COTTON AND THE ENVIRONMENT: WHAT IS SUSTAINABILITY?

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Abstract

With today's cotton production methods, particularly those used by US producers, cotton can be considered sustainable regardless of the definition one uses to describe sustainability. From one standpoint, the mere fact that cotton as a fiber has served mankind for over 5000 years with documented first use for fishing nets is proof alone of its sustainability. And the fact that cotton has been, and remains, a viable source of income throughout the world for millions of small and large producers alike for hundreds of years is a testament to its economic sustainability. Yet, focusing solely on a single attribute of sustainability is counter to the true intent of sustainability as defined by both John Elkington who coined the term 'triple bottom line' in describing the economic, social and environmental components of sustainability, and the Brundtland Commission, in its draft of the first known reference to sustainability: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.". The USDA describes sustainable agriculture as "a way of practicing agriculture which seeks to optimize skills and technology to achieve long-term stability of the agricultural enterprise, environmental protection, and consumer safety..." and in doing so, encompasses the economic, social and environmental components without dictating a specific set of growing practices. However, it is apparent that agriculture impacts the environment through its requirement for natural resources, but owing to technology and better management practices agriculture's environmental impact has lessened considerably over the years. The cotton industry's efforts in particular have resulted in marked reductions in natural resource use. For example, compared to 20 years ago, growing a pound of cotton today takes half as much irrigation water, energy expenditures are 66% less, there has been a 25% decrease in land use %, and GHG emissions have decreased by 33%. This workshop will provide context, educational materials and examples to illustrate and communicate about the innovations and management practices that have enabled cotton producers to provide food, feed and fiber for an ever-expanding population while simultaneously demonstrating a consistent and marked reduction in its environmental "fieldprint".