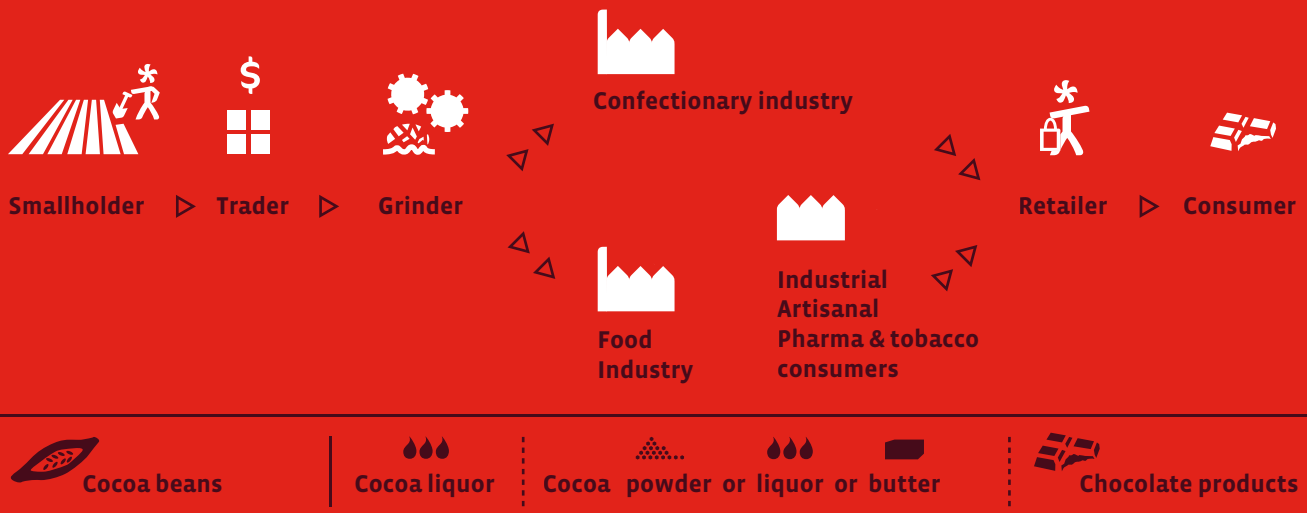

TCC
COCOA
BAROMETER
2010

Cocoa supply chain



Content

1 Introduction

Chocolate, produced from cocoa beans, is an extremely popular food item, consumed all over the world. Cocoa is cultivated in more than 40 tropical countries in Africa, Asia and Latin-America. Ivory Coast and Ghana account for 60% of world production. Over 90% of global cocoa production is cultivated by an estimated 5.5 million smallholders.[1] Another 14 million rural workers directly depend on cocoa for their livelihoods. Clearly, cocoa production impacts significantly on economic development, and the environment, in producing areas.

Cocoa prices at the London and New York commodity auctions, rose to record levels in mid 2010, reflecting the growing imbalance between supply and demand. Meanwhile, most smallholders and cocoa workers live below the poverty line. Smallholders have little bargaining power or influence on farm gate pricing mechanisms due to weak producer-market linkages and limited access to financial and capacity development services. They find little incentive to increase productivity, improve produce quality or adopt sustainable production methods. Investment in public structures such as research institutes, extension services and marketing boards is woefully inadequate in most producing countries. Consequently, producers lack proper facilities, know-how on good agricultural practices, and inputs such as planting material and new technologies. Crop loss due to pest damage adds to their misery, and these smallholders and workers are trapped in a vicious circle of unsustainable production and poverty.

Consequences of this unfortunate state of affairs are felt throughout the entire cocoa value chain. It is not easy for traders and cocoa grinders to secure a supply of good quality cocoa. The reputation of chocolate and confectionary companies is at risk due to the consumers' increasing concern about social, environmental and economic issues in the cocoa chain. In 2009, in the inaugural issue of the Cocoa Barometer, TCC concluded that without producers there will be no chocolate and without consumers there will be no market for the farmers' produce. It is, as simple as that. Both ends of the chain need investments to be sustainable.

Cocoa, is in fact, ideally suited for sustainable production and social change. The major players in the market are just a handful of transnational companies. They are well placed to act as major drivers of change and bring about a more sustainable cocoa sector. The cocoa industry invests vast sums of money at only one end of the chain: the consumers, and on one topic: branding. The industry has grossly underestimated the situation at the other end of the chain: the cocoa bean producers. Nevertheless, encouraging developments are taking place; producers, governments, industry, and consumers increasingly recognize the importance of sustainable cocoa production. In the Netherlands, all the stakeholders in the chocolate sector signed an agreement, in March 2010, to source only sustainably produced cocoa for the Dutch market.

'Cocoa Barometer 2010' presents an analysis of the recent market developments in the certified cocoa sector and aims to fuel ongoing discussions on building capacity and training of cocoa farmers. An overview of recent trends and developments in the cocoa value chain is followed by a brief introduction of the concept of certification and the different standards systems, which are increasingly accepted now. An overview of the availability of certified cocoa, its future prospects and procurement by the top five chocolate manufacturers follows. Developments and trends are briefly examined, and to place in perspective

the projected growth in certified cocoa production, we take a closer look at the training initiatives of the individual companies and the sector initiatives.

Tropical Commodity Coalition will present the Cocoa Barometer 2010 at the European Cocoa Conference and at the 2010 TCC-Conference 'Combining Results' in Amsterdam, to build shared understanding of the sustainability investments needed at the global level. The report will also be used in discussions with individual companies, NGOs, standard bodies, trade associations, and sector and consumers initiatives.

The demand for cocoa has grown steadily but, at present, the producing countries are unable to fulfil this demand.[2] Over the past few years, the demand has regularly exceeded cocoa bean production. In fact, the quantity of cocoa processed has exceeded production resulting in declining cocoa stocks and severe cocoa hedging.[3] Further growth of the demand to meet the increasing chocolate consumption in emerging markets will intensify the pressure on the cocoa stocks and raise world cocoa prices to an all-time high.

A closer look at the two most important cocoa producing countries reveals declining production since the 2005/2006 season; -15.5% in Ivory Coast and -13% in Ghana.[4] The industry therefore attempts to expand cocoa production in Asia, e.g. Cargill and Mars in Vietnam, in collaboration with the Dutch government, and Kraft in India. Increasing the cocoa acreage in this manner can inevitably lead to changes in land use with cocoa competing with other agricultural crops or with nature, resulting in deforestation. It is important to note that this expansion to less traditional cocoa producing areas in Asia has not balanced demand and supply, as yet.

Cocoa grinders

The grinders are the most powerful actors in the value chain due mainly to the ongoing horizontal and vertical integration: concentration process in the grinding segment and the outsourcing of liquid chocolate, respectively. Cocoa grinders have a highly concentrated market structure comprised of three leading companies and two smaller companies. The top five cocoa processors, Cargill (14.5%), ADM (13.9%), Barry Callebaut (12.2%), Petra Foods (7%) and Blommer (5.3%), produce more than half of the world's semi-finished cocoa products.[5]

Horizontal integration is continuing with the expected merger between Blommer, Delfi (a component of Petra Foods) and Cemoi set to become a reality in the near future. They are already cooperating in the PACTS (Processors Alliance for Cocoa Traceability and Sustainability) program, a joint venture program in Ivory Coast.[6] The ongoing concentration process in the grinding segment is very dynamic. Furthermore, the grinders are becoming, more and more, the producers of liquid chocolate, and suppliers to chocolate manufacturers. Within a short span of time, the grinders have become the most powerful stakeholders in the chain due to the ongoing concentration in the grinding segment and outsourcing of liquid chocolate.

