BEYOND CERTIFICATION: NEXT GENERATION OF SUSTAINABLE AGRICULTURE INITIATIVES

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ABSTRACT

This paper shares insight into commodity supply chains, complexity of social and environmental issue and other findings from emerging sustainable agriculture initiatives with the intention of spurring discussions amongst stakeholders interested in forging a path towards sustainable commodities that benefit smallholders.

INTRODUCTION

International agriculture is a massive and complex industry. The global agricultural sector employs half of the world's labor force with an estimated 1.3 billion workers active at the farm level[1]. The majority of agricultural workers are found in developing countries as small-scale farmers.

Because commodities comprise the vast majority of agricultural products, efforts aimed at promoting sustainable commodities have the potential to significantly improve agriculture's environmental and social impacts. However, such efforts must effectively address complex issues with the support of the industry in order to grow beyond niche markets.

One of the many challenges of designing effective environmental and social initiatives is how to apply global strategies in local context throughout the globe. This paper shares insight into commodity supply chains, complexity of social and environmental issue and other findings from emerging sustainable agriculture initiatives with the intention of spurring discussions amongst stakeholders interested in forging a path towards sustainable commodities that benefit smallholders.

UNDERSTANDING AGRICULTURAL SUPPLY CHAINS

In order to promote sustainability in agricultural supply chains, one must first understand the basic distinctions between the two broad categories of agricultural crops – *products* and *commodities*.

Products (e.g. fruit and vegetables) are sold to consumers in the same basic form that they are produced on the farm and require only inspection and packaging in their short supply chain. Products are susceptible to spoilage during the time it takes to transport them from farm to store. This is an important factor

[1] International Labor Organization, *Occupational Safety and Health in Agriculture*, Programme on Safety and Health at Work and the Environment (Safe Work), culled from http://www.ilo.org/public/english/protection/safework/agriculture/intro.htm, March 26, 2009

in many regions where lack of infrastructure prohibits timely export to global markets.

Commodities (e.g. sugar, cotton, biofuels) are mixed and transformed when processed through a multi-stage supply chain. They do not spoil as quickly as *products* after initial processing.

It is also important to understand the level of influence a buyer can have in each of these supply chains when designing sustainable agriculture programs. Buyers of *products* often have contracts with the inspector/packager who is one step away from the farm, or an agent/wholesaler who is just two steps from the farm. At times, end buyers may have more direct relationships with the producers. In either of these scenarios, buyers of *products* can have a high degree of influence on producers.

Buyers of *commodities* may not know where their products come from nor have any relationship with producers or even initial processors (e.g. sugar mills, cotton gin, etc.). These buyers would be more influential when working with the initial processors who purchase most of the *commodities* in that region. These processors may have strong business relationships with producers as they may provide inputs (e.g. seeds, fertilizer, etc.), credit, and, at times, training.

MARKETING TRENDS

As consumers become more socially and environmentally savvy, the way brands and industries communicate their corporate social responsibility (CSR) efforts will likely change. The increasing number of certifications, labels and socially responsible claims can be confusing to a consumer. However, consumers increasingly want to support responsible brands and make purchases that are aligned with their personal values. Many opportunities exist to connect consumers with communities in developing countries or contribute to measurable improvements to the environment without burdensome certifications. Brands can

communicate their efforts through a variety of vehicles: websites, in-store brochures, responsibility reports or product labels.

Examples of programs that connect consumers with communities in need include Kiva[2], the world's first person-to-person micro-lending website, empowering individuals to lend directly to unique entrepreneurs in the developing world; and (RED)[3], a partnership with iconic global brands through which a portion of profits from each (RED) product sold goes directly to the Global Fund to invest in African AIDS programs, with a focus on women and children.

RETAILERS' ROLES

Retailers' core business is creating, marketing and selling a product. Managing raw materials is usually a secondary priority at best. Many companies have made a strategic decision not to source raw materials directly from producers because it is a distraction from their core business and/or they cannot adequately manage the volatility of the raw material market. However, global brands are at the forefront of sustainability issues because of the potential damage to their most important assets – their brand image, their direct relationship with consumers and their potential influence on supply chains.

