

Increased demand for sustainably produced cocoa has led to new projects in Africa and Latin America to encourage an environmental, economic and responsible approach to production to ensure a steady, long-term supply. Alyshah Hasham writes

The cocoa sector, along with other commodity food supply chains, has distinct elements: producers, processors, distributors, wholesalers and retailers. Their collective environmental impact can be reduced if they work together in the most efficient way possible. And it is partly for that reason that there is a growing trend towards pressing and grinding cocoa near the source, particularly in Ghana and the Ivory Coast (which together account for 60% of the world's cocoa supply), as well as in Indonesia.

In the Ivory Coast, where major international cocoa processing companies including Cargill, Barry Callebaut and ED&F Man already have a strong presence, local processing is encouraged with an export tax on cocoa beans which is higher than for semi-finished products such as cocoa powder. These international companies are now expanding into neighbouring Ghana as well.

The export of semi-finished products is also more cost-efficient in transport terms. Barry Callebaut reports increasing production of cocoa liquor in origin countries, resulting in a reduction of nearly 20% in transport weight in 2008/09.

### Tough times for cocoa industry

It is not for nothing that the cocoa industry is examining how it does business. The sector has undergone difficult times since the 2005/06 marketing year. It is now into a fifth year of decline in cocoa production, says Edward Millard, sustainable landscapes director of the Rainforest Alliance, a non-profit organisation that certifies sustainable cocoa farms.

Cocoa is a fragile crop, one that has been ravaged by disease over the years. Every year, 40% of the world's cocoa crops fall victim to pests and diseases such as black pod, witches' broom and monilia. In 2008/2009, cocoa production in Ivory Coast – the world's largest supplier of cocoa –



# Adopting a sustainable

dropped by 40% from the previous year.

Despite this, there is a mounting demand for cocoa and chocolate. So it also makes commercial sense for the industry to look at securing and stabilising its basic supply of beans.

Some 90% of the world's cocoa comes from three million smallholder farmers, most with less than 10ha of land, according to the International Cocoa Organisation (ICCO).

The World Cocoa Foundation (WCF) – a group

of more than 70 cocoa processors, chocolate manufacturers and farmer coalitions – says adopting an environmental, economic and responsible approach to sustainable cocoa production will allow for a steady, long-term supply. It sums this approach up as looking at “people, planet, profit”.

This involves introducing cocoa farmers to sustainable methods of farming through workshops and training. A similar programme is run by the Rainforest Alliance, in partnership with major chocolate manufacturers such as Kraft and Mars.

Both focus on managing and treating cocoa diseases and pests, as well as adopting safety practices for using chemicals and fertilisers so that workers are safe and local water sources not contaminated. Farmers are encouraged to diversify and grow other crops such as cashew nuts, so they are not completely dependent on cocoa.

One project in Vietnam, operated by US government-funded sustainable cocoa organisation the Success Alliance, has farmers growing cocoa beneath the already present forest canopy – to great success. Much of the forest has been cleared in order to grow coffee, but the project shows it is possible to preserve the native forests and wildlife; encouraging biodiversity

**TABLE 1: PROJECTED PRODUCTION, GRINDINGS & STOCK TO GRINDING RATIO (TONNE)**

	2009-2010	2010-2011	2011-2012	2012-2013
<b>Supply and demand</b>				
World production	3,761,000	3,852,000	3,934,000	3,985,000
World grindings	3,596,000	3,734,000	3,837,000	3,913,000
<b>World cocoa stocks</b>				
End of season stock levels	1,598,000	1,678,000	1,735,000	1,767,000
Surplus/Deficit*	127,000	79,000	57,000	33,000
Stock to grindings ratio	44%	45%	45%	43%

\* Surplus/Deficit = (99% of production) – (Grindings)

Source: ICCO projections for 2009-2013 as of May 2009. 2007-2009 as of August 2009



PHOTO: FOTOLIA.COM

COCOA IS A FRAGILE CROP AND EVERY YEAR, 40% OF THE WORLD'S COCOA CROP FALLS VICTIM TO PESTS AND DISEASE SUCH AS BLACK POD, WITCHES' BROOM AND MONILIA

programmes following such courses.

