

Using Cgrain Value™ for Size Measurements

Current size measurement methods

The standard method for size measurement, today, uses sieves with slotted holes. The technique is limited and only documents part of the sample, depending on which sieve sizes have been chosen. Only the thinnest side of the seed is measured this way.

Cgrain Value™ measures the size distribution of the sample regarding thickness, width and length. This makes it a better tool to determine the size and quality of the grain than when using sieving methods.

Unique mirror-design allows for correct measurements

Cgrain Value™ has a unique mirror-design that documents three views for every kernel and enables good measurements of the length, the widest and the thinnest side of the image.

Figure 1 shows the oat kernel orientated so that the thinnest side is shown in the side view.

Figure 2 shows the thinnest side of the kernel measured in the middle view.



Figure 1



Figure 2

Corrections for rotation of the seed can be done to describe both the thinnest and thickest side of the whole sample.

In conventional flat-bed systems with image-analysis, only the length and one measurement of the width of the seed is performed. This width measurement is often a measurement of the widest side, as it is dependent on how the seeds are orientated on the surface.

Large scale tests have been done on oats and barley with very good correlations between Cgrain Value™ and sieving.

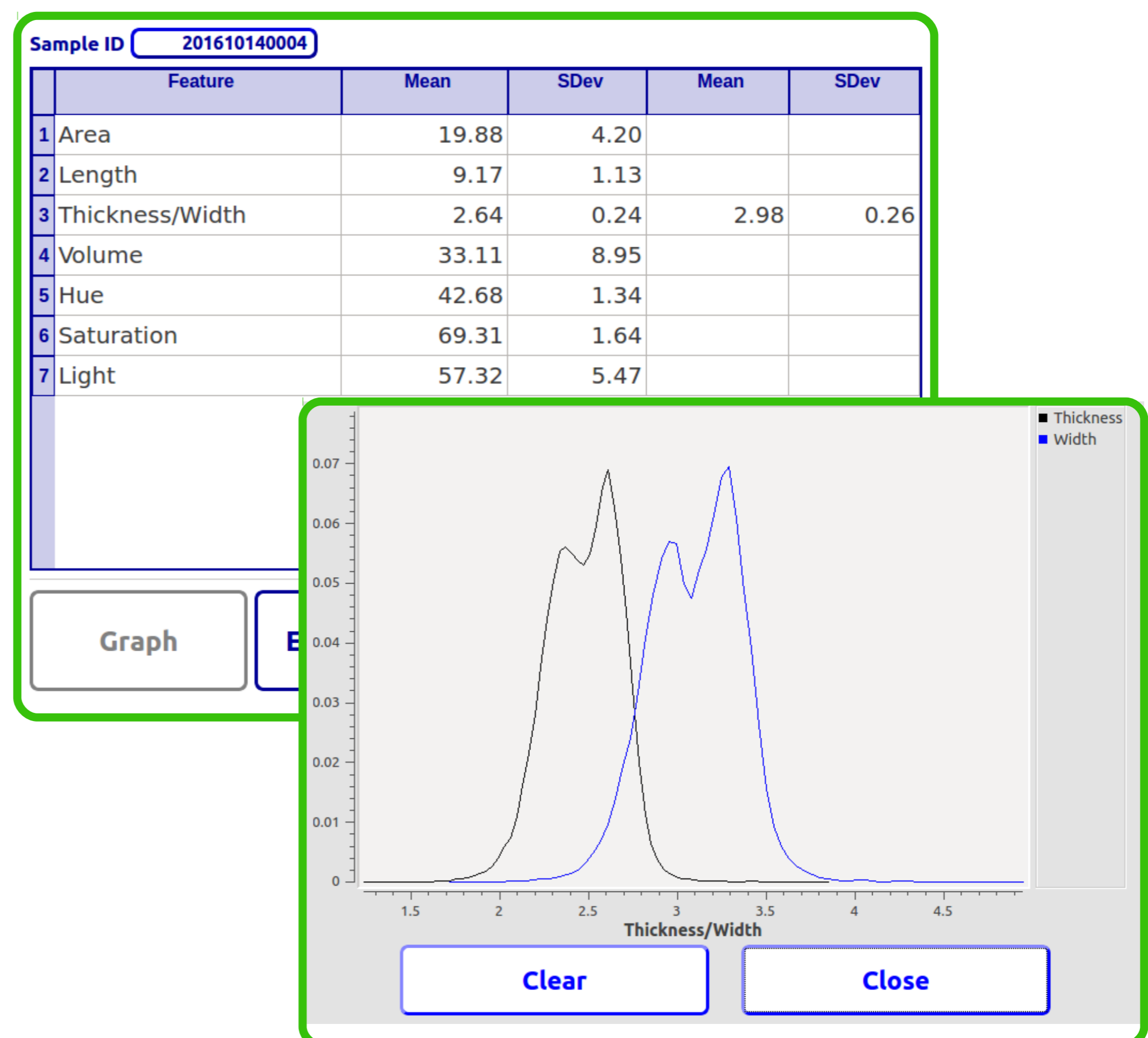
For more information, please visit www.cgrain.se
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Results depending on need

Results can be presented as a distribution of the whole sample in a diagram, as well as the sieving percentage over different levels, as seen in the pictures below.

Reference:	Oat sample	Seed Count:	13361	Weight:	500.00 g
Filtered As	Count	Percentage	Weight		
TKW	1000		37.42		
Sieving >2.0	13293	99.74	498.69		
Sieving >2.2	12923	98.04	490.22		
Sieving >2.8	3489	33.07	165.34		
Other	98	0.29	1.43		
Weed	0	0	0		
Foreign sum	53	0.46	2.28		
Naked Oats	907	5.09	25.47		
Oats	12303	94.16	470.82		

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Many quality defects analysed at once

Other quality parameters for grain can be analysed at the same time when using Cgrain Value.

- Foreign seeds
- Broken kernels
- Pink kernels
- Weed seeds
- Green seeds
- Size distribution/Sieving analysis