Case Study

Strengthening protein supply for nutrition and livelihoods in Africa

AgDevCo

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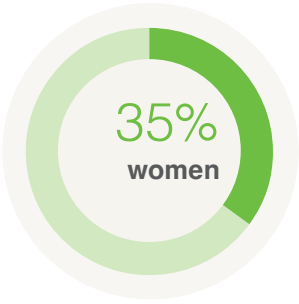
Summary

AgDevCo invests in poultry and aquaculture businesses that strengthen the supply of affordable animal-source proteins in low-income African communities. In 2024, AgDevCo's investees supplied over 1.2 billion protein meal portions, helping to address food and nutrition security within low-income communities. Their operations generate both direct and indirect employment, with significant female participation, supporting income generation and economic resilience for smallholder farmer[1] households. Additionally, our investees adopt sustainable practices such as solar energy and waste recycling, which contribute to the carbon efficiency of these production systems.

Overview of impact by poultry and aquaculture investees[2]

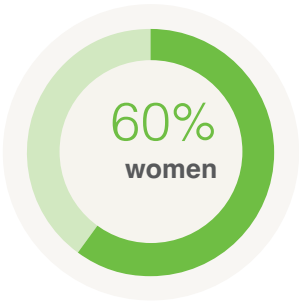
1.2 billion
protein meal portions supplied

5,180
full-time equivalent (FTE) jobs maintained



Total smallholder farmers (SHF) engaged

2,284,500



Average annual income per FTE

$2,190

Average annual income per SHF

$350

The headline figures reported in this case study reflect the 'gross' impact of our investee businesses. That is, for example the total number of permanent and season jobs that the investee provides. We separately report 'net' or 'attributed' impact and greenhouse gas emissions of AgDevCo's investment using the Task Force on Climate-related Financial Disclosures (TCFD) methodology.

[1] In this study, the term 'smallholder farmer' is used broadly to also include agents, traders, and customers, unless otherwise specified.

[2] Values represent gross impact from poultry and aquaculture investments within AgDevCo's 2024 portfolio.

Context

The supply of affordable, high-quality protein is essential because protein is a fundamental nutrient critical for physical growth, cognitive development, and overall health. In low-income countries, adequate protein intake, particularly from animal-sourced foods, is vital to combat malnutrition and reduce high rates of stunting and micronutrient deficiencies seen in many vulnerable populations. Beyond nutrition, building local industries that sustainably deliver affordable protein provides a dual benefit: it serves as a key source of nourishment while generating livelihoods and fostering economic resilience in local communities. Simply increasing food production without focusing on accessible, protein-rich foods is insufficient; targeted development of value chains for protein-rich foods such as poultry, eggs, dairy, fish, and beef can improve dietary quality and create income opportunities, especially for low-income communities.

The challenge

Local protein in regions with underdeveloped industries is often limited and unaffordable. This is true particularly in rural communities where households still depend on market purchases to subsidize their own production of animal-source foods. Additionally, in the absence of local industries, value-add opportunities and income generation remain limited for low-income farming communities.

Unaffordability means that diets tend to be dominated by starchy staples, with limited intake of essential proteins and micronutrients, and lack of nutritional diversity, contributing to undernutrition and protein-energy malnutrition among vulnerable groups[3].

Improving the supply of sustainably and locally produced animal protein is essential to help low-income communities enhance their nutrition, livelihoods, and long-term resilience. In the context of climate change, this requires production systems that incorporate adaptation and resilience to emerging risks.

Our approach

AgDevCo's portfolio of poultry and aquaculture investees responds to this need by supporting value chains that deliver inclusive employment, enhance nutrition using efficient sustainable and climate resilient production systems.

