



The University of Georgia

Cooperative Extension Service

College of Agricultural and Environmental Sciences / Athens, Georgia 30602-4356

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PROCESSING TIP . . .

DETERMINING PLANT EFFICIENCY BY MEASURING PRODUCT LOSS IN WASTEWATER

In a recent survey of wastewater treatment processes sponsored by the U.S. Poultry and Egg Association it was observed that further processors producing breaded/battered fried products generate several tractor trailer loads of DAF material each week. The Dissolved Air flotation (DAF) skimmings are normally hauled many miles to land fill or land application sites.

A 40,000 pound trailer load of DAF containing 25 percent solids represents 10,000 pounds of dry weight mixture consisting of flour, cooking oil, and meat lost by the processor. A further processor hauling a truckload of DAF per day is paying to dispose of 25 tons of product each week rather than putting it into the box for sale. By incorporating this loss data into management data to measure process efficiency those operations which lose product into the wastestream can be studied and improved.

- Is flour leaking from the equipment and not being incorporated into product? Can this be improved?
- Is excessive cooking oil being used? What is a production goal for oil used to produce a particular amount of product? A wastewater clarifier was observed to contain 22,000 gallons of cooking oil. What types of process controls would be needed to prevent this loss?
- What is the meat content of the DAF skimmings? How much meat is lost to the wastewater stream?

The previous 3 bullets are examples of management that could be questioned and improved by studying DAF content. Many processors see wastewater treatment as a necessary process to meet

PUTTING KNOWLEDGE TO WORK

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environmental requirements. However, many do not see the connection between wastewater data and process efficiency. Use of wastewater data to determine process efficiency can be a beneficial management tool to increase process efficiency, reduce wastewater DAF and increase the company's bottom line.

A handwritten signature in black ink, appearing to read 'W.C. Merka', written in a cursive style.

William C. Merka
Extension Poultry Scientist

Extension County Coordinator/Agent

“Your local County Extension Agent is a source of more information on this subject.”