We have evaluated the water storage on a clayey Rhodic Hapludox as a function of cropping systems under long-term no-till, in Botucatu, São Paulo, Brazil, a region with typically dry winters. In such situation, a suitable cropping system may reduce water losses as well as increase crop yields. The plots planted in the fall/winter were Congo grass (*Brachiaria ruziziensis*), grain sorghum (*Sorghum bicolor*) and a mix of both. In the spring, pear millet (*Pennisetum glaucum*), forage sorghum (*Sorghum bicolor*) and indian hemp (*Crotalaria juncea*) were planted in the sub-plots. Soybean (*Glycine max* (L.) Merril) was the summer crop. Readings of volumetric water content were taken from May 02, 2012 through April, 26, 2013 (period comprising a harvest of each crop) by a capacitance probe (model Diviner 2000). The results that will be presented include the variation of soil water storage until a depth of 0.8m and the drainage below this depth.