

Table S1. Associations between polymorphism g.3431insAC within IGFBP1 and growth and slaughter traits

Traits ³	TW ¹					NZWxFG					PW					FG				
	GG		G/GAC		<i>p-value</i>	GG		G/GAC		<i>p-value</i>	GG		G/GAC		<i>p-value</i>	GG		G/GAC		<i>p-value</i>
	Means	SD ²	Means	SD		Means	SD	Means	SD		Means	SD	Means	SD		Means	SD	Means	SD	
BW12	2774	54 ²	2669	53	0.1976	2651	43	2660	42	0.4524	2841	46	2834	58	0.9734	3194	77	3504	181	0.1568
SW	2808	54	2705	51	0.2989	2699	50	2720	49	0.4600	2859	46	2710	65	0.5517	3281	82	3693	143	0.0713
HCW	1494	30	1439	29	0.1835	1389	26	1386	27	0.4975	1455	25	1398	34	0.5925	1657	49	1898	94	0.1329
CCW	1478	29	1380	28	0.1127	1341	25	1344	26	0.4965	1323	21	1364	29	0.7353	1591	49	1832	89	0.1559
DPH	53.21	0.27	53.19	0.34	0.1056	51.30	0.28	50.90	0.29	0.8073	50.87	0.25	51.57	0.40	0.9161	50.18	0.51	51.23	0.69	0.2818
DPC	51.59	0.26	51.25	0.30	0.1032	49.48	0.26	49.34	0.27	0.9881	48.15	0.29	49.26	0.54	0.7638	48.33	0.58	49.47	0.66	0.0820
FMB	585	10	558	10	0.1346	527	11	533	11	0.7021	590	11	543	15	0.4130	688	22	791	36	0.1822
FF	39	6	30	3	0.1975	9	1	11	1	0.4474	26	2	15	2	0.1146	15	2	19	2	0.1462
IM	250	7	230	6	0.2227	239	5	237	5	0.5925	229	4	224	9	0.6312	243	9	273	21	0.5890
IB	43 ^a	2	36 ^b	1	0.0025	42	1	42	1	0.5479	35	1	42	1	0.2810	45	2	50	4	0.4808
IF	28	3	26	2	0.2248	15	1	13	1	0.2402	25	2	20	2	0.4696	13	2	19	4	0.4629
HM	410	7	383	7	0.2311	395	7	394	8	0.5151	397	6	372	8	0.4903	441	14	516	28	0.0912
HB	119	3	114	3	0.8633	106	2	109	2	0.5437	117	2	113	3	0.5177	144	4	161	6	0.1281
HF	4	1	4	1	0.2362	5	1	4	0	0.5994	2	0	2	1	0.5578	2	1	3	1	0.2968

¹TW – Termond White; NZWxFG – crossbreeds of New Zealand White and Flemish Giant; PW – Popielno White; FG – Flemish Giant. ²SD – standard deviation. ³BW12 – body weight at 12th week of age(g); SW- Slaughter weight (g); HCW – hot carcass weight (g); FP – fore part weight (g); IP – intermediate part (loin) weight (g); HP – hind part weight (g); CCW – chilled carcass weight (g); DPH – warm dressing out percentage (%); DPC – cold dressing out percentage (%); FMB – meat and bones in fore part (g); FF – dissectible fat in fore part (g); IM – meat in intermediate part (g); IB – bones in intermediate part (g); IF – dissectible fat in intermediate part (g); HM – meat in hind part (g); HB – bones in hind part (g); HF – dissectible fat in hind part(g). ^{a,b} Values within a row and breeds with different superscripts differ significantly at $P < 0.003$

Table S2. Associations between polymorphism g.3431insAC within IGFBP1 and carcass traits

