Pork yield guide

Animal to carcase, to primals to cuts

Contents

Introduction

The industry aim is to add value, use every part of the carcase and minimise wastage. This brochure has been produced to help people working with pork to get a basic understanding about the yield figures from farm to plate. Traditionally, the carcase is divided into three primal cuts, the Forequarter, the Middle and the Leg. Each of these primal cuts is then cut into a range of individual cuts and muscles, from which weights have been taken, to calculate the overall yield.

Dick van Leeuwen

AHDB Business Development Manager and Master Butcher

Processing the pork carcase, from farm to plate

Animal = 100%

Fifth quarter = variety meats/offal/edible co-products/animal by-products = 29.73%

Product	Figures from a pig weighing 111.5 kg liveweight, average fatness of P2 = 11		
	kg	% of fifth quarter	% of liveweight
Meat and best fat			
Caul fat	0.13	0.39	0.12
Head	4.40	13.27	3.95
Tongue	0.45	1.36	0.40
Jowls	1.80	5.43	1.61
Edible co-products			
Stomach (maw)	0.66	2.00	0.59
Small Intestines	0.15	0.45	0.13
Offal			
Liver	1.81	5.46	1.62
Skirt	0.42	1.27	0.38
Pharmaceuticals			
Mucosa	0.07	0.21	0.06
Blood	4.11	12.40	3.69
Petfood or Category 3*			
Intestinal fat	1.01	3.05	0.91
Spinal Cord	0.11	0.33	0.10
Large Intestines	3.10	9.35	2.78
Heart	0.34	1.03	0.30
Lungs, trachea	1.50	4.52	1.35
Bladder	0.25	0.75	0.22
Reproductive organs	0.35	1.06	0.31
Pancreas	0.48	1.45	0.43
Spleen	0.20	0.60	0.18
Category 2 – normally rendered as Category 1			
Gut contents	10.60	31.98	9.51
Tongue root trim	0.01	0.03	0.01
Hair scrapings and hooves	1.20	3.62	1.08
Total	**33.15**	**100.00**	**29.73**

*Many of these products will go as offal for human consumption, depending on export markets

Carcase = 70.27%

This figure excludes the head, but includes trotters, kidney and flare fat.

*Bone/Cut loss = 7.44%**

*Edible meat = 62.83%**

This figure includes skin (crackling), kidney and subcutaneous fat.

*Average yield of primals, muscles, joints, cuts and bone, fat and drip loss, as a percentage of the pork carcase.

Yields will vary depending on the type of cuts produced from the pork carcase, e.g. boneless or bone-in cuts, rindless or rind-on cuts, etc.

Source: AHDB

Pork primal cuts

Forequarter – bone-in

Collar of pork – boneless

Denver Muscle (Presa)

Chuck Eye Joint – Collar

Boston Butt (Neck End)

