Field experiments were carried out (2013/2014 and 2014/2015 for wheat; 2014 and 2015 for maize) at the two sites of Giza area (Giza governorate, represented to Middle Egypt) and Shandaweel area (Sohag governorate, represented to Upper Egypt). The present study aims to improve water management in on-farm using CropWat model. Fifteen irrigation scheduling scenarios in addition the control treatment have been proposed and studied. The irrigation scheduling criteria included irrigation timing (irrigation at fixed interval days) and application depths (fixed depths “net irrigation”, mm). The Control treatment represented to Farmer application where the irrigation intervals are at a maximum whilst avoiding any crop stress. Results indicated that elongate the period between irrigation with adding of a few water amounts led to save more of water but caused a substantial decrease in the productivity of the crop. On the other hand, shortening the period between irrigation with the addition of large amounts of water resulted in loss of large amounts of water without benefit. The results confirmed that the best scenarios that can be applied to get higher out of the water unit for wheat crop is 25 days + 50 mm at Giza and 20 days + 50 mm at Shandaweel. These scenarios led to saving irrigation water around 1,500 m3/ha (yield reduction less than 2 %). At the level of the total area planted with wheat, the total amount of water that can be saved will reach around 2,121 BCM. This amount of water is sufficient to irrigate an area of wheat about 385,568 ha