LEAF Annual Conference

Our Daily Bread – Food for Thought
Brian Irwin, Chairman
Northern Ireland Food and Drink Association (NIFDA)
Formed in 1912
Northern Ireland’s largest independent bakery
106 YEARS ESTABLISHED
380 EMPLOYEES

Distribution across UK and international
50% Ireland
50 GB
OUR RANGE

- Irish Speciality Breads - Batch
  - Hot Plate
  - Soda Bread
- Fruited Bread
- Rolls and Baps
- Muffins – Sweet & savoury
- Sandwich Bread
- Cake
- Biscuits
900,000 products baked per week

All major supermarkets in Ireland & GB

Order time – 48 + 24 hours

**But**

6 hours to bake & wrap

3 hours on a boat

12 hours in transit

*JUST IN TIME IS A WAY OF LIFE*
## The Major Inputs

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>AMOUNT</th>
<th>LOCATION</th>
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</thead>
<tbody>
<tr>
<td>FLOUR</td>
<td>13,000 TONNES PA</td>
<td>UK</td>
</tr>
<tr>
<td>DRIED FRUIT</td>
<td>1000 TONNES PA</td>
<td>TURKEY</td>
</tr>
<tr>
<td>POTATO FLAKE</td>
<td>450 TONNE PA</td>
<td>ENGLISH</td>
</tr>
<tr>
<td>BUTTERMILK</td>
<td>1.5 MILLION LITRES PA</td>
<td>NI</td>
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</tbody>
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Milling Flour

The UK single biggest food ingredient
14,000 tons of wheat milled per day
2.8m tons of flour per annum
130m slices of bread per day

It gives us...

- 35% of daily fibre
- 30% of calcium & iron
- 20% of protein, zinc and folate
Milling Flour

Facts and Figures

5m tons of wheat into 2.8m tons of bread flour

There are 50 mills in the UK

28 ton truck every hour at every mill

Every load is traceable to the farm

5.7 days from farm or grain store to bakery
Farm to Mill

Grain to miller  traceable back to farm
Inspections
Short notice audits

Mills
Each load of grain is certified
Samples are analysed
Feedback to farm & Assurance Scheme is required
Audits are independent
Variability is a key issue
- By season
- By farm
- By country of origin
NELSTROP’S MILL
Wheat Silos, Bulk Flour Bins & Bulk Flour Outloading
Grain Sampling
Control Room

Mill control room, showing graphic screens for mill control and 3D live image of running plant. The plant is fully automated and runs mostly unattended.
Thorough cleaning of wheat is the start of making consistent high quality flour. All the wheat passes through a Colour Sorter where suspect grains are removed.
On-line Analysis - Wheat

NIR whole wheat analyser immediately prior to 1st Break rollermill, the beginning of the milling process
Flour Collection

All gravity spouting and horizontal conveyors within the milling section are Stainless Steel, with remote automated porting of flour valves based on client’s finished product recipes.
Ingredient Feeders

Great emphasis has been given to hygiene and product consistency.

These Stainless Steel Micro Ingredient feeders ensure the correct statutory additive and flour improver addition rates to the flour.
Individual milling runs are automatically sampled, taken to the on site CLAS accredited Cereal Laboratory and tested to national standards, certified, archived and stored for future reference.
Again, where pre set limits are exceeded, action to control the situation is taken automatically to ensure the correct flour specification is delivered to the customer.
Finally the flour is sieved through 500 Micron covers to ensure purity. On transfer to the bulk tanker Outloading bins it is automatically analysed for particle size, key baking quality parameters and the level of ‘specks’.
Technical Standards

• BRC A*/BRC AA*
  • RSPO certification
• Customer unannounced audits, including all large retailers
  • Customer COP
Legalisation that controls bakeries

i. The Weights and Measures Act 1985 (incorporating the Weights and Measures (Packaged Goods) Regulations 2006
ii. The General Food Regulations 2004
iii. The Food Hygiene Regulations (Northern Ireland) 2006
iv. The Bread and Flour Regulations 1995
v. The Food Information Regulations (N.I.) 2014
vi. The Food Safety (Northern Ireland) Order 1991
vii. The Miscellaneous Food Additives Regulations 1995
viii. The Plastic Materials & Articles in contact with Food Regulations 2009
Supplier Approval

• Full approval system for all suppliers to include ingredient, packaging and services.

• Requirements include:

• Accreditations such as BRC, GFSI etc.

• Review of accreditations

• Supplier questionnaires

• Supplier audits

• Full product specifications

• Annual reviews

• COC/COA

• Product testing and inspection of products on arrival at site

• Risk assessments to include, allergens, cross contamination, food fraud, foreign body risk, microbiological, GMO etc.
Quality Management Systems

- Quality Manuals
- Procedures and policies
- HACCP study with multi disciplinary team, food safety plan
- Traceability system
- Product control and product labelling
- Site security and food defence
- Management of Allergen study, full verification and validation
- Product authenticity, claims and controls of custody
- TACCP/VACCP
How we reduce risk of food threat & food fraud

• Risk assessments
• Procedures and policies
• Training to ensure staff and aware of threats
• Supplier approval and review
• Ingredient/packaging testing
• Site security
• IT security systems
• Continuity plan
Problems

• Just in time systems

• Drive for lower cost

• Ever more stringent control of agrochemicals
  - Will we reduce our production to unsustainable levels?
  - More Food needed
  - New marginal areas of production will be used

• Brexit
  - New Trade deals
  - Will our standards be compromised?
Quality

• Consistency
• Conformance
• Robust supply chain
• Are we delighting consumers?
The focus is on **Controls, Consistency and Conformity**

What about....

...Satisfaction of the consumer;

...Ingredients that work;

...and food that people wish to eat
For the Future

Development of the idea of terroir for grains

• Trace elements
• Nutrition
• Flavours

More development of higher yielding ancient varieties of wheat

“Address consumers from the farm”