A new study has found that Smallholder farmers, fighting the fall of armyworms in Rwanda, are reaping greater benefits.

According to new CABI-led research published in the journal Food and Energy Security, the study was conducted on 720 smallholder farmers in Eastern Province, and it was found that maize yield increases between 10% to 34 $ depending on the channel.

The team found that exposure to a combined mass extension campaign consisting of plant health rallies, radio drama, and SMS all contributed to better identification of all fall armyworms and other environmentally friendly ways of managing the pest.

The findings suggest that while there is growing popularity in the use of digital extension approaches to deliver timely information to farmers in a cost-effective manner, much greater gains can be achieved if they are combined with other low-cost face-to-face extension methods, such as plant health rallies.

But it warns that, if not well managed, the fall pest has the potential to cause annual maize production losses of up to 17.70 million tonnes (equivalent to USD $4.66 billion) in 12 maize-producing African countries alone.

In Rwanda, fall armyworm was first reported in the Nyamagabe district in February 2017, and within 2 months, its presence was recorded in all of the country’s 30 districts.

The pest is causing severe damage to maize crops, resulting in economic losses, worsened food security, and intensive pesticide usage among smallholder maize farmers.

Dr. Justice Tambo who led the study says that they examined the effectiveness of three complementary mass-extension channels in enhancing farmers’ knowledge and management of fall armyworm (FAW).

He also points out that they also assessed the effects of the information channels on maize productivity.

“Our findings suggest that exposure to the campaign channels is associated with increased knowledge outcomes, including knowledge of the correct identification of FAW, the use of cultural practices as the first resort to FAW management, timely

planting to limit the infestation, and timely spraying for effective control of the pest.

“However, the positive effects of the campaign are statistically significant only when the field-based extension method is combined with digital extension approaches. Moreover, we found that the effects are greater for households that were exposed to all the three channels, suggesting complementary effects of the channels.”

Dr. Tambo for instance added that the results showed receiving FAW messages through any of the channels is correlated with a 7 percentage point increase in farmers’ level of knowledge on fall armyworm. But the knowledge gain could increase by up to 23 percentage points when the information is received through all the three channels under study.

“Households exposed to the information channels were significantly more likely to regularly monitor their maize fields for fall armyworm, and adopt cultural, chemical, mechanical measures for fall armyworm control than those who did not receive the fall armyworm information.” Dr. Tambo further added.