



CASE STUDY

Pet food Smart Extruder Automation

Extrusion Process - Automated Ingredient Delivery

PROJECT SUMMARY

DAD'S Products Company — a \$60-million manufacturer of canned, dry, and soft-moist dog and cat food — looked to Bachelor Controls to minimize waste and reduce the load on the wastewater treatment facility.

CHALLENGE

Minimize slurry end-of-run waste to reduce the load on the wastewater treatment facility, including:

- Handle the wet additive independently rather than in a batch slurry, so that the slurries can be more generic across products & the more specific flavor & preservative ingredients can be metered at the extruder
- Automate the ingredient feed system & meter ingredients into the dry feed system at the extruder pre-conditioner
- Integrate the extruder formula setup/management system so that each formula must be linked to a product that has been defined & resides in the batching SQL Server database
- Add two additional Readco/Bonnot units to the core BCI AUTOPILOT® configuration & control all three units from a single operator interface
- Monitor process performance & quality

SOLUTION & BENEFITS

BCI reduced the amount of waste material going to the water treatment facility during change-overs, which produced higher yields, a major increase in production, and an "enormous improvement" in product quality, as well as eliminated set up errors, and increased efficiency between the company's batch process and its business planning functions.



Bachelor's ability to provide an installation-friendly panel should not be overlooked. The panel items were grouped, packaged and routed to enhance the installation effort. There are just a lot of little details that are a standard part of a Bachelor panel.

It's running fantastic! I love it! We've broken three production records in a row. We have seen over a 40% increase in throughput on average, and we've seen change-over times drop by over 65%.

— JEFF LANG, VICE PRESIDENT



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RESULTS

- ▶ 10% increase in yields
- ▶ More than 40% increase in production
- ▶ 66% improvement in change-over times, (from 90 minutes to 30 minutes)
- ▶ "Enormous improvement" in product quality (in terms of shape, color & consistency)
- ▶ Synchronized the batch systems' Batch Campaign Management & extruder's Formula Selection screens
- ▶ Eliminated extruder set-up errors against the dry mix product
- ▶ Equipment-independent master recipes, used across production lines, have increased manufacturing throughput & flexibility
- ▶ Data for each step of the production cycle are electronically collected, stored & displayed.
- ▶ Enabled engineers to access information, release batches, & make on-line changes to recipes from workstations across the network
- ▶ Created a real-time link between the company's batch process & its business planning functions.



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