Shoulder – round

LMC

Pork Henry – whole

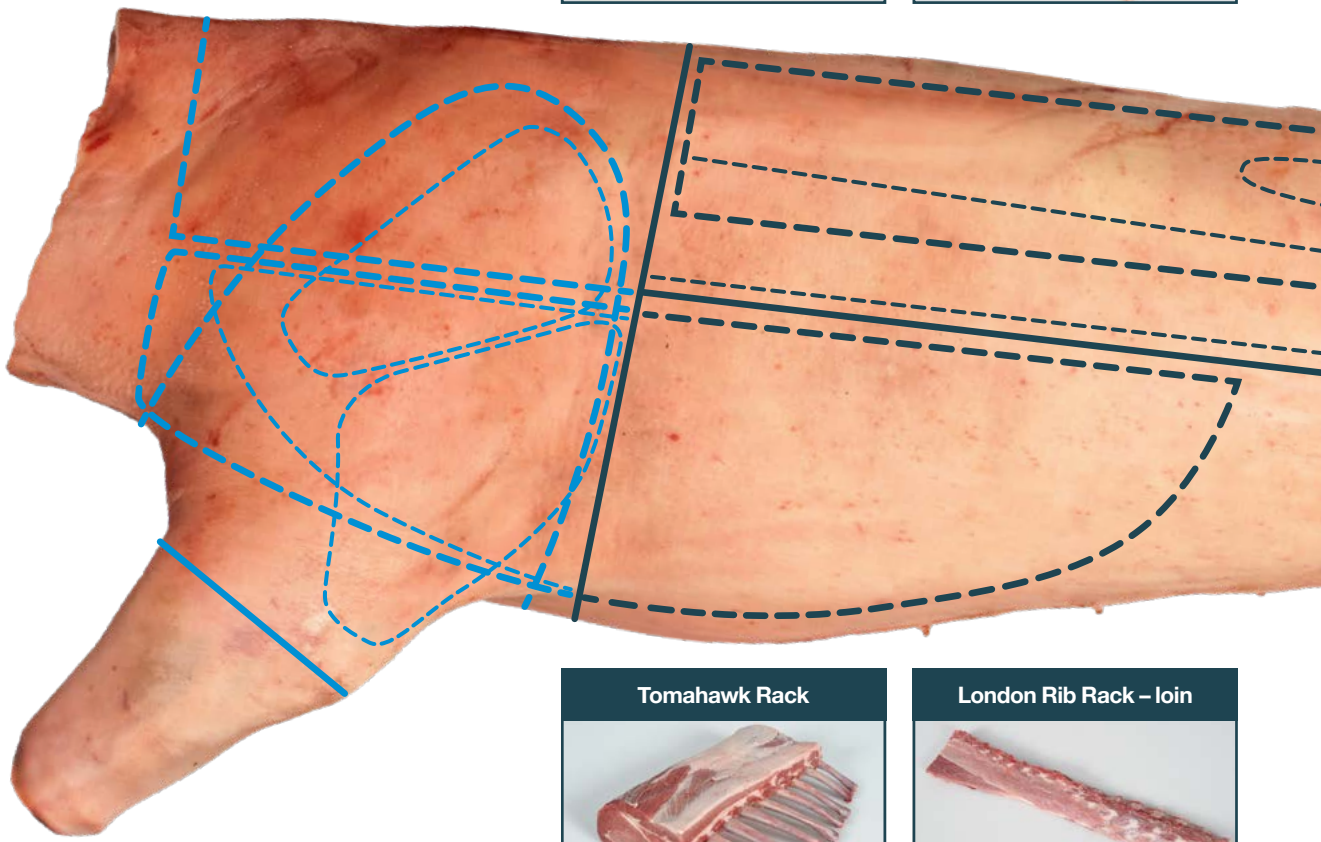
Brisket Muscle – fully trimmed

Brisket Rib Rack

Shank – Forequarter

Middle

Loin

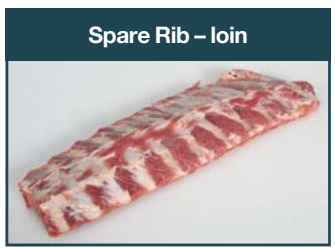


Tomahawk Rack

London Rib Rack – loin

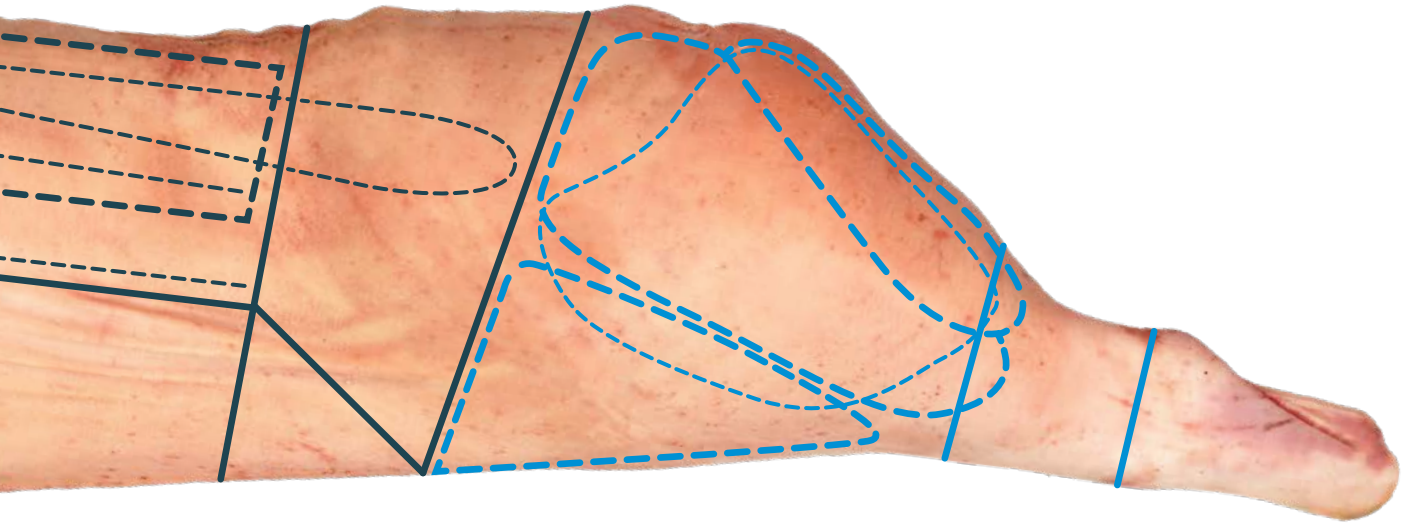
Gloucester Ribs Rack

Spare Rib – loin



Fillet on the bone

Fillet



Belly

King Rib Rack – belly

Spare Ribs – belly

Leg of Pork incl. chump

Leg of Pork

Topside

Topside excl. gracilis muscle

Silverside with Salmon Cut

Salmon Cut – fully trimmed

Thick Flank

Rump

Chump

Hock

Shank – Hindquarter

Pork carcase classification

The following equipment is approved for use in the UK:

- Optical probe
- Hennessey Grading Probe (HGP)
- Fat-O-Meater (FOM)
- AutoFOM
- CSB Ultra-Meater

The HGP, FOM, AutoFOM and CSB Ultra-Meater are all automatic recording probes.

Method 1

Optical Probe is used to measure backfat and rind thickness at the P1 and P3 positions, level with the head of the last rib. The probe is inserted 4.5 cm and 8 cm from the dorsal midline, respectively. The sum of the P1 and P3 measurements is recorded.

Method 2

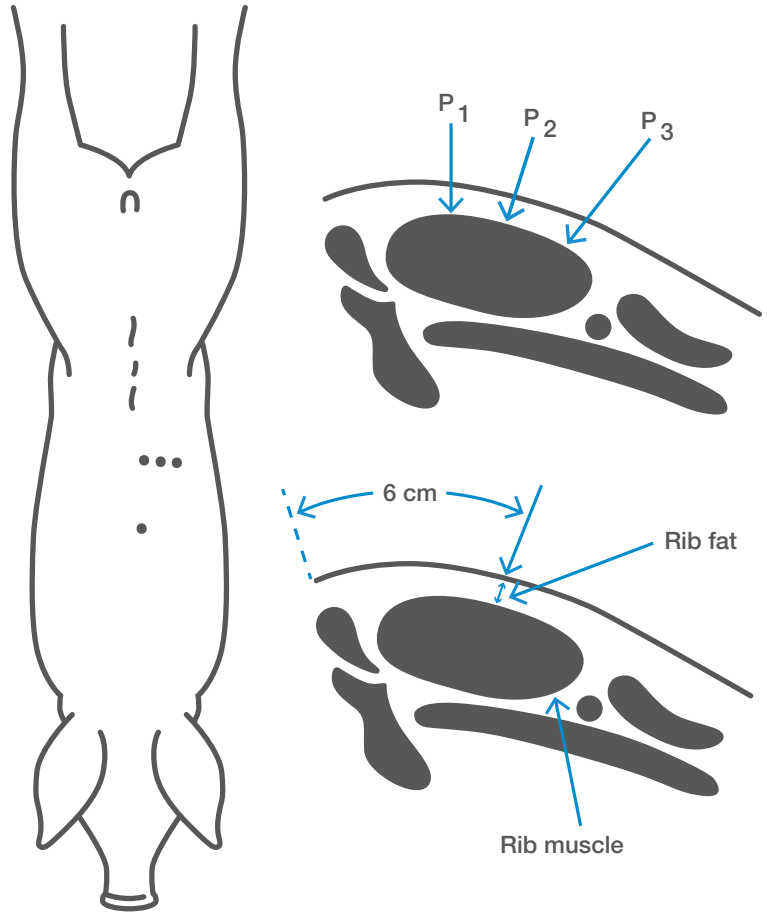
Optical Probe is used to measure backfat and rind thickness at the P2 position, level with the head of the last rib. The probe is inserted 6.5 cm from the dorsal midline.