Traits	TW ¹				<i>p</i> -value	NZWxFG				<i>p</i> -value	PW				<i>p</i> -value	FG				<i>p</i> -value
	GG		G/GAC			GG		G/GAC			GG		G/GAC			GG		G/GAC		
	Means	SD ²	Means	SD		Means	SD	Means	SD		Means	SD	Means	SD		Means	SD	Means	SD	
pH ₄₅	6.57	0.06	6.75	0.06	0.2081	6.63	0.03	6.67	0.03	0.5836	6.67	0.04	6.83	0.08	0.3895	6.64	0.06	6.80	0.11	0.1020
L* ₄₅	52.49	0.49	52.46	0.47	0.0176	57.08	0.23	57.47	0.22	0.0583	50.72	0.37	52.00	1.25	0.2858	51.97	0.54	54.96	1.00	0.0046
a* ₄₅	3.07	0.13	3.83	0.23	0.5360	11.45	0.15	11.13	0.15	0.0193	2.92	0.16	3.05	0.24	0.8723	3.65	0.24	2.98	0.37	0.4592
b* ₄₅	1.01	0.29	1.10	0.29	0.0887	0.99	0.14	1.04	0.14	0.2184	0.45	0.24	0.57	0.43	0.9651	1.14^a	0.23	-0.50^b	0.63	0.0001
pH ₂₄	5.85	0.03	6.11	0.06	0.0054	5.79	0.02	5.71	0.02	0.0299	5.98	0.03	5.92	0.08	0.9774	6.07	0.02	6.08	0.05	0.2115
L* ₂₄	55.36	0.44	55.20	0.37	0.9404	57.99	0.20	57.92	0.20	0.0259	56.24	0.27	54.34	0.69	0.1652	57.31	0.48	59.33	1.43	0.4196
a* ₂₄	4.18	0.24	4.84	0.32	0.1504	12.59	0.18	12.56	0.17	0.2202	3.95	0.19	4.02	0.32	0.8211	4.74	0.35	3.40	0.26	0.0619
b* ₂₄	4.21	0.32	4.29	0.27	0.6705	3.55	0.16	3.34	0.15	0.5575	4.08	0.17	3.91	0.24	0.7067	4.78	0.29	3.82	0.29	0.5678
<i>m. longissimus lumborum</i>																				
pH ₄₅	6.71	0.05	6.47	0.19	0.6576	6.70	0.03	6.76	0.03	0.4414	6.66	0.06	6.48	0.10	0.4007	6.78	0.05	6.97	0.07	0.1030
L* ₄₅	59.77	0.70	58.94	0.55	0.5776	60.65	0.32	60.65	0.31	0.2054	59.43	0.64	60.24	2.23	0.2358	62.27	0.82	65.40	1.39	0.0811
a* ₄₅	0.70	0.40	1.27	0.38	0.2488	8.38	0.21	8.60	0.18	0.1599	1.55	0.41	0.13	0.86	0.2098	2.39	0.66	0.37	0.57	0.0865
b* ₄₅	-2.34	0.73	-2.30	0.50	0.6848	-2.59	0.15	-2.26	0.17	0.3623	-1.78	0.49	-2.57	0.20	0.3635	-1.89	0.80	-1.63	0.87	0.5482
pH ₂₄	5.76	0.04	5.92	0.04	0.1439	5.63	0.02	5.58	0.02	0.0306	5.81	0.03	5.84	0.08	0.5621	6.03	0.05	6.06	0.08	0.2824
L* ₂₄	55.91	0.47	55.67	0.44	0.1647	56.99	0.27	56.39	0.26	0.1164	56.56	0.31	53.80	0.60	0.0086	58.76	0.62	60.92	1.77	0.6551
a* ₂₄	5.21	0.27	6.43	0.40	0.0368	12.86	0.24	13.12	0.20	0.2042	5.43	0.25	6.00	0.85	0.2021	7.88	0.40	7.01	0.61	0.4481
b* ₂₄	3.85	0.38	4.46	0.34	0.2235	1.96	0.20	1.77	0.19	0.4057	3.33	0.23	4.73	0.23	0.1434	5.76	0.42	4.95	0.75	0.6242
<i>m. longissimus lumborum</i>																				
Shear force	2.03	0.09	1.93	0.12	0.4335	3.79	0.12	3.98	0.13	0.2512	1.74	0.07	2.15	0.32	0.0035	2.07	0.10	2.43	0.20	0.0926
Hardness	13.57	0.71	13.69	0.45	0.0542	57.86	1.96	59.09	2.02	0.9284	10.76	0.39	12.87	1.04	0.1067	11.71	0.68	13.23	0.94	0.6067
Springiness	0.45	0.01	0.47	0.01	0.5183	0.52	0.01	0.52	0.01	0.8015	0.47	0.01	0.45	0.02	0.1873	0.49	0.01	0.49	0.01	0.6896
Cohesivness	0.44	0.01	0.43	0.01	0.0357	0.42	0.01	0.41	0.01	0.0616	0.43	0.00	0.43	0.01	0.9498	0.45	0.01	0.44	0.01	0.3880
Cheviness	2.74	0.19	2.81	0.14	0.1238	13.37	0.49	13.78	0.57	0.7719	2.25	0.11	2.55	0.28	0.4311	2.75	0.24	2.95	0.32	0.9609

