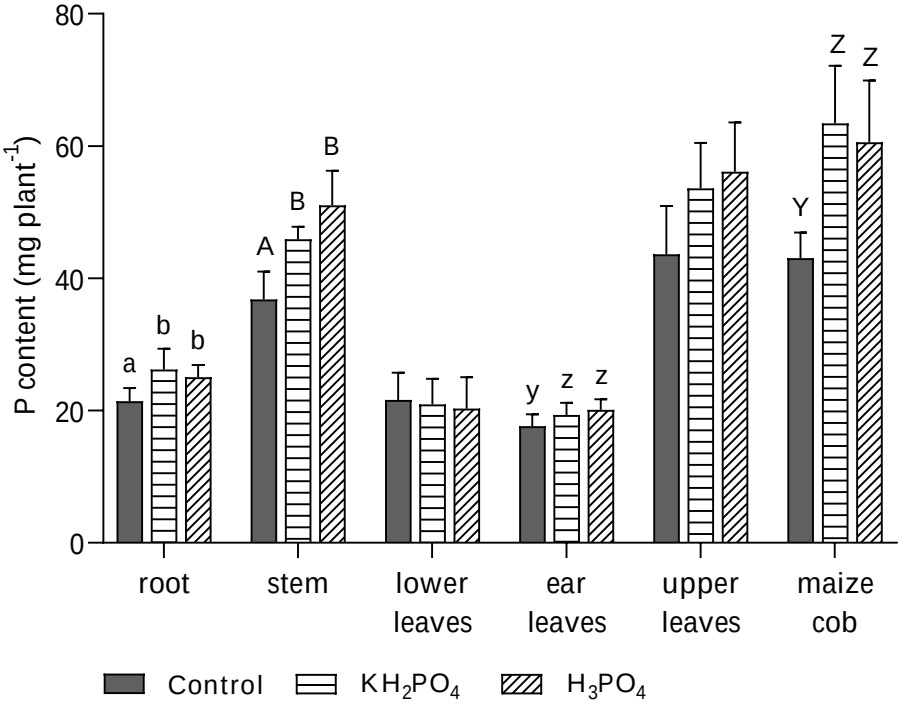

Figure S1: Phosphorus content (P) in mg plant^{-1} of the investigated parts of the plant were analyzed after harvest at flowering (BBCH 65). Plant material was separated into root, stem, lower leaves (leaves below the ear leaves), ear leaves, upper leaves (leaves above the ear leaves), and maize cobs (+ husk leaves). Control without P fertilization (control) or three foliar applications of 200 mM potassium dihydrogen phosphate (KH_2PO_4) or phosphoric acid (H_3PO_4) at 40, 46, and 53 days after sowing. Bars represent means + SD (n = 5). Letters indicate significant differences between treatments (ANOVA with Duncan test, $p \leq 0.05$).

