

CIRCULAR ECONOMY BUSINESS CASE STUDIES IN SOUTHEAST ASIA



Fair Farms

-  Kampot, Cambodia
-  Agriculture (spices)
-  fair-farms.com
-  Analysis period: 2014-2023

Organic and Inclusive Spices Cultivation

Business Spotlight

Fair Farms is an inclusive business in Cambodia, which specialises in producing and distributing organic and Fair-Trade pepper (and intends to add vanilla in 2024). Its commitment to regenerative practices, Fair Trade, and international organic certifications (Fair for Life, Ecocert, USDA) enabled Fair Farms to get access to premium global markets, making it the leading exporter of organic Kampot pepper from Cambodia since 2021. Regenerative practices include intercropping with vanilla plants and the use of cover crops such as *Arachis repens* (locally known as peanut grass).

During the peak of COVID19 pandemic in 2021, demand for pepper surged, prompting Fair Farms to establish a small cooperative to source pepper from smallholder farmers under a model that ensures premium prices in exchange for sustainable farming practices. Fair Farms is exploring retail expansion for the distinctively flavored, local Kampot peppercorns and Vanilla Tahitensis varieties, with significant growth anticipated for vanilla due to its high global demand.

Fair Farms employs a holistic approach to sustainability: it provides equitable compensation to its 15 full-time, 110 seasonal workers and 10

cooperative farmers, further supporting the latter through an equitable fund for community projects.

Challenges such as resistance to regenerative agriculture methods and the intricacies of vanilla cultivation have been met with innovative solutions and educational support for farmers. Looking forward, Fair Farms aims to diversify its product range to include other dried spices, thereby enhancing farmer livelihoods and expanding into premium export markets. This model of combining environmental sustainability with economic viability demonstrates significant potential for replication and scaling, particularly for high-value products.

Keywords

Regenerative agriculture, Intercropping, Cover crop, Spices

Innovation

Design, Operations, Resource efficiency, Resource substitution

Analysis of Fair Farms

Context and baseline

Agriculture is a key pillar of the Cambodian economy, characterised by a predominance of smallholder farmers, with limited resources and capabilities for efficient soil management. In 2021, 6.3 million people were living on degraded agricultural land –an increase of 38% in a decade, bringing the share of rural residents who inhabit degraded agricultural land up to 55% of the total rural population.¹ Land degradation can severely influence the populations' livelihood by reducing people's access to vital ecosystem services (including food and water) and increasing the risk of poverty. The annual cost of land degradation in Cambodia was estimated in 2018 at USD 677 million.²

Fair Farms established in 2014 its inclusive business in Cambodia that specialises in the production and distribution of organic and Fair Trade pepper of the highly valued local Kampot variety. From the outset, Fair Farms embraced fair practices and implemented regenerative agriculture with intercropping and organic fertilizers. Moreover, Fair Farms is able to share these practices with smallholder farmers. By focusing on high-value-added products with international organic and Fair Trade certification and engaging in collaborative schemes, Fair Farms has an effective and sustainable environmental impact which also reduces poverty in Cambodia.

Innovation

Witnessing the negative impact of existing agricultural practices on soils used for Kampot pepper cultivation, Norbert Binot decided to conduct experiments using *Arachis repens* (peanut grass) as a cover crop to rejuvenate the soil through agroforestry and intercropping. This was not necessarily expected to maximise productivity, but rather to optimise environmental benefits. These benefits include improved soil quality, reforestation, biodiversity enhancement and carbon sequestration.

The concept of intercropping is well-known, but the innovation lies in the implementation of a successful social and economic business model that facilitates the dissemination of these organic practices among other smallholder farmers, thereby creating a more holistic and long-term impact. Fair Farms focuses on exporting only a few niche products: initially Kampot pepper, and most recently vanilla as an additional and complementary crop. Organic and Fair Trade international certifications unlocked access to premium-priced export

markets. To meet the increasing demand for pepper during the COVID-19 pandemic, Fair Farms chose to collaborate with farmers instead of increasing its own production. Fair Farms agreed to buy all their production provided the farmers applied sustainable practices and met Fair Trade standards. Additionally, to provide an extra incentive and help farmers diversify their production, Fair Farms created an "equitable" fund.

Circular Economy impact

The innovations by Fair Farms are relevant to the circular economy, in particular through improved efficiency in the use of agricultural inputs, or resource efficiency, and partial substitution of non-renewable farm inputs by renewable inputs, or resource substitution.

Resource efficiency is principally achieved through the successful use of *Arachis repens* (locally known as peanut grass) as a ground cover crop in pepper production. The *Arachis repens* cover stabilises the soil and improves its quality. Once the cover has matured, the need of external outputs to compensate for soil erosion is eliminated. This model maximises pepper production, soil rejuvenation, and reduces energy consumption for pumping water, reduces water utilisation and reduces operational costs.

While usual practices (of removing the grass) are labour- and time-intensive, Fair Farms estimates that 50% of its water usage and cost have been reduced with the cover crop, and have eliminated the need for soil amendment. This represents a benefit of over EUR 20,000 annually, saving about 3,000 cubic meters of water and preventing the 3,600 cubic meters of soil washout per year.

In addition to growing *Arachis*, Fair Farms also introduced vanilla culture to partly replace pepper plants with *Vanilla tahitensis* plants, using the already existent wooden support structure (the 'posts') for pepper. This only requires the collection of the vanilla cuttings (which is the most expensive input) and capacity building on vanilla cultivation. The vanilla attracts a high price.

