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ASSESSING ENERGETIC AND AVAILABLE FUEL DEMANDS FROM A SOYBEAN BIOREFINERY PRODUCING REFINED OIL, BIODIESEL, DEFATTED MEAL AND POWER

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Highlights

- A soybean biorefinery was simulated and assessed with two cogeneration systems
- Defatted meal, refined oil and biodiesel in different proportions were produced
- Fuel availability, energetic demands and different market situations investigated
- Straw or a combination of different fuels could provide process energetic demand
- Up to 0.95 kWh/kg of processed soybeans could be produced as electricity surplus

Abstract

Soybean processing facilities can produce various products, readily fitting in a biorefinery concept. In addition, they can also produce their own energetic needs by using their own residues and/or products. The aim of this study was to assess the relationship among the availability of fuel, process energetic demands and different market situations in a soybean