

TOWARD MORE PRODUCTIVE COCOA FARMING:

THE WAY FORWARD

LOCAL WEATHER FORECASTS AND HUSBANDRY ADVICE FOR FARMERS

INTRODUCTION

Veriground seeks to provide cocoa farmers with the best available forecasts of weather at each farm. The value of weather-based farming is known in the U.S. and Europe. Calls to serve Africa are frequent. A plan has been missing. Veriground has the plan and the tools to succeed.

STEPS TO SUCCESS

Others have tried to provide local weather forecasts to African farmers. Some have added husbandry advice. They have fallen short for three reasons: wrong technology, asking farmers to pay, and failing to serve all stakeholders. Veriground's plan corrects these errors.

THE VERIGROUND APPROACH



14-DAY FORECASTS FOR THE FARM



HUSBANDRY ADVICE WITH THE FORECAST



FREE TO FARMERS



PROMOTE TO FARMERS



INVOLVE FARMERS



DATA TO GOVERNMENTS



DATA TO SPONSORS



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FIRST, A PILOT



CÔTE D'IVOIRE AND GHANA



5% OF COCOA AREA



FORECAST WEATHER AT STATIONS



CONNECT HUSBANDRY ADVICE



DELIVER TO FARMERS



PROMOTE TO FARMERS



DATA TO GOVERNMENTS



DATA TO SPONSORS



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BUILDING THE PILOT HAS STARTED

Two hundred Veriground weather stations are reporting from cocoa areas of Africa. Veriground has designed and builds a weather station that is efficient, inexpensive, easily installed, and durable. Reports from many places give better knowledge and forecasts than few reports or satellites alone. Software for the Veriground network is advancing daily.

MAKING FORECASTS

Several groups create local forecasts by applying modern climate models to the available data—from satellites, public sources, and private stations. Reports from Veriground stations will merge with existing sources to create better forecasts. Veriground is evaluating the methods of delivering its data and receiving forecasts. It will evaluate the quality of the forecasts and use the best.

HUSBANDRY KNOWLEDGE

Building a library has started. Knowledge about good cocoa husbandry has been accumulating for decades in books, academic papers, other writings, and in the experience and expertise of many individuals. Veriground's expert will oversee the library, consult with professionals, and create a database of husbandry advice keyed to weather forecasts.

WORK WITH GOVERNMENTS

Work with governments has started. Staff of Ghana's Cocoa Marketing Board have helped plan station placement. The Veriground principals and the husbandry expert will offer to work with government agencies to explain the project, plan test areas, make data available, and communicate with farmers and farmer organizations.

SOFTWARE TO SERVE FARMERS

Creating software has started. Software for serving farmers must fit the capabilities of each farmer's mobile device, language, skills, and experience. Veriground is sending 160-character texts to farmers who host stations. An app for smartphones will allow greater communication. Farmers will be able to join the service easily, control what they receive, and invite neighbors to join.

SPONSORS, GOVERNMENTS, CO-OPS

Sponsors, governments, and cooperatives need different arrangements of data than farmers need. Sponsors need information for regions where they source supplies. Governments need forecasts, current weather, and history covering large communities and watersheds. Cooperatives need information for the areas from which they receive cocoa. All will receive history, forecasts, and husbandry advice from Veriground.

ENGAGE WITH FARMERS

Reaching farmers has started. Reaching farmers with advice that increases yields and prevents waste is an essential service that Veriground provides. Farmers must be aware of the service and must find it useful. The service must adapt to their needs, experience, language, skills, and situations. To reach farmers, posters can be placed at cooperatives and buying stations. Contact with farmers will occur through cooperatives, extension agents, and Veriground installers.

HOW TO ENGAGE FARMERS



POSTERS AT COOPERATIVES AND STATIONS



TEXTS AND APPS TO INVITE NEIGHBORS



NATIONAL MEDIA AND COMMUNITY FM



ADVERTISING THROUGH CARRIERS



SURVEYS BY INSTALLERS



SURVEYS BY TEXT AND APP



ALWAYS FREE TO FARMERS

MONITOR AND INFORM

Veriground will provide reports to governments and sponsors that show the accuracy of forecasts, the characteristics of weather across the cocoa-growing area, such as microclimates, the appropriateness of husbandry advice, farmer participation, and the judgments of farmers, cooperative managers, and extension agents about the Veriground project. In-depth yield studies will become possible for the first time.

MORE IS POSSIBLE

The Veriground project—made possible by a device that is inexpensive, versatile, easily installed, durable, and ready for remote locations—offers more than forecasts and advice for farmers. Veriground stations support multiple soil moisture sensors. Veriground stations can help conserve irrigation water, make crop insurance possible, warn about floods, and aid forecasts of hydro power.

COSTS

A purpose of the pilot is to assess costs. The largest costs are in programming, researching husbandry, network management and outreach to farmers and other stakeholders. The typical cost of installing a station in Africa is less than 1,200 USD. This is much less than alternatives. Like the cost of alternatives, installation costs do not include other costs such as those mentioned and lesser costs such as maintenance and mobile service. Veriground works closely with sponsors to determine all costs of the pilot project, its benefits, and the costs of expanding the project to serve all cocoa farmers.



VERIGROUND

PROJECT.VERIGROUND.NET

**955 North 1300 West, Suite 11
Saint George, Utah 84770 USA**

+1 (435) 255-3540

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