Saskatoon company could revolutionize chocolate industry

Colin Campbell

Photo Caption: Woman crushing shea butter nuts. (IDRC Photo: S. Colvey)

It’s best known as an exotic skin care product from West Africa, but future trade and refining of shea butter from the small, landlocked country of Burkina Faso could owe a lot to the efforts of a company in Saskatoon.

In 1999, scientists at the POS Pilot Plant – a private research facility in Saskatoon – along with colleagues in Burkina Faso started searching for ways to better process and clean shea butter. The research was part of a larger $1.5 million Canadian-funded effort to improve the butter and nut trade in Burkina Faso – a country in West Africa about the size of Newfoundland.

A substitute for cocoa butter

Shea butter is not only used as a skin moisturizer – increasingly, it’s sought after by chocolate manufacturers as a substitute for cocoa butter. It’s inexpensive, and helps keep chocolate from melting.

As a result, there’s a growing international demand for shea butter. A product of the shea tree, it is one of the few plentiful and renewable wild resources in West Africa.

But in Burkina Faso, one of the poorest countries in the world, "there is really no shea butter ‘industry’ so to speak," says Pierre Zaya, an expert on the shea butter industry at the International Development Research Centre (IDRC) in Ottawa.
Most shea butter in Burkina Faso – about 95 per cent – is produced for local markets by rural women, says Zaya. Only the nuts are exported for use in the international market, going to places like England, Holland, Sweden, and Denmark.

**Towards a shea butter industry**

Researchers in Saskatoon and Ouagadougou, the capital city of Burkina Faso, set out to change that, and help the country develop its own shea butter industry.

The effort dates back to 1995, and a visit to Ottawa by the president of Burkina Faso. The previous year, President Blaise Campaoré made developing and commercializing shea nuts a national priority. To help develop a local shea butter industry, he turned to Canada, visiting two development agencies: IDRC and the Canadian International Development Agency (CIDA).

The agencies agreed to help, providing $1.5 million in funding to projects aimed at modernizing the nut industry – from helping local scientists set up their own research plant, to providing mechanical presses for the rural workers. When the time came to develop a new refining process, the IDRC looked to Saskatoon’s POS, says Rick Green, a head scientist with POS Pilot Plant.

**Improving processing**

"The people in Burkina Faso collect (shea nuts) from the trees and do a crude extraction of the butter, so it has to be cleaned up. That’s what we worked on – we helped them develop the process for cleaning up the butter," says Green.

Working with the African shea nut wasn’t easy for scientists used to working with prairie vegetable oils, which are liquid at room temperature, says Zaya. "Here you’ve got a butter, which is liquid at above 35-40 degrees Celsius – at room temperature it’s a solid."

A big challenge for the scientists was learning how to separate the butter into two phases – a liquid and a solid. The solid is used for chocolate, while the liquid part is used for cosmetics, like skin moisturizers. Currently only companies in Europe separate and sell the two products of the shea nut. This is the process Burkina Faso needs to take advantage of to build a shea butter industry in Burkina Faso, says Zaya.

The work at POS was one of the first steps. And it was a collaboration involving travel between Saskatoon and Burkina Faso, says Green. "We helped scientists in Burkina Faso set up so they could start doing their own research into processing the product."

**A new pilot plant**

One of the key successes of the project is that there are now scientists in Burkina Faso who know how to process shea butter, says Zaya

"What we’ve done is just the beginning of the story," he adds. Burkina Faso still needs to break into the international market. There is not yet a huge production or a huge trade of shea butter, says Zaya.

Burkina Faso is now building its own pilot plant – a research plant that’s a scaled-down version of a shea butter factory. The pilot plant will allow them to make samples to give to potential buyers.
It’s evidence of the success of the projects, says Zaya. But the real reward, he adds, will come when Burkina Faso can use these new processes to sell its shea butter on the international market.

For more information:

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