An industry perspective on ‘risk based management’ of shellfisheries

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Introduction

- Presentation of some concerns and views relating to management of microbiological food safety
- Conceptual, not systems
- Review ‘Redrisk-equivalent’research project in Scotland
- NB *Personal views, not necessarily reflecting those of any organisation*

Risk

- There are many dimensions to the concept of ‘Risk’ when applied to shellfish :
  - To consumers health
  - To shellfish producers commercial ‘health’
  - To the economy (sectoral, regional,national)
  - To retailers’ reputations (local to multiple)
  - To regulators’ credibility (national to European)
  - To scientists’ credibility (local, national, international)

‘Risk’ (continued)

- To scientific research funding !!!

Focussing on Priorities

- Objectives of hygiene Regulations :
  - Primary : Minimise gastro outbreaks
  - *Way down the list : Minimise production closures*
- Regulators agree need for a balance to be struck : "Appropriate and proportionate"
- Industry perspective : "Rational, consistent, equitable"
- NB **Not an exact science**

Industry view of implementation

- **Rational :** No; indicator too variable, frequently irrelevant and/or transient;
- **Consistent :** No; occasional samples; inconsistent locations; variable handling, transportation and analytical conditions;
- **Equitable :** No; Differing approaches across EU to Classification and monitoring; disputes over methods;
- Clear and present need for improved approach - Risk Assessment based, to reflect real risk to public health

Despite legislator and regulator concerns, shellfish have escaped the worst of ‘food scares’ in recent years

- Illustrative food concerns (and the products affected):

- BSE (beef)
- Listeria (milk, cheese)
- E. coli 0157 (meat products)
- Chernobyl fission products (lamb, mutton)
- Residues (general):
  - –Growth promoters
  - –Antibiotics
  - –Hydrocarbons (PAHs)
- Dioxins (poultry)
- Salmonella (eggs)
- Chemical treatments (salmon)
- Heavy metals
- Pesticides
- ‘Gender benders’

