

Table S2. Correlation between the two measured trait (backfat thickness and carcass weight) and the 46 estimated traits of pig carcasses in all abattoirs

Measured traits	Abattoir A (N = 400,280)		Abattoir B (N = 416,092)		Abattoir C (N =252,647)	
	Backfat thickness	Carcass weight	Backfat thickness	Carcass weight	Backfat thickness	Carcass weight
Estimated traits						
Backfat thickness	0.906	0.355	0.900	0.414	0.941	0.381
Backfat thickness in the 11th/12th thoracic vertebra	0.852	0.325	0.805	0.337	0.878	0.314
Backfat thickness in the 14th thoracic vertebra/1st lumbar vertebra	0.873	0.334	0.855	0.382	0.901	0.347
Backfat thickness in the 7th multifidus muscle	0.756	0.323	0.698	0.326	0.752	0.316
Backfat thickness in the 1st/2th thoracic vertebra	0.781	0.401	0.785	0.447	0.814	0.396
Carcass weight	0.330	0.784	0.404	0.871	0.323	0.881
Front weight	0.206	0.936	0.275	0.942	0.194	0.943
Middle weight	0.572	0.936	0.569	0.941	0.571	0.933
Rear weight	0.235	0.879	0.273	0.923	0.178	0.888
Rib weight	0.102	0.762	0.150	0.778	0.080	0.804
Rib trim weight	-0.055	0.670	0.019	0.715	-0.062	0.689
Rib meat weight	-0.034	0.673	0.039	0.750	-0.102	0.715
Neck weight	0.350	0.918	0.420	0.926	0.380	0.934
Neck trim weight	0.209	0.885	0.240	0.877	0.184	0.897
Neck meat weight	-0.301	0.647	-0.046	0.789	-0.259	0.680
Shoulder weight	0.292	0.944	0.367	0.949	0.269	0.938
Shoulder trim weight	0.070	0.899	0.172	0.911	0.025	0.874
Shoulder meat weight	-0.170	0.732	-0.122	0.705	-0.216	0.724
Foreshank weight	-0.228	0.455	-0.132	0.467	-0.188	0.548
Front meat weight	-0.213	0.649	-0.061	0.750	-0.232	0.665
Tenderloin weight	-0.060	0.738	0.067	0.762	-0.024	0.781
Tenderloin trim weight	-0.256	0.613	-0.148	0.656	-0.236	0.629
Tenderloin meat weight	-0.156	0.611	0.008	0.680	-0.193	0.605
Belly weight	0.561	0.850	0.563	0.888	0.572	0.855
Belly trim weight	0.531	0.898	0.522	0.919	0.559	0.900
Belly meat weight	-0.068	0.719	0.083	0.834	-0.068	0.748
Belly fat weight	0.679	0.536	0.623	0.627	0.687	0.553
Belly rate	-0.677	-0.229	-0.658	-0.220	-0.715	-0.222
Belly trim rate	-0.631	-0.264	-0.605	-0.298	-0.673	-0.280
10-cm neck fat thickness	0.783	0.453	0.775	0.485	0.796	0.408
Intra-fat thickness	0.584	0.312	0.606	0.377	0.642	0.363
Diaphragm weight	0.027	0.776	0.119	0.789	-0.001	0.765
Loin weight	0.607	0.904	0.600	0.904	0.604	0.895
Loin trim weight	0.130	0.729	0.202	0.790	0.122	0.763
Loin meat weight	-0.012	0.651	0.021	0.639	-0.028	0.652
Middle meat weight	-0.064	0.789	0.062	0.829	-0.064	0.801
Ham weight	0.285	0.871	0.317	0.923	0.262	0.904
Ham trim weight	0.103	0.705	0.143	0.812	0.028	0.765
Ham meat weight	-0.052	0.551	-0.030	0.663	-0.155	0.602
Hindshank weight	-0.021	0.651	0.069	0.744	-0.053	0.691
Rear meat weight	-0.013	0.679	0.010	0.745	-0.141	0.673
Total skin weight	0.159	0.808	0.239	0.822	0.177	0.781
Total fat weight	0.739	0.667	0.723	0.708	0.752	0.661
Total bone weight	-0.289	0.620	-0.217	0.673	-0.346	0.610
Total meat weight	-0.076	0.729	0.026	0.768	-0.122	0.715
Lean meat percentage	-0.563	-0.200	-0.425	-0.105	-0.593	-0.207