

Report on Testing for Broken Food Pellets

M. Pemberton October 17,2001



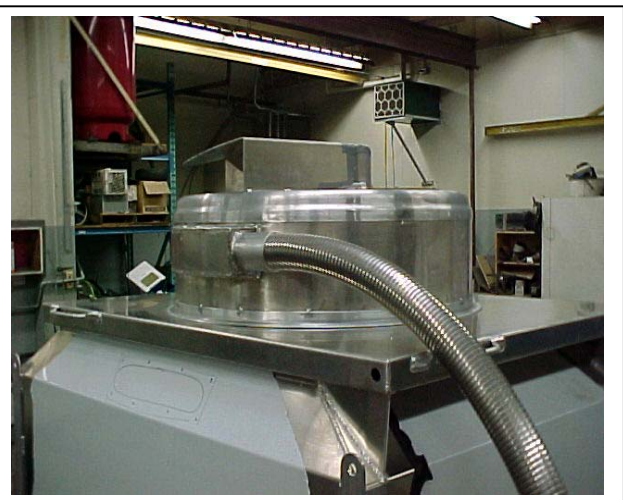
Test Set Up

The feed pellets were Moore Clark type size 11mm.

They were launched from an IAS X Positive displacement blower. The blower was powered by a direct drive 15 inch IAS blower with a 10HP electric motor, running at **3600rpm** and delivering air at a velocity 170ft/sec through a **100'** long 3" tube connected to a IAS Series 1000 **AeroSpreader™** with a X-Decelerator mounted on top.

Test Procedure

This test was conducted using three 25kilo bags of feed. One bag was used as a control and was passed only once through the system. The second bag made only one pass through the same delivery system. The third bag made three passes through the same delivery system to observe and record pellet integrity after each pass. Each time the particles and the pellets were carefully collected out of the hopper and screened with the particles collected and placed in sample bags for lab analysis.



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Summary and Conclusion

The control test consisted of weighing and sieving a randomly selected bag of 11 mm feed. This control bag determined a base line reading of 99.79% edible feed pellets with the remaining 0.21% indicating feed fines too small for fish consumption.

Summary

Two (2) separate bags of feed were used with each bag providing the following single pass run results:

Test #1	99.75% edible feed pellets 0.25% being feed fines too small for consumption
Test #2	99.44% edible feed pellets 0.56% being feed fines too small for consumption

One (1) separate bag of feed was used to provide a double pass run result:

Test #3	99.54% edible feed pellets 0.46% being feed fines too small for consumption
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One (1) separate bag of feed was used to provide a triple run pass run result:

Test #4	98.82% edible feed pellets 1.180% being feed fines too small for consumption.
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Conclusion

Based on the control base line, it can be concluded that there is no significant pellet degradation as a result of being air blown through a of 3 inch diameter piped feed delivery system along with being subjected to the effects of a 34 inch diameter cyclonic decelerator positioned on top of the pen side feeder. Each of the single pass test runs resulted in an increase of 0.04% and 0.35% of non-consumable feed fines.

Even the more harsh double and triple pass runs through the same 3 inch diameter piped feed delivery system and cyclonic decelerator resulted in a marginal increase in non-consumable feed fines of 0.21% and 0.93% respectively.

Farm: **I.A.S. Products Ltd.**

Date: **Oct 17, 2001**

Performed by: **M. Pemberton & I.A.S. Products Ltd.**

Results Reported to: **I.A.S. Products Ltd.**

Feeding

Equipment: **3-inch Bulk Feed Delivery with Cyclonic**

Data		Sieves Used		Fraction Weights After Sieving					Fraction Percentages				Total	
Sample ID		Low mm	High mm	Grams Dust/Fines <2.36 mm	Grams Breakage 2.36 - 4.75 mm <	Grams Pellets >4.75 mm 10.0	Grams Pellets mm 10.0 >	Total Sum (g)	Grams Dust/Fines <2.36 mm	Grams Breakage 2.36 - 3.55 mm <	Grams Pellets >4.75 mm 10.0	Grams Pellets mm 10.0 >	Edible Pellets >4.75 mm	Total Sum %
				A	B	C	D	A+B+C+D	F	G	H	I	H+I	F+G+H+I
Control	11	2.36	10.00	0.20	1.30	6.60	694.70	702.80	0.03%	0.18%	0.94%	98.85%	99.8%	100.00%
Single Pass	11	2.36	10.00	0.80	1.00	7.90	704.40	714.10	0.11%	0.14%	1.11%	98.64%	99.7%	100.00%
Single Pass	11	2.36	10.00	2.20	1.80	11.60	691.10	706.70	0.31%	0.25%	1.64%	97.79%	99.4%	100.00%
Two Pass	11	2.36	10.00	1.10	1.90	22.10	621.40	646.50	0.17%	0.29%	3.42%	96.12%	99.5%	100.00%
Three Pass	11	2.36	10.00	2.40	5.70	38.00	640.00	686.10	0.35%	0.83%	5.54%	93.28%	98.8%	100.00%
Total Ex. From bags				6.7	11.7	86.2	3351.6	3456.2	0.19%	0.34%	2.49%	96.97%	99.5%	100.00%