

PlantwisePlus External Review 2023

Management Response

Introduction

CABI's PlantwisePlus Programme Board has considered the report of the external review of the PlantwisePlus proof-of-concept phase (focus: Ghana, Kenya, Pakistan) managed by the Netherlands Royal Tropical Institute (KIT) and implemented between January and April 2023 according to agreed terms of reference. Here, CABI provides responses to the high-level findings and recommendations from the review report. Specifically, our responses relate to, (i) the findings of the OECD DAC criteria, (pg 6-7 of the KIT synthesis report) (ii) the programme activities that are working well, that need improving or that should be de-prioritised (Annex 1, synthesis report), and (iii) the 25 detailed recommendations (pg 8-13, synthesis report). These 25 detailed recommendations were mapped against the elements of (i) and (ii) and are referred to in those sections below. The CABI response includes conclusions on which programme elements from the proof-of-concept will be prioritised in the roll-out phase, as indicated by a traffic light system.

CABI considers that the observations from this external review of PlantwisePlus are in line with our own internal learning. The findings will be embedded in the streamlined programme roll-out phase, which will focus on interventions that are sustainable, scalable, innovative, and show the greatest potential to have a positive impact on smallholder farmers.

OECD-DAC Criteria

Relevance

Most stakeholders confirmed the relevance of the PlantwisePlus programme with regard to its ability to address the needs of plant health system actors; primarily in the public sector at national, provincial, and local levels. The programme's activities align with government agriculture sector policies, and its digital tools help strengthen the capacity of NPPOs. They, in turn, support Directorates of Agriculture Extension (DAEs) to advise farmers on managing pest outbreaks and risks, while also promoting sustainable agricultural practices. The strengthening of the plant health systems has also helped identify and prioritize pests, while inclusive/ gender-responsive behaviour change strategies are being developed to make plant health services more relevant to all types of farmers.

Relevant recommendations: R20; R24; R25-1; R25-2

RESPONSE: CABI agrees with this positive assessment. Ongoing relevance is central to the programme's success to date and in future, and is considered at every level of implementation, including in assessing opportunities for scaling to new countries and fragile states. The PlantwisePlus programme will continue to actively involve diverse partners through formal and informal relationships going forward.

Coherence

The programme successfully aligns with national policies and donor community goals in the three countries studied. Strong collaboration with government authorities, such as with the establishment of the National Forum in Pakistan, showcases effective communication and coordination among stakeholders. However, the programme's experience of addressing and promoting food safety standards is mixed, as coherence with national stakeholders is weak. As such, there is room for improvement in certain areas, such as stakeholder engagement, private sector involvement, and capacity building.

Relevant recommendations: None.

RESPONSE: CABI recognises the importance of stakeholder engagement for the programme's success. The PlantwisePlus programme will continue to actively involve diverse stakeholders going forward, to ensure alignment with national policy and local needs. CABI's work on promoting food standards will be focused on providing support, as relevant, to pest management only in the roll-out phase (see Activity recommendations beginning on p.6 below). More broadly across the programme, CABI will continue to involve private sector partners wherever appropriate opportunities arise, in line with our approach to sustainability and scalability. Many PlantwisePlus activities aim to provide public goods which provide limited incentive for commercialisation.

Effectiveness (not assessed)

Relevant recommendations: None.

RESPONSE: A formal assessment of the programme's effectiveness was considered out-of-scope for the proof-of-concept phase. However, findings cited in the report indicate that the programme is effective. Long-term effectiveness of programme activities will remain a key focus of the programme in the roll-out phase.

Efficiency

The programme capitalizes on CABI's position in national plant health systems, aligning incentives and objectives among different players, and utilizing CABI's international network of experts to guide implementation. PlantwisePlus focuses on preventive measures and early detection, which are more cost-efficient than addressing pests once they are established. The use of digital tools and learning products further contributes to the programme's efficiency, although it is crucial to consider the costs of developing, testing and using these digital products. Concerns regarding resource availability and communication are likely to affect the efficiency of the programme in reaching its objectives

Relevant recommendations: None.

