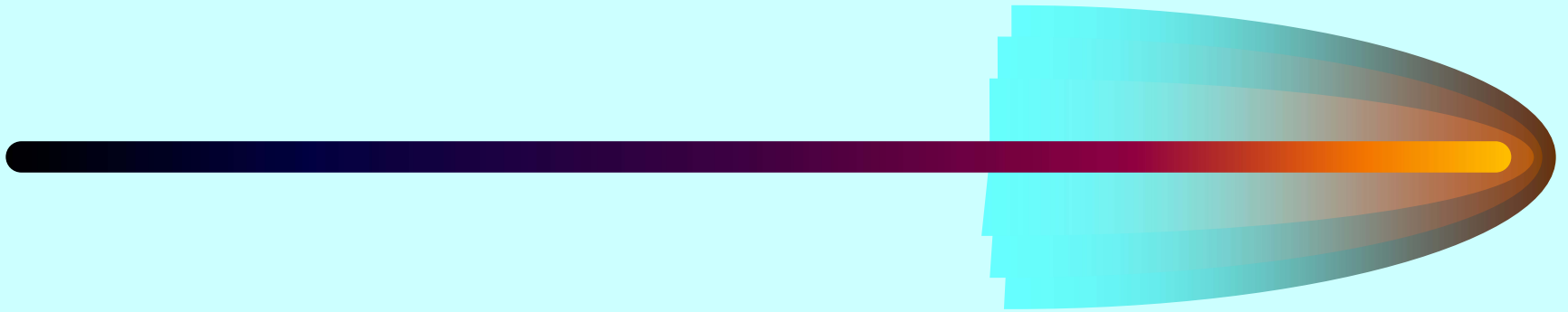


# **'GMP' REQUIREMENTS & SANITARY CONTROL**



***Ruminant & Pig Abattoir***

# WHAT IS 'GOOD MANUFACTURING PRACTICES - GMP'



- Procedures ensuring manufacturing quality and safety of products
- Describes methods and control, equipment and facilities related to manufacturing every product

# GOOD MANUFACTURING PRACTICES



- A set of pre-requisite programs for food quality and safety plan, for example *HACCP, ISO 9000*
- *GMPs* must be developed, implemented, reviewed and verified in place and must be effective
- Provides focus for *HACCP* plans ensuring product safety

# •MANAGEMENT RESPONSIBILITIES



- Understand benefits of *GMP*, implementation, coordination and implications including difference between *GMP* and *HACCP*
- Total commitment and involvement
- Consequences of not having a good quality assurance program

## MANAGEMENT RESPONSIBILITIES *(contd)*



- Maintain good communication between management and staff including training
- Provide for plant improvement
- Provision for food safety system

# GMP PROGRAMS



- Premise and environment
- Equipment and utensils
- Personnel
- Sanitation facilities and operation
- Pest control program
- Supplies, storage and distribution
- Process control
- Product recall programs

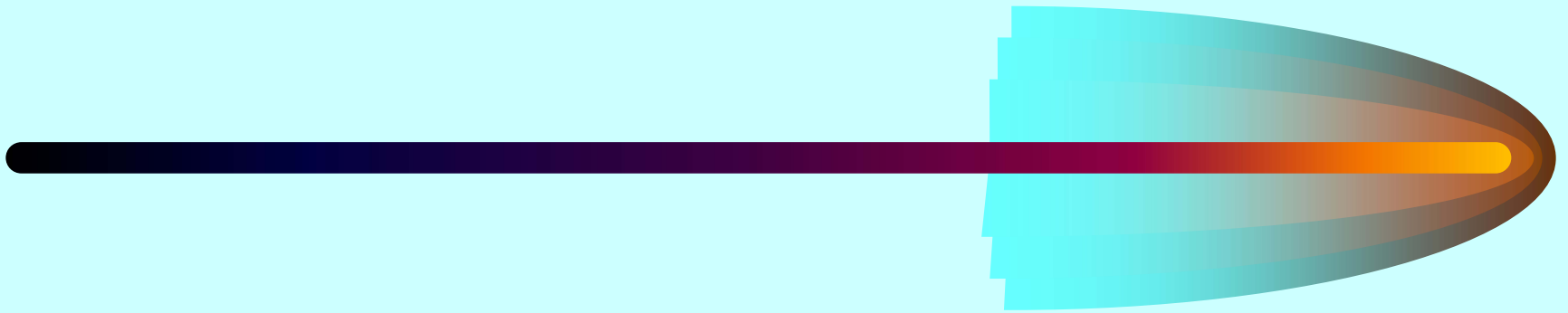
# BENEFITS OF GMP



- Creates awareness in food quality and safety
- Increases confidence in product safety
- Provides a starting point for *HACCP* implementation
- Internationally accepted
- Meets requirements of regulatory authority

# CONSEQUENCES OF NOT IMPLEMENTING GMP

- Consumer safety
- Product quality
- Shelf - life of product
- Increased recalls
- Management time
- Company credibility and reputation
- Market share drop
- Financial instability



