FONTAGROTECH

Digital platform for consulting cultivars, environments, and management recommendations

COSTA RICA, ARGENTINA, URUGUAY, PERU, PARAGUAY, COLOMBIA, UNITED STATES

Webstory

Technological solution

The technological solution is an interactive online platform that integrates soybean yield trial data from the participating countries. It allows users to compare cultivars, production environments, and management variables to generate specific recommendations. Its objective is to support more precise technical decisions and improve sustainable soybean productivity in Latin America.

Technological description

The project will develop an interactive online platform to integrate data generated by regional soybean performance and comparative yield trial networks across participating countries. This tool will allow farmers, crop advisors, and technical teams to view trial results, compare cultivar performance, and access tailored recommendations based on production environment, maturity group, planting date, plant spacing/stand geometry, and climate risk. The platform will be supported by regional databases containing environmental and crop variables, including weather, soil, topography, biotic factors, crop management practices, yield, phenology, and grain quality data. Furthermore, it will incorporate outputs from the calibration and validation of crop simulation models such as CROPGRO-soybean in DSSAT, using historical climate time series and probabilistic analysis.

Impacts and results

The project expects to establish national networks and a regional network of comparative soybean yield trials under standardized protocols, evaluating genotypes from different maturity groups in more than 180 environments throughout the project. The initiative will generate a baseline for each country, a unified protocol manual, regional databases with environmental and crop variables, and analyses of genotypic, environmental, and G×E interaction effects. It is also expected to identify cultivars with better performance and stability by environment, calibrate and validate simulation models, develop an interactive online platform, and produce reports, newsletters, outreach articles, and social media content. The estimated direct beneficiaries include approximately 5,000 producers, 15 seed companies, 500 technical advisors, and research and extension staff from the NARIs.

1
Base line established

150
Production environments evaluated

+ 5000
Beneficiaries

15
Partner seed companies

4
Technical training and field transfer days

+ 2
TRL increase expected

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