Chocolate manufacturers

The chocolate sector is dominated by just a few players who have grown in size and significance, especially through the recent acquisition of competitors. The market structure of the chocolate manufacturers resembles that of the cocoa grinders with three leading companies and two smaller companies dominating. After the recent takeover of Cadbury by Kraft, almost 50% of the entire confectionery market is in the hands of only five companies. Kraft (14.9%) and Mars (14.5%) are leading the group followed by Nestlé (7.9%), Hershey's (4.6%) and Ferrero (4.5%).[7] As the Kraft-Cadbury merger created a sector dominated by a few, large companies, it is highly likely that horizontal integration will continue, leading to an even more concentrated sector. With the takeover, Kraft became the world largest chocolate manufacturer and the second largest confectionery, food and beverage corporation, behind Nestlé. Kraft strengthened its position in its traditional markets and strategically expanded its activities to the emerging markets, for example, Kraft sales in India alone grew from zero to $400 million with Cadbury products.[8]

Not only is the number of manufacturers and processors declining, they are also cooperating more intensively. Over the past decades, the processors have grown and gradually taken over about 50% of the world cocoa bean processing. Currently chocolate manufacturers increasingly contract processors to take over (parts of) the production process for specific products. Processors are gaining a more important role in the entire product chain. Barry Callebaut, for example, aims to reach an industrial chocolate production capacity of 1,350,000 tons, in 2010.[9]

3 Towards sustainability

Enabling sustainability in the cocoa sector is of the utmost importance. This will not only allay consumers' growing concerns about food production methods and their impact on poor people and the environment, but also safeguard business interests by averting the high risk of quality loss, supply shortfalls and sullied reputations. In recent years a wide range of sustainability instruments have proliferated in the cocoa sector. The most significant among these are cocoa certification standards, training and capacity building programmes to promote sustainable farming practices, and programmes to address child labour in cocoa production. TCC prefers an integrated approach to improve and protect the economic, social and environmental conditions at the beginning of the cocoa chain. In this regard, it must be noted that large scale certification is taking off and becoming more widespread in the cocoa sector. Almost all major chocolate manufacturers now source a small proportion of their production under a standards system, such as Fairtrade, Organic certification, Rainforest Alliance and UTZ Certified. These market-based approaches to sustainable development of the cocoa sector gives producers many opportunities, for example training, access to new markets, and enhanced efficieny and revenues. Still it has to be noted that certification is not the ultimate solution, a combination of different sustainability instruments would be the ideal to plead for.

Certification

Certification is the procedure whereby an independent third party certification body gives a written assurance that the quality of the cocoa and the production process has been assessed, and that both conform to the requirements specified by the standards system.

To address poverty reduction in a market context, certification should take place against a standards system with adequate attention for continual improvements towards inclusiveness and sustainability. To further this objective, a methodology has been developed to communicate the strengths and weaknesses of each individual standards systems (information derived from each standards list) on inclusiveness, sustainable development and chain management.

Figure 1 'Flower' with inner management cycle and five specific thematic qualities

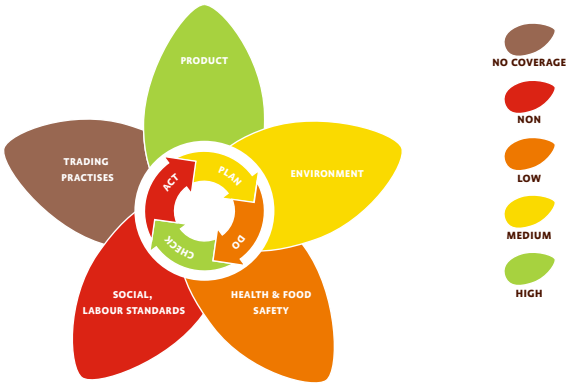


Figure 1 portrays the methodology developed to assess the extent to which a standards system gives attention to an effective management system (the inner cycle), and specific thematic qualities (the five leaves).

Inner management cycle

The inner cycle of the flower depicts the importance given to systematic management and the requirement of an effective and working management cycle (Plan-Do-Check-Act). Although standards systems can score high on isolated components, demonstration of a working cycle is required. Which means that linking the 4 management components should get attention.

Plan

The first component deals with planning, priority setting and inclusiveness. Are baseline studies and planning required? Does the standards system facilitate integration of external standards in planning? Is there room for priority setting and inclusiveness of vulnerable producers? Is the number of zero tolerance standards (minimum requirements) low? And how tolerant is the standards system to accommodate producer groups at a low entry level on the condition of rapid improvement?

Do

The second component is the actual implementation phase. Is continual improvement during implementation taken into consideration?

Check

The third component covers auditing, chain coverage and traceability. A high score means effective combinations of internal and external auditing / third party certification and external standards well integrated in the internal auditing system. Auditing, chain coverage and traceability are important for credible communication and assurance that the qualities on the product label are respected throughout the chain. The importance of transparency is also included.

Act

The final component of the management cycle deals with the action based upon the findings of the third component (Check). Following ISO procedures, findings in audit reports are reported at management meetings possibly leading to modifications to the planning process for the next cycle. Findings could also be reported to national reference groups and/or standards bodies, facilitating communication and action leading to the further development of standards.

Thematic qualities

Encircling the heart of the flower are five leaves representing five groups of thematic qualities (in ISO terminology). An effective management system is the minimum requirement to enable improvements in the five thematic qualities.

Product quality and quantity

Often, this thematic quality receives the highest priority in the plans of producer groups. Standardization at global level has limited meaning because of national and ecological differences. But global standards bodies can cooperate with national reference groups and provide guidance by standardizing Good Agricultural Practices. Compliance with product quality and quantity standards can provide the farmer a direct benefit based on better and/or more produce to sell. Otherwise the direct benefits of working towards compliance are related to consumer goodwill only.

Environmental quality

This quality deals with the degree of linking baseline data to a healthier and cleaner environment. How complete are the environmental issues (ecosystem conservation,

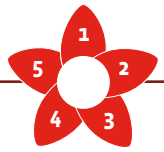
Figure 2 Overview of the strengths and weaknesses of the four standards systems on inclusiveness, sustainable development and chain management

Rainforest Alliance (SAN standards) gets a relatively high score for the internal management cycle. SAN standards require a management system according to the size and complexity of the farm. The standards are flexible and tolerant towards low entry level producer groups; it has a low number of minimum requirements and has room for priority setting. Management evaluation results need to be included in the next improvement plan. The accreditation structure (currently under revision[10]) is a less stronger point, and in the inner management cycle, chain coverage and traceability are weak.

On thematic issues Rainforest Alliance is strong on environmental quality including ecosystem and wildlife conservation. It is also strong in trading conditions, market transparency and social quality (but lacks specific consideration on gender). It scores low on product quality, since production practices are not standardized. There is no coverage on health and food safety, but reference is made to national regulations.

