Pressor® Optimization Case Study

Application
Pork Rendering

Situation
A long-term client with a four press operation reached out to The Dupps Company to improve the press results from an evaporator cooking system. The feed is a notoriously hard to press, soupy material with a large amount of fines. Due to varying protein and fat percentages in the feed, coupled with variable feed rates, the customer was struggling to deliver a consistent finished product. The client came to Dupps with certain goals to improve their press operation. The client stated that their three primary goals were to:

- Reduce the residual oil in the meal
- Reduce maintenance cost
- Increase throughput

Action
In response, Dupps conducted a customized one week Pressor Optimization Study. The Dupps field service team systematically reviewed the pressor configurations and made multiple changes that allowed the client to achieve all their goals.

Results
After completing the study and analyzing the results, Dupps was able to reduce the fat content in the meal by 1.5 percentage points, a 13% improvement. Even more importantly, meal and fat throughput was increased by 38% at the same time. The customer was very pleased with the results, and realized a fast and substantial payback on their nominal investment in the Pressor Optimization Study.

	Before Optimization	**After Optimization**	**Change**
Pressed Cake Throughput (lb/hr)	4,000 lbs.	5,520 lbs.	+38%
Pressed Cake Oil content	11.5%	10%	1.5% point decrease
Oil throughput (lb/hr)	3,673 lbs.	5,068 lbs.	+38%

As a result of the changes that Dupps made, the customer also achieved greater operational flexibility. For example, if the plant was capacity constrained and looking to grow, the plant could take more business without adding capital equipment. The increased throughput equates

to $640 added revenue potential per press hour at June 2018 meal and oil prices. If similar improvements were applied across all four presses at typical operating schedules, the customer could realize an estimated $16MM/year increase in revenue opportunity.*

Alternately, the plant could process the same amount of material with a three-press operation. In this case, the plant could save an estimated $55-60,000/year on maintenance and electricity costs,** while having an added layer of protection with an idle press available should operating conditions change in the future.

While your results are likely to be different since all rendering operations are unique, Dupps can help you get the most out of your investment. To learn more about how we can help you, please contact your Dupps sales representative to get started.

**Calculation based on a typical 132 hour operation schedule*
*$640/HR *132 HR/WK x 50 WK/YR x 4 presses= $16,896,000*

***around $27,000 in electrical savings and $30,000 in maintenance cost savings*