

CHOLACA®



pure liquid cacao



A quality you can
taste and a difference
you can see:

**The key to quality
cacao is all in the
Cholaca Process.**

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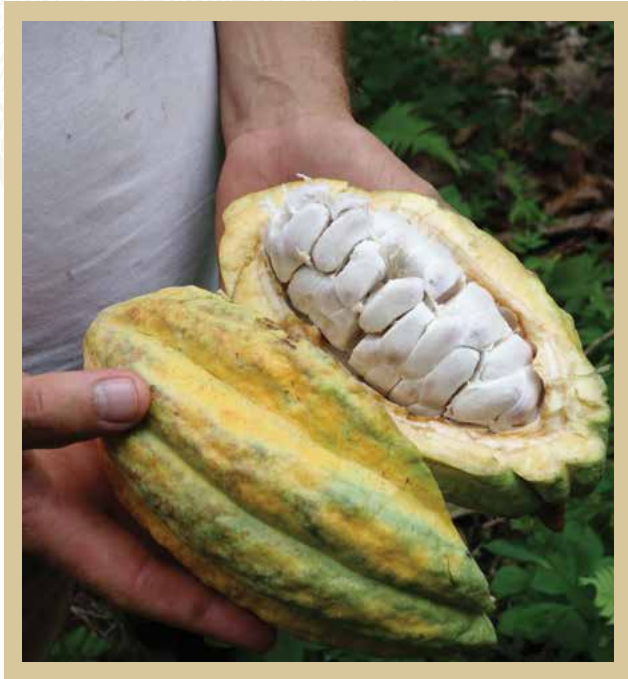


Executive Summary

We searched high and low to find superior cacao with excellent flavor at scale and it simply didn't exist. For us, compromising on quality or our values wasn't an option, so our Head of Quality Control developed the Cholaca process through rigorous exploration, knowledge exchange, and experimentation alongside cacao farmers until he got it just right. In this paper, we discuss the how and why behind our signature process, from partnering with farmers to select the best beans to roasting our cacao beans to perfection.

Partnering with Farmers

Great chocolate starts with the cacao bean, and inferior cacao beans can never result in the kind of smooth, balanced, and bold chocolate our taste buds crave.



A RAW CACAO POD HAND PICKED FROM OUR FARM

In the cacao farming industry, especially in Colombia where we've been developing our grower relationships, it's a common practice for farmers to bring all the beans they have to sell together – regardless of quality. High quality beans are mixed with lower quality beans, and the corporate and state buyers don't care; they will buy the mixed quality beans, but often at a low price. We know we can't create great cacao without the cacao farmers, and we want them to know their hard work is valued and appreciated.

What we needed was a way to support our farmers AND select for the beans that will produce the best cacao. Our solution: work together to design a clear process for identifying and separating the raw, unfermented beans by quality before we buy.

First, we assured our partner growers we would pay them for ALL the cacao beans they bring to us. Part of our company's mission is to support the people who make what we do possible. We want this to be a partnership with cacao farmers, one that is mutually beneficial.

In keeping with this, we pay them well for all of the beans. This helps them make a good living while ensuring we get the kind of high-quality cacao beans we want that yield the smooth, balanced, and flavorful chocolate products we aim for.

Initially, there was a bit of a learning curve. After all, many of the cacao farmers have been doing things one way for generations. But now we have a smooth system that benefits everyone: the cacao farmers, the team at Cholaca, the companies who buy our cacao, and the customers who enjoy eating and drinking the finished product.

Perfecting the Fermentation Process

Once we have the high-quality cacao beans, we move on to the next step in the process: fermentation.

We've built a unique process for fermenting and drying our cacao beans based on which techniques produce the highest quality end product. All beans

must be fermented and dried before they can be roasted, but we've perfected the Cholaca process through a unique combination of science and tradition to bring out the very best in our beans.

First, our cacao beans go into wooden "sweat boxes" that have holes drilled into the bottom to support both aeration and drainage. Once the cacao beans are in these boxes, we cover them with fresh banana leaves and jute bags. These two coverings help to not only keep moisture in so the cacao beans can ferment properly, but ensure they retain the heat necessary for fermentation to take place.

The white pulp of the bean is very rich in natural sugar, which is exactly what the cacao beans need to begin fermentation. Combined with natural yeast, microorganisms from the banana leaves, and heat, the cacao beans begin to "sweat" and ferment.

During the first two days, the cacao beans undergo anaerobic fermentation in which the yeast and pulp turn into alcohol. Lactic acid also begins to form, causing the pulp to liquefy and flow out through the holes in the bottom of the box. Meanwhile, the heat in the box is steadily rising. By the start of the second day, the temperature is well into the 90's (Fahrenheit). By the end of the second day, it gets up to nearly 120 degrees.

This part of the fermentation is important because it kills off a part of the cacao called the germ or bud. This embryo would grow if given the chance and we don't want that. The combination of heat and alcohol gets rid of it.

