

Table S1. Pedigree of 76 extra-early maturing provitamin A quality protein maize inbreds derived from a tropical *Zea Striga* resistant provitamin A quality protein maize population along with four checks used in this study.

Line	Pedigree information
TZEEIORQ 1	2009 TZEE-OR2 STR QPM S6 7-3/3-2/2-1/1-1/1-1/1
TZEEIORQ 2	2009 TZEE-OR2 STR QPM S6 9-1/2-1/1-2/3-1/1-1/1
TZEEIORQ 3	2009 TZEE-OR2 STR QPM S6 9-1/2-1/1-3/3-2/2-1/1
TZEEIORQ 4	2009 TZEE-OR2 STR QPM S6 11-3/3-1/4-1/2-1/1-1/1
TZEEIORQ 5	2009 TZEE-OR2 STR QPM S6 19-1/2-2/2-2/2-1/2-1/1
TZEEIORQ 6	2009 TZEE-OR2 STR QPM S6 15-1/2-1/3-3/3-1/1-1/1
TZEEIORQ 7	2009 TZEE-OR2 STR QPM S6 15-1/2-3/3-1/4-2/2-1/1
TZEEIORQ 8	2009 TZEE-OR2 STR QPM S6 15-1/2-3/3-2/4-2/2-1/1
TZEEIORQ 9	2009 TZEE-OR2 STR QPM S6 15-1/2-3/3-4/4-1/2-1/1
TZEEIORQ 10	2009 TZEE-OR2 STR QPM S6 15-2/2-1/2-3/3-2/2-2/2
TZEEIORQ 11	2009 TZEE-OR2 STR QPM S6 20-2/2-3/3-1/2-1/2-1/1
TZEEIORQ 12	2009 TZEE-OR2 STR QPM S6 20-1/3-1/1-1/3-3/3-2/2
TZEEIORQ 13	2009 TZEE-OR2 STR QPM S6 20-2/3-3/3-1/1-1/2-1/2
TZEEIORQ 14	2009 TZEE-OR2 STR QPM S6 20-3/3-1/3-1/2-2/2-2/2
TZEEIORQ 15	2009 TZEE-OR2 STR QPM S6 20-3/3-1/3-2/2-1/4-1/2
TZEEIORQ 16	2009 TZEE-OR2 STR QPM S6 21-1/6-1/2-1/2-2/2-1/1
TZEEIORQ 17	2009 TZEE-OR2 STR QPM S6 21-1/6-2/2-2/4-1/3-1/2
TZEEIORQ 18	2009 TZEE-OR2 STR QPM S6 21-1/6-2/2-2/4-3/3-2/2
TZEEIORQ 19	2009 TZEE-OR2 STR QPM S6 21-1/6-2/2-1/4-2/2-1/1
TZEEIORQ 20	2009 TZEE-OR2 STR QPM S6 21-1/6-2/2-4/4-1/4-1/2
TZEEIORQ 21	2009 TZEE-OR2 STR QPM S6 21-1/6-2/2-4/4-2/4-2/2
TZEEIORQ 22	2009 TZEE-OR2 STR QPM S6 21-1/6-2/2-3/4-2/2-1/1
TZEEIORQ 23	2009 TZEE-OR2 STR QPM S6 21-2/6-3/3-1/3-1/3-1/1
TZEEIORQ 24	2009 TZEE-OR2 STR QPM S6 21-2/6-1/3-1/2-1/2-1/1
TZEEIORQ 25	2009 TZEE-OR2 STR QPM S6 21-2/6-1/3-2/2-1/2-1/2
TZEEIORQ 26	2009 TZEE-OR2 STR QPM S6 21-2/6-1/3-2/2-2/2-2/2
TZEEIORQ 27	2009 TZEE-OR2 STR QPM S6 21-2/6-2/3-2/2-2/2-2/2
TZEEIORQ 28	2009 TZEE-OR2 STR QPM S6 21-2/6-3/3-2/3-1/3-1/2