As with any cost incurred by a retailer, any additional costs associated with labor or sustainability programs and/or monitoring is often transferred to the consumer. These costs are typically more easily accepted by consumers for higher priced or specialty items, such as fresh fruits and vegetables, than for hidden ingredients such as sugar, oils or wheat. Based on a recent survey conducted for International Labor Organization[4] (ILO) and International Finance Corporation's[5]

[2] For more information on Kiva, please visit www.kiva.org.
[3] For more information on (RED), please visit www.joinred.com.
[4] ILO is the tripartite United Nations agency that brings together governments, employers and workers from its member states in common action to promote decent working conditions throughout the world. ILO establishes international labor standards and seeks to ensure those standards are respected in practice as well as principle.
[5] The International Finance Corporation is a member of the World Bank Group. IFC provides investments and advisory services to build the private sector in developing countries

Better Work Programme, food retailers tend to monitor labor conditions on as far back in the supply chain to when their brand name is affixed to the product[6]. Issues further down the supply chain (e.g. on the farm) pose less of a brand reputation risk and are more challenging to influence. Therefore, few retailers monitor these nodes of the supply chain.

Where global brands can play a role in promoting more sustainable farm-level programs is in convening stakeholders and supply chain actors to overcome operational challenges and pursue opportunities that benefit all stakeholders: employers, merchants, processors, trade associations, labor and social organizations, appropriate governmental ministries and consumers.

UNDERSTANDING THE COMPLEXITY OF SOCIAL ISSUES

When designing a sustainable agriculture program, environmental benefits can often be realized through the application of better management practices such as integrated pest management, no-till, and water conservation, to name a few. While mainstream adoption remains a challenge, environmental solutions are, in general, better understood than solutions for more complex social issues.

Farm workers and small-scale farmers are the backbone of agricultural production in much of the world. Yet, these people often work under demanding conditions and have limited opportunity to better their lives. Seventy-five percent of the world's poorest people live in rural communities, many of who depend on agriculture for their livelihood[7].

Social issues in agricultural settings relate to both working conditions and socio-economic factors. Common issues throughout agriculture include child labor, migrant labor, forced/bonded labor, dangerous working conditions, discrimination, and lack of freedom of association. Some of these issues are

[6] Ergon Associates Limited, May 2008, *Better Work – African Agribusiness, Draft Scoping Report.*
[7] Ayres W., McCalla, A., No date. *Rural Development, Agriculture, and Food Security*.

subject of core labor standards established by the ILO that form the foundation for its Decent Work program.

Despite the fact that the ILO's standards have been recognized in a number of countries, many of these countries lack provisions to ensure compliance. Limited protection is not the only challenge facing farm workers. Economic factors keeping people in poverty include: high input prices, low yields or crop failure, delayed payment, unaffordable interest rates, product spoilage, and lack of access to a global market.

By looking at the root causes that create poor working conditions in both formal employment and small-scale settings, it is easy to recognize the correlation between economic standing and social well-being. For example, if a farmer's income increases he might be able to end a cycle of indebtedness. This may lessen his dependence on unfair employers or buyers, or allow him to send his children to school because he doesn't need them to work to earn additional income.

Capacity building programs are recognized as more suitable, scalable and sustainable solutions for these issues. However, this is likely not enough. Initiatives should collaborate with local organizations and governments to ensure proper enforcement of labor laws, strengthening needed infrastructure, providing affordable schools, and marketing local products in a global supply chain.

CHALLENGES OF CERTIFICATION PROGRAMS

Certification programs play an important role in the advancement of sustainable agriculture. They can promote better farming practices and business transactions, benefiting the environment and/or community. However, few, if any, certification programs have reached any significant scale.

While successes exist, some disadvantages of certification programs include:

- Governments and/or industry associations may not support a certification program that infers that the rest of the subject crop is “less good.”
- Certification systems are resource intensive and often force businesses to work outside existing sourcing models.
- Cost to become certified can disadvantage small-scale producers.
- Supply chain actors are reluctant to support programs that require additional documentation and/or processing.
- Price premiums may become amplified as they get passed along throughout the supply chain.
- Farmers are often reluctant to undertake the risks associated with adopting what might be quite radical changes in some of their farming practices.
- Few certification systems have been able to demonstrate measurable improvements in key social or environmental indicators.

EMERGING SUSTAINABLE AGRICULTURE INITIATIVES

Recent efforts to promote sustainable agriculture aim to make positive changes on a mainstream scale. Many of the objectives focus on key environmental, social and economic impacts rather than strict prohibition of inputs or prescribed practices.

Complementary nature of certification and non-certification programs

Emerging sustainable agriculture initiatives will likely face similar challenges to certification systems but the less restrictive and resource intensive programs (e.g. certification requirements, etc.), may present an opportunity for initial engagement by farmers who would otherwise avoid changing their behavior. These initiatives can thus have the potential to act as a stepping-stone for farmers interested in organic or Fair Trade production, but who are currently unwilling to take on the additional risk.

Fair Trade and organic programs can not only co-exist with other sustainable agriculture initiatives but also complement each other resulting in mutually

beneficial impacts by reaching more farmers across the globe. These programs educate farmers on alternative and more sustainable farming practices and promote and/or facilitate improved livelihood (i.e. higher net income).

