



# APRA Policy Brief

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## Ghana's cocoa farmers need to change gear: what policymakers need to know, and what they might do

### Key messages

Cocoa farmers in Ghana face increasing challenges. In the past, many of them could make a living from cocoa thanks to the advantages – ‘forest rents’ – that initially apply when forest is cleared to create cocoa farms: fertile soils, few pests and diseases. With time, however, weeds invade, pests and diseases build up, and trees age. To maintain production requires more labour, more inputs and more skill.

In the past, farmers would often abandon older groves and seek new forest to clear. As they did so, the frontier for cocoa farming moved westwards across Ghana to the remaining high forest. But by 2000 or so, no new forest was available. Farmers now have to manage aging stands of trees, clear weeds and parasites, and combat pests, fungi and diseases.

In Suhum District in the east and in Juaboso District in the far west of Ghana, we talked to farmers. They understood the challenges they faced, and knew how to deal with some of them. But many were not farming their cocoa as well as they could, losing yields and income as a result.

Four issues arise for policymakers:

- Farmers need research findings and extension to address critical problems such as swollen shoot disease. They need guidance on finding the chemicals that work on their farms. A looming, multi-faceted challenge is to devise systems that work with natural ecology and rely less on increasing use of toxic chemicals.
- Most farmers lack working capital to buy inputs and hire labour when needed. This demands value chain finance.
- Public support at present is sporadic, partial and does not reach most farmers. It needs to be refocused on public goods.
- Farmers who are elderly, sick or disabled are unable to work and often cannot cultivate their cocoa. Their plight cries out for social protection: is it time for universal pensions for those aged over 60?

Kojo Amanor, Joseph Yaro, Joseph Teye, and  
Steve Wiggins<sup>1</sup>

### What's the issue?

Cocoa has been grown in Ghana since the 1880s. The development of cocoa has been a major driver of the economy: when cocoa has thrived, so has the country (Amanor, Yaro and Teye, 2021). Even as Ghana urbanises and its economy diversifies away from agriculture, cocoa growing remains a cornerstone of the economy of Ghana.

Cocoa was grown on 1,450,449ha of land in 2020, by around 850,000<sup>2</sup> farmers – most of them family farmers with smallholdings. The cocoa harvest was worth US\$611 million in 2018. Exports of cocoa beans and derived products such as cocoa butter were worth US\$2,082 million in 2020, making up almost 14 per cent of Ghana's exports by value.

What, however, are the prospects for cocoa farmers in Ghana today? Can they make a living from growing the crop, and can they improve their productivity to earn more from their cocoa trees?

These questions matter because the conditions for growing cocoa have changed. From the 1880s to the 1990s, farmers could clear forest to plant new cocoa groves. Newly cleared land was fertile, largely free from weeds, with only moderate challenges from pests, fungi, disease and parasites. Once trees are mature, after at most five years, they yield well for at least 20 years. Cocoa farmers thus enjoyed what has been termed a ‘forest rent’ (Ruf and Schroth, 2015).

1 Kojo Amanor is a professor at the Institute of African Studies at the University of Ghana: [ksamanor@ug.edu.gh](mailto:ksamanor@ug.edu.gh). Joseph Yaro and Joseph Teye are both professors in the Department of Geography and Resource Development at the University of Ghana. Steve Wiggins is a principal research fellow at the Overseas Development Institute.

2 Estimate from COCOBOD: <https://cocobod.gh/pages/cocoa>



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With time, however, weeds build up, as do populations of insect pests, fungal infections, the parasite mistletoe, and the danger of the deadly virus, swollen shoot. Aging trees also yield less and need replacement. In the past, farmers would often abandon aging cocoa groves and seek new land in the forest to clear. Hence, the frontier of cocoa farming steadily moved westwards, from the original cocoa areas of Akwapim in eastern Ghana to the frontier with Côte d'Ivoire in the west. By 2000 or so, however, with much of the remaining forest protected, very little forest was available to clear. With the frontier closed, cocoa farmers had to learn to live with aging trees, infertile soils, weeds, insects, fungi, mistletoe and the menace of swollen shoot.

### What did we find?

We investigated these issues in Suhum and Juaboso districts in late 2019 and early 2020, interviewing 104 cocoa farmers, convening nine focus groups, and administering a survey to 517 farmers.

Most farmers were growing cocoa on a small-scale. Only 6 per cent of farmers cultivated more than 8ha of cocoa; 71 per cent had less than 4ha in cocoa; and 50 per cent cultivated holdings up to 2.5ha of cocoa. Farming on a small-scale did not affect yields: on the contrary, yields reported were higher on cocoa farms smaller than 2ha.

