THE RECIPROCITY FUND

SIMBIOSIS PERU

Simbiosis is a social enterprise created to empower Quechua women while alleviating poverty in the Peruvian Andes. The business was founded by César Huamán, a Chemical Engineer who was born and raised in Lambayeque in close contact with the indigenous communities of the Peruvian North Andes.

Simbiosis collects and processes the edible mushroom *Boletus luteus* for export to Europe where it fetches a high price. The Company directly employs 6 plus 320 seasonal, part-time mushroom workers, 90% of whom are women, who receive a significant additional income during the 5-7 month mushroom season. Simbiosis mushroom workers are able to maintain their year-long livelihoods such as tending to small farms or maintaining livestock.

Simbiosis owes its name to the <<symbiosis>> that takes place between the pine trees *Pinus radiata*/*Pinus patula* and the mushroom *Boletus luteus* that naturally grows at the base of the tree.

IMPACT OVERVIEW

Women empowerment in the rural areas of the Peruvian Andes. Sustainable use of the edible mushroom *Boletus luteus:* a valuable resource of the pine plantations and a highly priced food product in Europe. Forest management and good forestry practices in pine plantations that otherwise are lowly profitable while not being harvested for wood.

No. of beneficiaries	320 mushroom producers
Forest area of sourcing	346 hectares
Beneficiary annual income increase	52%

COMMUNITY

Country
Peru
Departments
Lambayeque, La Libertad, Cajamarca, Amazonas
Indigenous Group
Quechua

In 2021 Simbiosis business plan was recognized by the Agroideas program. Ran by the Agriculture Department of the Peruvian government, Agroideas is focused on improving the capacities of micro and small agriculture companies. One of the ways they achieve this is by providing capital for technology adoption, and Simbiosis received a grant under this focus area. The donation received will invested in high-quality dryers to improve the quality of the mushrooms. Through this investment, the

mushrooms foraged and produced will command a higher price at the market, directly contributing to the incomes of Simbiosis' partner women.

Impact Background

In the Andes, agriculture and livestock farming are among the main economic activities. While really demanding to producers, they do not result in financial returns enough for them to sustain a household. On the other hand, and in detriment to their health and the environment, some families must turn to the mining industry—both formal and informal—for better incomes. In this context, Simbiosis appears as a safe and viable option for prosperity to the Andean woman by harvesting and processing a local resource that used to be "invisible" but is highly valuable.

The average monthly income in the areas covered by Simbiosis can be as low as 400 soles ($100 USD) a month for the whole family, less than half the national minimum wage of Peru. Furthermore, this is usually administered by the man as women typically do not earn money of their own. With Simbiosis, each of the women receives an additional 500 to 1,000 soles monthly for the 5-7 months they work with Simbiosis, meaningfully augmenting their family income.

This is especially true given that most of the partners of Simbiosis are part of the quechua group, who make up more than 80% of the indigenous population of Peru. While the national poverty incidence in Peru has declined, rural and indigenous communities still represent an outsized share of the poor population, at 45% vs the national average of 20%.[1]

The pine plantations in the Andes of Peru are the result of the forestation programs initiated more than a century ago. Whitin them grows the edible mushroom *Boletus luteus:* a valuable resource little known in the country but highly appreciated in Europe. The work of Simbiosis is to enhance the natural occurring growth of the mushroom with good forest management practices, to collect the wild mushrooms, and to process them in the dehydrators they have design.

When effectively managed, one hectare of pine plantation produces from five to six tons of fresh mushrooms. Without management, the production is around 2,5 tons of fresh mushrooms. One of the main interventions is the pruning of the trees, which in return gives the producers the firewood they need in their daily life.

Impact Delivery

[1] Poverty Incidence based on Native Language Perú: Perfil de la Pobreza por Dominios Geográficos, 2008-2018

Simbiosis aims to improve the life of the Andean women and their families, while sustainably using one of the most valuable and abundant resources they have to offer to the international food market: the wild edible mushroom *Boletus luteus.* They do this through their commitment to:

Women-and-Community Empowerment	▪ Strengthen the implementation of forest management practices. ▪ Empower the women to collect, process and deliver a valuable resource of their community. ▪ Increase incomes by acting as an intermediary between the Andes and global customers.
Enhanced Economic Value and Environmental Preservation.	▪ Provide communities with training and technical assistance to improve productivity in the collection and processing of the wild mushrooms: Simbiosis is constantly teaching individuals how to use and maintain the dehydrators; group sessions take place in every community to discuss the importance of the dehydration process and the equipment. ▪ Increase the economic value of the Peruvian pine plantations through the introduction of a sustainable income complementary to their usual activities and alternative to the mining industry in the Andes.

LOAN OVERVIEW	
Loan amount	USD 52,5 k
Term	4 years
Effective Interest rate	8% p.a. in USD
Structure	

Financial overview	
2021 Revenue	USD 61.8k
2021 Net Assets	USD 4k
USD 1: Sol 4.12	

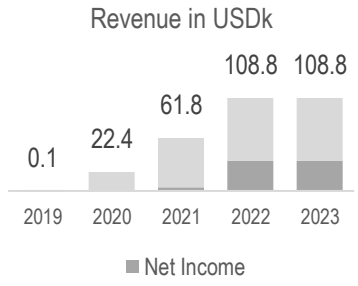
Company information	
Legal name	ID BIOFOREST PERU SAC
Incorporation date	2019
Corporate address	Lambayeque, Peru
Nature of operations	Mushroom Production
Website	www.biosimbiosis.com

Transaction Overview

Simbiosis is seeking a loan of USD 52,500 to install solar driers with higher productivity and produce better quality mushrooms. While the first dehydrators they tried had the capacity to produce 42 kilograms each campaign and would be sold for 15 soles per kilogram, now Simbiosis will install "módulo de secado SYM 3.0" machines that produce 350-500 kilograms each campaign with much better quality that could fetch prices as high as 20 soles per kilogram.

Financial Overview

Simbiosis demonstrated significant growth in 2021, with 276% overall growth revenues vs 2020 from USD 22.4k to USD 61.8k. This impressive growth is driven by its more than 6x growth in mushroom sales, as its supplier communities invested in machines and expanded capacities from in the prior year. Simbiosis expects that the additional investment in machines through the Agroideas grant this year will further drive this growth through increased volumes and improved prices.



in USDk	2019	2020	2021
Working capital	3	4	7
Total assets	3	5	8
Total debt	-	1	1
Total equity	3	4	7
Current ratio		*4.4x*	*8.1x*

Simbiosis does not have any loans outstanding prior to this loan from The Reciprocity fund. Forecasted 2022 EBITDA covers 4x its annual loan servicing costs. Testing for sensitivities, even at 35% achievement of its projected revenues, Simbiosis will be able to repay the loan from The Reciprocity Fund.