



Agroforestry as a Sustainable Practice to Save Cocoa Production in Ghana

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Cocoa (*Theobroma cacao*) is central to Ghana's rural economy and national income, yet the sector faces a deepening [crisis driven by decades of monoculture farming, aging tree stocks, rising input costs, climate change](#), and the encroachment of illegal mining (galamsey). This article argues that agroforestry, the intentional integration of trees, food crops, and cocoa on the same piece of land offers a viable, ecologically grounded pathway to restore degraded cocoa lands, reduce farmer vulnerability, and sustain rural livelihoods.

Cocoa (*Theobroma cacao*) has shaped rural life, land use, and national income in Ghana for over a century. Yet today, in cocoa-growing communities across Ghana, farming has become increasingly difficult. From Sefwi to Asunafo, from Akyem to Juaboso, farmers speak of the same problems: cocoa trees are old, yields are falling, diseases are spreading, and the cost of farming keeps rising. Many farmers can no longer depend on cocoa alone



to feed their families. Young people see no future in cocoa farming and leave the land. What we are facing today is not just a farming problem but a livelihood crisis.

How Cocoa Monoculture Has Failed Farmers

For many years, farmers were advised to remove shade trees to increase cocoa yields. Cocoa farms were simplified, and forests were cleared in the name of “modern” farming (Asare, 2005). While yields increased for a short time, the long-term result has been weak farms that depend heavily on agrochemicals and inorganic fertilizers. Cocoa monoculture exposes farmers to too many risks at once: disease outbreaks, climate stress, rising input prices, and unstable cocoa prices. When cocoa fails, everything fails. This is why many farmers are now abandoning farms or turning to mining. Agroforestry challenges this system by bringing trees and diversity back to cocoa lands.

The Daily Struggles of Cocoa Farmers

Most cocoa farms in Ghana are old. Many trees were planted by parents or grandparents and are now weak and unproductive (Dormon et al., 2004). These old trees are more vulnerable to black pod disease, mirids, and cocoa swollen shoot virus, which has destroyed entire farms in some communities (Appiah et al., 2004; Thresh et al., 1988). When swollen shoots appear, farmers are often told to cut their trees, but compensation is slow or does not come at all. For many families, cutting cocoa means cutting off their only source of income.

Farmers are encouraged to spray chemicals and apply fertilizers, yet these inputs are expensive and often unavailable on time. Even when applied, the results are poor because the soil itself has been depleted and degraded by years of continuous farming. Years of continuous cocoa farming without trees or organic matter have reduced soil fertility and moisture-holding capacity (Asigbaase et al., 2019). During the dry season, cocoa leaves wilt, flowers dry up, and pods fail to develop.



A cocoa farmer in Ghana applying chemicals to his cocoa trees. Source: B&FT Online

Illegal mining has made the situation worse. In many cocoa areas, galamsey has destroyed farms, polluted streams, and weakened community control over land (Hilson & Garforth, 2013). Some farmers lease their land for mining not because they want to destroy it, but because cocoa no longer pays. When farming cannot feed a family, survival choices become desperate.



Illegal mining pits and destroyed water in cocoa farms at Nyinahin in the Atwima Mponua District in Ghana.
Source: Cocoa Post

Climate change is now clearly felt in cocoa communities. Rains no longer come on time, dry seasons are longer, and heat stress affects cocoa trees, especially on farms without shade (Schroth et al., 2016). Farmers know this from experience. Many say cocoa no longer “likes the sun” the way it used to.

Agroforestry: Returning Trees to Cocoa Lands

Cocoa has always depended on healthy land and forests. Yet over the years, cocoa farming has been pushed in a direction that weakens both the land and the farmer.



Agroforestry offers a way to restore cocoa lands, protect livelihoods, and give farming communities a future.

Agroforestry involves growing cocoa together with other trees and crops on the same piece of land. These systems resemble forest structures, with different plants supporting each other (Rice & Greenberg, 2000). In Ghana, many farmers practiced cocoa agroforestry before these systems were discouraged by policy and extension services (Ruf, 2011).



Cocoa Agroforestry in Ghana. Source: Tropenbos International



Agroforestry is part of a broader agroecological approach that values farmer knowledge, biodiversity, and ecological balance. Instead of relying on chemicals, agroecology rebuilds soil fertility through organic matter, shade, and biological interactions. Integrating shade trees, fruit trees, timber species, and food crops protect cocoa from extreme heat, reduce moisture loss, and improve soil structure. Fallen leaves increase organic matter and feed soil organisms, gradually restoring soil fertility (Isaac et al., 2007). Diverse root systems make better use of nutrients and water, strengthening the entire farm.