Since 2021 we have been invested in Victory Farms, Kenya's largest tilapia producer. This business is supporting the country's growing demand for affordable, high-quality fish. It produces tilapia on Lake Victoria and sells primarily in low-income communities across Kenya. The model, which supplies fish to the local market through retail outlet and predominantly female market traders, has expanded to Lake Kivu in Rwanda. Seeing the impact of Tilapia in the affordable protein sector, in 2024 AgDevCo invested in Tropo Farms, expanding fish production in Ghana.

We are also invested in a portfolio of poultry businesses in different countries and regions, including Transurban in Mozambique and Goldenlay Layers in Zambia. Our largest poultry investment is in Hatch Africa.

Now operating in six countries across sub-Saharan Africa, Hatch leverages a network of rural agents who raise day-old chicks and then sells them to smallholder farmers. These farmers raise a small number of chickens for household consumption and sell surplus eggs and chicken at local markets.

Hatch supplies a high-performing, disease-resistant SASSO breed that is more productive and feed-efficient than local breeds, well-suited to African farming conditions and consumer preferences. The impact of the model is seen through increased climate resilience of smallholder farmers, enhanced women's economic participation and affordable proteins reaching local communities.

This case study examines how the supply of affordable, high-quality animal-source proteins, particularly poultry, eggs, and fish, helps address persistent nutrition gaps in low-income African markets while advancing economic opportunities and sustainable production systems.

According to the Food and Agriculture Organisation (FAO)[4] and World Bank[5]:

58%

of the African population are moderately or severely food insecure.

31% of children

across Africa are stunted due to chronic malnutrition.

67%

of the Sub-Saharan Africa population live in extreme poverty.

[3] Affordability of Protein-Rich Foods: Evidence from Zambia.

[4] Africa: Regional overview of food security and nutrition, 2023, statistics and trends.

[5] World Bank Group: Poverty, prosperity and planet report 2024.

Nutritional and food security impacts of AgDevCo investees

Product	Volume supplied	Estimated protein content by weight	Protein meal portions[6]
Eggs	3.6 billion[7]	13%	1.09 billion
Tilapia	16,325t[8]	26%	213 million
Poultry meat	81,810t[9]	27%	110 million
Total			**1.2 billion meals**

Source: AgDevCo Annual Reporting (December 2024)

In 2024, poultry and aquaculture enterprises that AgDevCo is invested in supplied an estimated 1.2 billion nutritious meals through locally produced eggs, poultry, and fish. The provision of nutritious meals contributes to combating malnutrition and hunger in local communities by making protein-rich foods more accessible and affordable.

Innovative poultry distribution models resulted in a significant increase in nutritional products available in low-income communities. Poultry provides some of the most inexpensive animal proteins that can be produced locally and is an important element in the livelihoods and food security of small farmers and their families. An estimated 3.6 billion eggs and more than 81,000 tonnes of meat were sold and consumed in low-income communities where our poultry businesses operate.

Hatch Africa reported that 79% of smallholder farmers households with children noted an increase in egg consumption in children, since purchasing Hatch Africa's day-old chicks. In Rwanda, Hatch smallholder farmer households reported an increase in their annual egg consumption which amounted to ten times more than the national average.

[6] Protein meal portions supplied are calculated based on the recommended daily protein intake for adults, which ranges from approximately 45g (women) to 55–60g (men), with higher requirements for elderly individuals and pregnant or nursing women. For the purposes of this analysis, we have assumed a daily intake of 50–60g, divided across three meals, equating to an estimated 20g of protein per meal. The figures presented reflect the number of protein meal portions supplied, rather than complete meals.

[7] Data sourced from Hatch Africa, Transurban and Goldenlay Layers. We account for the volume of eggs and poultry meat supplied through downstream value chain actors who purchase day-old chicks from our investees. These actors rear the chicks for commercial poultry meat and egg production, with surplus production sold to local communities as a means of income generation for the downstream actors and improved nutrition access for low-income households.

[8] Tilapia supplied gutted.

