



# dunbia

naturally better...

Session 71

Improving Meat Quality Through  
The Supply Chain

Michael McWhinney  
Group Head of Innovation, Dunbia

**R&D**  
New product  
technology, e  
change and t  
puts the cus



**THE  
SCIENCE  
OF  
MEAT  
QUALITY**



# Think About Food

Increasingly the food we choose to eat says as much about our culture and who we wish to be as the clothes we wear, the cars we drive or the films and music we choose to enjoy



The lifestyle we choose to live

## So what are the key trends?

- **Smaller Households** – in UK 63% Households are 1-2 person households
- **Convenience**; Speed; Ease - consumers are looking for convenient meal solutions that are both fast and simple to cook & in thus fit into their busy lifestyles - 1 in 5 occasions described as a quick bite
- **Quality** – despite the desire for convenient, fast, and simple meal solutions, consumers still demand quality product particularly in meat.
- **Health & Nutrition** – consumers are more health conscious now than ever; consumers often have a perception of red meat as ‘unhealthy’ (high in fat; bad for cholesterol...) versus other proteins however essential as part of a healthy BALANCED diet.

(www.ons.gov.uk & kantar)



## Our Strategies

To ensure our innovation and development strategies are in tune with and are relevant to the changing lifestyles of consumers.

1. **Quality** – From farm to fork – training and collaborative expertise in R&D combined with people skills and knowledge enhancement
2. **Convenience** - Food that appeals is inspirational and is easy to deal with – Dinner tonight – less primal and more meal solution orientated
3. **Affordability** - Extracting more value from the animals we process and using advancing technologies to optimise eating quality
4. **Health** – We are be increasing recognised for taking care of this in relation to salt / fat, sugar and portion size and control.
5. **Food Waste** – Reducing food waste through improved raw material processing and functional packaging technologies
6. **Packaging Reduction & Recyclability** - working with and challenging our suppliers, eco resins, the removal of PE laminates, alternatives to PET plastics etc.

## Shopper In Relation To Beef

What is driving purchase decisions in-store?

### PURCHASE DRIVERS:

1. Price
2. Special offers
3. Quality
4. Taste
5. Use by / Sell by date
6. Familiar
7. Healthy option
8. Brand
9. Ease of using
10. Ethical / eco friendly

(Source: IGD Shoppervista Oct 14)

### TOP REASONS TO BUY:

1. Is tasty
2. It is full of flavour
3. Good source of protein
4. Should be eaten in moderation
5. Is easy to cook with
6. Good source of Iron
7. Versatile
8. Suitable any day of the week

(AHDB Research Meat Attributes)



(Kantar World Panel 2015)

## The Industry

- Beef supply in the UK is changing
- Gradually increasing focus on beef from the dairy herd
- Increasing focus on more traditional breeds
- Slightly reduced carcass quality, but potential increase in eating quality



## At Farm

- Genetics / breed type & Sex
- Production system & diet
- Health, welfare & handling
- Age at slaughter

