Abstract

Today reducing greenhouse gases against global warming, and to encourage the balance between development and natural sources are the basic requirement of the sustainability of life. Because of the 88 % ratio of CO$_2$ it is needed to decrease the flux of CO$_2$ to minimum. Soil carbon (C) dynamic is important for sustainability and climate change. Most of the C in soil converts to CO$_2$ and the basic reason of the C loss is soil tillage. CO$_2$ flux to the atmosphere from the soil because of the intensive tillage causes decrease of soil quality and yield, and increase the environmental pollution. On the other hand, it is accepted conservation tillage is advantageous for soil and environment quality. In this study, two different soil tillage systems (conventional tillage, minimum tillage) and direct seeding methods were examined. At the end of the study, the highest difference between the soil CO$_2$ flux values was in direct seeding (decreased 0.023 g CO$_2$ m$^{-2}$ h$^{-1}$), the lowest difference between the soil CO$_2$ flux values was in conventional tillage (increased 0.009 g CO$_2$ m$^{-2}$ h$^{-1}$). The lowest average soil CO$_2$ flux (0.024 g CO$_2$ m$^{-2}$ h$^{-1}$) was in direct seeding.