RESPONSE: CABI agrees with this positive assessment. CABI recognises that efficiency can be improved within individual activity streams, such as plant health data collection, and across the programme through improving communication and resourcing processes. The streamlined roll-out phase will implement changes for this purpose.

Impact (not assessed)

Relevant recommendations: None

RESPONSE: A formal assessment of the programme's impact was considered out-of-scope for the proof-of-concept phase. For the roll-out phase, CABI is streamlining the PlantwisePlus programme to build on activities that are sustainable, scalable, innovative, and show the greatest potential to have a positive impact for smallholder farmers.

Sustainability

The sustainability of PlantwisePlus depends on numerous factors: institutionalization and ownership; government commitment and funding; multi-stakeholder coordination, particularly partnerships with the private sector and civil society organisations; scalability and innovation; and, to some extent, commercialization and market integration. The programme has made progress in some countries, but further efforts are needed to strengthen local ownership, increase government investment in infrastructure development and continued service provision and develop and strengthen partnerships, scalability, and commercialization. In addition, the programme has not taken adequate steps to address sustainability to have a lasting impact on plant health systems.

Relevant recommendations: R18; R19; R20

RESPONSE: As recognised by the KIT report, the proof-of-concept phase has focused on testing assumptions and innovations before considering long-term sustainability. The roll-out phase of PlantwisePlus will have a strong focus on sustainability at both activity and programme levels, including through formalised partnerships, local ownership, clear exit strategies and joint resource planning.

Gender and youth inclusion

The PlantwisePlus programme recognizes the importance of addressing the needs of women and youth in the plant health system. Some steps have been taken to integrate women and youth in the programme – such as through the creation of women- and youth-led IPM service provision models, and strengthening the ability of call centres to reach out to female farmers. However, they do not appear to be part of a well thought out strategy focused on women and youth inclusion, and designed according to the specific needs and contexts of different countries.

Relevant recommendations: R20

RESPONSE: CABI agrees with the recommendation given. A Gender Analysis and Action Plan was developed in Q1/Q2 2023, and will enable the global PlantwisePlus team to make programme activities and their national and local implementation more gender-responsive. CABI recognised early on in the proof-of-concept phase that we needed to fill an expertise gap in the gender field; hence the organisation recruited two gender experts (Kenya, Pakistan) between 2020 and 2022 and will recruit further expertise in Q2 2023. Furthermore, CABI will recruit a youth engagement expert in 2023.

Climate responsiveness

PlantwisePlus acknowledges the significance of climate change and its effects. The programme's focus on pest prevention and management, early warning systems, and plant health advisory services and campaigns indirectly helps enhance climate resilience, biodiversity, and soil health. However, although the programme promotes low-risk pesticide production systems to support climate-smart agricultural practices and technologies, it risks weakening its focus on accountability and learning in this area if it does not explicitly highlight that using low-risk pesticides is an integral component of climate smart agricultural practices.

Relevant recommendations: None

RESPONSE: CABI agrees that there is scope to further emphasise the connection between integrated pest management and climate-smart agriculture. Further research is also needed to support decisions on where climate-smart approaches should be integrated into PlantwisePlus. As part of the programme, CABI will support countries in the implementation of the Nationally Determined Contributions developed under the Paris Agreement. CABI has recruited three new climate adaptation experts in 2023. These specialists will work closely with local and national stakeholders to identify key climate change issues and climate-smart practices, and design and implement activities accordingly.

Innovativeness

PlantwisePlus has incorporated innovative approaches – such as digitization, bio-protection, multisector collaboration, use of information and communication technology (ICT) and social media, and innovative business models – to promote resilient, socially inclusive, and safer food systems across Ghana, Kenya, and Pakistan. However, the effectiveness and scalability of these innovations remain uncertain, and challenges exist regarding their adoption, accessibility, and profitability.

