SUCCESS *STORY*

Transforming Maize Farming in Ghana: A Success Story of Partnership and Innovation

The Fall Armyworm (FAW) poses a significant threat to maize production in Ghana, where millions of households depend on maize for both food and income. This pest attacks maize plants at every growth stage, often causing yield losses ranging from 12% to 58%. Traditional methods of control, such as extensive pesticide spraying, are not only expensive and labor-intensive but also harmful to both human health and the environment. In response to this urgent challenge, a groundbreaking partnership has emerged, combining the expertise of research institutions with the innovative capacity of the private sector.

To combat FAW and mitigate its damaging impact, CSIR-Savanah Agriculture Research Institute (SARI), in partnership with CIMMYT, has released three non-Bt maize hybrids that exhibit inherent tolerance to the pest. These FAW-tolerant hybrids are designed to reduce the need for repeated pesticide applications, lower production costs, and minimize environmental damage. They represent a transformative solution that not only safeguards maize crops but also provides a platform for the broader adoption of integrated pest management technologies.

A key player in this transformative journey is Brakatu Investments and Commercial Farms Limited, a private seed company based in Gomoa Abasa in the Central Region of Ghana. Recognizing the urgency of the FAW crisis, Brakatu Investments made a strategic decision ahead of the 2024 main growing season. The company prepaid 60% of the cost for foundation seeds of the FAW-tolerant hybrids, and with technical support provided by Dr. Isaac Amegbor—a renowned maize Breeder at CSIR-SARI—Brakatu successfully cultivated 10 hectares of these certified seeds during the cropping season. According to Mr. Philip Quaye, the administrative and operations manager at Brakatu Investments, the decision to adopt these hybrids was driven by their ability to drastically reduce the number of pesticide applications required compared to conventional, FAW-susceptible varieties.

> ***"Farmers are excited about these hybrids because it's a real solution to the Fall Armyworm problem. As a seed producer, it aligns with our vision of empowering farmers with cutting-edge technologies,"***
> *he stated.*

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Dr Isaac Amegbor (Maize breeder at CSIR-SARI) excited at the performance of FAW tolerant maize

> ***"Seeing the results here at the Agricultural technology park convinced me that this variety is what I need to protect my crops and increase my yield."***
> *Mr. Fuseini Ibrahim, a farmer from Kpalsogu*

His enthusiastic endorsement highlights the park's role in instilling confidence among farmers and encouraging the broader adoption of these technologies.

The enthusiasm among the farming community is palpable. Alhassan Abu, a maize farmer from Tolon, shared his personal experience:

> ***"The Fall Armyworm destroyed a significant portion of my maize farm last year. These new hybrids give me hope. Seeing it at the Technology Park proved it works. I am eager to see how it will perform in my field."***
> *Alhassan Abu, a maize farmer from Tolon*

Mr. Abu plans to cultivate 5 hectares of the FAW-tolerant hybrids in the next planting season, and he has already encouraged his fellow farmers to consider this promising innovation. His optimism is a testament to the tangible benefits these hybrids offer—reducing losses, lowering input costs, and contributing to a more sustainable and resilient agricultural sector.

Mr. Quaye is confident that, by adopting FAW-tolerant maize hybrids, smallholder farmers can significantly increase their production and move towards self-sufficiency.

The impact of these innovations extends well beyond the seed companies. At the Agricultural Technology Park at CSIR-SARI, funded by the Food System Resilience Program (FSRP) through CORAF, interactive demonstrations have played a crucial role in bridging the gap between research and field application. The Technology Park serves as a dynamic hub where farmers, seed producers, and other stakeholders can witness firsthand the superior performance of FAW-tolerant hybrids under real-world conditions. During one such demonstration, Mr. Fuseini Ibrahim, a farmer from Kpalsogu, remarked,

The transformative impact of the FAW-tolerant maize hybrids is further amplified by the strategic role of partnerships. The collaboration between CSIR-SARI and CIMMYT, facilitated by CORAF's commitment to innovation and regional coordination, has been instrumental in introducing this breakthrough to the market. These partnerships not only ensure that cutting-edge technologies reach those who need them most but also foster a culture of knowledge sharing and technical support. The joint efforts have led to a comprehensive approach that addresses both immediate pest control needs and the longer-term goal of sustainable agricultural development.

The experience of Brakatu Investments, combined with the positive feedback from farmers like Alhassan Abu, illustrates the potential of agricultural research and innovation to drive significant improvements in productivity and livelihoods. With the support of the Agricultural Technology Park, which acts as both a demonstration site and a learning center, the technology has the potential to transform maize farming across Ghana and, by extension, the wider region.

FAW-tolerant hybrids showing clean undamaged leaves

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