Introduction The increasing universal demand for food calls for growing agricultural productivity, which 1 consequently results in widespread application of pesticides. This method was further replaced by environmentally friendly approaches including ultrasonic solvent extrac- tion (USE) (Lambropoulou & Albanis, 2004), supercrit- ical fluid extraction (SFE) (Sun & Lee, 2003), shake- flask approach (Dabrowska et al., 2003), pressurized liquid extraction (PLE) (Dagnac et al., 2005), or microwaveassisted extraction (MAE) (Shen & Lee, 2003) methods, occasionally followed by cleanup tech- niques using solid-phase extraction (SPE) (Boeuf et al., 2016) or solid-phase microextraction (SPME) (Lambropoulou & Albanis, 2004) and QuEChERS. Herein, pesticide residues were evaluated in soils of different regions of northern parts of Iran (Golestan province), and the po- tential sources and risks of contamination were identi- fied for the first time, using QuEChERS-based extrac- tion techniques in soil matrices along with liquid chro- matography coupled to ESI-triple-quad mass spectrometry (LC-MS/MS) using MRM mode. In addition, a few papers have been published on extraction of carba- ryl, imidacloprid, cyproconazole, diazinon, butachlor, krezoxim-methyl, malathion, thiophanate-methyl, fenpropathrin, chlorpyrifos, propargite, and pinoxaden from soil samples using QuEChERS method. Among all the analytical instruments, LC coupled to triple-quadrupole mass spectrometry (LC-MS/MS) using MRM mode was a compatible appropri- ate tool for analysis of targeted pesticides in .(laboratories (Alder et al., 2006; Pico et al., 2004