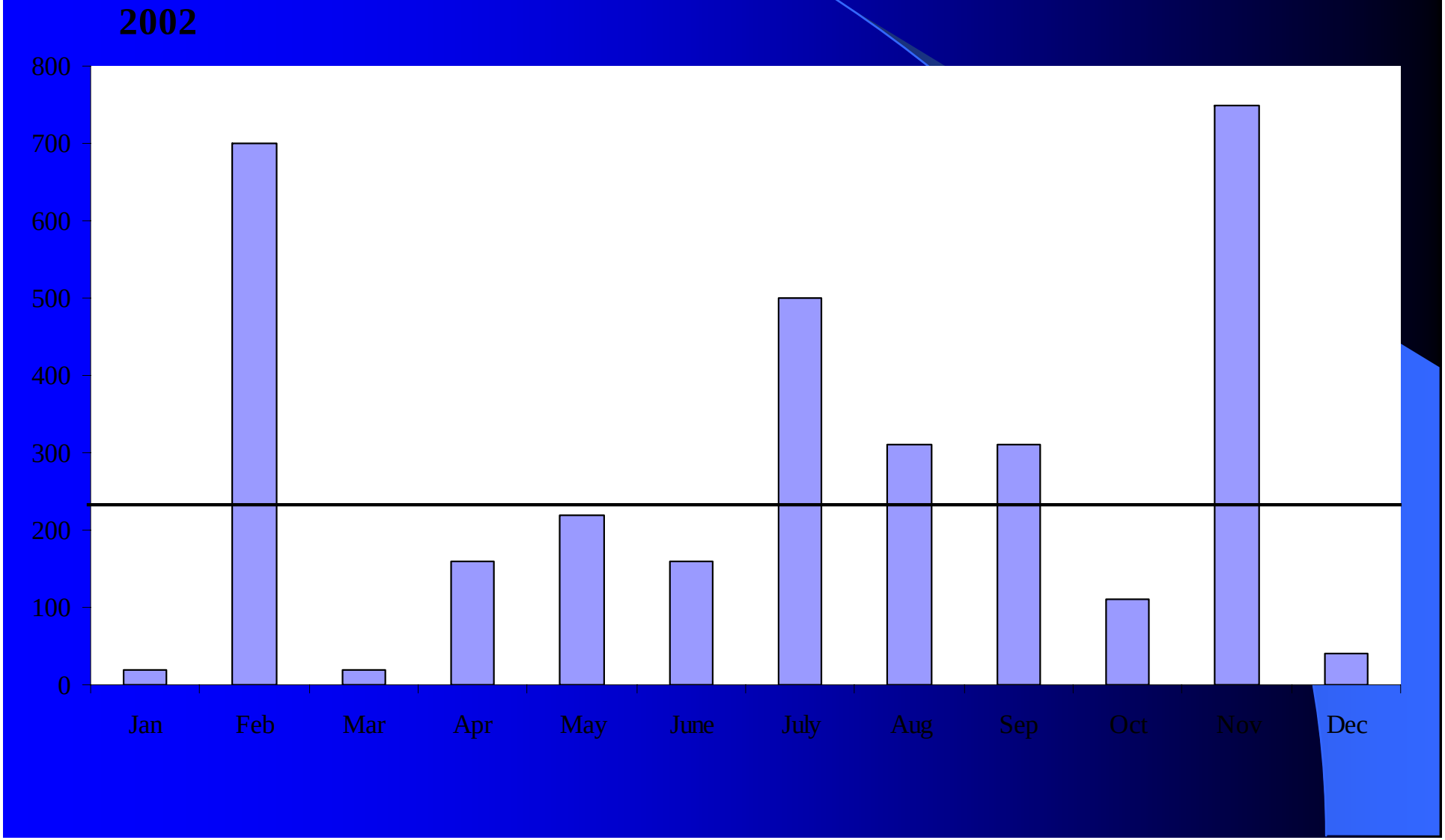
Parameters of Regulation

- Pathogen being measured (virus, bacteria)
- Measurement (water, shellfish)
- Sampling (location, handling, climatic)
- Testing (method, SOP)
- Action Levels (consumer or animal ‘level’)
- Exposure (frequency, portion size)
- In summary, “What is the danger to your/my/our health from a meal of shellfish”

Commentary

- How to ‘risk assess’ *E.coli* results in terms of potential viral risk :
  - Variation across seasons/through time
  - Variation across species
  - Variation according to geography (urban/rural)
  - Variable risk to individual consumer’s health