Trees and food crops integrated on cocoa farms. Source: Valrhona



Reducing Pest, Disease and Input Dependency

Though agroforestry does not eliminate pests and diseases, cocoa farms with diverse trees experience fewer severe disease outbreaks. Diversity slows the spread of pests and diseases and supports birds and insects that help control mirids and other pests (Jagoret et al., 2014). Shade moderates humidity and temperature, making conditions less favourable for certain diseases such as black pod.

As soil fertility improves, farmers depend less on expensive chemical fertilizers and pesticides. Agrochemicals are not simply expensive; they are harmful. Repeated use of synthetic fertilizers and pesticides degrades soil biology, kills beneficial microorganisms, pollutes water sources, and exposes farming families to serious health risks. Dependency on these inputs also locks smallholder farmers into a cycle where they must spend more each season to achieve the same or diminishing results, as soils become increasingly unable to respond. Reducing and eventually eliminating chemical inputs is therefore not just a financial relief; it is an ecological and health imperative. As soil fertility improves through agroforestry, farmers naturally depend less on these harmful inputs, lowering production costs, keeping more income within farming households, and breaking the cycle of dependency on agrochemical companies. Lower input cost means more income remains with farming households rather than flowing to agrochemical companies.

Agroforestry also supports gradual farm renewal. Instead of cutting all old cocoa trees at once, farmers can replant in stages while earning income from food crops and trees (Mbile et al., 2009). This makes rehabilitation possible without pushing families into hunger.

Strengthening Livelihoods and Food Sovereignty

Agroforestry does more than support cocoa; it restores farmers' sovereignty over their own food and land. When farmers grow plantain, avocado, orange, pear, vegetables, and food crops alongside cocoa and timber trees, they are no longer dependent on markets or external suppliers to feed their families. They decide what to grow, when to harvest, and how to use their land. Timber and non-timber trees provide long-term assets that belong entirely to the farming household. This diversity does not just improve what is on the table, it rebuilds the power of farming communities to define and control their own food systems, free from the dictates of global commodity markets and corporate supply chains. This diversification is critical in Ghanaian cocoa communities where cocoa income comes only once or twice a year. With agroforestry, families are not forced to depend on cocoa alone. When cocoa prices fall or harvests fail, other crops help sustain households. In areas affected by galamsey, productive agroforestry systems can make



farming a better option than mining. While agroforestry cannot stop mining on its own, it reduces the pressure on farmers to abandon land when cocoa fails.

Carbon, Climate, and Farmer Rights

Agroforestry systems store more carbon than monoculture cocoa farms (Somarriba et al., 2013). This has attracted carbon credit projects to cocoa communities. While these projects promise income, they often benefit external actors more than farmers (Leach & Scoones, 2015). Some carbon agreements restrict how farmers can use their land for many years, while payments remain small and uncertain. Meanwhile, carbon offsets allow companies in the Global North to continue polluting (Bachram, 2004). Farmers must be cautious. Carbon money must not replace the fight for fair cocoa prices and land rights. Any climate initiative must respect farmer control over land and ensure benefits reach communities directly, not through middlemen.

Collective Action and the Future of Cocoa

Agroforestry works best when farmers organise. Farmer groups and cooperatives can raise seedlings, share knowledge, protect land, and market diverse products (Gyau et al., 2014). Collective action also strengthens farmers' voices in demanding better policies and fair prices. Extension services and cocoa policies must change. Support should prioritise land restoration, tree seedlings, farmer-led learning, and secure land rights not just chemicals and short-term fixes.

In conclusion, Cocoa farming in Ghana is under threat because the land has been overused and farmers have been undervalued. Decades of monoculture farming, driven by misaligned policy and external interests, have stripped cocoa landscapes of their ecological resilience. Agroforestry rooted in agroecology and farmer knowledge, offers a realistic and proven path to restore cocoa lands, rebuild soil health, and sustain the farming families who depend on them.

Saving cocoa demands more than technical fixes. It requires secure land rights, reformed extension services, and farmer-centered policy that prioritises long-term restoration over short-term chemical inputs. Collective farmer organisation is equally essential, cooperatives and farmer groups give communities the economic and political power to negotiate fair prices, resist exploitative deals, and hold governments and companies accountable. The global cocoa supply chain must also change. International buyers must pay prices that reflect the true cost of sustainable production, and external actors must design initiatives with farmers rather than for them. Ghana's cocoa sector has endured for over a century, and this crisis is not irreversible. When trees return to cocoa lands, the land heals, the farmer prospers, and the future of cocoa becomes imaginable again.



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