In the management cycle the UTZ standards require that progress is demonstrated. The standards are tolerant for low entry level producer groups (number of minimum requirements increase over a 4-year period); a plan is required within 3 years with room for priority setting, but plan requirements are divided for several themes, which does not give a good guidance to producers. Internal and external auditing at multiple levels and web based traceability are strong points. On the other hand, while progressive improvement in the implementation phase is desired, it is not standardized and action upon findings is not required.

On thematic issues a lot of attention is given to product quality and quantity, supposed to lead to higher income. The UTZ standards are also strong on facilitation and guidance in market info and several criteria on health and food safety are required. A less stronger point is the environmental coverage, although improvement is required for agricultural production practices.



In the management cycle the FLO smallholder standards require that progress is demonstrated. The standards are tolerant for low entry level producer groups (one third of the standards are minimum requirements) and a 3-year period is given for the plan and priority setting. The standards give much attention to planning and specifically requires a program for vulnerable producers. The accreditation structure (certification is centralized through FLO-CERT) and chain coverage (although there is a separate trade standard) are less stronger points. Almost no requirements exist on action on audit findings, although an organizational structure is in place enabling control by members.

On thematic issues the FLO standards pay a great deal of attention to social quality, and average attention to gender issues. A substantial part of the code is reserved for general environmental standards. Market statistics are available and a minimum price and fixed premium are guaranteed. The FLO standards score low on product quality as production practices are not standardized. There is no coverage on health and food safety but reference is made to national regulations.

The EU Organic standards require a plan and risk-based priority setting. It is strong in risk-based internal and external auditing, third party certification and in chain coverage and traceability. The standards are weak in inclusiveness (since the standards are formulated as zero tolerances) and in continual improvement as there is no coverage on the ‘do’ and ‘act’ phases.

On the thematic qualities the EU Organic standards are strong on the environmental quality, with many minimum environmental requirements and the fact that management of biological processes is required. Production practices are standardized. There is no coverage on health and food safety, but integration of EU food safety regulation is facilitated. The EU standards are weak on social quality with no coverage on ILO Conventions, labour rights, gender, etc. Furthermore, the standards are very difficult to read and understand even for experienced persons, let alone producers.

biodiversity, optimal use of internal resources, energy efficiency, low emissions, zero waste, etc.) included in the standards system?

Health and food safety

Health and Food Safety includes HACCP and ISO 22000 standards systems. Many standards bodies consider these are too specialized and make reference to national regulations. Nonetheless, for many farmers exporting cocoa, these health and food safety standards are mandatory.

Social quality and labour norms

Standards systems must include at least the eight fundamental ILO Conventions, namely no forced labour (ILO Conventions 29 & 105), no discrimination (ILO Conventions 100 & 111), no child labour (ILO Conventions 138 & 182) and freedom of association and collective bargaining (ILO Conventions 87 & 98). The standards system should also make reference to a living wage that covers basic needs, healthy and safe working conditions, legal labour contracts and should include gender-specific criteria. Importantly, the implementation of a standards system should be complementary to governmental regulations, and national legislation is always preferable if it establishes higher standards.

Trading practices

Can structural costs of compliance be covered from price differentials, premiums and increased efficiencies? Does the standards document provide a link to a marketing website, which transparently communicates on percentages of produce sold as certified? Does working towards compliance lead to acceptable cost-benefits and does it avoid excessive conditions (heavy investments, income dips, strong fluctuation of prices, etc.)? Is a step by step approach followed in accordance with management capacity and cost-benefit margins in the market? Is cost-benefit information available in a structural, standardized, transparent and preferably comparative way for smallholders? Does the standards body facilitate the work of a national reference group in providing data required in a comparative framework?

Four global standards systems are relevant for the cocoa sector, namely Fairtrade, Organic, Rainforest Alliance (Sustainable Agriculture Network) and UTZ Certified. Figure 2 gives an overview of the strengths and weaknesses of the four standards systems, when scored for inclusiveness, sustainable development and chain management.

4 Certified cocoa production

In 2009, 104,000 t of certified cocoa, equal to 3% of the world market (3,593,000 t), was produced. The world market share of certified cocoa has grown considerably from 2009 to 2010. Standards systems overlap to varying degrees, leading to double or triple certification at the producers' level. An estimated 30% of the UTZ Certified and Rainforest Alliance production and 15% of the Organic and Fairtrade cocoa production has been multi-certified.[12] As the current situation is unclear to all stakeholders along the chain the standards bodies should communicate transparently on the level of multi-certification. Due to double counting, the actual total volume of certified cocoa beans is lower than stated. Furthermore, 20% of the certified production never enters the certified sales channel, because being either of inferior quality or of high quality they are sold for attractive prices to middle men (Figure 4). The balance of supply and demand of certified cocoa beans is questionable. Considering the recent commitments of the chocolate manufacturers there will be a substantial oversupply of more than 150,000 tons of certified cocoa beans in 2012, even after taking into consideration the losses due to multi-certification and sales through other trade channels.

Figure 3 shows that standards bodies are aware of the magnitude of the task ahead, and are determined to deliver. The projections provided by the standards bodies clearly show their eagerness to grow, and mirrors a very competitive environment. According to the future projections of the standards bodies, over the next decade, more than 43% of all cocoa beans will be certified. The growth rates projected by UTZ Certified, Fairtraide and Rainforest Alliance have to be assessed very carefully. Their combined intentions imply that over the next ten years around 1,777,000 farmers have to be trained to increase their production with 25% and become certified (Figure 5). Presently, there are around 127,000 certified farmers.[13] Considering the recent efforts to build capacity at the producer level, in a demanding environment of unorganised smallholders, achieving the projected growth rates is highly questionable. To reach their goals the standards bodies will have to increasingly overcome the following challenges:

- Lack of farmer organisations
- Limited training capacity at local level
- Poor access to credit and agricultural funds
- Low motivation and incentives to grow cocoa
- High compliance costs for farmers
- Competition between standards bodies

Figure 3 Production and growth projections of certified cocoa by standard bodies[11]

