

Main points of Action for the next 5-10 years

(Synoptic table – See details on the following pages)

Pest and disease control	
<i>Where P&D are impacting cacao</i>	1. Prioritize and integrate measures for control – Tool Box approach (1/3)
	2. Strengthen complementary sectors to facilitate diversification and reduce risk & pest/disease pressure (e.g. agroforestry) (1/3)
<i>To avoid the spread of P&D</i>	3. Identify/quantify factors influencing the spread of P&D at local, regional, international levels through epidemiological studies (2/3)
	4. Reinforce quarantine facilities (2/3)
Ensure impact of research reaches smallholders	
<i>In general</i>	5. Carry out in-depth analyses of successes and failures of technology transfer in the cacao sector (1/3)
<i>Before and while defining a innovation</i>	6. Improve understanding of farming systems in terms of socio-economics and the impact of farming systems on environment (2/3)
	7. Systematic <i>ex ante</i> impact assessment of new innovations and technologies (1/3)
<i>After having defined a innovation</i>	8. Develop appropriate communication tools (1/3)
Networking / exchange of information	
<i>Comprehensive networking</i>	9. Develop a shared understanding within the cacao sector of: i) products & quality (market demand / needs and opportunities) ii) environmental services of cacao (value and mechanism for rewarding) (1/3)
<i>Circulation of information within cacao scientific community</i>	10. Gather and structure information on best practices to reduce fragmentation of efforts. Improve national coordination and participation and develop customized information products for different options/regions. (1/3).
	11. Improve the ways of sharing unpublished results or non results through informal newsletters (1/3)
Other Points of action	
	12. Understand soil fertility management at smallholder level and understand its impact on yield & quality (1/3)
	13. Develop traceability tools as a way to reward quality (1/3)
	14. Maintain and make optimal use of cacao genetic resources (1/3)

How were these points of action developed?

The points were developed at a two-day workshop of cocoa scientists, which was organized in three sessions, each corresponding to a major issue in the cacao sector: (1) Control of pests and diseases, (2) Sustainable cacao farming systems and (3) Overall quality.

Each session lasted half a day and was divided in two parts. Firstly, 3 to 5 speakers made a presentation on the state-of-the-art in their domain, pointing out strengths and weaknesses and proposing priorities for the future. Then, key issues/priorities were identified in general facilitated discussions.

The last session (the last afternoon) was dedicated to prioritizing points of action emerging from all previous sessions. Three groups composed of a balanced representation of participants were asked separately to list the top five points of action they retained from the discussions. Each group then presented these points to the assemblage of participants.

The points listed in this document have been structured and rephrased by Ch. Montagnon (CIRAD) and Ch. Lusty (IPGRI). Figures between brackets indicate the number of groups having identified the given point (e.g. 1 out of 3).

The first page of this document is designed to give a quick synoptic overview of the points of action. Further comments and possible means of action are given in the next pages.

Main learning and emerging issues

Not surprisingly, given 42 % of the scientists present were phytopathologists or entomologists, the points of action linked to the control of pest and diseases were among the priorities listed. Nevertheless, this reflects a shared concern in the cacao sector.

Two interesting areas for attention emerged:

1. To improve the coordination of efforts between researchers working on different components of Integrated Pest Management (IPM) (i.e. breeding, spraying, biological control, pruning, etc.)
2. To not only improve control but also carry out in depth analysis and prevent the spread of disease

An interesting and much discussed issue was the gap between the innovations proposed by research and the actual practices of cacao growers. In other words, poor technology transfer was commonly acknowledged. The reasons for this are not clear and there are differences of opinion. Some participants pointed to the lack of adequate communication tools, others believed research efforts frequently lacked inputs from the farmers and led to inappropriate technologies and poor adoption rates, others stated that price volatility was such a key factor that growers would not invest in any new technology without market incentives. A common view was that social and economic sciences should play a much greater role in the cacao scientific community.

Major scientific breakthroughs were observed in the domain of technology and chemistry, namely in understanding aroma but also in developing tools for product tracing. It was agreed that rewarding quality is a key issue and that new technologies should help growers to gain more added value from good practices. For the cacao sector to have a common language on quality, and even more, a common agenda for the development of the sector, it was proposed that a forum be set up aiming at developing such a common strategy.

Comments and possible means of action

1. Prioritize and integrate measures for control – Tool Box approach

A lot of research is undertaken for individual components of Integrated Pest Management (IPM): breeding, biological control, spraying, chermones, etc. However, very few, if any research really integrates these components in order to give an integrated solution to smallholders.

Means of action:

Implement trials integrating different components of IPM in order to identify the best combination.

Certainly demands inter-institutional collaborations

Projects to be proposed to donors – Voluntary leaders?

2. Strengthen complementary sectors to facilitate diversification and reduce risk and pest/disease pressure (e.g. agroforestry)

Diversification is viewed as a way to reduce risks linked to P&D pressure but also to any other threat such as price volatility.

