

STØTTET AF



GEBV correlations for bulls with many offspring

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RDC

For RDC the comparison is based on November data.

Solani (unstandardized GEBV) are compared

- Current data, current model, current parameters (called ooo)
- Current data, current model, new parameters (called oon)
- Current data, new model with permanent cow effect, new parameters (called onn)
- Snell score data, new model with permanent cow effect model, new parameters, with heterosis (called nnn) (RDCevalny)
- Snell score data, new model with permanent cow effect model, new parameters, without heterosis (called nnh) (RDCevalny1)
- Snell score data, new model with permanent cow effect model, new parameters, without CS (called nnr) (RDCeval_noCS)

Correlations for bulls with more than 300 offspring and 100 daughters with offspring (for SB and CE).

see excel file “correlations_RDC_2010_2015” and excel file “correlations_noCS_RDC_2010_2015”.

Correlations for Solutions are estimated for Nordic AI bulls born 2010 – 2015.

“correlations_RDC_2010_2015”:

The correlations between models are high for direct traits. However, for maternal traits the correlations ooo and oon, ooo and onn, and ooo and nnn is low for SB2 and CE2. This means that there will be some reranking of bulls when snell score data and snell score model is applied compared with current model and current data.

“correlations_noCS_RDC_2010_2015”:

The correlation between ooo and nnn is similar to the correlation between ooo and nnr, and furthermore the correlation between nnn and nnr is 1, therefor it can be concluded that it is not due to CS in the model that the snell score have low correlations for RDC for especially SB.

correlations for RDC bulls with more than 300 offspring and 100 daughters with offspring for SB and CE

