

## Supplementary Materials



**Figure S1.** Left: Water treatment plant, experimental field and mature lagoon (A, above) and (B, below): lay out of the experimental plot in July 2019, including subsurface drip irrigation (360 m<sup>2</sup>, T1 and T2), support irrigation (60 m<sup>2</sup>, T3) and rainfed (60 m<sup>2</sup>, T4) areas. Drip irrigation area was divided in three blocks in which both of the two irrigated treatments were installed (6 subplots of 8 lines of 10 m long). Observe trees growing close to the T3 and T4 areas. Right: experimental field at the time in which drip lines are being buried. Note soil sensors placed at the topsoil at this time.



**Figure S2.** Pump, filters and fertigation tank from the irrigation head.



**Figure S3.** Plants just before and after the power outage of 14 days in which plants were not irrigated.



**Figure S4.** *Spodoptera frugiperda* attack causing important losses in plant leaves (left) and in cobs (centre). Right: Cobs classification at field in three qualities: high (centre, below), poor/moderate (centre above) and low pest attack, respectively.