Relevant recommendations: None.

RESPONSE: CABI recognises the need for effectiveness, scalability and adoption whilst accessibility and profitability will be critical for sustainability. The proof-of-concept phase focused on testing innovations, and only effective and scalable ones will be included in the roll-out phase of the programme. Adoption and sustainability of those innovations will be emphasised during the roll-out phase.

Activities that are working well (and can be scaled up)

1. Application of Horizon Scanning (HS) and Pest Risk Analysis (PRA) tools and surveillance for identifying and prioritising new pests, and existing pests to be able to respond early to outbreaks. (Pest preparedness pathway)

Relevant recommendations: R2

RESPONSE: CABI agrees that the pest horizon scanning and prioritisation tools that have been developed and refined through the PlantwisePlus programme have been universally well received by stakeholders involved in pest surveillance and response, and that there is an increasing demand for scaling application of these tools to multiple countries. The tools allow for a more rapid assessment of risk and more targeted surveillance of threats. CABI will continue to refine these tools based on user feedback and increasingly coordinate their use on a regional scale. For example, modelling to predict climate change effects on biological invasions is being integrated into the risk assessment models. Work has already commenced with the regional economic communities to undertake joint HS and PRA workshops.

CONCLUSION: This work will continue as part of the programme roll-out phase.

2. Insight reporting based on literature/database review and experts' networks within regions. This work needs to be emphasised in regional inter-governmental forums. (Pest preparedness pathway)

Relevant recommendations: R2

RESPONSE: CABI agrees that the pest insight reporting has been an innovative approach to assessing pest risk on the basis of worldwide information scraping, in collaboration with European Union (EU) institutions (European Food Safety Authority and Joint Research Centre). Feedback from National Plant Protection Organisations (NPPOs) involved in the pilots was that the reports are useful and have triggered changes to risk management. The sustainability of insight reporting is being investigated through discussions with the United Nations World Health Organisation initiative called Epidemic Intelligence from Open Sources (EIOS) with the opportunity for long-term free scraping of the data by any country involved in PlantwisePlus. Based on CABI's mapping of existing tools, certain tools are showing high potential for scalability across countries and regions, such as the United Kingdom (UK) Department of Environment, Food and Rural Affairs' Plant Health Pest Risk Register. In addition, to support embedding these activities into programme countries, we are already investigating how machine learning could reduce the time needed to process the results.

CONCLUSION: This work will continue as part of the programme roll-out phase.

3. Development of preparedness plans and early response and management plans. However, the leadership and coordination of decision-making mechanisms across and within countries needs attention. (Pest preparedness pathway)

Relevant recommendations: R1

RESPONSE: CABI agrees that some good progress has been made regarding assessing the level of risk and planning mitigation measures to respond to new pest invasions and/or outbreaks. CABI's assessment is that there is a need for stronger leadership and coordination of decision-making mechanisms across and within countries. Meeting the requirements of legal and institutional frameworks and mandates can be challenging due to highly specific targets that can be complex to harmonize. PlantwisePlus is working on a country-level co-ordination mechanism that can enable all agencies to be a part of plant health system initiatives. This approach has been successful in Zambia and Kenya for interventions against Cassava Brown Streak Disease (CBSD) and Apple snails, with high levels of engagement from policy makers. Regional coordination is being addressed in part through the regional PRA and HS workshops planned for 2023 and through CABI partnerships. For example, CABI has recently renewed its Memorandum of Understanding (MoU) with the Common Market for Eastern and Southern Africa (COMESA). Agreements such as this allow CABI to use its research and technical expertise to strengthen evidence-based policy formulation by regional bodies.

CONCLUSION: This work will continue as part of the programme roll-out phase.

