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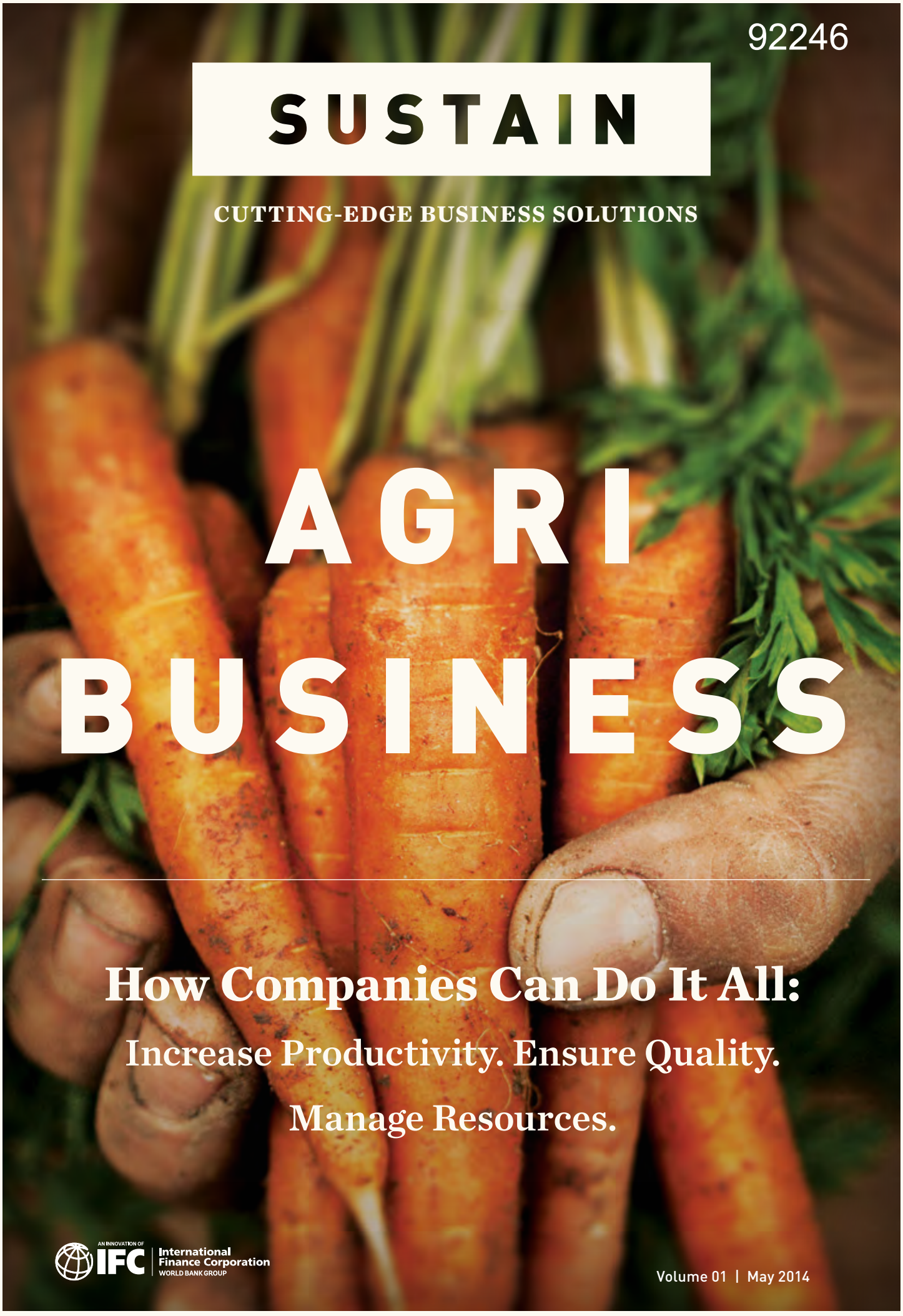
SUSTAIN

CUTTING-EDGE BUSINESS SOLUTIONS



AGRI BUSINESS

How Companies Can Do It All:

Increase Productivity. Ensure Quality. Manage Resources.

AN INNOVATION OF IFC | International Finance Corporation WORLD BANK GROUP

Volume 01 | May 2014

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Why SUSTAIN?

How can businesses achieve and SUSTAIN stronger performance? How can they realize higher productivity, product quality and profitability while maintaining a positive impact on society and the environment? How do companies across the world, large and small, address sustainability challenges and how can they learn from each other?

Finally, how can IFC leverage its unique vantage point at the intersection of business and development to convene an effective global conversation on cutting-edge sustainable business solutions?

These were some of the questions that led to the creation of this magazine. We hope it will inspire you and add value to your business, bringing you fresh perspectives from the private sector, international organizations, academia, and the World Bank Group.

About IFC

IFC, a member of the World Bank Group, is the largest global development institution focused exclusively on the private sector. Working with private enterprises in more than 100 countries, we use our capital, expertise, and influence to help eliminate extreme poverty and promote shared prosperity. In the last financial year (July 2012 — June 2013), our investments climbed to an all-time high of nearly $25 billion, leveraging the power of the private sector to create jobs and tackle the world's most pressing development challenges. For more information, visit **www.ifc.org**.

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WHY AGRIBUSINESS?

BY

Mary Porter Peschka
Global Acting Director, Advisory Services, IFC

German Vegarra
Global Head, Agribusiness & Forestry, IFC

It is a bleak statistic for an already overworked planet: a world that by 2050 will be bursting with over 9 billion people. That's an additional two billion people that must be fed and clothed every day amid a growing scarcity of, and conflict over, land, water and energy resources.

For those working in agriculture, the challenges have never been greater. These include the impacts of climate-related disasters such as droughts in Africa and Asia as well as increasing energy costs, growing waste and eco-system damage across the globe. Inefficient farming practices, including low-technology farming, complicate the picture.

While these problems may seem intractable, many innovative business solutions — showcased in this magazine — are already delivering win-win outcomes in terms of financial returns and sustainable development. These breakthroughs of technology and ideas not only maximize productivity, but also optimize delivery across a far more complex landscape of financial, environmental and social outcomes.

At IFC, we know that unleashing the creative power of the private sector is critical to ensuring sustainable and equitable agricultural development. We combine investments and advisory services to help the sector address supply and demand challenges and opportunities in climate-smart and socially inclusive ways. We also support global initiatives for sustainable production of agricultural commodities.

At the end of June 2013, IFC's investment portfolio in agriculture and forestry totaled $4.25 billion. In 2012 alone, our investments helped our clients reach 3.1 million farmers.

In this magazine, we offer a first-hand insight into how forward-thinking companies and organizations have increased agri-productivity, delivered quality products to markets, and managed vital resources more efficiently. These approaches can be replicated by other companies — including IFC clients — to address common challenges.

They include companies such as Alqueria, Bayer, Ecom, Coca-Cola, IBM, Marks and Spencer, Mars, Metro, and Sense-T in addition to contributors like the Cherie Blair Foundation, the Vodafone Foundation, the UN, the University of California at Davis, the World Economic Forum, and the World Cocoa Foundation.

We are also offering a collection of useful resources including reports, tools and advice, from the World Bank Group, academia, media and other international organizations who are on the front lines of sustainability and business.

We hope you will enjoy reading about the experiences and ideas laid out in this magazine. We look forward to working together with you to deliver sustainable solutions to the toughest problems that lie at the critical intersection between business and development. Because — as it is also highlighted throughout this magazine — it is only through constructive partnerships that we can achieve true progress.

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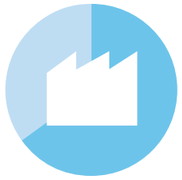
FACTS & FIGURES



60-70%

increase in **food production** is needed to feed more than 9 billion people by 2050. [1]

73%

is the expected increase in the demand for meat by 2050, driven from an **emerging global middle class**. [1]

80%

of the food consumed in a large part of the developing world is provided by **small farmers.** [3]

79%

increase in **productivity** can be expected if smallholder farmers adopt sustainable agricultural practices. [1]

70%

of the world's **freshwater** withdrawals are used in agriculture— this reaches 95% in developing countries. [1]

38.5%

of the world's **land** is dedicated to agriculture. [1]

1/4 to 1/3

of all food produced for human consumption is lost or **wasted**. [2]

©Zahidul Naim Zakaria, IFC

©Shafiqul Akhter, Lal Teer, Bangladesh

842 MILLION PEOPLE

experienced chronic **hunger** in 2011-13. [1]

$3.5 TRILLION

is the cost to the global economy caused by **lost productivity** related to malnutrition and lack of direct health care. [1]

100-150 MILLION PEOPLE

could escape hunger if **women farmers** had the same access to productivity resources as men. [1]

$450 BILLION

is the estimated global demand for small farmer agricultural **finance.°**

[1] *Food and Agriculture Organization of the United Nations (FAO)*

[2] *FAO and World Resources Institute – World Food Price Watch, February 2014*

[3] *UN Report 2013, Smallholders, food security and the environment*

° *Catalyzing Smallholder Agricultural Finance report, published by Dalberg in September 2012.*

Unleashing the POWER OF GENOMICS

How **Mars Inc.** redefines sustainable production through science and partnerships

BY

Howard-Yana Shapiro, PhD

Chief Agricultural Officer, Mars, Incorporated; Senior Fellow at the College of Agriculture & Environmental Sciences, at the University of California at Davis; Distinguished Fellow at the World Agroforestry Centre in Nairobi, Kenya

All Photography: ©Mars Incorporated
Illustration: Morphart Creation, Veer

At Mars we are trying to use genomics to improve the lot of small farmers in our supply chain while protecting the environment.

As one of the world's leading food manufacturers, we are also moving toward 100% certified sustainable sourcing for most of our key agricultural raw materials. But Mars is also working to ensure certification does not lock in poverty for farmers, but instead, becomes a means to pull them into prosperity.

How can genomics help us get there?

In 2010, when we sequenced, assembled and annotated the genome of cacao, the tree that grows the seeds that become cocoa, we put the results in the public domain for anyone to access freely and without restriction. We wanted more and better chocolate to be bred for Mars and to raise the incomes of the cacao farmers who supply us.

Consider this: cacao productivity has been a flat line for the past century, the world average being less than 500 kilos per hectare. With a little of the right fertilizer, a little training, and new, more productive germplasm (developed in our genomics work) to graft to aging trees, farmers can triple that yield to 1.5+ tonnes per hectare.

As a result, cocoa farmers will become more prosperous, send their children to school, and not be seduced into switching from cacao to palm oil or rubber. They will also be less prone to cutting down forests in order to plant more low-productivity cacao. This approach leads to a win-win-win strategy for all: farmers, the environment and Mars.

Sequencing the cacao genome gave me the germ of an idea that became the African Orphan Crops Consortium (AOCC). The consortium is an uncommon collaboration of African governments, companies, NGOs and international agencies pledged to sequence and re-sequence the genomes of 101 African "back-garden" food and tree crop varieties.

These crops are crucial to the 600 million people who live in rural Africa but are of little interest to the scientific community because they are not traded internationally.

With a little of the right fertilizer, a little training, and new, more productive germplasm, cacao farmers can become more productive.

The AOCC is not charity. Mars has a "Food Segment" (best known for Uncle Ben's rice products) that excels at producing and packaging quality foods anywhere in the world. It is hoping to produce nutritious products that Africans can afford. In addition, Mars' Petcare Segment, the largest pet food producer in the world, is searching for alternative sources of protein so that its pet foods are not competing with humans for protein.

Is there a "sweet spot" where AOCC and the ambitions of our food and petcare segments all overlap?

Cassava produces a big, drought-resistant tuber in much of Africa that fills bellies with starch, but not much nutrition. Yet its leaves are very high in protein. Can they be processed and packaged to help improve the food security of Africa?

A few years ago, Mars bought Wrigley, which uses mint in some 70-80% of its chewing gum products. Much of this mint comes from the northwestern United States, where we help farmers grow higher quality mint, while at the same time helping them use water more efficiently and be more energy-efficient.

We are also helping small farmers in India become more efficient in mint production.

And we are sequencing the mint genome, which should help us breed higher quality, hardier, more flavorful and more profitable mint varieties for the farmers of the Pacific Northwest and India.

Mars is part of an international collaboration to sequence the genome of the peanut, which will produce peanuts resistant to aflatoxins. If we could figure out how to do that in peanuts, perhaps we could do it in other crops, and improve nutrition all over the world.

It is an age-old idea, one that agricultural universities and extension services in the US and elsewhere have long pondered and pursued: how to give famers better seeds to improve productivity and quality.

At Mars we are trying to do that today. The high-tech science of genomics offers an excellent opportunity not only to increase agricultural sustainability but to save millions of lives in Africa. ■

Cutting-edge solution: Enhancing the productivity of small farmers and the sustainability of crops through genomics

Featured Interview

↗ When scientist Howard-Yana Shapiro is not mapping crop genomics, he is riding one of his collector classic motorcycles through the back roads of northern California.

An icon of the sustainability world with an idiosyncratic boardroom look, Shapiro is one of corporate America's most influential voices. Here, Shapiro talks with IFC about the humble origins of the organic seed company, Seeds of Change, what agribusiness companies can learn from failure, and how he navigates corporate America with his unconventional beard.

How did you discover an interest in food and farming?