At the same time, all sustainable agriculture initiatives send complementary messages: safe farming practices and equitable access to the global market are possible and will result in improved livelihoods of the farmers and their communities.

It should be noted, however, that there are disadvantages of sustainable agriculture initiatives, including the cost, time and other resources that must be invested during the design and implementation phases. Additionally, most initiatives are for a single crop, limiting its applicability and scale. These two limitations together can create a large burden on companies that depend on multiple crops in their business.

Overview of some emerging sustainable agriculture initiatives

There are numerous initiatives aimed at improving environmental and/or social conditions in agriculture supply chains. This section shares highlights from four commodity roundtables that were the brainchild of WWF (formerly World Wildlife Fund): Roundtable for Responsible Palm Oil, Roundtable for Responsible Soy, Better Cotton Initiative, and Better Sugarcane Initiative.

- Most of the emerging sustainable agriculture initiatives focus on producing measurable improvements through application of principles and criteria.
- The roundtables are inclusive efforts that facilitate collaborative partnerships amongst all stakeholders groups to make commodity production more sustainable, efficient and profitable.
- They seek to make ***measurable*** improvements in key environmental and social impacts of agriculture production by promoting better growing practices across the industry.

- A few initiatives, such as Better Sugarcane Initiative and Roundtable for Sustainable Palm Oil, extend to processing.

DESIGNING A MAINSTREAM AGRICULTURE PROGRAM

When developing a mainstream agriculture program, there are three stages of development over 20-25 years: start up, expansion and normalization.

Start up

This stage takes approximately five years and focuses mainly on activities in the pilot regions. Active participation and support of progressive and committed merchants and retailers as well as other supply chain actors is required. Financial contributions from the private sector (e.g. retailers) are needed to support farm level activities. It will be important to build credibility and collect data that contributes to a compelling business case for engagement of farmers, government involvement and support by other value chain actors.

Expansion

Additional regions and value chain members are engaged over the course of ten to fifteen years. Retailers and merchants still need to be proactive. Financial support from the private sector is still needed to support farm level activities. Government support will also be important. Data (e.g. impact indicators) and other business benefits will increasingly tell a convincing story for farmer participation and industry support.

Normalization

Further expansion to new regions takes five to ten years. Sustainable product will flow into already existing systems without much direct engagement from actors. While retailers' financial support is still needed, they can disengage from supply chain detail and rely on buying through normal specification and sourcing channels. Farmers' participation, industry and government support all expand as the program grows.

Additional findings from these roundtables include:

- Local stakeholders become engaged early in the design phase.
- It is important to understand supply chain members' incentives and obstacles for their participation.
- They provide a reasonable entry-level and promote continuous improvement over time.
- They capture baseline data in a credible and replicable manner.
- They facilitate producer engagement by providing capacity building and/or low-cost verification opportunities.

Creating supply chain systems to support sustainable agriculture

Impactful programs should provide business benefits to various supply chain members. Improved working conditions, along with more efficient, transparent and fair supply chains, can lead to improved productivity that benefits farmers and their communities as well as global brands. Improving relationships and communication between key supply chain participants can unearth opportunities to improve working conditions and build a more efficient and fair supply chain. While this requires major brands to take the lead to affect global supply chains, small- and medium-sized companies can also make significant contributions.

These initiatives use / intend to use one or more of three general supply chain systems: physical segregation, mass-balance, and book-and-claim. A description and requirements of each system is provided in Table 1.

Table 1

System	Description	Requirements
Physical Segregation	Certified products are physically segregated from non-certified products at every facility along the supply chain.	• Documentation must accompany the certified product at all times. • Each facility is usually certified to manage certified product. • Cleaning of equipment between the

		processing of non-certified and certified products.
Mass-Balance	The amount of certified product sourced and sold by each supply chain actor is tracked. However, the certified product and sustainable certificates (e.g. documentation that represents the sustainable attributes embedded in the certified product) does not need to be sold together. The certified product does not need to be segregated from non-certified products.	• Sustainable certificates must match the quantities of the certified product that it represents (i.e. there should be a system to ensure proper accounting such that only qualified amounts of sustainable certificates are traded). • It is advisable that all facilities trading sustainable certificates and/or products are audited.
Book-and-Claim	Certified products are completely decoupled from sustainability certificates. Certified product will flow through the supply chain just as conventional product does. Sustainable certificates will be traded and by an independent Issuing Body.	• Establishment of an independent Issuing Body is required. • Auditing of the issuing body and/or any other traders of sustainable certificates is recommended.