4. Gender assessments, indicating uptake of services and inputs for women, are useful to help NPPOs and partners to develop a gender strategy to overcome barriers and make implementation more gender responsive. The real challenge is how to translate the strategy into activities that lead to gender transformation (going beyond participation and benefits). (Pest preparedness pathway)

Relevant recommendations: R8

RESPONSE: CABI recognises the good progress made through the Gender and Rural Advisory Services Tool (GRAST) assessments in raising the awareness of gender inequalities and helping agricultural advisory services to develop a gender strategy to overcome barriers. There is a recognition that influencing the gender sensitivity of national extension services requires a number of changes at social, policy and organizational levels, which will require sustained efforts over the medium to longer terms. CABI is currently finalising a gender analysis and action plan for the entire programme, which will be incorporated going forward. In order to implement the action plan, CABI is building further gender and behaviour change expertise into the programme through the employment of three gender specialists.

CONCLUSION: This work will continue as part of the programme roll-out phase.

5. Digital versions of the Plantwise Toolkit, including apps and learning products, have been well received by extension agents and plant doctors using them (Farmer advisory pathway).

Relevant recommendations: R9

RESPONSE: CABI agrees with this observation. One key development that has spearheaded PlantwisePlus work on digital decision support tools was the development of the Crop App Index. The Index will be used to identify trusted and effective digital tools to include in the PlantwisePlus Toolkit. Decision-support tools and learning products made accessible through the CABI Academy are being mainstreamed into the regular activities of countries' agriculture extension departments. These tools and learning products are constantly being reviewed to enhance inclusivity and accessibility. Government authorities are preparing content for e-extension using mass media and other channels to inform larger numbers of farmers.

CONCLUSION: This work will continue as part of the programme roll-out phase.

6. Facilities for rearing bio-control agents; plans for mass release are so far successful, but commercialisation will need further discussion. (Pesticide risk reduction pathway)

Relevant recommendations: R5

RESPONSE: CABI broadly agrees with this statement, taking "commercialisation" to mean sustainable business models. For the development of potential new augmentative biocontrol agents, PlantwisePlus relies on research partners who can lead the local, low-tech development of the agents, including testing a sustainable business model. Ongoing support for the development of new augmentative biocontrol agents under PlantwisePlus is contingent on private sector buy-in in the early stages. Without this buy-in, programme support will not continue.

In the case of commercially tested and proven ("best-seller") augmentative biocontrol agents or biopesticides that are not yet available in the selected PlantwisePlus country, the programme objective is to support local partners to produce and distribute the agents. PlantwisePlus will work with a government partner to test agent efficacy and pilot sustainable production. As above, programme support will not continue without private sector buy-in.

Where biocontrol agent rearing involves only a single mass release per location (classical biocontrol), there is no commercial model that would make a business case. Therefore, the collaboration would continue to focus on working with government and research agencies to build capacity on all the steps towards getting the specific biocontrol agent into the farmers' fields.

In all cases, there is a need also to create awareness of both farmer advisors and farmers themselves on how biological control can work successfully under smallholder conditions.

CONCLUSION: This work will continue as part of the programme roll-out phase, in line with the distinctions above.

7. Collaboration with relevant partners to obtain evidence on residue levels in fresh produce and use that as a basis to engage with policy makers involved in pesticide regulation. (Pesticide risk reduction pathway)

Relevant recommendations: None.

RESPONSE: We agree that this kind of collaboration has yielded very valuable insights to facilitate discussions with country stakeholders on pesticide risks. It is not CABI's intention to develop systematic testing of pesticide residues in any country. In contrast to export markets, domestic markets are largely unregulated and formal testing of products tends to be ad-hoc with the results not widely communicated to interested stakeholders. CABI will continue using testing as required to evaluate the scale and nature of pesticide residues in domestic markets to identify issues with highly toxic pesticides and opportunities to promote the use of lower-risk alternatives as part of an integrated pest management (IPM) approach.

CONCLUSION: This work will continue as part of the programme roll-out phase, in line with the distinctions above.