At this point, the yeast has used up most of the sugar. This is when we aerate the cacao beans by mixing them well and moving them to a new box so the second part of the fermentation can begin. During the aerobic phase, the alcohol is transformed into acetic acid, aka vinegar. The vinegar actually penetrates the cacao shell and changes the chemistry of the cacao bean – which is essential for the chocolate flavor to develop.

Without this step, you might get a hint of chocolate flavor, but it wouldn't be the strong flavor we all know and love.

We mix the cacao beans well and move them to new boxes as needed. The full fermentation takes 6 to 10 days. The goal is to remove as many tannins and acids as possible. The fewer tannins left behind in the cacao bean, the less bitter the flavor. The less bitter the cacao bean, the easier it is for chocolate makers to achieve the flavor profiles they want. We know it's important to get this step right, so we don't put a set time frame on it. We just let the cacao beans do their thing until they're ready.

At the end, you can clearly see the difference. We quality check the beans to ensure we're only using beans that have been fermented to perfection before we move on to the next steps.

An Artisan Method Rooted in Tradition and Science

Every step of the Cholaca process plays a role in how the end product tastes.

We follow a path rooted in tradition by studying the best cacao producers in the world, and then leveraging science to understand what works and what we can do differently to consistently produce the highest quality cacao.

When it comes to our cacao drying process, we owe a lot to Steve DeVries, our Head of Quality Control. Steve has 20 years of experience and



OUR STANDARD FERMENTATION RATE IS 92%

award-winning craftsmanship as a chocolate maker. He was the first artisanal bean to bar chocolate maker in the US and has been influential in the artisanal chocolate field since it began. Always in search of better cacao, Steve found himself on a journey to develop a process that would bring out the highest potential within the cacao bean. As part of that journey, he visited a village where they have a drying system that's been in practice for several centuries – and for good reason!

Typically, after fermentation the beans are spread out and left until they are completely dry. Drying is important to stop the fermentation process and eliminate the possibility of contamination.

Steve watched the villagers take their beans and spread them on the patio outside their church for three or four hours in the morning. Then young boys scoop them up into wheelbarrows and wheel them back to a resting house for the remainder of the day.

Steve was intrigued; packing them away each day seemed counterintuitive, yet he could see the high quality of the finished product. So he got to work, experimenting with the steps, and even bringing in a scientist to measure the drying rates. Together, they worked to understand why this method yielded a higher quality product, and how they could adapt the system.

As a result, we employ a unique drying process that has been perfected by tradition and proven by science to yield a higher quality product, prime for roasting.



DRYING OUR CACAO BEANS IN THE SUN

Roasting the Cacao Beans

Once the beans have fully dried, it's time to roast them to bring out their full flavor potential.

Because we've paid such attention and care to the selection of the beans, allowed them to fully ferment in their own time, and dried them using our method backed by science and 400 years of tradition, we don't need to try to correct the flavor or compensate for lower quality during the roasting.

Corporate production that is less selective and careful in the previous steps must use roasting to try to eliminate or cover up the bitter notes that can result from inferior beans, incomplete fermentation, or rushed drying. In practice, that often means an over-roasted bean that borders on tasting burnt.

But because of our attention to detail at every stage, a light roast is all we need to draw out the best flavor in each bean. The result? A smooth, balanced, bold flavor of cacao worthy of the rainforest and the people that made it all possible.

Scaling the Cholaca Process

Of course, as a business, we have to make sure the processes and systems we've perfected will work on a larger scale.

We want to be able to create the best quality, responsibly produced cacao beans – yet still make them affordable. To this end, we take what works from centuries-old traditions, combine them with scientific processes that we perfect through trial and error, and then scale them through the perfect storm of the right partners, the right land, great cacao, and solid opportunities.

This means we're able to produce larger volumes of high-quality cacao that can be used to create premium chocolate products. We've taken decades of experience in what works and what doesn't, and perfected the Cholaca process so we (and everyone involved) win at every step of the way.

Cholaca: A Difference You Can Taste

Fine chocolate is our passion, and we know that the best tasting, highest quality products start at the source: in the rainforest with the people who grow the beans. To us, there's simply no question that producing a quality product at scale requires a partnership with the people and the land where it originates.

We're focused on what cacao can do to make life better for people AND the planet, so we are committed to meaningfully supporting cacao farmers and regrowing rainforests – beyond labels and lip service – in pursuit of true sustainability. No one in the industry has higher standards than we do.

We especially want the cacao farmers to understand the importance of the role they play in the

finished product. Without their hard work, dedication, and generations of tradition providing us with the best quality cacao beans to start with, we could never produce the roasted cacao beans that make the great-tasting chocolate products our clients are known for.

To show them the difference they can help us make, we hand-peeled a small sample of roasted cacao beans and made a cacao liquor to share with our farmers. They used it to make hot chocolate and were immediately won over! Even farmers who were skeptical about how we do things have had to admit our roasted cacao beans made some of the best chocolate they've ever tasted.

And we think you'll agree.

We source, process, and produce high quality cacao products at scale, and we are committed to meaningfully supporting cacao farmers and regrowing rainforests.

**Quality you can taste and a commitment you can see.
That's the Cholaca difference.**

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