A changing climate for cider

The National Association of Cider Makers

SUMMARY

INTRODUCTION

The National Association of Cider Makers (NACM) carried out a study on the implications of unavoidable climate change for the UK cider industry. The report was produced by the industry for the industry, working on a low budget but drawing on its own resources and the tools available from UKCIP.

It was the first industry-led study of its kind and identified key climate risks as well as some adaptation options. As a result, there has been a change in attitude across the industry, from 'not aware' of climate change impacts to effects being 'fully embedded' in the orchard planning process.

> "Our industry has to think long term. Climate change will affect the trees we are planting now so we need to understand the threats and opportunities that this places on our industry." Richard Heathcote, Chair NACM Sustainable Development Committee.

KEY MESSAGES

- **A range of new interventions, varieties and techniques will be required to maintain healthy productive orchards, and more thought should be given to siting of orchards to minimise risk from extreme weather events (e.g. heavy rainfall of summer 2012 and storms during winter 2013–14).**
- **Utility costs are likely to rise as requirements for cooling of plant increase and become more widespread against a backdrop of rising electricity and water prices.**
- **Risks to physical assets will increase, for example, low-lying Somerset is home to many cider makers. Flooding causes disruption in communication and distribution – it is wise to address these problems in good time through business continuity planning.**

- **There are opportunities for different styles of cider as 'café culture' and warmer weather produce more 'al fresco' usage occasions.**

IN DETAIL

ABOUT THE ORGANISATION

The National Association of Cider Makers (NACM) promotes the cider and perry industry in the UK. It represents both larger producers and many hundreds of smaller scale cider makers in the cider trade.

BUSINESS DRIVERS

Orchards take a long time to mature – 7 years before breaking even on the investment with a 30–40 year lifespan. The NACM and its members recognise that planting decisions made now will need to take the future climate into account.

The industry-led study was undertaken to benefit the profile and reputation of the UK cider industry, taking a sector wide approach so that smaller players could also benefit from findings.

METHODS AND RESOURCES

NACM joined UKCIP's A Changing Climate for Business partnership and used UKCIP resources, including BACLIAT and UKCIP02 projections. NACM established a small, cross-industry group, which then held workshops to:

- Familiarise itself with issues and set scope.
- Explore impacts, risks and benefits.
- Prioritise impacts using a risk assessment.
- Where possible identify adaptation options for highest priority risks.
- Complete a report for members.

KEY PLAYERS

Within the industry:

- Bob Cork, Production Manager, Gaymers (project leader)
- Richard Heathcote, Sustainable Development Manager, Bulmers
- Melvyn Dickinson, Marketing Manager, Westons
- Liz Copas, independent, orcharding / apple expert

External:

- Kay Johnstone, Project Officer (Business), UKCIP

OUTPUT

There has been a change in attitude of the industry as a whole on the implications of unavoidable climate change that resulted from involvement in the study. Climate change will affect the critical raw materials: apple fruit trees that are the long term asset for the industry. Thinking within the industry has changed from 'not aware' of climate change impacts to effects being 'fully embedded' in the orchard planning process.

In addition, climate change has now risen up the agenda from not being considered to the next most important item after cost and yield. The new research strategy now embeds climate change in all aspects and focuses on developing climate resilient trees – specifically it covers pests and diseases, winter dormancy, flowering time, frost protection and tolerance to water logging.

New information from the study was also disseminated to growers via a best practice guidebook and networking in order to alter the practices of cider-makers.

The study found gaps in knowledge that have been followed-up as research proposals and new work is on-going.

FURTHER ACTION

The study enabled development of a research strategy, approved by the NACM Board of senior managers from Cider companies including Heineken (Bulmers), Magners and Weston's. Work on the study and use of the results has changed the attitude of all staff.

Two research projects are underway:

1. Weather is an important factor in fungal disease Venturia inaequalis epidemiology. Work is underway to better understand the genetic relationship between Venturia inaequalis and apples to inform the development of future varieties.

2. East Malling Research is working jointly with Pomology Committee members and growers on a 3-year project for a more climate resilient New Generation Orchard. The work will be distributed freely once complete.

FUTURE INITIATIVES COULD INCLUDE:

- Making use of UKCP09 projections to help determine when various climate aspects (e.g temperature, rainfall) may pose a significant threat.

