

## **Processing of agriculture and food wastes to recover energy, nutrients and clean water**

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Life Cycle Analysis (LCA) and TechnoEconomic Assessment (TEA) of a range of hybrid biological and thermochemical processes for treating wet agriculture and food wastes to recover energy (biogas and biooil), nutrients and soil amendments (hyrdochar and NPK salts) and clean water. Current activities include developing and validating strategies for more sustainable management practices for a range of wastes including dairy and poultry manure, cheese and yogurt whey and conventional food wastes using hybrid combinations of hydrothermal liquefaction and gasification, pyrolysis, anaerobic digestion, membrane distillation and bioactive adsorption. Case studies include dairy and poultry wastes from large farms in NY State and wastes from Cornell's two dairy farms and campus food operations.