¹TW – Termond White; NZWxFG – crossbreeds of New Zealand White and Flemish Giant; PW – Popielno White; FG – Flemish Giant. ²SD – standard deviation. ^{a,b}Values within a row and breeds

with different superscripts differ significantly at $P < 0.003$

Table S3. Associations between polymorphism g.41594308T>C within IGFBP4 and growth and slaughter traits

Traits ³	TW ¹					NZWxFG					PW					FG				
	TT		TC		p-value	TT		TC		p-value	TT		TC		p-value	TT		TC		p-value
	Means	SD ²	Means	SD		Means	SD	Means	SD		Means	SD	Means	SD		Means	SD	Means	SD	
BW12	2778	73	2687	45	0.5254	2683	48	2647	43	0.8122	2965	49	2729	55	0.0502	3264	115	3391	127	0.5195
SW	2802	68	2740	45	0.6139	2761	55	2667	53	0.4814	2962	53	2658	56	0.0069	3337	138	3449	140	0.6118
HCW	1498	39	1456	24	0.6225	1420	30	1357	28	0.2894	1512^a	26	1322^b	33	0.0028	1657	79	1791	86	0.3085
CCW	1461	38	1410	24	0.5953	1371	29	1314	28	0.3638	1351	13	129	11	0.1749	1620	74	1694	86	0.8509
DPH	53.43	0.36	53.15	0.25	0.9139	51.41	0.35	50.85	0.30	0.2074	51.07	0.27	49.70	0.38	0.0836	49.53	0.86	51.15	0.55	0.7999
DPC	51.63	0.35	51.38	0.23	0.7826	49.61	0.33	49.20	0.29	0.4337	47.95	0.40	48.35	0.34	0.3876	48.52	1.11	48.87	0.67	0.3453
FMB	577	14	566	8	0.7287	538	12	521	12	0.5263	605	13	510	14	0.0040	692	34	737	35	0.7002
FF	39	6	30	3	0.4576	10	1	10	1	0.6131	26	3	19	3	0.1669	14	4	12	2	0.5295
IM	247	7	237	6	0.7872	242	6	233	5	0.5441	231	5	211	6	0.1735	244	14	260	16	0.9438
IB	40	2	38	1	0.5799	42	1	40	1	0.3052	35	1	30	2	0.7913	49	3	47	3	0.6691
IF	28	3	26	2	0.1514	14	1	14	1	0.7552	27	2	14	2	0.0641	13	4	14	3	0.4121
HM	405	10	394	6	0.7640	402	9	386	8	0.4039	401	7	357	8	0.0106	460	21	473	26	0.9819
HB	122	3	116	3	0.6260	107	3	106	2	0.8556	118	2	105	2	0.0072	146	5	149	6	0.6803
HF	3	1	3	1	0.1959	4	1	5	1	0.3426	3	1	1	0	0.3743	2	1	1	1	0.8750

¹TW – Termond White; NZWxFG – crossbreeds of New Zealand White and Flemish Giant; PW – Popielno White; FG – Flemish Giant. ²SD – standard deviation. ³BW12 – body weight at 12th week of age(g);SW- Slaughter weight (g); HCW – hot carcass weight (g); CCW – chilled carcass weight (g); DPH – warm dressing out percentage (%); DPC – cold dressing out percentage (%); FMB– meat and bones in fore part (g); FF - dissectible fat in fore part (g); IM - meat in intermediate part (g); IB - bones in intermediate part (g); IF - dissectible fat in intermediate part (g); HM - meat in hind part (g); HB - bones in hind part (g); HF - dissectible fat in hind part(g). ^{a,b}Values within a row and breeds with different superscripts differ significantly at $P<0.003$

