Supporting Information

Degenhardt et al. 10.1073/pnas.0906365106



Fig. S1. Design of the field plots where transformed lines were tested alongside control lines. Plants were grown in plots with 2 or 4 rows with 8 plants per row. Four plants of each row were used for the root damage rating, and the 4 remaining plants received emergence cages to monitor emergence of adult WCR. (a) One row of a control line was planted alongside a row of a transformed maize line. Each plant was infested with WCR eggs and nematodes were applied in a trench in the middle of the 2 rows (n = 30). (b) As a first control plot, a row of 8 control plants was planted alongside 3 rows with each 8 plants of a transformed line. These plants were also infested with WCR eggs, but no nematodes were applied (n = 5). (c) For the second type of control plot, design was the same as for b, but no WCR eggs or nematodes were applied (n = 5).



Fig. S2. WCR adult head capsule width and weight. To evaluate whether there was a difference in the size of the adult beetles that emerged near transgenic and nontransgenic plants in the 2 plot types that had received WCR eggs, the head capsule width and dry weight of each beetle was measured. (a) Average head capsule width of beetles that emerged in maize plots infested with WCR eggs without nematode application (n = 5, P = 0.57). (b) Average head capsule width of beetles that emerged in maize plots infested with WCR eggs and application of nematodes (n = 30, P = 0.41). (c) Average dry weight of beetles that emerged in maize plots infested with WCR eggs and application (n = 5, P = 0.39). (d) Average dry weight of beetles that emerged in maize plots infested with WCR eggs and application of nematodes (n = 30, P = 0.94). The letters above the bars indicate significant differences. Error bars indicate standard errors.



Fig. S3. Emergence of WCR adults over the collection period. WCR adults were sampled from July 17 to August 16. The number of adults collected per sampling date was plotted for the 2 plot types that had received WCR eggs to visualize any time effect on the emergence. (a) WCR emergence over time in maize plots infested with WCR eggs without nematode application. (b) WCR emergence over time in maize plots infested with WCR eggs and application of nematodes. The late decrease of the adult emergence in plots treated with nematodes may reflect an effect of multiple generations of the nematodes. Once they reached and infected their first hosts, a new generation of infective juveniles can be expected to emerge from this host within 10 days. A minimum of 3 generations must have exponentially increased the nematode population throughout the season, thereby having the most significant effect on the WCR larvae with slowest development.