I grew up in New York in an extended family of holocaust survivors from eastern Europe. Because of what they suffered, food was very important. I spent summers of my childhood working in the fields of family farms. My father, a scientist, taught me to think systematically. My mother taught me the joy of abstract thought. I have combined both in my life's work.

Seeds of Change was founded in the late 1980's and sold to Mars a decade later. How was that transition?

It was a nascent business that existed because of the dedication of a few individuals, and great seed farmers concerned about the preservation of biodiversity and the production of organic seed. We worked day and night to build the network — sleeping on the floor at growers' homes to save money, sharing meals with their families. We were living the dream. To take on the conservative and monolithic business of seed production was an audacious idea. That said, we built an extraordinary fundamental seed business that changed the world.

When we sold the company to Mars in 1997, the transition felt very complicated, both intellectually and emotionally. I realized very quickly that we had an opportunity to influence one of the biggest food companies in the world. Privately held, the owners of Mars possessed a long-term view which is missing in almost all businesses today. More than fifteen years later we have never looked back.

Mars created history with the mapping of the cacao genome in 2010. Why did you urge Mars to go down this path?

When you have a business, no matter what it is, if you cannot ensure the sustainability of your fundamental ingredient, you need to either get out of that business or fix the problem. That was my rap to the powers-that-be at Mars about sequencing the genome of the cacao tree. They understood immediately the rationale and agreed that we should place the completed genome in the public domain for unrestricted use by scientists everywhere.

What lessons can you impart to IFC's agribusiness clients?

Firstly, spend your money. If you are trying to solve issues surrounding a key ingredient, then put money on the table to do it. Secondly, form uncommon collaborations—governments, universities, farmers, NGO's, other companies—don't leave anyone out or operate under the radar. Thirdly, work together pre-competitively. Why work alone when your competitors have the same issues? Fourthly, always use the best new science. Early adapters are usually the big winners.

You have been likened to everything from Santa Claus to a member of the band ZZ Top. How do you navigate corporate America with that beard?

There are not too many other long beards in this business. I talk to many presidents and CEOs of other big companies and once they get over the shock that I'm the person they need to talk to they realize that together we can make a difference.

We all want to be in business in 100 years. The solutions we find will need to be revised and improved many times during that period. Companies, like Mars, Incorporated continuously look into what is needed and plan for a sustainable future. ■

Read more of this interview online at www.sustainbusiness.org

About Mars and IFC

Mars and IFC have been working together since 2006 in Indonesia, where they set up the Cocoa Sustainability Partnership, a multi-stakeholder forum on cocoa collaboration, and also joined forces with Rainforest Alliance to train farmers in sustainable cocoa practices, through a project funded by IFC's Biodiversity and Agricultural Commodities Program (BACP).

View videos online at www.digitalgreen.org/discover

Cutting-edge solution: Combining video technology with social interaction to improve productivity and the lives of small farmers

Digital Green

Transforming rural farms one video at a time in South Asia and Africa

BY

Caitriona Palmer
Communications Consultant, Advisory Services, IFC

with contributions from Brad Roberts, Agribusiness Specialist, Advisory Services, IFC

All Photography: ©Digital Green

Growing up in New Jersey, Rikin Gandhi dreamt of becoming an astronaut. He spent hours rifling through the newspaper for NASA stories, pasting them into an album devoted to his hero astronauts.

A gifted student, Rikin trained his sights on joining the NASA space program. He earned a pilot's license, and studied aeronautical and astronautical engineering at MIT.

In 2006, Rikin turned his skyward gaze to the lives of small farmers. He wanted to transform the lives of these farmers, many in or nearing poverty, through information. Rikin travelled to India, seeking to apply his analytics systems training to rural agriculture. Working with Microsoft Research, he spent six months exploring how video technology can spread good agricultural practices.

Rikin emerged fluent in the local language and armed with an audaciously simple yet intriguing proposal: to equip and train local partners with easy-to-use video equipment that would record rural farmers sharing their best practices. So, instead of flying a spaceship, Rikin Gandhi is now steering Digital Green, a unique, non-profit organization that marries technology and social interaction.

"Often we talk about sustainability in the context of the environment or the financial world," said Kentaro Toyama, chair of Digital Green's board. "But I think that there is an under emphasis on the sustainability of human capacity. Farmers that engage with Digital Green gain a level of self-efficacy and self-confidence about how they can change their lives."

For decades, the Indian government has attempted to introduce new varieties of seed and fertilizer through a large, 100,000-staffed extension program. While this effort has helped in the more irrigated northern states of Punjab and Haryana, it has largely failed to help farmers in poorer states with weaker capacities.

Rikin Gandhi, Founder of Digital Green

Enter Rikin Gandhi, who found inspiration in a successful outreach effort called Digital Study Hall that involved distributing instructional videos made by urban teachers to classrooms in rural Uttar Pradesh. Applying similar principles, Rikin travelled to Karnataka and experimented with training locals to produce short informational videos featuring local farmers.

Unlike the government programs that had alienated many farmers, Rikin discovered that when these videos were played in a small, 10-15 person group setting with a facilitator, the farmers really took note.

With support from Microsoft Research, Rikin set up a controlled trial. Among 1,470 households in 16 villages, Digital Green's approach increased adoption of some agricultural practices sevenfold over control villages. Working with the Gates Foundation and other donors, Digital Green has now produced over 2,800 videos in 20 languages, working with over 150,000 farmers in India, Ethiopia, Ghana and Tanzania and hopes to scale to one million by 2015.

Critical to the success of this effort has been Digital Green's partnerships with NGOs, companies and government programs. These partners now film, edit, produce and post the videos, using simple battery-operated cameras, thereby facilitating farmer-to-farmer interaction.

"Technology is only 20% of this," said Vinay Kumar, COO of Digital Green. "Eighty percent is human mediation, human organization and social mobilization."

Digital Green makes the farmer videos available on YouTube, with training manuals and standard operating procedures. This has allowed rapid program expansion, but with a continued grassroots touch. Digital Green is now expanding into health and hygiene programs.

For veteran development expert Vinay Kumar who joined Digital Green in 2006, this new development is further confirmation of how innovative technology combined with social mobilization can transform lives. ■

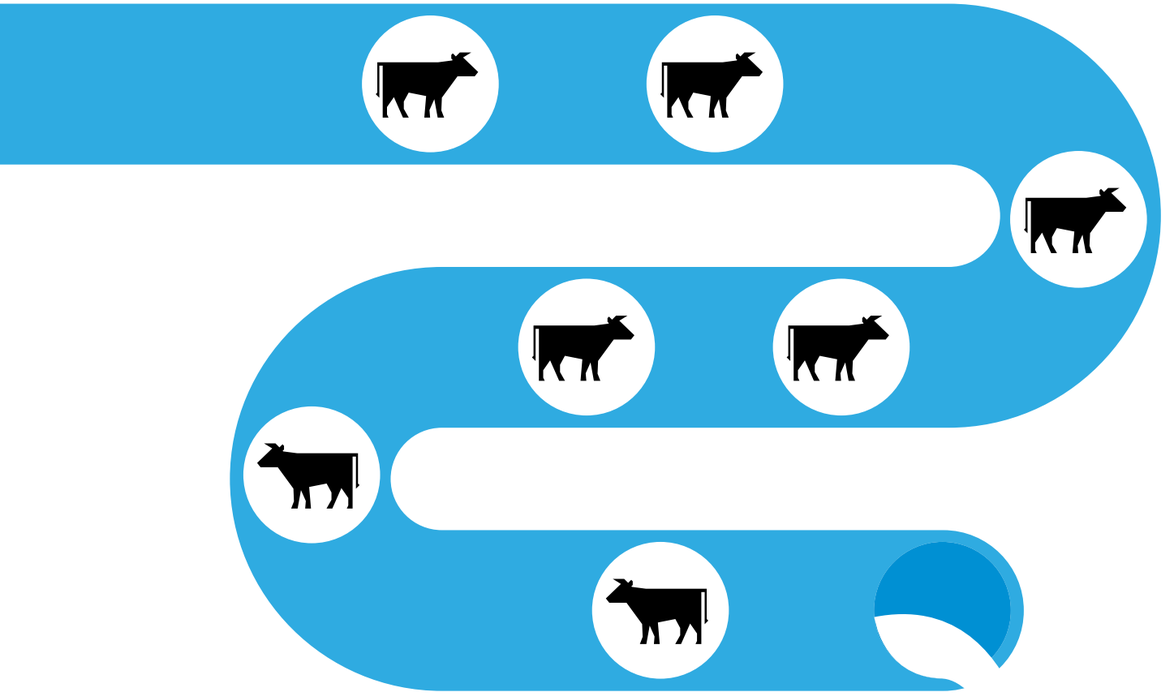
2,800 videos produced in 20 languages

150,000 farmers reached in India, Ethiopia, Ghana and Tanzania

One million farmers expected to be reached by 2015

Building a Profit Pipeline

How **Alqueria** harnesses the potential of small dairy farmers and retailers in Colombia



BY

Juan Gonzalo Flores

Senior Investment Officer, Agribusiness & Forestry, Investment Services, Latin America and the Caribbean, IFC

Some of the world's greatest innovations emerge from the simplest of ideas. For Colombian physician Jorge Cavelier, that innovation was a belief in the magical health and nutritional benefits of pasteurized milk.

ALQUERIA'S REVENUES

$354 MILLION

©Edwin Huffman, World Bank

Cavelier's conviction that all Colombians should have access to safe milk led him to buy a pasteurization plant in the city of Medellin, nestled in the shade of the Andes, in 1959. Now, fifty-five years later, Alqueria S.A, is the country's third-largest dairy company and second in fluid milk, with revenues of $354 million, 4,500 direct and indirect employees, a 16% share of the Colombian milk market (in liters) and 25% of the Ultra High Temperature milk (UHT) market.

The patriarch of the Cavelier empire may have revolutionized the processing of raw milk in Colombia but his family successors have been equally bold, pursuing a unique and inclusive business model that has been the driving force behind their continuing growth.

Under the direction of Jorge's son, Enrique, and now his grandson, Carlos Enrique, Alqueria has built an innovative business model that relies on low-income populations (dairy farmers on the supply side and retailers on the distribution side).

It is estimated that, on a daily basis, Alqueria visits more than 150,000 small scale retailers. Critical to the process has been sourcing milk from over 5,500 independent farmers – most of whom produce less than 200 liters of milk a day and some of them, remarkably, as little as 10 liters a day. The company engages these farmers through a strong network of intermediaries including cooperatives and independent milk tanks belonging to Alqueria, who help with the collection and payment processes, particularly in more remote areas.

Foregoing the secure safety net of long-term supply contracts, Alqueria has decided to ground its business model on forming personal, rock-solid relationships with farmers and establishing a reputation for paying farmers on time.

The company has also maintained a generous financing and technical assistance program, offering microcredit financing, advice on appropriate feed rations, and buying fodder and fertilizer in bulk to keep production costs down.

Cutting-edge solution: Bringing together small-scale dairy farmers and retail outlets to increase dairy farming productivity in Colombia

Through an innovative distribution network known as pre-sales, Alqueria accounts for over half of its revenue by having company staff visit small-scale retailers nationwide, taking orders to be delivered the following day. A mobile application allows orders to be uploaded and transmitted through cellular phones.

Maintaining trust with their suppliers, payment is made directly to delivery personnel on a purely cash basis. In more remote areas, a creative system known as micro-sales, allows one person to serve as an independent distributor to small retailers in that area. That distributor uses their home as a mini-warehouse and Alqueria sometimes provides financing for a small truck or motorcycle.

Alqueria's model has improved the lives of thousands of low-income farmers across Colombia while reaping an impressive profit margin for the family held company. This, according to Carlos Enrique Cavelier, is a fitting tribute to the legacy his great grandfather Jorge left behind.

"Now I can go out to the communities and see how the flow of income helps people, as opposed to alternatives with the informal market that do not pay consistently," Cavelier said. "These communities now have real access to the modern economy." ■

Alqueria grounded its business model on forming personal, rock-solid relationships with farmers.

About Alqueria and IFC

Alqueria has been an IFC client since 2010. IFC has provided the company with long-term financing in the form of $5 million in equity and $15 million in debt, enabling the company to increase milk sourcing by bringing additional dairy farmers into the supply base, helping new farmers to emerge, and increasing volumes from current suppliers. In 2012, IFC also conducted a resource efficiency assessment of Alqueria's plant in Cajica, leading to significant energy and water savings.

Alqueria was recognized at the 2013 FT/IFC Sustainable Finance Awards, the world's leading awards for environmentally and socially responsible banking and investment, in London, in June 2013. It was shortlisted for the 'Achievement in Inclusive Business' award.

Empowering Women Agri-entrepreneurs

The Vodafone Foundation in India unlocks efficiency gains through the use of a mobile application

BY

Henriette Kolb
Head, Gender Secretariat, IFC

Cutting-edge solution: Using cell phone applications for smart stock management that boosts women's productivity and income in agricultural value chains in Gujarat, India

Estefany Marte, a woman entrepreneur from Santo Domingo, Dominican Republic recently wrote in a blog *"I went into the fruit business because I fell in love with it and had the opportunity to take it over from my father. The fruit industry is not famous for being frequented by women entrepreneurs, so it was a challenge to win respect from my suppliers and staff, especially since they had been working with a man for the past 30 years."*

Estefany is not alone. **Women — who produce more than half of the world's food — are often shut out from land ownership.** They tend to have smaller plots, travel longer distances to markets, lack market price information as well as agricultural inputs. As a result, they are less productive and miss out on valuable earnings, money that could feed their families and educate their children.