Table S4. Associations between polymorphism g.41594308T>C within IGFBP4 and carcass traits

Traits	TW ¹				<i>p</i> -value	NZWxFG				<i>p</i> -value	PW				<i>p</i> -value	FG				<i>p</i> -value
	TT		TC			TT		TC			TT		TC			TT		TC		
	Means	SD ²	Mea ns	SD		Means	SD	Means	SD		Mea ns	SD	Means	SD		Means	SD	Mean s	SD	
<i>m. biceps femoris</i>																				
pH ₄₅	6.59	0.06	6.63	0.06	0.4806	6.72	0.03	6.65	0.03	0.0472	6.73	0.05	6.59	0.11	0.8694	6.71	0.12	6.69	0.08	0.9006
L* ₄₅	52.80	0.43	53.03	0.50	0.8326	57.40	0.25	57.10	0.22	0.5733	50.94	0.55	49.79	0.55	0.9744	53.78	1.17	52.52	0.63	0.1206
a* ₄₅	3.01	0.25	3.51	0.22	0.8844	11.11	0.17	11.41	0.15	0.4600	2.89	0.21	3.48	0.15	0.2555	3.37	0.42	3.38	0.38	0.5392
b* ₄₅	0.87	0.35	0.96	0.23	0.5449	0.95	0.17	1.14	0.15	0.4355	0.05	0.27	1.26	0.30	0.9246	0.00	0.57	0.94	0.18	0.2187
pH ₂₄	5.86	0.03	6.00	0.06	0.3424	5.80	0.02	5.76	0.02	0.0054	5.94	0.04	6.08	0.05	0.9288	6.20	0.03	6.05	0.02	0.0116
L* ₂₄	56.16	0.38	55.18	0.38	0.1693	58.31	0.20	57.58	0.23	0.1212	56.29	0.44	56.16	0.41	0.8725	56.75	0.70	57.42	0.81	0.7616
a* ₂₄	5.41	0.30	4.54	0.30	0.6195	12.25	0.20	12.81	0.18	0.1976	3.83	0.24	4.57	0.29	0.4190	4.03	0.40	4.59	0.49	0.7939
b* ₂₄	4.20	0.28	4.35	0.26	0.3641	3.43	0.18	3.65	0.14	0.3025	3.88	0.22	4.81	0.27	0.1862	4.16	0.42	4.76	0.44	0.1035
<i>m. longissimus lumborum</i>																				
pH ₄₅	6.70	0.07	6.51	0.16	0.7121	6.79	0.03	6.74	0.03	0.0280	6.67	0.07	6.44	0.13	0.5960	6.80	0.12	6.90	0.05	0.9511
L* ₄₅	60.34	0.73	59.12	0.50	0.4806	60.84	0.35	60.31	0.33	0.5805	59.26	0.89	60.33	1.44	0.9448	62.32	1.55	63.52	1.48	0.0760
a* ₄₅	0.51	0.40	1.30	0.41	0.7207	8.44	0.22	8.70	0.20	0.8104	1.81	0.53	1.27	0.87	0.7430	3.03	1.47	1.65	0.75	0.0157
b* ₄₅	-2.54	0.66	-2.08	0.52	0.3317	-2.33	0.16	-2.22	0.18	0.0584	-1.20	0.71	-2.90	0.75	0.8840	-0.39	1.21	-0.67	0.50	0.0877
pH ₂₄	5.75	0.03	5.83	0.04	0.5787	5.66^a	0.02	5.60^b	0.02	0.0011	5.84	0.04	5.82	0.05	0.1901	5.98	0.07	5.89	0.06	0.7830
L* ₂₄	55.11	0.40	55.44	0.41	0.4567	56.77	0.30	56.41	0.31	0.6235	56.88	0.48	55.98	0.67	0.3897	58.34	0.57	58.61	1.12	0.6886
a* ₂₄	4.34	0.22	6.17	0.41	0.8168	13.11	0.26	13.21	0.21	0.8336	5.15	0.33	6.42	0.34	0.7915	7.04	0.65	8.01	0.45	0.7032
b* ₂₄	3.96	0.35	4.05	0.34	0.3867	2.26	0.24	1.92	0.17	0.2691	3.40	0.32	3.38	0.35	0.9468	5.68	0.53	6.09	0.54	0.5245
<i>m. longissimus lumborum</i>																				
Shear force	2.00	0.12	1.93	0.08	0.2281	4.13	0.15	3.72	0.13	0.0203	1.79	0.11	1.88	0.15	0.5904	2.24	0.17	2.02	0.14	0.4585
Hardness	12.26	0.54	13.67	0.53	0.6510	59.75	2.07	58.75	2.10	0.4675	10.87	0.50	11.05	0.80	0.5150	12.88	0.71	11.98	1.09	0.1547
Springiness	0.45	0.01	0.46	0.01	0.4438	0.52	0.01	0.52	0.01	0.5127	0.48	0.01	0.46	0.01	0.4360	0.49	0.01	0.49	0.02	0.1300
Cohesivness	0.42	0.00	0.43	0.00	0.9725	0.42	0.01	0.43	0.01	0.0063	0.43	0.01	0.43	0.01	0.4146	0.47	0.01	0.44	0.01	0.0428
Cheviness	2.36	0.13	2.84	0.16	0.6360	13.97	0.60	13.62	0.59	0.5404	2.29	0.13	2.23	0.23	0.4408	3.02	0.27	2.70	0.37	0.0988