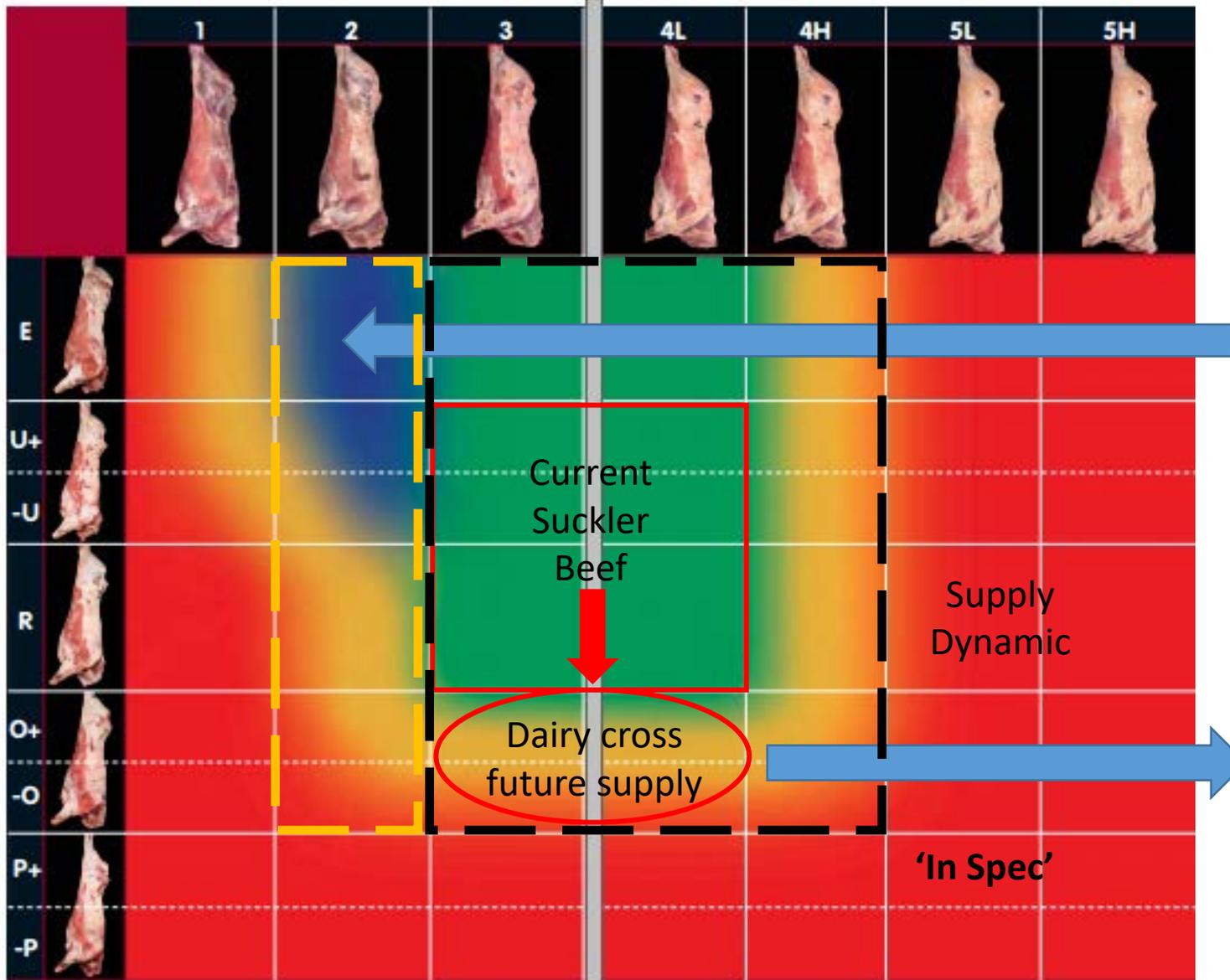


## In Process

- Transport & Lairage
- Process & Carcass pH & °C decline
- Carcass fat class
- Maturation time and type
- Method of hanging