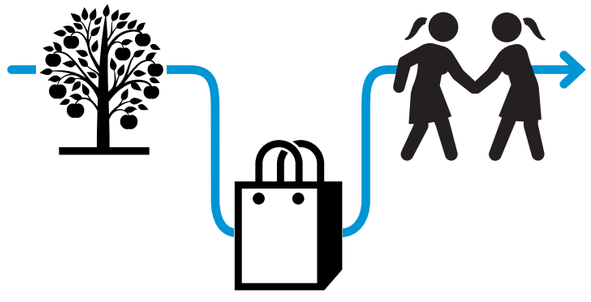
At the same time, poor information flow in rural markets can impact productivity and there is a critical need for technological innovations to improve the supply chain. The use of a cell phone with the right application can address some of these market failures, including inefficient stock management processes.

One innovative example of improving rural supply chain challenges through the use of mobile phones can be found in Gujarat, a highly entrepreneurial state in India. Here, the Self Employed Women's Association (SEWA), the Vodafone Foundation in India and the Cherie Blair Foundation for Women have joined hands to develop a mobile-based Management Information System (MIS) for SEWA's rural agricultural distribution network.

The members of the network procure farm produce from farmers at market prices, which they then process and package before selling it through a network of saleswomen. The network's reach and scale has increased dramatically, exposing the challenges of paper-based inventory management and sales reporting.

The MIS solution is a user-friendly application targeted at 2,500 women entrepreneurs. The women can capture sales and place orders for additional stock via SMS in their mobile phones. Data is captured on a central database providing information for the network's managerial, financial and audit requirements. With the help of training, the women can generate simple reports on their handset, giving them essential information to improve their business.

The project aims to increase overall sales by 25%. Since its launch in December 2012, many women have reported significant increases in their monthly sales, in some cases up to four times as much.



↗ Suryaben, distributor in India (right) training Bhavanaben, another distributor in the RUDI network (left)

Travel time to markets has been reduced, commodity stock outs largely avoided, and the women report that they are able to run their businesses much more efficiently. Local farmers, in turn, have reported increased sales.

> *In February 2014 the application won the* **Best Mobile Product, Initiative or Service in Emerging Markets** *award at the World Mobile Congress in Barcelona.*

We know that integrated gender technology solutions work best only when they are context adapted and locally owned. If linkages in the supply chain are significantly flawed, no tech solution in the world can solve the problem alone.

No application — however innovative — will mend persistent and deep rooted gender inequalities in India. But as female small farmers in Gujarat have discovered, sometimes just a mobile phone and an innovative approach can help get goods to market on time and at the right price. ■

Cutting-edge solution: Increasing coffee farm productivity in Indonesia and Vietnam through gender mapping and specialized training

Brewing Up a Breakthrough

How **Ecom's** specialized farmer training for women is a game-changer in coffee production in East Asia

BY

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All Photography: ©Ecom

It is a precious commodity that kick-starts the day for billions of people across the planet. Coffee: the ubiquitous urban nectar that is consumed 12,000 times every second around the globe.

For many readers of this magazine, your morning cup of coffee is likely to come from Indonesia or Vietnam, two of the world's largest coffee producers. These tropical havens house tens of thousands of coffee bean farms that employ over two and a half million people, small farmers who rely on coffee as their main source of income.

For Ecom Agroindustrial Corp Ltd, a global commodity trading company with a specialty in coffee and cocoa, meeting consumer demand for sustainably grown coffee has become a constant challenge.

In 2011, Ecom in conjunction with IFC, scaled up its farmer training programs in both Indonesia and Vietnam to increase productivity, sustainability, and to improve the quality of their coffee beans.

The plan was simple: IFC would help Ecom train their field staff to get closer to their small farmer suppliers by imparting valuable knowledge on how to grow better and more sustainable coffee plants in farmer training centers across Indonesia and Vietnam.

> "Our focus was to train our field staff and their managers to work directly with farmers and to help train them with good agricultural and sustainability practices."
>
> - Serge Mantienne
> Sustainability Manager for Ecom in Vietnam

When the training centers opened for business, classrooms were full of eager participants but with one major exception: there were hardly any female coffee farmers in attendance, all the more puzzling given that in north Sumatra, Indonesia, for example, 70% to 80% of the coffee farming activities are handled by women.

On investigation, the project team found that women often assumed the training was for men and many also felt culturally uncomfortable in a mixed room with a male trainer.

When Ecom realized that a large share of their training budget was essentially being wasted, they immediately took action and went back to the drawing board with IFC to drastically rethink their training protocols.

Male trainers were replaced with female trainers and consultants specializing in gender awareness were brought on board to assist in revised Training of Trainers. With special sensitivities to the cultural traditions, training materials were rewritten to appeal to a female audience. For those women with low literacy rates, specialized training materials were devised.

In addition, the timing of the training sessions was realigned to suit the rhythms of family farm life and for women in more remote areas, sessions were moved to locations nearer to their homes. Female farmers with leadership skills were assigned to organize farmer meetings.

As a result, in Indonesia, female participation in the training increased from 16% to 27% and more than doubled from 12% to 25% in Vietnam. In north Sumatra, coffee farmers who had participated in joint male/female training reported a 92% increase in their productivity levels while those who did not receive training reported only a 37% productivity increase.

Realizing that the experience could resonate with other commodities such as cocoa, Ecom has embraced the application of an 'on the farm' gender mapping tool to future projects, paving the way for significant cost savings.

"Our business is coffee and we want the production to keep going," said Laurent Bossolasco, sustainability manager for Ecom in Indonesia. "If we are delivering the wrong training package, then, from a business point of view, we need to fix that and involve the correct stakeholder." ■

About Ecom and IFC

Ecom has been an IFC investment and advisory client since 2006. IFC has provided the company with $154 million in financing as well as with advisory services on how to strengthen the ability of its coffee suppliers to (a) meet international standards for quality and (b) adopt sustainable practices.

Are Standards Standard Enough?

How **Marks & Spencer** handles challenges and opportunities in ensuring good quality and sustainably sourced products

BY

Kate Bottriell

Environmental and Social Standards Specialist, Advisory Services, IFC

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Cutting-edge solution: Improving the company's sourcing resilience by helping its suppliers run their businesses more profitably while being good environmental and social custodians

Interview with Fiona Wheatley, Sustainable Development Manager, Marks and Spencer

How does Marks & Spencer work to ensure quality, safety, environmental and social standards for each of its products?

The breadth of product range and the complexity of retail supply chains make it difficult for retail companies like ours to participate in every standards initiative. However, M&S has extensively collaborated with a range of standards organizations. Examples include M&S membership of the Roundtable on Sustainable Palm Oil (RSPO) Board of Governors to call for more demanding principles and criteria on deforestation and peat land conversion, as well as M&S field trials in the UK, Kenya and South Africa to support the development of the Water Stewardship Standard.

How do sustainability standards help or hinder business competitiveness?

Standards can prevent a proliferation of different interpretations of what 'sustainability' entails. There has been a tendency to assume we will all adopt the lowest cost standard. However, there is little evidence to support this and in fact in the UK and European market early adopters have consistently selected the most demanding standards. Also, where there is more than one standard, as in timber (e.g., PEFC and FSC), there can be healthy 'competitive' pressure towards higher standards and harmonization.

What does a good standard look like?

In order for standards to have business support, they have to be credible, relevant, practical and economically viable.

Standards or certification...which is best?

The work in Kenya and South Africa was originally conceived as a certification scheme. However, what the field trials showed was that the primary value of a standard is the creation of a framework for engagement and cooperation. As a result, the development of supplier business models is increasingly focused on participation and capacity development, geared towards collective action. This may lead companies to seek certification, but certification is no longer the central feature, nor a prerequisite.

How have your efforts around standards affected company profits and growth?

Improving efficiency and productivity is a fundamental benefit of participating in sustainability standards. Helping our suppliers run their businesses more profitably while also being good environmental and social custodians is a core objective of M&S Plan A (our sustainability plan). This in turn makes a positive contribution to M&S sourcing resilience.

Which is the biggest obstacle to improving standards?

There is an ongoing tension between the perceived need for all-encompassing standards versus the desire to improve the lives of the broadest spectrum of producers, particularly very small scale producers. More effort is needed to create the enabling environment for widespread adoption of standards and also to build producer capacity to collaborate and engage in improvement programs. We must continue to seek ways to motivate and reward participation in and commitment to standards, despite the fact that some producers may not yet be 'sustainable' producers.

How does M&S navigate the many standards that are out there?

The M&S product range touches on almost every region of the world and the company is supplied directly and indirectly by a vast network of producers of many shapes, sizes and scales. In deciding which type of standard to use, we will consider the extent of our influence, our knowledge of the issues involved, and whether there is a desire for market differentiation or across-the-board improvement. ■

©Marks & Spencer

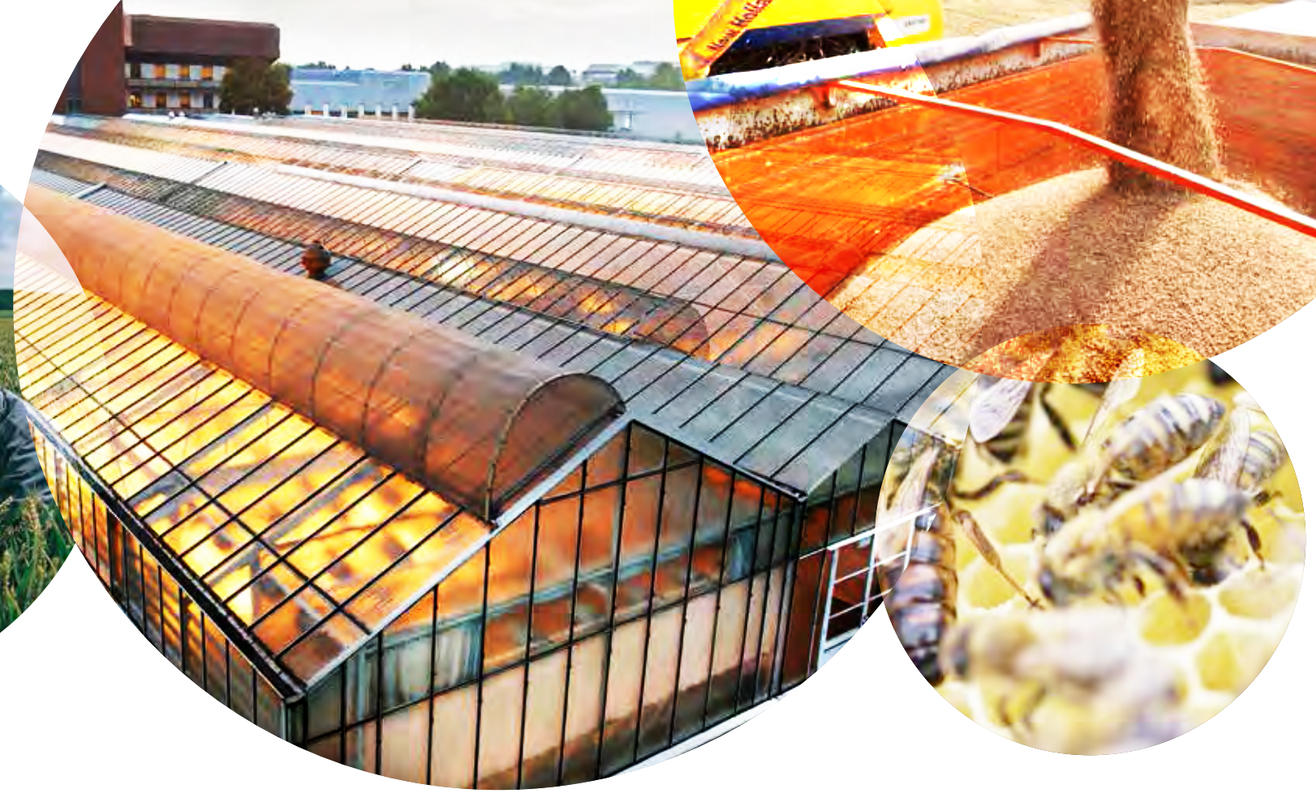
Cutting-edge solution: Using integrated crop practices to achieve economic, environmental, and social sustainability

Agripreneu rship

How **Bayer** pursues farmer, product and environmental excellence through partnerships

BY

Dr. Birgitt Walz-Tylla
Head of Sustainability, Bayer CropScience



All Photography: ©Bayer CropScience

The Earth's population currently stands at around 7 billion. By 2050, it is expected to grow to more than 9 billion. Population growth, changing consumption patterns, access to resources, weather fluctuations, poverty and equal opportunities represent huge challenges for society, politicians and innovative companies like Bayer. Bayer is addressing these challenges responsibly. In line with its mission "Science For A Better Life," Bayer is making relevant contributions to help solve the major challenges of our time.

As long as 300 years ago, Hans Carl von Carlowitz, a mining inspector in Germany, recognized the importance of sustainable reforestation in ensuring a lasting supply of wood as a raw material for energy. Today, our challenge is global food security, which requires a further intensification of agricultural productivity in a sustainable way. We at Bayer CropScience are taking responsibility and bringing our innovation leadership to the table.

