

GRAIN TO GLASS

Beer and Britain's rural economy



THE BREWING AND PUB INDUSTRY CONTRIBUTES £28 BILLION TO THE UK ECONOMY

FOREWORD

Beer and pubs are an essential part of what it means to be British. But the beer supply chain also plays an important economic role in providing jobs, adding value to farm crops and generating millions of pounds for the rural economy.

This report sets out, for the first time, the scale of the interdependence from grain to glass and challenges policy makers to match the importance of the beer supply chain with actions to enable it to reach its full potential. Better regulation on the farm and a review of the structure and impact of beer duty are two key aims, but, as this report makes clear, there are many other things that Government could be doing to turn negatives into positives.

At a time when the focus is very much on realising the growth potential of our rural communities and on shaping rural services to meet current and future demand, we set out here how investment in the right policy and regulatory framework for farming, beer and pubs can underpin the wider rural economy and create much-needed jobs.

If we want our countryside and rural communities to flourish then farming, beer and pubs must be at the heart of our economic growth strategies. There is much we can all do to build on one of Britain's largely unsung economic success stories including more effective promotion of rural pubs, removing burdensome red tape for farmers, support for brewing as a home-grown industry with a rich heritage and brighter future and a renewed focus on local sourcing of food and drink served in pubs.

We would urge you to read this report and more importantly act on our recommendations to shape a brighter future for farming, beer and pubs in rural Britain.



Peter Kendall
NFU President



Ralph Findlay
Chairman, British Beer
& Pub Association



BEER'S NATURAL INGREDIENTS

Barley, hops, water and yeast. Just four natural ingredients make up beer.

Hop bines are grown vertically along twine cords to a height of 20 feet producing hop cones that must then be separated from the bine and dried in an oast or hop kiln. The dried cones can be used whole but are more frequently milled into pellets.

Before being used for brewing, barley must first be 'malted' via a process that results in a dried form of the grain called malt.

This malting process works in three stages: steeping, germination and kilning, encouraging the grain's natural growth cycle. As well as providing flavour and colour to beer, the dried, malted barley also has a crushable husk and high starch content, both of which are vital for the brewing process.



IN THE BREWERY

Hops and malt both contribute to every beer's distinctive flavour and aroma and are essential to quality and consistency.

At the start of the brewing process, wort, a sweet, nutrient-rich liquid is extracted from the crushed, malted barley. The wort is then boiled and cooled, and yeast is added to convert the sugary wort into alcohol, leaving vitamins, minerals and other nutrients to end up in the final beer.

Hops are added to the wort during boiling for flavour and aroma. They also provide natural protection from deterioration. Hops can also be added directly into cask beer after packaging, imparting a characteristic flavour and aroma unique to each style of beer.



TO THE GLASS

Draught beer is the key selling point of the great British pub. A pint of beer is the culmination of all the fruitful labours in the brewing supply chain, from grain to glass.

The publican plays a key role in providing the skills to ensure the best glassware and dispense systems are used to bring the beer to the customer in perfect condition.

Packaged beer allows pubs to showcase an even greater range of styles and brands as well as enabling Britain's brewers to sell their produce in supermarkets, shops and farmers' markets around the country.



22 MILLION PINTS CONSUMED PER DAY



WHAT FARMING CONTRIBUTES TO THE BRITISH ECONOMY

Farming is vital to the UK economy, not just as a key industry in its own right but also because of its role within the agri-food sector and the wider rural economy.

It was one of the few strong sectors as the economy headed towards recession and it has remained robust throughout the downturn.

Agriculture and horticulture contribute some £7.1 billion to the GVA of the national economy and it is a significant employer, with 534,000 people – or 1.7 per cent of the total UK workforce – directly involved in primary agricultural production alone.

Cereal farming is a major player within the sector. In 2009 cereal farmers marketed their crop for a total of £2.3 billion, which added around £1 billion to the economy. Processors added a further £5.2 billion to the economy through their activities, many of which would not happen on UK soil if the volume and quality of production were not present.