[9] Hatch (accounting for 95% of poultry meat supplied), calculate the kg of poultry meat based on 1.6kg for females and 3kg for males for SASSO birds. Broilers are not included, as it is unlikely that they will go to rural markets. A mortality rate of 3.5% at the agent level and 15% at SHF level is factored into the calculation. The assumption is that 50% of SASSO birds are female and 50% are male.

Nutritional and food security impacts of AgDevCo investees continued

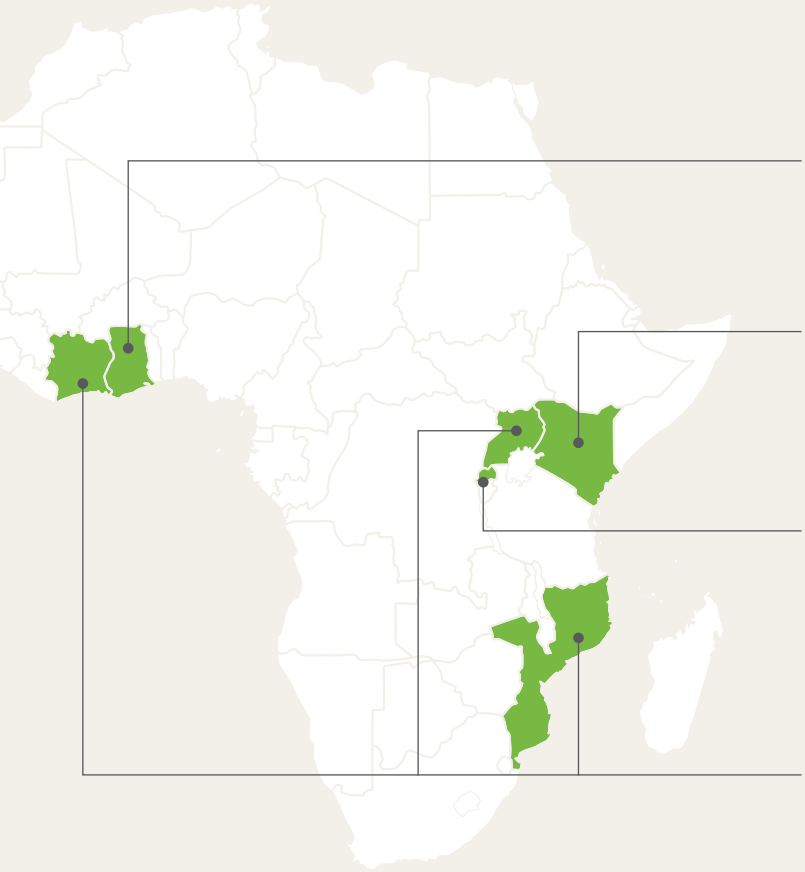
Nutritional advantages

Poultry products, especially eggs, are culturally accepted across many African communities and are a vital and affordable source of high-quality, complete protein and essential nutrients. They play a crucial role in combating malnutrition and improving health outcomes—particularly for vulnerable groups like children and pregnant women. They support growth, reduce stunting, and enhance immune and cognitive development. The affordability and nutritional value underscore the value of poultry as a critical dietary staple for improving overall local community health and nutrition[10].

Fish are rich in protein; contain essential micronutrients and essential fatty acids, which cannot easily be substituted by other food commodities[11].

Investee businesses contributing to national health and nutrition strategies

Increasing access to animal-source foods is a core objective in many countries' domestic health and nutrition strategies, with growing policy and investment support. Governments and development partners recognise that animal proteins-such as poultry, dairy, and fish-provide dense concentrations of bioavailable protein and critical micronutrients (iron, zinc, vitamin B12) that are often absent from plant-based diets. Even modest, consistent access to these foods can have transformative effects on public health outcomes, particularly for vulnerable groups.



Examples of country national nutritional strategies directly supported by AgDevCo investments.

Ghana stands out for high fish consumption (26kg per capita[12]), with fish accounting for the majority of animal protein consumed. National policy aims to maintain or increase this, especially as population grows.

