

# Liquid Addition System Increases Bird Performance 2010



## **Customer**

Feedworks is a supplier of quality products and technologies to the agricultural and associated industries in the Australian, New Zealand and Oceania regions. Feedworks has partnered with Danisco in Australia to provide their food ingredients to the local market. Danisco is one of the world's leading producers of ingredients for food and other consumer products.

## **Challenge**

Baiada required the addition of several enzymes to their feed to increase the performance of their chickens.

## **Solution**

Feedworks partnered with Gordyn & Palmer to supply an enzyme liquid system for two pelleting lines spraying two liquids to the feed at the Baiada Beresfield feedmill. Gordyn & Palmer has also partnered with Feedworks to produce the liquid system for other major mills in Australia.

The liquid system is controlled via a standalone SCADA display in the control room connected to an Allen Bradley PLC on an Ethernet network.

## **Outcome**

The enzyme system was supplied as a turnkey solution with Gordyn & Palmer managing the electrical, automation and plumbing requirements. This included weighing platforms for the Enzyme IBC tanks, pumps and sampling panels.

Minimizing the downtime of the plant was the most important factor in the installation of the control system. An approach was adopted that minimized interruptions to plant production.

The control system is interfaced to the existing Genius batching system and Genius Auto Press controller on site via the Ethernet network and set points are received from the batching system with batch information. The system is also interfaced to Baiada's ERP system to record liquid usage per batch with theoretical and actual values. The customer saves time and money by linking the system to the batching process also eliminating manual handling and contamination.

The system is easily installed to existing post pelleting fats systems and is adaptable to all existing liquid application system types. Product flow at the Beresfield mill is determined by existing belt weighers on both pelleting lines. It measures and controls feed & enzyme flow rates to account for fluctuations from upstream processing equipment, changes in

manufacturing capacity, variations in feed bulk density & changes in enzyme characteristics. This results in accurate liquid application which meets the customers' expectations.

LINE 2 LIQUID ADDITION	
PHYTASE	XYLANASE
<b>OPERATION</b>	
<div style="display: flex; justify-content: space-around;"> <span><b>RUNNING</b></span> <span><b>RUNNING</b></span> </div>	
Belt Weigher Flow: <input type="text" value="12.00"/> tph	
TARGET FLOW: <input type="text" value="200.00"/> g/ton	TARGET FLOW: <input type="text" value="300.00"/> g/ton
ACTUAL FLOW: <input type="text" value="111.57"/> g/ton	ACTUAL FLOW: <input type="text" value="285.56"/> g/ton
<b>DOSING RATES</b>	
<input type="text" value="200.00"/> g/ton	<input type="text" value="300.00"/> g/ton
<b>PUMP PARAMETERS</b>	
Belt Speed: <input type="text" value="60.0"/> RPM	
CAPACITY: <input type="text" value="7.50"/> L/hour	CAPACITY: <input type="text" value="7.50"/> L/hour
PULSE - VOLUME: <input type="text" value="0.31"/> mL/pulse	PULSE - VOLUME: <input type="text" value="0.28"/> mL/pulse
PULSE - WEIGHT: <input type="text" value="0.34"/> g/pulse	PULSE - WEIGHT: <input type="text" value="0.33"/> g/pulse
<b>SAMPLING</b>	
<input type="button" value="OFF"/> <input type="text" value="0.00"/> gram	<input type="button" value="OFF"/> <input type="text" value="0.00"/> gram
<input type="button" value="CALIBRATE"/> <input type="text" value="0.00"/> gram	<input type="button" value="CALIBRATE"/> <input type="text" value="0.00"/> gram
DENSITY: <input type="text" value="1084.7"/> gram/L	DENSITY: <input type="text" value="1156.4"/> gram/L
<input type="button" value="SAMPLING TIME: 0.50 min"/> <input type="button" value="SAMPLING"/>	
<b>ALARM DELAYS</b>	
<input type="button" value="RESET"/>	
Slow / No Flow: <input type="text" value="0.00"/> sec	Slow / No Flow: <input type="text" value="0.00"/> sec
Tank Low Level: <input type="text" value="0.00"/> sec	Tank Low Level: <input type="text" value="0.00"/> sec
Spray Valve Off Delay: <input type="text" value="0.10"/> sec	Spray Valve Off Delay: <input type="text" value="0.00"/> sec
<b>USAGE</b>	
<input type="button" value="RESET"/>	
<input type="text" value="303.315"/> kg	<input type="text" value="575.536"/> kg

