluble calcium (Pearson correlation r = 0.8593, *p* = 4.92e-06), ratio of alkali hydrolyzed nitrogen and available phosphorus (Pearson correlation r = 0.8415, *p* = 1.2e-05) significantly positively affected soil organic carbon concentration (**Fig.4a**).

The ratio of available nitrogen and available potassium, ratio of available nitrogen and available calcium, ratio of available phosphorus and available calcium significantly affected soil organic carbon [2].

The soil ratio of inorganic carbon and water-soluble potassium (Pearson correlation r = -0.9518, *p* = 1.25e-09), ratio of inorganic carbon and available phosphorus (Pearson correlation r = -0.8929, *p* = 8.72e-07), ratio of available phosphorus and water-soluble magnesium (Pearson correlation r = -0.5025, *p* = 0.0336), ratio of inorganic carbon and water-soluble magnesium (Pearson correlation r = -0.8009, *p* = 6.52e-05) and ratio of inorganic carbon and alkali hydrolyzed nitrogen (Pearson correlation r = -0.9649, *p* = 1.04e-10) significantly negatively impacted soil organic carbon concentration (**Fig.4a**). This supported that the ratio of available nitrogen and available magnesium significantly affected soil inorganic carbon [2].

The ratio of alkali hydrolyzed nitrogen and available phosphorus (Pearson correlation r = -0.5246, *p* = 0.0254), ratio of alkali hydrolyzed nitrogen and water-soluble sodium (Pearson correlation r = -0.7498, *p* = 0.0003), ratio of organic carbon and available phosphorus (Pearson correlation r = -0.5323, *p* = 0.0230), ratio of organic carbon and water-soluble potassium (Pearson correlation r = -0.6409, *p* = 0.0042), ratio of alkali hydrolyzed nitrogen and water-soluble calcium (Pearson correlation r = -0.7147, *p* = 0.0009), ratio of organic carbon and water-soluble calcium (Pearson correlation r = -0.7067, *p* = 0.0010), ratio of alkali hydrolyzed nitrogen and water-soluble potassium (Pearson correlation r = -0.6251, *p* = 0.0055), ratio of organic carbon and water-soluble sodium (Pearson correlation r = -0.7599, *p* = 0.0003), ratio of available phosphorus and water-soluble sodium (Pearson correlation r = -0.7083, *p* = 0.0010), and ratio of available phosphorus and water-soluble calcium (Pearson correlation r = -0.6986, *p* = 0.0013) significantly negatively impacted soil inorganic carbon concentration (**Fig.4c**).

The ratio of inorganic carbon and available phosphorus (Pearson correlation r = 0.8304, *p* = 2.0e-05), ratio of inorganic carbon and alkali hydrolyzed nitrogen (Pearson correlation r = 0.7533, *p* = 0.0003), ratio of inorganic carbon and water-soluble magnesium (Pearson correlation r = 0.8665, *p* = 3.3e-06), ratio of inorganic carbon and water-soluble potassium (Pearson correlation r = 0.8158, *p* = 3.67e-05), ratio of available phosphorus and water-soluble magnesium (Pearson correlation r = 0.7103, *p* = 0.0010) significantly positively affected soil inorganic carbon concentration (Fig.4g).

Soil stoichiometric ratios played mediating roles in structuring soil carbon [2]. The ratio of organic carbon and alkali hydrolyzed nitrogen (Pearson correlation r = 0.8503, *p* = 7.84e-06), ratio of organic carbon and available phosphorus (Pearson correlation r = 0.9439, *p* = 4.12e-09), ratio of organic carbon and water-soluble sodium (Pearson correlation r = 0.6034, *p* = 0.0080), ratio of organic carbon and water-soluble magnesium (Pearson correlation r = 0.8034, *p* = 5.94e-05), ratio of organic carbon and water-soluble potassium (Pearson correlation r = 0.7753, *p* = 0.0002), ratio of organic carbon and water-soluble calcium (Pearson correlation r = 0.7369, *p* = 0.0005), ratio of alkali hydrolyzed nitrogen and available phosphorus (Pearson correlation r = 0.8065, *p* = 5.29e-05), ratio of alkali hydrolyzed nitrogen and water-soluble calcium (Pearson correlation r = 0.5647, *p* = 0.0146) and ratio of alkali hydrolyzed nitrogen and water-soluble magnesium (Pearson correlation r = 0.5732, *p* = 0.0129) significantly positively affected soil organic carbon density (**Fig.4b**). This supported that the ratio of available nitrogen and available magnesium increased the soil organic carbon density [2].