Kenya's National Nutrition Action Plan[13] calls for increased consumption of animal protein, with poultry and fish identified as affordable, scalable solutions to reduce stunting and micronutrient deficiencies.

Rwanda's Livestock Master Plan[14] sets explicit targets to increase the availability of animal-sourced foods. The plan sets to increase the availability of meat to 41kg per capita, and eggs to 114 eggs per capita, directly addressing FAO recommendations aiming to reduce malnutrition.

Uganda, **Côte d'Ivoire**, and **Mozambique** have embedded the promotion of animal-source foods-especially poultry-within their national nutrition and food security strategies, recognising their role in improving dietary diversity and health, even where numeric targets are less explicit.

[10] Small-scale poultry and food security in resource-poor settings: A review.
[11] Contribution of fish to food and nutrition security in Southern Africa: challenges and opportunities in fish production.
[12] Review of fisheries and aquaculture policies in Ghana.
[13] The Kenya Nutrition Action Plan (KNAP): 2018-2022.
[14] Rwanda Livestock Master Plan.

Direct and indirect job creation and livelihood impact

	Poultry	Aquaculture
Number of full-time equivalent (FTE) jobs	3,550	1,630
Average annual income[15] per FTE job	$1,247	$4,240
Number of smallholder farmers (SHF) engaged	2,274,940	9,560
Average annual income[16] per SHF	$330	$3,940

Source: AgDevCo Annual Reporting (December 2024)

Integrated poultry and aquaculture production systems demonstrate strong potential for both commercial return and transformational impact, particularly in low-income contexts where our portfolio operates. While not all businesses achieve the same level of scale or depth of impact, the nature of these value chains creates unique opportunities for inclusive employment, resilient livelihoods, and downstream economic growth, even in challenging environments.

[15] Employee income is the gross salary of employees pre-taxes and other deductions.

[16] For traders/entrepreneurs, income is the gross revenue earned from selling inputs/produce purchased from investees. Depending on data available, we may estimate the average price traders sell the input using a markup applied to the investee's selling price.

Direct and indirect job creation and livelihood impact continued

In 2024, poultry and aquaculture production created and maintained more than 15% of FTE jobs within our portfolio businesses. These sectors generated meaningful earnings, as shown in the table above, underscoring their role in strengthening household purchasing power.

The impact extends well beyond primary production. Both sectors provide livelihood opportunities indirectly in the supply chain, to over 2.2 million smallholder farmers, agents, traders, and retailers. These actors (both upstream and downstream) earned an average of $350 in annual income, highlighting the multiplier effect of inclusive value chains in local economies.

The Hatch Africa case illustrates this well. Using a wide agent network, Hatch distributes productive, resilient chickens to rural families. As a result, thousands of micro-entrepreneurs are supported, and nutrition and incomes for smallholder households are improved.

These sectors also have an important equity dimension, given the significant role women play. Women represent 33% of FTE roles in poultry, 34% in aquaculture, and over 60% of downstream value chain actors. Victory Farms use local market traders, majority who are women, as an existing channel to distribute their fish to customers. There are over 7,000 market women in the Victory Farms network. They resell raw fish alongside value-add products, including cooked fish, to 90% of end consumers. Women make up more than half of Victory Farms' customer base. This example of women's participation in the value chain is also important for nutritional outcomes given the relationship between women's income and improved household nutrition[17] [18].

[17] Women, income use and nutrition quality: effects of women's decision-making in rural households in Cameroon.

[18] Eliciting the gender income influences on household's food security in west Africa.

Investee feature

Transforming rural livelihoods through poultry

Hatch Africa is improving lives in low-income rural communities by addressing two interconnected challenges: nutrition and livelihoods. Through the distribution of SASSO dual-purpose chickens—a resilient, high-yield breed—smallholder farmers gain access to a reliable source of both food and income. These birds lay significantly more eggs and grow to market weight faster than local breeds, making them ideal for rural conditions.

