

INTERNATIONAL WORKSHOP ADVANCES IN CLEANER PRODUCTION

"KEY ELEMENTS FOR A SUSTAINABLE WORLD: ENERGY, WATER AND CLIMATE CHANGE"

Contributions of Environmental Accounting in Emergy for Understanding of Soybean Production System on the Perspective of Sustainable Agriculture

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Abstract

Brazil is considered the world's granary because of its territorial extension and the possibility of transforming into agricultural land. In this context, the most outstanding commodity produced by the country is the soybean crop. About 21 million hectares of soybean are planted and approximately 61 tons are produced (harvest 2008-2009). The introduction of this Asiatic species in Brazil was recent, about 120 years ago, and so was its genetic and transgenic improvement. Due to these processes and advanced technology, improved knowhow of nutritional demands and greater access to information by the farmers, Brazil has stood out in the international scenario as a region with excellent production and productivity indices. Currently, other important issues have appeared that need to be managed such as the principles and methods that guide this type of production, the economic, social and environmental sustainability as well as the costs and environmental impact involved in obtaining these indices. The objective of this article is to discuss some examples of soybean production using the environmental accounting methodology and applying the Emergetic Ternary Diagram.

Keywords: Sustainable Agriculture; Sustainable Soybean; Emergy Accounting; Emergy.