



# Cutting Costs by using Waste Products and Less-desired Parts

## BUSINESS MODEL FEATURES FOR REACHING LOWER-INCOME CONSUMERS WITH NUTRITIOUS FOODS

The **GAIN Business Model Research Project** aims to identify promising business models to reach lower-income consumers with nutritious foods. This series of briefs summarises the results of the project's systematic review of existing research and evidence to identify these approaches.



### Serving lower-income consumers: the business and nutrition opportunity

Lower-income consumers represent a large market, estimated at 4 billion people worldwide. Many low-income consumers' diets are lacking in food diversity and quality. There is a business opportunity for private companies to help improve this by providing safe, nutritious foods that meet customers' needs at an affordable price – as long as they do so in ways that are profitable and financially sustainable for the company.

## HOW DOES IT WORK?

To help meet lower-income consumers' needs, companies often need to adapt their products. This is particularly important when it comes to making products more affordable.



One way to reduce costs is to identify products that are currently wasted or considered low-quality, but have untapped value, and to capture that value. This can be done by taking products that are normally waste or are seen as undesirable, then presenting those to the customer in an appealing format that meets their demands.

By taking food that would otherwise be wasted and repurposing it into something that can be consumed, firms may be able to create a more affordable product, given that the 'waste' ingredient is usually available cheaply. This can also help reduce the environmental impact of the food system by reducing waste.

An alternative to using waste products is recognising that some parts of a product, while not quite waste, are less desirable to most consumers. These can be separated and sold at a lower cost. This can be done for products that would normally be sold as a whole (e.g., chicken) or for which only desirable parts would be sold and the others diverted to waste or non-food uses.

## WHAT ARE SOME EXAMPLES?

### Repurposing Waste

#### Reybanpac Unidad de Lácteos, Ecuador

This company used whey, a high-quality easily digestible protein leftover from processing milk into cheese, to create a fortified yoghurt. Whey was previously dumped into rivers in large quantities and had a negative environmental effect. The product is ultra-high-temperature pasteurised (thus shelf-stable), low-sugar, and targeted to lower-income young children.



#### Limpho Productos Alimentares, Mozambique

This processor used broken nuts that would not normally be sold to make nut butter. It is aiming to use a similar approach to create rice flour-based products from broken rice.

#### Kwanza Tukule, Kenya

This company produced and delivered pre-cooked beans to street vendors. It also had an interesting take on repurposing waste: it used food scraps from the vendor-clients to feed a biogas digester, used to cook the beans. This resulted in lower energy costs as well as greener energy.

## WHAT ARE SOME EXAMPLES? (continued)

### Less desired parts

#### Chicken farmers, Mozambique and Kenya

It is common for chicken farmers to sell the chicken's organs and other offcuts like skin, neck, and feet at a cheap price while selling the more desirable chicken meat (e.g., breasts, fillets, drumsticks) at market prices to wealthier consumers. A company in Mozambique, for example, has sold a package of chicken neck, liver, and legs for less than half the per-unit price of a whole chicken.



#### MozAgri, Mozambique

This goat farm sold goat meat to urban markets at market prices while selling the 'fifth quarter' (i.e., pieces of an animal carcass that are not used for meat production, like organs, hide, feet, bones, and/or fat) to the local rural population around the farm at affordable prices.

## WHAT SHOULD A FIRM CONSIDER?

In product design, it is important to achieve customer acceptability. This can be done through appealing packaging, marketing, and/or consumer education.

From a nutrition perspective, it is important that waste ingredients or less-desired parts be of high nutritional value (or contribute to producing highly nutritious foods as non-ingredient inputs, like fuel).

From a food safety perspective, it is important to carefully process waste products and to understand their origin and potential risks in the food value chain to ensure they do not contain food safety hazards.

## HOW TO DEPLOY IT?

The first step for an entrepreneur interested in applying this approach is identifying either a waste product that could be consumed or a product for which some parts are less desirable than others. Next, they could experiment with different formulations to identify how that waste could be used in a food product, or how the product could be segmented; calculate the costs entailed in creating those products (including packaging) and compare those to customers' willingness to pay; design appropriate packaging; and devise a strategy to market the new product to customers, which may include addressing misconceptions related to the product being waste or undesirable.

### To Learn More:

Nordhagen, S, Demmler KM. 2023. How do food companies try to reach lower-income consumers, and do they succeed? Insights from a systematic review. *Global Food Security*. Doi: 10.1016/j.gfs.2023.100699.

Reybanpac Unidad de Lácteos. 2020. Brief: G20 Challenge on Inclusive Business Innovation. <https://www.inclusivebusiness.net/sites/default/files/2020-01/Reybanpac.pdf>

SBN. Octavio's Aspiration [Internet]. SUN Business Network (SBN). 2021 [cited 2022 Aug 11]. Available from: <https://www.sbn.lucidleaps.com/sbn-demo/stories/octavios-aspiration/>

SBN. Khadija's Innovative Idea [Internet]. SUN Business Network (SBN). 2021 [cited 2022 Aug 11]. Available from: <https://www.sbn.lucidleaps.com/sbn-demo/stories/khadijas-innovative-idea/>

MozAgri. 2023. Goat Production. <https://www.mozagri.com/index.php/blog/goat>

While we hope this offered useful advice, users should always consider their company's circumstances when adopting new approaches – and make sure that they are used as part of a broader viable business model. The examples cited come from a 2022 document review and may not be fully up to date.

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