Figure S1. Bivariate plots and eigenvectors showing variation among diets (control, fine sand, and medium sand) for sheep 1 and 2. A) Principal components 1 (pits) and 2 (scratches) and B) principal compents 3 and 4 (observer bias). Black arrows=Observer 1; grey arrows=Observer 2; S=total scratches; P=total pits; different shapes represent different subjects; different colors represent different diets.

Table S1. Analysis of Variance results for extracted principal components 1 and 2 from sheep 1 and sheep 2 with Tukey comparisons for assessing differences among diet treatments.

Principal Component 1 - Pits (O1P+O2P)							Principal Component 2 - Scratches (O1S+O2S)					
Source	df	SS	MS	F-ratio	P		Source	df	SS	MS	F-ratio	P
Diet	2	4,391	2195	9.035	0.003		Diet	2	141.2	70.60	0.963	0.406
Residual	14	3,402	243				Residual	14	1,026	73.28		

Tukey Multiple Comparisons of Means	P adj.		Tukey Multiple Comparisons of Means	P adj.
Control-Fine	0.982		Control-Fine	0.990
Control-Medium	0.013		Control-Medium	0.567
Fine-Medium	0.009		Fine-Medium	0.474

Control=control diet (hay with no added silica); Fine=fine-grained sand treatment (180-250 µm); Medium=medium-grained sand treatment (250-425 µm).