

# Estimation of carcass composition

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- physical dissection of carcass to get information about carcass growth characteristics such as the amount or percentage of lean, fat and bone tissue.

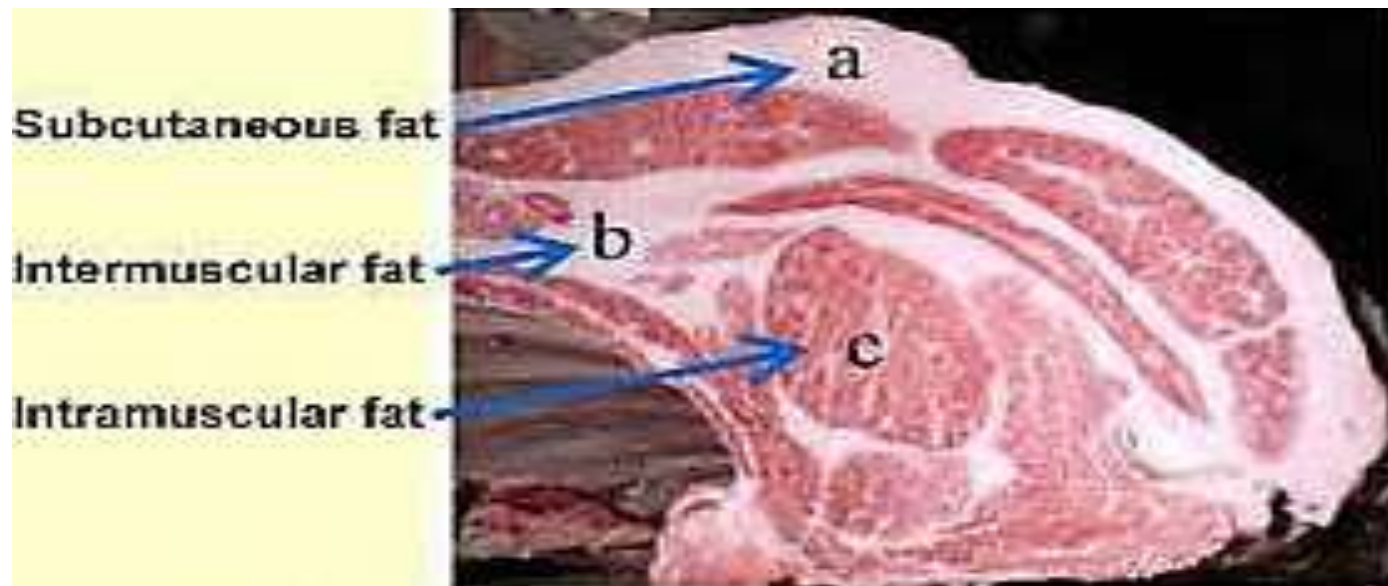
**The ratio of lean to fat ratio** = Lean weight / Fat weight.

**The ratio of lean to bone ratio** = Lean weight / Bone weight.

**The ratio of meat to bone ratio** = Meat weight / bone weight.

## Type of fat in carcass

- The three main types of fat found in meat
  - Inter-muscular fat (between the muscles).
  - Intramuscular fat ('marbling' within the muscles).
  - Subcutaneous fat (visible fat below the skin).



## ➤ The two type of abdominal fat

- Fat around digestive system (stomach and intestinal)
- Fat of kidney, pelvic and heart

## ➤ The order of tissue precedence is as follows

- I. Tissues that organize physiological process
- II. Bone,
- III. Muscle,
- IV. Fat deposition.

# Factors influencing carcass composition

## ➤ Genetic factors

## ➤ Physiological age

## ➤ Influence of sex

## ➤ Nutrition

## ➤ Hormones

- Growth hormone =- lean tissue growth throughout in animal.
- Somatomedins- responsible for protein synthesis.
- Adrenaline or noradrenaline- influence muscle protein and lipid metabolism.
- $\beta$ -adrenaline- increase muscle size and decrease quantity of fat.
- Androgens- stimulate growth in muscles of the male, especially
- Estrogens - effective in promoting deposition of body fat