Exports from the UK remain strong and in 2010 the UK exported over four million tonnes of cereals at a value of £630 million. Recently, large individual shipments have reached destinations as diverse as South Korea, the United States, the Philippines and several North African countries.

While the solid performance of agriculture has been good news for the whole economy, it has been particularly critical to rural areas. The rural economy turns over £300 billion each year, employs 5.5 million people and has farming at its centre.

Farming and the food industry

The economic contribution of agriculture and horticulture is sizeable enough but it also underpins jobs and wealth throughout the agri-food sector.

Collectively, the agri-food sector accounts for 6.7 per cent of the total economy and generates some £85 billion (GVA) to the UK economy. In addition, an estimated 3.6 million people are employed, 14 per cent of all employees. The UK food and drink industry also accounts for approximately five per cent of total UK exports, with some £14.3 billion generated through overseas sales in 2009.

Without a healthy farming base there is a very real risk the major contribution domestic food and drink manufacturing makes to the UK economy could be eroded.

The economic importance of barley

Barley is one of Britain's oldest cultivated crops. The amount of land used to grow barley has fluctuated over the years but it remains an important crop and contributor to the national economy. The 2010 crop was valued at £510 million, with about a third of it destined for brewing or distilling. In 2011 the area of barley grown increased by four per cent, to 607,000 hectares.

Domestic use of barley (thousand tonnes)

	1985	1995	2005	2010
Total domestic uses of which:	6,706	5,727	4,974	5,314
Brewing/distilling	1,704	1,857	1,723	1,692
Animal feed	4,536	3,609	3,069	3,445
Seed	279	216	143	138
Other uses and waste	187	46	39	38

Source – Defra



MALTING BARLEY FARMING

Barley, when malted, offers the brewer a package of all his needs: the food store and nutrition to allow his yeast to perform the magic that is fermentation and thereby produce beer.

Brewers since the sixth millennium BC have appreciated barley for these properties. The cereal originated in the Fertile Crescent – modern Iraq, Syria and Iran – and progressed northwards through Europe to become ubiquitous by modern times. Its origins suggest that drought-resistance could be a useful characteristic as the climate changes over this century.

Currently around 1.7 million tonnes of barley is used in this country annually for malting. Buyers set strict quality standards which need to be matched by farmers' technical knowledge and skills. High price volatility and a 3.5 per cent rise in the amount of barley used for brewing and distilling between 2009 and 2010 means many growers are reconsidering malting barley.

Malting barley growing is concentrated in particular areas of the country where the world-class combination of soil composition, climate and farming expertise ensures the barley meets the exacting standard of maltsters. Malting barley needs only a low input of nitrogen fertiliser, in order to meet the requirements of brewers and distillers for a low protein input to their process. This helps keep a low carbon footprint with less run-off into watercourses and more efficient brewing and distilling.

Winter barley is a reliably early crop that farmers can harvest before other cereals, allowing better use of machinery and labour, and providing a good preceding crop for sugar beet or oilseed rape.

The barley crop has become less competitive in recent years and there has been a reduced spend on malting barley publicly-funded applied research and development. Reversing this trend is key, as encouraging the plant breeding industry to bring forward new and productive varieties of malting barley will arrest erosion of the competitive position of barley growing internationally and against other crops in the UK.

Barley: the 'premier cru' of British farming



Signs close to Teddy Maufe's North Norfolk farm tell motorists they are entering Malting Barley Country. Records show the Iceni nurtured wild barley to brew beer on land in the area 2,000 years ago, and he is proud to be continuing the tradition at Branthill Farm. He would like the East of England to be as well-known for the quality of its malting barley as the Bordeaux region is known for its grapes.

Teddy, a tenant farmer on the Holkham estate near Wells-next-the-Sea, grows 160 acres of spring barley and 220 acres of Maris Otter winter malting barley on light, sandy soils. He says the distinctive coastal climate of North Norfolk helps extend the natural ripening process.

His Maris Otter goes to Crisp Maltings in nearby Great Ryburgh and about a quarter of the crop is then used by Norfolk microbrewers, who send beers back to be sold in the real ale shop he has opened on the farm. Some of the bottles even show a grid reference of the actual field where the malting barley was grown.