¹TW – Termond White; NZWxFG – crossbreeds of New Zealand White and Flemish Giant; PW – Popielno White; FG – Flemish Giant. ²SD – standard deviation. ^{a,b}Values within a row and breeds with different superscripts differ significantly at $P < 0.003$

Table S5. Associations between polymorphism g.41592248A>C within *IGFBP4* and growth and slaughter traits

Traits ³	TW ¹				<i>p-value</i>	NZW×FG				<i>p-value</i>	PW				<i>p-value</i>	FG	
	AA		AC			AA		AC			AA		AC			AA	
	Means	SD ²	Means	SD		Means	SD	Means	SD		Means	SD	Means	SD		Means	SD
BW12	2607	41	2750	48	0.3930	2689	47	2648	35	0.8570	2889	41	2720	106	0.0995	3248	70
SW	2640	43	2796	45	0.4868	2727	56	2692	41	0.7450	2910	42	2703	103	0.0648	3348	72
HCW	1395	24	1489	25	0.5630	1393	31	1377	22	0.6755	1479	23	1400	60	0.1429	1699	44
CCW	1346	24	1454	25	0.4575	1346	30	1334	21	0.6972	1354	18	1269	49	0.7504	1637	42
DPH	52.85	0.33	53.25	0.26	0.648	51.01	0.32	51.01	0.24	0.8721	50.78	0.24	51.73	0.41	0.4044	50.44	0.40
DPC	50.97	0.31	51.47	0.25	0.7707	49.30	0.33	49.38	0.22	0.8618	47.99	0.28	49.75	0.27	0.3468	48.77	0.46
FMB	545	9	577	9	0.5619	529	13	526	9	0.8689	601	10	546	25	0.0414	709	18
FF	23	3	38	4	0.3019	10	1	10	1	0.8911	26	2	21	2	0.5501	15	2
IM	224	5	245	6	0.3622	236	5	238	4	0.2821	229	4	229	12	0.5092	248	8
IB	38	2	38	1	0.8020	40	1	42	1	0.4034	34	1	40	6	0.6427	46	2
IF	24	3	27	2	0.9586	12	1	15	1	0.0978	24	2	26	4	0.7474	14	2
HM	374	5	406	7	0.2656	395	9	390	6	0.4171	402	6	375	17	0.0755	456	13
HB	115	3	118	3	0.2629	108	2	106	2	0.9535	118	2	110	4	0.0341	147	3
HF	3	1	4	1	0.4495	4	1	6	1	0.2816	3	0	1	1	0.2719	2	0