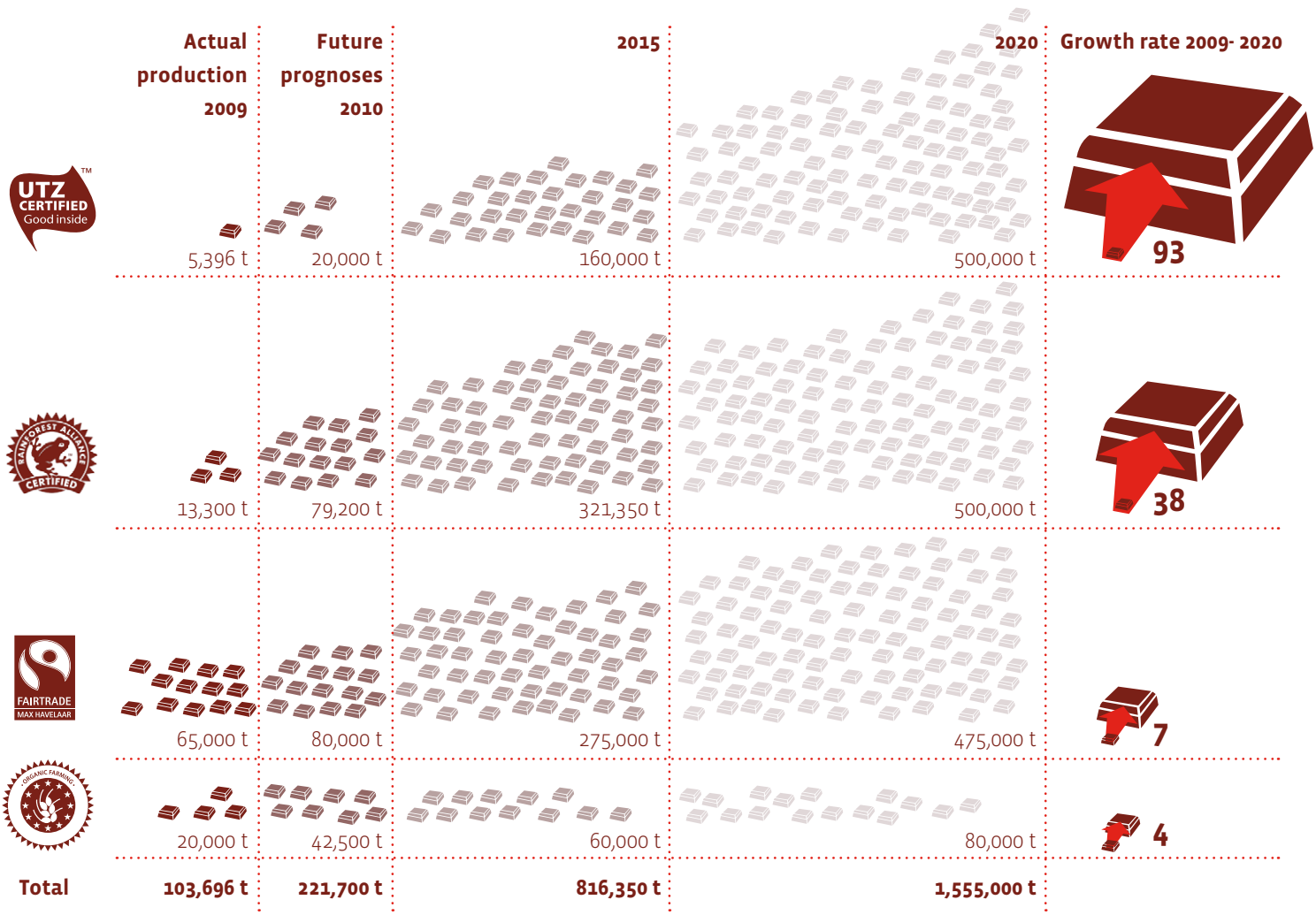


Figure 4 Fate of certified cocoa

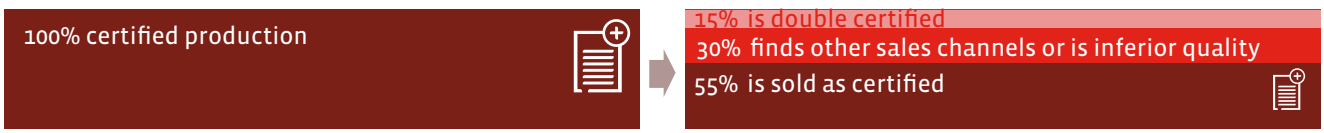
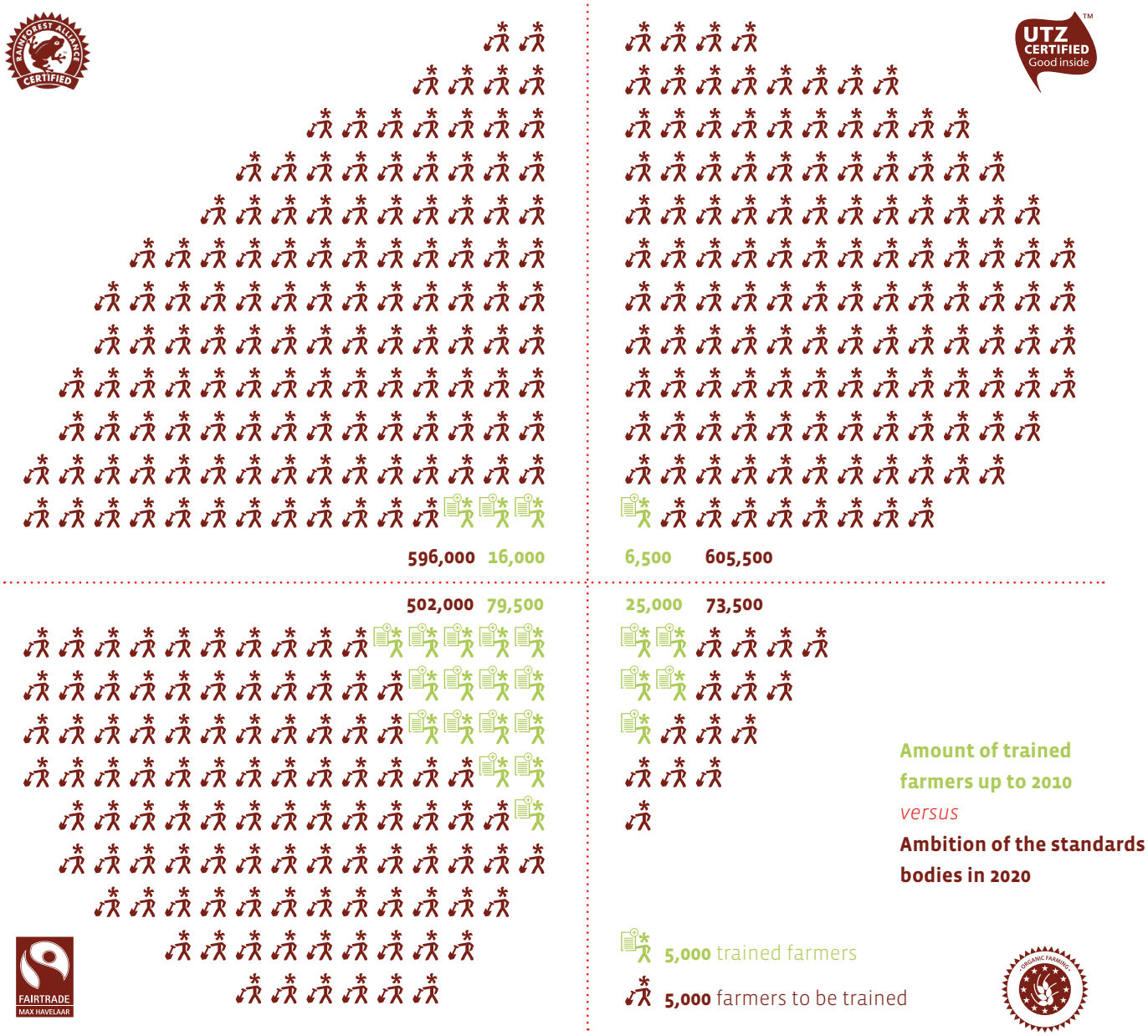


Figure 5 Certified farmers: reality versus projections in 2020



Cocoa grinders

Cocoa grinders have a key role in sustaining the cocoa sector, as they are close to both the farmers and the chocolate manufacturers. The top five processors are increasingly committing themselves to grinding certified cocoa to meet the increasing demand of chocolate manufacturers. Client expectations, in this case, are a huge driver of growth in trade and processing of sustainable cocoa. Most grinders have adopted multiple standards systems to serve a wide array of customers.