# PREMISE AND ENVIRONMENT

## *GROUNDS (SITE AND LOCATION)*



- Suitable
- Good housekeeping - proper equipment, storage, litter and waste disposal, neat and well kept surrounds
- Effective pest control- entry of and harbourage
- Adequate drainage
- General maintenance - roads, yards and parking lots



## BUILDINGS

- Good layout - unilateral flow - dirty to clean
- Good design, construction and maintenance
  - *sufficient working space*
  - *prevent and eliminate contamination*
  - *facilitate effective cleaning*
  - *provide adequate lighting and ventilation*
  - *adequate screening for effective pest control*

# EQUIPMENT & UTENSILS



- Sound design, material and construction
  - *permit easy cleaning, preventing hygiene hazards*
  - *visible and accessible for inspection*
  - *non - corrosive and non - toxic food contact surfaces*
  - *resistant to cleaning and sanitizing agents*
  - *smooth seams with preferably tubular construction*

## *EQUIPMENT & UTENSILS (contd)*

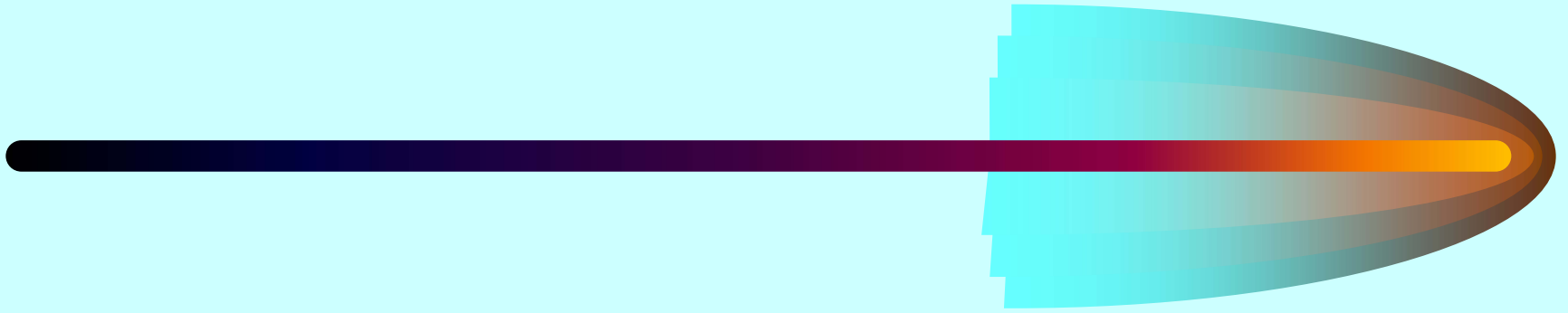


- Clean and well maintained non - food contact surfaces
- Suitable installation site - facilitate cleaning
- Temperature and measuring and recording devices - where high risk food storage and equipment is required

## *EQUIPMENT & UTENSILS (contd)*



- Instrumentation and control - temperature, pH, acidity, water activity etc.
  - *adequate in numbers*
  - *proper maintenance and regular calibration*
- Compressed air and gases from equipment
  - *treated and discharged properly (prevent contamination)*



# **SANITARY FACILITIES**

# WATER SUPPLY



- *Sanitary source and adequate supply*
- *Sufficient pressure and suitable temperature*
- *proper storage*
- *quality tests - sedimentation and microbiology*
- *1 1/2 days supply reserve*

# *PLUMBING*



- preferably overhead system
- suitable size pipes to carry sufficient water
- no back flow / cross - connection between sewage / waste water and potable water lines
- pipes made of non - rust material

# SEWAGE DISPOSAL



- *adequate and proper lines*
- *flow from clean to dirty areas*

# TOILET FACILITIES

- *adequate and easily accessible*
- *good repair at all times*
- *self - closing type non - wood doors*
- *preferably located away from processing areas*
- *clear and proper signages*

# HAND WASH FACILITIES

- *adequate and proper locations*
- *complete with provision hand cleaning and sanitizing agents*
- *disposal paper towels and drying devices*
- *foot, knee or sensor type operation*
- *warm running water (45°C)*
- *foot operated refuse bins*

# *RUBBISH & OFFAL DISPOSAL*



- conveyed, stored and disposed efficiently and properly*
- avoid waste accumulation*
- waste area and containers regularly cleaned*

# PERSONNEL AMENITIES



- *adequate and suitably located*
- *changing and washing areas*
- *lockers*
- *rest areas, laundry, etc.*
- *properly ventilated*

# SANITARY OPERATIONS



- General maintenance
  - *buildings, fixtures and other facilities maintained in good state of repair*
  - *utensils and equipment*
- Cleaning and sanitation materials and toxic materials storage
- Pest control