The ratio of inorganic carbon and water-soluble potassium (Pearson correlation r = -0.6014, *p* = 0.0083), ratio of inorganic carbon and alkali hydrolyzed nitrogen (Pearson correlation r = -0.6076, *p* = 0.0075), and ratio of available phosphorus and water-soluble potassium (Pearson correlation r = -0.5186, *p* = 0.0275) significantly negatively impacted soil organic carbon density (**Fig.4b**).

The ratio of inorganic carbon and water-soluble sodium (Pearson correlation r = -0.6235, *p* = 0.0057), ratio of organic carbon and water-soluble sodium (Pearson correlation r = -0.8020, *p* = 6.26e-05), ratio of available phosphorus and water-soluble sodium (Pearson correlation r = -0.9479, *p* = 2.33e-09), ratio of alkali hydrolyzed nitrogen and water-soluble sodium (Pearson correlation r = -0.8793, *p* = 1.54e-6), ratio of alkali hydrolyzed nitrogen and water-soluble calcium (Pearson correlation r = -0.7805, *p* = 0.0001), ratio of available phosphorus and water-soluble calcium (Pearson correlation r = -0.8815, *p* = 1.34e-06), ratio of organic carbon and water-soluble calcium (Pearson correlation r = -0.6834, *p* = 0.0018), ratio of available phosphorus and water-soluble potassium (Pearson correlation r = -0.6057, *p* = 0.0077), ratio of alkali hydrolyzed nitrogen and water-soluble potassium (Pearson correlation r = -0.7634, *p* = 0.0002), and ratio of organic carbon and water-soluble potassium (Pearson correlation r = -0.6172, *p* = 0.0064) significantly negatively impacted soil inorganic carbon density (**Fig.4d**).

The ratio of inorganic carbon and water-soluble magnesium (Pearson correlation r = 0.9078, *p* = 1.96e-07), ratio of available phosphorus and water-soluble magnesium (Pearson correlation r = 0.6833, *p* = 0.0018), ratio of inorganic carbon and available phosphorus (Pearson correlation r = 0.9243, *p* = 4.26e-08), ratio of inorganic carbon and alkali hydrolyzed nitrogen (Pearson correlation r = 0.7609, *p* = 0.0002), and ratio of inorganic carbon and water-soluble potassium (Pearson correlation r = 0.7700, *p* = 0.0002) significantly positively affected soil inorganic carbon density (**Fig.4d**).

Previous studies showed that the ratio of available nitrogen and available potassium, ratio of available nitrogen and available calcium, ratio of available phosphorus and available calcium affected soil total carbon [2]. In this study, the ratio of alkali hydrolyzed nitrogen and available phosphorus (Pearson correlation r = 0.8644, *p* = 1.04e-05), ratio of alkali hydrolyzed nitrogen and water-soluble calcium (Pearson correlation r = 0.9539, *p* = 8.9e-10), ratio of alkali hydrolyzed nitrogen and water-soluble potassium (Pearson correlation r = 0.8653, *p* = 3.55e-06), ratio of available phosphorus and water-soluble sodium (Pearson correlation r = 0.7856, *p* = 0.0001), ratio of alkali hydrolyzed nitrogen and water-soluble sodium (Pearson correlation r = 0.9145, *p* = 1.09e-07), ratio of organic carbon and alkali hydrolyzed nitrogen (Pearson correlation r = 0.7326, *p* = 0.0005), ratio of organic carbon and water-soluble magnesium (Pearson correlation r = 0.4786, *p* = 0.0445), ratio of organic carbon and water-soluble potassium (Pearson correlation r = 0.9777, *p* = 2.91e-12), ratio of organic carbon and water-soluble sodium (Pearson correlation r = 0.9845, *p* = 1.63e-13), ratio of organic carbon and water-soluble calcium (Pearson correlation r = 0.9961, *p* = 2.55e-18), ratio of organic carbon and available phosphorus (Pearson correlation r = 0.8921, *p* = 6.55e-07), ratio of available phosphorus and water-soluble calcium (Pearson correlation r = 0.8562, *p* = 5.8e-06), and ratio of inorganic carbon and water-soluble sodium (Pearson correlation r = 0.5757, *p* = 0.0124) significantly positively affected soil total carbon concentration (**Fig.4e**). This supported that the ratio of available nitrogen and available calcium increased soil total carbon concentration [2].