Activities that need to be improved (efficiency and innovativeness)

8. The Plantwise Online Management System (POMS) database for surveillance, and implementation of pest prevention and response/management plans remains relevant for pest preparedness. However, it will need to be assessed against bottlenecks, reinforcing the need for regular updating and maintenance. In countries where plant clinics are in decline alternative options must be researched. (Farmer advisory pathway)

Relevant recommendations: R3-1; R3-2; R4

RESPONSE: CABI recognises that plant clinic data and other intelligence from the field can have significant value for monitoring and assessing pest occurrence within a country. However, CABI has reviewed the existing POMS resource and does not consider it to be an essential component of a well-functioning plant health system. Recognising the limitations of POMS data collection and use, PlantwisePlus will shift to passive data collection methods through the roll-out phase. CABI is also considering the necessary processes to make the data more accessible to users within country at all levels – a key learning from the Plantwise programme.

CONCLUSION: The POMS database will be phased out over the roll-out phase. Data collection will continue through passive approaches.

9. The communication strategy to raise awareness about prioritised pests needs to be strengthened to ensure integration of messages, intersectionality among end users and use of multiple channels. (Pest preparedness pathway)

Relevant recommendations: None.

RESPONSE: CABI utilises several complementary communication strategies for raising awareness about prioritised pests. These are targeted at various levels from policy-makers to farmers, and use a variety of channels, including print and broadcast media, and plant clinics. PlantwisePlus communication campaigns on specific pests aim to change farmer management practices by offering decision support tools from the PlantwisePlus Toolkit. These promote low-risk plant protection solutions to reduce reliance on highly toxic pesticides. CABI agrees that integrated messaging and ensuring intersectionality and accessibility should remain at the forefront of all communication activities.

CONCLUSION: This work will continue as part of the programme roll-out phase.

10. Not much work is being done on reaching women farmers, besides developing e-extension materials. PlantwisePlus must partner with development organisations (including Non-Government Organisations (NGOs)) with a good understanding of the social norms influencing gender dynamics at the grassroots level. (Pest preparedness pathway)

Relevant recommendations: R8

RESPONSE: CABI considers that this statement does not accurately reflect the work undertaken to date. CABI has gone beyond developing extension materials, as noted in the positive comment included in the “what is working well section” about integration of gender strategies. Ongoing assessment work enables CABI to understand the challenges faced by women farmers at institutional as well as day-to-day levels. We will continue to work with existing and new partners at local and national levels to ensure a gendered approach to rural advisory services. Specifically, we will strengthen our focus on gender when designing and implementing social and behavioural change strategies and activities.

CONCLUSION: This work will continue as part of the programme roll-out phase.

11. Better understanding of barriers to agro-input dealers’ promotion of low-risk and bio-protection products is required, in collaboration with agro-input dealer associations. There needs to be a focus beyond training/knowledge needs and legal and regulatory barriers, to include market incentives, profitability, and feasibility studies. It is important to identify and work with suitable partners to help collect market intelligence information on sale/demand for bio-protection products. (Farmer advisory pathway)

Relevant recommendations: R6; R12; R21; R23

RESPONSE: PlantwisePlus recognises that agro-input dealers are an important source of

information for farmers, but also recognises that there is a lack of knowledge amongst agro-input dealers on IPM approaches. While a long-term ambition would be to have agro-input dealers selling more bioprotection products, the current Programme focus remains on building the capacity of agro-input dealers to provide IPM advice to smallholder farmers. CABI is investigating possible incentives for agro-input dealers to complete training and promote IPM practices.

As such, the programme roll-out phase will continue to focus on knowledge needs and training, and will not directly address regulatory or market barriers. However, CABI will encourage the uptake of registered lower-risk products through the promotion of pest management decision guides and the use of the CABI BioProtection Portal. The Portal, which involves 21 private sector partners and 7 bioprotection industry umbrella associations, was developed to increase awareness and uptake of registered bioprotection solutions. It can also support biocontrol manufacturers to understand market gaps and incentives.

