



EDUCATING COCOA STAKEHOLDERS ON SANITARY AND PHYTOSANITARY ASPECTS THROUGH COCOASAFE PROJECT IN MALAYSIA



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INTRODUCTION

Application of agro-chemicals is still widely used among the cocoa farmers in Malaysia. However, many cocoa consuming countries such as the European Union (EU), USA and Japan, are very concerned on the issue of food safety that affect cocoa relate to pesticide residues and other harmful substances such as Ochratoxin "A" (OTA), Polycyclic Aromatic Hydrocarbons (PAH), Free Fatty Acids (FFA) and heavy metals such as lead and cadmium. As a result, some cocoa importing countries have enacted legislative and regulatory measures on sanitary and phytosanitary (SPS) standards that have to be met by imported cocoa. This has put the cocoa producing countries including Malaysia on alert in developing capacity to conform to SPS and imposed maximum contaminant levels in order to meet the requirements set by the cocoa consuming countries. Through the cooperative work between the Centre for Agriculture and Biosciences International (CABI), Malaysian Cocoa Board (MCB) and International Cocoa Organization (ICCO) with funding from the Standards and Trade Development Facility of the World Trade Organization (STDF), the "Cocoasafe" project was conducted which aimed to strengthen SPS capacity through the cocoa supply chain by educating stakeholders through innovative knowledge dissemination.

ACTIVITIES IN COCOASAFE PROJECT

The main component in "Cocoasafe" project is enhancing the capacity of cocoa stakeholders including farmers to improve the quality of their cocoa through an awareness raising programme about food safety issues by producing cocoa beans that meet the international SPS standards.

Activity 1: Development of locally adapted curricula for training of trainers

Training materials included comprehensive curricula for cocoa including awareness-raising and best practices in Good Agricultural Practices (GAP), pesticides, mycotoxins, PAHs, heavy metals, food safety, mixing/bulking, traceability, worker safety and SPS standards.



Activity 2: Training of master facilitators (TOMF)

Twenty seven (27) participants were selected to be trained as master facilitators (5 research officers from MCB and 22 extension staff with 14 from MCB and 8 from Department of Agriculture (DOA)). The participants came from three regions, namely Peninsular Malaysia, Sabah and Sarawak.



Activity 3: Training of facilitators (TOF)

A total of 152 participants which consisted of 109 cocoa lead farmers and 43 local extension staff from MCB were involved in the TOF. The training of cocoa lead farmer and local extension staff of MCB focused on the curriculum in SPS, Good Agriculture Practices (GAP), safety, production and postharvest practices.

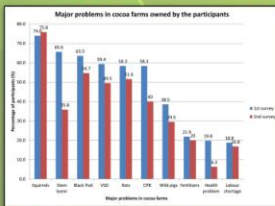


Figure 1: Major problems in cocoa farms owned by the participants.

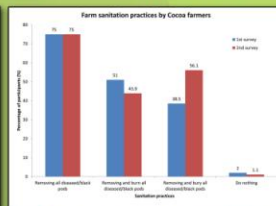


Figure 2: Farm sanitation practices by farmers of TOF participants against cocoa pest and diseases.

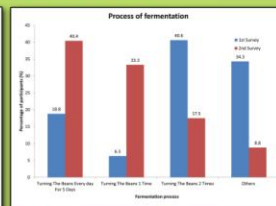


Figure 3: Bean-turning during fermentation by farmers of TOF participants.

The venues and dates for TOF program conducted in Malaysia

In 2nd baseline survey, most of the problems identified as being significant for them in 1st baseline survey had decreased (Figure 1). This suggests that participants' perceptions of their problems had changed and it suggests the TOF training had some impact with participants of the TOF training being more confident in managing these cocoa related problems.

Figure 2 showed many more respondents (56%) had started to bury all diseased pods that had been removed from the farms. This was an 18% improvement from the first survey.

The 2nd survey in Figure 3 indicated that the TOF participants had adopted the method taught concerning fermentation practice where 40% respondents chose to turn the beans every day for 5 days compared to 20% in 1st survey.

Conclusions

The "Cocoasafe" project benefited many cocoa stakeholders especially cocoa farmers and extension staff. The project has provided useful lessons on how to sustain their cocoa planting through discovery learning exercises which covered Farmers Field School (FFS), Agro-Ecosystem analysis (AESA), Crop husbandry (CH) and managing cocoa diseases and pests (CDP). In addition, they have been taught how to produce beans that comply with the international SPS standards through discovery learning exercises of Rational Pesticide use (RPU) and Cocoa quality (CQ).

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REFERENCES

Burman, R. (2013). Pesticide Use in Cocoa: A Guide for Training Administrative and Research Staff. ICCO, 94 pp.
Bijlmakers, H. (2005). FFS for IPM-Refresh your memory. IPM DANIDA Project, Thailand, 60 pp.
CABI (2007). Crop Protection Compendium. An interactive multimedia knowledge base, containing a wide range of science-based information on all aspects of crop protection.
CABI SEA (2008). Training of Master Facilitators (TOMF). ACIAR Project PC/2006/114 on the Management of Cocoa Pod Borer in PNG, 109 pp.
David, S. (2008). Learning about sustainable cocoa production-A guide for participatory farmer training. 1. Integrated Crop and Pest Management. STCP-TITA Accra, Ghana, 227 pp.
David, S. et al. (2006). A guide for conducting FFS on cocoa integrated crop and pest management. STCP-TITA Accra, Ghana 93 pp.
Dankers, C. and C.N. Twin (2007). Organic cocoa production - A guide for FFS in Sierra Leone. FAO Rome, 63 pp.
ICCO (2008). Manual of Best Known Practices in Cocoa Production. CB/162-9 pp.
Vox, J.G.M., B.J. Ritcher and J. Flood (2003). Discovery Learning about Cocoa - An Inspirational guide for training facilitators. CABI Bioscience, 110 pp.
MS 1784: PART 4:2005. Malaysian Standard: Good Agricultural Practice (GAP) Part 4: COCOA (Theobroma Cacao), Department of Standards Malaysia.
MS 293:2005. Malaysian Standard: COCOA BEANS - SPECIFICATION FOR GRADING (Fourth revision), Department of Standards Malaysia.
Lee, C. H., Ling, A. S. C., Khairul, B. S., Mohamed Helmi, S., Rozita, O., Mohammad Rizman, N. M., Paulus, L., Mohamad Jaafar, H., Stephen, M. and Raine, S. H. (2014). Manual Latihan: Keselamatan Koko - Pembangunan modal insan dan perkongsian pengetahuan dalam piraian sanitari dan fitosanitari (SPS) koko di Asia Tenggara (STDF/PG381). Lembaga Koko Malaysia, Kota Kinabalu. (Terjemahan).
Lee, C. H., Soetiko, S. S., Jeremy, N. C. K., Crozier, J., Ling, A. S. C., Chooi, L. K., Khairul, B. S., Mohamed Helmi, S., Rozita, O. and Mohammad Rizman (2015). Training Manual: Cocoasafe - Capacity building and knowledge sharing in SPS in Cocoa in Southeast Asia (STDF/PG381). Lembaga Koko Malaysia, Kota Kinabalu.