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Energy Balancing/Optimization in General, with Special Emphasis on Crop Production

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Message from the Guest Editor

Crop production is an energy-intensive process. Consumption of energy depends on several factors, including but not limited to soil nutrients, soil moisture, and weather pattern. Nutrient content in soil, specifically amount of N, K, etc., plays a vital role in determining the amount of fertilizer to be used, while soil moisture and weather pattern determine irrigation. Other factors such as crop rotation and type of crops produced in a farm too affect the quality of soil. Energy is also consumed in the cultivation of land, transportation of various products and irrigation, and harvesting. There are ways to recover a portion of energy through effective utilization of farm waste through biomass. Minimizing energy losses can also be helpful in energy balancing/optimization. Exergy analysis can help to understand energy losses and their minimization from principles of thermodynamics.



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Special Issue



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