He plans to strengthen this link even further by developing a micro malting at the farm, which will be used by local brewers to produce a special range of real ales.

Teddy works with other local producers to promote food and drink, helping to organise a two-day festival at Holkham Hall in September that involves more than 60 North Norfolk food and drink producers.



HOP GROWING: HERITAGE AND PROGRESS

British grown hops have been central in British history and culture since weavers from Flanders settled in Kent in 1520. They brought with them new varieties and, crucially, the knowledge of how to use them in beer. Hop growing peaked in the 19th century when around 29,000 hectares were under cultivation. Although the area has fallen to around 1,000 hectares, British hops remain a crucial ingredient for the nation's brewers.

Hop plants are perennials and can be expected to remain productive for 10-20 years. Each year they die back to ground level and regrow in the spring, with the support of strings and poles to a height of 16ft. Hops are harvested in September when the climbing 'bines', the plants containing the crucial cones, are cut three feet above the ground and brought in from the field. Next they are fed into picking and sorting equipment to separate the valuable cones from leaves and stems. Finally hop cones are dried in oast houses – reducing the water content from about 80 per cent to 10 per cent. This process takes less than 24 hours and the cones are then ready to be transported in hessian sacks to brewers.

Today Kent, Sussex, Herefordshire and Worcestershire are the major areas where hop growing can be found. In one way, the high bitterness of hops from British farms has brought about the UK hop industry's relative decline in recent years. The more bitterness they can provide the fewer hops you need to achieve a balanced and accessible flavour. However, there is good demand for English aroma hops, helped in recent years by a boom in the number of microbrewers.

Hop crops are vulnerable to several fungal diseases, soil-borne infections and pests during the growing season. Plant breeding has helped to address this issue by producing resistant or tolerant varieties. As Kent farmer Tony Redsell recognises (see case study) a successful future for the industry is dependent on effective funding for crucial research and development.

R&D keeps British growers top of the hops



Kent farmer Tony Redsell is the UK's largest hop grower, with 220 acres of traditional hops on three holdings near Faversham. And 2011 was his 62nd hop harvest. Tony grows English aroma hops – East Kent Goldings, first developed in the late 1700s, and Fuggle, developed in the 19th century. In addition, he has Northdown and Challenger hops, varieties that were bred at the Wye horticultural research station in Kent during the 1960s.

Tony says: "Probably 80 per cent of our production is English aroma hops, East Kent Goldings and Fuggle, and between 20 per cent and 25 per cent of that production is exported to America every year."

The delicate, citrus aroma of East Kent Goldings is increasingly sought after by brewers worldwide for 'single hop varietal' beers as well as for use in some wheat beers.

Tony is behind an application to the European Union

to seek Protected Geographical Indication (PGI) status for 'East Kent Goldings'. He says: "The Tettnang hop growers in Germany have PGI status as they claim to produce speciality hops. If they can get it, then so can we!"

The application has progressed through its early stages and a decision from Europe is now eagerly awaited.

Tony believes that research and development is vital to the industry. He is a great supporter of the research and development work undertaken by the National Hop Association. The association was formed by hop growers in 1982 to coordinate hop research and breeding programmes at HRI Wye College in Kent. Growers and corporate sponsors from the brewing industry, including Kent brewer Shepherd Neame, came to the rescue of the association in 2006 with the closure of Wye and loss of government funding for research. Fortunately the association was able to retain Dr Peter Darby, the leading scientist behind Wye's breeding programme.

Tony says: "We felt it was important not to lose the breeding stock and the expertise that had been built up. So we secured start-up funding – £25,000 from Government for a three-year period to enable the programme to continue. By the fourth year, one third of its income came from overseas, with contracts from the French hop growers, growers in the Czech Republic and in America.

"The national hop breeding programme and the national hop collection are vital, particularly given the challenges we face with pests, diseases and climate change. The programme is trialling some clones from South Africa to see if we can develop a hop that can manage without winter chill."

HOW BEER AND PUBS CONTRIBUTE TO THE RURAL ECONOMY

Both beer and pubs play a crucial part in the rural economy. Beer relies on agricultural land for its core ingredients. There are breweries, both traditional and modern, throughout the British countryside.

