

# Feeding the growth of Timor-Leste's vital pig market

## Market context

Pigs are ubiquitous in Timor-Leste, reared for cultural ceremonies, as a store of wealth and to generate income. Before the outbreak of African Swine Fever in 2019, 68 per cent of rural households raised pigs. Pork is an important part of the Timorese diet, with each person in Timor-Leste consuming close to 11.5kg of pork every year. Demand for pork surpasses domestic production, which was approximately 1,579 tonnes worth USD3.4 million (AUD5.1 million) in 2023.<sup>6</sup>

Timorese farmers practise traditional animal husbandry methods, where pigs are allowed to roam freely or are confined in rudimentary enclosures constructed from readily available materials such as bamboo and wood. Feeding practices are basic, with farmers relying on kitchen scraps, agricultural byproducts, such as cassava leaves and maize husks, or whatever the pigs can forage.

Productivity has been low because of poor animal nutrition, suboptimal farming practices and high levels of disease. When MDF entered the pig market, farmers were rearing pigs for 19 months and animals would only reach an adult weight of 60-100kg.

In comparison, with the right breed, feed and husbandry, pigs can reach an adult weight of 90-110kg within six months.

To unlock the opportunity presented by rising demand, in 2019 MDF began working with the private sector to boost domestic pig production. Businesses have invested USD896,312 (AUD1.34 million) since 2019 in improving pig breeds, increasing the availability of

complete pig feed and supporting farmers to adopt better husbandry practices, including biosecurity measures. The sector has grown, and the benefits of MDF's support have reached over 64,845 farmers, whose incomes cumulatively have increased by USD8.02 million (AUD12.03 million). While MDF supports the entire pig market system, support for pig feed has seen the most progress.

## Catalysing change in pig feed

### From crisis to opportunity

In 2019, African Swine Fever (ASF) swept through Timor-Leste, killing around half of the country's pig population. In collaboration with the Ministry of Agriculture and Forestry (MAF), MDF launched a large-scale communication campaign to educate farmers about how simple biosecurity measures and husbandry practices could protect their pigs from the disease. The ASF outbreak was catastrophic but it played a catalytic role in prompting farmers to adopt improved penning practices and biosecurity measures. Penning pigs reduces the spread of ASF but it also prevents pigs from scavenging, encouraging the use of complete feed.



ASF  
campaign  
posters

<sup>6</sup> National Institute of Statistics Timor-Leste.

# Farmers start using complete feed

Farmers relied on traditional feeding practices for generations, which not only involved animals scavenging but also required people to gather fodder and waste to feed their animals. MDF conducted three interventions in 2019 and 2020 to demonstrate the benefits of switching to improved feed. One focused on formulating feed using locally available materials; one focused on supplementary feed and one focused on complete feed. Each partner was supported to use demonstration plots and training to increase farmers' understanding of the benefits of using different feeding practises.

Demonstration plots proved pivotal, enabling farmers to observe the drastic difference in the rate of growth of pigs fed with complete feed, compared to pigs that relied on traditional feeding practices. This persuaded farmers that there was a clear business case for investing in feed. Using complete feed enabled farmers to reduce their workload while increasing their resilience to climate change by providing a reliable feed option for their pigs when local fodder was unavailable, such as during drought.

It was difficult for some farmers to switch entirely to complete feed because it is relatively expensive. Consequently, some farmers tried formulating their own feed and others used supplementary feed.

## Types of pig feed



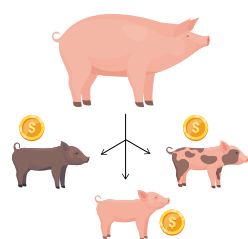
✖ **Formulated feed using local materials:** Feed prepared locally using available ingredients to formulate a balanced diet.

✖ **Supplementary feed:** A concentrated form of feed rich in nutrients, usually protein and essential vitamins and minerals, mixed with locally available ingredients to formulate a balanced diet.

✖ **Complete feed:** Commercially prepared feed that is ready to use and provides all the necessary nutrients.

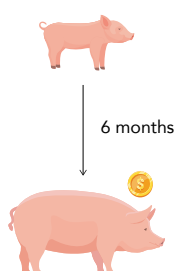
## A clear business case for using complete feed

### 1 Breeding



|                                        | Treatment (hybrid pigs and improved feed) | Control (primitive pigs and local feed) |
|----------------------------------------|-------------------------------------------|-----------------------------------------|
| ➔ a. Annual piglet production          | 13                                        | 8                                       |
| ➔ b. Price of piglet (USD)             | 195                                       | 130                                     |
| ➔ c. Annual revenue (a*b) (USD)        | 2,598                                     | 1,074                                   |
| ➔ d. Annual cost of feed (USD)         | 354                                       | 134                                     |
| ➔ e. Annual profit per sow (c-d) (USD) | 2,244                                     | 940                                     |
| ➔ Additional profit per year (USD)     | <b>1,304</b>                              |                                         |