We estimate that, since 2010, Hatch has helped generate $3.4 billion in additional income for smallholder families. Many farmers reinvest their earnings in food, education, and healthcare. At the same time, household nutrition has improved through increased access to eggs and poultry meat. Egg consumption among Hatch-supported families is four times the regional average, contributing to lower rates of child stunting and improved maternal health.

Hatch's model is particularly impactful for women. The company employs nearly 1,000 women, over a third of its workforce, and supports close to 10,000 female micro-entrepreneurs who distribute chicks and farming inputs. Among women smallholder farmers, most report increased income and improved food security, reinforcing women's agency in household decision-making.

In 2024 alone, Hatch distributed over 47 million chicks, resulting in billions of eggs and millions of kilograms of chicken meat consumed in rural areas. Beneficiaries report high satisfaction with the program, citing its reliability and relevance to their needs.

By combining inclusive employment, women's economic empowerment, and improved access to affordable protein, Hatch Africa is proving that market-based solutions can drive meaningful and measurable development across Africa's rural landscape.

> At Hatch, we meet farmers and families where they are - delivering the most resilient, productive, and high-quality dual-purpose poultry suited for backyard systems. The result is greater access to affordable, high-quality protein and increased disposable income, especially for rural women. AgDevCo has been a vital partner, providing risk capital and hands-on capacity support that were essential to replicating and scaling our model into new markets.

David Ellis, Founder & Co-CEO Hatch Africa

Hatch Africa · ethio chicken · Uzima Chicken · PREMIER POULTRY · POULET PRESTIGE

Carbon efficiency of protein production systems

Well-operated domestic aquaculture and poultry production, as shown in this case study, not only deliver significant social impact but also represent some of the lowest carbon emission sources of animal protein available. In comparison to other sources of animal protein, poultry and aquaculture generally have lower carbon emissions due to the absence of enteric methane production in aquaculture and lower levels in poultry[19] [20].

Aquaculture and poultry are already less carbon intensive than many other animal proteins – and our investees further reduce their impact by adopting sustainable practices. For example, Victory Farms use solar power to to reduce a portion of their emissions from power generation and improve energy reliability in remote, community-based ponds. Hatch, Transurban and Goldenlay divert waste litter to fertilizer used in crop cultivation, which lowers emissions from manure management and promotes waste reuse, helping farmers reduce their dependence on chemical fertilizers.

Analysis of our emissions data highlights how aquaculture and poultry production can play a significant role in delivering affordable, nutritious protein to low-income areas, while also maintaining a low carbon footprint per piece. Sustainable practices such as solar energy use and waste recycling further reduce environmental footprints. Many of the production systems are climate resilient using both technological and genetic approaches to achieve this e.g. Hatch's SASSO dual purpose breed has good tolerance to projected climate conditions. Beyond reduced emissions, initiatives such as Victory Farms' work with regulators to protect Lake Victoria's ecosystems, and Hatch Africa's support for smallholder farmer's income diversification, further strengthen climate resilience and food security for communities.

To understand this better, we plan to conduct lifecycle assessments (LCAs) this year and publish the findings to provide deeper insights into the environmental impacts and sustainability of these production methods.

[19] Poultry production and climate change.
[20] Quantifying and mitigating greenhouse gas emissions from global aquaculture.

Conclusion

Scaling the supply of affordable, high-quality animal-source proteins, particularly poultry, eggs, and fish, delivers multiple, reinforcing benefits in low-income African markets. These sectors catalyse inclusive growth and create meaningful pathways out of poverty. Their success demonstrates how market-based approaches can deliver both financial returns and social impact in underserved markets. By closing nutrition gaps, reducing carbon footprint through efficient sustainable agricultural practices, and creating meaningful employment, especially for women and smallholder farmers, these systems contribute to both economic opportunity and environmental stewardship. These impacts also align with national development priorities, underscoring the transformative potential of sustainable, local protein supply.