## ➤ Pre-slaughter handling

## ➤ Abnormal growth including double muscling

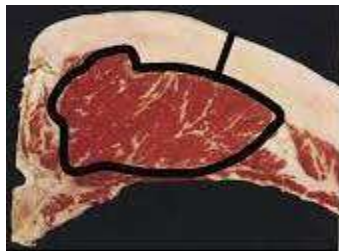
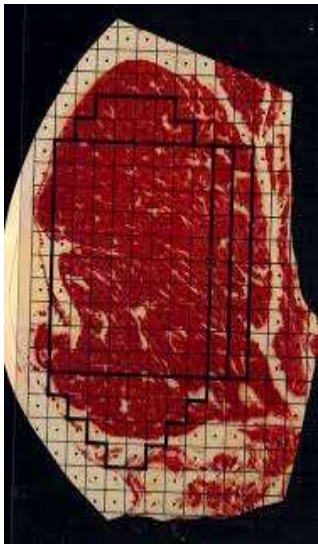


## Fat thickness

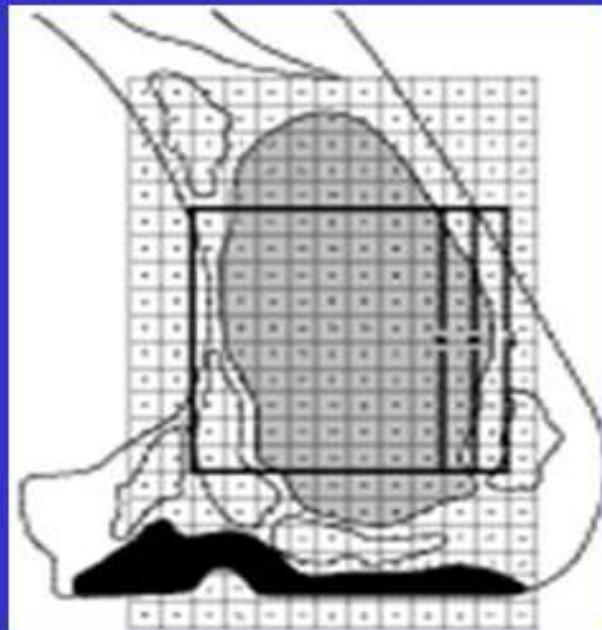
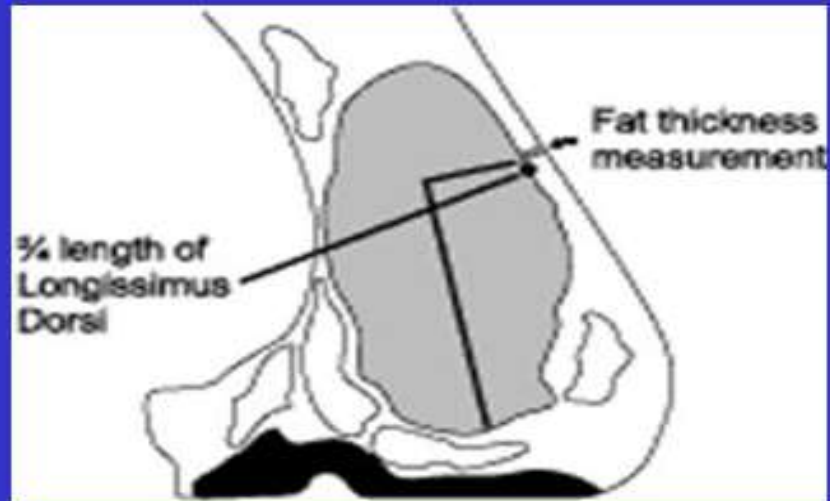
- It is measured at a point three-fourths of the length of the rib eye muscle at the 12th rib.
- This measurement is an indicator of the total amount of fat on the carcass.

## Rib Eye Area

- The *longissimus* muscle is measured at the 12th rib.
- Rib eye area is an indicator of carcass muscling.



rib



Name of cut	Intact cut/ tissue	Weight (g)	Percentage of wholesale cut (%)
Leg	Wholesale cut		
	Muscle		
	Fat		
	Bone		
Sirloin	Wholesale cut		
	Muscle		
	Fat		
	Bone		
Short loin	Wholesale cut		
	Muscle		
	Fat		
	Bone		
Rib	Wholesale cut		
	Muscle		
	Fat		
	Bone		
Shoulder	Wholesale cut		
	Muscle		
	Fat		
	Bone		
Neck	Wholesale cut		
	Muscle		
	Fat		
	Bone		
Breast	Wholesale cut		
	Muscle		
	Fat		
	Bone		
Fore shank	Wholesale cut		
	Muscle		
	Fat		
	Bone		
	Wholesale cut		
Flank	Wholesale cut		
	Muscle		
	Fat		
	Bone		
	Wholesale cut		