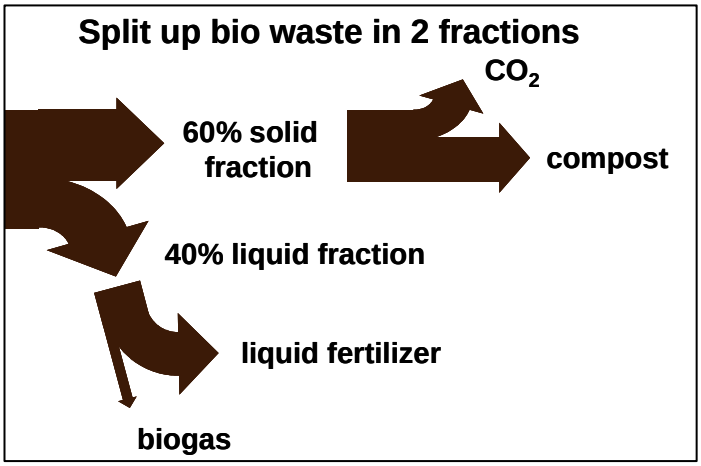
Cost effective solutions with partial stream digestion

Martin Mayer, Komptech GmbH, Kühau 37, 8130 Frohnleiten, Austria,
m.mayer@komptech.com

In many areas of the world kitchen waste and yard waste is collected in one waste bin and is commonly known as source separated organic house hold waste. As both, the yard and the kitchen waste is made up of organic this collection system is useful, but as far as the treatment technology is addressed, this jointly collection creates problems.
Yard waste is normally a mixture of grass, dry leaves, woody material from tree cut and other organic form the garden, the ratio of the single components depend mainly on the season and changes a lot throughout a year. The dry matter content of this waste stream is high, and due to much bulking material easily to compost. Normally the compost quality is high as the input material is very clean.
Kitchen waste is made up of organics from the food preparation, food residuals and other organics coming from the kitchen. The dry matter content is low with nearly no bulking material and with a high share in contraries like plastic, paper, metals, mainly the food packaging. Due to fat and carbohydrates the biogas potential is very high.
Thus the idea of the cost effective solution with partial stream digestion is to divide the waste into a stream perfect for anaerobic digestion and in a stream perfect for composting.



The advantage of this system is that the wet waste does not affect the composting properties, whereas the bulking material is not brought to the biogas plant. Thus the size of the composting facility and the anaerobic digestion plant can be optimal together with an optimal output quality in compost, biogas and liquid fertilizer.
This system is not only a functional tool for new plants, but what is more existing plants can be updated. So troubles with the neighbourhood by odour emission, poor compost quality and low acceptance can be avoided together with optimized factory management.