

# National Pork Board Niche Marketing Factsheet

## Carcass Composition of Purebred Pigs

Rodney Goodwin, Ph.D.

The National Pork Board (NPB) has done extensive carcass separation research to give producers better information about market pig value. Different genetic types, sexes, and market weights were designed in these research projects. Data was collected in the Quality Lean Growth Modeling Project and Genetics of Lean Efficiency Project. Some purebred pigs from the 1996 and 2000 National Barrow Show Sire Progeny Tests were included in this research database. Carcass separation methods were approved by a committee of producers, packers, and meat scientists. The work was supervised by the Texas A & M University Meat Laboratory staff, led by Dr. Rhonda Miller. One side of each carcass was separated into bone, lean, fat and other soft tissue. Multiply each yield by two to get total carcass yield.

The growing interest in labeling high quality pork products by breed requires knowledge of the meat and fat yield of the resulting carcasses. Some of the highest pork quality breeds are fatter and produce less saleable product than commercial crossbred pigs. Carcass premiums for quality must be combined with lean meat yield to compare total economic returns between production systems.

Currently Berkshire, Chester White, and Duroc breeders are marketing genetically labeled pork products. The NPB database was used to predict lean meat, fat, other soft tissue (ost) and bone yields of barrows and gilts of these breeds and purebred Yorkshire pigs. There were 424 pigs of these breeds with carcass separation data. These pigs' average live weight was 264 lbs, ranging from 197 to 313 lbs. The values in the tables show the yield of a 264 lb live weight pig, this is the average market weight of modern pigs. However, you can use the adjustment factors found in the 'Change/lb' column to predict yields from hogs with different live market weights.

Table 1. Number of pigs and carcass measurements at 264 lbs.

	Unit	Berkshire barrows	Berkshire gilts	Chester barrows	Chester gilts	Duroc barrows	Duroc gilts	Yorkshire barrows	Yorkshire gilts	Change/ lb live weight	Std Dev
Pigs		31	21	15	7	82	78	102	88		
BF10	In	1.38	1.18	1.47	1.10	1.00	0.76	1.02	0.83	.0078	.22
LRBF	In	1.22	1.18	1.34	1.00	1.07	0.98	1.06	0.98	.0085	.17
LMA	Sq in	5.33	5.94	5.22	5.80	6.23	7.03	5.95	6.70	.0345	.72

Table 2. Carcass belly yields, one side separated.

	Unit	Berkshire barrows	Berkshire gilts	Chester barrows	Chester gilts	Duroc barrows	Duroc gilts	Yorkshire barrows	Yorkshire gilts	Change/ lb live weight	Std Dev
Belly 409	Lb	11.2	11.3	11.1	10.8	10.2	9.8	10.5	10.1	.121	.96
Belly ost	Lb	13.3	13.5	13.2	12.8	12.4	11.2	12.8	12.5	.150	1.16
Spare rib 416	Lb	3.4	3.6	3.5	3.6	3.6	3.6	3.6	3.7	.0257	.30
Spare rib ost	Lb	2.2	2.2	2.1	2.1	2.2	2.2	2.3	2.3	.0184	.28
Fatback	Lb	3.3	2.9	3.0	2.0	2.1	1.6	2.1	1.8	.0269	.60

Table 3. Carcass ham yields, one side separated.

	Unit	Berkshire barrows	Berkshire gilts	Chester barrows	Chester gilts	Duroc barrows	Duroc gilts	Yorkshire barrows	Yorkshire gilts	Change/ lb live weight	Std Dev
Ham 401	Lbs	21.4	21.8	21.8	23.3	22.7	23.7	22.2	22.6	.1729	1.15
Inside muscle	Lbs	3.3	3.4	3.7	4.1	4.1	4.5	3.9	4.2	.0248	.42
Outside muscle	Lbs	4.5	4.8	4.4	5.3	5.1	5.6	5.1	5.4	.0315	.49
Knuckle	Lbs	2.4	2.6	2.5	2.8	2.7	2.9	2.8	3.0	.0200	.29
Ham ost	Lbs	3.4	3.7	3.7	4.0	3.8	4.2	3.9	4.0	.0263	.40
External fat	Lbs	3.9	3.5	3.8	3.0	2.7	2.1	2.6	2.0	.0397	.61
Seam fat	Lbs	0.19	0.19	0.18	0.21	0.21	0.19	0.15	0.11	.0022	.08

Table 4. Carcass loin yields, one side separated.

	Unit	Berkshire barrows	Berkshire gilts	Chester barrows	Chester gilts	Duroc barrows	Duroc gilts	Yorkshire barrows	Yorkshire gilts	Change/ lb live weight	Std Dev
Loin 410	Lb	20.9	21.1	19.7	20.6	21.1	22.7	22.0	23.2	.1775	1.45
Boneless loin	Lb	5.5	6.0	5.3	6.0	6.0	6.9	6.2	6.8	.0517	.63
Loin ost	Lb	10.4	10.0	9.4	9.9	9.8	10.2	10.2	10.7	.0879	.86
Tenderloin	Lb	1.1	1.1	0.9	1.0	1.0	1.2	1.2	1.2	.0038	.29
Loin fat	Lb	3.5	2.4	3.9	2.2	1.9	0.9	2.3	1.4	.0337	.89

Table 5. Carcass shoulder yields, one side separated.

	Unit	Berkshire barrows	Berkshire gilts	Chester barrows	Chester gilts	Duroc barrows	Duroc gilts	Yorkshire barrows	Yorkshire gilts	Change/ lb live weight	Std Dev
Picnic 405	Lb	9.7	10.3	9.4	9.8	10.4	10.7	10.1	10.3	.0829	.90
Boneless picnic	Lb	6.8	7.1	6.4	7.0	7.2	7.7	7.3	7.6	.0649	.71
Shoulder ost	Lb	0.9	1.1	1.0	0.9	0.9	0.9	0.9	1.0	.0025	.24
Butt 406	Lb	9.4	9.6	9.2	9.8	10.1	10.4	10.0	10.5	.0861	.91
Boneless butt	Lb	7.1	7.2	6.9	7.4	7.5	7.8	7.5	8.0	.0605	.67
Picnic fat	Lb	0.9	0.9	1.0	0.8	0.6	0.4	0.6	0.4	.0112	.27
Butt fat	Lb	2.1	1.8	2.2	1.6	1.5	1.2	1.6	1.3	.0247	.37

Table 6. Other carcass components, one side separated.

	Unit	Berkshire barrows	Berkshire gilts	Chester barrows	Chester gilts	Duroc barrows	Duroc gilts	Yorkshire barrows	Yorkshire gilts	Change/ lb live weight	Std Dev
Jowl	Lb	2.2	1.9	1.8	1.9	1.7	1.5	1.9	1.8	.0199	.42
Jowl ost	Lb	1.9	1.6	1.4	1.5	1.5	1.2	1.6	1.4	.0176	.38
Bone	Lb	9.3	9.5	9.4	9.6	10.4	10.9	10.1	10.3	.0612	.92

Descriptions of each carcass component are given in the Appendix.