

Figure S1



Fig. S1. A separate growth experiment conducted with the microcontroller-based water control system. 16 tomato plants were grown in lidded pots. (A) Just after transplanting and (B) 20 days after transplanting. Scales equipped with watering pipes are placed on the metal racks, with water tanks located under each rack. The microcontroller system is housed in the central plastic box.

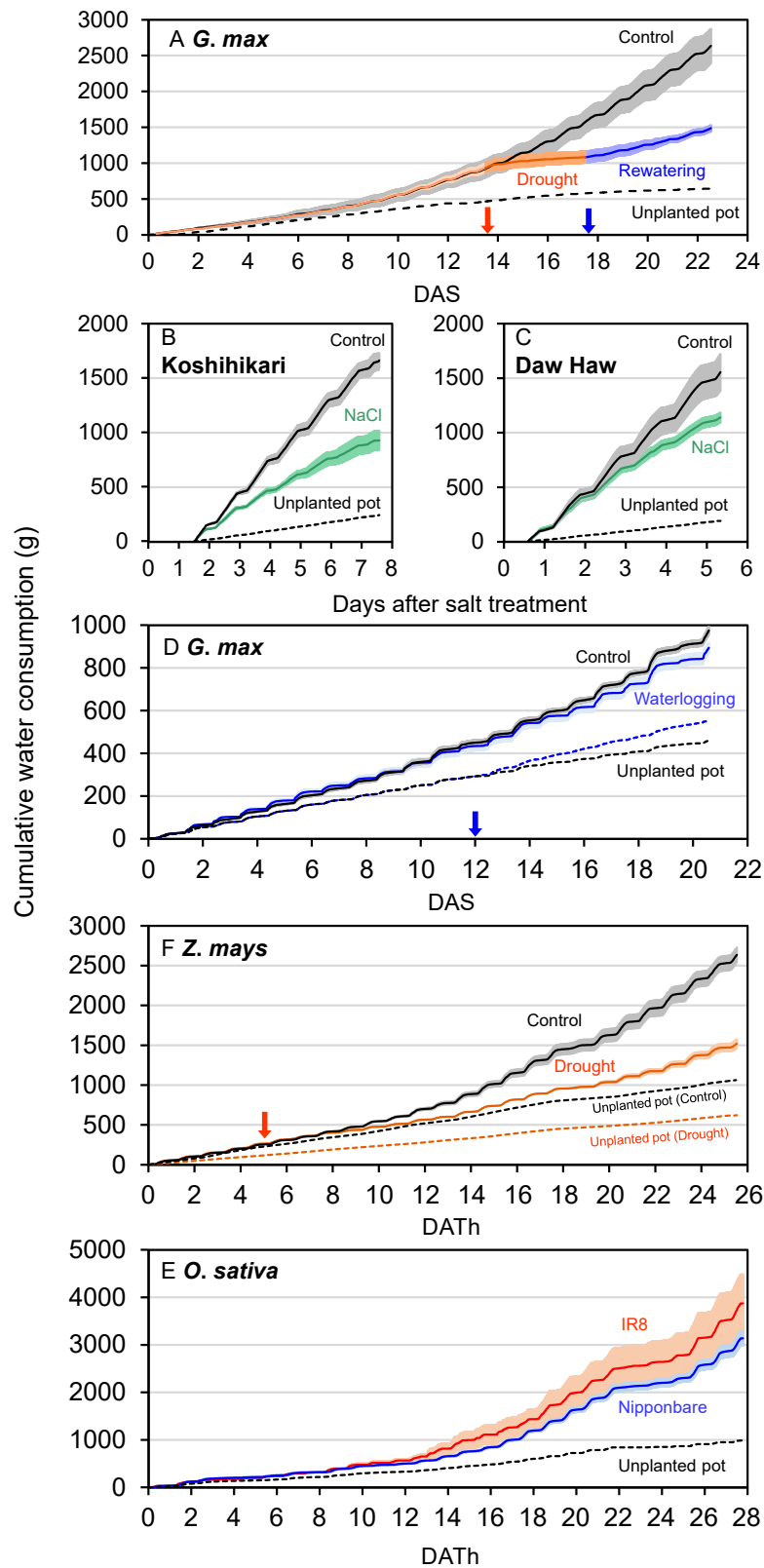


Fig. S2. Cumulative water consumption of planted and unplanted pots. (A) *G. max* in Exp. 1, (B, C) two cultivars of *O. sativa* in Exp. 2, (D) *G. max* in Exp. 3, (E) two cultivars of *O. sativa* in Exp. 4, (F) *Z. mays* in Exp. 5. See Table 1 and Figs. 3-7 for detailed experimental setup. Values and bars represent mean $\pm$ SD ($n = 3-4$).

