



Software can anticipate climate change

With a detailed picture of soil, plant and climate conditions, software from Ingemann can optimize crop yields.
The first target group are the farmers of Central America.

It started as a Central American honey adventure back in 2007 when Danida invited the Danish food company Ingemann to Nicaragua. The goal was to develop an effective honey export infrastructure, thus improving the earnings opportunities for the country's many beekeepers.

The project succeeded for both the honey and, later, the important cocoa production. Today, Ingemann ensures market access for more than 1,500 Nicaraguan farmers and beekeepers. And new countries are on the horizon.

"When we first came to Nicaragua, it was mostly a coincidental combination of competences," says CEO of Ingemann, Niels Ingemann Møller. "We knew something about honey production, and we knew something about international marketing and logistics. Today, in addition to acquisition from 13 acquisition centres and exports of Nicaraguan honey, we run a honey academy where we train new beekeepers and help existing beekeepers optimize their business."

In 2013, Ingemann acquired a cocoa company originally established by Danish investors. Here, too, an academy is being run for the peasants:

"We have about one million cocoa trees at the local producers, from which we have an obligation to purchase, typically on long-term contracts," says Niels Ingemann Møller. "At the same time, we provide fermentation and drying and further export to more than 50

SDG's IN PLAY

SDG 2: Zero hunger

Target 2.3: Double the productivity and incomes of small-scale food producers

By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.



countries. It is a big success. Our advanced processing methods allow us to deliver some of the most award-winning cocoa in the world."

Despite the progress, the Nicaraguan farmers face major challenges in the coming years, says Niels Ingemann Møller:

"As a major coffee producer, Nicaragua is one of the countries in the region who is hit the hardest by climate change. We regard climate change as both a threat and an opportunity. Coffee is extremely sensitive to heat, which means that large areas of cultivation can suddenly become unprofitable. The cocoa trees, on the other hand, can withstand higher temperatures and are therefore a good substitute for coffee. The same can be said for honey production because of its high mobility. Beehives can be moved to areas where flowers are actually found."

With extensive knowledge of local production conditions, it was natural for Ingemann to take the next step in the fight against climate change. The initiative was called Soluciones Climática - a software that can provide early warnings, technical assistance and recommendations to farmers through climate, plant and soil data.



"With Soluciones Climática we can create a whole new knowledge of local production conditions," says Niels Ingemann Møller. "Here, we combine the algorithms of meteorologists with data from weather stations and local micro-observations. The results of these calibrations are communicated to the peasants by e-mail or sms. Here they will find detailed instructions on what should be done on the ground so that the crops get optimal conditions."

Participating in the SDG Accelerator for SMEs has provided direction and energy for the entire project, says Niels Ingemann Møller:

"At first, we were very unsure of how Climática would work as well as how to approach the market. All of this has been validated through the SDG Accelerator with the help of skilled experts. It has brought us a good deal closer to a real market development."

The next step for Ingemann is to further develop the software so that Climática can play an even greater role in agriculture in developing countries, initially in Central America, says Niels Ingemann Møller:

"Climática includes not only cocoa and honey but a total of 32 crops and three types of cattle. Both on the business side and the investment side we can bring our knowledge into play. For example, if you buy a larger piece of land, we can help with an analysis of the climate and soil conditions in relation to the desired crops.

At the same time, we have developed a lending tool for banks and microfinance institutions. By combining climate forecasts, soil conditions and the growth needs of the plants, we can provide a credit assessment on our Agroclimática platform that can be included in the institute's overall assessment. We hope that it can help increase food production, because more farmers will be able to access, for example, seasonal credit."

Niels Ingemann Møller also has great expectations for the future of the Climática platforms:

"The ambition is that our early warning system will reach around 10,000 Central American farmers already within the next couple of years. Next, the rest of Latin America is waiting, as are new partnerships with banks, microfinance institutes and NGOs. Our big force is that we are not a software house that has thought of a smart idea. We are a food producer who knows our craft through local presence and many years of experience."

THIS IS HOW INGEMANN CONTRIBUTES TO THE SUSTAINABLE DEVELOPMENT GOALS

- Ingemann has developed the software platforms Agroclimática and Soluciones Climática that will help Central American farmers optimize the cultivation of their crops because they can prepare themselves for crucial climate change in the region.
- The software can also help identify different investment scenarios, thus ensuring farmers increased access to credit from relevant banks and microfinance institutions.
- Based on experience from Nicaragua and Honduras, the solution is expected to be rolled out in other countries in the region.

FACTS ABOUT INGEMANN

- Established in 2007
- Approx. 90 employees
- Family-owned
- Geographical presence in Denmark and Nicaragua, exports to over 50 countries



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