## *SANITARY OPERATIONS (contd)*

- Clear and written instructions
- Planned and systematic cleaning schedules
- Cleaning schedule should the following details as:
  - *name of person in charge*
  - *equipment / area cleaned*
  - *frequency of cleaning*
  - *method*
  - *type of detergent and sanitizers used*

## *SANITARY OPERATIONS (contd)*

- dismantling instructions (equipment)*
- safety precautions*
- standards*
- name and designation of person who check, record and verify procedures*

## *SANITARY OPERATIONS (contd)*



- Cleaning methods
  - manual
  - soak
  - pressure
  - foam
  - cleaning in place (CIP)

## *SANITARY OPERATIONS (contd)*



- Set cleaning standards
- How clean is clean
- Organoleptic test
  - *general appearance*
- Microbiological test
  - *contact method*
  - *swab method*

# CLEANING AND SANITIZING MATERIALS & TOXIC MATERIAL STORAGE



- Free from contamination, safe, adequate
- Compliance - supplier certification, examination
- Identified, held and stored to protect against contamination
- Separate locked rooms or cabinets

# *Chemicals approved by the authority and allowed in a plant*

- cleaning and sanitation chemicals*
- laboratory test chemicals*
- plant and equipment maintenance & operations chemicals*
- other chemicals used in plant operations*

# PEST CONTROL



- In plant program for control of insects, rodents, birds and other vermin
- Effective, on - going documented program
- Conducted by trained personnel or professionals
- Regularly inspected
- Layout of bait or trap stations

## *PEST CONTROL (contd)*

- Authority approved rodenticides, fumigants, insecticides
- Clear usage instructions, dosage etc, & collection of dead pests
- Prevent cross contamination
- Inspection, action, record and verify all procedures
- Caged or secured guard and watch dogs
- Discourage stray animals

# SIGNS OF INFESTATION



- Smell
- Droppings
- Smears
- Path
- Parts of carcass or body
- Visual
- Damages
- Maggots

# MODES / MEANS OF PEST ENTRY INTO PREMISE



- Delivery trucks - raw materials
- Attraction to smell of food
- Employees
- Cracks, gaps, holes
- Drainage system
- Windows, doors, ventilation

# GOOD PEST CONTROL



- Good housekeeping and state of repair
- Recognition of infestation signs, prevention & control measures
- Clean traps and maintained in good repair
- Good hygiene practices
- Stock rotation
- Screening for doors, windows and other outlets

# DOCUMENTATION



- Record of materials, procedures, operations and products
- Defines and communicates the above information correctly
- Avoidance of errors
- Allows product defect traceability
- Permits investigation

## DOCUMENTATION (contd)



- GMP Manual
- Structure:
  - *Quality manual*
  - *Operating procedures*
  - *Support documentation*

## DOCUMENTATION (contd)

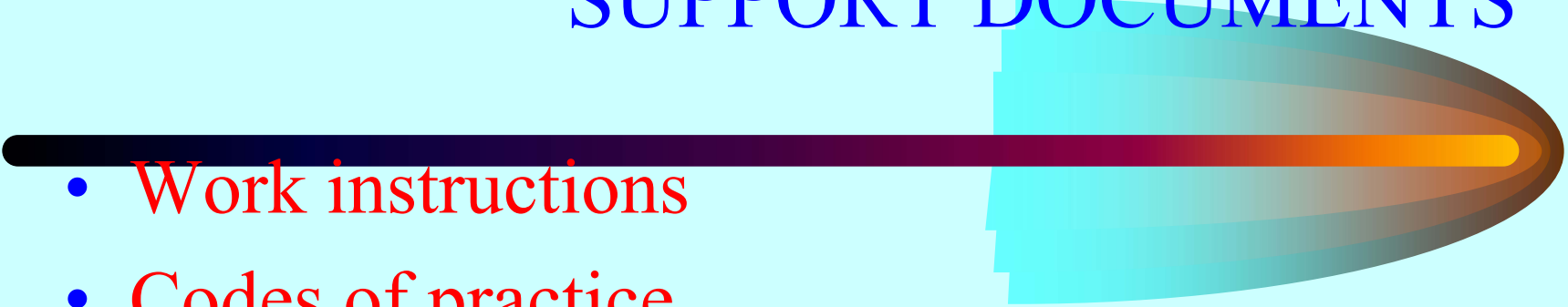
- **Quality Manual:**
  - *Company's policy statement defining the manner the company intends to carry out its business*
- **Operating Procedures:**
  - *What the company does and how it achieves its policy objectives*
- **Support Documentation**
  - *How the company carries out what it says it does*

# DOCUMENTING PROCEDURES



- What we do
- Defines process by which a task is carried out
- Structure:
  - *Objectives and scope*
  - *Definitaions and references*
  - *Responsibilities*
  - *Procedure details*

# SUPPORT DOCUMENTS

- 
- Work instructions
  - Codes of practice
  - User manuals
  - Technical documentation
  - Job description
  - Job specification
  - Forms
  - Checklists