

# Animal Feed

## Micro-Ingredients Additives System

### Overview

To design, manufacture, manage and install a purpose built micro-ingredients additives system which automatically weighs and transfers additives to mixers.

### Problem

The client's product range required a significant amount of micro-ingredients variations in each blend batch. This was previously completed by hand-weighing each micro-ingredient and then tipping them into the mixing process. The client wanted to take the human element out of the equation as it was labour intensive and showed miniscule, but significant differences between each blend batch.

### Solution

Working within the constraints of the existing plant which had to be kept running, GAME's system consisted of 10 stainless steel bins of which two could hold 1,000kg of ingredients, and the remaining 8 could hold 250/300kg of ingredients. Each of the micro-ingredients included in the batch mix were automatically weighed and discharged (on instruction from the automatic control system) into a central weigh hopper (mounted on 3 load cells), and then discharged and blown into the designated mixer through a 75mm blowline. On completion, the system automatically made up the next batch. Dust was minimized using a bucket filter and suction during filling, with reverse jet filters for the mixer top hoppers.

### Result

Up to ten different ingredients were stored and weighed automatically, one at a time for inclusion in the process and transferred to the process, as opposed to each ingredient being individually weighed and tipped into the process line manually.

As a result the ingredients weighments accuracy has reduced to 0.5%.

