Opinion Article

Technical Feasibility of Waste Cooking Oil and its Recycling Methods

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DESCRIPTION

The production of biofuels from Waste Cooking Oil (WCO) is attracting the attention of governments around the world amid the growing energy crisis and environmental problems. Government incentives and good recycling practices can effectively promote WCO recycling. Bio-companies can either carry out the recycling themselves or outsource it to independent recyclers, and the government can provide subsidies to the bio-companies or recyclers. Scrap tires have become a serious problem due to the increasing car sales worldwide. The practice of storing and disposing of these scrap tires poses serious environmental problems. Instead of throwing this waste away, it is important to recycle it to avoid pollution and create new, affordable goods.

The careless disposal can have a significant negative impact on the environment. The low recycling rate of mobile phones takes advantage of the fact that increasing recycling rates is essential to reduce negative economic and environmental impacts. As game theory is used to uncover the strategy that improves the current recycling rates for used mobile phones using detailed static information based on current practices of individuals and recyclers. Governments, organic companies, and recyclers are all involved in this reverse supply chain, using principal-agent contracts to determine the optimal subsidies and recycling modes, taking into account recyclers' asymmetric recycling cost information. Consider your approach. Analyzing and comparing various subsidies and recycling strategies, BT's case is that the government should subsidize organic companies instead of recyclers, and organic companies should hire recyclers to recover WCO. Additionally, all three parties are more likely to accept his BT if the recycling cost is relatively low. Finally, information asymmetry reduces the total amount collected and reduces the efficiency of the supply chain.

In the case of markets, government policy can be enforced through reward and punishment mechanisms. In addition, under the ideological guidance of game theory, a pricing model for the recycling of used mobile phones based on best-response dynamics such as search, variable neighborhood search, and contribution increase. In addition, this model can to some extent promote the opportunities and initiatives for customers to choose to recycle their mobile phones.

The process consists of selecting a combination of several different steel scraps with unknown contaminant content to produce new steel. Contaminant content can only be measured after the scrap combination has melted. This allows us to draw conclusions about the contaminants in various scrap piles. Production costs must be minimized while ensuring high product quality by limiting the maximum amount of contaminants. Dual-control formulations allow us to achieve the best search-and-exploitation compromise between reducing uncertainty of the problem under investigation and minimizing costs.

Specifically, the double effect is a result of considering the uncertainty of future contaminants depends on the choice of scrap in the forecast. Implicit formulations indirectly facilitate uncertainty reduction *via* the effect of active constraints on the target, whereas explicit formulations add a heuristic cost to uncertainty to reduce active encourage exploration. We compare formulations through numerical simulations of a simplified representative industrial steel recycling process. The results demonstrate the superiority of the two dual formulations compared to robust but non-dual formulations.

CONCLUSION

Human societies develop rapidly through the advancement of technology; however, with these advancements, many problems are emerging. The study of e-waste has become a major problem around the world. Second-hand and unused mobile phones are a big part of globally generated e-waste. If these devices are properly recycled, they can generate substantial economic and resource value.