An Example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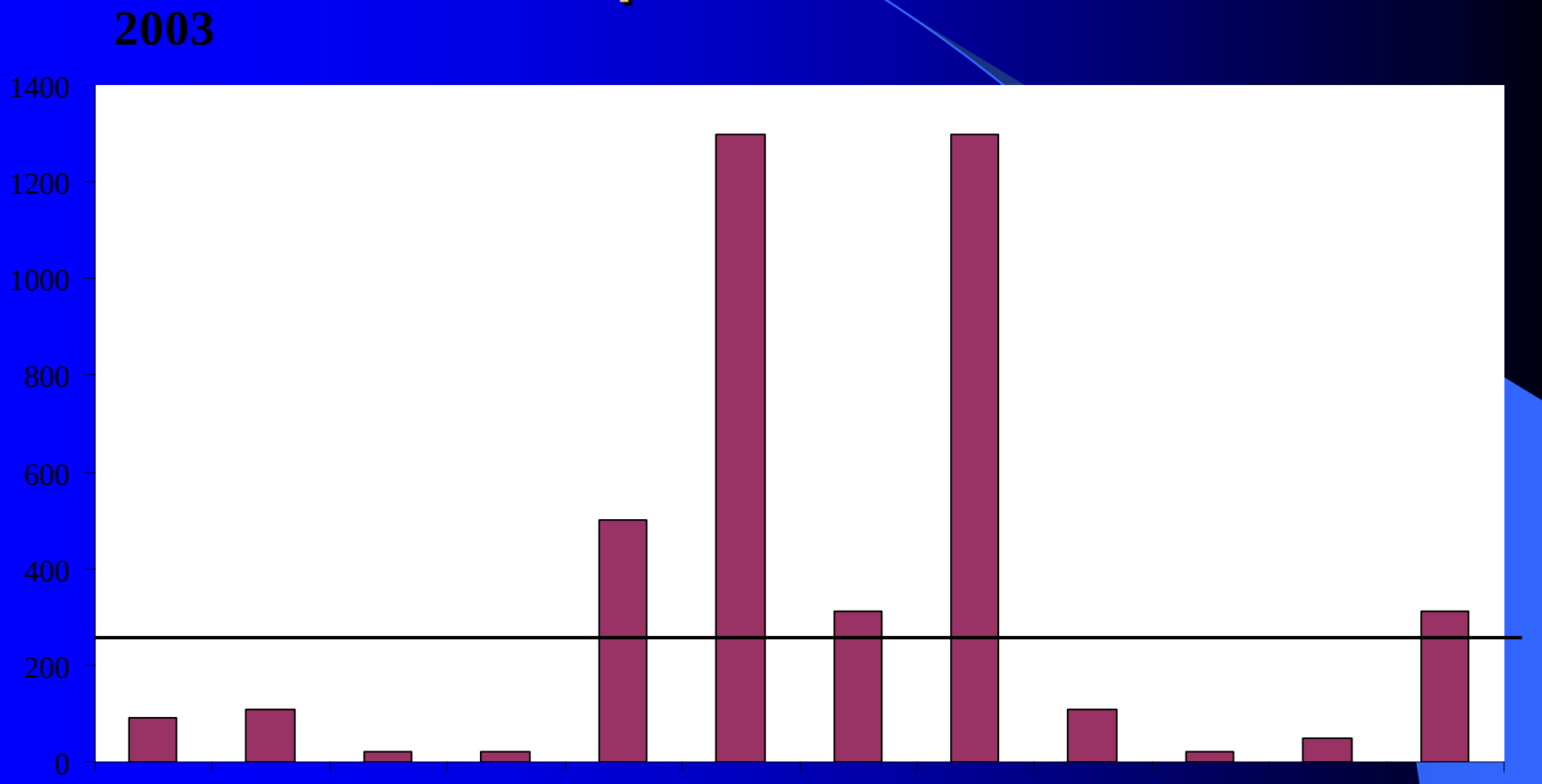