¹TW – Termond White; NZWxFG – crossbreeds of New Zealand White and Flemish Giant; PW – Popielno White; FG – Flemish Giant. ²SD – standard deviation. ³BW12 – body weight at 12th week of age(g);SW- Slaughter weight (g); HCW – hot carcass weight (g); CCW – chilled carcass weight (g); DPH – warm dressing out percentage (%); DPC – cold dressing out percentage (%); FMB– meat and bones in fore part (g); FF - dissectible fat in fore part (g); IM - meat in intermediate part (g); IB - bones in intermediate part (g); IF - dissectible fat in intermediate part (g); HM - meat in hind part (g); HB - bones in hind part (g); HF - dissectible fat in hind part(g). ^{a,b}Values within a row and breeds with different superscripts differ significantly at $P<0.003$

Table S6. Associations between polymorphism g.41592248A>C within *IGFBP4* and carcass traits

Traits	TW ¹				<i>p</i> -value	NZW×FG				<i>p</i> -value	PW				<i>p</i> -value	FG	
	AA		AC			AA		AC			AA		AC			AA	
	Means	SD ²	Means	SD		Means	SD	Means	SD		Means	SD	Means	SD		Means	SD
<i>m. biceps femoris</i>																	
pH ₄₅	6.66	0.07	6.63	0.05	0.8286	6.74	0.03	6.62	0.02	0.1480	6.71	0.04	6.60	0.12	0.6560	6.66	0.05
L* ₄₅	53.90	0.60	52.21	0.35	0.0296	57.23	0.26	57.34	0.18	0.530	50.84	0.35	50.72	1.19	0.2885	52.51	0.48
a* ₄₅	4.28^a	0.26	2.93^b	0.13	0.0029	11.24	0.19	11.25	0.12	0.8620	3.05	0.15	2.25	0.27	0.6495	3.55	0.22
b* ₄₅	0.69	0.29	1.05	0.24	0.5969	0.83	0.19	1.09	0.11	0.5076	0.28	0.22	1.13	0.55	0.2230	0.79	0.24
pH ₂₄	6.08	0.07	5.88	0.03	0.0243	5.79	0.03	5.74	0.02	0.5803	5.96	0.03	6.00	0.10	0.1267	6.08	0.02
L* ₂₄	55.02	0.40	55.52	0.31	0.8197	57.79	0.26	57.99	0.15	0.4470	56.39	0.27	55.00	0.58	0.1577	57.51	0.48
a* ₂₄	4.94	0.34	4.15	0.17	0.1618	12.68	0.22	12.54	0.14	0.7100	4.01	0.17	3.15	0.32	0.4550	4.52	0.28
b* ₂₄	4.46	0.27	4.06	0.25	0.7994	3.74	0.15	3.33	0.13	0.2431	4.16	0.16	3.37	0.24	0.4046	4.57	0.23
<i>m. longissimus lumborum</i>																	
pH ₄₅	6.39	0.20	6.73	0.03	0.4266	6.72	0.03	6.74	0.02	0.0508	6.68	0.05	6.44	0.15	0.1704	6.81	0.04
L* ₄₅	58.82	0.62	59.60	0.53	0.3940	61.11	0.39	60.15	0.24	0.0508	59.64	0.58	59.02	2.29	0.0657	62.66	0.74
a* ₄₅	2.22	0.46	0.48	0.27	0.0852	8.09	0.23	8.79	0.16	0.0214	1.77	0.40	-0.11	0.67	0.5748	2.23	0.56
b* ₄₅	-1.57	0.64	-2.58	0.45	0.6808	-2.67	0.20	-2.26	0.13	0.0769	-1.13	0.45	-4.75	0.42	0.0123	-1.55	0.64
pH ₂₄	5.91	0.04	5.77	0.03	0.2690	5.64	0.02	5.59	0.01	0.5330	5.82	0.03	5.79	0.11	0.6866	6.01	0.04
L* ₂₄	54.51	0.48	56.38	0.34	0.2106	57.26^a	0.31	56.16^b	0.21	0.0031	56.55	0.30	55.06	0.88	0.0237	59.12	0.58
a* ₂₄	7.43	0.44	5.25	0.21	0.0013	12.99	0.26	13.18	0.18	0.4487	5.49	0.25	5.22	0.70	0.5027	7.65	0.34
b* ₂₄	4.89	0.31	3.99	0.29	0.0755	2.30	0.24	1.77	0.15	0.2459	3.47	0.21	3.39	0.70	0.6161	5.66	0.36
<i>m. longissimus lumborum</i>																	
Shear force	1.90	0.11	2.01	0.09	0.0167	4.26^a	0.15	3.65^b	0.10	0.0026	1.73	0.07	1.89	0.16	0.4846	2.13	0.08
Hardness	13.76	0.47	12.92	0.49	0.1535	60.46	2.44	57.19	1.54	0.5238	10.50	0.36	12.11	1.08	0.9364	12.18	0.53
Springiness	0.47	0.01	0.45	0.01	0.3316	0.53	0.01	0.52	0.01	0.2735	0.47	0.01	0.49	0.02	0.8821	0.49	0.01
Cohesivness	0.43	0.01	0.42	0.00	0.4166	0.43	0.01	0.41	0.01	0.0213	0.43	0.00	0.44	0.01	0.4219	0.45	0.01
Cheviness	2.87	0.15	2.54	0.13	0.6688	14.99	0.66	12.80	0.41	0.0255	2.17	0.10	2.59	0.32	0.9700	2.76	0.18