direct traits

TYPE	NAME	oooSBd1	onnSBd1	onnSBd1	nnnSBd1	nhhSBd1	oooCEd1	oncCEd1	onnCEd1	nnnCEd1	nhhCEd1	oooCs1	oncCs1	onnCs1	nnnCs1	nhhCs1	oooSBd2	oncSBd2	onnSBd2	nnnSBd2	nhhCs2	oooCEd2	oncCEd2	onnCEd2	nnnCEd2	nhhCs2				
MEAN		0.0346238	0.0978637	0.0975856	0.1158695	0.1064299	0.0224595	0.0501463	0.0498929	0.0482084	0.0361268	0.1051751	0.1260166	0.1281319	0.1356732	0.0121262	0.0436667	0.0433802	0.0875377	0.0855544	-0.0004011	0.0186572	0.0181056	0.0237236	0.025106	0.0349056	-0.028572	-0.0320217	0.0086168	0.0373191
STD		0.0225764	0.0436566	0.0436411	0.0436551	0.0436556	0.0440939	0.1355645	0.1583335	0.1593101	0.1590508	0.2972268	0.3354106	0.3319784	0.0107993	0.0258776	0.0257776	0.0327043	0.0326743	0.0665082	0.0821608	0.0820877	0.0833558	0.2739037	0.3115314	0.3107061	0.3046235	0.305033		
N		353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	
CORR	oooSBd1	1	0.98	0.98	0.98	0.98	0.98	0.76	0.75	0.75	0.75	-0.64	-0.67	-0.67	-0.67	0.60	0.64	0.64	0.57	0.57	0.66	0.62	0.62	0.61	-0.63	-0.64	-0.63	-0.63		
CORR	onnSBd1	0.98	1	1.00	1.00	0.99	0.98	0.74	0.73	0.73	0.72	0.73	-0.65	-0.68	-0.68	-0.68	0.64	0.67	0.67	0.60	0.66	0.62	0.62	0.61	-0.65	-0.66	-0.66	-0.65		
CORR	onnSBD1	0.98	1.00	1	1.00	0.99	0.98	0.74	0.73	0.73	0.72	0.71	-0.65	-0.68	-0.69	-0.69	0.64	0.67	0.67	0.60	0.66	0.62	0.62	0.61	-0.65	-0.66	-0.66	-0.65		
CORR	nhhSBd1	0.98	1.00	1.00	1	1.00	0.99	0.72	0.71	0.71	0.71	0.70	-0.67	-0.66	-0.66	-0.66	0.61	0.63	0.64	0.57	0.63	0.59	0.59	0.58	-0.62	-0.63	-0.63	-0.62		
CORR	oooCEd1	-0.76	-0.74	-0.74	-0.72	-0.74	-0.74	-0.98	-0.98	-0.98	-0.98	-0.98	-0.04	-0.02	-0.02	-0.02	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93		
CORR	oncCEd1	0.75	0.73	0.73	0.71	0.70	0.98	1	1.00	1.00	1.00	1.00	-0.91	-0.91	-0.91	-0.91	0.43	0.46	0.46	0.40	0.40	0.40	0.40	0.40	0.91	0.91	0.91	0.91		
CORR	onnCEd1	0.75	0.73	0.73	0.71	0.70	0.98	1.00	1	1.00	1.00	1.00	-0.91	-0.91	-0.91	-0.91	0.43	0.46	0.46	0.40	0.40	0.40	0.40	0.40	0.91	0.91	0.91	0.91		
CORR	nhhCEd1	0.75	0.72	0.72	0.71	0.70	0.98	1.00	1.00	1	1.00	1.00	-0.91	-0.91	-0.91	-0.91	0.43	0.46	0.46	0.40	0.40	0.40	0.40	0.40	0.91	0.91	0.91	0.91		
CORR	oooCs1	-0.64	-0.65	-0.65	-0.62	-0.61	-0.94	-0.91	-0.91	-0.91	-0.91	-0.91	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.46	-0.92	-0.92	-0.91	-0.91	0.95	0.92	0.93	0.93	
CORR	oncCs1	-0.67	-0.68	-0.68	-0.66	-0.65	-0.92	-0.91	-0.91	-0.90	-0.90	-0.90	1	1.00	1.00	1.00	-0.46	-0.46	-0.46	-0.39	-0.39	-0.93	-0.93	-0.88	-0.87	-0.87	0.93	0.91	0.91	0.91