Method 3

HGP or FOM are used to measure:

- Backfat and rind thickness at the P2 position as for Method 2. The HGP or FOM probes are inserted 6 cm from the dorsal midline
- Backfat and rind thickness at a point 6 cm from the dorsal midline between the third and fourth last rib. This measurement is referred to as rib fat
- Longissimus dorsi (eye muscle) depth at a point 6 cm from the dorsal midline between the third and fourth last rib. This measurement is referred to as rib muscle

Locations of probing sites on a pig carcase



Lean Meat Percentage and EU Grade

Lean meat percentage is calculated as follows:

- Optical probe
- Cold carcase weight and P2 (or P1 + P3) fat depths are used to estimate lean meat percentage.

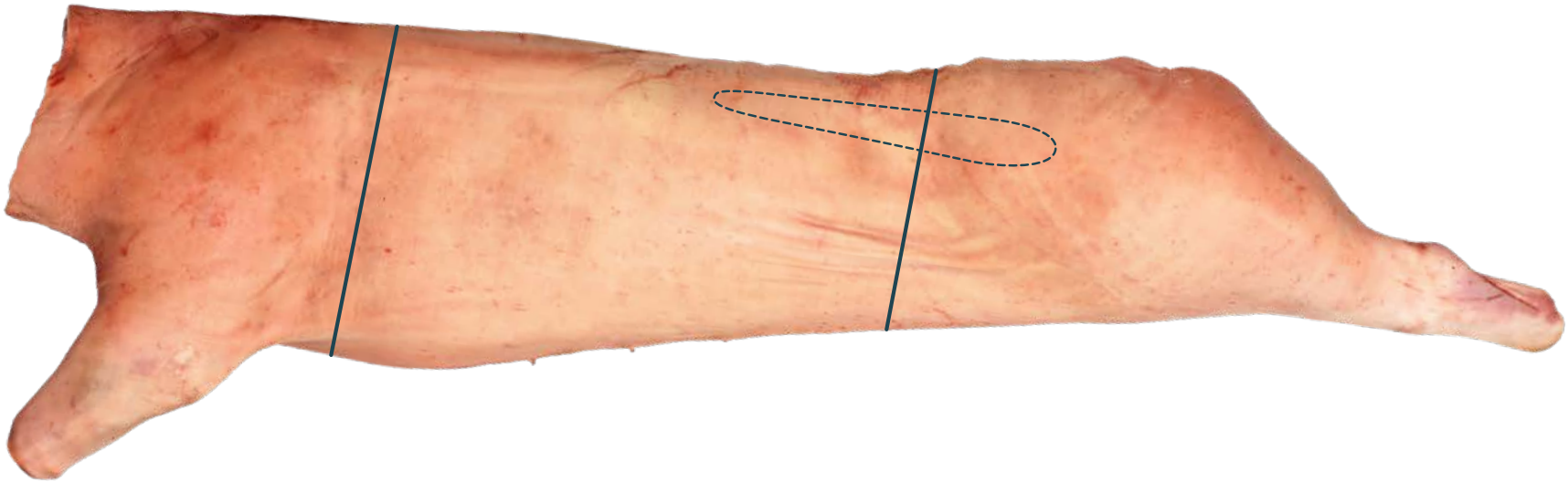
An EU grade can be allocated to a carcase by using the lean meat percentage figure.

Lean meat percentage	EU grade
60% and above	S
55–59%	E
50–54%	U
45–49%	R
40–44%	O
39% or less	P

Visual Appraisal

This is the identification of pigs with carcase faults. These are described as ‘Z’ carcases. Carcases that are scraggy, deformed, blemished, pigmented and coarse skinned, those with soft fat or pale muscle and those devalued by being partially condemned are recorded as ‘Z’ on the carcase record (PCC1 or computer equivalent). Young boars are identified and recorded. Carcases with poor conformation are recorded as ‘C’ carcases at the request of the abattoir.

Pork carcase to primal cuts – yield information



Forequarter – bone-in

Code: **1003**

Weight	11.76 kg
Percentage of side	**32.21%**

Middle – excl. fillet

Code: **1034**

Weight	12.30 kg
Percentage of side	**33.70%**

Fillet

Code: **2012**

Weight	0.51 kg
Percentage of side	**1.40%**

Leg and Chump – excl. fillet head

Code: **1045**

Weight	11.92 kg
Percentage of side	**32.65%**

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For the above primals, the forequarter and the leg include trotter weights and the middle includes the kidney and flare fat.

As soon as the carcase is cut into, cutting and drip loss will be experienced.

The weights/percentages of cuts are intended to act as a guide only, as butchery techniques, carcase weights and types may vary from one business to another.