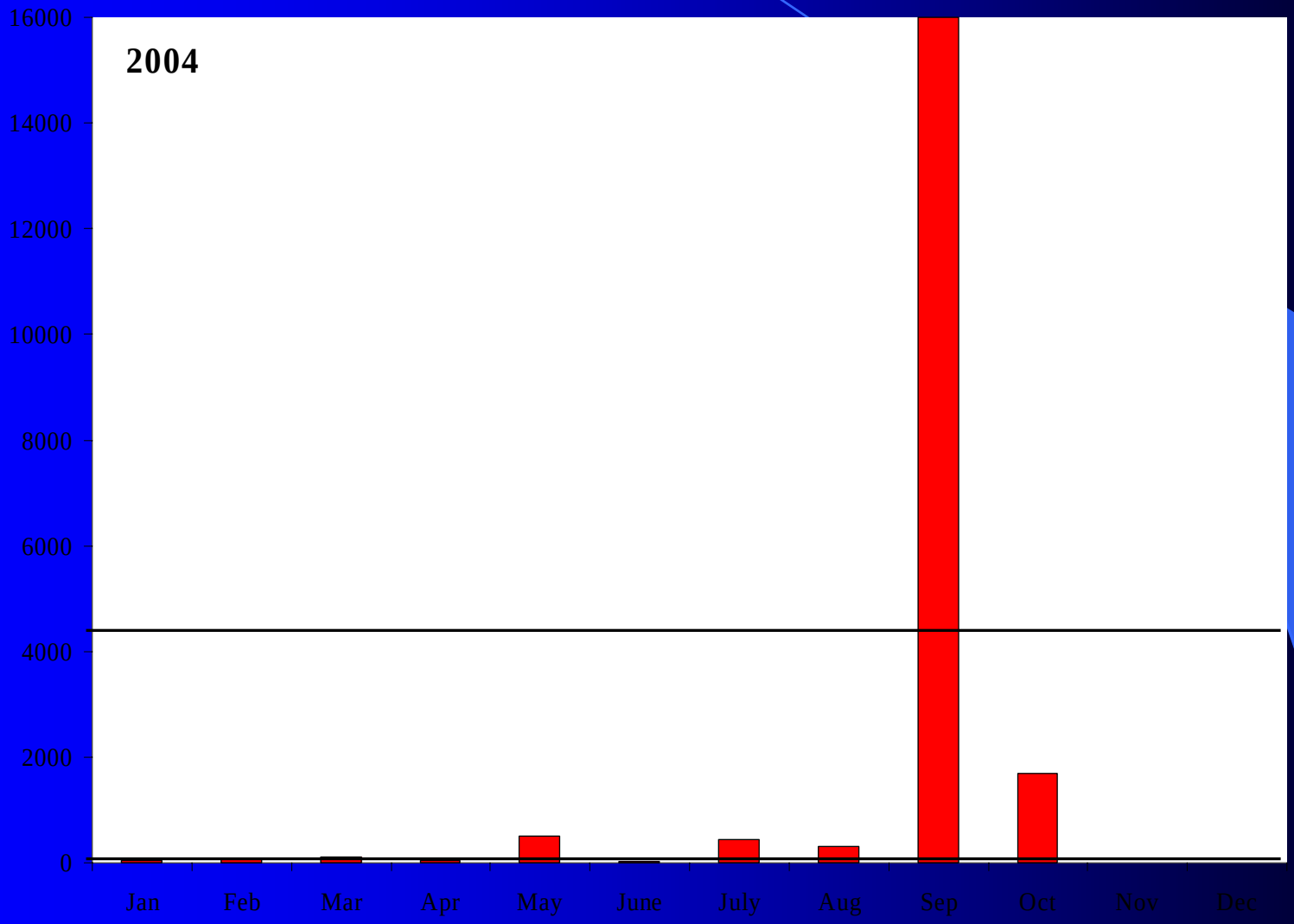
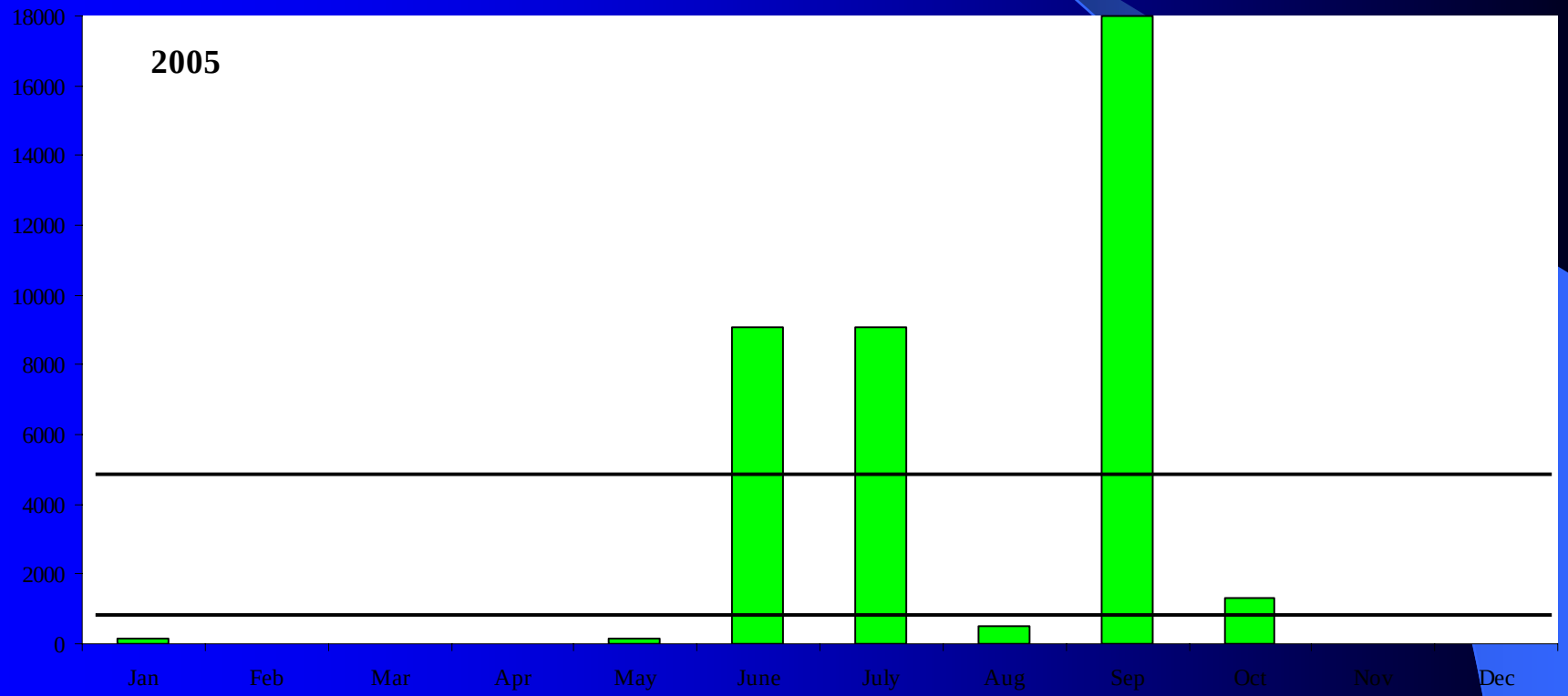
An Example Continued (2)