Sustainability is a key element of our business strategies. And, above all, through our innovations, products and customized services, it is integral to our business activities. In our view, a sustainable approach connects economic success with environmental and social responsibility. This is something that Bayer has always done throughout its 150 years of history. We know that sustainability is "Good Entrepreneurial Practice" and has a long history. Today, Bayer CropScience supports farmers worldwide, offering integrated crop solutions based on seeds and traits, chemical and biological crop protection solutions, services and proactive product stewardship measures to practice sustainable agriculture and to be good "agripreneurs."

Contributing to sustainable food production

Bayer CropScience's contribution to sustainable agriculture is a new concept called "Bayer Forward Farming," demonstrating profitable and resource-efficient production of high-quality food. The concept comprises the development of technologies that go well beyond compliance requirements and high-level cooperation with key stakeholders such as politicians, national authorities and NGOs. One cornerstone of this program is a growing network of farms across Europe. These "Forward Farms" act as "centers of excellence" demonstrating sustainable agriculture. The aim is to improve agricultural production in a sustainable manner to secure a stable supply of high-quality and affordable food.

In addition, at the Bayer Forward Farms, we demonstrate product stewardship measures to protect human health and preserve the environment. It is about the responsible management of natural resources such as water and soil and the biodiversity of our agricultural ecosystems, e.g., through the provision of flowering strips, bee hotels or nesting places for birds. But farming is not just about producing the basis for our daily food. It is also about profitability and economic success for farmers and support for them as economic contributors to their communities, especially in rural areas.

Improving bee health

Bees play an important part in the agricultural landscape, providing pollination services which are necessary to ensure the production of a wide variety of foods. In collaboration with farmers, beekeepers, researchers, industry, politicians and NGOs, Bayer has researched solutions to improve bee health for more than 25 years. With the "Bayer Bee Care Center" in Monheim, Germany and a second center which just opened in North Carolina, USA, Bayer provides a dialog platform to engage with interested stakeholders to improve bee health and promote the planting of more bee and pollinator habitats.

Cultivating partnerships to increase agricultural yields

Emphasizing the need for a more holistic approach to drive up agricultural yields, Bayer CropScience proposes a five-point-plan to bring about a "New Revolution in Agriculture." Five key points are crucial: innovation, which requires investment in research and development; access for farmers, big and small, to tools, technology and training; more sustainable approaches in agriculture; enhancing human health; and extending partnerships.

In essence, the sustainable intensification of agriculture requires closer collaboration among different stakeholders. Amidst the trends of lowered public and private investment in the agricultural sector, the exchange of agricultural expertise, insights, technologies, and resources is indispensable.

We cannot do this alone; we need strong private partners like IFC. Together, we support modernization of agriculture in Ukraine and help the country maximize its farming potential.

Strengthening small and medium-sized farms in Ukraine

Ukraine is one of the world's leading exporters of grains, oilseeds and vegetable oil. The aim of the partnership with IFC is to enable farmers in the Ukraine to increase yields and yield quality and reduce costs. Bayer CropScience and IFC strive to help more than 20,000 small and medium-sized farms gain broader access to agricultural knowledge, inputs such as crop protection products, high-tech solutions, e.g., precision farming systems, and technology transfer.

It is also crucial to connect farmers with supply chains, because many farmers have limited access to markets. Finally, farmers in Ukraine not only require unrestricted choice about which crop to grow and which production method to employ, they also need access to financing, coherent agricultural policies, free trade, and open markets.

We are convinced that, to make progress towards enhancing food security, it is essential that we work together — in Ukraine and worldwide. Bayer CropScience has forged a growing number of partnerships all over the world to jointly pursue innovative solutions for enhancing sustainable agriculture. ■

Testimonials

BY

Oksana Varodi
Senior Agribusiness Officer & Program Manager, Advisory Services, Europe and Central Asia, IFC

FARMER

"Our farm started using bank loans in 2003. Thanks to Bayer and IFC, we can now use promissory notes guaranteed by the bank as a financing tool. Before this program we were saddled with interest rates up to 20%. But today, we are paying only 4.5%. That's an extraordinary fourfold difference. As a result, our debt pressure on the farm has been reduced, especially during the spring when we need working capital financing to buy seeds, fertilizers, fuel, and crop protection products. Even though three years ago we were among the few who were using this financing tool, now there are many small and medium-sized farmers like us, who have access to affordable financing thanks to this program."

– Pavlo Kalenych

Farmer, *Farm "Olgopil," Vinnytska Oblast, Ukraine*

BANKER

"Thanks to the risk sharing partnership with IFC and Bayer, we were able to start offering innovative small and medium enterprises financing to farmers for the first time in Ukraine. Now most financial institutions and input suppliers in the market are replicating this type of financing and the small and medium enterprise farmer financing market in Ukraine is transformed. In 2013, our program portfolio reached $10 million per annum. In 2014, we plan to double our portfolio through an intensive educational program for farmers, dealers, and bank staff as well as through simplified business processes introduced with the support of IFC's advisory services."

– Nikolay Volkov

Head of Regional Corporate Clients Division, *Raiffeisen Bank Aval, Ukraine*

About Bayer and IFC

Bayer has been an IFC advisory client since 2013. IFC and Bayer have embarked on a new partnership to modernize agriculture in Ukraine through the most innovative technologies and high-tech solutions, including sustainable farm management practices, remote crop-sensing technologies, and precision farming practices.

Converging for Quality

How **METRO GROUP** addresses food safety issues throughout its global supply chains

BY

Sarah Ockman

Senior Operations Officer, Advisory Services, Europe and Central Asia, IFC

Interview with Hans Jürgen Matern, VP of Corporate Sustainability and Regulatory Affairs, METRO GROUP

What guides METRO GROUP's sustainability work?

All our work rotates around the customer. "Customer centricity" is our main goal. At METRO GROUP we focus on safeguarding food supplies, conserving resources, and promoting sustainable production, taking into consideration demographic changes — all important parameters in the retail sector. We aim to ensure that our customers, and their customers, get what they are expecting from us: fresh, safe, and sustainably produced food.

All Photography: ©METRO GROUP

> Competition does not help in tackling this challenge. We must work together.

Your standards strategy is global but originates from Germany. How do you apply the same standards in Germany as you do, for example, in Ukraine?

To operate efficiently in the supply chain, standardization is a pre-requisite for business. We believe that there must be one single standardization solution throughout the supply chain that works for our sales lines as well as for our competitors. A sector-wide, efficient solution helps our partners in the supply chain to focus and to expand their business. Since we have aligned our approach with others in the Global Food Safety Initiative, we have achieved a significant reduction of audits per site and improved the delivery of safe food.

Can you tell us about the innovative solutions that METRO GROUP has employed for food safety worldwide?

We are running a global food safety system that focuses on the delivery of safe food to consumers worldwide. Supplier certification by schemes that are accepted by the Global Food Safety Initiative (GFSI) is a key aspect of this. We also recognize that it is difficult for many small farmers around the world to fulfil the GSFI requirements. This led us to develop METRO's Assessment Service program a couple of years ago, which today builds the basis of the global market's tool within the GFSI, to raise capabilities in the supply chain and to guide the companies to full certification. With this program we run projects in Egypt, Vietnam, China, India, Russia and the Ukraine in order to help our suppliers meet customers' expectations.

Cutting-edge solution: Developing an assessment program which builds on the Global Food Safety Initiative (GFSI), raises capabilities within supply chains and guides companies to full certification in Egypt, Vietnam, China, India, Russia and Ukraine

What was the biggest challenge in rolling out your sustainability programs?

Our biggest hurdle was convincing other companies — our competitors — that our strategy and approach are non-competitive. Food safety and sustainability are key principles in ensuring that we can feed an additional nine billion people by 2050.

What advice would you give to suppliers who are keen to work with METRO GROUP?

I like to motivate partners in the supply chain to join multinational activities which support efficient operations. We currently have 700 global certification programs with more or less the same purpose. Some of our suppliers have been certified by five, ten or even fifteen of these programs. This is where I like to step in and say, 'Please, let's just aim for one solution. It does not make any sense to invest in five or more certification programs.' ■

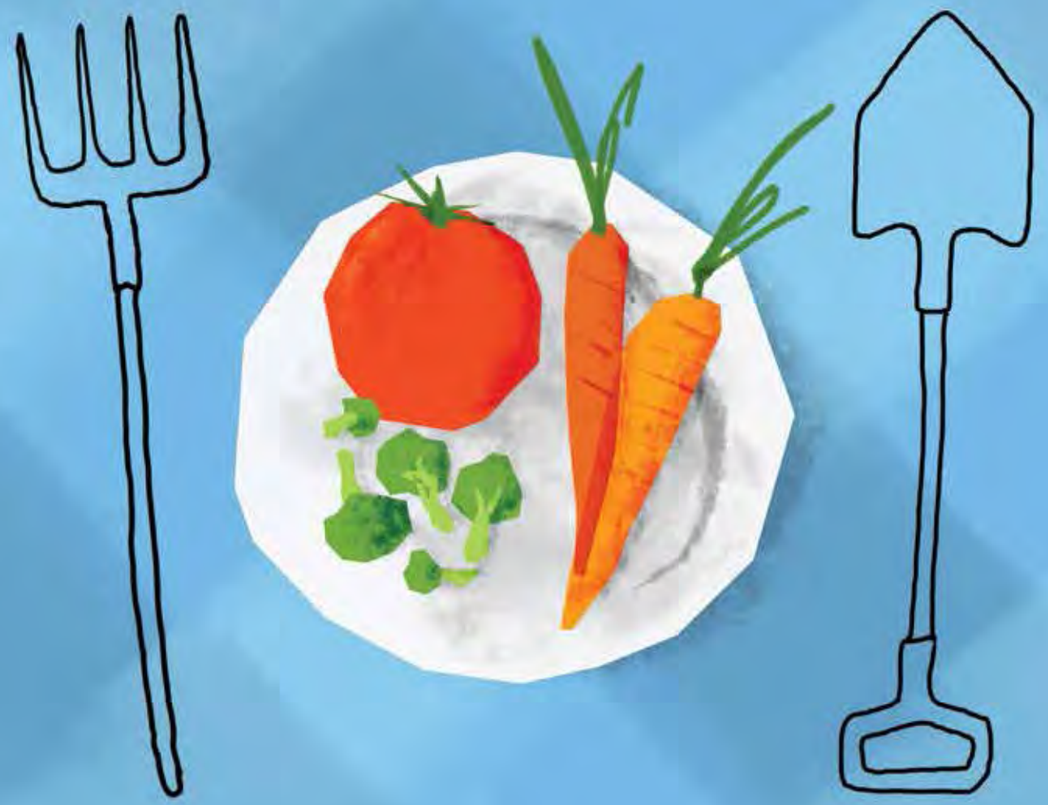
Read more of this interview online at www.sustainbusiness.org

About METRO GROUP and IFC

METRO Cash & Carry teamed up with IFC in 2010 to launch a new program to help Ukrainian food producers learn about international best practices in food safety. The program was expanded to Kazakhstan in 2012. Since 2009, IFC has also been promoting agribusiness standards in Europe and Central Asia, in partnership with the Austrian Ministry of Finance. As a result, investments in IFC's client food producers in the region have risen by $156 million, while their sales and exports have increased by $173 million.

Beyond Safety Measures

How **SGS** increases customer confidence and competitiveness through food safety standards



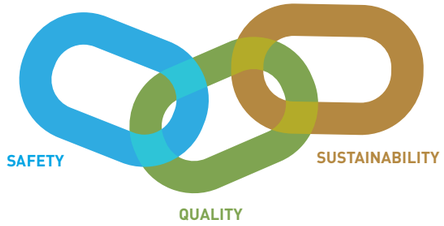
BY

Ivan Ivanov
Senior Agribusiness Specialist, Advisory Services, IFC

Cutting-edge solution: Focusing on R&D and having state-of-the-art laboratories that help the industry immediately ensure compliance with food safety regulations

Interview with Olivier Coppey, Executive Vice President for Agricultural Services, SGS

How would you describe the link between competitiveness and food safety?



Safety, quality and sustainability are key drivers in the food value chain. Each of these elements impacts the marketability of food products and the efficiency of their manufacturers or distributors. In addition to being a legal obligation in the countries where the food is produced or sold, food safety has become a clear competitive advantage to increase customer confidence and open the doors to new markets. Products that meet high quality and safety expectations also prevent costly recalls and protect brand reputation.

What kind of innovative solutions has SGS used to improve food safety?

SGS goes beyond the traditional inspection, testing, audit and certification of the food sector. We start with the R&D of agricultural inputs at our experimental research farms across the world. Arable, dairy, fish, horticultural and livestock farmers trust our expertise to help them reduce risk in their business activities, as well as to improve the quality and safety of their products. It is all about making the right choices, from field preparation and seed selection, through to crop monitoring.

> Our technical solutions also include identity preservation, traceability systems from farm to fork, food label reviews and nutritional analysis.

Our state-of-the-art laboratories help to ensure compliance with applicable regulations and our food safety response teams help the industry deal efficiently and safely with incidents where immediate action is needed to protect consumers. New certification schemes and analytical tests are continuously being introduced.