The ratio of inorganic carbon and water-soluble magnesium (Pearson correlation r = -0.7896, *p* = 9.73e-05), ratio of inorganic carbon and water-soluble potassium (Pearson correlation r = -0.9468, *p* = 2.74e-09), ratio of inorganic carbon and alkali hydrolyzed nitrogen (Pearson correlation r = -0.9626, *p* = 1.7e-10), ratio of available phosphorus and water-soluble magnesium (Pearson correlation r = -0.4890, *p* = 0.0394), ratio of inorganic carbon and available phosphorus (Pearson correlation r = -0.8856, *p* = 1.03e-06) significantly negatively impacted soil total carbon concentration (**Fig.4e**).

The ratio of organic carbon and water-soluble magnesium (Pearson correlation r = 0.8265, *p* = 2.35e-05), ratio of alkali hydrolyzed nitrogen and available phosphorus (Pearson correlation r = 0.6976, *p* = 0.0013), ratio of organic carbon and alkali hydrolyzed nitrogen (Pearson correlation r = 0.7815, *p* = 0.0001), ratio of inorganic carbon and water-soluble calcium (Pearson correlation r = 0.4951, *p* = 0.0367), ratio of organic carbon and water-soluble calcium (Pearson correlation r = 0.5610, *p* = 0.0154), ratio of organic carbon and water-soluble potassium (Pearson correlation r = 0.6142, *p* = 0.0067), ratio of organic carbon and available phosphorus (Pearson correlation r = 0.8443, *p* = 1.06e-05), ratio of alkali hydrolyzed nitrogen and water-soluble magnesium (Pearson correlation r = 0.6501, *p* = 0.0035) significantly positively affected soil total carbon density (**Fig.4f**). This supported that the ratio of available nitrogen and available magnesium increased the soil total carbon density [2].

The ratio of available phosphorus and water-soluble potassium (Pearson correlation r = -0.6512, *p* = 0.0034) significantly negatively impacted soil total carbon density (**Fig.4f**).

The ratio of organic carbon and available phosphorus (Pearson correlation r = 0.8647, *p* = 3.65e-06), ratio of organic carbon and water-soluble potassium (Pearson correlation r = 0.9574, *p* =4.78e-10), ratio of organic carbon and alkali hydrolyzed nitrogen (Pearson correlation r = 0.7018, *p* = 0.0012), ratio of alkali hydrolyzed nitrogen and available phosphorus (Pearson correlation r = 0.8257, *p* = 2.44e-05), ratio of available phosphorus and water-soluble sodium (Pearson correlation r = 0.8077, *p* = 5.03e-05), ratio of alkali hydrolyzed nitrogen and water-soluble calcium (Pearson correlation r = 0.9536, *p* = 9.29e-10), ratio of inorganic carbon and water-soluble sodium (Pearson correlation r = 0.5487, *p* = 0.0184), ratio of alkali hydrolyzed nitrogen and water-soluble sodium (Pearson correlation r = 0.9269, *p* = 3.26e-08), ratio of available phosphorus and water-soluble calcium (Pearson correlation r = 0.8658, *p* = 3.45e-06), ratio of alkali hydrolyzed nitrogen and water-soluble potassium (Pearson correlation r = 0.8605, *p* = 4.61e-06), ratio of organic carbon and water-soluble calcium (Pearson correlation r = 0.9870, p = 3.96e-14), ratio of organic carbon and water-soluble sodium (Pearson correlation r = 0.9877, *p* = 2.47e-14) significantly positively impacted the ratio of organic and inorganic carbon (**Fig.4g**).

The ratio of inorganic carbon and water-soluble potassium (Pearson correlation r = -0.9661, *p* = 7.87e-11), ratio of available phosphorus and water-soluble magnesium (Pearson correlation r = -0.5562, *p* = 0.0165), ratio of inorganic carbon and water-soluble magnesium (Pearson correlation r = -0.8411, *p* = 1.23e-05), ratio of inorganic carbon and available phosphorus (Pearson correlation r = -0.9149, *p* = 1.06e-07), and ratio of inorganic carbon and alkali hydrolyzed nitrogen (Pearson correlation r = -0.9684, p = 4.51e-11) significantly negatively impacted the ratio of organic and inorganic carbon (**Fig.4g**).

Collectively, the organic materials addition-induced alterations in soil stoichiometric ratio significantly modified the soil organic and inorganic carbon, and the ratio of organic and inorganic carbon.

**References**

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