

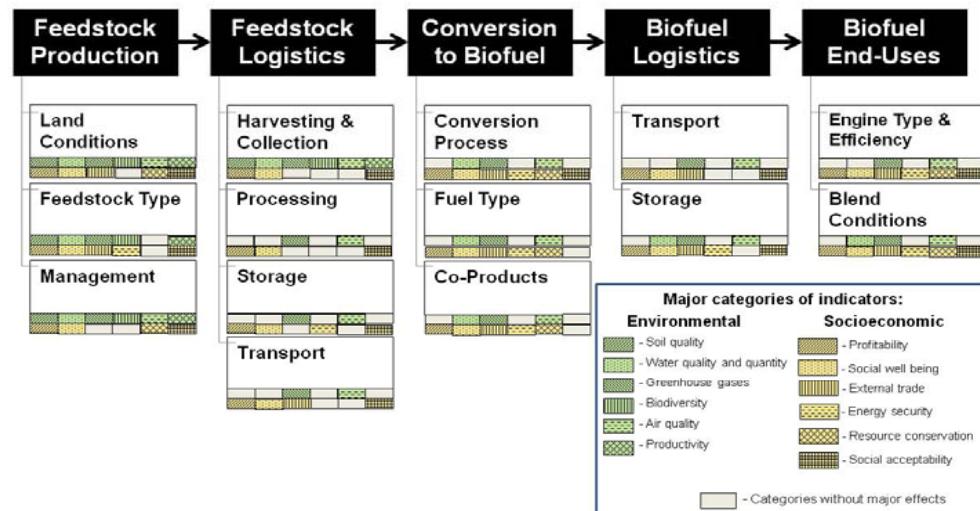
ASSESSING EFFECTS OF BIOENERGY CHOICES

V.H. Dale, L.M. Baskaran, M. Davis, M.E. Downing, L.M. Eaton, R.A. Efroymson, C.T. Garten Jr., N. Griffiths, M. Hilliard, K.L. Kline, H.I. Jager, M. Langholtz, A.C. McBride, R. Middleton, P.J. Mulholland, G. Oladosu, E.S. Parish, P.E. Schweizer, A. Sorokine, J.M. Storey, and N. Thomas

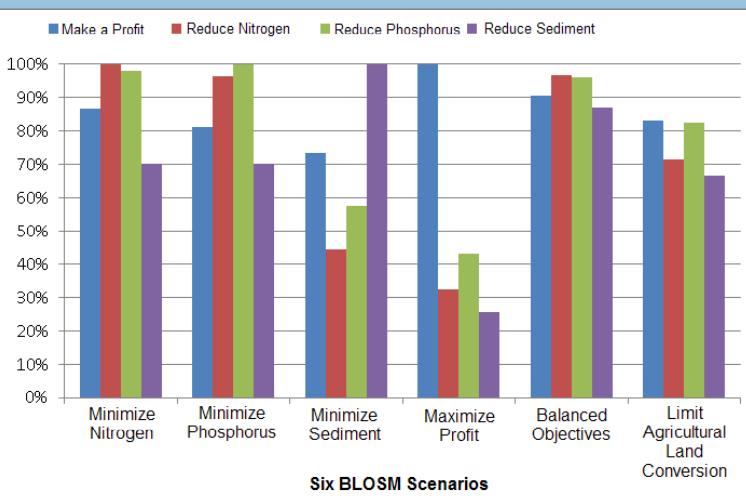
Center for BioEnergy Sustainability - Oak Ridge National Laboratory - <http://www.ornl.gov/sci/ees/cbes/>



Depiction of Where Categories of Sustainability Indicators Experience Major Effects within the Biofuel Supply Chain



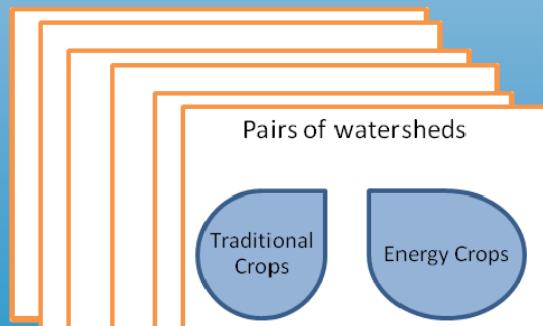
Exploring Tradeoffs Between Multiple Indicators



- Our Biomass Location for Optimal Sustainability Model (BLOSM) explores landscape design scenarios.
- Initial results indicate that multiple objectives may be achieved simultaneously.
- Results are based on producing 65K tons of switchgrass from 1.3% of the Lower Little Tennessee watershed.

Testing the Indicator Suite

Watershed Experimental Design



Data collected on socioeconomic and environmental measures of sustainability

- Indicators should be tested in a variety of systems.
- Context-specific knowledge is imperative.
- Paired watershed experiments are ideal.
- Our university partners are collecting field data.