

SOCIAL ENTREPRENEURSHIP PROGRAM**PROJECT SYNTHESIS**

- 1. Country:** Paraguay
- 2. Project number:** PR-T1313 and PR-L1184
- 3. Project name:** Adoption of New Agricultural Technologies for Small-scale Farmers in Paraguay
- 4. Borrower/Executing Agency:** Cooperativa Colonias Unidas Agropecuaria Industrial Ltda. (the Cooperative, Colonias Unidas, or CCU) and Fundación Solidaridad Latinoamericana (FSL)
- 5. IDB unit:** Multilateral Investment Fund (IDB Lab), Social Entrepreneurship Program
- 6. Amount of financing**

	IDB US\$	LOCAL US\$	Total US\$
Reimbursable financing	1,100,000		1,100,000
Non reimbursable Technical cooperation	<u>380,000</u>	<u>318,400</u>	<u>698,400</u>
Total	1,480,000	318,400	1,798,400

7. Objective and purpose of the project

The objective of the proposed project is to increase the incomes of small-scale growers of soybeans and other crops who are members of Colonias Unidas.

The purpose of the project will be to test a precision agriculture adoption model for small-scale farmers. The project would start as a small-scale pilot with 224 soybean farmers with an average of 20 hectares of cultivated land. In the second phase, CCU will aim to scale up the adoption model to its 3,700 member farmers and replicate it in other affiliated cooperatives around the country, through the trade organization of which it is an active member: Federación de Cooperativas de Producción [Federation of Agricultural Cooperatives] (FECOPROD).

To achieve the project's purpose, two complementary components will be developed: reimbursable financing and nonreimbursable technical-cooperation funding. The former will be executed by Colonias Unidas, who will be the borrower under this operation, whereas the latter will be executed by Fundación Solidaridad.

8. Components of the project

Reimbursable financing component. This component will finance a series of investments in precision agriculture technology that the Cooperative's farmers need to increase their incomes. CCU will use the proceeds to provide its farmers with tools, such as analysis of farms using georeferenced satellite imagery, soil fertility maps, and disease monitoring, as well as high-tech machinery and equipment service for variable rate application of crop inputs (e.g. fertilizer and lime). These precision agriculture tools will help farmers make better decisions based on data and information to apply the optimal quantity of inputs in the right place and at the appropriate time. CCU will provide all tools and services under this component to its members in kind and on credit. Farmers will repay the loans to CCU as they deliver their harvests to the Cooperative. The loan proceeds from the Bank will enable CCU to extend these long-term loans to its farmers, with the understanding that any marginal increase in their productivity and, by extension, their incomes, resulting from the adoption of precision agriculture technology, will materialize gradually over the long term.

Nonreimbursable technical cooperation component. As small-scale farmers do not currently have the capacity to adopt precision agriculture solutions like the analysis of satellite imagery, soil fertility maps, and disease monitoring, a series of actions will be implemented under the technical cooperation component to address these challenges.

Accordingly, the component's activities will focus on three main areas: (i) designing a technology and farm preparation package for the adoption of precision agriculture; (ii) implementing and monitoring the technology package at farms; and (iii) project administration, which will include coordination by, and support from, FSL, as well as knowledge products and project evaluation.

To carry out these activities, FSL will leverage its prior experience working with the Cooperative to implement the continuous production improvement model (through the MejorAgro program that was implemented in 2017). This model involved the use of diagnostic tools, assisted evaluations, individual improvement plans, and the implementation and monitoring of agricultural practices. The program's outcomes with large-scale farmers (farms of more than 50 hectares) have proven that it does in fact boost crop yield. To implement the model with small-scale farmers, the evaluation guidelines for continual improvement of farms will be updated, and the Farming Solutions digital tool will be adapted to the local context. This will provide farmers with relevant information on requirements for their farms related to soil and input management. Additionally, training will be provided for the Cooperative's technical extension agents, and farmers will be trained intensively in the adoption of these practices. Monitoring activities will be redesigned to incorporate a digital tool that records actions in real time and enhances the efficiency of the process. The Cooperative will provide high-tech machinery and equipment with connections to obtain satellite imagery of farms and conduct variable rate application of inputs.

9. Beneficiaries of the Project

Through the project, CCU plans to directly assist 224 small-scale farmers who are heads of household by providing them with access to financing and specialized technical support for the adoption of precision agriculture technology. The farmers are located in the departments of Itapúa and Alto Paraná, CCU's area of action. The project beneficiaries will be CCU member farmers that have an average of 20 hectares, i.e. the smallest-scale farmers and those that make up the largest group assisted by CCU, considering that its members have an average of 45 hectares of land, and 60% of its active members have farms ranging from 0 to 50 hectares. They are generally family farmers who often require access to working capital financing for inputs involved in the production of various basic crops, such as soybeans, corn, and sorghum. Unlike large-scale farmers, they have limited access to technology, technical assistance, and long-term financing for medium- and long-term investment in their farms.

10. Expected outcomes and capture of benefits

The direct benefits of the Bank financing will be captured by: (a) 224 farmers, who will have access to financing with terms and conditions tailored to the adoption of precision agriculture technology; (b) 392 farmers, 20% of whom are expected to be women, through training, on-farm specialized support, and technical assistance; (c) 4,484 hectares managed under precision agriculture; and (d) 561 indirect beneficiaries (the farmers' family members). Furthermore, the beneficiary farmers will have access to the Farming Solutions app (adapted to the local context), which they may use to monitor soil and input management, and other requirements for their farms.