For good reason. Once all the required practices are met, including labour standards that ensure children are limited in the hours and types of work they do, a farm can be audited and certified by the Rainforest Alliance as producing sustainable cocoa.

### Premium prices for certified cocoa

Farmers producing certified cocoa can charge premium prices, and be assured their product is always in high demand. Farmers can also expect higher yields and better quality cocoa because of sustainable production techniques, that include shade-growing, pruning and chupon (central stem) removal, as well as access to better germplasm.

Initial monitoring of a Rainforest Alliance project in the Ivory Coast shows that average cocoa yields rose from 508.67/ha to 760.66kg/ha. At the same time, the number of pods affected by the fungal brown rot disease declined from 513 pods/ha to only 331 pods/ha. Results such as this should encourage farmers to remain in cocoa growing, and for others to join – ensuring a long-term source of cocoa.

There are four major cocoa certifiers: the Rainforest Alliance; UTZ Certified (a Netherlands-based group assessing the work of companies such as Cargill, Mars and Nestlé); Germany's Fairtrade Labelling Organisation International; and the International Federation of Organic Agriculture Movement, also based in Germany Fairtrade. The organic federation's label requires plant conservation and no use of artificial nutrients or chemicals, while the Fairtrade system looks at the price paid for the cocoa. UTZ and the Rainforest Alliance focus on sustainable farming methods.

WCF president Bill Guyton says there is still a long way to go, but the progress so far is exciting.

The WCF's farmer field schools have trained (not certified) 423,232 farmers over the last 10 years – 125,555 in West Africa; 272,471 in Southeast Asia; and 25,206 in Latin America. The Rainforest Alliance has certified more than 4,000 farmers in Ghana and the Ivory Coast.

### Developments in Latin America

In Latin America, the Central American Cacao Project, run by research centre CATIE (the Costa Rica-based Tropical Agricultural Research and Education Centre) is working in six regions of Central America, including in Costa Rica, Panama and Belize, to help farmers prevent the loss of their crops, through education in techniques such as grafting.

This allows the identical reproduction of the best cocoa plants, and the ones most resistant to disease. Using grafting instead of seeds allows farmers to control the height of their plants as well – limiting them to 2 or 2.5m (rather than 6m) so that they can be checked easily for signs of cocoa diseases such as witches' broom, which affects the tips of the branches. It also makes harvesting easier and more cost-effective, said Dr Eduardo Somarriba, CATIE's research coordinator and leader of the Central American Cacao Project.

Cocoa has been grown for centuries in Latin America and, while many farmers are eager to learn about modern methods of cocoa production, there are still cultural barriers to overcome.

Somarriba gives the example of the indigenous people of Costa Rica, who have their traditional method of cocoa planting, using seeds taken from certain parts of the cocoa plant: 10 years ago, only 20% were willing to try a different way, he says; now 70% are ready to try – a huge leap forward.

The project is in the process of developing technical high schools in Latin America to educate farmers about new developments in cocoa

# approach

while still growing a cash crop.

Often, farmers can inter-plant trees among cocoa plants that can provide timber – a useful resource that also provides protection for the cocoa plants and a home for local wildlife.

“The workshops are to pass on the latest information and give farmers access to better germplasm that is more tolerant of disease,” says Millard. He adds that there is a 60-70% adoption rate of Rainforest Alliance sustainable farming

TABLE 2: 2009 COCOA BEAN, COCOA BUTTER AND RETAIL CHOCOLATE IMPORTS (US\$ VALUE)

