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INTERNATIONAL WORKSHOP  
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“CLEANER PRODUCTION INITIATIVES AND CHALLENGES FOR A SUSTAINABLE WORLD”

## Evaluating the Global Productivity of a Medium Size Agribusiness

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### Abstract

A medium size agribusiness located at São Sebastião do Paraíso, Minas Gerais, Brazil, is evaluated in order to determine the effects of the integrated production process in its productivity. Results are compared with those obtained for agribusiness without integration. The farm is composed by an integrated production of corn, eggs, pigs and milk. Emergy accounting is applied to evaluate the energy and materials flows driving the production process. The farm total emergy is  $1,23 \times 10^{18}$  seJ/ano. The values obtained for eggs, pigs and milk are, respectively, 24, 5 e 6 times higher than the results observed in literature for traditional production systems. Global productivity values for the three by-products are indicate that integrated production processes are more environmentally efficient.

**Keywords:** *emergy; agribusiness; transformity; environmental efficiency; global productivity*

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