A few grinders like ADM and Armajaro developed company specific programs to source traceable cocoa in an efficient manner. ADM started its traceable SERAP program and Armajaro set up Source Trust, a company foundation that offers traceable cocoa with special direct benefits for farmers.[14] Although these programs may foster positive results via training they are no substitute for independent standards as they lack third party auditing.[15]

Grinders are not visible to end consumers, hence less vulnerable to public criticism. Nevertheless, grinders have a pivotal role to play in addressing the social, environmental and economic problems at farm level. The most important challenge grinders and traders face today is how to move from a business model based on price and volume, to one based on price, volume and sustainability.[16] To ensure quality certified cocoa, now and in future, traders and grinders together with governments of the main producing countries, must heavily invest in small cocoa farmers. If not, they will increasingly continue to face difficulties to meet the demand of their clients. Good training and farmer support programmes are important; and linked to market-based sustainability trajectories, would constitute the most efficient way to achieve long-term sustainability development.

Implementation of a small levy is a possible means to finance comprehensive structured training for smallholders.[17] The processing company is the most appropriate level to raise the levy, because all beans have to be processed to be useful. A levy of 39 €/ton (50$/ton) of grinded cocoa is less than 2% of the world market price and within the boundaries of normal market developments. The levy could generate 140,000,000 €/year. The costs of the levy have to be transferred via the post-processing chain to consumers. With a cocoa content of about 8% in the consumer products this would mean a consumer price effect of less than 2 per mill/chocolate bar. The Dutch Trade Union FNV presented this idea at the 2nd Round Table for a Sustainable Cocoa Economy in Trinidad. This proposal is presently being researched by ICCO and the Round Table for Sustainable Cocoa Economy. A proactive role for industry could help the process significantly and would demonstrate the responsibility taken by the whole sector.

Chocolate manufacturers

The demand for certified cocoa is growing. More major chocolate manufacturers procure certified cocoa and offer labelled chocolate products. Instead of only offering selected labelled premium products, they have labelled many of their leading brands in 2009 and 2010.

In 2009, Kraft introduced Rainforest Alliance labelled *Cote d'Or* products in France and Belgium. The company has planned to gradually introduce the certified product in seven other countries in Europe and in North America before 2012. Its *Marabou* brands will receive certification in three Scandinavian countries, and in Switzerland and Austria; the same applies to its *Suchard* product line. Certified cocoa beans required to implement these plans will amount to 30,000 tons in 2012.[18] Due to the Cadbury takeover Kraft

can add two certified products to its portfolio: Fairtrade certified *Cadbury Dairy Milk* bars (2009) and Organic/Fairtrade *Green & Black's* (2008). *Cadbury Dairy Milk* bars are currently available in the United Kingdom, Ireland, New Zealand, Australia and Canada[19], for which Kraft procures more than 15,000 tons of certified beans. *Green & Black's* is also widely available.[20] Kraft has set a short-term goal to procure a minimum of 50,000 tons certified cocoa in 2012.[21]

In 2010, Mars launched its first major brand, the *Galaxy* bar, with the Rainforest Alliance label.[22] Mars, a frontrunner towards a sustainable cocoa sector, also publicly announced its future target to source 100% sustainable cocoa by 2020. The company expects to procure at least 350,000 tons of certified cocoa by that time. Both UTZ Certified and Rainforest Alliance play an important role; they are the main suppliers with minimal 100,000 tons each.[23]

Since 2010, Nestlé uses Fairtrade certified chocolate for the *KitKat four-finger* bars in the United Kingdom and Ireland.[24] In the near future, Nestlé plans to introduce UTZ Certified products in New Zealand and Australia. Nestlé has set a short-term target to source a minimum of 30,000 tons certified cocoa in 2012.

Hershey's offers the organic *Dagoba* brand since 2009. In 2007, Hershey's and Starbucks were cooperating on a Starbucks Chocolate line that was sourced via the Starbucks Cocoa Practices Guidelines and Scorecard. However, this cooperation ended in 2009 and Hershey's present public commitment is 1% certified cocoa by 2015.[25]

Ferrero has not yet introduced any certified chocolate product, nor has it publicly committed itself to invest in making the cocoa supply chain sustainable. However, at farm production level it has become active and has acquired a small volume of Rainforest Alliance certified cocoa from a pilot project in Ivory Coast.[26] Of the top five manufacturers, Hershey's and Ferrero are clearly lagging behind.

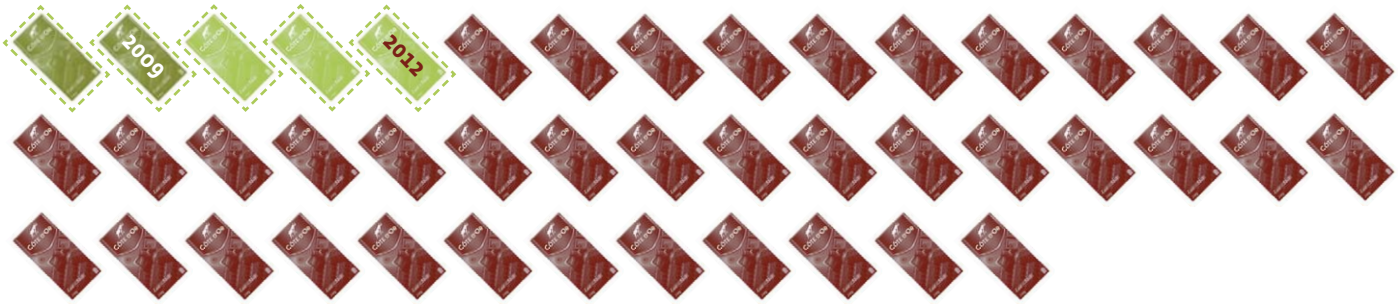
Although chocolate manufacturers still use relatively small volumes of certified cocoa, and distribute these products to a limited number of countries, their underlying strategy is aimed at promoting sustainably produced chocolate in the mainstream market. Both Rainforest Alliance and UTZ Certified facilitate this strategy by recognizing products with a minimum of 30% certified cocoa blended with conventional cocoa. A label on the chocolate product must inform the consumer of the exact percentage of certified cocoa. Of course, different labels with different percentages can confuse the consumer. While this is a step in the right direction, all chocolate manufacturers should indicate a clear target towards 100% certified products, as Mars and Kraft have already announced.

Consumers buying the final product have the right to receive correct information, in easy-to-understand language, about the scope and goals of the various standards systems. Transparency of information for the consumer, regarding the real improvements at producers' level, is a key factor in creating credible, sustainable chocolate brands. In this respect, chocolate manufacturers should be encouraged to follow the example set by Mars in 2010. This company has developed a road map, indicating different routes towards sustainable cocoa sourcing, accompanied by a public announcement of its sustainability goals with a clear time frame and milestones in the form of certified volumes until 2020. Other chocolate manufacturers should become proactive too, to tackle the challenges in a coordinated manner and create a truly sustainable sector.