¹TW – Termond White; NZW×FG – crossbreeds of New Zealand White and Flemish Giant; PW – Popielno White; FG – Flemish Giant. ²SD – standard deviation. ^{a,b}Values within a row and breeds

with different superscripts differ significantly at $P < 0.003$

Table S7. Associations between polymorphism *g.158093018A>T* within *IGFBP5* and growth and slaughter traits

Traits ³	TW ¹				<i>p</i> -value	NZWxFG				<i>p</i> -value	PW		FG	
	AA		AT			AA		AT			AA		AA	
	Means	SD ²	Means	SD		Means	SD	Means	SD		Means	SD	Means	SD
BW12	2704	50	2638	52	0.3359	2566	93	2674	33	0.2470	2831	37	3248	70
SW	2732	47	2705	52	0.7550	2582	101	2728	39	0.1650	2838	38	3348	72
HCW	1462	26	1420	29	0.3692	1319	59	1395	21	0.1806	1447	21	1699	44
CCW	1427	25	1369	29	0.2442	1271	55	1351	20	0.1506	1333	17	1637	42
DPH	53.51	0.23	52.49	0.37	0.0886	50.91	0.70	51.01	0.22	0.8850	50.96	0.21	50.441	0.40
DPC	51.83	0.22	50.55	0.34	0.0119	49.14	0.74	49.35	0.20	0.7268	48.43	0.25	48.768	0.46
FMB	567	10	556	11	0.5939	502	24	531	8	0.2432	584	9	709	18
FF	31	3	28	4	0.9778	9	2	11	1	0.5929	25	2	15	2
IM	245	6	225	6	0.0447	227	10	238	4	0.3339	227	4	248	8
IB	41	2	36	1	0.0593	41	2	42	1	0.7829	36	1	46	2
IF	25	2	27	3	0.4091	15	2	14	1	0.4691	25	1	14	2
HM	398	6	379	7	0.1088	365	16	397	6	0.0790	393	5	456	13
HB	117	3	114	3	0.6145	101	4	108	2	0.2165	116	1	147	3
HF	4	1	3	1	0.1494	6	1	5	1	0.5725	2	0	2	0

¹TW – Termond White; NZWxFG – crossbreeds of New Zealand White and Flemish Giant; PW – Popielno White; FG – Flemish Giant. ²SD – standard deviation. ³BW12 – body weight at 12th week of age(g);SW- Slaughter weight (g); HCW – hot carcass weight (g); CCW – chilled carcass weight (g); DPH – warm dressing out percentage (%); DPC – cold dressing out percentage (%); FMB– meat and bones in fore part (g); FF - dissectible fat in fore part (g); IM - meat in intermediate part (g); IB - bones in intermediate part (g); IF - dissectible fat in intermediate part (g); HM - meat in hind part (g); HB - bones in hind part (g); HF - dissectible fat in hind part(g). ^{a,b}Values within a row and breeds with different superscripts differ significantly at $P<0.003$

Table S8. Associations between polymorphism g.158093018A>T within *IGFBP5* and carcass traits