Alongside are Britain's village pubs, buying local produce and providing employment to local people. In rural communities everywhere, there are people whose livelihoods are dependent on either beer or pubs or, more likely, both.

Research carried out in 2011 by Oxford Economics found that around 270,604 rural jobs exist because Brits drink beer and visit pubs – 27 per cent of all beer and pub jobs. These employees earn £3.6 billion from the industry, fuelling further economic activity in rural areas.

All of these beer and pub-related businesses add hugely to the rural economy. It is estimated that this activity added over £5.6 billion in value to the local economy during 2009/10, making the industry one of the most important for the rural economy.

The rural base of the UK brewing industry is remarkable. More than 400 breweries are based in rural locations, around half of the country's total. These breweries come in all sizes, from small breweries operating out of a working farm and employing just a handful of people, to well-established commercial operations employing hundreds.

Traditional breweries also provide a boost to tourism, bringing additional opportunities to neighbouring businesses.

Rural jobs tend to be centred on areas of agricultural production. Jobs resulting from the growing of barley and hops are supplemented by suppliers of other goods and services. And, of course, pubs themselves are labour intensive, often providing a flexible working environment for their employees.

At a time when rural economies are struggling the brewing and pub sector can be a catalyst for growth and increased earnings through agriculture, manufacturing and retailing. This is a sector that crosses traditional boundaries and offers opportunities to people from all walks of life.

Molson Coors Growers Group – understanding how beer is grown



When a beer prides itself on being made from 100 per cent British barley, top quality supplies are of vital importance. Molson Coors (UK & Ireland) gets through 150,000 tonnes of barley each year so the procurement team has its

work cut out to make sure quality British supplies are sufficient.

In 2008, in partnership with its major grain merchant, Frontier Agriculture, and facilitated by the English Farming and Food Partnerships, the Molson Coors Growers Group was founded, dedicated to ensuring a regular and guaranteed supply of top quality barley. Its original purpose was also to ensure that farmers around the country receive a fair deal for their grain, and can plan ahead, knowing their barley will be bought by a reputable customer at a fair price.

The group now has an expanded common purpose: to secure a sustainable supply of high quality malting barley from local and important barley growing regions of the UK; to provide value to all parties; and to implement best practice and innovation in the supply chain.

Members of the group now supply more than 20,000 tonnes of barley to Molson Coors (UK) and the figure is increasing all the time. The group has evolved into a truly collaborative partnership between barley supplier and brewer with members discussing matters such as ecosystems and biodiversity, resource efficiency and the health of the farming sector as a whole.



Economic contribution of beer and pubs in rural areas

Region	Breweries	Pubs	Employment	Wages (£m)	GVA (£m)
East of England	54	2,031	32,172	484	684
East Midlands	43	2,091	29,704	385	571
North East	11	900	12,604	148	201
North West	33	1,214	17,005	208	337
Scotland	35	1,775	21,420	251	437
South East	50	2,364	38,782	571	849
South West	88	3,550	56,561	711	1,179
Wales	21	1,706	18,469	219	369
West Midlands	42	1,541	24,967	358	609
Yorkshire & The Humber	25	1,153	18,921	252	341
Grand Total	402	18,325	270,604	3,586	5,579

Source – Oxford Economics, Local impact of the beer and pub sector, 2011



MALTING ON A GLOBAL STAGE

The British malting industry is one of the largest in the world. It is second largest in the EU after Germany. UK maltsters have led the world in innovation for more than a century.

From a cottage industry in the years before practical road transport, when every village and town would have one or more of its own maltings, British maltsters have harnessed change as a force for development and success to become serious global players.

Buying nearly two million tonnes of high quality UK barley - over a third of the whole barley crop - maltsters work with the supply chain to ensure that the quality of harvested barley is fit for malting for customers at home and abroad.

This starts with variety development, in partnership with brewers, breeders, distillers and growers, to produce barley varieties suited for our climate and soils.

