

# RESEARCH WITH IMPACT!

## THE CHALLENGE:

*Small holder coffee farmers who have migrated to the steep slopes of the northeastern Amazon in Peru commonly faced a repeating poverty cycle. Their perennially low yields and incomes prevent adequate reinvestment in their crops. Over time this situation has led to extreme poverty and family instability.*

*Soil nutrient depletion is a main factor limiting yields. Very little fertilizer is used, biomass production is low, and the risk of soil erosion is high. Eventually families move on in search of new land to start the cycle again.*



## Strengthening Families in Peru by Improving Coffee Yields

### THE RESULTS:

#### AGRONOMIC BENEFITS:

Research demonstrated that the solution to the declining coffee yields was to reverse chronic nutrient depletion. Making inputs available to farmers, mainly fertilizers, was key to increasing yield and profitability. IPNI-sponsored projects demonstrated a profitable yield response to fertilizer application and rapid return of tree health. Timing of application and source of fertilizer were also improved. IPNI actively partnered in basic agronomic training of the technicians of the project and collaborated in the field research as adviser and provider of information.

#### SOCIAL BENEFITS:

The main goal of the Family Program is to strengthen the economic stability of the family. The secure family foundation provides other social benefits. Notable examples include the implementation of basic sanitation by farmers participating in the program such as the construction of functional latrines, improvement of the local infrastructure, and the installation

of electricity on these farms. Enhanced schooling was another social benefit derived from improved household income. Farmers in the communities involved in the project have kept their children in school to finish primary and secondary levels.

#### ENVIRONMENTAL BENEFITS

The environmental benefits have been clear. Vigorous coffee plant growth results in more fruit yield and also produces abundant biomass that is returned to the field. Higher yields produce more pulp, which also comes back to the field after being composted. This increases soil organic matter and promotes the restoration of soil fertility. The additional cover from leaves and trimmed branches protects the soil against erosion. Nutrients applied to the soil also feed the surrounding trees that provide shade within coffee fields. Shade trees grow vigorously and create good habitat, which in turn promotes biodiversity.

#### FURTHER BACKGROUND:

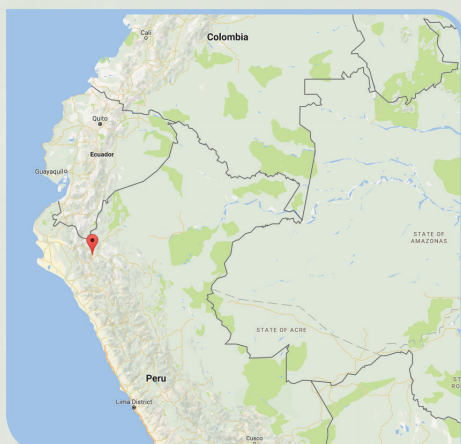
Zapata, R., and J. Espinosa. 2010. Better Crops 94 (4):12-15.



## THE SOLUTION:



IPNI, in cooperation with local fertilizer companies, Canpotex, and various social agencies, funded the "Family Program" in Peru, which enables farm families to improve their standard of living and better manage land in coffee production. IPNI staff assisted this program by providing agronomic education. Financial credit (without interest) was made available to the families who joined the program.



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