Most farmers were planting hybrid varieties – despite their complaints that these trees did not live as long as traditional varieties – but did not apply fertiliser to take advantage of the yield potential of hybrids. Most farmers hired in labour for laborious tasks such as weeding and harvesting. They also bought and applied chemicals to combat insects and protect against fungi.

It was clear that most farmers were not achieving the yields they might. They reported yields that typically lay between 300 and 400kg/ha of dried beans. Extension workers believe farmers could get 1,000kg/ha if they followed recommended cultural practices – including thorough weeding, pruning of trees and cutting mistletoe, spraying to control insects and protect against fungal disease, and fertilising the trees.

How costly was this yield gap? The median farmer was realising an estimated net margin of US\$350/ha of cocoa, equivalent to an implicit return of around US\$11 for every day worked in the cocoa groves. Even if it cost twice as much in labour and inputs to achieve the yields possible, the rewards would outweigh the costs: returns to labour could rise to US\$20 a day.

Farmers knew they were not farming as well as they could, but they faced obstacles to do so. Lack of working capital to hire in labour and to buy inputs was the most common and serious obstacle. It wasn't that farmers did not believe they would see a return to hiring labour and applying inputs, it was simply that they did not have the funds when needed. The cash they earned from the last harvest was in large part taken up by other priorities, above all paying school fees and settling medical bills.

While farmers were well aware of most aspects of good cocoa husbandry, they still would benefit from technical guidance and innovations to find the most effective – and most economical ways – to manage their farms. One of the most serious technical challenges was finding ways to resist swollen shoot virus. The current recommendation is to destroy infected trees, then replant with hybrids which have some resistance: a costly response. A lesser problem was the profusion of agro-chemicals available, some of dubious quality, which made it hard for farmers to know which chemicals would be effective for their cocoa.

When interviewed, farmers also mentioned some of the environmental challenges they faced: declining soil fertility in some cases, reports of increasing numbers of insect pests, the loss of effectiveness of some agro-chemicals in controlling pests – they had worked well in the past, but less so today – and the adverse side-effects of some soil fertilisers on food crops grown in among young cocoa.

The government tries to provide farmers with extension advice, mass spraying of trees, and agrochemicals provided at no cost. The interviews showed, however, that coverage was patchy. Most farmers received few if any of these services and support.



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Cocoa farmers face differing circumstances in their holdings of land, access to labour, availability of working capital, and their technical knowledge and expertise. Elderly farmers who could no longer work on their land, and farmers who had been hit by sickness and accidents were often in dire straits. They lacked labour, and they often also lacked cash to hire help. Consequently, their cocoa farms were neglected, producing pitiful yields, effectively trapping them in poverty.

### What are the policy implications?

Four considerations for policymakers stand out from these studies:

One, research and extension is critical if farmers are to get reliable guidance on how to cope with the challenges they increasingly face in managing their cocoa – soil fertility, weeds, pests, fungi, parasites, and disease. A priority is to develop more ecological systems for cocoa, ones that rely less on use of toxic chemicals and work more in harmony with natural controls, such as encouraging birds and spiders that predate harmful insects.<sup>3</sup>

Such systems will probably see cocoa grown under shade with forest trees that provide benefits for the cocoa and are valuable resources in their own right. It is likely that some cocoa buyers will increasingly expect cocoa to be grown ecologically, since this will be a selling point for premium chocolate in some high-income countries.

Two, the lack of working capital for most farmers is chronic. Cocoa is a valuable crop and its marketing is controlled by COCOBOD. It should be possible to offer growers credit to be deducted against payments for delivered beans – a form of value chain finance. Currently, purchasing clerks are reluctant to advance sufficient funds to their farmers, because they run the risk that farmers will sell their cocoa to another licensed buyer. If there were a national register of growers it would be possible to ensure that advances of capital could be matched against deliveries – and the scheme would

be self-financing. With advances in digital information technology, it should be possible to set up such a system.

Three, public support currently offered to farmers should be rethought. The benefits currently go to only a minority of farmers, making public support fertile ground for favouritism and politicisation. Support might be provided only when it is a public good – such as extension advice, and possibly mass spraying when spraying all farms in an entire locality reinforces the benefits of spraying individual farms.

Four, the fate of the elderly and those subject to the misfortunes of accidents and sickness cries out for some remedy. As an emerging middle-income economy, Ghana should be able to extend social protection to provide some relief to affected populations. Time for universal (non-contributory) pensions for the over-60s?



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<sup>3</sup> Some entomologists and ecologists have long questioned the increasing reliance on chemicals to control pests and fungi. Instead, the solution lies in promoting a more diverse environment that creates less optimum conditions for pests and diseases, rather than intensifying use of harmful chemicals (Padi and Owusu, 1989; Schroth and Harvey, 2007; Clough, Faust and Tschardtke, 2009). Reducing the usage of agrochemicals would also enable farmers to invest more in labour and possibly fertilisers as well.

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