Figure S3

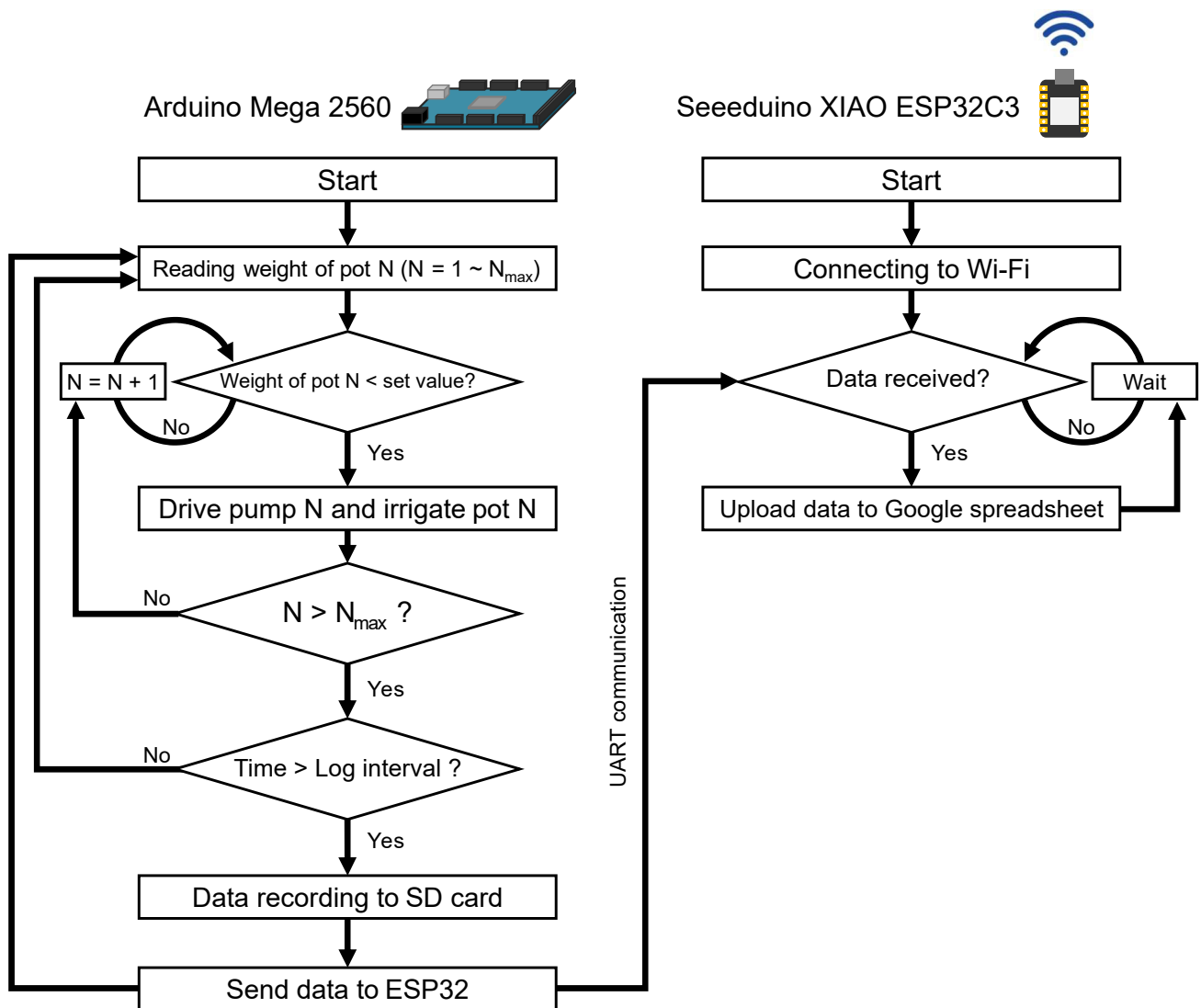


Fig. S3. System flowchart.

The Arduino Mega measures pot weight and controls automated irrigation for each pot, transmitting data to the ESP32 via UART communication at the specified log interval. The Wi-Fi-connected ESP32 uploads the received data to a Google spreadsheet. The programming code for both microcontrollers will be made available upon request.