

Food Chain CIC update

The Food Chain CIC's current active fields of application include shelf-life studies, opportunities for additional income from food waste and assisting the diversification of other sector technology providers into the food industry.

Small businesses, multi-national manufacturers and UK Trade Associations are already reaping the benefits of partnerships



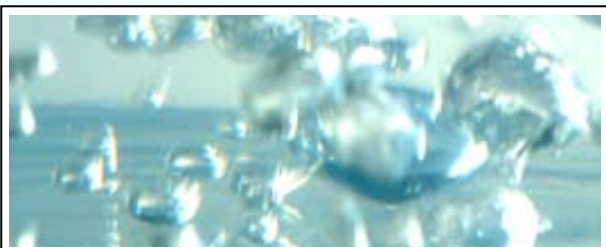
with The Food Chain CIC. Knowledge transfer and research into technical solutions are key areas of our work.

The CIC is dedicated to harnessing leading edge science to create foods which are safe, enticing and affordable by assisting companies to investigate:

- Product formulation
- Minimal processing to maintain the fresh quality of natural foods
- Application of novel or emerging technologies to create new textures and flavours
- The assurance (microbial, chemical, authenticity) of food factory input streams
- Process innovation to increase manufacturing efficiency
- Food security

We are actively seeking companies interested in Knowledge Transfer Partnerships which pay up to 60% of a graduate position in a company to research and solve the company technical problems. Contact us to find out more.

Now there's thought for food.



Innovation Improves Manufacturing Yields

Food manufacturers in Yorkshire and Humberside are taking advantage of the DTI's grant-aided Manufacturing Advisory Service. By revising manufacturing processes (lean manufacturing) and using on-line inspection and control systems, local companies are gaining competitive advantage over food producers from elsewhere. An on-line camera system can check the quality and quantity of continuous production and it works just as well on a Friday afternoon as during the rest of the week! Putting a checking system on the end of a line prevents customers receiving substandard products and putting an inspection system earlier in the process avoids adding value to waste.

Huge savings can be achieved by just a small change to a process. Reducing waste not only improves yield and hence turnover but also reduces the cost of getting rid of the waste. And if there is still waste to be disposed of, then there may be a non-food use for the waste, which might generate useful extra income!

Are you aware that the Manufacturing Advisory Service (MAS) will cover the cost of a Research day FREE of charge for the investigation of a specific manufacturing or technical related problem? Or it will subsidize Improvement Projects with a 50% grant for up to 10 days spent on finding and implementing a solution (to a maximum of 2 projects per firm per year).

The Food Chain Centre for Industrial Collaboration (CIC) gives access to specialists in the York Electronics Centre at the University of York, the Procter Dept of Food Science at the University of Leeds and at the Central Science Laboratory, for solving food related problems. All this expertise is available through this MAS scheme.

The Food Chain CIC has assisted many food industry companies to enhance their manufacturing processes. Use the following Internet links to give you more information.

What the Food Chain CIC can offer
www.foodchaincic.co.uk/MAS.html

Some examples of manufacturing improvements for the food industry can be seen at
www.foodchaincic.co.uk/managed/File/MAS%20examples.pdf

More information about the MAS scheme is available at
www.mas-yh.co.uk

If you would like to discuss a current problem needing a solution please contact the Food Chain CIC:

E: info@FoodChainCIC.co.uk

T: +44(0) 113 343 7593



Ultrasound Week 6th - 10th February 2006

Most people have heard about ultrasound and many have used it. Familiarity with ultrasound in medical applications is already established, but there are many other areas where ultrasound can make massive contributions to our understanding of processes and transformations.

For instance, ultrasound tomography allows us to 'see' dynamic processes in a non-invasive way, enabling accurate on-line analysis and evaluations of critical scenarios. Understanding the scattering phenomena of ultrasound in particulate systems produces a huge amount of information on particle, colloid and gel characterisation.



If you have used ultrasound, or can see its potential, then come to the short course and practical demonstrations "**Ultrasound Characterisation of Industrial Soft Materials**". This 3 day course involves leading international exponents of ultrasound characterisation and will involve hands-on measurement using commercially available ultrasound equipment with commercially available software.

At the end of our ultrasound week is a two day conference on Ultrasound in the **Processing of Industrial Soft Materials** which will cover both measurement techniques and high power applications. An exhibition of ultrasound and associated equipment is part of the conference. Ongoing work on industrial materials will also be presented. From applications of ultrasound in nanotechnology to waste water treatment in food processing, this conference will open your eyes to how ultrasound can transform your processes.

Further details and booking information can be found in the new Ultrasound section of the Food Chain's website www.FoodChainCIC.co.uk/ultrasound.html

Food Chain CIC & Swedish Functional Foods

Recently the Commercial Director from the Food Chain CIC, Dr Graham Clayton, and the Yorkshire Forward Food & Drink Cluster Champion, Stephen Fitzpatrick, visited Southern Sweden to find out how their functional food cluster operates. Position Skåne was visited which was set up in 1999 to attract companies to the region and the especially strong functional foods cluster. The University of Lund was also visited which has a strong multi-disciplinary involvement in functional foods. On both visits models were seen of how industry and academia have worked together to produce new functional foods for market. Through collaboration this knowledge is also available to food companies in the UK via the Food Chain CIC.

Where to go from here? The Food Chain CIC is expanding its involvement in functional foods, supported by expansion of the Procter Department of Food Science at the University of Leeds with new professorial appointments in this area. In early 2006 it is anticipated that there will be specific functional food activities that industry can join to fast track developments in this area.

For more information contact Dr Graham Clayton, Commercial Director, on g.clayton@FoodChainCIC.co.uk

Food Modelling

The Food Chain CIC is now working with the Food Modelling Club on joint conferences for 2006.

