We have gathered information on the vibrational energy states in the ground electronic state of three isotopomers of acetylene ($^{12}$C$_2$H$_2$, $^{12}$C$_2$D$_2$, $^{13}$C$_2$H$_2$): spectroscopic constants (vibrational frequencies and anharmonicities, geometrical structure, vibration-rotation interaction parameters), observed vibrational energy states and complete sets of predicted vibrational energies and predicted principal rotational constants $B_0$ for states of $^{12}$C$_2$H$_2$, $^{12}$C$_2$D$_2$ and $^{13}$C$_2$H$_2$ up to 15000, 10000 and 12000 cm$^{-1}$ respectively. Statistical parameters (partition functions and integrated number of states) deduced from these predicted spectroscopic data are also provided for the three isotopomers.