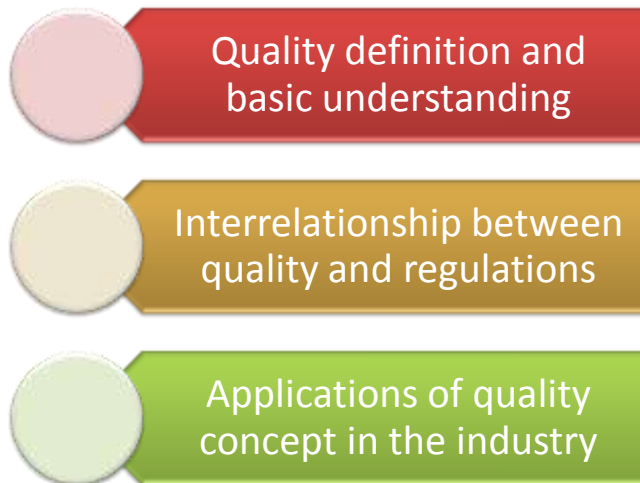


Quality Concept

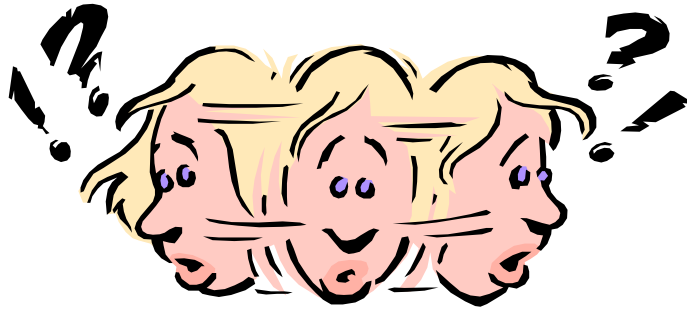
MMRP 2014

Food Science & Technology Department

The Quality Concept



What is Quality ??



Definition

Quality is

“The totality of features and characteristics of a product or service that bear on its ability to satisfy implied or stated needs”

ANSI/ASQC Standard

Quality Definitions

- Product-based.
 - Based on features or attributes of the product that enhance quality,
 - e.g., organically manufactured food products as opposed to regular products.
- User-based.
 - The user determines the quality of the product.
 - “fitness for use,” (Juran)
 - e.g., ready to-eat microwaveable dinners as opposed to other forms of manufactured dinners.

- Manufacturing-based.
 - Conformance to specifications.
 - Manufacturing engineering specifies the product characteristics and the more closely manufacturing can conform to those requirements, the better the quality of the product.
- Value-based.
 - The element of price is introduced into the definition of quality.
 - Quality is the degree of excellence at an acceptable price and the control of variability at an acceptable cost.
 - Value comprises price and quality of product and service.

Dimensions of Quality

- Design.
 - This determines the market segment.
 - Not only an engineering decision, but involves customers, manufacturing, and other stakeholders.
- Conformance.
 - David A. Garvin : 8 Dimensions of Quality to link customer requirements to engineering design.

8 Dimensions of Quality

1. Performance
2. Features.
3. Reliability.
4. Conformance.
5. Durability.
- 6. Serviceability.
- 7. Aesthetics.
- 8. Perceived quality.

Standards of Quality

- Legal Standard
- Company/ Voluntary Label Standard
- Industry Standard
- Consumer or Grade Standard

Responsibility for quality



- Quality is everyone's job!
- Includes assembly-line worker, the typist, the purchasing agent, the president of the company
- Begins when marketing determines the customer's quality requirements and continues until the product is received by a satisfied customer

Areas Responsible for Quality



Marketing

- Evaluate the level of product quality that the customer wants, needs and is willing to pay for
- Provide product quality data
- Helps to determine quality requirements



Design Engineering

- Translate customer requirements into operating characteristics, specifications and then product
- What materials to be used in a product
- No design is perfect over time !



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Procurement

- Standard material
- Standard hardware
- Minor components
- Major components
- Capable supplier → single / multiple
- Proof of conformance to quality standards
- Concern total cost, not price!



Process Design

- Develop process & procedures
→ process selection & development, production planning
- Design review → anticipate quality problems
- Cost, quality, implementation time & efficiency !



Production

- Quality cannot be inspected into a product, it must be built into the product
- First line supervisor
- Periodical Training session on quality



Inspection & Test

- Quality cannot be inspected into a product, it must be built into the product
- Quality appraisal (purchased & manufactured items)
- Reporting inspection result
- SQC for improvement

Check
& Compare



← CHECKS GO FIRST TO YOUR WILLING PRINTS.



Packaging & Storage

- Preserve & protect product
- Product handling during loading, unloading & warehousing
- Proper storage



Product Service

- Provide the customer with the means for fully realizing the intended function of the product during its expected life
- Prompt service :
dissatisfied customer → satisfied one



Quality Assurance

- No direct responsibility !
- Responsibility : continually evaluate the effectiveness of quality system
- Assists or support other areas responsible for quality



Chief Executive Office

- Responsible for each area incl. QA
- Must be involved directly in the quality effort
 - Quality improvement project
 - Recognition ceremonies
 - Employee meeting
 - Writing in monthly newsletter
- Measurement of quality performance



Customer Satisfaction

- Quality measure = hard indices
- CS measure = soft indices
 - Attitudes
 - Perception

CS defined

- Characteristics of the product or service that represent important dimensions → Quality dimensions
- How the customer defines the quality of product or service

Hayes, 1998

Next Week

Quality System in Food Industry

- Basic production system in food industry
- Relationship of Quality-Process-Control
- Product and Process Specification

Essential Questions

1. What is process ?
2. What is control ?
3. What is the relationship between Quality-process-control ?
4. What is product/process specification ?
5. Please give example of product/ process specification!

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