In terms of resource substitution, to use renewable inputs, Fair Farms is experimenting with various combinations of natural local materials to substitute fertilisers such as fish bones for phosphorus, cow dung for azote and *Arachis* for nitrogen. This diversification shows promising results.

1 See: https://www.unccd.int/sites/default/files/ldn_targets/2018-12/Cambodia.pdf

2 Ibid.



Business and market impact

Thanks to the international certifications obtained in 2018 (Fair for Life, USDA Organic, and EU Organic), Fair Farms gained access to the export market and has grown to become the top exporter of organic-certified Kampot pepper in Cambodia (around 13 metric tonnes in 2021, representing 10% of total Kampot pepper exports from Cambodia). Fair Farms does not have its own brand as it sells all its production to well-recognised international organic brands like Ecodées. Selling to international brands is only possible by having achieved high and consistent quality of its products.

Interestingly, when the demand for pepper peaked during the COVID period (in 2021), Fair Farms established a small cooperative, the Organic Grower Group, to source more pepper from smallholder farmers under a fair, sustainable and inclusive model (premium paid over the market price against implementation of sustainable practices). Fair Farms aims to expand this model by focusing on retail expansion of its current products: Kampot peppercorns and Vanilla tahitensis. The production size for the latter product is modest for now as the first complete harvest is expected in 2025, but given the worldwide demand for vanilla, significant expansion opportunities exist.

By providing farmers with additional opportunities such as intercropping vanilla with pepper, Fair Farms aims to improve farmer livelihoods and build new partnerships and a sustainable supply chain. This will include more smallholder farmers and is expected to lead to the setting up of a vanilla processing facility in the future.

Stakeholders

Fair Farms employs 15 full-time workers and 110 seasonal workers. Additionally, it collaborates closely with a group of 10 farmers who are part of its cooperative, the Organic Grower Group. Fair Farms

commits to purchasing the farmers' entire production at a price 10% above the market rate, in exchange for the farmers' commitment to adhering to Fair Trade standards and adopting organic farming practices. Moreover, Fair Farms contributes an additional 5% of the farmer's sales to Fair Farms to an equitable fund. This fund is managed by the beneficiaries (the cooperative members), who can decide on its use according to needs, such as solar panels, repairs, food relief program during COVID, sponsoring education, etc. Fair farms have also provided the expertise and support needed to cultivate the vanilla vines.

Looking ahead, through partnerships with local farmers, Fair Farms plans to expand its business with other dried spices such as galangal, turmeric, cinnamon, cardamom, kaffir lime leaves, and local sugar. This expansion would help rural farmers obtain organic and Fair Trade certifications to be able to access premium export markets.

Implementation

Regarding the implementation of circular practices, Fair Farms encountered significant resistance in convincing their staff of the benefits of regenerative agriculture. In addition, challenging the traditional and well-established practices of Kampot pepper cultivation were not well received by the Kampot Pepper Producers Association. However, the results were closely tracked and speak for themselves: the plants were healthy and produced an abundance of peppercorns. The impact and losses arising from the extreme heat wave and drought during March-April 2024 has been noticeably less at Fair Farms than at other Kampot pepper growers.³

In parallel, growing vanilla vines posed some risks. Fair Farms hired a consultant from Tahiti to learn the technical aspects of cultivation. Pollination, curing and drying are delicate operations that require time and attention to master and build a solid knowledge base.

Another major barrier was the language and education level of the farmers, especially when transferring specific or technical knowledge. Most farmers have limited formal education and required more hands-on support for capacity building. Without proper attention, information is easily lost, and implementation delayed.

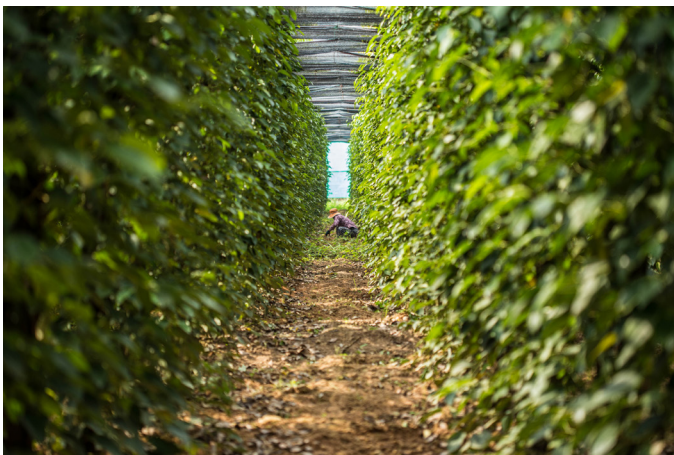
Fair Farms is benefitting from a tax reduction on its business income for five years starting in 2022.

3 <https://www.natureworldnews.com/articles/61650/20240513/kampot-pepper-wilts-under-cambodian-sun-amidst-record-temperatures.htm>

Takeaways

The transition towards sustainability for smallholder farmers requires time, patience and dedicated guidance to adopt new, organic practices effectively. To ensure sustainability, leveraging local resources (to use as organic fertilizers, for example) presents a simple and accessible approach. Obtaining organic and Fair Trade international certifications is conditional for access to the lucrative premium export markets for spices. Integrating these certifications with traceable, locally-driven collaborative schemes and incentives significantly contributes to alleviating poverty among smallholder farmers.

The success story of Fair Farms indicates that such a model is possible and suited for replication and scaling up, particularly for products with a high added value. This approach underscores the importance of a holistic strategy that combines environmental sustainability with economic viability.



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