Cocoa beans		Cocoa powder		Retail chocolate	
Netherlands	2,068,824,653	USA	220,205,650	UK	1,285,774,486
USA	1,178,524,648	Germany	106,623,850	France	1,167,694,492
Germany	980,214,637	France	82,120,879	Germany	1,158,638,904
Malaysia	767,666,543	Russia	65,927,195	USA	879,116,531
France	493,413,100	Italy	61,323,002	Netherlands	640,327,533
Belgium	467,024,810	Netherlands	59,103,659	Canada	545,104,740
UK	421,531,757	Japan	48,249,493	Spain	461,286,953
Spain	244,500,374	Belgium	40,118,808	Russia	419,698,549
Singapore	208,858,094	China	38,088,156	Austria	391,990,108
Italy	208,647,598	Ukraine	37,186,212	Italy	368,404,445

Source: Global Trade Atlas as of May 2010



farming, and to encourage more people to go into cocoa farming. They are also working with local agronomy universities to develop modules focused specifically on cocoa.

Consumers are also playing a role. "You used to walk to the chocolate section in a supermarket and it would be mostly candy," says Guyton. "Now you have all kinds of chocolate – like 60% cocoa, 70% cocoa."

**More demand for sustainable cocoa**

Guyton and Millard both say they are observing an increase in demand for sustainable cocoa products.

Cadbury's Green and Black's chocolate uses organically grown cocoa and its Dairy Milk chocolates in the UK are Fairtrade-certified. Kraft's Côte d'Or bar carries the Rainforest Alliance seal and, in March this year, Cargill launched its first UTZ-sealed chocolates in a joint venture with Belgian chocolatier Baronie, in the form of chocolate eggs.

The estimated sales of Rainforest Alliance certified cocoa increased 27% from 6,700 tonnes to 8,500 tonnes in the last year, says Millard. Chocolate giant Mars has committed to sourcing all its cocoa sustainably by 2020, including 100,000 tonnes of cocoa from Rainforest Alliance certified farms; and the Galaxy chocolate bar already sells in Britain with the Rainforest Alliance seal. Ice-cream maker Ben & Jerry's has committed to going fully Fairtrade by the end of

**A snapshot: the global cocoa market**

Africa produces 70% of the world's cocoa; Asia and Oceania provide 19%; and the remaining 11% is from the Americas, according to the International Cocoa Organisation (ICCO).

There are 5-6M cocoa farmers worldwide, most with farms that cover 2-5ha. Total global cocoa production in 2009-2010 was 3.54M tonnes, 1,000 tonnes higher than the previous year but 100,000 tonnes less than 2007-2008.

The ICCO is predicting global cocoa production growth of 6% from 2009-2010 to 2012-2013. Africa will see 4% growth, Asia/Oceania 9% growth; and Latin America 12% growth. The highest growth will be in Ghana, the Dominican Republic and Malaysia.

The Netherlands is the largest importer of cocoa beans at over US\$2bn worth of imports, thanks to major grinding operations at ADM Cocoa and others. This is followed by the USA at US\$1.1bn and Germany at US\$980M. The USA imports the most cocoa powder at US\$220M, followed by Germany at US\$106M.

The 2009-2010 grinding was 3.57M tonnes. Africa was the only region to see growth in grindings, with an 11.5% increase. Origin grinding has increased by 39% over the last three years. World cocoa grindings will increase at a slightly higher rate than world cocoa production, according to ICCO projections.

World production in 2010-2011 will be 3.85M tonnes, increasing to the 3.98M tonnes in 2012-2013. World grindings will be 3.73M tonnes in 2010-2011, increasing to 3.91M tonnes in 2012-2013.

Cocoa prices have also seen an increase over the last five years, rising to US\$3,625/tonne, the highest price in 30 years, according to the ICCO.

2013. Kraft Foods has vowed to increase the amount of Rainforest Alliance certified cocoa beans 10-fold to 30,000 tonnes by late 2012.

Processors are also seizing opportunities to be more sustainable. For instance, at Barry Callebaut, cocoa shells are burned at factories to

reduce on-site gas or fuel consumption.

However, for all this growth, sustainable chocolate is still very much a niche market – only about 2-3% of the total market for chocolate, says Millard. Clearly there is room for growth.

*Alyshah Hasham is a freelance journalist*

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