TZEEIORQ 29	2009 TZEE-OR2 STR QPM S5 21-2/6-3/3-2/3-2/3-2/2
TZEEIORQ 30	2009 TZEE-OR2 STR QPM S6 21-2/6-3/3-3/3-1/3-1/2
TZEEIORQ 31	2009 TZEE-OR2 STR QPM S6 21-2/6-3/3-3/3-3/3-2/2
TZEEIORQ 32	2010 TZEE-OR2 STR QPM S6 21-5/6-1/2-1/2-3/3-1/1
TZEEIORQ 33	2009 TZEE-OR2 STR QPM S6 22-1/3-1/2-2/4-2/2-1/1
TZEEIORQ 34	2009 TZEE-OR2 STR QPM S6 22-1/3-1/2-3/4-1/2-1/1
TZEEIORQ 34B	2009 TZEE-OR2 STR QPM S7 22B-1/3-1/2-3/4-1/2-1/1
TZEEIORQ 50B	2009 TZEE-OR2 STR QPM S7 27B-1/5-1/3-1/3-1/2-1/2
TZEEIORQ 62B	2009 TZEE-OR2 STR QPM S7 27B-5/5-1/2-3/3-2/3-1/1
TZEEIORQ 77	2009 TZEE-OR2 STR QPM S7 82-2/2-2/2-1/4-1/3-1/2
TZEEIORQ 39	2009 TZEE-OR2 STR QPM S6 22-2/3-2/2-1/1-2/2-1/1
TZEEIORQ 40	2009 TZEE-OR2 STR QPM S6 22-3/3-1/3-1/3-3/5-1/1
TZEEIORQ 41	2009 TZEE-OR2 STR QPM S6 22-3/3-1/3-2/3-3/4-1/1
TZEEIORQ 42	2009 TZEE-OR2 STR QPM S6 22-3/3-2/3-3/3-1/3-1/2
TZEEIORQ 43	2009 TZEE-OR2 STR QPM S6 22-3/3-2/3-3/3-2/3-2/2
TZEEIORQ 44	2009 TZEE-OR2 STR QPM S6 22-3/3-3/3-1/3-1/3-1/3
TZEEIORQ 45	2009 TZEE-OR2 STR QPM S6 22-3/3-3/3-1/3-2/3-2/3
TZEEIORQ 46	2009 TZEE-OR2 STR QPM S6 22-3/3-3/3-1/3-3/3-3/3
TZEEIORQ 47	2009 TZEE-OR2 STR QPM S6 22-3/3-2/3-2/3-1/2-1/1
TZEEIORQ 49	2009 TZEE-OR2 STR QPM S6 22-3/3-3/3-2/2-1/1-1/1
TZEEIORQ 50	2009 TZEE-OR2 STR QPM S6 27-1/5-1/3-1/3-1/2-1/2
TZEEIORQ 51	2009 TZEE-OR2 STR QPM S6 27-1/5-1/3-1/3-2/2-2/2
TZEEIORQ 52	2009 TZEE-OR2 STR QPM S6 27-1/5-2/3-2/2-2/3-1/1
TZEEIORQ 53	2009 TZEE-OR2 STR QPM S6 27-1/5-2/3-1/2-3/3-1/1

TZEEIORQ 54	2009 TZEE-OR2 STR QPM S6 27-1/5-3/3-1/3-2/2-1/1
TZEEIORQ 55	2009 TZEE-OR2 STR QPM S6 27-1/5-3/3-2/3-1/2-1/2
TZEEIORQ 56	2009 TZEE-OR2 STR QPM S6 27-1/5-3/3-2/3-2/2-2/2
TZEEIORQ 57	2009 TZEE-OR2 STR QPM S6 27-1/5-3/3-3/3-1/1-1/1
TZEEIORQ 58	2009 TZEE-OR2 STR QPM S6 27-3/5-1/3-1/2-1/3-1/2
TZEEIORQ 59	2009 TZEE-OR2 STR QPM S6 27-3/5-1/3-2/2-2/2-1/1
TZEEIORQ 60	2009 TZEE-OR2 STR QPM S6 27-3/5-2/3-1/2-1/2-1/1
TZEEIORQ 61	2009 TZEE-OR2 STR QPM S6 27-5/5-1/2-1/3-2/3-1/1
TZEEIORQ 62	2009 TZEE-OR2 STR QPM S6 27-5/5-1/2-3/3-2/3-1/1
TZEEIORQ 63	2009 TZEE-OR2 STR QPM S6 27-5/5-2/2-1/2-1/2-1/2
TZEEIORQ 64	2009 TZEE-OR2 STR QPM S6 27-5/5-2/2-1/2-2/2-2/2
TZEEIORQ 65	2009 TZEE-OR2 STR QPM S6 27-5/5-2/2-2/2-2/3-1/1
TZEEIORQ 66	2009 TZEE-OR2 STR QPM S6 29-2/3-1/2-2/2-1/2-1/1
TZEEIORQ 67	2009 TZEE-OR2 STR QPM S6 33-1/2-1/1-1/2-1/2-1/1
TZEEIORQ 68	2010 TZEE-OR2 STR QPM S6 33-1/2-1/2-2/2-1/2-1/1
TZEEIORQ 69	2009 TZEE-OR2 STR QPM S6 34-1/1-3/3-1/1-2/4-1/2
TZEEIORQ 70	2009 TZEE-OR2 STR QPM S6 34-1/1-3/3-1/1-4/4-2/2
TZEEIORQ 71	2009 TZEE-OR2 STR QPM S6 37-1/2-1/1-1/2-1/1-1/1
TZEEIORQ 72	2009 TZEE-OR2 STR QPM S6 58-1/1-1/2-1/1-2/3-2/2
TZEEIORQ 73	2009 TZEE-OR2 STR QPM S6 58-1/1-1/2-1/1-3/3-1/2
TZEEIORQ 74	2009 TZEE-OR2 STR QPM S6 79-2/2-1/1-2/3-1/1-1/1
TZEEIORQ 75	2009 TZEE-OR2 STR QPM S6 82-2/2-2/2-1/4-1/3-1/2
TZEEIORQ 76	2009 TZEE-OR2 STR QPM S6 82-2/2-2/2-1/4-3/3-2/2
TZEEI 94	Check-1 TZEE-Y Pop Co S6 Inbred 47-2-4B
TZEEI 75	Check-2 TZEF-Y SR BC1 x 9450 STR S6 Inb 7B
TZEEI 76	Check-3 TZEF-Y SR BC1 x 9450 STR S6 Inb 8B
TZEEI 73	Check-4 TZEF-Y SR BC1 x 9450 STR S6 Inb 3A

TZEEIORQ = Extra-early Maturing Provitamin A Quality Protein Maize Inbred; **TZEEI** = Tropical *Zea* Extra-early Inbred