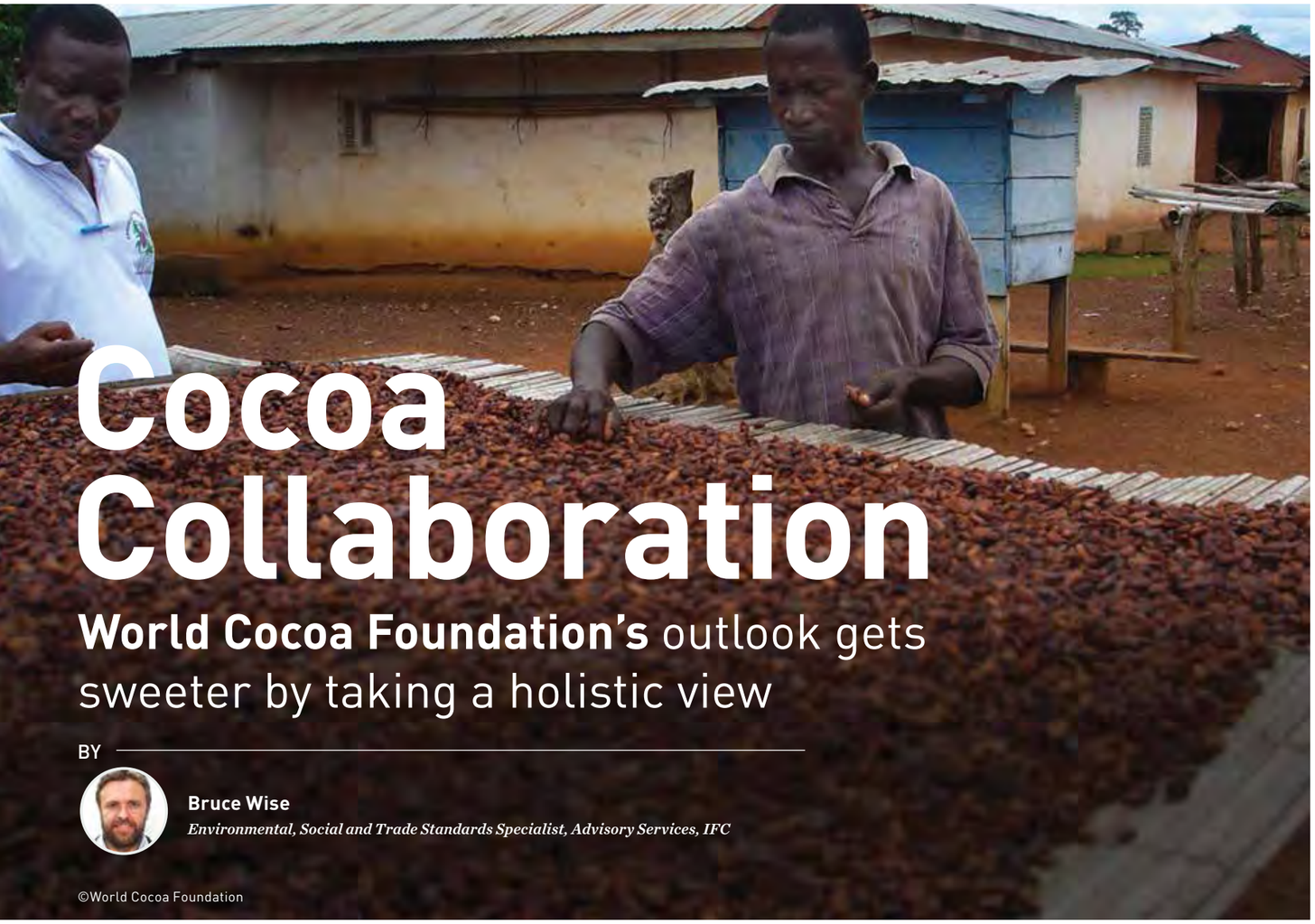
What is the biggest challenge you have observed in securing safe food and avoiding post-harvest waste - and how can it be addressed?

Infrastructure and logistics remain a challenge, particularly in developing countries where a relatively large percentage of food products are lost or damaged during transportation and storage. In response to this situation and to the changing food safety landscape, SGS has opened its first integrated food safety and cold chain facility in India. This is the first-of-its-kind in this country for fresh produce, integrating traditional inspection and testing with cold chain and post-harvest services like pre-cooling, ripening and safe storage at different temperatures.

What are the key trends in the food safety space and how will they affect the global food market in the future?

Food in the future should be adequate, affordable, sustainable and safe. Consumers would like to know where the food they eat comes from and how it has been produced on the farm. There is a growing demand for transparency and traceability through the entire value chain. In an ideal world, consumers are able to scan QR codes on food packaging in their favourite store with their smart phones and access an additional layer of information on the origin, safety and sustainability aspects of the food they buy. ■

Read more of this interview online at www.sustainbusiness.org



Cocoa Collaboration

World Cocoa Foundation's outlook gets sweeter by taking a holistic view

BY

Bruce Wise
Environmental, Social and Trade Standards Specialist, Advisory Services, IFC

©World Cocoa Foundation

INTERVIEW WITH

Bill Guyton
President, World Cocoa Foundation

Steve Farone
Business Manager, Cocoa Measurement and Progress Initiative, World Cocoa Foundation

The World Cocoa Foundation (WCF) has grown from a handful of large companies into a diverse group of firms that represent over 80% of the global cocoa market. How important is this diversification?

BG: WCF has over 100 company members: about one-third from Europe, another third from North America, and the remaining from countries in Latin America, Africa and Asia. Our members are branded companies, processors, exporters, input suppliers, agri-dealers and banks. This allows us to see supply chains from various perspectives and provides us with a more holistic view on how to tackle cocoa sustainability.

What are the objectives of Cocoa Measurement and Progress (CocoaMAP) and how relevant is the program to IFC's agribusiness clients?

SF: CocoaMAP — a web based tool kit — was launched by WCF to grapple with the challenges of operating a more sustainable supply chain and to support a closer collaboration in the cocoa industry through certain indicators and measurements. This year we focus on West-Africa (Ivory Coast and Ghana) to establish a framework of Key Performance Indicators (KPI's) to help guide strategic activities and to measure the status of sustainability issues, including social, environmental, economic and productivity topics. We have narrowed down a set of priorities around measures and performance issues. Moving forward in 2014, 2015 and 2016 we will start building a resource for information so that the industry — as well as IFC clients — can draw on for sustainability issues.

What has been the most important accomplishment of this effort?

SF: First, consensus around measuring what matters for industry partners. We have led discussions around various frameworks of measurement, bringing in an industry perspective that was new to certifiers, NGO's and third parties. Second, CocoaMAP has developed a farmer information toolkit that is open-sourced and available to all companies, extension agents and governments to help with farm surveys, farm inventories and data collection.

Sourcing certified cocoa can lead to significant investments in certification. What challenges do you see that could hinder the industry from reaching its sustainability targets?

BG: One of the biggest challenges we face are the number of small scale farmers who work independently and who are not organized in cooperatives or groups. Another challenge is ensuring that farmers receive the right inputs, including seeds and fertilizers, to improve productivity.

©World Cocoa Foundation

Could you share one piece of advice that you feel is overlooked in the industry?

BG: That there is power in working together. No one company alone can solve the problems; even the industry alone can't solve the problems. It's also important to work with governments on the federal and local levels to find solutions.

What is your vision for the future of the cocoa industry?

BG: My wish is to see even better collaboration among public and private sector partners in finding solutions to improving the livelihoods of farmers in cocoa growing areas of the world. ■

www.worldcocoa.org

Read more of this interview online at www.sustainbusiness.org

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INNOVATING in Kenya

IBM's smart strategies for water management

Interview with Kala Fleming, Ph.D, Water Research Scientist, IBM Research – Africa (pictured here)

All Photography: ©IBM Research

BY

Richard Colback
Agricultural Water Specialist, Advisory Services, IFC

Water is a subject at the core of productive and sustainable agribusiness. What, in your estimation, are the biggest challenges facing agribusiness today in terms of water management?

Excessive water withdrawals, inefficient water use and pollution are three of the biggest challenges facing agribusinesses today. The growing narrative and concern around water scarcity positions these issues as key challenges that can damage both the brand and profits.

Environmental and social standards and the integration of agribusinesses into the community are incredibly important for IFC. One of the major reputational challenges that we face as a partner and investor has been around water. How do you see the work that you are currently involved in contributing to this?

We leverage big data and analytics to help companies stay one step ahead in managing water-related risks. Agribusinesses need timely and flexible approaches to handle scarcity and rapid change — in either the environment or political and regulatory landscape. For example, we help farmers anticipate and respond to drought as well as evaluate and manage watershed vulnerability by informing them about the changes that are occurring in the water table, as adjustments occur due to a multitude of inflows and outflows. This approach relies heavily on being able to access and analyze accurate data from disbursed areas of land. We are also looking at how our predictive analytics capabilities can drive the development of more tailored insurance products for both small farmers and larger agribusinesses.

H.E. the President of Kenya, Hon. Uhuru Kenyatta (left) and Dr. Kamal Bhattacharya, Director IBM Research - Africa (right) inaugurate IBM's first research laboratory in Africa (November 2013).

Charity Wayua, Research Scientist, Agriculture Lead at IBM Research - Africa

IBM scientists in Africa. From left to right Anne Onsarigo, Nathan Wangusi and Komminist Weldemariam.

It is a sobering fact that an estimated 50 percent of water used for global agriculture is wasted. How can agribusinesses better address water efficiency issues?

In water scarce regions, smart strategies for water management, such as precision agriculture can deliver significant competitive advantage. For example, Sun World International, a mid-sized grower based in Bakersfield, CA, used IBM's predictive analytics to compare the costs of traditional and drip irrigation. The result has been lower water usage and better nourished produce. In the growing of table grapes, targeted use of drip irrigation resulted in a 5% reduction in harvesting costs, a 20% reduction in fuel usage and a 50% increase in yield over the past five years.

Results of applying smart water strategies in irrigation

–5% REDUCTION IN HARVESTING COSTS

–20% REDUCTION IN FUEL USAGE

+50% INCREASE IN YIELD

How will you be able to deliver these new capabilities?

Many of the services for agribusinesses we've discussed will be delivered via cloud, which as your readers know, is a new consumption and delivery model inspired by consumer internet services. IBM is the global leader in cloud with an unmatched portfolio of open cloud solutions that help clients to think, build or tap into it. The increasing shift across industries to cloud computing is well-documented. Companies are achieving competitive advantage by using software as a service (SaaS) to enhance customer experience, increase collaboration, improve decision making, and increase operational efficiency.

In Kenya, IBM is using big data analytics to create a better understanding of water within networks, such as aquifers, that are largely unseen. Could you tell us a little more about this project? And what role does IBM see for itself in improving water use efficiency in Africa?

We're exploring ways to use data on boreholes and shallow wells gathered by others in the water ecosystem (for example, borehole service providers, government agencies, homeowners) to better understand the health and sustainability of groundwater resources. We're digitizing paper records such as borehole completion reports and also developing new mobile apps that can be used to infer borehole information.

The approach we have taken allows average citizens to monitor levels and can reduce the burden on water regulators who steward the resource. Imagine the capability to snap a photo of a borehole rig in your neighborhood, and automatically feed that information to a system that either confirms that the driller has been properly registered or immediately alerts the authorities. Illegal boreholes, indiscriminate dumping and poorly treated wastewater threaten the health of all who rely on the resource.

This ongoing effort to essentially crowd-source groundwater data can be incredibly helpful during droughts. Response times can be reduced tremendously if the best locations for successful, emergency boreholes can be quickly identified. Ongoing monitoring and analysis also supports early warning and alerting on the boreholes that are at risk of running dry. In some situations, dry boreholes can spark conflict. Anticipating the locations of these hotspots and prioritizing interventions can save lives.

How could lessons learned in Africa be taken to Asia?

The tools we are developing for Africa are directly applicable to Asia. Across Asia, irrigated agriculture drives groundwater use. Bangladesh, for example, is reported to have more than one million boreholes. India has more than 20 million with a new borehole sunk every six seconds on average. Groundwater management becomes even more complex when there is a high density of extraction points withdrawing from the same source. The ability to get early warning alerts for quantity and quality become even more urgent in this setting.

Can predictive groundwater analytics really help to turn the tide and improve water use efficiency and resource sustainability in water- scarce continents like Africa?

Studies have shown that economic scarcity is much more of a challenge than physical scarcity. So water can usually be found, but the infrastructure required to harness it effectively is often lacking. This certainly suggests the potential for technology to help bridge the infrastructure gap.

What is your advice for agribusinesses faced by the challenge of water management? How do they access the integrated tools they need to monitor, manage and anticipate the risks?

Embrace and leverage technology to stay ahead of the game and give me a call if they need help doing that! ■

The Data Revolution

How **Sense-T** shakes up the business of agriculture in Tasmania

BY

Megan Tudehope
Communications Manager, Sense-T

©David Prince / offset.com

The gentle heartbeat of an oyster far away in the Southern Ocean could help unlock the key to the global challenges of food safety and security.

Sense-T is a program based in Tasmania, an island of about 500,000 people just off the southeastern corner of Australia.