The Food Modelling Club is a project that was set up to make industry more aware of the immense potential of mathematical modelling in all aspects of food production and food research.

The aim of the Food Modelling Club is to provide individuals with an insight into the potential value of this emerging technology and to keep abreast of developments in the field. Its purpose is to provide a forum for discussion and to identify the core expertise in this area, to which individuals may turn for advice.

In addition the club takes a strong lead in defining the food industry's generic modelling research needs and works on collaborative research proposals that gain wide spread support from industry and public funding sources.

For more information contact Catherine Roberts, at c.roberts@FoodChainCIC.co.uk

How Spinning Discs could 'Revolutionise' Food & Drink Production

The Food Chain CIC has recently completed research that could pave the way for major changes in food and drink production methods. Working with the Food Processing Faraday and Newcastle-based company, Protensive, to investigate applications of 'spinning disc' technology.

Possible applications include replacing existing methods of product mixing, preventing contamination during food and drink production and creating new flavour systems for products such as sauces.

Spinning disc reactor (SDR) technology works by passing liquids across the surface of metal discs which can be set to spin, heat and cool at optimum speeds. The accuracy and speed with which ingredients can be mixed, the ability to strip water from substances and the high temperatures that can be achieved have made SDRs invaluable to the chemical and pharmaceutical industries.

Now, Dr Mahmood Akhtar of the Food Chain CIC has completed research experiments to test the SDRs performance making fruit juice, mayonnaise and ketchup. These have shown that rapid process times, controlled mixing and heating mean that there is less risk of 'overreaction' and that end products can be produced at speed, on demand.



Other tests have shown that it is possible to remove allergens, such as those present in peanuts which are so dangerous to people with an intolerance.

The design of the spinning disc unit also means that it can be cleaned down in a matter of seconds – enabling manufacturers to use the same equipment for any number of products or variations in quick succession. So, Just-In-Time manufacture becomes possible, over production disappears and warehouse requirements are vastly reduced.

For more information contact Dr Graham Clayton, Commercial Director, on
Tel: +44 (0) 113 343 7594 or
g.clayton@FoodChainCIC.co.uk

Industrial Steering Committee

The Food Chain CIC Industrial Advisory Committee was set up in August 2004 with the launch of the Food Chain CIC. The first meeting was held in November 2004.

The Committee has representatives from a wide area within the food industry and our members include representatives from the following areas: Regional and national retail businesses, Multi-national food manufacturers, regional small food manufacturers, National small food manufacturers, companies producing specialist food products, Non-Human food supply and Companies Providing technical support for the food industry. In addition members also include the CIC Director, The Science Exploitation Manager from Yorkshire Forward and the Food and Drink Cluster Champion.

The Committee has been established to advise the Food Chain CIC Director and act on behalf of the Food Chain Centre for Industrial Collaboration. Areas of responsibility include:




- a) Management
- b) Products and Services
- c) Markets
- d) Marketing Communications Strategy
- e) Financial Targets and Performance Indicators

For more information contact Angela Morrison on
a.morrison@FoodChainCIC.co.uk



Food Chain CIC's partners

The Food Chain CIC is a combination of world class expertise at the

-  Procter Department of Food Science at the University of Leeds
-  York Electronics Centre at the University of York
-  Central Science Laboratory, York

and uses the advanced laboratory and facilities of these world-class centres of excellence.

For more information see
www.foodchaincic.co.uk/partners





Making the Most of Food Waste

With increasingly robust legislation on the disposal of food waste, particularly animal parts, what are the best measures for reducing the complexity and costs involved in the food processing business?

In order to address the issues that really affect the disposal of waste in the food chain, the Food Chain CIC along with the Greenchemistry and Environment Technology CICs have conducted extensive market research on a one-to-one basis with the food business sector. The results will be used to help plan further R&D around the developing challenges facing the food industry.

Bringing a scientific dimension to the food business, the research looked at new business opportunities available for the taking, (e.g. extraction of valuable chemicals), bacteriological characterisation, composting, sampling, and toxin identification to reveal new cutting-edge opportunities for food manufacturers to reduce costs and increase profits from food waste

For further details about making the most of your food waste please contact the Food Chain CIC
info@foodchaincic.co.uk
W: www.foodchaincic.co.uk

Upcoming Events

Ultrasound Characterisation of Industrial Soft Materials

A joint Food Chain CIC and Particle Science and Engineering CIC short course and practical demonstration on ultrasound.
6th to 8th February 2006 ~ Leeds

Ultrasound in the Processing of Soft Materials - 1st International Conference and Exhibition

A joint Food Chain CIC and Particle Science and Engineering CIC event looking at state of the art advances in ultrasound.
9th and 10th February 2006 ~ Leeds
Further details and booking information can be found in the new Ultrasound section of the website
www.FoodChainCIC.co.uk/ultrasound.html

Royal Society of Chemistry (RSC) Food Group Postgraduate Research Conference Devonshire Hall, University of Leeds, 4-5 July 2006

The 6th Biennial Postgraduate Research Conference organized and sponsored by the RSC Food Group will be held at the University of Leeds in July 2006. Main aim of the conference is to provide research students an opportunity to present their latest findings and to share experience and knowledge with fellow students, academic supervisors, and industrial researchers. The conference will also be an excellent opportunity for people working in food industry to catch up the latest research developments in food and related areas. The registration fee for industrial delegates is £250, covering one-night accommodation and foods.

For further details contact Dr Jianshe Chen
P: Procter Department of Food Science, University of Leeds, Leeds LS2 9JT
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contact the Food Chain

Further Information and Getting in Contact

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