Traits	TW ¹				<i>p</i> -value	NZW×FG				<i>p</i> -value	PW		FG	
	AA		AT			AA		AT			AA		AA	
	Means	SD ²	Means	SD		Means	SD	Means	SD		Means	SD	Means	SD
<i>m. biceps femoris</i>														
pH ₄₅	6.61	0.05	6.64	0.07	0.9608	6.58	0.05	6.67	0.02	0.1379	6.69	0.04	6.66	0.05
L* ₄₅	52.88	0.45	53.21	0.53	0.7194	56.75	0.44	57.48	0.17	0.1328	50.83	0.34	52.51	0.48
a* ₄₅	2.97^a	0.17	4.14^b	0.24	0.0010	11.74	0.29	11.09	0.11	0.0654	2.94	0.14	3.55	0.22
b* ₄₅	0.56	0.29	1.36	0.24	0.0200	1.03	0.33	1.00	0.10	0.9894	0.40	0.20	0.79	0.24
pH ₂₄	5.80^a	0.02	6.11^b	0.06	<.0001	5.64^a	0.03	5.77^b	0.02	0.003	5.97	0.03	6.08	0.02
L* ₂₄	55.13	0.38	55.27	0.30	0.4594	57.24	0.36	58.07	0.16	0.0546	56.09	0.25	57.51	0.48
a* ₂₄	4.26	0.23	4.74	0.30	0.2370	13.36	0.34	12.36	0.13	0.0094	3.93	0.17	4.52	0.28
b* ₂₄	4.39	0.24	4.28	0.28	0.3692	3.63	0.34	3.39	0.11	0.4835	4.05	0.15	4.57	0.23
<i>m. longissimus lumborum</i>														
pH ₄₅	6.65	0.03	6.64	0.06	0.4999	6.78	0.04	6.73	0.02	0.4507	6.63	0.05	6.81	0.04
L* ₄₅	59.47	0.56	58.64	0.56	0.4682	60.41	0.60	60.71	0.25	0.6749	59.63	0.60	62.66	0.74
a* ₄₅	0.89	0.38	1.47	0.38	0.5636	8.47	0.41	8.45	0.15	0.9754	1.46	0.36	2.23	0.56
b* ₄₅	-2.06	0.62	-2.64	0.48	0.2432	-2.51	0.45	-2.43	0.11	0.8716	-1.76	0.41	-1.55	0.64
pH ₂₄	5.72^a	0.03	5.91^b	0.03	0.0025	5.52^a	0.04	5.62^b	0.01	0.0011	5.81	0.03	6.01	0.04
L* ₂₄	55.93	0.37	55.02	0.47	0.3436	55.36	0.47	56.83	0.21	0.0123	56.27	0.29	59.12	0.58
a* ₂₄	5.24	0.25	6.80	0.45	0.0135	13.66	0.43	12.87	0.17	0.1063	5.49	0.23	7.65	0.34
b* ₂₄	4.01	0.32	4.41	0.33	0.6883	1.44	0.31	1.88	0.15	0.2409	3.45	0.20	5.66	0.36
<i>m. longissimus lumborum</i>														
Shear force	2.25^a	0.10	1.74^b	0.08	0.0005	3.30	0.21	3.95	0.10	0.0192	1.77	0.07	2.13	0.08
Hardness	14.13	0.63	12.70	0.35	0.0252	54.08	3.95	59.68	1.47	0.1554	10.78	0.36	12.18	0.53
Springiness	0.44	0.01	0.47	0.01	0.0208	0.54	0.02	0.51	0.01	0.2095	0.47	0.00	0.49	0.01
Cohesivness	0.43	0.00	0.43	0.01	0.8135	0.42	0.01	0.41	0.01	0.5851	0.43	0.00	0.45	0.01
Cheviness	2.80	0.17	2.62	0.12	0.3610	13.43	1.27	13.71	0.39	0.7814	2.24	0.10	2.76	0.18

¹TW – Termond White; NZWxFG – crossbreeds of New Zealand White and Flemish Giant; PW – Popielno White; FG – Flemish Giant. ²SD – standard deviation. ^{a,b}Values within a row and breeds

with different superscripts differ significantly at $P < 0.003$