Evidences

Study #4269

Contributing Projects:

- P1571 - CIAT Contribution to RICE Flagship project 1

Part I: Public communications

Type: OICR: Outcome Impact Case Report

Status: Completed

Year: 2021

Title: Digital agriculture tools have reached 24% of rice and maize producers (around 4,000 ha), increasing 2020 yields by 26% on average (41% maize, 12% rice) in Colombia

Short outcome/impact statement:
In 2013, the Alliance of Bioversity-CIAT and Fedearroz, Fenalce, and the Ministry of Agricultural and Rural Development initiated a technical and scientific cooperation agreement to increase the federations' capacity to model and analyze climatic information to identify potential agricultural threats and develop management options. Since then, every year, the federations have used diverse strategies to improve rice and maize production in Colombia, mainly through farmers' workshops where agroclimatic knowledge is disseminated to influence farmers' management decisions.

Outcome story for communications use:
<Not Defined>

Links to any communications materials relating to this outcome:

- https://tinyurl.com/ybkcatdn

Part II: CGIAR system level reporting

Link to Common Results Reporting Indicator of Policies : No

Stage of maturity of change reported: Stage 3

Links to the Strategic Results Framework:
Sub-IDOs:

- Increased household capacity to cope with shocks
- Reduced smallholders production risk

Is this OICR linked to some SRF 2022/2030 target?: Yes

SRF 2022/2030 targets:

- # of more farm households have adopted improved varieties, breeds or trees

Description of activity / study: Andrade, R., Ibarra, L., Ortega, J. (2021). Too Little, too late? Rice production to mitigate climate change in Colombia. Colombia. Alliance Bioversity-CIAT. Cali, Colombia (mimeo)
Gallego, J., Wiesner, D., Jerez, K., Betancourth, A., Ortega, J., Bateman, A., González, C., Andrade, R., Ibarra, L., Álvarez, A., Cubillos, N. (2021). Evaluación de Impacto Informe final: resultados y recomendaciones. INSUCO. CIAT. GCF

Geographic scope:

- National

Country(ies):

- Colombia

Comments: <Not Defined>

Key Contributors:

Contributing CRPs/Platforms:

- Rice - Rice

Contributing Flagships:

- F1: Accelerating impact and equity
- F5: New rice varieties

Contributing Regional programs: <Not Defined>

Contributing external partners:

- FENALCE - Federación Nacional de Cultivadores de Cereales y Leguminosas
- FEDEARROZ - Federación Nacional de Arroceros
- MADR - Ministerio de Agricultura y Desarrollo Rural (Colombia)

CGIAR innovation(s) or findings that have resulted in this outcome or impact:

Climate change modeling and big data analytics contributed to generate specific analysis that help farmer's associations to support rice and maize producers.

Innovations: <Not Defined>

Elaboration of Outcome/Impact Statement:
Agricultural activities are highly susceptible to climatic variability and are therefore at increased risk of exposure to climate change. Colombia is considered highly vulnerable to climate change due to its geographical conditions [1]. To mitigate the agricultural sector risk and exposure, the Alliance of Bioversity International and CIAT, in collaboration with the Ministry of Agriculture and Rural Development of Colombia (MADR), Fedearroz (Federación Nacional de Arroceros), and Fenalce (Federación Nacional de Cultivadores de Cereales, Leguminosas y Soya) developed and have implemented since 2013 a technical and scientific cooperation agreement to propose and disseminate solutions to mitigate climate change. One of the main components is to strengthen farmers' associations in order to manage and model climate data. The latter is to design agro-climatic forecasting tools and their validation in various areas of the Colombian agricultural sector for optimized crop management decisions. Since 2013, the farmers' associations have continued developing tools and strengthening institutional capacities to incorporate this information into their extension activities and create agronomic strategies to mitigate and make farmers more resilient to the risks and variability to which rice and corn are subjected by climate change, as well as increasing production and reducing greenhouse gas emissions (GGEs).
The primary information dissemination mechanism was to train extension agents to pass along acquired knowledge to farmers through workshops, focus groups, and training courses, aimed at creating awareness about the importance of climate forecasting. These knowledge tools equip farmers to face potential crop threats and improve management decisions related to specific seasons and agroclimatic regions. An impact evaluation carried out in 2020 confirmed that significant results were achieved from this dissemination strategy. Rice producers exposed to technical assistance activities (e.g., workshops, focus groups, etc.) are more likely to use agro-climatic forecasts [2]. This dissemination strategy reached 24% of the farmer households surveyed (representing about 4,000 ha planted between rice and maize), who are using agroclimatic forecast information in their production decisions, such as sowing dates, choice of varieties, use of agricultural inputs, among others. In turn, the adopters show that they have on average 26% higher yields than those who did not adopt, and it is expected they will have fewer GGEs due to improved crop management decisions [3]. Regarding maize farmers, those exposed to technical assistance activities mitigated crop losses related to climate-change factors.

References cited:
•[1] EVALUACION DE IMPACTO: INFORME FINAL, RESULTADO Y RECOMENDACIONES (https://tinyurl.com/y742n88q)

Quantification: <Not Defined>

Gender, Youth, Capacity Development and Climate Change:
Gender relevance: N/A - Not applicable
Youth relevance: N/A - Not applicable
CapDev relevance: 1 - Significant
Main achievements with specific **CapDev** relevance: The joint project contributed to strengthing the capacities of national producer federations, increasing awareness and providing technical support for analysis
Climate Change relevance: 2 - Principal
Describe main achievements with specific **Climate Change** relevance: The innovation was oriented to mitigate climate change effects. Every workshop and all disseminated advice aimed to provide coping strategies to reduce CC.

Other cross-cutting dimensions: No

Other cross-cutting dimensions description: <Not Defined>

Outcome Impact Case Report link: Study #4269

Contact person:
Carolina Gonzalez, Leader Foresight and Applied Economics for Impact, c.gonzalez@cgiar.org