# The Changing Dynamic Of Beef Production



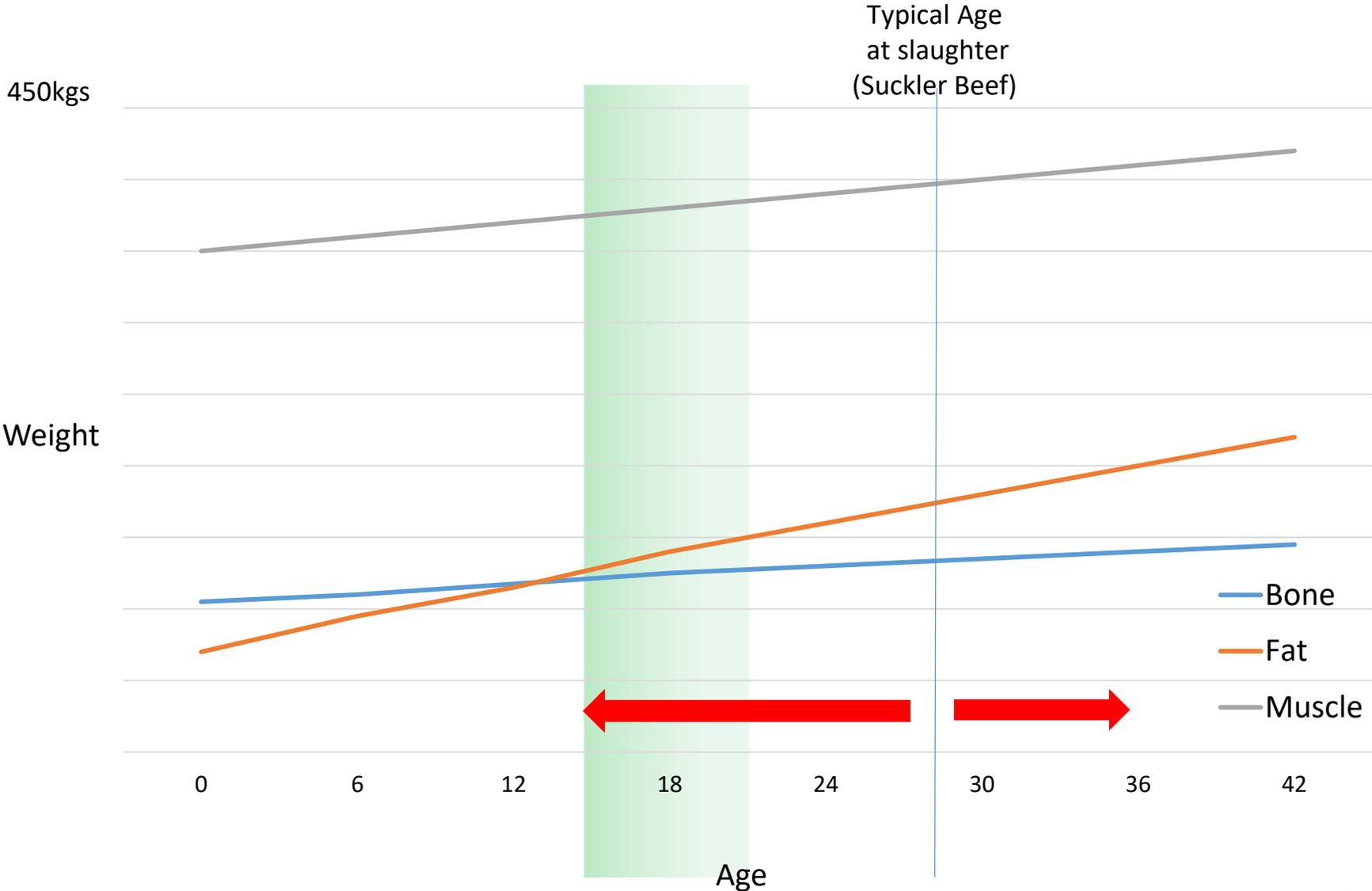
## Supply Within The Classification System

- Still recognised in monetary premiums albeit polarising in terms of:
- Forecast declining market
- Typically +27 month rearing
  - Large primal (size and weight)
- Challenging for pack size and fixed weight retail products

## Opportunities From Change

- Younger (<20 months) and cheaper to produce carcasses
- Less fat and connective tissue (collagen)
- Greater consistency and narrower distribution in confirmation and fat class
- Closer 'in specification' primals to end product quality specifications
- Improved eating quality (source:EBLEX/AHDB)
- Lower Carbon Footprint

