

CAM DAIRY FOOD WINS THE 2023 ARREL GLOBAL FOOD INNOVATION AWARD BUILDING NIGERIA DAIRY CHAIN WITH PASTORALISTS

[Câm Dairy Foods](#), is one of the 2023 winners of Arrell Global Food Innovation Awards.

Winner for the community engagement category of the award, CAM is creating an innovative system in Nigeria that connects rural and marginalized pastoralists who raise cattle, with young entrepreneurs in their communities. Entrepreneurs purchase and collect the milk from pastoralists on behalf of Câm, which is then aggregated and processed to create nutritious dairy products.

This system provides steady and reliable income for both the pastoralists, who have historically had limited access to markets and unreliable income streams, and the entrepreneurs, who gain employable skills and access a stable job. This system also strengthens food security in the region – providing nutrient-dense dairy products to a population that struggles with poverty and malnutrition and helping to build Nigeria's dairy industry.

The company highlights that Nigeria has the fifth largest cattle population in Africa, and pastoralists are the most vulnerable, the poorest of the population in the country. In this context, they have created an opportunity where something can now generate an income, and they are offering a fixed price for the milk, that allows everyone to have equal opportunities, especially women.

The products of the company are:

- Natural milk that comes out pure and raw, as nature intended.
- Yoghurts made using a traditional method of straining to create a rich and creamy texture without adding artificial thickeners and preservatives.
- Real cream, freshly skimmed by carefully skimming the top layer from the milk before it is pasteurized.
- Ice cream, a real showstopper made using the freshest dairy and not much else.

An aspect of the company's quality is also its choice of designing and manufacturing sustainable packaging, avoiding the use of plastic. Considering that the report by the World Economic Forum estimates that 200,000 tonnes of Nigeria's plastic waste end up in our oceans, the Company is building a sustainable supply chain that does not depend on plastic, and they have already switched their product packaging to 100% glass jars and bottles. When they are empty, they



can either send them back to the company for recycling or upcycle them for pens, potting herbs, storing utensils, holding flowers and other creative uses.

The system implemented by the company is composed by the following structural aspects:

1. *An ethical and sustainable partnerships with pastoralists*, structured in a way that provides a steady income and entrepreneurial opportunities, helping them benefit from the modern economy without losing their way of life. The source of all company's milk are pastoralists, intended as anyone who cares for livestock. The company travels to remote regions and builds strong relationships with the communities and their leaders, helping them generate recurring revenue and builds long-term wealth for their households from their greatest asset: their herd. On a larger scale, these partnerships allow the company to develop milk collection routes across the country, creating a modern and universally profitable dairy industry all anchored around pastoralists.
2. *The Câm Rangers* that are the "pipeline" between the company and the pastoralist suppliers. Câm Rangers are self-employed contractors and come from rural communities and are tasked with delivering milk from the fields to the factory. They are recruited directly from the communities where the company source its milk, creating entrepreneurial opportunities for many young Nigerians living in rural areas. The company provides free training and a low-interest loan to cover start-up costs (such as their vehicle and equipment) that is deducted from future income in manageable instalments. This model puts Câm Rangers in control of their own future and earning potential – plus it is a faster and more sustainable way for the company to scale.
3. *Milk Aggregation Centres*. These are a crucial part of the infrastructure. Refrigeration is a huge challenge in any milk business. So, whenever they partner with a new community, the next step is to establish a milk aggregation centre nearby. Câm Rangers deliver fresh milk to their milk aggregation centres (MACs) after its been milked first thing in the morning. It is here that they cool the milk before it is transported to the factory.
4. *The factory making the Dairy*. The milk arrives at the factory within hours of being milked. Before they do anything else, they run another series of tests using specialist equipment and each batch must meet the highest quality standards for pasteurisation or it is rejected. Once it is safe for consumption, they transform the fresh, local milk into a delicious range of dairy products packaged in sustainable glass jars and bottles.