### 2 Fattening

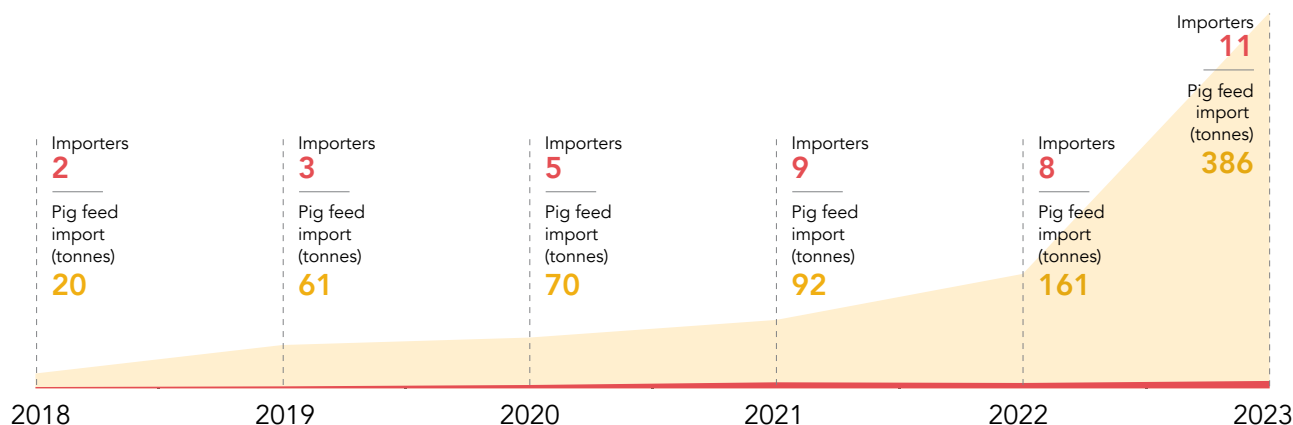


|                                                 | Treatment (hybrid pigs and improved feed) | Control (primitive pigs and local feed) |
|-------------------------------------------------|-------------------------------------------|-----------------------------------------|
| ➔ a. Weight of pig at sales (kg)                | 121                                       | 81                                      |
| ➔ b. Revenue from pig sales (USD/kg)            | 1,087                                     | 729                                     |
| ➔ c. Cost of piglet (USD)                       | 195                                       | 130                                     |
| ➔ d. Cost of feed** (USD)                       | 316                                       | 209                                     |
| ➔ e. Cost of piglet and feed (c+d) (USD)        | 511                                       | 339                                     |
| ➔ f. Profit per pig fattening cycle (b-e) (USD) | 576                                       | 390                                     |
| ➔ g. Fattening cycle (months)                   | 11                                        | 19                                      |
| ➔ h. Annual profit (f/g*12) (USD)               | 628                                       | 246                                     |
| ➔ Additional profit per year (USD)              | <b>382</b>                                |                                         |

\*\*The cost of feed for control farmers does not include the cost of materials available at their homes.

## Farmers' demand for complete feed increases imports and reduces unit costs

As more farmers started using complete feed, the number of firms importing pig feed and the volume of pig feed imported increased significantly, despite pandemic-related disruptions.



However, Timorese pig feed importers continued to buy in relatively small volumes via overseas intermediaries and did not receive preferential dealer benefits, resulting in them paying above the market price. In 2022, MDF invited Sreeya, one of Indonesia's top

feed manufacturers, to visit Timor-Leste to explore the potential to establish a dealership. This resulted in a dealership contract with Wfour, one of the largest supermarket chains in Timor-Leste. This reduced the retail price for a bag of feed in Dili from USD55-60

per 50kg (AUD82.5-90) to USD45 (AUD67.6). Sreeyawent on to establish another dealer in Baucau municipality. Other Indonesian feed manufacturers, like Gold Coin and Patriot, are exploring the feasibility of establishing similar dealers in Timor-Leste.

## Distribution and sale of pig feed increases in municipalities

When farmers observed the benefits of pig feed at demonstration plots, they started buying feed from these plots. MDF's partner Casa Agricultura capitalised on this interest by

converting five of its demonstration plots into feed retailers. To further increase the availability of feed outside of Dili, MDF supported feed importers to establish retailers in municipalities. In 2019, feed was

available only in Dili, Baucau and Ainaro. In 2024, feed was available in Dili, Manatutu, Baucau, Lautem, Aileu, Ainaro, Bobonaro, Covalima, Liquica, Oecusse and Viqueque.

## Complete pig feed is produced domestically

In 2024, Galhos International began domestic production of complete feed. Within the first five months of production, it was selling approximately nine tonnes per month. MDF is supporting Galhos to increase its production capacity, promote the benefits of complete feed and set up district-level distribution networks.



Since MDF started working in the pig sector, market activity has ramped up: feed imports have increased six-fold, the number of importers has nearly quadrupled, more feed is available outside Dili and Timorese firms have started domestic production. Given that feed is critical to the healthy growth of pigs, this vital market is set for transformation.

## PIG FEED MARKET STATUS

2019

- 453,444 pigs in Timor-Leste\*
- Traditional farming practices
- Local breeds
- **Feed:** mostly scavenging, some household waste/local feed; a handful of farms fed complete feed

Total feed imported — 61T

- African Swine Fever (ASF) detected in Timor-Leste

2020

- ASF kills approx. 50% of all pigs
- **Feed importers: 5** (mostly farms importing for themselves and Casa Agricultor)

Total feed imported — 70T

2021

- Farmers start penning, applying biosecurity measures and using complete feed

Total feed imported — 92T

2022

- Pig feed use gradually increases

Total feed imported — 161T

2023

Total feed imported — 386T

2024



## MDF PARTNERS AND SUPPORT

- Casa Agricultor (introducing complete feed and improved farm management practices)

- Manufahi Lui (training on animal feed formulation)

- ASF communication campaign with MAF

- Biosecurity consultant to provide training

- RN Agri Lda (use of soymeal as a supplementary feed)

- Casa Agricultura conducted pig feed demonstration (delayed due to ASF and COVID-19)

- Sreeya (Indonesian feed manufacturer) visits Timor-Leste and W4 becomes a Sreeya distributor

- Sreeya expands distribution, leading to a new dealer

- Galhos (local feed manufacturing)

\*2019 survey



📷 Metinaro Pig Breeding Center (MPBC), led by Dr Alipio de Almeida, has introduced artificial insemination services for pigs.