Pork forequarter cuts – yield information

Forequarter – bone-in

Code: 1003

Description: Bone-in forequarter.

Weight	11.42 kg
Percentage of primal	**97.11%**
Percentage of side	**31.28%**

Forequarter – without neck, vertebrae and rib bones

Code: **1004**

Description: Bone-in forequarter – ribs, neck bones and vertebrae removed.

Weight	10.55 kg
Percentage of primal	**89.71%**
Percentage of side	**28.90%**

Shoulder – round

Code: **1005**

Description: Removed from the forequarter with the collar muscles and brisket ribs removed.

Weight	6.55 kg
Percentage of primal	**55.70%**
Percentage of side	**17.94%**

Shoulder – boneless, rindless, excl. shank

Code: **1027**

Description: Prepared from the round shoulder (Code: 1005) excluding the shank muscles.

Weight	4.35 kg
Percentage of primal	**36.99%**
Percentage of side	**11.91%**

Boston Butt (Neck End) – bone-in, rind on

Code: **1029**

Description: This cut contains the collar and blade bone part of the shoulder.

Weight	5.36 kg
Percentage of primal	**45.58%**
Percentage of side	**14.68%**

Boston Butt Joint – boneless and rindless

Code: **2024**

Description: This cut contains the collar and blade bone part of the shoulder and is deboned and rolled into a roasting joint.

Weight	3.95 kg
Percentage of primal	**33.59%**
Percentage of side	**10.82%**

Brisket Muscle – fully trimmed

Code: **1031**

Description: The brisket muscle is removed by seam cutting from the round shoulder (Code: 1005). Excess fat and gristle removed.

Weight	0.46 kg
Percentage of primal	**3.91%**
Percentage of side	**1.26%**

Brisket Rib Rack

Code: **3069**

Description: A meaty rib rack, which includes the brisket muscle.

Weight	1.12 kg
Percentage of primal	**9.52%**
Percentage of side	**3.07%**

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Pork forequarter cuts – yield information

Forequarter Ribs

Code: **3071**

Description: A 4-bone rib rack produced from the forequarter.

Weight	0.38 kg
Percentage of primal	**3.23%**
Percentage of side	**1.04%**

Shoulder Joint – boneless (Feather and LMC muscles)

Code: **2021**

Description: Produced from the boneless round shoulder, which is seam cut; only the highly trimmed feather and LMC muscles are used for this roasting joint.

Weight	1.27 kg
Percentage of primal	**10.80%**
Percentage of side	**3.48%**

Shoulder Joint – boneless (Brisket and Blade muscles)

Code: **2022**

Description: Produced from the boneless round shoulder, which is seam cut; only the highly trimmed brisket and blade muscles are used for this roasting joint.

Weight	1.57 kg
Percentage of primal	**13.35%**
Percentage of side	**4.30%**

Pork Henry – whole

Code: **2025**

Description: Meaty shoulder blade of pork.

Weight	0.97 kg
Percentage of primal	**8.25%**
Percentage of side	**2.66%**

Shank – forequarter

Code: **1032**

Description: The shank is removed from the forequarter between the radius/ulna and humerus.

Weight	0.80 kg
Percentage of primal	**6.80%**
Percentage of side	**2.19%**

Fore Trotters

Code: **8008**

Description: Bone-in trotters removed from the forequarter.

Weight	0.34 kg
Percentage of primal	**2.89%**
Percentage of side	**0.93%**

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Pork forequarter cuts – yield information

Collar of Pork – bone in

Code: **1007**

Description: Bone-in pork collar, seam cut from the forequarter.

Weight	3.24 kg
Percentage of primal	**27.55%**
Percentage of side	**8.87%**

Collar of Pork – boneless

Code: **1008**

Description: Boneless collar, seam cut from the forequarter.

Weight	2.57 kg
Percentage of primal	**21.85%**
Percentage of side	**7.04%**

Collar Joint with crackling – boneless

Code: **2019**

Description: Trimmed boneless collar with added rind for crackling and rolled into a roasting joint.

Weight	2.69 kg
Percentage of primal	**22.87%**
Percentage of side	**7.37%**

Chuck Eye Joint – collar

Code: **2023**

Description: This joint is the continuation of the rib eye muscle, which runs into the collar.

Weight	0.38 kg
Percentage of primal	**3.23%**
Percentage of side	**1.04%**

Denver muscle

Code: **3072**

Description: A single muscle, seam cut from the collar of pork.

