

Cocoa sustainability

Working for a better future for cocoa farmers around the globe

In its wholehearted commitment to sustainable development in rural West Africa, Mars, Incorporated supports good farming practices in cocoa growing regions and equitable labor practices along the cocoa supply chain. This commitment places Mars as an industry leader in the pursuit of socially responsible cocoa production.

Cocoa is of vital importance to the economy of West Africa. It has become the primary agricultural export of the region, and in countries like Cote d'Ivoire, Ghana, Nigeria, and Cameroon it can account for significant portions of national exports and household incomes. It is estimated that throughout West Africa there are more than two million cocoa smallholders and that those touched by cocoa farming may number as many as 10 million. Presently, aging trees, outdated farming techniques, and plant disease diminish annual crop yields by up to 35 percent of their potential. Overcoming these problems is essential not only to the economic well-being of the region, but also to the sustainability of rural livelihoods.

As one of the world's largest users of cocoa, Mars has taken this challenge seriously and is engaged in cocoa research. For example, Mars scientists work with the US Department of Agriculture in Beltsville, Maryland on integrated pest management techniques to support cocoa production, and in Miami, Florida, where the breeding of a new generation of disease resistant cocoa trees is progressing.

Mars is also a founding member of the World Cocoa Foundation and partners with them to deliver practical farming knowledge directly to farmers. A highlight of this partnership is the collaboration with the US Agency for International Development and the International Institute of Tropical Agriculture to support the Sustainable Tree Crops Program in West Africa. This program drives economic improvements at the farm household level by educating cocoa farmers in improved cultivation techniques that also have a positive impact on the environmental and social structures of their farms and communities.

While Mars research and practical programs support a holistic approach, conditions in cocoa growing communities demand a focus on social sustainability. This need has been highlighted in recent years as working conditions on cocoa farms in West Africa have come into the spotlight. Again, Mars has been at the forefront of industry efforts as a key signatory to the 2001 Harkin-Engel Protocol that brings together national governments,

the global cocoa and chocolate industry, and other stakeholders - all seeking to achieve improvements at farm level and to secure the sustainability of cocoa farming for future generations across West Africa.

One innovative element of the Harkin-Engel Protocol required the establishment of The International Cocoa Initiative in 2002. Today, the ICI has programs on the ground in Cote d'Ivoire and Ghana raising awareness of appropriate labor standards and offering support to cocoa farming communities as they improve working practices along the supply chain. In recognition of their leading role in this work, the global cocoa and chocolate industry has turned to Mars to provide the industry co-President of the ICI since its inception.

Mars is a leader in organizing industry collaborations to ensure that cocoa has a sustainable future. Looking to the future, the company has recently announced partnerships with leading international non-governmental organizations and development agencies for a three-year US\$4.5m program to provide economic, educational and environmental assistance to cocoa growing communities and individuals in West Africa.

Cocoa research and disease prevention

Mars views cocoa sustainability as a holistic, proactive global public-private partnership designed to ensure future supplies of cocoa in a manner that helps cocoa-producing farmers, communities and countries thrive

Mars understands the importance of addressing challenges at their roots, and is committed to finding solutions. Therefore, Mars was instrumental in establishing a number of proactive programs, some of which include:

The Mars Center for Cocoa Science, the company's own Brazilian research farm, started in 1982; research agreements between Mars and the US Department of Agriculture; the Mars partnership with Winrock International; the industry-wide Sustainable Tree Crops Program to educate farmers; and – with industry and NGO partners such as the International Labor Organization and Free the Slaves – the International Cocoa Initiative, which aims at eliminating the worst forms of child labor in cocoa producing countries.

Since 1982, Mars has operated the Mars Center for Cocoa Science in Bahia, Brazil as a research partner with federal, local, and NGO communities working on a broad range of issues in cocoa.

With outreach to the local farmers and scientific community, Mars develops and disseminates best practices in cocoa production, distributes selected cocoa planting materials, investigates new methods to control pests and disease and discovers new ways to improve the quality of cocoa. This plays a role in the overall commitment of Mars in producing models of sustainable cocoa growing systems.

One major focus of the research at the Mars Center for Cocoa Science has been the fungal plant disease Witches' Broom. In Brazil, this is the primary pathogen of concern. When Witches Broom came into Brazil in the 1990's, it knocked production down by 75-80 percent. In just eight years, Brazil went from one of the world's leading cocoa producers to a net importer of cocoa.

Mars hopes to see a recovery of this production and research findings that reveal more about the disease to develop solutions that can be put to use in the farming community.

Mars' scientific work aids in preventing the spread of Witches' Broom globally, as it would have devastating consequences for five to six million cocoa farmers and the additional 26

million people who depend on some part of the cocoa industry for income. Lessons learned at Mars Center for Cocoa Science have benefited farmers around the globe, especially in the effort to contain Witches Broom to Latin America.

Hog happy

Mars site slashes landfill by 90 percent

Piglets have been helping Mars take an innovative approach to waste management at their plant in Ballarat, Victoria, Australia and helped slash the company's waste by 90 percent over the last five years.

Site services manager, Bruno Bomitali, saw an opportunity to help wean Mars off landfill when a local piggery discovered that mixing chocolate waste with grain helped wean piglets from their mother's milk without them losing weight. Until then, losing weight after weaning was a constant problem for the piglet's that endangered their long term health. Recent research has shown that attractive chocolate flavors encourage weaning pigs to make the transition from milk to solid foods more easily, a discovery beneficial to Mars, the piglets and the environment.

The 3,000 tonnes of chocolate bars the site produced each month was also creating around 220 tonnes of waste bits suitable for piglets, much of it product reject and scraps. Bomitali called in the Highlands Regional Waste Group and EcoRecycle (now Sustainability Victoria) for guidance.

All Ballarat associates embraced the concept of waste reduction, and in June 2002 the Waste Wise program began. Since then, this program has prevented over 9,500 tonnes of waste from going to landfill.

Today the Mars site's average monthly landfill is 22 tonnes, compared to a previous average of 220 tonnes. By continued segregation of waste streams, working and communicating with associates, and collaborating with service companies to find alternatives to landfill, Mars believes it can achieve zero waste to landfill each month in the near future. In addition, the animal waste is also being recycled as part of an efficient system that involves generating electricity from biogas (gas produced by anaerobic digestion or the fermentation of organic matter) and collecting dry matter for sale as fertilizer.