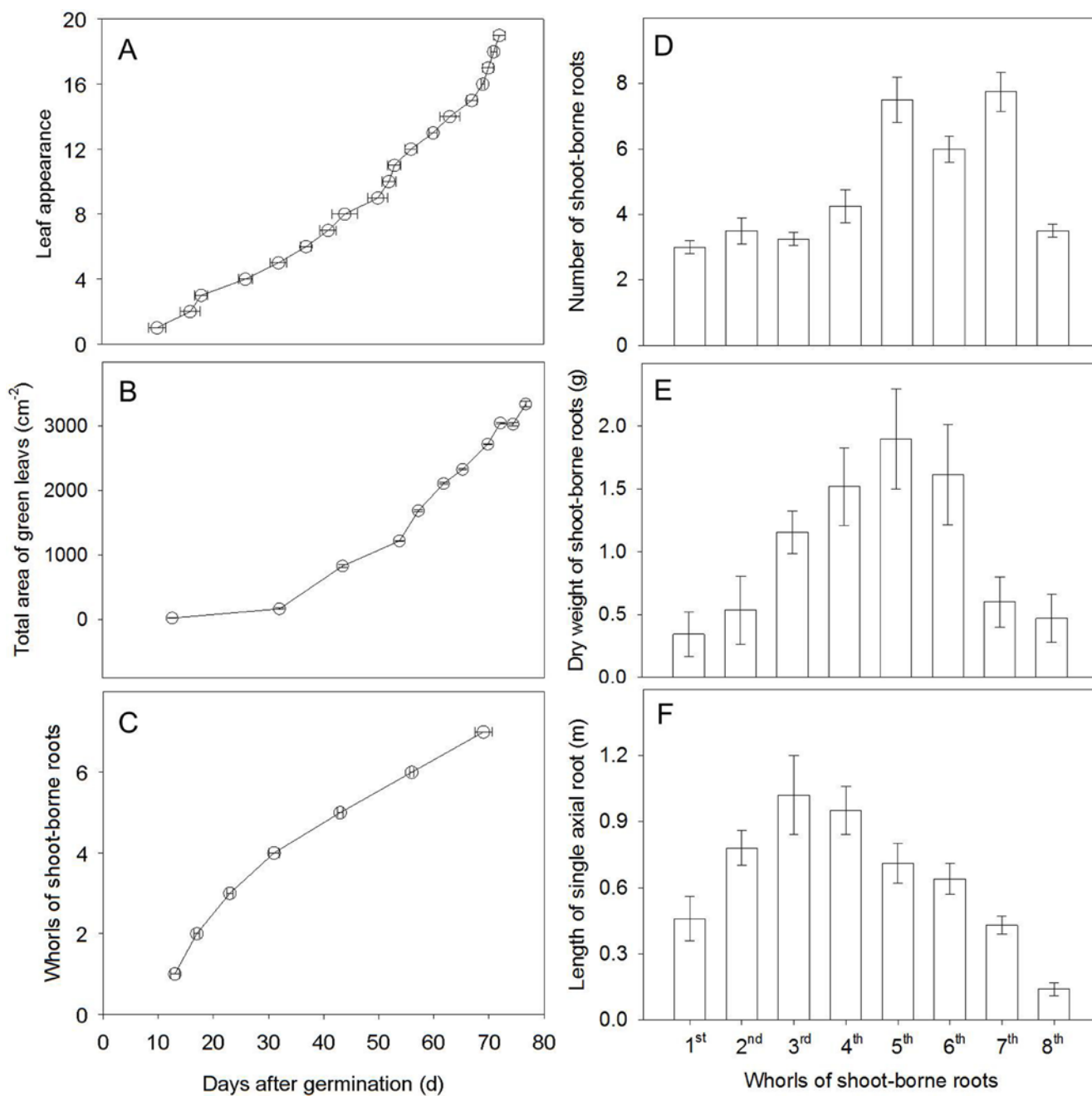


## SUPPLEMENTARY DATA

**Figure S1.** Dynamics in growth and development of leaves and different whorls (1<sup>st</sup> to 8<sup>th</sup>) of shoot-borne roots (SBRs) of maize inbred line B73 grown under 0.5 mM nitrate in 20 L pots in the greenhouse. (A) Dynamics of appearance of leaves. (B) Changes in total area of green leaves from 2-leaf stage until silking. (C) Initial time of each whorl of SBRs. Comparisons in number (D), dry weight (E), and single axial root length (F) of different whorls of SBRs of maize harvested 13 days after silking. Bars indicate s.e. of the mean,  $n = 4$ .



**Figure S2.** Specific root length of axial root, the 1<sup>st</sup> and the 2<sup>nd</sup> order lateral roots (LRs) initiated from the primary root and different whorls of shoot-borne roots (SBRs) of maize inbred line B73 with split-supply of localized high nitrate (Local HN, 4 mM), compared with those supplied with homogeneous low nitrate (Homo LN, 0.5 mM). Bars indicate s.e. of the mean,  $n = 4$ . ‘\*’ above each pair of columns represented significant differences between treatments (Homo LN vs Local HN) ( $P < 0.05$ ).

