

Effectiveness of Push–Pull Systems to Fall Armyworm (*Spodoptera frugiperda*) Management in Maize Crops in Morelos, Mexico

Table S1. Data of the establishment of the field experiment in the 2019 maize season (Experimental period: June - December 2019)

Crop type	Species	Sowing / transplant dates	Distance between plants (cm)	Density (plants/ha)
Trap plants	<i>B. hybrid</i> cv <i>Mulato II</i>	June 4–8	SS	-
	<i>P. maximum</i> cv. <i>Mombasa</i>		SS	-
	<i>P. maximum</i> cv. <i>Tanzania</i>		SS	-
Intercropped plants	<i>T. erecta</i> §	June 17	80	7 200
	<i>D. ambrosioides</i> §	June 21	40	1350
	<i>C. juncea</i>	June 21 and 22	60	38 400
Main crop	<i>Z. mays</i> *‡	June 21 and 22	20	60 000

§ Transplanted species;

*Pioneer P3966W;

‡The maize crops of all treatments received foliar fertilization with worm leachate (Dose: 250 liters/ha) on July 10 and 17 and nitrogen fertilization (Dose: 200 kg/ha of Urea corresponding to 92 kg/ha of Nitrogen) on August 14.

SS: sowing in streamlines with a distance of 50 cm between the two sowing lines;

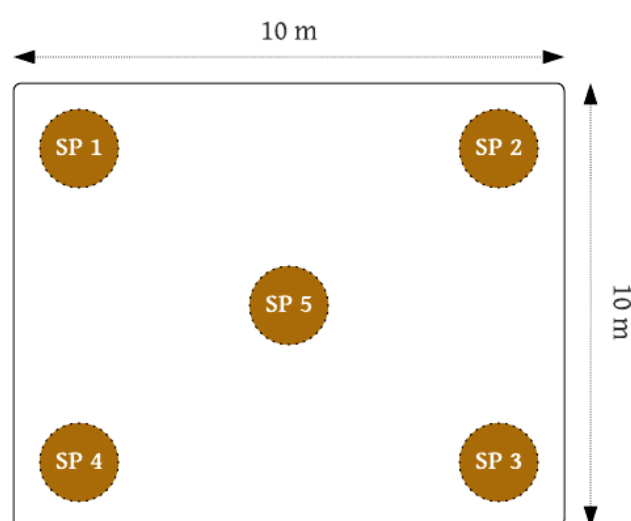
Harvest date: December 16;

Shelling and weighing date: December 18.

Table S2. Costs and incomes considered for the profitability analysis of the production systems

Activities	Values (\$USD)
Land preparation (\$USD/ha)	136.405
Maize seeds (\$USD / ha PP) [¥]	48.716
Labor for maize planting (\$USD / ha PP) [¥]	27.281
Nitrogenous fertilizer (\$USD / ha PP) [¥]	13.641
Foliar fertilizer (\$USD / ha PP) [¥]	27.281
Weeding (\$USD / ha PP) [¥]	115.991
<i>T. erecta</i> cost (\$USD / ha PP) [¥]	589.268
<i>D. ambrosioides</i> cost (\$USD / ha PP) [¥]	1178.540
<i>C. juncea</i> seed cost (\$USD / ha PP) [¥]	27.838
Mombasa seed cost (\$USD / ha PP) ^a	109.124
Tanzania seed cost (\$USD / ha PP) ^a	109.124
Mulato II seed cost (\$USD / ha PP) ^a	109.730
	147.579 (\$USD / ha) + 6.416 ((USD /ton) × Yield (ton/ha)
Labor for harvest [§]	Organic/Agroecological production = 427.766 Conventional Production = 294.089
Maize price (\$USD /ton)	
<i>D. ambrosioides</i> income (\$USD / ha PP)	1571.386
<i>T. erecta</i> income (\$USD / ha PP)	785.691
<i>C. juncea</i> income (\$USD / ha PP)	6.991
Income from Mulato II (two cuts) (\$USD / ha PP)	57.532
Income from Mombasa/Tanzania (two cuts) (\$USD/ha PP)	78.811
Discount rate [*]	9.5%

[¥] Estimated values for the main areas of Push-Pull plots (taken to one hectare); ^a Estimated values for the pasture areas of Push-Pull plots (taken to one hectare); [§]Unisem; ^{*} González-Estrada (1999); The conversion of dollar to Mexican peso used was: \$ 1 USD = 18.7018 pesos (December 2019).

**Figure S1.** Five-point sampling method used in the maize plots (10 × 10 m) of the different production systems. SP = Sampling Point.

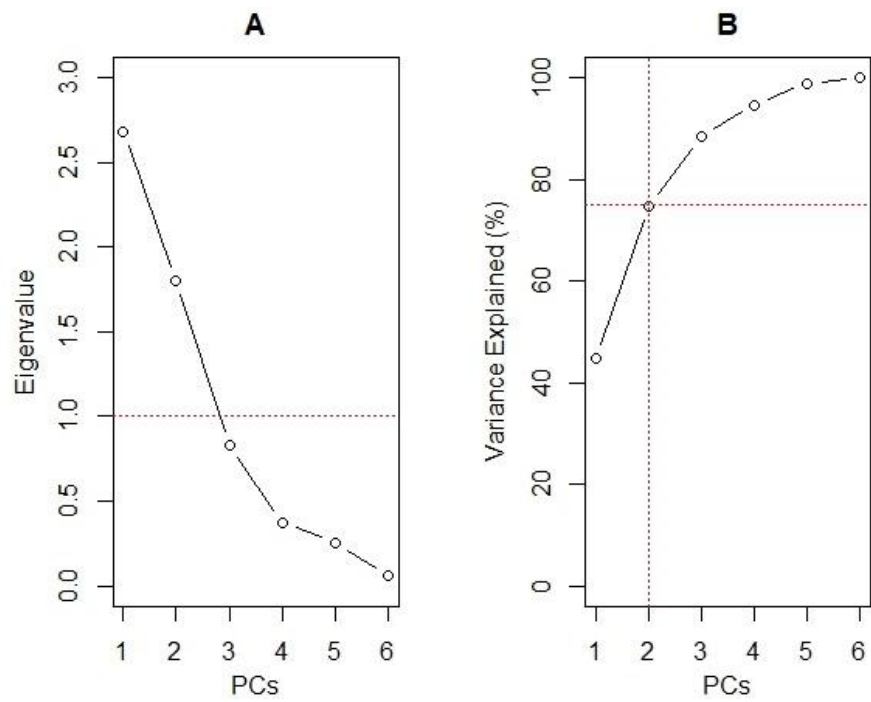


Figure S2. Scree plots of eigenvalues (A) and cumulative variance explained (B) of principal components of Push-Pull systems evaluation variables at Yautepec, Morelos, Mexico.