CORR	onnCs1	-0.67	-0.68	-0.68	-0.66	-0.65	-0.92	-0.91	-0.91	-0.90	-0.90	-0.90	1	1.00	1.00	1.00	-0.46	-0.46	-0.46	-0.39	-0.39	-0.93	-0.93	-0.88	-0.87	-0.87	0.93	0.91	0.91	0.91
CORR	nhhCs1	-0.67	-0.69	-0.69	-0.67	-0.66	-0.93	-0.91	-0.91	-0.91	-0.91	-0.91	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.89	-0.89	-0.88	-0.88	-0.88	0.93	0.91	0.91	0.92
CORR	oooCEd2	-0.69	-0.69	-0.69	-0.67	-0.66	-0.93	-0.91	-0.91	-0.91	-0.91	-0.91	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	oncCEd2	-0.62	-0.62	-0.62	-0.61	-0.60	-0.94	-0.91	-0.91	-0.91	-0.91	-0.91	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	onnCEd2	-0.62	-0.62	-0.62	-0.61	-0.60	-0.94	-0.91	-0.91	-0.91	-0.91	-0.91	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	nhhCEd2	-0.62	-0.62	-0.62	-0.61	-0.60	-0.94	-0.91	-0.91	-0.91	-0.91	-0.91	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	oooCs2	-0.60	-0.61	-0.61	-0.60	-0.60	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	oncCs2	-0.61	-0.61	-0.61	-0.60	-0.60	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	onnCs2	-0.63	-0.63	-0.63	-0.62	-0.62	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	nhhCs2	-0.63	-0.63	-0.63	-0.62	-0.62	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	oooCEd2	-0.63	-0.63	-0.63	-0.62	-0.62	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	oncCEd2	-0.64	-0.64	-0.64	-0.63	-0.63	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	onnCEd2	-0.64	-0.64	-0.64	-0.63	-0.63	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	nhhCEd2	-0.64	-0.64	-0.64	-0.63	-0.63	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	oooCs2	-0.62	-0.62	-0.62	-0.61	-0.61	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	oncCs2	-0.62	-0.62	-0.62	-0.61	-0.61	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	onnCs2	-0.62	-0.62	-0.62	-0.61	-0.61	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	nhhCs2	-0.62	-0.62	-0.62	-0.61	-0.61	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	oooCEd2	-0.60	-0.60	-0.60	-0.59	-0.59	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	oncCEd2	-0.60	-0.60	-0.60	-0.59	-0.59	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	onnCEd2	-0.60	-0.60	-0.60	-0.59	-0.59	-0.95	-0.92	-0.92	-0.92	-0.92	-0.92	1	0.98	0.98	0.98	-0.47	-0.47	-0.40	-0.40	-0.43	-0.92	-0.92	-0.91	-0.91	-0.91	0.93	0.91	0.91	0.92
CORR	nhhCEd2	-0.60	-0.60	-0.6																										