Physical segregation

Physical segregation: certified products are physically segregated from non-certified products throughout the supply chain. Physical segregation can use two differing systems:

- *Full 'track-and-trace' systems.* Track individual products (e.g. postal services or bananas) and focus on tracing products back to an individual farm or plantation.
- *Bulk-commodity approach*. Physically segregate certified products from non-certified products (though it does *not* aim to provide traceability back to the origin of the product). The main goal here is to ensure that certified and non-certified products are not mixed in the supply chain.

<u>Advantages</u>

- Physical segregation is preferred by many stakeholders because of its

transparency and credibility.

Disadvantages

- Additional investments need to be made in the logistical infrastructure. The financial viability of a physical segregation may only be economic at high volumes of certified produce.
- Requires a significant investment but will also take considerable time to materialize.

Examples

- The soybean market where genetically modified and non-genetically modified are kept physically separated throughout the supply chain.

Mass-balance

The mass-balance approach has a lot in common with a book-and-claim system although is often perceived very differently by stakeholders. As in a book-and-claim system, there is no physical segregation of sustainable from non-sustainable product throughout the supply chain. However, in a mass-balance system, each company keeps track of the amount of sustainable product it sources and the amount of sustainable product it sells — in which each company can never sell more sustainable product than it sourced. In other words, while there is no physical segregation of sustainable from non-sustainable product, there is *administrative* segregation of sustainable product from non-sustainable product in a mass-balance system.

Advantages of a mass-balance system

- Because no physical segregation or cleaning of processing equipment is needed, the costs for a mass-balance system will be significantly lower than for a physical segregation system. However, each company in the chain does need to keep additional documentation on the incoming and outgoing amounts of certified product.

- No physical infrastructure investments are required.
- Credibility of a mass-balance system is expected to be lower than that of a physical segregation approach but higher than a book-and-claim system.
- Note that in a mass-balance system there is no guarantee that the physical material that ends up in the product actually originates from a sustainable farm. The difference in credibility described here is, therefore, largely one of perception.

Disadvantages

- From a credibility point of view it may be desirable that all parties in the supply chain participate in a mass-balance system. However, from the market players' perspective this may be more burdensome than a book-and-claim system.
- Because mass-balance does not involve physical segregation it may still be considered as lacking credibility by certain stakeholders.

Example

Forest Stewardship Council (FSC) credit system where a sawmill processes both FSC and non-FSC-wood. The sawdust resulting from the process can be sold as FSC-mixed using a mass-balance system.

Book-and-claim

The central characteristic of a book-and-claim system is that the trade in physical products is completely decoupled from the trade in sustainability certificates. For example, sustainable product certificates are traded between farms and retailers/others. The farm receives a unique certificate for each unit of sustainable product it adds to the market. The certificate holds information on the sustainability of the farm (e.g. that it is certified by a certain standard) and may also contain sustainability data. A centralized Issuing Body issues this certificate. The farm can sell this certificate to a retailer. When the retailer brings a certain amount of sustainable product on the market and claims this originates from a

sustainable farm, the retailer needs to submit the certificates to the Issuing Body. The certificates are said to be ‘redeemed’ and cannot be claimed again.

Advantages of a book-and-claim system

- The trade of sustainability certificates does not distort physical product. In other words, the trade in physical sustainable product can continue unchanged which has clear benefits to market players.
- An increase in demand for sustainability certificates leads to an increase in sustainable production. Thereby, a book-and-claim system serves the purpose of increasing sustainable production.
- With sustainability certificates bought directly from growers and decoupled from the physical product, chances are better that the added extrinsic value of sustainable production actually ends up with the grower.

Disadvantages of a book-and-claim system

- Suffers from the following credibility concerns with stakeholders:
    - There are no guarantees that the sustainable material used for products actually originates from a sustainable farm.
    - May lead to double counting: e.g. several parties make the same claim on a lot of sustainable product. Therefore, it must contain a rigorous control with unique certificates to prevent double counting.
- Because of the need for a comprehensive design with a credible Issuing Body, setting up a book-and-claim system will require both time and high start up costs. At small volumes it is not considered a very economic system.

Example

- Used in the electricity sector for the trade in electricity from renewable energy (renewable energy certificates).

CONCLUSION

Alternatives to certifications exist in promoting better social and environmental conditions in agriculture. Successful programs should be designed for mainstream scale and effectively address root causes of social issues. Achieving mainstream scale requires support from local producer organizations and engagement by the industry as a whole. This demands genuine engagement by all key stakeholders early in the program design and throughout its implementation. Understanding the different systems and local context is a very important first step toward the important changes that we all want to see made.