Concept Note: Collaborative digital cacao farmer peer-training

The Challenge
Cocoa farmer training is often communicated in industry media and conferences, as well as in company communications as large projects that aim to 'help' farmers. Despite many claims and millions of dollars investment in farmer training, smallholder yields and living standards have not significantly improved for cocoa farmers around the world. There is a gap between market communications about cocoa farmer training and proof of effectiveness.

In 2019 an evidence assessment examined the effectiveness of cocoa farmer training (knowledge transfer and new practice adoption) and what multifactorial impacts; household health, wealth, farm ecology and productivity exist. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses framework (1) (PRISMA) and the QATSDD (2) were used to review the quantitative and qualitative research on to identify effectiveness of cocoa farmer training from 2014-2019 were searched and independently reviewed for selection, extraction, and results from West Africa, Oceania and South America. From a base of over 700, 53 studies were identified and analysed and found that **there is little reliable evidence that current cocoa farmer training is effective regarding knowledge transfer and new practice adoption.**

Regarding evidence of training methods; modality of training (e.g. farmer field school or traveling teacher) and length of training, organisations involved, and content was under reported. It has not been possible to benchmark or assess these aspects in cocoa farmer training. It was clear though, that the largest barrier to farmers implementing new practices was access to financial resources, inputs and materials. Knowledge transfer, in the case of cocoa farmer training, is not the only measure of effectiveness without implementation for impact.

There is also **significant evidence of multifactorial impacts from farming household health, wealth and ecology occurring concurrently on productivity.** Health and food security (access, availability, nutrition) followed by chemical safety and water/sanitation were key impediments to farmer's ability to live well, and thus work well. Living wage in terms of positive contributions from either farm diversity (plant species and revenue stream) and farmer professionalism were highlighted as key factors regarding farmer wealth, while productivity in the research focused on challenges with plant pest and disease control, land management and professional farming practices. Currently, there are barely any training programs which cover this broad range of topics.

The Complexity
Due to COVID-19, social distancing has meant that farmer training in field schools and cooperatives have functionally stopped. While the case is server currently, disruption to agricultural extension support and training occurs regularly due to natural environmental disaster, political upheaval or some other community or family challenge. Relying on market-driven (donations from chocolate companies), certification-driven, or government supplied) training is not reliable for fundamental productivity and livelihood skills that rural and remote farmers need. This, is true for the 4+ million farmers around the world.

The opportunity:
Strengths exist for effective knowledge transfer and new practice adoption:

- Simple skills transfer easily: Simple skills are effectively transferred through peer-learning (3), farmers learn from other farmers (4) (5) and personal engagement increases knowledge in low-resource agri-locations (6). One of the big reasons farmer's don't follow through with new knowledge or innovations is that they lack the resources to implement (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25), so the knowledge needs to be mapped to the situation and capacity
- Self-directed learning is effective: Farmers choose their own learning topic (26) (eg a menu of training ideas) and then write their own action plan based on the new practice (27) and understand it in the context of their own land / situation (28)
- Motivation is vital: Farmers need to believe the training will help them (29) and receive follow up information / reminders (30) (10). Encouraging farmers to learn a new idea, and take a 'experimental approach' to trying it out was also more effective than just 'learn and do' (31) (32) (33) so the skillset of designing an experiment and testing a hypothesis was part of the training to understand the logic around crafting curiosity around new practices

Digital communications suggests an opportunity to leverage farmer connection, inherent skill sets in certain regions and a peer-led learning platform. Indeed the UN FAO initiated investigation into digital farmer field schools in December 2019 as a potential avenue to explore.

- Information sharing among farmers with radio and cell phones could be leveraged for spreading new ideas (or farming practices) (17), and also supporting related-skills sets such as health (34)
- Wageningen study goes here. (35)

The idea:
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- Diversity of topics: Digital methods enable a huge variety of topics to be delivered, and does not rely on the existence of specialist knowledge in a certain area. If cacao farming is directly impacted by a variety of health, wealth, environmental and productivity-related challenges, then a platform needs to be as diverse as their needs.
- Better metrics: Digital tools enable benchmarking before a learning program begins, so true assessment of needs and wants are identified, before a potential curriculum is decided. This should be participatory, involving farmers themselves who share knowledge of their challenges, participate in the identification of potential solutions, and choose for themselves which intervention to learn and try.

Weaknesses:
Information overload can cause burnout of learning (13) (15), the relationship of new information to traditional wisdom (36) can sometimes conflict and the negative influence of colleagues and peers (37) can also be destructive.

Stakeholder engagement

Team:
About Carla

About Alyssa Jade
Alyssa Jade McDonald-Baertl is a third generation farmer from Papua New Guinea, who built a German social enterprise in Ecuador in 2009 to farm cacao and produce chocolate bars for Europe. While the tree to table worked; it became very clear to her that the world doesn't need another chocolate bar, rather contribution at the most vulnerable aspect of chocolate, farmer households. The organisation evolved into education focusing on cacao farmer training, building nurseries and fields schools in Philippines and Papua New Guinea. In 2018 she started post-graduate environmental science research at the University of Sydney, Australia, in the area of effectiveness of cacao farmer training, and multifactorial impacts of farmer health, wealth and productivity. Functionally, she lives in Europe, and when not working in cacao, writes close to market strategy for the European Commission on sustainable finance and eco-innovation. Her purpose is to influence positive systemic change from the fields to financing. She is board member of the German Federation of Green Economy, The European Commission Business and Biodiversity Board, and the Greenpeace Australia Pacific GA. https://www.linkedin.com/in/blyss/

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