







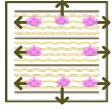









# Toothpick Competitor Matrix

Competitor	Restores crop yield	Attacks Striga seed bank in soil	Safe	Price / Farmer ROI	Available
 <b>TOOTHPICK</b>	✓	✓	✓	✓ \$15.45/acre (to treat 10kg seed). Other unit sizes are 5kg and 2kg.	✓
 <b>Weeding/uprooting</b>	✗ By the time the weed comes above ground, striga has already attached to the crop and is doing damage.	 If done before flowering, can prevent the deposit of striga seeds in the seed bank.	✓ * See note on mechanization risk	✗ It is an essential preventative measure. Some farmers hire labor for weeding.	✓
 <b>Fertilizer</b>	✗ It can take years to boost soil fertility enough to beat striga	✗	✗ Contributes to GHG emissions, reduction in organic matter, toxic runoff, loss of soil carbon	✗ \$32.50. Recommend improving soil fertility (compost, crop rotation, no till, etc.). Not a striga ROI.	✓
 <b>Striga-resistant crop varieties</b>	 Boosts yield reportedly up to 23% (50-79% less yield increase than IRMaize) Not full restoration.	✗	✓	 Has to be purchased every season. Could not find on the market to source a price.	 Not readily available in all villages
 <b>Push:Pull</b>	 ICIPE has promoted this for 10+ years. Yield improvement is based on years of practice.	✓ ICIPE reports this method reduces the seed bank.	✓	 \$21-48/acre. For livestock, desmodium is a nutritious fodder. Difficult to source. Difficult to establish	✓ Documented very poor farmer adoption and maintenance
 <b>StrigAway (IR-resistant maize)</b>	✓ Similar yield increase to Toothpick in regulatory trials.	✓	✗ Distributed with gloves for protection.	✓ \$21.20/acre (restricted availability)	✗ Pulled off the market due to toxic runoff and short shelf life
 <b>Suicidal germination</b>	 Still in R&D but we assume it will restore yield	✓			✗ Still in R&D. Nothing in the regulatory pipeline yet.

\*Tractors and shared mechanized equipment are spreading striga seeds to new farms. There is a risk the seeds will be transported to new counties as tractor sharing becomes more popular.