An Example Continued (3)



An Example Continued (4)



An Example

- Current Classification ‘B’
- Under historic implementation in Scotland, should be classed ‘C’ (> 10% variation from ‘B’ in last 3 years)
- Under new Long Term Classification in England, should remain ‘B’ (no result > 18,000)
- Outcome : stress for operator, concern for industry & customers, uncertainty for investors

The EU molluscan cultivation industry supports:

- The objective of improving quality and safety of products;
- The paramount importance of safeguarding public health/minimising risk;
- The harmonisation of standards across the EU;
- Any reduction in negative media reports;
- Effective and proportionate hygiene legislation, as a prerequisite for consumer confidence & future growth.

• But the industry questions whether this is being achieved under the current approach, & worries over the current climate of ***'hygiene overkill'***

Outcomes of Hygiene Overkill

- Consumers – higher prices, reduced choice, enhanced blandness
- Regulators – greater demands on scarce resources
- Legislators – more complex legislation
- Industry : increased costs, bureaucratic distractions, slimmer margins and greater uncertainty - all leading to fewer jobs, fewer companies, reduced efficiency, lower production, increased imports from third countries

Furthermore, the costs associated with compliance (91/492) have been significant

DIRECT :

- Harvesting equipment, depuration/despatch centre facilities, transportation (€350 Million over initial three years; equivalent costs for new entrants in later years);

- Higher operating costs (equipment, personnel, overheads, etc)
at c. €30+ Million/Year;

And INDIRECT:

- ‘Lost Production’, due to investment diverted to equipment, etc and reduced profit margins (€500 Million, 1992 - 95);

- ‘Lost production’, due to closures as a result of biotoxin levels exceeding ‘Action Levels’ (€60+ Million 1992 - 2000);

- ‘Lost production’ post ’99 due to biotoxin closures (€50+ million)

- Overall ‘cost’ of € 1+ Billion, average of around 10% of annual turnover over period 1992 – 2005

Risk Assessment through a Grading system (MAF, NZ)

- Animal pollution +
- Human pollution ++
- Seasonal population when harvesting ++
- Seasonal population when not harvesting +
- STP tertiary treatment, managed and monitored -
- Septic tanks – not inspected, poor soils ++

NZ Grading system (Continued)

- Legal requirements for septic tank management -
- Tertiary sewage treatment for all -
- Marina management +
- High boating usage – no enforcement ++
- No sediment management ++
- No riparian strip management ++

Risk Assessment

- There must be a comprehensive, yet flexible and appropriate, approach to manage the real ‘risk’ to public health from pathogens associated with molluscs – industry believes there remains significant ‘overkill’
- The extreme view – close down the industry as ‘too risky’– is not acceptable; there is ‘risk’ attached to every human activity, the issue is management of that risk
- The positive aspects of shellfish consumption must be incorporated in any risk/cost/benefit analysis

Tartan ‘Redrisk’

- A focussed project to assess in a single location the factors associated with contamination by human pathogens :
  - Sanitary survey of all potential pollution sources
  - Co-ordinated weekly mussel sampling programme
  - Daily monitoring at times of trigger events (heavy rainfall)
  - Statistical analysis, in association with ‘Redrisk’, to provide recommendations (to regulators) on causative factors and risk mitigation

Tartan ‘Redrisk’ (Continued)

- Project has only recently commenced
- Multiple partners, leading to more comprehensive input, but less agile decision-making
- Parallel project assessing single point discharge by ribotyping
- Industry concern that by time project completed (mid 2008), production will have ceased/been closed by regulator

Conclusion

- Changing to a regulatory system based on ‘risk assessment’ must rationalise and remove the inconsistencies and inequalities currently being experienced
- Protection of consumer health must remain the priority, but based on a more credible assessment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