Here, a team of scientists, farmers and entrepreneurs based at the University of Tasmania are developing new sensing technology and business support tools that will forever change the way we grow food and derive value from nature's resources.

Early trials demonstrate that Sense-T can help – not only oyster farmers — but all Tasmanian farmers monitor their crops, optimize productivity and efficiency, and minimize their environmental impact.

Mike Buckby is a fifth generation Tasmanian farmer. He specializes in growing pasture for the region's beef and dairy cattle and is participating in Sense-T trials.

"It's not enough for me to know the weather across the whole region. I want to know the microclimates in each section of my property and adjust how much water and fertilizer I use. I need precision farming."

Sense-T is collecting vast amounts of historical and real-time data. It is integrating data from public and private sensors that are already out there, as well as developing affordable, easy-to-use sensing technology so people can invest in their own sensors.

Scientists are, in turn, analyzing these real-time, sensor data flows to come up with models and algorithms that predict things like the rate of pasture growth, disease risks and when animals are in heat. These algorithms will then be fed into smart phone apps so farmers get relevant alerts or calculations.

Ultimately, Sense-T will generate apps for farmers that help to optimize all aspects of their business, including production, animal health, environmental sustainability, freight, logistics and marketing. Current research projects are in beef, dairy, oysters and grapes, as well as projects looking at managing water resources and food supply chains.

"The difference between Sense-T and other sensor developers or research programs lies in its approach to creating a shared data resource that can benefit the whole community," says Sense-T Director, Ros Harvey.

So how does all of this on an island near the Antarctic help farmers in developing countries? It turns out that Tasmania is the perfect sample size to test these innovative methods and approaches and scale them in other parts of the world. ■

Sense-T is a partnership program between the University of Tasmania, CSIRO, the Tasmanian Government and IBM.

©Sense-T

©Sense-T

Current research projects are in beef, dairy, oysters and grapes, as well as projects looking at managing water resources and food supply chains.

About Sense-T and IFC

Sense-T is in dialogue with IFC and with some of the world's leading food and beverage as well as global ICT companies about ways to apply their sensor technology and data platforms to agribusiness and aqua culture projects in emerging markets.

WATER WONDERS

*How **Coca-Cola's** efficient use of water contributes to*

$1 BILLION

IN PRODUCTIVITY SAVINGS

while improving millions of lives and the environment

WATER PROJECTS IN
468 COMMUNITIES

ACCESS TO SAFE WATER PROVIDED FOR
800,000 PEOPLE

ACCESS TO SAFE WATER IN
33/58 AFRICAN NATIONS

INITIATIVES HAVE BENEFITTED
1.82 MILLION PEOPLE

Interview with Greg Koch, Director, Global Water Stewardship, The Coca-Cola Company

Blow-fill machines enable Coca-Cola to rinse pre-form bottles with air instead of water before filling them.

What kind of innovative solutions has Coca-Cola used to manage water more efficiently?

At Coca-Cola, we set a goal to 'balance' an amount of water equivalent to what we use in our beverages and their production by 2020. To achieve this goal we are improving our water-use efficiency; treating all wastewater from our manufacturing processes; and replenishing the water used in our finished beverages back to communities and nature.

We are also focusing innovative water stewardship efforts on our agricultural supply chain. In partnership with Cargill Incorporated and WWF, for instance, we are working in Jilin Province, China, on a sustainable corn project intended to improve the livelihoods of farmers and protect biodiversity by increasing yields, reducing waste, conserving water, and protecting wetlands. In India, we are working with Jain Irrigation to promote sustainable mango production.

How have these solutions affected the company's profits?

Innovative solutions have helped Coca-Cola avoid costs by reducing the amount of water used and discharged. And, water efficiency activities are often coupled with energy efficiency improvements, which amplify the savings. These efforts are part of an expanded productivity and reinvestment program aimed to generate an incremental $1 billion in productivity savings by 2016.

> While it may sound simplistic, a good starting point is to measure how much water you use. You can't plan for improvements without a baseline.

What impact have your activities around water had on the environment and on communities?

Since 2005, through 468 community water partnership projects, our initiatives for improving water access and sanitation alone are estimated to have benefitted more than 1.82 million people. Our Replenish Africa Initiative (RAIN), which aims to provide 2 million people with safe water access across Africa by 2015, has provided access to safe water for approximately 800,000 people in 33 of Africa's 58 nations. It has helped replenish more than 1.3 billion liters of water and improve 1,600 communities.

With WWF, we have been working to conserve freshwater resources around the world. Some major conservation gains in freshwater basins include the establishment of a freshwater reserve in East Africa, integrated pollution control techniques in China, improved livelihoods through better production in Honduras, habitat restoration in Vietnam, and collaboration for the protection of the Danube River in Europe. In addition, we worked with Bonsucro to develop certification standards for growing and milling sugarcane more sustainably—Coca-Cola was the first to purchase certified sugar in 2011.

Cutting-edge solution: Treating all water wasted during manufacturing and replenishing the water used in beverages back to communities and nature

What advice can you give to agribusiness companies that wish to use water more sustainably and efficiently?

While it may sound simplistic, a good starting point is to measure how much water you use. You can't plan for improvements without a baseline. Next, work to eliminate wasted water by improving the efficiency of irrigation. Then, determine the sustainability limits of your water sources, and question whether your withdrawals are more than nature can replenish and adjust accordingly. Lastly, work to reduce pollution impacts from water runoff picking up agrichemicals.

How has your participation in the 2030 Water Resources Group affected the way you do business?

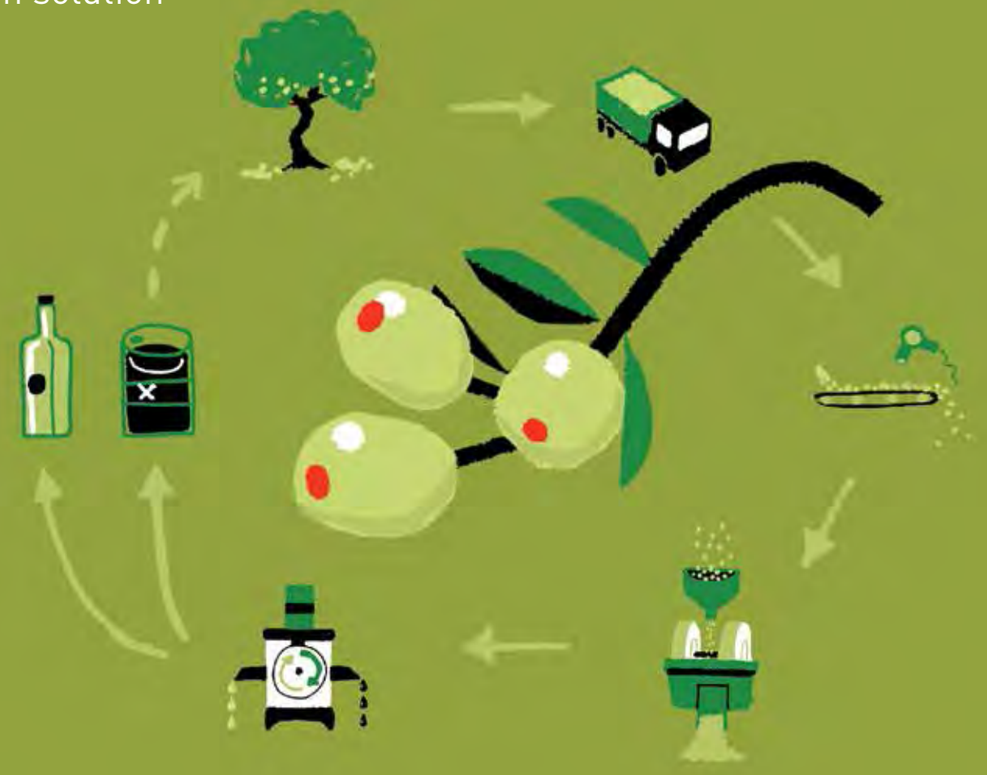
As a founding member, we are collectively working with our partners, including IFC, to improve water policy around the world—engaging in country-level policy discussions with a diverse group of stakeholders. In South Africa, for example, which is anticipated to face a 17% water demand-supply gap by 2030, WRG has helped foster a cross-sector collaboration to support the South African government's water strategy. By addressing water stewardship in the context of the "water-energy-food nexus," many of our water projects are already helping communities by focusing on increasing crop yields while reducing the impacts on water sources through water body alterations, aquifer recharge, rainwater harvesting and more. ■

About The Coca-Cola Company and IFC

IFC is partnering with The Coca-Cola Company on investments made in bottling companies around the world and on strategic themes such as water, sustainable sourcing, food safety, women's empowerment, and resource efficiency.

An Olive Branch in the West Bank

UNEP & IFC on how a water waste problem becomes its own solution



BY

Frederic Gallo

Chemical Engineer, Sustainable Consumption and Production Center (SCP/RAC) of the Mediterranean Action Plan (UNEP/MAP), an intergovernmental organization of the United Nations Environment Program

Hazem Hanbal

Agribusiness Specialist, Advisory Services, Middle East and North Africa, IFC

In the West Bank, one of the world's most arid regions, transformative agricultural practices are urgently needed by hundreds of thousands of farmers dependent on their lands for their livelihoods.

For those working in olive oil production — a centuries-old mainstay of the local economy — safe and successful use of waste water from olive pressing is a welcome improvement.

Olives, and the oil that they produce, constitute an essential source of income for as many as 100,000 families in the West Bank. However, the olive oil production process frequently involves hefty volumes of untreated liquid waste seeping into groundwater tables and public sewage facilities. This waste can contaminate aquifers and neighboring fields and can cause damage to sewage systems and waste water treatment plants.

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Under the "West Bank Olive Oil Export Development" project, IFC partnered with the United Nations Environment Programme's (UNEP) Sustainable Consumption and Production/Regional Activity Center (SCP/RAC) to provide olive oil farmers and small and medium enterprises with modernized practices to minimize the potential environmental impacts of the olive oil industry.

By conducting certain modifications in olive pressing processing, the practice creates a single waste that can be composted and used later on as an organic fertilizer, thus eliminating the problems associated with waste water.

The use of this organic fertilizer mitigates the effects of chemical fertilization, a source of nitrate pollution whose long term use has intensified soil erosion and desertification across the region.

Cutting-edge solution: Processing water waste to create an organic fertilizer that improves soil conditions and enhances productivity

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Ecological Footprint

The use of treated waste water as compost can also help improve soil conditions in the West Bank's lush olive fields and enhance productivity, offering both a safe and natural substitute for chemically synthetized fertilizers and helping improve the sector's ecological footprint.

The compost is obtained by modifying the oil extraction process and letting the waste undergo a natural process of maturation during a six-month period.

For small and medium enterprises involved in the pressing and bottling of olive oil, that intervention has helped their businesses eliminate a toxic material and prevented it from polluting neighboring fields.

> As firms globally sell products labelled as green and fair trade, organic fertilization can help in the certification of exported goods.

Further, the application of compost as a natural alternative can help increase the input of organic carbon in soils, acting as a climate change mitigation measure.

At a time when the world is facing enormous water scarcity challenges and prices of chemical fertilizer have increased, these alternative solutions for cash-strapped farmers and for those working in agribusiness, are celebrated as a refreshing bout — of good news.

Regionally, olive oil is a key sector in Morocco and Tunisia, but this innovative solution can be replicated across fields where the traditional olive pressing process remains largely intact. Lessons learned in the West Bank, where agribusiness accounts for about two-thirds of total employment, are transferrable elsewhere, a testament to the fact that in recycling waste, we are often recreating value. ■

Country Spotlight

MYANMAR

Open for agribusiness

BY

Vikram Kumar
Resident Representative in Myanmar, IFC

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Once one of the most isolated countries in the world, Myanmar, in the wake of political and economic reform is now fully open for business.

©Tun Lynn

Under the current leadership of former general President Thein Sein, Myanmar's new government has pledged a democratic transition anchored on economic reform and foreign investment. Critical to that process will be a strong focus on agribusiness investments.

Bordered by dense forests and plateaus and rich in fertile valleys and deltas, Myanmar has long caught the attention of global agribusiness companies who are keen to draw profits from the country's vast natural resources.

In a country where close to 70% of the population live in rural areas, the agribusiness sector is a critical driver of growth with rural development and agribusiness poised to potentially lift millions of Myanmar citizens out of extreme poverty.

70%
of the population live in rural areas

But despite new opportunities for economic growth, both the government and foreign investors recognize that many challenges still stand in the way. As part of the IFC team tasked with unleashing private sector potential in Myanmar, I see firsthand every day the roadblocks to market liberalization and agricultural reform.

Decades of mismanagement have led to crumbling infrastructure, mass poverty and low rates of literacy. Basic infrastructure — roads, airports, communications and electricity — are woefully inadequate and compromise market access, distribution and competitiveness.

©Kyaw Soe Lynn

The most recent edition of the World Bank's annual "Doing Business" report rated Myanmar 182 out of 189 economies in relation to the ease of opening and running business ventures. In October 2013, the World Bank projected Myanmar's economy to grow to 6.8% in 2013/14 but raised concerns about inflation, which hit 7.3% last year.

