Both new and proved processes are needed for the rapidly developing art of waste processing to meet difficult economic and environmental requirements. As the latter criteria are also changing rather rapidly, a process that may not be economical today, or technically mature, may lead to success in the years ahead.

Roller crushing as an aid to compaction of mixed waste was investigated at the University of Wisconsin, both experimentally and by engineering mathematical mechanics. The paper reports the forces in the crushing of individual cans and bottles, which is fundamental to future tests and studies of layers of mixed materials. The research has possible application to packer trucks, baling, landfilling and processing generally.

Carefully controlled combustion tests reported by Monroe and McKee show the relations between nitrogen in waste fuels and the emissions of nitrogen oxides in the exhaust gases of incinerators. The tests showed that NO\textsubscript{X} did not increase rapidly with nitrogen content of the fuel, but was consistent with calculated thermodynamic values. While mixed municipal waste contains only about 0.5 percent nitrogen, some industrial wastes from chemical processes may contain considerably higher amounts.

Kumar and Kumar have suggested the production of methane from municipal wastes by the action of anaerobic bacteria, as is presently practiced for sewage digestion. Their paper is introductory and does not present the technical difficulties and economics for producing fuel gas of marketable quality. As evidenced by numerous discussions, the same basic idea has occurred to others, and experimentation is underway at several laboratories. Among the chief deterrents are long holding time, concurrent production of CO\textsubscript{2} and H\textsubscript{2}S, poisoning of the bacteria and limited gas yield.