CONCLUSION: This work will continue as part of the programme roll-out phase, in line with the distinctions above.

12. Following identification of low-risk alternatives, there has to be a plan to involve private sector bio-pesticide companies to take on research, production and promotion of the products. The companies could pilot such products through last-mile delivery service and input provision models.

Relevant recommendations: R7 (prepare a plan); R11 (research and trials)

RESPONSE: CABI agrees that involving private sector biocontrol manufacturers is necessary to the research, production and promotion of augmentative biocontrol products. CABI notes that the research and development needed to bring a commercial augmentative biocontrol agent to the market is intensive, and typically takes a minimum of five years. Therefore, while PlantwisePlus may develop some new plant protection products with commercial potential in partnership with private-sector partners (e.g. our current studies on *Metarhizium* and Entomopathogenic Nematodes for Fall Armyworm management), this is not likely to be a mainstream intervention of the programme.

Most of the classical biocontrol agents assessed in the Proof-of-Concept phase are not suited to partnerships with private companies and commercialisation as they are public goods and require the involvement of government agencies.

CONCLUSION: This work will continue as part of the programme roll-out phase, in line with the distinctions above.

13. Increasing the use of digital tools and apps, as well as enrolment on CABI online courses, might need formal incentivising mechanisms to be resourced and managed by concerned partners (research, extension, education) within government agriculture ministries. (Farmer advisory pathway)

Relevant recommendations: R9; R22

RESPONSE: CABI agrees that more should be done to expand the reach and increase the uptake of digital tools across target groups, particularly agricultural advisors and agro-input dealers. CABI will utilise multiple channels to promote the tools and learning offerings, including working through known partners (government departments and associations) to promote local ownership.

CABI also recognises that continued need for off-line (including face-to-face) learning and decision support tools, particularly in countries with low bandwidth and/or high cost access to internet. CABI will continue to design and provide both off-line and online approaches, with a particular focus on gender-responsive accessibility. In addition, tools and learning materials will be provided in a range of languages to ensure maximum reach.

CONCLUSION: This work will continue as part of the programme roll-out phase.

14. Maximum residue level (MRL) in produce can be incorporated as criteria for mandatory/voluntary standards. It can also be included in digital learning courses' extension material on pest management and pesticide use to inform and educate producers about the potential risks and health hazards. Focused consumer education could also increase awareness. (Pesticide Risk Reduction Pathway)

Relevant recommendations: None.

RESPONSE: CABI considers that this is not a major focus of the programme. Evidence of maximum residue level (MRL) exceedances is already being used to inform relevant stakeholders of the need to take corrective measures. Where possible, this will be used to help design crop- and pest-specific measures that can enable farmers to supply produce that meets quality requirements.

Focused consumer education will not be a priority of the programme (see point 4 under "activities that might be de-prioritised"). While consumer awareness about food safety is important, the investment required to achieve real change in consumer choices is beyond programme scope.

CONCLUSION: This work will not be included in the roll-out phase.

15. Farmers need support to be able to comply with all certification/standard requirements. This support needs to be a mandate of extension services, or delegated to appropriate partners (not depend on packhouses or supermarkets alone). (Pesticide Risk Reduction pathway)

Relevant recommendations: R16

RESPONSE: CABI strongly agrees with the statement that farmers need support to be able to meet all standard requirements. However, the PlantwisePlus programme's focus is on building capacity of public and/or private agricultural service providers on IPM. Through the work, the programme may indirectly support farmers to comply with production standards.

CONCLUSION: Activities directly supporting farmers on production standards will not be included in the roll-out phase.