Living in Myanmar and working closely with my World Bank colleagues, I have identified four central challenges to agribusiness foreign investment:

Despite the government's renewed focus on agriculture, the issue of land access and land grabbing is of paramount concern. Two recent bills designed to alleviate the problem of land grabbing — the Farmland Law and the Vacant, Fallow and Virgin Lands Management Law — may actually complicate the problem. The Farmland Law passed in March 2012, for example, permits the transfer and mortgaging of tillage rights but also gives the state ultimate ownership and control of all agricultural land.

Access to finance for farmers is severely limited with only one financial institution, the Myanmar Agricultural Development Bank, operating in the rural space. Informal loans to farmers carry monthly interest rates between 5% to 10%. Myanmar's strong currency has pushed up the cost of basic inputs such as seeds and fertilizers but reduced the revenue from rice sales. Many of Myanmar's farmers are now locked in a vicious cycle of debt following drought and flooding.

For foreign companies hoping to invest in Myanmar, finding a reputable Myanmar sponsor is critical. Although Myanmar is now party to several international agreements, including the New York arbitration convention, foreign investment is still challenging. Steps continue to be taken to enhance investor protection, including the implementation of a new foreign investment law in July 2012. Currently IFC is looking to merge this new law with an existing domestic citizen law that would create one central legal investment framework while maintaining a level playing field for both domestic and foreign investors.

For the vast bulk of families who are living below the poverty line, agriculture is their primary source of income. But for many of these farmers a range of market barriers including a lack of knowledge and tools for efficient production, as well as a lack of technology to support agricultural processes, ensures that the quality and quantity of their yields remain low. Many rural youths have left the sector altogether in search for better-paid jobs in urban areas or abroad.

The overall picture may look sobering for foreign agribusiness companies looking to invest in Myanmar but there is potential given the country's resources and favorable geographic location.

In 2013 Coca-Cola Co. and Unilever both pledged investments of nearly $1 billion in Myanmar for the next decade, becoming the first prominent companies to start manufacturing in the country and making the biggest commitments yet by Western multinational corporations.

In March of this year, Singapore-listed Yoma Strategic Holdings (YSH), announced plans to expand into Myanmar, investing a total of $130 million into education, coffee, dairy products, cold storage and logistics. YSH is looking to secure a financing package for this venture from IFC, subject to IFC's detailed due diligence including an environmental and social impact assessment.

In 2013, Coca-Cola and Unilever both pledged investments of nearly

$1 BILLION

FAST FACTS:

→ **According to the Myanmar government, the agricultural sector constitutes 41% of the country's total GDP and 11% of foreign exchange earnings.**

→ **Myanmar is resource-rich with a strong agriculture base in rice, pulses, beans, maize, sesame, rubber, sugarcane, jute, wheat and hardwood and is backed by a strong agricultural processing industry.**

→ **Growth areas in the agricultural sector include rice, horticulture, pulses, animal protein, dairy and coffee. As pesticides and fertilizers are not in widespread use, there is a potential niche production area for organic goods.**

→ **According to the United Nations, over 80% of Myanmar's population are subsistence farmers and live on $2 or less per day.**

©Galyna Andrushko / veer.com

To create capacity for local agribusiness companies in Myanmar, IFC is also trying to link them with international players who have the right technical experience and are willing to invest risk capital in the country. Opportunities are tremendous across the entire value chain, particularly in providing quality agri inputs.

And despite communications challenges, there is also an opportunity to use digital technology to get real time information about weather and commodity pricing to farmers — an innovation that could potentially revolutionize productivity while maximizing rural incomes for years to come.

For agribusinesses seeking to invest in Myanmar there is a delicate path to tread — ensuring that they access this once isolated market in an ethical and inclusive way while maximizing the positive benefits for a population mired in poverty. With parliamentary elections looming in 2015, all eyes will be on Myanmar's commitment to the democratic process. Foreign investment will undoubtedly go hand-in-hand with the country's tenuous political process. ■

How a **World Economic Forum** platform builds partnerships that can drive the future of agribusiness

BY

Gene Moses
Senior Strategist, Agribusiness & Forestry, Investment Services, IFC

Interview with Lisa Dreier

Senior Director, Food Security and Development Initiatives, World Economic Forum, USA
(pictured here)

All Photography: ©World Economic Forum

What is the "New Vision for Agriculture?"

The New Vision for Agriculture (NVA) is a global initiative of the World Economic Forum which began in 2009 and has developed quickly to become a dynamic platform for catalyzing and supporting partnerships in the agriculture sector.

NVA aims to bring together the public and private sectors in a more coordinated way to develop agriculture in a more sustainable, inclusive and productive manner. The initiative was prompted by our stakeholders' recognition that the world was not on track to face the enormous challenge of sustainably feeding 9 billion people by 2050.

$5.7 BILLION GENERATED IN PRIVATE SECTOR COMMITMENTS

$100 MILLION INVESTED ON THE GROUND

BENEFITING

1 MILLION FARMERS

What do you offer that is different?

We work with leaders of all sectors and regions, so that we can help put critical items on the agenda and facilitate commitment and action at a high level. We can help to bring the private sector to the table as a constructive partner in helping address some of these issues. The fact that we are a neutral and informal platform means that we can offer a "safe space" for open discussion about common challenges and obstacles.

What has been your approach?

Market-based approaches can be an important tool to achieving our vision and implementing these approaches often requires collaboration between different stakeholders. The private sector has enormous capacity to develop and efficiently scale innovative business models — especially in the developing world — and can deliver real benefits in terms of farmers' incomes and market access, sustainability and productivity.

How far have you come?

We are now working with 14 different countries in Africa, Asia and Latin America, anchoring efforts around each country's vision for its agricultural sector. We serve as a platform to facilitate co-investment and collaboration between key stakeholders including the government, private sector, farmers associations, donor and international agencies, and civil society. To date, this activity has generated over $5.7 billion in private sector investment commitments, of which about $100 million has been implemented on the ground so far, benefiting over a million farmers.

What would you say to someone who might think "shouldn't big companies already be addressing these challenges?"

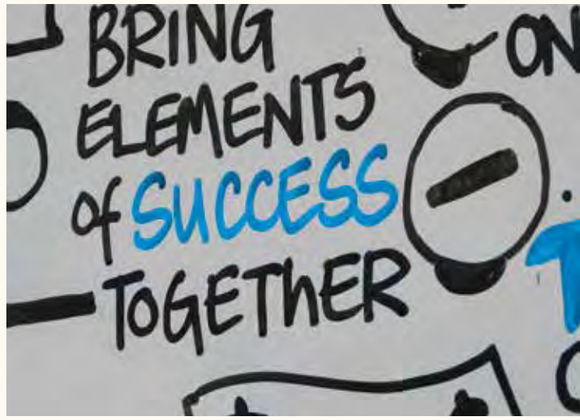
When we started this work, many companies were already undertaking their own sustainability initiatives. But there are real limitations to what one single company — or even the entire private sector — can do. What's needed is coordinated, collective action among all stakeholders to achieve shared goals.

Where do you go from here?

There are two really exciting efforts that we will be announcing in 2014. Following the rapid development of the Grow Africa partnership, which the NVA catalyzed together with the African Union and NEPAD, our partners in Southeast Asia said, 'Why don't we do that here?' We're delighted to say that a new regional platform called Grow Asia will be launched later this year.

The other effort is our Transformation Leaders Network, a community of senior practitioners and partnership leaders from all regions and stakeholder sectors who will be exchanging best practices and experiences. All of these partnership approaches are very new — there's no preexisting roadmap or recipe for success — so everyone is inventing and innovating as they go along. By learning from each other's successes and failures we can help speed the progress of the whole network that shares this common agenda. ■

Visit www.sustainbusiness.org to read more, watch a video and download related reports.



UC Davis, one of the world's leading agricultural universities, on the global food system

BY

Tom Tomich
*Founding Director**

Courtney Riggle
*Sustainable Sourcing of Global Agricultural Raw Materials**

Aubrey White
*Communications Manager**

**Affiliation: Agricultural Sustainability Institute, University of California, Davis, CA USA*

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Defining and measuring sustainability through the food lens

The definition of sustainability used by many seems simple enough: *development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*

This familiar quote from the 1986 Brundtland report, Our Common Future, is useful as a visionary statement, but provides little guidance on how to assess sustainability, much less how to achieve sustainable development. And since sustainable development is multi-dimensional — comprising complex combinations and interactions across economic, social, and environmental issues — the operational challenges become apparent:

What is the minimum list of issues that have to be addressed to back up a comprehensive claim of sustainability? Is there just one list? If so, what are the issues that must be on the list? How can those issues be measured to benchmark progress so that sustainable development is recognizable when it is achieved? How can we identify, build consensus, and balance tough tradeoffs? And how can we adapt strategies and practices in a rapidly changing world? Such a comprehensive, practical, and universally-accepted sustainability framework is an urgent need — let us hope its realization is only a few years away.

In the meantime, the global food system is one of many lenses through which one can usefully view the practical challenges of sustainable development; specifically how to enable our growing human population to feed itself.

©Agricultural Sustainability Institute at UC Davis

"Even perfection in attaining sustainability targets on-site (for example, retrofitting for greater efficiency in energy or water use) may have only a small effect overall."

The social footprint of the food system is indisputable: food is fundamental for human wellbeing, economic prosperity, social stability, and cultural interaction. **Over the past 15-20 years, advances in remote sensing and other data sources also have established beyond doubt that the food system has a huge and growing environmental footprint.** Major roles in land cover change and biodiversity, climate forcing, energy, and freshwater, nitrogen and phosphorous cycles, to name a few, place the food system in the center of debates about potential impacts on planetary boundaries and vulnerabilities as boundaries are exceeded.

Why food challenges extend beyond factory walls

Food manufacturers and processors — and commodity traders, financiers, risk managers, and other agribusiness enterprises — operate within this intersection of impacts and vulnerabilities. Data still are limited, but food companies undertaking evidence-based sustainability efforts are likely to find that their challenges extend far beyond factory walls. An internal assessment by Mars, Incorporated, for example, showed on-site greenhouse gas emissions were only 6% of the total emissions over the complete product life cycle, while well over half of emissions arose upstream in the supply chain. This result is daunting: even perfection in attaining sustainability targets on-site (for example, retrofitting for greater efficiency in energy or water use) may have only a small effect overall.

Moreover, supply chain vulnerabilities also remain unaddressed if focus remains within factory walls. Droughts and floods, pests and diseases, and economic and political upheavals threaten the livelihoods of agricultural producers and access to raw materials that keep global food businesses humming.

Following this trail in the search for sustainability solutions necessarily takes firms far from familiar home turf of managerial controls and engineering solutions into a chaotic realm. Self-organizing social and ecological systems interact to produce "rules" of their own, and can adapt in perverse ways to even the best intentions. This holds implications not just for procurement and manufacturing, but also for corporate strategy, capital investment, organizational design, branding, and even the viability of existing business models. **Rather than trying to "administer" or "engineer" the food system, efforts to advance sustainability require "uncommon collaborations" involving businesses, governments and other public institutions, civil society organizations, and farming communities across our planet.**

Why information technology matters

Fortunately, there is good news from the information technology sector, which is undergoing a revolution in availability of huge datasets of heretofore unimagined timeliness and complexity. Ongoing work at the Agricultural Sustainability Institute and the Information Center for the Environment at the University of California at Davis is but one of many contrasting efforts underway to develop informatics applications for food system sustainability. In collaboration with food companies and other partners, our approach seeks to provide coherence through an integrated, open-source platform.

Rather than a single fixed list of sustainability issues and indicators, our computable prototypes can be viewed as a "sustainability checklist generator" that can be used for any agricultural commodity produced anywhere on land.

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While three or four indicators will not be sufficient, our prototypes suggest that frameworks can be quite tractable: 15-20 indicators may be suitable for food system sustainability assessment in specific contexts.

We believe these information technology applications can help food companies clarify impact mitigation priorities, identify supply chain vulnerabilities, and benchmark progress toward sustainability goals that matter for everyone. Moreover, the intersection of sustainability impacts and vulnerabilities also may hold tangible opportunities for firms to enhance competitive advantage, from recruiting and retaining leaders who are motivated by sustainability concerns to enhancing brand loyalty among consumers through verifiable sustainability claims. For centuries, business models in the food sector have guarded proprietary information to secure profits from thin margins. Perhaps a transparent new "open source" food business model will emerge — mashing up food manufacturing, marketing, risk management, and information technology — to harness "big data" to inform sustainability strategies and enhance consumer appeal through evidence-based sustainability branding. ■

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Over the past 15-20 years, advances in remote sensing and other data sources also have established beyond doubt that the food system has a huge and growing environmental footprint.

** The authors are members of a large team working on sustainable sourcing at UC Davis. Their work has been funded by a major grant from Mars, Incorporated. Project information and results can be viewed at www.asi.ucdavis.edu. Opinions expressed here are those of the authors alone, not the University of California or Mars Incorporated.*

About the Agricultural Sustainability Institute at UC Davis

The Agricultural Sustainability Institute at UC Davis works to ensure access to healthy food and to promote the vitality of agriculture today and for future generations. We do this through integrative research, education, communication, and early action on big, emerging issues. ASI is part of the University of California at Davis, ranked as the No. 1 school in the world for teaching and research in agriculture and forestry.

A *Financial Times* reporter's view on how to tell the sustainability story and why it matters

BY

Emmanouela (Emmy) Markoglou
Communications Officer, Advisory Services, IFC

Hanoi, Vietnam.