- Provision of site-specific advice to growers on all climate change issues.

- Research into the dormancy requirements and stress tolerance of commonly used cider cultivars and rootstocks.

- Actions to strengthen partnerships between growers and cider makers.

- Promoting the understanding that both the industry and apple growers need to adapt to climate change to secure a long term supply of bittersweet cider fruit, for the benefit of both industries.

CONSTRAINTS

The depth and detail of the study was constrained by the relatively small resource available, which meant that it was not possible to buy in technical expertise.

The joint approach meant that there were inevitably some difficulties in progressing, e.g. the time required to set meeting dates, reach consensus and to pull together contributions from several busy managers and the need to respect competitive relationships between firms.

The sector-wide approach presented the challenge of accounting for differences between different members. For example, the impacts, the level of risk and the potential responses are often site-specific.

There were difficulties in dealing with risks for which climate change was not the main driver, i.e. whether or not to separate the climate aspect of the increasing risk.

Related to the two points above, setting the scope of the study was a challenge, e.g. which climate impacts to include, how to define 'UK cider industry' and how much advice on adaptation can be given at a sector level?

Added to this, climate change impacts is a new subject area for the industry, involving new information and varying levels of knowledge of, and belief in climate change.

ENABLERS

The study would not have happened had the group not been able to devote time to introducing the topic and building its background knowledge, at first through UKCIP's business partnership and then through presentations and discussion at a dedicated meeting.

The study benefited from the broad experience and knowledge base of those involved from within the industry, encompassing orcharding and production processes (as well as business development, sustainability and marketing).

Existing Pomology research relating to climate change meant a lot of the information on impacts and possible adaptations at Orchards was easily available.

The group benefited from an enthusiastic individual who, although not leading the project, acted as an 'adaptation champion' throughout the process. The involvement of UKCIP resources and support was also a factor, co-ordinating the group and providing relevant information on climate change and suggesting approaches. The BACLIAT headings provided scope for a wider range of impacts than was immediately obvious.

The work was also assisted by the fact that NACM has a clear vision of how a future UK cider industry should look, through their 'Cider Futures' project.

TRANSFERABLE LESSONS LEARNED

It is important to carefully set the scope for the issues being considered, including: assumptions about the future; the timescale of interest (e.g. 30 year orchard cycle); and the boundaries around the industry.

In this case, the trade association carried out a low-cost study, tailored to the needs of the industry. Knowledge from the study has benefited the industry as a whole, but also changed behaviour – climate change is now embedded in decision-making, with the aim of making fruit trees climate resilient.

Once a study is underway, a feedback system is important to ensure that any problems are identified early, hence the need for rapid and easy to use communications networks.

It is necessary to provide time to introduce the topic and explore the new types of information involved and the complexity of the issues.

Generic tools, such as BACLIAT, are useful but ultimately, analysis and findings need to be structured in a way that makes sense to the industry.

Climate change has broader implications than is obvious at first, e.g. the study recognised the need to look beyond apples, orchards and cider production to address impacts on cider drinking culture and on markets.

Trade associations have an important role in building the adaptive capacity at a sector level but cannot get into the detail relating to site-specific impacts and need to be careful about making specific recommendations to their members, as the choice of adaptation measures needs to reflect individual company objectives.

CASE STUDY PROFILE		
	LOCATION	UK wide
	SCOPE	Sector
	SECTOR	Manufacture of beverages, Agriculture
	DATE	2008
	BUSINESS AREAS	Markets, logistics, finance, premises, process, people
	RISK/ OPPORTUNITIES FOCUS?	Both
	CLIMATE CHANGE/ weather event focus	HOTTER, DRIER SUMMERS
		MILDER, WETTER WINTERS
		MORE HEAVY RAIN
		Heatwave
		Drought
		Flood
		Cold snap
		Storm
	BUILDING ADAPTIVE CAPACITY OR DELIVERING ADAPTATION ACTION	BAC
	CONTACT DETAILS	Nick Bradstock, consultant to the NACM, nickbrads@btinternet.com
	REFERENCES, WEB LINKS ETC	http://cideruk.com/cider_news/view/climate_change_story1/ for Press Release. Copy of full report from above email address