correlations for RDC bulls with more than 300 offspring and 100 daughters with offspring for SB and CE

direct traits

TYPE	_NAME_	oooSBd1	oonSBd1	onrSBd1	nnnSBd1	nnhSBd1	nrrSBd1	oooCEd1	oncCEd1	onrCEd1	nnnCEd1	nnhCEd1	nrrCEd1	oooSBd2	oncSBd2	onrSBd2	nnnSBd2	nnhSBd2	nrrSBd2	oooCEd2	oncCEd2	onrCEd2	nnnCEd2	nnhCEd2	nrrCEd2
MEAN		0.0346238	0.0978637	0.0975856	0.1158695	0.1064299	0.1157497	0.0224595	0.0501463	0.0498929	0.0482084	0.0336126	0.0508447	0.0121262	0.0436667	0.0433802	0.0875377	0.0855544	0.0854642	-0.0004011	0.0186572	0.0181056	0.0237236	0.025106	0.033326
STD		0.0225674	0.0436566	0.0436411	0.0436983	0.0440939	0.0425038	0.1355645	0.1593335	0.1593101	0.1590508	0.1590072	0.15624	0.0107993	0.0258776	0.0257775	0.0327043	0.0326741	0.0324118	0.0665062	0.0821608	0.0820877	0.0833656	0.0833558	0.0802321
N		353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353
CORR	oooSBd1	1	0.98	0.98	0.98	0.98	0.98	0.76	0.75	0.75	0.75	0.60	0.64	0.64	0.57	0.57	0.56	0.66	0.62	0.62	0.61	0.61	0.60		
CORR	oonSBd1	0.98	1	1.00	1.00	0.99	0.99	0.74	0.73	0.73	0.72	0.64	0.67	0.67	0.60	0.60	0.59	0.66	0.62	0.62	0.61	0.61	0.59		
CORR	onrSBd1	0.98	1.00	1.00	1	1.00	1.00	0.72	0.71	0.71	0.71	0.61	0.63	0.64	0.57	0.57	0.56	0.63	0.59	0.59	0.58	0.58	0.57	0.57	
CORR	nnnSBd1	0.98	1.00	1.00	1	1.00	1.00	0.71	0.70	0.70	0.70	0.60	0.63	0.63	0.56	0.56	0.55	0.62	0.58	0.58	0.57	0.57	0.55		
CORR	nnhSBd1	0.98	0.99	0.99	1.00	1	0.99	0.71	0.70	0.70	0.70	0.60	0.63	0.63	0.56	0.56	0.55	0.60	0.57	0.57	0.56	0.56	0.55		
CORR	nnrSBd1	0.98	0.99	0.99	1.00	0.99	1	0.69	0.69	0.69	0.69	0.60	0.63	0.63	0.56	0.56	0.55	0.60	0.57	0.57	0.56	0.56	0.55		
CORR	oocCEd1	0.76	0.74	0.74	0.72	0.71	0.69	1	0.98	0.98	0.98	0.98	0.45	0.48	0.48	0.42	0.42	0.41	0.96	0.93	0.93	0.92	0.92	0.90	
CORR	oncCEd1	0.75	0.73	0.73	0.71	0.70	0.69	0.98	1	1.00	1.00	1.00	0.43	0.46	0.46	0.40	0.40	0.39	0.93	0.91	0.91	0.91	0.91	0.89	
CORR	onrCEd1	0.75	0.73	0.73	0.71	0.70	0.69	0.98	1.00	1	1.00	1.00	0.43	0.46	0.46	0.40	0.40	0.39	0.93	0.91	0.91	0.91	0.91	0.89	
CORR	nnnCEd1	0.75	0.72	0.72	0.71	0.70	0.69	0.98	1.00	1.00	1	1.00	0.43	0.46	0.46	0.40	0.40	0.39	0.93	0.91	0.91	0.91	0.91	0.89	
CORR	nnhCEd1	0.75	0.73	0.73	0.71	0.70	0.69	0.98	1.00	1.00	1	1.00	0.43	0.46	0.46	0.40	0.40	0.39	0.93	0.91	0.91	0.91	0.91	0.89	
CORR	nnrCEd1	0.75	0.72	0.72	0.71	0.70	0.69	0.98	1.00	1.00	1	1.00	0.42	0.46	0.46	0.40	0.40	0.39	0.92	0.91	0.91	0.91	0.91	0.90	
CORR	oosBd2	0.60	0.64	0.64	0.61	0.60	0.60	0.45	0.43	0.43	0.43	0.42	1	0.97	0.97	0.95	0.95	0.95	0.95	0.57	0.55	0.54	0.53	0.52	
CORR	oonSBd2	0.64	0.67	0.67	0.63	0.63	0.63	0.48	0.46	0.46	0.46	0.46	0.97	1	1.00	0.97	0.97	0.97	0.56	0.53	0.53	0.51	0.51	0.50	
CORR	onrSBd2	0.64	0.67	0.67	0.64	0.63	0.63	0.48	0.46	0.46	0.46	0.46	0.97	1.00	1	0.97	0.97	0.97	0.56	0.53	0.52	0.52	0.51		
CORR	nnnSBd2	0.57	0.60	0.60	0.57	0.56	0.56	0.42	0.40	0.40	0.40	0.40	0.95	0.97	0.97	1	1.00	1.00	0.50	0.47	0.47	0.46	0.46	0.45	
CORR	nnhSBd2	0.57	0.60	0.60	0.57	0.56	0.56	0.42	0.40	0.40	0.40	0.40	0.95	0.97	0.97	1.00	1.00	1	0.49	0.46	0.46	0.45	0.44		
CORR	oocCEd2	0.66	0.66	0.66	0.63	0.62	0.60	0.96	0.93	0.93	0.93	0.93	0.92	0.57	0.56	0.56	0.56	0.50	0.50	0.49	1	0.97	0.97	0.97	0.95
CORR	oncCEd2	0.62	0.62	0.62	0.59	0.58	0.57	0.93	0.91	0.91	0.91	0.91	0.91	0.55	0.53	0.53	0.47	0.47	0.46	0.97	1	1.00	1.00	0.99	
CORR	onrCEd2	0.62	0.62	0.62	0.59	0.58	0.57	0.93	0.91	0.91	0.91	0.91	0.91	0.54	0.53	0.53	0.47	0.47	0.46	0.97	1.00	1	1.00	0.99	
CORR	nnnCEd2	0.61	0.61	0.61	0.58	0.57	0.56	0.92	0.91	0.91	0.91	0.91	0.91	0.53	0.51	0.52	0.46	0.45	0.45	0.97	1.00	1.00	1.00	1.00	
CORR	nnhCEd2	0.61	0.61	0.61	0.58	0.57	0.56	0.92	0.91	0.91	0.91	0.91	0.91	0.52	0.51	0.52	0.46	0.45	0.45	0.97	1.00	1.00	1.00	1.00	
CORR	nnrCEd2	0.60	0.59	0.59	0.57	0.55	0.55	0.90	0.89	0.89	0.89	0.89	0.90	0.52	0.50	0.51	0.45	0.44	0.95	0.99	0.99	1.00	1.00	1	

