**Supplementary Table**

**Table S1**

Socio-demographics of farmers and their perception of third generation Push-Pull technology (3G-PPT)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Response/Ratings** | **Suba** | **Bondo** | **Siaya** | **Kisumu** | **Vihiga** |  |
|  | **n=4** | **n=5** | **n=4** | **n=4** | **n=4** | **Mean** |
| Gender (Male) (%) | 75 | 60 | 25 | 75 | 25 | 52 |
| Age category (%) |  |  |  |  |  |  |
|  18-30 | 0 | 0 | 0 | 25 | 0 | 5 |
|  31-40 | 75 | 0 | 25 | 25 | 0 | 25 |
|  41-50 | 25 | 20 | 50 | 25 | 0 | 24 |
|  51-60 | 0 | 80 | 25 | 0 | 75 | 36 |
|  >60 | 0 | 0 | 0 | 25 | 25 | 10 |
| Education level (%) |  |  |  |  |  |  |
|  None | 0 | 0 | 0 | 0 | 0 | 0 |
|  Primary | 50 | 60 | 25 | 50 | 25 | 42 |
|  Secondary | 25 | 40 | 75 | 25 | 75 | 48 |
|  Tertiary | 25 | 0 | 0 | 25 | 0 | 10 |
| Number of years practicing CS-PPT (%) |  |  |  |  |  |  |
|  1-2 yrs | 0 | 0 | 0 | 25 | 0 | 5 |
|  3-4 yrs | 50 | 20 | 25 | 25 | 0 | 24 |
|  5yrs and over | 50 | 20 | 75 | 50 | 100 | 59 |
| Intention to continue with 3G-PPT (%) |  |  |  |  |  |  |
|  Yes | 100 | 80 | 100 | 75 | 75 | 86 |
|  No | 0 | 20 | 0 | 25 | 25 | 14 |
| Reasons for intending to continue 3G-PPT (%) |  |  |  |  |  |  |
|  Reduces attack by FAW | 25 | 0 | 0 | 0 | 50 | 15 |
|  Companion crops are drought tolerant | 25 | 0 | 75 | 0 | 0 | 20 |
|  Good biomass yield by Xaraes | 0 | 60 | 0 | 25 | 0 | 17 |
|  Spider mites resistance in Xaraes | 25 | 20 | 0 | 25 | 0 | 14 |
| Reasons for not intending to continue with 3G-PPT (%) |  |  |  |  |  |
|  Desmodium has low biomass  | 0 | 0 | 0 | 25 | 50 | 15 |
| Intending to expand existing 3G-PPT (%) |  |  |  |  |  |  |
|  Yes | 100 | 60 | 75 | 75 | 50 | 72 |
|  No | 0 | 0 | 25 | 25 | 50 | 20 |
| Reasons for not intending to expand 3G-PPT (%)  |  |  |  |  |  |  |
|  Limited land for farming  | 0 | 0 | 50 | 25 | 0 | 15 |
|  Lack of access to seeds of companion crops | 0 | 0 | 0 | 0 | 25 | 5 |
| Are other farmers interested in 3G-PPT? (%) |  |  |  |  |  |  |
|  Yes | 100 | 75 | 50 | 100 | 50 | 75 |
|  No | 0 | 20 | 50 | 0 | 50 | 24 |

CS-PPT, climate-smart Push-Pull technology; 3G-PPT, third generation Push-Pull technology; FP, farmer practice;

FAW, fall armyworm

**Supplementary Figures**



**Fig. S1.** Location of study sites in western Kenya



**Fig S2.** Companion plants used in climate-smart (CS) and third generation (3G) Push-Pull technology (PPT). A) Flowering *Desmodium incanum*, B) Greenleaf *Desmodium intortum* and C) Side by side comparison of *Brachiaria brizantha* cv Xaraes and *B. brizantha* cv Mulato II under heavy infestation of spider mites (*Oligonychus trichardti*), characterized by yellowing of leaves and stunting as observed on Mulato II.