Figure 6 Certified cocoa purchased by the major five chocolate manufacturers in 2009 and future commitments in 2012[27]

kraft foods — Make today delicious

cocoa volume 2009 **440,000** t / certified 2009: **22,000** t (5.0%) / certified 2012: **50,000** t (11.4%)



Nestlé

cocoa volume 2009 **360,000** t / certified 2009: **4,000** t (1.1%) / certified 2012: **30,000** t (8.3%)

MARS

cocoa volume 2009 **350,000** t / certified 2009: **5,000** t (1.4%) / certified 2012: **100,000** t (28.6%)

HERSHEY'S

cocoa volume 2009 **170,000** t / certified 2009: **10** t (0.0%) / certified 2012: **855** t (0.5%)

FERRERO

cocoa volume 2009 **135,000** t / certified 2009: **0** t (0.0%) / certified 2012: **0** t (0.0%)

6 Major challenges

Certification is one important key to transform the cocoa sector into a sustainable production chain. It is a vital tool in each stakeholder's tool box. Codes of conduct require suppliers to meet certain standards on food safety, working conditions and environment-friendly production practices. This approach to sustainable development provides participating producers many opportunities, for example, training, access to new markets, and enhanced efficiency and revenues. However, full access to these benefits, for those most in need, is restricted by various obstacles such as limited demand for, and investment on, certified produce, and high audit costs.

All grinders and chocolate manufacturers addressed, barring one, and also sectoral initiatives, have kindly supplied information regarding their investments in, and outcome of, training programs. However, for most programs the information is inadequate to determine their success rate and the benefits derived from training. In fact, credible impact measurement techniques are not readily available or easily applied. This creates uncertainty about the impact (positive or negative) of training and certification programs. It is paramount for the cocoa sector to systematically measure the sustainability results achieved at all levels in the cocoa value chain. Special attention should be given to back claims of impact at producer level, to measure real time progress, and create sector wide credibility for the efforts of the stakeholders involved. Only through combined measuring and pooling of results will the sector be able to identify, develop and widely implement efficient improvement programs.

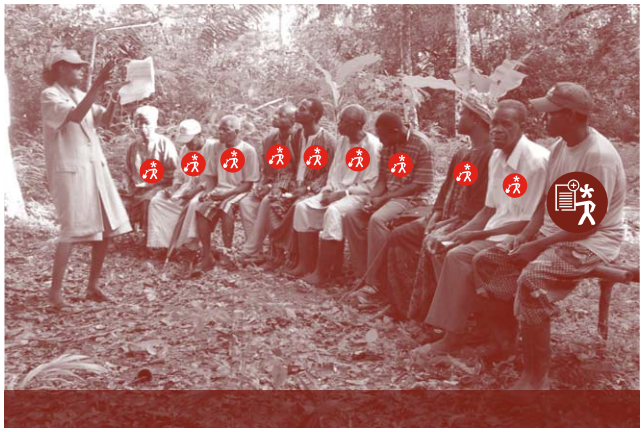
Nevertheless, many companies are proactive in training activities, and the Barometer takes pride in mentioning a few interesting programmes of strongly active companies. At the grinder level: Barry Callebaut with its Quality Partner program, ADM with its Socially and Environmentally Responsible Agricultural Practices (SERAP) program and Cargill with its Farmer Field Schools program have achieved good results. Among the chocolate manufacturers, Mars with its Cocoa Sustainability Partnership, Kraft with its Cadbury Cocoa Partnership and Nestlé with its Cocoa Plan, demonstrate their sincere involvement.

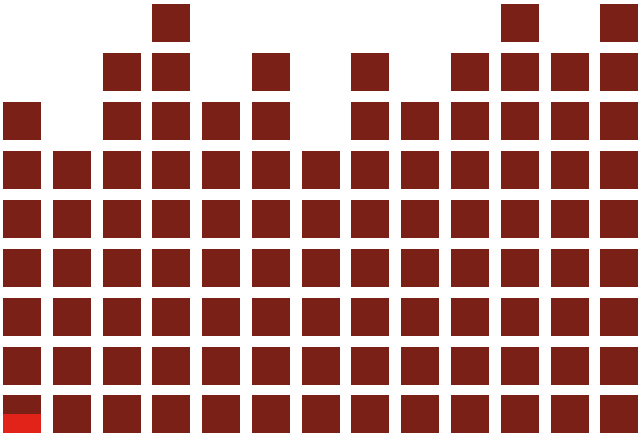
All five major chocolate manufacturers and grinders contribute to sector wide initiatives, like the World Cocoa Foundation (WCF). WCF manages various large scale training programs in different cocoa producing countries, like the Cocoa Livelihoods Program, Sustainable Tree Crops Program and ECHOES Alliance.

Training of farmers is essential to make a success of certification. To get a good grasp of the training situation, TCC calculated the total outlay required for training cocoa farmers worldwide (Figure 7). The calculation is based on the total number of trained farmers currently available, as per data from the 5 major grinders and chocolate manufacturers, and sectoral and governmental training programs; and the total number of cocoa farmers worldwide as per WCF i.e. 5,500,000.[28]

It is evident that via individual training programs of the top 5 processors and chocolate manufacturers, sector wide initiatives like WCF, and governmental extension services, around 10% of the cocoa farmers worldwide have been trained. Training a mere 10% of the smallholders has taken considerable time and effort. No doubt, it will take, relatively, so much more effort, time and resources to address the rest of the farmers because they are less organized and live in remote areas. To restore the balance

Figure 7 Investment required to train cocoa farmers worldwide





10% of the farmers have received training, the necessary investment to train the remaining 90% is € 400,000,000

Global chocolate sales 2009[29]	€ 71,200,000,000
Investement needed for training	€ 400,000,000

Which is 0.56% of the global chocolate sales of 2009

between supply and demand, and to seriously address rural poverty and environmental degradation in the cocoa sector, a long term investment of at least € 400 million is necessary.

This amount of € 400 million will only cover the cost of farmer training. Other services like creating organizational structures, access to rural credit, new planting material and social improvement programs are also needed.

It becomes more and more evident that a comprehensive sector wide training initiative with governments, industry, NGOs and research is the only solution to this ongoing problem. A levy for a sector wide sustainability fund, as proposed in section 5.1, could be an appropriate solution to address this major challenge. If the sector is able to allocate every year an substantial portion of the € 140 Mio for coordinated high level training activities, rural poverty and environmental degradation can be addressed faster and more efficiently.

The capacity of the stakeholders to reach and train cocoa farmers with quality programs largely depends on good planning and intensive cooperation. All stakeholders directly or indirectly dealing with farmer training programs, should avoid working in isolation and promote generic training modules. Possible ways to stimulate cooperation and safeguard efficiency and effectiveness are:

- Cooperation between standards bodies
- Partnerships between companies/CSOs/governments/ standards bodies
- Round table initiatives & national reference groups
- Cooperation of governments
- Introduction of a sector wide sustainability fund

7 Conclusion

Worldwide demand for cocoa beans is growing steadily, outpacing production. This year's record cocoa prices at the commodity auctions in London and New York clearly reflect the growing imbalance between cocoa supply and demand. More than half the global cocoa bean supply comes from Ghana and Ivory Coast. Cocoa is almost exclusively farmed by smallholders who account for over 90% of the global production. These small-scale producers often fall below the poverty line, unable to make a living from cocoa farming. Today the cocoa sector, in most producing countries, is confronted with the dire consequences of neglecting investment in public institutions, and the diminishing yields are driving the sector to despair. In order to reverse this trend, revive the sector and assure an adequate supply of quality cocoa, a significant effort to invest in the human capital of farmers is absolutely essential.

