



Figure 5. Root lignin concentration is correlated with tensile stress of the root cortex and root tip bending force. (A) Tensile stress of seminal roots, and first, second, and third node crown root in maize is shown at 37 days of growth from greenhouse mesocosms. (B) Roots with MCS had a greater root tip bending force compared to tips of roots without MCS in maize. (C) Tensile stress of nodal roots in wheat is shown at 30 days of growth from greenhouse mesocosms. (D) Tips of roots with MCS had a greater bending force compared to tips of roots without MCS in wheat. Data shown are means \pm standard error (SE) for four replications per genotype from plants grown in greenhouse mesocosms ($n=12$ in maize, $n=16$ for wheat with MCS, $n=32$ for wheat without MCS). Means with the same letters are not significantly different ($p \leq 0.05$) according to Tukey's HSD.