RENDERING: THE GREENEST OPTION

A Comparison Of 3 Alternatives For Large Scale Processing of Meat and Meat By-Products

	RENDERING	INDUSTRIAL COMPOSTING	ANAEROBIC DIGESTION
GREENHOUSE GAS PRODUCED (*per 1000 kg of meat and meat by-products processed)	200 kg GHG* (* Greenhouse Gas) RENDERING avoids at least 90% of potential greenhouse gas emissions compared with industrial composting	2500-4000 kg GHG*	60-500 kg GHG*
END USES	Converts 99% of meat & meat by-products into ingredients for animal feed, biofuel, fertilizer, industrial and consumer products Recovered resources have a HIGH ECONOMIC VALUE $$$$	SMALL FRACTION of meat and meat by-products can be recovered as fertilizer	Recovered resources have relatively LITTLE ECONOMIC VALUE METHANE FUEL GAS FERTILIZER
BIOSECURITY & REGULATION	Established Industrial Process operating under and controlled by a CODE OF PRACTICE in line with federal regulations to control pathogens & ensure animal food safety Regulated to ensure safety of employees, the public, & the environment by STATES & the FDA, EPA, & USDA	DIFFICULT to destroy pathogens requires training and labor REGULATIONS on composting & anaerobic digestion vary from state to state NO CONSISTENT FEDERAL REGULATIONS on air emissions or wastewater.	To destroy pathogens requires STRICT TIME & TEMPERATURE CONTROL without this control, pathogens and environmental problems increase DRASTICALLY SEEPAGE CAN HARM people, animals, and plants
ENVIRONMENTAL SUSTAINABILITY	Although fossil fuel can be required to produce steam for heating, many renderers use their fat products to fuel boilers, increasing energy independence. Nearly all CARBON IS RETAINED within rendered products and reused rather than becoming GHG (C_4)	Low energy requirements but, 45-75% of the carbon in meat by-products is released as CO_2, and 4-20% is released as METHANE (CH_4) (with 25x the global warming potential of CO_2)	Low energy requirements BUT if digestate slurry is stored in open tanks greenhouse gas emissions are multiplied by 10x

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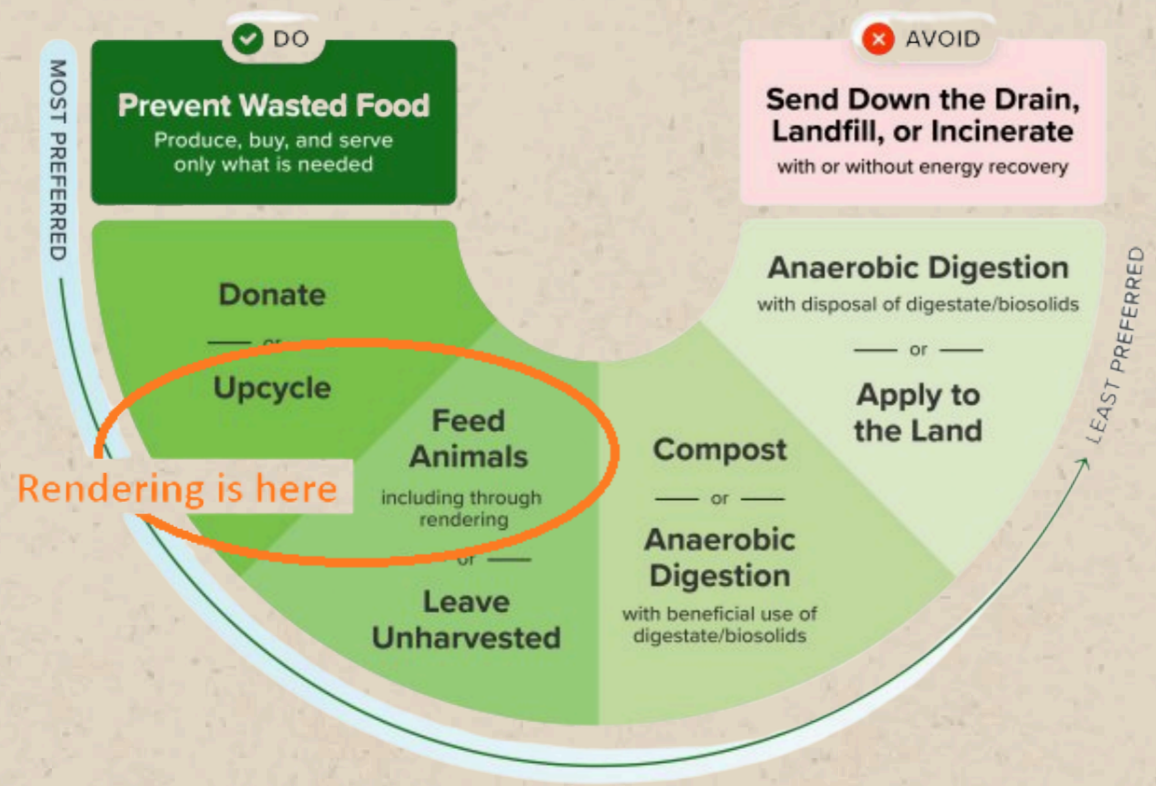
EPA

Wasted Food Scale

How to reduce the environmental impacts of wasted food



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