maternal traits

TYPE	_NAME_	oooSBm1	oonSBm1	onrSBm1	nnnSBm1	nnhSBm1	nrrSBm1	oooCEm1	oncCEm1	onrCEm1	nnnCEm1	nnhCEm1	nrrCEm1	oooSBm2	oncSBm2	onrSBm2	nnnSBm2	nnhSBm2	nrrSBm2	oooCEm2	oncCEm2	onrCEm2	nnnCEm2	nnhCEm2	nrrCEm2
MEAN		0.0236285	0.0392753	0.0395468	0.0321501	0.0196343	0.0243711	0.1544088	0.179544	0.1795591	0.1818489	0.1712871	0.1670655	0.0094685	-0.0021332	-0.0016964	-0.0182824	-0.0245394	-0.0204255	0.086589	0.0823436	0.0821937	0.0859992	0.0865208	0.0784741
STD		0.0194681	0.0392222	0.0392244	0.0414798	0.0418158	0.0447071	0.0808082	0.1096773	0.1098939	0.1128507	0.1132994	0.1133329	0.0098836	0.0196279	0.0195592	0.0263921	0.0263188	0.0263458	0.0427599	0.0514519	0.0511771	0.0538296	0.0539447	0.0539486
N		353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353
CORR	oooSBm1	1	0.96	0.96	0.96	0.96	0.96	0.68	0.65	0.65	0.63	0.64	0.63	0.61	0.70	0.70	0.56	0.56	0.56	0.46	0.42	0.37	0.38	0.36	
CORR	oonSBm1	0.96	1	1.00	0.99	0.99	0.99	0.61	0.60	0.60	0.58	0.57	0.64	0.71	0.71	0.58	0.58	0.58	0.44	0.42	0.37	0.38	0.37		
CORR	onrSBm1	0.96	1.00	1	0.99	0.99	0.99	0.61	0.60	0.60	0.58	0.58	0.64	0.71	0.71	0.58	0.58	0.58	0.44	0.42	0.37	0.38	0.37		
CORR	nnnSBm1	0.96	0.99	0.99	1	0.99	1.00	0.60	0.58	0.58	0.56	0.56	0.63	0.69	0.69	0.57	0.57	0.57	0.42	0.40	0.35	0.36	0.35		
CORR	nnhSBm1	0.96	0.99	0.99	0.99	1	0.99	0.59	0.58	0.58	0.56	0.55	0.63	0.70	0.70	0.57	0.57	0.57	0.42	0.40	0.35	0.36	0.35		
CORR	nnrSBm1	0.96	0.99	0.99	1.00	0.99	1	0.60	0.58	0.58	0.56	0.55	0.63	0.69	0.69	0.57	0.57	0.57	0.42	0.40	0.35	0.36	0.35		
CORR	oocCEm1	0.68	0.61	0.61	0.60	0.59	0.60	1	0.96	0.96	0.96	0.96	0.64	0.55	0.55	0.47	0.47	0.47	0.83	0.76	0.76	0.72	0.72		
CORR	oncCEm1	0.65	0.60	0.60	0.58	0.58	0.58	0.96	1	1.00	1.00	1.00	0.62	0.56	0.56	0.48	0.47	0.48	0.82	0.79	0.79	0.75	0.75		
CORR	onrCEm1	0.65	0.60	0.60	0.58	0.58	0.58	0.96	1.00	1	1.00	1.00	0.62	0.56	0.56	0.48	0.47	0.48	0.82	0.79	0.79	0.75	0.75		
CORR	nnnCEm1	0.63	0.58	0.58	0.56	0.55	0.56	0.96	1.00	1.00	1	1.00	0.61	0.53	0.54	0.46	0.46	0.46	0.82	0.78	0.79	0.75	0.75		
CORR	nnhCEm1	0.64	0.58	0.58	0.56	0.55	0.56	0.96	1.00	1.00	1	1.00	0.61	0.54	0.54	0.46	0.46	0.46	0.82	0.79	0.79	0.76	0.75		
CORR	nnrCEm1	0.63	0.57	0.58	0.56	0.55	0.56	0.96	1.00	1.00	1	1.00	0.61	0.53	0.54	0.46	0.46	0.46	0.82	0					