Hygienic challenges in food industry

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Agenda

Introduction to Kanes Foods
Overview of common hygienic design issues
Examples of improvements
Introduction

• Privately owned

• Prepared Leafy Salads, Salad Dressings, Prepared Vegetables, Stir Fry, Dressed Salads, Salad Bar & Stir Fry Sauces

• 4 Factories based on our one 28 acre Evesham Site:
  – Bagged Salad unit
  – Stir Fry & Noodle unit
  – Dressed Salads, Salad Dressings & Stir Fry Sauce unit
  – Beansprout Farm

• Employ 1,650 people, no agencies, no gang masters, all staff employed directly

• Based in the growing region of Vale of Evesham, where much of our leaf is grown

• Turnover £105m in 2014/15

• Supply ASDA & Sainsbury's with own label products
Company Vision

- Offer rewarding and inspiring employment throughout the company
- Lead the industry with our sustainability program
- Remain responsible and respectful to the local community
- Treat our suppliers with respect
- Make the customer central to all our decisions
- Manufacture products that surpass customer expectations
- Site turnover target £150m
- To provide the reliability, scale and service of a plc with the speed, nimbleness and flexibility of a private company
Ownership

- Dr Randall died July 2011
- 5 sons inherited Kanes Foods
- Appointed 4 Directors to take day to day control
- The family are very interested in Kanes performance
- Continue the same high level of investment
- Remain independent
Bagged Salads Factory

Objectives:

• Provide a state of the art facility for the production of salads with capacity for future growth

• Seek and develop latest production technologies to enhance product quality and extend shelf life.

• Focus on our environmental responsibility optimizing the building and process design to become as efficient as possible and minimise as far as practical the embodied energy within building components

• Respect our rural location and blend the building development as much a possible with the surrounding landscape and natural habitats

• Creation of an ergonomically friendly working environment and where possible the introduction of natural light into the building.
Stir Fry Factory

- Purpose built facility commissioned Autumn 2001 at a cost of £16m
- 4 Thermoform tray lines, 1 bowl line and 6 high speed bagging lines
- Fresh noodle manufacture
Beansprout Farm

- 12 beansprout growing cells
- 150t capacity per week
- Wash the beansprouts and flume them to the Stir Fry factory
- Dried and bagged
Dressed Salads and Sauces Factory

- Grunwald 4-lane rotary line (coleslaw/ pasta Salads 300g)
- Grunwald 2-lane linear (big pots 500g)
- 4 x Flex-Deli lines (cous cous, bean, variety, twin)
- 1 x High speed bottled dressing line
- 1 x HFFS (Horizontal form fill seal) Doypack M/C for filling hot sauces into retail pouches
- 1 x 6 lane sachet machine
- Mayonnaise and dressing manufacture
- Tract recipe & weighing system
- Cooking for pasta & potatoes
Environment

**Wildflower Meadow Roof** (largest bio-diverse living roof in the UK) – planted with 90 species of wild flowers. This improves the ecology, it soaks up rainwater to reduce flooding, it provides insulation and muffles noise.

**Solar Panels** – 2 banks of PV Solar Energy panels which provide all of the electricity needed for the computer cooling system.

**Natural Light** – improving the mood and productivity of the employees.

**Energy Efficient Lighting** – to supplement the daylight.

**Hempcrete Cassette System** – improves thermal efficiency and reduces the embodied carbon within the structure.

**Geothermal Pumps** – controls the heat from the factory, reducing demand for refrigeration systems and hence energy requirements.

**Underground Water Tanks** – harvest rainwater from the roof used for toilet flushing.

**Sustainable Storm Water Management System** – controlling excess water diverting it into ponds providing home for mallards, grass snakes, frogs, newts, toads, bulrushes and reeds.

**Water recycling** – using low energy filtration systems, Kanes recycles half of our water requirements.
Technical

- We have a Technical Team consisting of over 100 people:
  - General Technical Manager
  - Technical Development Manager
  - 3 Factory Technical Managers
  - 3 Teams of Technical Compliance Controllers
  Plus teams to cover: Quality Control, Shelf Life, Allergens, HACCP, Complaints, Auditing, Sampling & Benchmarking, Specifications

- BRC – Grade A*
- Hand-held Paperless QC System
- Automated dynamic weighing system to control recipe integrity
- Genius optical sorters
- 2 different types of automated drying systems /recipe controlled by written seasonal programs
- Built-in automated gas analyser units to control gas levels in finished pack
Breadth of Ingredients

- Leafy salads
- Grains & pulses
- Proteins
- Carbohydrates
- Dressings (pots, sachets or bottles)
- Vegetables

All on one site
Overview of common hygienic design issues

Key challenges to the food industry in hygienic design

- Historical design issues and previous modifications
- Design do not always suit what is required – cost, access
- Installation
- Health & Safety requirements
Exposed screw threads, nuts, bolts, screws and rivets must be avoided wherever possible in product contact areas.
Fastenings kept outside of the product flow
Drainage

Horizontal surfaces on the top the cabinets

X
Installation and Bearings

Bearing should, wherever possible, be mounted outside the product area to avoid possible contamination of product by lubricants (unless these are edible), or to avoid possible failure of the bearings due to the ingress of the product.
Motor above the product but the catch tray was installed.
Smooth and continues product flow
Guarding of moving parts sometimes makes access more difficult
Kanes Foods is investing in people

**EHEDG Advanced Course on Hygienic Design**, completed by key personnel from Engineering and Projects departments

**Level 3 – Listeria Management course**, completed by Technical, Production, Hygiene and Engineering teams across 3 factories (over 40 people)
Thank you very much for your attention!