Weight	0.56 kg
Percentage of primal	**4.76%**
Percentage of side	**1.53%**

Derby Ribs – collar

Code: **3066**

Description: Prepared from the collar bones with a minimum of 20 mm thick layer of meat and cut into 30 mm wide portions.

Weight	1.29 kg
Percentage of primal	**10.97%**
Percentage of side	**3.53%**

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Pork middle cuts – yield information

Middle excl. fillet

Code: **1034**

Description: This middle consists of the loin and belly with the fillet removed.

Weight	11.58 kg
Percentage of primal	**94.15%**
Percentage of side	**31.72%**

Middle – boneless

Code: **1035**

Description: This middle has all bones removed by sheet boning and does not include the fillet.

Weight	9.84 kg
Percentage of primal	**80.00%**
Percentage of side	**26.95%**

Loin – boneless, rind on

Code: **1056**

Description: Loin with the bones and fillet removed.

Weight	5.53 kg
Percentage of primal	**44.96%**
Percentage of side	**15.15%**

Loin – boneless, rindless

Code: **1013**

Description: Loin with rind, bones and fillet muscle removed.

Weight	4.78 kg
Percentage of primal	**38.86%**
Percentage of side	**13.09%**

Fillet on the bone

Code: **2030**

Description: A bone-in fillet prepared from the lumbar section of the loin.

Weight	0.86 kg
Percentage of primal	**6.99%**
Percentage of side	**2.36%**

Loin – bone-in, rind on, excl. fillet

Code: **1037**

Description: Bone-in loin including rind but without the fillet.

Weight	6.18 kg
Percentage of primal	**50.24%**
Percentage of side	**16.93%**

Loin – bone-in, rindless, excl. fillet

Code: **1036**

Description: Bone-in loin without the fillet, and with rind and fat removed to a maximum fat depth of 10 mm.

Weight	5.71 kg
Percentage of primal	**46.42%**
Percentage of side	**15.64%**

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The calculations shown above do not include the kidney and flare fat weights.

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Pork middle cuts – yield information

Loin Eye Muscle 95%VL, incl. silverskin, chain and spinalis muscle

Code: **1042**

Description: Boneless loin with the tail and all back fat removed.

Weight	4.27 kg
Percentage of primal	**34.72%**
Percentage of side	**11.70%**

Loin Eye Muscle 98%VL, excl. silverskin, incl. chain and spinalis muscle

Code: **1043**

Description: Boneless loin with the tail, all back fat and silverskin removed.

Weight	3.78 kg
Percentage of primal	**30.73%**
Percentage of side	**10.35%**

Loin Eye Muscle – 99%VL

Code: **1044**

Description: Boneless loin with the tail, all back fat, silverskin, chain and spinalis muscle removed, leaving just the eye muscle. Trimmed to 99%VL.

Weight	3.46 kg
Percentage of primal	**28.13%**
Percentage of side	**9.48%**

Spare Rib – loin

Code: **3019**

Description: Rack loin ribs removed by sheet boning.

Weight	0.56 kg
Percentage of primal	**4.55%**
Percentage of side	**1.53%**

Gloucester Rib Rack

Code: **3055**

Description: A rack of loin ribs comprising a variety of muscles, including the tail of the loin, creating a meaty rib rack.

Weight	1.93 kg
Percentage of primal	**15.69%**
Percentage of side	**5.29%**

London Rib Rack – loin

Code: **3057**

Description: Vertebrae and feather bones of the loin with a minimum of 20 mm thick layer of meat.

Weight	1.59 kg
Percentage of primal	**12.93%**
Percentage of carcase	**4.35%**

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Pork middle cuts – yield information

Belly – bone-in, rind on

Code: **1014**

Description: Bone-in belly with the rind on.

Weight	5.62 kg
Percentage of primal	**45.69%**
Percentage of side	**15.39%**

Belly – bone-in , rindless

Code: **1040**

Description: Bone-in belly with the rind removed.

Weight	5.13 kg
Percentage of primal	**41.71%**
Percentage of side	**14.05%**

Belly – boneless, rind on

Code: **1015**

Description: Rind on belly with the ribs removed by sheet boning.

Weight	4.31 kg
Percentage of primal	**35.04%**
Percentage of side	**11.80%**

Belly – boneless, rindless

Code: **1016**

Description: Rindless belly with the ribs removed by sheet boning.

