

Dairyland MQA Case Study: Grain Particle Size

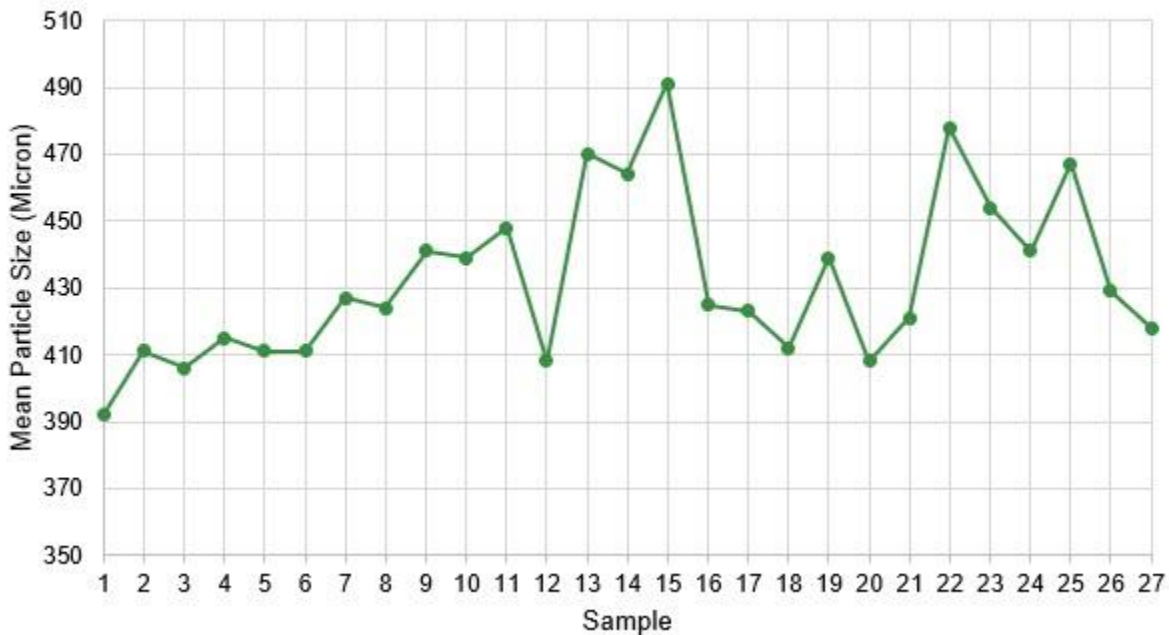


Grain particle size is the primary factor that dictates starch digestibility in both ruminant and monogastric animals. Grain that is not processed well enough results in slow or incomplete digestion and low feed efficiency.

Besides spot checks and troubleshooting, grain particle size analysis can be used as a process control measure. When used as routine process control, it illustrates the amount of variation that is expected when all systems are operating properly and quickly identifies when something has gone wrong. Changes due to equipment wear and tear, temperature, input speed, and corn properties can all be detected in a process control chart.

In the chart below, a mill quality assurance customer took routine samples for a year. With consistent testing, it was easy for the customer to identify increasing trends in particle size throughout the year and take corrective action when needed. This customer used the results to monitor when a sample measured over 450 microns. When that threshold was exceeded, they checked the hammer mill for wear and tear and were able to correct through equipment maintenance and adjustment.

Mean Particle Size Through the Year January - December



For more information regarding Dairyland's Mill Quality Assurance Program, please contact: [Sarah Fessenden](#), Product Manager – Feed Manufacturing (715-905-1372) or [Tyler Kappers](#), Stratford Lab Manager (715-391-1025).

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