Means of action:

Identify best options for diversification in different situations – Use a Market Information System in decision-making

Project to be proposed to donors (see examples of diversification in coffee sector) – Voluntary leaders?

3. Identify/quantify factors influencing the spread of P&D at local, regional, international level through epidemiological studies

Several P&D (Moniliasis, Cocoa Pod Borer, etc) are in an invasive phase. Severe threats are posed to regions that have yet to be reached by new P&D. Knowledge must be shared to prevent as far as possible the spread of P&D at local, regional and international levels. Analysis of the way spread occurred previously together with in-depth epidemiological studies will help.

Means of action:

Demands international collaboration

Projects to be proposed to donors – Voluntary leaders?

4. Reinforce quarantine facilities

This Point of Action is also closely linked to Point 14.

Means of action:

Support and involvement in CacaoNet.

5. Carry out in-depth analyses of successes and failures of technology transfer in the cacao sector

There is a shared view that technology transfer has been poorly achieved in the cocoa sector during the past decades. Reasons proposed for this are: inappropriate solutions provided by research, poor communication to smallholders, price volatility preventing smallholders to invest, etc. There is no consensus on the weight of each of these reasons.

Means of action:

Support a socio-economic Phd on the subject (see also Point 7)

Propose a university to be involved.

6. Improve the understanding of farming systems in terms of socio-economics and the impact of farming systems on environment

Building on the previous point, it is necessary to better understand how smallholders take decisions on farming activities and revenues regarding cocoa. In a second step, the impact of these decisions on the environment should be analyzed. These objectives might be reached through participatory approaches.

Means of action:

Develop a common view and share experiences of participatory approaches.

Have a specific workshop on the topic to identify the steps forward. Voluntary leaders?

7. Systematic *ex ante* impact assessment of new innovations and technologies

It is often the case that an innovation is perfect at the technical level but unfeasible at the smallholder level because of socio-economic issues

Means of action:

Ex ante impact analyses, including costs and benefits, should be part of any innovation delivery (as part of code of conduct of researchers?)

Produce a grid with indicators to assess the cost benefit ratio. Voluntary leaders? Maybe in line with Point 5 (socio-economic PhD)

8. Develop appropriate communication tools

Communication tools are often not adapted to the “clients” (ie the smallholders) or they may not exist at all. Communication tools include leaflets, radio, TV, etc.

Means of action:

Systematically include in any project the communication tools which will promote the innovation (as part of a code of conduct of researchers?)

Gather existing communication tools per thematic area and region (see also Point 10).

Volunteers??

9. Develop a shared understanding within the cacao sector of: i) products & quality (market demand / needs and opportunities) ii) environmental services of cacao (value and mechanism for rewarding)

Information does not circulate well between the main stakeholders of the cocoa sector: producers, grinders, chocolate industry, etc. In particular, producers are not always aware of market opportunities for a given quality. The issue of rewarding quality is still open to discussion and other “symbolic” quality attributes (environment, social...) are now coming into the game. A shared view is needed to coordinate funding in a coherent manner.

Means of action:

Ask ICCO and/or COPAL and/or WCF to organize a workshop on this issue?

10. Gather and structure information on best practices to reduce fragmentation of efforts. Improve national coordination and participation and develop customized information products for different options/regions.

A better exchange of information will help avoid duplication of efforts. There is a need for a central database of references on best practices or even a publication or CD-ROM compiling these best practices according to different regions/options. (see also point 8).

Means of action:

Strengthen international coordination.

Propose a project to donors. Voluntary leaders?

11. Improve the ways of sharing unpublished results or non results through informal newsletters

This point has to do with communication (see points 8 and 10) but was isolated to highlight the need to exchange non results among the cocoa scientific community. These are the results that are not usually published in peer reviewed publications but maybe in grey literature or not at all.

Means of action:

Communicate non results (as part of the code of conduct of researchers?)

WCF proposed to use its newsletter for this kind of publication.

12. Understand soil fertility management at the smallholder level and its impact on yield & quality

The management of long-term soil fertility in cocoa farming systems in relation not only to the quantity but also the quality of the cacao produced is an area that remains to be extensively studied.

Means of action:

Multidisciplinary approach

Propose projects to donors. Voluntary leaders?

13. Develop traceability tools as a way to reward quality

Breakthroughs in technology related to traceability were acknowledged by the cocoa scientific community. This was thought to have a useful application as a way to recognize and reward cooperatives or smallholders groups producing good-quality cocoa.

Means of action:

Strengthen collaborations between bio-physical and socio-economic sciences

Propose projects to donors. Public Private partnership? Voluntary leaders?

14. Maintain and make optimal use of cacao genetic resources

This is the objective of the CacaoNet initiative.

Means of action:

Support/participate in the CacaoNet Initiative