Rajasthan, India.

Interview with Sarah Murray

Specialist writer on corporate responsibility and environmental sustainability, long-time *Financial Times* contributor, and former FT staff journalist

All Photography: Sarah Murray

What were the criteria for the selection of private sector success stories you featured in sustainability reports you wrote for the FT and other media?

Agribusiness is a vast global industry with one of the world's heaviest environmental footprints, from water consumption to the pollution resulting from agricultural runoff. Agribusiness has a social footprint, too, since small farmers, as suppliers, play a critical role in strengthening food security. In coming up with story ideas for the FT World Food reports, I tried to reflect these themes, with features that ranged from Harvey Morris's piece on private sector initiatives helping to fight poverty to Clive Cookson's feature looking at advances in fertilizers and pesticides and a piece I wrote on how companies are providing agricultural extension services to small farmers, giving them advice and assistance on everything from fertilizer use to accessing agricultural commodities markets.

What is the biggest challenge you think agribusiness faces today?

Researching my book *Moveable Feasts: From Ancient Rome to the 21st Century, The Incredible Journeys of the Food We Eat* gave me a sense of just how old the world's food supply chains are. As I discovered, from the ancient spice routes to the vast global trade activities of the British Empire, food has long traveled vast distances from producers to markets and consumers. In Rome, it was amazing to stand on top of Monte Testaccio and learn that this hill is made entirely from millions of broken pots discarded from a giant food commodities trade that operated during the first and second centuries when olive oil traveled from southern Spain to Italy and across the Roman Empire. Then, the challenge was coming up with the right transport technologies (in this case, the amphora, a large, sturdy ceramic pot).

Today, the challenges facing agribusinesses are very different. There is now enormous pressure to find ways of managing the social and environmental footprint of agribusiness. **First, consumers and buyers increasingly care about where their food and agricultural products come from. And companies are beginning to see the benefits of sustainable agriculture** — in terms of being able to reduce risks such as shortages of water and, on the social side, being able to create a more robust supply chain by helping small farmers improve the efficiency of their farms.

Can you share an example of an agribusiness company that led a successful campaign around sustainability?

In the UK, the "Behind the Label" campaign launched by Marks & Spencer a few years ago is a good example of this. The campaign, which provided information about the way its products (ranging from clothing to food) are sourced, was well-regarded and popular with customers.

Is there any advice you could give to a small agribusiness company that wishes to pro-actively raise its visibility?

If a company can provide real, honest insights into the challenges it has faced, as well as its successes, this would catch the attention of the media. It's also important to make stories "real" — to connect agribusiness to people's lives, the food they eat, or, in the case of farmers, how they support their families.

Read more of this interview online at www.sustainbusiness.org

West Africa.

Social Media

"Mixing It Up" blog

This blog was launched by Sarah Murray in April 2014 and features thought provoking views on business, society and the environment.

It presents interviews with CEOs, academics, policymakers, social entrepreneurs, authors and others, on innovations and new business models that transform our world and the way we consume natural resources.

www.sarahmurray.info/blog

"Guardian Sustainable Business" blog

This blog features the views of leading sustainability experts and showcases best practice in corporate sustainability.

It also offers 'Business Shorts,' a series of half-day courses on communications, tailored to sustainability professionals.

www.theguardian.com/sustainable-business

World Bank Group Reports and Tools

Working with Smallholders: A Handbook for Firms Building Sustainable Supply Chains

Contributed by Alan Johnson
Senior Agribusiness Specialist, Advisory Services, IFC

The future of agriculture depends in large part on innovative solutions emerging from private firms. It also depends on new and innovative partnerships between different stakeholders in the food system. IFC, in addition to increasing its programs and investments in agriculture, is scaling up programs that improve the livelihoods of small farmers by linking them to modern supply chains providing opportunities to increase their productivity and improve their farming practices.

IFC recently published a handbook for firms who wish to expand their supply chains by working with small farmers. The handbook aims to enable more productive interactions between private firms and small farmers. It is designed as an overview of key topics for sustainability and supply chain managers at agribusinesses, plantation companies, and extractives. It covers a broad range of topics including farmer aggregation, training and communication strategies, standards and certification, access to inputs, farm management, the role of women in supply chains, and measuring results.

The Handbook can be accessed through a new IFC website, **www.farms2firms.org**, which aims to bring together firms and service providers interested in small farmer supply chains. It also presents related activities and events, including IFC's past and upcoming roundtables on small farmer engagement.

Good Practice Handbook: Assessing and Managing Environmental and Social Risks in an Agro-Commodity Supply Chain

Contributed by Louis-Philippe Mousseau
Sector Lead, Agribusiness & Forestry, IFC

Companies increasingly understand that managing social and environmental risks is fundamental to success and market access. IFC recently published a Handbook to offer its agribusiness clients practical advice for managing these risks. This new tool unlocks the "how to" on supply chain mapping and risk categorization of suppliers, and provides crucial support to regional traders and processors in understanding IFC's supply chain requirements as reflected in IFC's Performance Standards.

IFC will be offering interactive webinars and workshops to drill down on specific areas of interest.

For agricultural companies, managing the potential impact of their activities is an immense challenge, given this industry's use of land and water and its economic significance to poor and vulnerable people. Effectively managing these risks means that agribusinesses must identify not only the risks of their direct activities, but also the risks inherent in supply chains for the agro-commodities they need.

Another IFC tool, the Global Map of Environmental and Social Risks in Agro-Commodity Production (GMAP), has supported IFC business development with agro-commodity traders and trade finance. It presents a database of 150 country-commodity combinations (e.g., Brazil/soy, Ghana/cocoa, Vietnam/coffee), using a methodology aligned to IFC's Performance Standards. It aims to facilitate financing decisions by assigning a color-coded risk score to each country-commodity combination. It can be accessed at **www.ifc.org/gmap**.

Investing in Agribusiness: A Retrospective View of a Development Bank's Investments in Agribusiness in Africa and Southeast Asia and the Pacific

Contributed by Grahame Dixie
Agribusiness Adviser, World Bank

This study analyzes the experience of the Commonwealth Development Corporation (CDC) as an investor in commercial smallholder and estate agriculture and agro-processing in Sub-Saharan Africa and Southeast Asia and the Pacific between 1948 and 2000. Analysis of the data was undertaken to determine whether success and failure can be correlated to any critical factors. This has brought into the public domain a number of hitherto hidden insights about the ground realties of these investments.

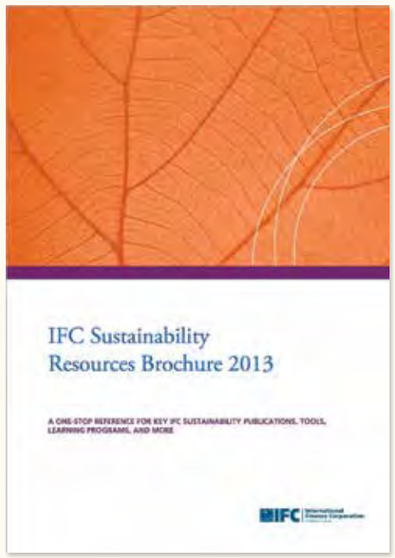
This review of CDC agribusiness investments corroborates the view that agribusiness investments are risky, particularly when the investment is in a start-up. While only one fifth of projects were rated complete failures, one third of equity investments generated at least moderately attractive internal rates of return, and overall about 55% resulted in financially viable projects. The majority of projects in both Asia and Africa ended up being sustainable businesses that delivered broadly the number of jobs and level of turnover that had initially been anticipated.

The analysis of CDC's agribusiness portfolio demonstrates both historical potential and pitfalls and illustrates the need to continuously adapt and innovate to achieve both political and commercial sustainability.

Another new joint study by the World Bank and UNCTAD entitled *The Practice of Responsible Investment Principles in Larger Scale Agricultural Investments: Implications for Corporate Performance and Impact on Local Communities* uses a sample of 39 mature agribusiness investments in Asia and Africa, plus interviews with over 500 people from the communities surrounding these businesses. It paints a nuanced picture of their perception of upsides and downsides of agribusiness. It also responds to the demand by investors and Governments for best practices and the pitfalls to avoid. The report's evidence-based recommendations ultimately will help provide fairer and better outcomes for all.

Find out more at www.openknowledge.worldbank.org

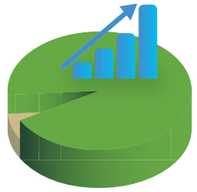
Other Sustainability Reports



Find these reports at www.ifc.org/sustainability

Other Reports

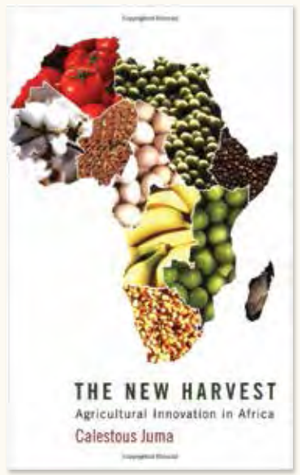
87% of CEOs believe that the sustainability reputation of their company is important to customers' purchasing decisions



97% of CEOs see sustainability as important to the future success of their business

The UN Global Compact-Accenture CEO Study on Sustainability 2013

This study presents findings from the world's largest CEO study on sustainability to date. More than 1,000 top executives from 27 industries across 103 countries assess the past, present and future of sustainable business; discuss a new global architecture to unlock the full potential of business in contributing to global priorities; and reveal how leading companies are adopting innovative strategies to combine impact and value creation.



The New Harvest: Agricultural Innovation in Africa

By Calestous Juma

This report integrates research and policy ideas from an international panel of some of the most influential thinkers on agricultural development. It presents enactable policy ideas for advancing agriculture throughout Africa, at the national and regional levels. It includes a wealth of case study material from Green Revolution and educational initiatives in India, China, and throughout Latin America. It is authored by C. Juma, a professor of the Practice of International Development and faculty chair of Innovation for Economic Development Program at Harvard Kennedy School.

Post-green revolution food systems and the triple burden of malnutrition

By Gómez, Miguel I.; Barrett, Christopher B.; Raney, Terri; Pinstrup-Andersen, Per; Meerman, Janice

Changes in food systems and in the understanding of the global malnutrition challenge necessitate fresh thinking about food systems-based strategies to reduce malnutrition. This paper introduces a special section that offers such new perspectives. It discusses trends with respect to indicators of the triple burden of malnutrition to understand the extent of global malnutrition challenges and then relate those to food systems transformation in developing countries.

Catalyzing Smallholder Agricultural Finance

Published by Dalberg Global Development Advisors

This report aims to inform investors, multinational commodity buyers, and donors on how to deploy capital in a way that will strengthen small farms. A directional estimate suggests global demand for small farmer agricultural finance could be as large as $450 billion. This report leverages the experience and insights of an advisory committee that included Root Capital, Technoserve, and ANDE, plus interviews with over 65 commodity buyers, investors and value chain experts.

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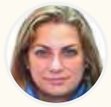

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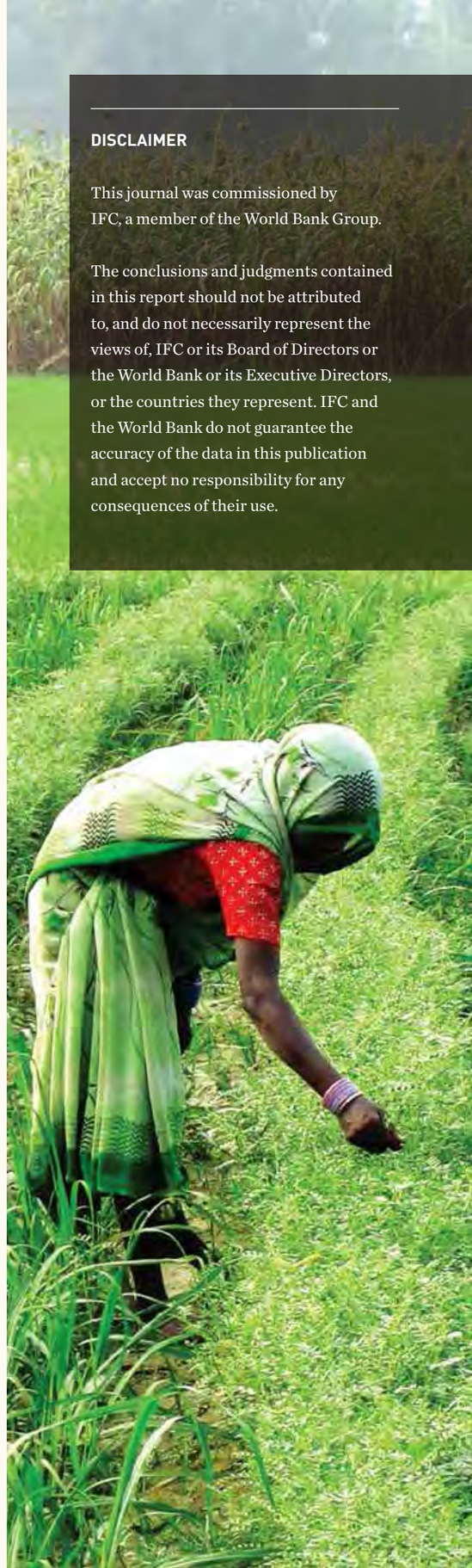

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