16. Identifying and training youth as last mile delivery service providers needs careful planning and in-built revenue generation mechanisms to sustain it. Promoting community-based, women and youth-led enterprises for production of low-tech low-risk bio-protection solutions might not gain traction until farmers are fully convinced of their value, but in the right environment with sufficient interaction it may work. (Farmer Advisory Pathway)

Relevant recommendations: R10 (business model analysis); R13 (pilot and assess EA service models); R15 ; R21 (same as R13)

RESPONSE: CABI agrees that careful assessment and planning is necessary to establishing successful income-generating activities for women and youth. The PlantwisePlus proof-of-concept phase identified two potential business models that will be further investigated as part of the roll-out phase. CABI has recruited a youth engagement coordinator to further strengthen the implementation of this work.

CONCLUSION: This work will continue as part of the programme roll-out phase.

Activities that might be de-prioritised

17. In the absence of legal enforcement (and potential political will) for licensing and registration of agro-input dealers, development of a voluntary certification scheme for agro-input dealers seems ambitious at this point in time (Pesticide Risk Reduction Pathway).

Relevant recommendation: R6

RESPONSE: CABI agrees with this assessment. Through the major baseline study conducted at the start of the proof-of-concept and in-depth in-country surveys, CABI has learned that there is a need to work with existing standards in countries and is of the strong

opinion that this should continue going forward. Based on this lesson learned, CABI sees an opportunity to engage governments by contributing to improving their mandatory licensing process/requirements and incentivising compliance with best practice. PlantwisePlus will not seek to develop voluntary certification standards during the roll-out phase.

CONCLUSION: This work will continue as part of the programme roll-out phase, in line with the distinctions above.

18. Withdrawal/de-registration of high-risk pesticides from the market could be a drastic step unless it is accompanied with solid/proven low-risk alternatives that can prevent food losses with the same 'efficiency'. Moreover, very few alternatives are widely used or easily available yet. A step by step approach is needed (Pesticide Risk Reduction Pathway).

Relevant recommendations: R15

RESPONSE: CABI's work related to the possible withdrawal of highly toxic pesticides is focused on assessing likely impacts of withdrawal on yield losses and livelihoods. The PlantwisePlus programme's focus is on identifying lower-risk alternatives and working with stakeholders to ensure advisors and farmers have the option of choosing them. PlantwisePlus will continue to develop and disseminate resources that promote IPM, such as pest management decision guides based on local expertise. The programme will not promote the withdrawal or de-registration of highly toxic plant protection products.

CONCLUSION: This work will continue as part of the programme roll-out phase, in line with the distinctions above.

19. Using digital tools to develop a data-driven alerting system based on real-time triggers requires efficient technical infrastructure – communication devices, network connectivity, training, user manuals, guidelines, well-defined data standards – and enough hardware nodes to cover geographies where pests are likely to be present. Support using project resources might create dependency on CABI's resources and affect sustainability in the longer term (Pest Preparedness Pathway).

Relevant recommendations: R15

RESPONSE: CABI recognises that any data-driven alerting system has to be designed and structured in a way that requires minimal technical infrastructure. Developing and/or supplying technical infrastructure is not within the PlantwisePlus programme scope, and as such project resources will not be used for this purpose.

CONCLUSION: This work will not be included in the roll-out phase.

20. Developing and designing consumer education campaigns for safe food is a huge task, and one which may not provide significant results during the remaining PlantwisePlus period. In this area, CABI should limit its involvement to providing evidence regarding MRL risks due to excessive/incorrect/toxic pesticide use – and not spend resources to fund entire campaigns, as this is well beyond the scope of CABI’s expertise. (Farmer Advisory Pathway).

Relevant recommendations: R14; R16; R17

RESPONSE: We agree to de-prioritise consumer awareness raising campaigns to create demand for safer food as this is indeed well beyond CABI’s areas of strength. The PlantwisePlus programme roll-out phase will seek to contribute to ongoing initiatives that focus on farmer health and awareness on safe pesticide use, offering inputs tied more specifically to our areas of expertise.

CONCLUSION: This work will not be included in the roll-out phase.