Concentration

Meanwhile, the ongoing horizontal and vertical integration in the cocoa chain, both at the level of the cocoa grinders and the chocolate manufactures, leaves the market to only a handful of transnational companies. Less than ten corporations deal with more than 50% of the world's cocoa beans and liquid chocolate production. And here lies a wonderful opportunity. These companies could take up their corporate social responsibility and become the major drivers of change and bring about a more sustainable cocoa sector.

Change

ADM, Cargill, Barry Callebaut, Blommer and Petra Food are the closest to farmers in the value chain. Therefore, grinders can play a pivotal role in addressing the social, environmental and economic challenges at farm level. The most important challenge grinders and traders face today is how to move from a business model based on price and volume, to one based on price, volume and sustainability. Over the last decade, many cocoa stakeholders have initiated company and sector wide initiatives to address various pertinent issues, like child labour, farmer schooling and environmental degradation. In recent years, there has been a significant shift of interest towards integrated sustainable production practices, which has the intention to restore the balance between supply and demand of cocoa beans. The public announcement of Mars in 2009 to work towards 100% certified cocoa in 2020, triggered the whole sector. Kraft and Nestlé have joined the certification bandwagon and the demand for cocoa, certified against sustainability standards, has grown appreciably. Future commitment, indicating clear steps to source a growing share of sustainably produced cocoa, of the other four major chocolate manufacturers Kraft, Nestlé, Hershey's and Ferrero, would help to stimulate both production and consumption markets for sustainable cocoa and chocolate products.

Certification

Various standards systems, with different business perspectives and consumer profiles, are rapidly entering the mainstream cocoa and chocolate market. Independent monitoring and certification are central to the four major cocoa production standards: Fairtrade, EU Organic, Rainforest Alliance and UTZ Certified. Their systems of sustainability standards should be seen as instruments to improve the social, environmental and economic situation of the cocoa producers, and to give a credible message about the sustainable chain management efforts to the end consumers. Individual companies also make use of training programs as a means to sustain the cocoa sector. However, the information available on many of the training programs conducted by grinders, manufactures and standards bodies is

insufficient to determine their success rate and training effects. Sustainability programs are in danger of being questioned if their evaluation lacks credibility. More and more farmers, consumers, companies and governments evince interest in the results of sustainability initiatives. However, the ways in which we now measure results lack transparency. Nor is there agreement on what sort of results need to be measured to determine impact. Collaboration of different stakeholders in measuring results is the key to credibility. Without consensus among stakeholder groups the evaluations will not be acceptable to the audience at large. Collective measuring and pooling of results is less expensive, and more effective. The challenge is to reduce the complexity and to define accepted indicators and select processes that can be implemented.

Challenges

Considering the efforts in recent years to build capacity at the producer level, in the demanding environment of unorganised smallholders, the projected growth rates are simply astonishing. Rainforest Alliance is targeting a growth rate of 38 times, and UTZ Certified is planning to grow up to 93 times in ten years. These growth rates and competition between standards bodies could end up being counter productive. It is paramount for the cocoa sector to systematically measure the achieved sustainability results at all levels in the cocoa value chain. Special attention should be given to back claims of impact at the producer level, to measure real time progress and create sector wide credibility for the efforts of the stakeholders involved. In the long term, convergence of standards at the producer level seems inevitable. Closer cooperation between standards bodies will increase the efficiency of all concerned and transform cocoa production into a sustainable enterprise. The tremendous challenge to reach more than 50% of all smallholders, within 10 years, needs a comprehensive effort with substantial contributions, both financial and in kind, by all involved stakeholders.

In this realm, internalizing the social and environmental costs of sustainable production is a key challenge. In other words, how do we finance the effort towards more sustainability?

There are 5.5 million cocoa farmers worldwide; 90% of them have not been trained. A conservative calculation shows that an investment of at least €400 million is necessary to train these farmers. This amount will only cover the cost of farmer training. Other services like creating organizational structures, access to rural credit, new planting material and social improvement programs are also needed. Addressing remote and unorganised farmers will further inflate training costs. These costs can be absorbed by the sector if a general levy of €39 per ton (50$/ton) of grinded cocoa is imposed. This could generate €140 million each year for a sector wide sustainability fund. The costs of the levy have to be transferred via the post-processing chain to consumers. With a cocoa content of about 8% in consumer products this would mean a consumer price effect of less than 2 per mill per chocolate product. Clearly, this price effect is negligible, and this could be an appropriate solution to finance this major long term effort to restore the supply and meet the demand in the cocoa sector. If the sector is able to allocate, each year, a substantial portion of the €140 Mio for coordinated high level training activities, rural poverty and environmental degradation can be addressed effectively. Finally, the consumer will also profit; chocolate will remain an affordable luxury that can be enjoyed with a clear conscience!

8 Sources of information

Information sources for the Figures

Figure 1 This methodology developed by Coen van Beuningen, Hivos and Sjoerd Panhuysen, TCC was presented for public consultation at the Biofach 2010, in Nurenberg, Germany. It is designed to assess and compare the potential of different standards systems to facilitate and promote continual improvement towards inclusiveness and sustainability. The complex interrelations between these two objectives are explained and elaborated in the book "Inclusive improvement". The flower figure is based upon the standards systems comparison model developed and used by the TCC in the coffee and tea sectors.

Coen van Beuningen and Peter Knorringa (2009). Inclusive improvement, standards and smallholders, taking stock and moving on. TCC Coffee Barometer 2009 and Tea Barometer 2010.

Figure 2 The scores are solely based on the standards lists since they constitute the foundation on which the whole standards system is built; reference documents:

FLO Generic Fairtrade Standards for Small Producers' Organizations (08-2009),
FLO Fairtrade Standards for Cocoa for Small Producers' Organizations (02-2009),
SAN Sustainable Agriculture Standard (04-2009),
UTZ Code of Conduct Cocoa for Group Certification (04-2009),
EU Organic EC 834/2007 (06-2007),
EU Organic EC 889/2008 (09-2008)

Figure 3 Consultation of Standards Bodies (2010)

Figure 4 Cocoa experts consulted (2010)

Figure 5
Consultations with standards bodies (2010)
ICCO (2010):
Total world production = 3,593,000 tonnes
WCF (2010):
Total number of cocoa farmers = 5,500,000
IITA (2010):
Yield increase through training = 25%

Number of additional trained farmers to realize the 2020 projection for certified cocoa = Number of trained farmers needed to produce the 2020 projection - number of trained farmers currently available

Number of trained farmers needed to produce the 2020 projection for certified cocoa = Projected certified production in 2020 / Average production per trained farmer.

Number of trained farmers currently available = Current certified production / Average production per trained farmer.

Average production per trained farmer = (World production / No. of cocoa farmers worldwide) x % yield increase by training (estimated at 25%).

Therefore, average production per trained farmer = (3,593,000 / 5,500,000) x 1.25 x1000 = 817 kg.

Figure 6 Consultation of chocolate manufacturers (2010)

Figure 7 Consultation, by way of a questionnaire, with five major grinders and chocolate manufacturers.
The questionnaire was returned by Kraft, Mars, Nestle, Hershey's, Ferrero, Barry Callebaut, ADM, Cargill and Petra Foods; only Blommer did not respond.

As the data submitted in the responses were not easily comparable, and credibility issues arose regarding the result measurement programs used, this calculation provides only a coarse estimation of the current situation.