Weight	3.86 kg
Percentage of primal	**31.38%**
Percentage of side	**10.57%**

King Rib Rack – belly

Code: **3053**

Description: All the trimmed belly meat is left on the rib section of the belly to create a very meaty rib rack of required weight.

Weight	2.62 kg
Percentage of primal	**21.30%**
Percentage of side	**7.18%**

Spare Ribs – belly

Code: **3020**

Description: Rack of ribs, including the soft bones/cartilage taken from the belly by sheet boning.

Weight	0.64 kg
Percentage of primal	**5.20%**
Percentage of side	**1.75%**

Kidney

Code: **8014**

Description: Pig's kidney.

Weight	0.20 kg
Percentage of primal	**1.63%**
Percentage of side	**0.55%**

Flare Fat

Description: Flare fat from the inside of the belly.

Weight	0.52 kg
Percentage of primal	**4.23%**
Percentage of side	**1.42%**

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Pork leg cuts – yield information

Leg and Chump – excl. fillet head

Code: **1045**

Description: Leg and chump removed from the side of pork by cutting between the last two lumbar vertebrae. Excluding the fillet head.

Weight	11.26 kg
Percentage of primal	**94.46%**
Percentage of side	**30.84%**

Leg and Chump – without hip and tail bone, excl. fillet

Code: **1046**

Description: Part-boned leg and chump of pork, excluding the head of the fillet.

Weight	9.85 kg
Percentage of primal	**82.63%**
Percentage of side	**26.98%**

Leg of Pork

Code: **1047**

Description: The leg of pork does not include the chump.

Weight	9.45 kg
Percentage of primal	**79.28%**
Percentage of side	**25.88%**

Leg of Pork – boneless

Code: **1048**

Description: Leg of pork with the hock removed. The femur is removed by tunnel boning. The leg of pork does not include the chump.

Weight	8.45 kg
Percentage of primal	**70.89%**
Percentage of side	**23.14%**

Topside

Code: **1019**

Description: Topside seam cut from the leg.

Weight	1.92 kg
Percentage of primal	**16.11%**
Percentage of side	**5.26%**

Topside - excl. gracilis muscles

Code: **1020**

Description: Seam cut from the leg with the gracilis and associated muscles removed.

Weight	1.40 kg
Percentage of primal	**11.74%**
Percentage of side	**3.83%**

Gracilis and associated muscles

Code: **1049**

Description: Gracilis and associated muscles are removed from the topside by seam cutting.

Weight	0.36 kg
Percentage of primal	**3.02%**
Percentage of side	**0.99%**

Thick Flank

Code: **1050**

Description: Thick flank seam cut from the leg.

Weight	1.36 kg
Percentage of primal	**11.41%**
Percentage of side	**3.73%**

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Pork leg cuts – yield information

Silverside with Salmon Cut and Heel Muscle

Code: **1022**

Description: Silverside with salmon cut and heel muscle seam cut from the leg.

Weight	2.45 kg
Percentage of primal	**20.55%**
Percentage of side	**6.71%**

Silverside with Salmon Cut

Code: **1023**

Description: Silverside with salmon cut seam cut from the leg.

Weight	1.83 kg
Percentage of primal	**15.35%**
Percentage of side	**5.01%**

Salmon Cut – fully trimmed 98%VL

Code: **1052**

Description: Salmon cut seam cut from the leg and trimmed to 98%VL.

Weight	0.36 kg
Percentage of primal	**3.02%**
Percentage of side	**0.99%**

Rump

Code: **1053**

Description: Rump seam cut from the leg.

Weight	1.10 kg
Percentage of primal	**9.23%**
Percentage of side	**3.01%**

Heel Muscle – fully trimmed

Code: **1054**

Description: Heel muscle seam cut from the leg and fully trimmed.

Weight	0.38 kg
Percentage of primal	**3.19%**
Percentage of side	**1.04%**

Hock

Code: **3076**

Description: Bone-in and rind on, hind hock.

Weight	0.99 kg
Percentage of primal	**8.32%**
Percentage of side	**2.71%**

Shank – hindquarter

Code: **3077**

Description: Produced from the hock with the rind and heel muscle part removed.

Weight	0.67 kg
Percentage of primal	**5.62%**
Percentage of side	**1.84%**

Hind Trotters

Code: **8010**

Description: Hind trotters removed from the leg.

Weight	0.66 kg
Percentage of primal	**5.54%**
Percentage of side	**1.81%**

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