

# **Push-Pull Technique in the Management of Fall Armyworm (*Spodoptera frugiperda*) in Sweetcorn (*Zea mays*), Taiwan**

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## **Abstract**

Effective control of fall armyworm (*Spodoptera frugiperda*) (FAW) through use of synthetic chemical pesticides faces several challenges including improper use, unaffordability by small farmers and mainly development of resistance by the pest. Consequently, there is a need to develop IPM packages that are suitable and cost-effective, and environmentally friendly especially for small farmers. Hence, the push-pull is a farming system intensification approach that involves attracting insect pests with trap plants (pull), while driving them away from the main crop using a repellent intercrop plant (push). In this context, the present study evaluated the effectiveness of the push-pull strategy, which, consisted of four treatments (control= corn monoculture, T1= corn + sunnhemp, T2= corn + napier grass, and T3= corn + sunnhemp + napier grass). Results, revealed that with the adaptation of the push-pull technique, there was a significant reduction in plant damage, number of larvae, and an increase in both insect diversification and yields when compared to the control. Although this management approach showed effectiveness in managing FAW in small scale maize production, a more complete IPM package is necessary to manage FAW in larger scale production.

Key words: Fall armyworm (FAW), Diversification, Integrated pest management (IPM), Maize, Push-pull technique

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