

Comprehensive strategies for addressing climate change to manage stunted growth in corn

ARGENTINA, BRAZIL, COLOMBIA, UNITED STATES, MEXICO, PARAGUAY



Webstory



Technological solution

The technological solution consists of developing and implementing an integrated model for managing the maize stunt complex and its vector, *Dalbulus maidis*, by combining the modeling of its current and future distribution under climate change scenarios, the validation of sustainable field management practices, and technology transfer to producers. This solution brings together the use of georeferenced data, yellow sticky traps, taxonomic identification, modeling tools such as QGIS, R, MaxEnt, and Random Forest, and the comparison of conventional practices with integrated practices that include monitoring, irrigation, fertilization, biofertilizers, bioinsecticides, and biological control. In addition, it incorporates knowledge management strategies, farmer networks, training of trainers, and social learning to facilitate the adoption of innovations by small and medium-sized maize producers in Latin America.



Technological description

This initiative aims to reduce the incidence of the maize bushy stunt complex in maize-producing regions of Latin America by assessing the potential distribution of the vector *Dalbulus maidis* under climate change scenarios, validating and promoting sustainable technologies for the management of the maize bushy stunt complex and its vector, strengthening the adoption of innovations and maize farmer networks for knowledge management, and implementing technology transfer to small- and medium-scale maize producers.



Impacts and results

The proposal introduces improvements by integrating predictive, technological, and participatory approaches for managing corn stunt disease. It will incorporate distribution models of the vector *Dalbulus maidis* under climate change scenarios, enabling risk anticipation and targeted interventions. Additionally, it will validate and promote a sustainable technological package that reduces dependence on agrochemicals and improves production efficiency. The initiative will also strengthen adoption through farmer networks and knowledge management, overcoming gaps in technology transfer. Overall, it contributes to more resilient, profitable, and environmentally sustainable production systems.



- 20 %

Reducing the water footprint



+ 16 talleres

Training workshops



+ 5 %

Increase crop yield



- 30 %

Decrease in the use of agrochemicals



- 20 %

Reduction in chemical fertilizers



~ 400 personas

Trained people

MAIN DONORS



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