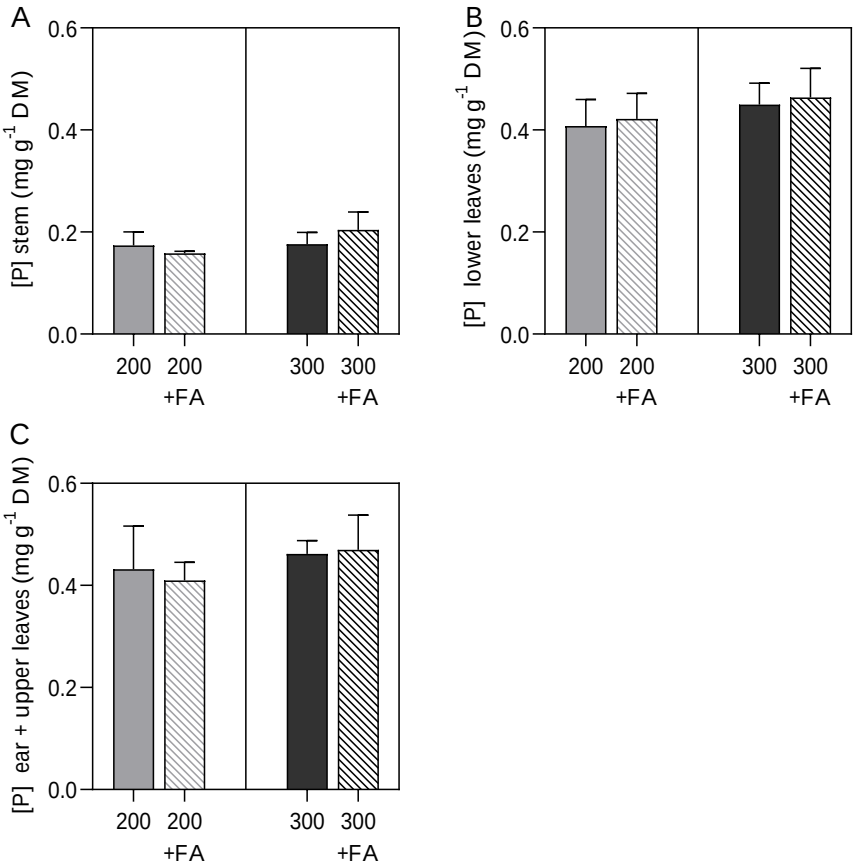

Figure S2: Phosphorus concentration [P] in mg g^{-1} dry matter of (A) stem, (B), lower leaves, and (C) ear + upper leaves. Plants were cultivated with 200 mg P soil fertilization (200) with additional foliar application (FA) (200+FA) or with 300 mg P soil fertilization (300) with additional foliar application (300+FA). KH_2PO_4 was used as foliar fertilizer and was applied at 35, 42, and 49 days after sowing. Bars represent means + SD (n = 5). Asterisks indicate significant differences between treatments of one fertilization level (student´s t-test, $p \leq 0.05$).

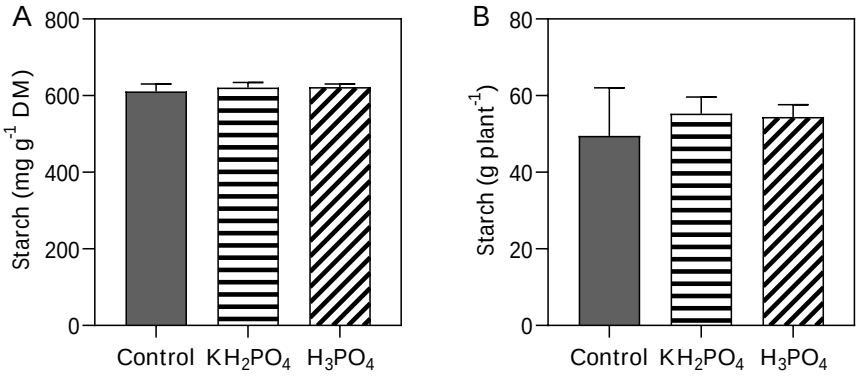

Figure S3: (A) Starch concentration in mg g^{-1} dry matter, and (B) starch content in g $plant^{-1}$. Control without P fertilization (control) or three foliar applications of 200 mM potassium dihydrogen phosphate (KH_2PO_4) or phosphoric acid (H_3PO_4) at 40, 46, and 53 days after sowing. Bars represent means + SD (n = 5). Letters indicate significant differences between treatments (ANOVA with Duncan test, $p \leq 0.05$).

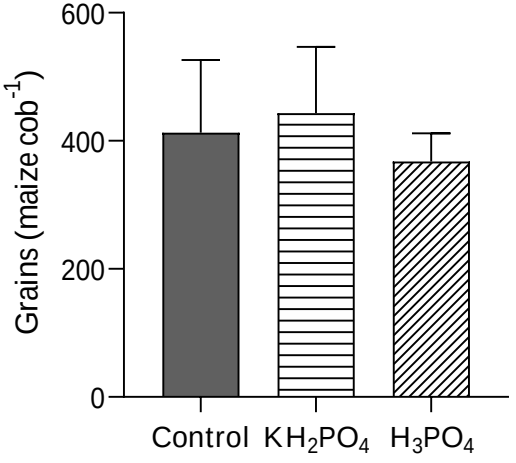

Figure S4: Number of grains per maize cob at maturity (BBCH 89). Control without P fertilization (control) or three foliar applications of 200 mM potassium dihydrogen phosphate (KH_2PO_4) or phosphoric acid (H_3PO_4) at 40, 46, and 53 days after sowing. Bars represent means + SD ($n = 5$). Letters indicate significant differences between treatments (ANOVA with Duncan test, $p \leq 0.05$).