As per WCF (2010), the total number of cocoa farmers worldwide = 5,500,000
Estimation of the number of farmers trained through different initiatives (as per questionnaire responses) are as follows:

Company initiatives (5 major grinders and manufacturers):	355,660
Sector initiatives:	125,959
Government extension services:	96,324*
Number of trained farmers currently available:	577,943

*Number trained by Government initiatives was assumed at 20% of the number of farmers trained via company and sector initiatives.

Cost of training = € 80 ($ 100) per farmer in Farmer-field Schools (as per Cocoa experts consulted)

Investment needed to have all the cocoa smallholdings worldwide run by trained farmers = (Total number of cocoa farmers – number of currently available trained farmers) x Cost of training

= (5,500,000 - 577,940) x €80 = € 393,764,800

8 Sources of information

Footnotes

1 WCF estimate of 5.5 Mio is used in this Barometer.
2 ICCO (2010): *"ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XXXVI, No.2, Cocoa year 2009/2010"*
3 ICCO (2010): *"ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XXXVI, No.2, Cocoa year 2009/2010"*
4 ICCO (2010): *The World Cocoa Economy, Past and Present*
5 Based on: *Tropical Commodity Coalition (2009): "Cocoa Barometer 2009"*
ICCO (2010): *"ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XXXVI, No.2, Cocoa year 2009/2010"*
6 PACTS Press Release (05-2010): *"International family controlled businesses unite to form an ethical, quality cocoa production alliance in Ivory Coast"*
7 Nestlé (presentation) (2010): *"Chocolate presentation" (source: Euromonitor (2010)*
8 Kraft (presentation) (2010): *"Kraft Foods Strategic Decisions Conference"*
9 Oxfam Wereld Winkels (in print 2010): *"The Belgian chocolate sector; Role and Importance of Belgium in the cocoa and chocolate chain"*
10 *http://www.ioas.org/SAN.htm*
11 Consultation of Standards Bodies (2010)
12 Consultation of Standards Bodies (2010)
13 Current number of farmers per standards body = total certified production per standards body/average production per trained farmer (including 25% production increase)
14 ADM (2010): *"Our Commitment to Sustainable Cocoa"*
Source Trust (2010): *http://www.sourcetrust.org/*
15 "A physical audit of Source Trust's on the ground operation was recently conducted by Fair Foods but their findings and their report are not available, as yet." (Information from Armajaro on 2/9/2010)
16 Rosenberg, D. et al (IDH (2010): *"Traders as agent of sustainability in coffee and cocoa supply chains"*
17 Dick de Graaf (FNV): Presentation at the 2nd Round Table for a sustainable Cocoa Economy in Trinidad
18 Rainforest alliance Press release (10-2009): *"Major European Kraft Chocolate Brands Embrace Rainforest Alliance certification"*
19 Cadbury (2010): *http://www.cadbury.com/ourresponsibilities/fairtrade/Pages/fairtrade.aspx*
20 Green & Black's (2010) *http://www.greenandblacks.com/*
21 Consultation of chocolate manufacturers (2010)
22 Galaxy Chocolate (2010): *http://www.galaxychocolate.co.uk/*
23 IDH (2010): *"Sustainable Cocoa for the Dutch Market – Analysis of the Dutch cocoa sector"*
24 Nestlé UK (2010): *http://www.Nestlé.co.uk/Home/Fairtrade*
25 Hershey's Pres Release (06-2007): *"Starbucks Coffee Company's Global Consumer Products Group and The Hershey's Company Announce Agreement to Launch Premium Chocolate Platform"*
26 Ferrero (2010): *"Cocoa Position Paper"*
27 Consultation of Chocolate Manufacturers (2010),
28 Figure worldwide because a more aggregated picture was not possible due to different formats of data from industry.
29 ICCO (2010): "The World Cocoa Economy, Past and Present"

Other sources

TCC (2008): Breaking the vicious circle in the cocoa sector by scaling up the cocoa smallholders
TCC (2008): Sweetness follows, 2nd edition
TCC (2009): Cocoa Barometer 2009
TCC (2010): Tea Barometer 2010
TCC (2010) Coffee Barometer 2010
IDH (2010): Sustainable Cocoa for the Dutch Market – Analysis of the Dutch cocoa sector

Abbreviations

ADM	Archer Daniels Midland
CSO	Civil Society Organization
EC	European Commission
ECHOES	Empowering Cocoa Households with Opportunities and Education Solutions Alliance
EU	European Union
FLO	Fairtrade Labelling Organization
FNV	Federatie Nederlandse Vakbeweging
HACCP	Hazard Analysis and Critical Control Points
ICCO	International Cocoa Organization
IDH	Initiatief Duurzame Handel
IITA	International Institute of Tropical Agriculture
ILO	International Labour Organization
ISO	International Organization for Standardization
ISS	International Institute of Social Studies of Erasmus University, Rotterdam
NCRC	Nature Conservation Research Centre (Ghana)
NGO	Non Governmental Organization
PACTS	Processors Alliance for Cocoa Traceability and Sustainability
RSCE	Roundtable for a Sustainable Cocoa Economy
SAN	Sustainable Agriculture Network
SERAP	Socially and Environmentally Responsible Agricultural Practices program
STCP	Sustainable Tree Crop Program
TCC	Tropical Commodity Coalition
WCF	World Cocoa Foundation

Colophon

Citation: Weiligmann, B., Verbraak, G. and Van Reenen, M. (2010): Cocoa Barometer 2010, Tropical Commodity Coaliton
Text: TCC: Bärbel Weiligmann, Gijs Verbraak, Mieke van Reenen and Prakruthi: Sjoerd Panhuysen.
Design and graphs: Tegenwind, Roelant Meijer, Utrecht
Print: Drukkerij Mostert & van Onderen, Leiden
September 2010

We appreciate the valuable inputs of Mars, Kraft, Nestle, Hershey's, Ferrero, Cargill, ADM, Barry Callebaut, Petra Foods, FLO, UTZ Certified and Rainforest Alliance and WCF. We especially thank Peter van Grinsven for assisting TCC to develop the questionnaire. The final responsibility for the content and the views expressed in this publication lies solely with the authors.

Participants

Tropical Commodity Coalition
for sustainable Tea Coffee Cocoa

Tropical Commodity Coalition (TCC) comprises ten non-governmental organizations: Hivos, Oxfam Novib, Solidaridad, Oikos, Somo, Fairfood, India Committee of the Netherlands, Both Ends, Goede Waar & Co, and Stop the Traffik; and two trade unions, FNV Bondgenoten and CNV BedrijvenBond. TCC cooperates with NGOs and trade unions in coffee, tea and cocoa producing countries to improve the social, environmental and economic conditions at the beginning of the coffee, tea and cocoa value chains.

TCC addresses the social, environmental and economic conditions in the coffee, tea and cocoa chains through organizing informed discussions, in both the South and the North. The TCC ensures coordination of the members' activities where needed, compiles lessons learnt and promotes the interchange of strategies to build shared understanding and approaches to sustainability in these commodities. TCC shares its knowledge and influences policies and plans of companies, standards bodies, CSR initiatives, governments, NGOs and unions to develop and implement sustainable practices efficiently throughout the coffee, tea and cocoa chains. TCC creates an enabling environment for civil society stakeholders from producing countries to join and take an active part in the sustainable commodity debate.

Raamweg 16
P.O. Box 85565
2508 CG The Hague
Tel + 31-70-3765500

www.teacoffeecocoa.org