The impact: the company registers to date the following results that can help shape a future dairy economy for Nigeria:

- 87087 litres of milk produced to date.
- 402 pastoralists involved in the project, 44% of all pastoralists are women.
- 2316 additional daily income earned per pastoralist.
- 4785 highest additional daily income earned per pastoralist
- 239 families nourished.
- 24 rural jobs created.

The system implemented by the company involves the following steps to ensure healthy milk that can be used to produce many derived products:



- **Safety & tests.** They test the milk and the health of the cows at multiple stages throughout the process. They have systems in place to make sure the milk is safe to drink straight from the bottle. Their pastoralists use aluminium churns for storage immediately after milking, which are cleaned and disinfected between use. They even wash the cow's udders before and after milking
- **Milking.** Cows are milked just after sunrise every morning. They only ever milk healthy cows. Raw milk is naturally free from harmful bacteria but it can be easily contaminated by environmental factors. For this reason, they chill raw milk down to 4°C within 3-4 hours of milking, which helps to stop bacteria from developing. Any bad bacteria and germs are later killed in the pasteurization process.
- **Collection.** Pastoralists take their milk to a designated collection point that is less than a 20-minute walk from their home. The Câm Rangers inspect the milk and check everything from appearance, temperature, acidity, consistency and even how the milk was stored. They always reject milk at the point of collection if it fails to meet the safety and quality standards required by the company.
- **Aggregation.** If all tests are passed, the milk is accepted and the volume is marked on each pastoralist's record sheet. Milk is transferred to stainless steel churns and each churn is scanned with its own ID number for traceability purposes. The Company's milk aggregation Centres then perform a second series of tests, similar to the ones carried out at the collection point. Finally, the milk is chilled to the correct temperature and loaded onto their vehicles ready for delivery to the factory.
- **Factory.** The milk arrives at the factory within 3-4 hours of milking. After scanning the ID numbers, they perform another series of checks including an organoleptic test, alcohol test, density test and temperature check. The lab team collects samples for more confirmatory tests before approving the milk for pasteurization. These include an antibiotic test, a resazurin test, and a milk analyzer.
- **Pasteurization.** All the milk that has made it this far is then pasteurized. They heat the milk to 72°C for 15 seconds, which eliminates any pathogens and extends its shelf life. They then separate milk into cream and skimmed milk. The last step is homogenization, a process of reducing fat particles in the milk to create a creamy, smooth texture.



The Manifesto of the CAM company explains the ambitious objectives of their work, aimed at building a milk production system that enhances the work carried out by the pastoralists and opens up employment opportunities for many people, especially the young people of the areas.

We're a social impact movement that just happens to make dairy. Our goal is to create a massive income boost for 500,000 pastoralists and 10,000 youth entrepreneurs living in extreme poverty, and nourish millions of customers with essential nutrients. We believe that to be sustainable we must first be profitable. The subsidised dairy import industry is destructive to the planet, our economy and our local jobs. The market is flooded with imported processed dairy that arrives tasting beyond its best, so we have high rates of child malnutrition. We partner with local pastoralists who supply us with daily fresh milk



from pure and crossbred cows that graze beyond our city limits. In return, we guarantee a fixed price per litre that is above the market average. We have a large and overlooked pastoralist population living amongst us that own more than 20 million cows and know everything there is to know about real dairy. They individually survive on less than \$1.90 per day, below the poverty line. We have a large and growing population of rural youth without job opportunities, and as the future third largest national population in the world, Nigeria needs to figure out how to feed itself by creating a pastoralist-driven value chain. We can easily produce enough milk to nourish our population: it is time we stop underestimating the value of our smallholder farmers, and create a new and future-proof economy that will nourish our growing population and deliver a massive income boost for all.

[The 2023 Arrell Global Food Innovation Awards](#) has recognized the CAN project among the winners, for the category *community engagement innovation*. The recognition will certainly strengthen the results of this extraordinary project that is building a national milk production chain in Nigeria, which integrates pastoralists as protagonists.

To know more

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