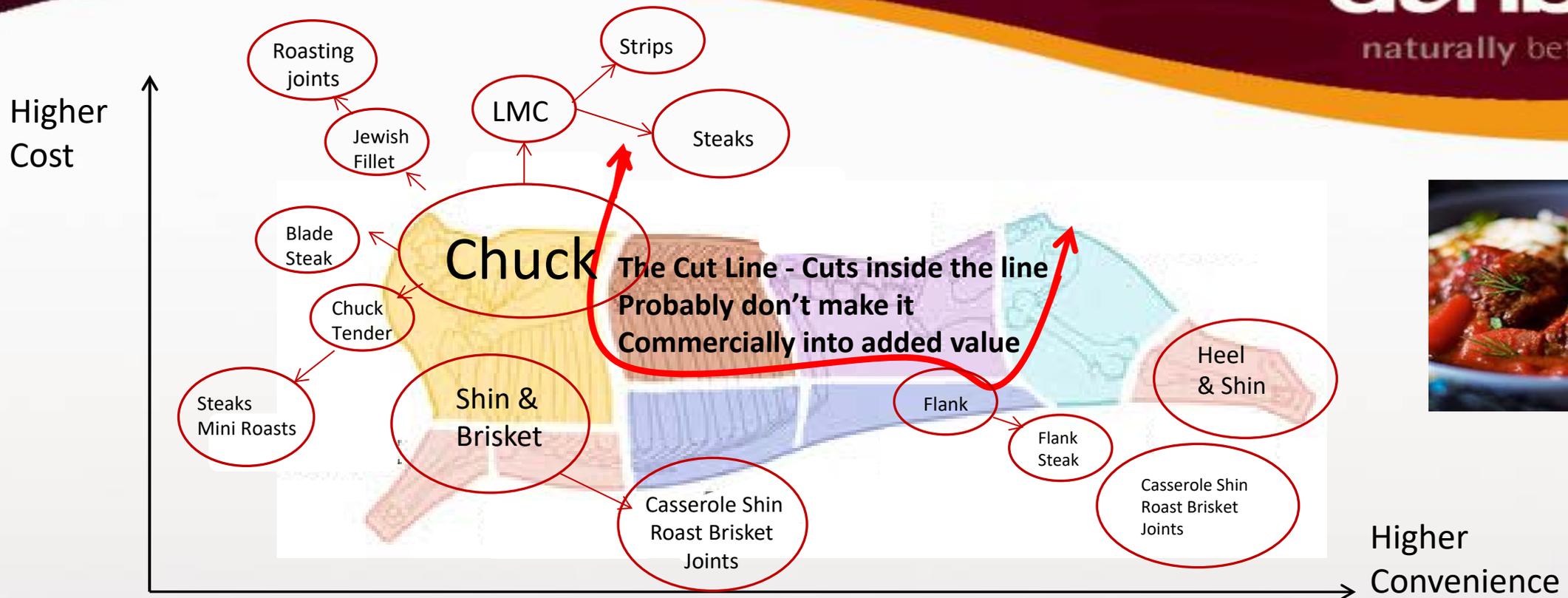
# Beef Cattle Constituent Growth Profiles



## Improvements in eating quality through age reduction

- Meat:bone ratio (than dairy pure bred dai)
- Fat:Protein ratio
- Collagen content within the protein fraction
- Improve eating quality and tenderness

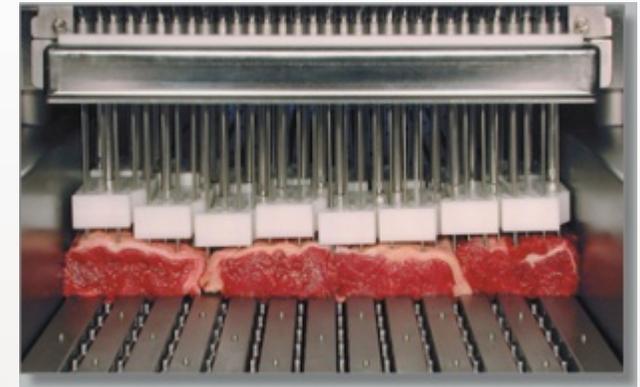
# Primal Cuts Review – Beef



- Key opportunities still remain in the forequarter
- Innovative butchery combined with perfect cooking instruction is critical to whole muscle concepts
- Mechanical tenderisation and or injection will be probable in steak type cuts
- Sous Vide and part cooking increasing become integral to the added value process for enhanced quality and convenience
- Reformed process technology is will be greatest affecter on stretching seasonality and eating occasion and driving down cooking times

## Mechanical Injection

- Need tenderisation combined with the addition of functional ingredients in solution
- Rapid development of natural flavour enhancement complexes
- Yield enhancement
- Work in progress added value step
- Finished retail products



MAP (modified atmosphere packaging) to VSP (vacuum skinpack)

- One of the greatest packaging advances in the last three years
- Total life and shelf life extension
- Rapid advancement in application and functionality
- Changing perception of meat freshness through colour
- Continued in pack maturation through product life
- Improved eating quality in all sensory organoleptic metrics over MAP



## Cooking & Part Cooking (Sous Vide)

- Consumer Insight points to cook times < 30 mins total meal time prep to plate > 30 mins now seen as major reason not purchase
- Price point targets mean there is a need to extract more value from most fore quarter and lesser utilised hind quarter cuts
- Sous vide offers significantly improved eating quality, consistency and reduced preparation time for the consumer
- Culinary ability at home is in decline



“ Sous vide cooking is the single greatest advancement in cooking technology in decades. ”

Heston Blumenthal, Three-Michelin Star Chef