Of the malt produced, up to 20 per cent is exported to countries worldwide. In this market UK maltsters compete with other European producers and with malt from Australia, North America, and increasingly South America and China. Customers are price sensitive, so costs of production are important, but they also appreciate the food safety and quality aspects of UK malt.

Farm assurance through Red Tractor is part of the expected background now, and maltsters build on this with the Assured UK Malt scheme (AUKM), designed to provide the security of traceable supplies of this major raw material. AUKM is the first and leading malt assurance scheme in the world. It is a testament to the sophistication of the grain chain within the UK and the control offered by all links within it.

Maltsters rely on clean air, water and a supply of assured barley, so they are intimately linked to environmental concerns. The main impacts from the malting process are energy consumption with associated greenhouse gas emissions, use of water and production of waste water, but over half of the carbon footprint comes from the growing of the barley crop.

Accordingly, maltsters have worked hard to reduce energy and water consumption - and have been very successful in this regard. They are also engaging with the supply chain to look at emissions from agriculture.

In addition to beers and whiskies, malt from UK maltsters appears in many ingredients' listings in products as diverse as cakes, biscuits, breads, vinegar, breakfast cereals, soups, sauces, soft drinks, confectionery - and beauty products. But, of course, it is the magnificence of the superb global beers and the diversity of the craft beers produced from British malt that are most obvious to the consumer in the beer supply chain.

Investing in malting

Muntons uses the finest malting barley to produce a high quality range of malts, with barley usually sourced from within 50 miles of its two maltings in East Yorkshire and Suffolk. This barley is carefully malted to meet customers' specifications, and the company takes pride in this dedication and attention to detail.

In an increasingly competitive environment, Muntons has invested over £500,000 in a new product development suite, which includes a purpose built one hectolitre microbrewery. This stainless steel pilot brewery is proving invaluable for brewers wanting to develop new beers while not interrupting mainstream brewing production.

The weather in 2011, with its cold winter, warm spring, wet summer and dry autumn has presented its own challenges for the malting barley crop. Muntons works with brewers to overcome these to ensure the highest-quality product reaches the beer drinker. These are interesting times for maltsters and brewers alike. As a family-owned and dedicated maltster, Muntons is well placed to meet future challenges.

BREWING: A BRITISH SUCCESS STORY

A world famous manufacturing industry with local roots, the UK brewing industry is one of the oldest manufacturing industries in Britain. It has prospered through a unique blend of rich heritage and modern innovation.

Today's global brewing companies compete alongside regional and family-owned breweries dating back centuries. There is also a rapidly growing craft brewing sector, creating a heady mix that has resulted in one of the most diverse beer markets in the world. There are an estimated 5,000 UK-produced beer brands available to consumers, with an astonishing diversity of styles and flavours. The UK also leads the world when it comes to brewing science, engineering and research and development.

Beer is a heavy product with significant transport costs, so the economics of brewing means being close to the beer drinker. Around 85 per cent of beer consumed in the UK is produced in the UK. The vast majority of ingredients, materials, good and services purchased by brewers are sourced from within the UK, often locally.

In 2010, the number of new breweries opening topped 100, bringing the total number currently brewing to over 800, according to HM Revenue & Customs. This compares with 500 breweries just a decade ago and reflects the growing interest in craft beers in markets across the world as well as the increasing demand for local products with a strong provenance.

The number of breweries in the UK exceeded 800 in 2010 (from 500 a decade ago) with a range of entrepreneurs entering the beer market. Reduced duty rates provide a big incentive to small brewers, especially as beer taxes have risen to the second-highest in Europe. Despite this disparity medium-sized family-owned brewers have continued to thrive, supporting their local community through local sourcing and producing great-tasting beers - and continuing this country's fine brewing heritage.



Red Tractor Assurance – a guarantee of quality



British Beer & Pub Association members are embracing the Red Tractor scheme to show their beers' credentials when it comes to guaranteeing food safety, quality and traceability. Red Tractor, run by not-for-profit organisation Red Tractor Assurance, is recognised as the UK's leading quality food assurance mark.

Red Tractor is backed by farmers and growers, food producers, processors and packers who are independently inspected to ensure they are meeting high standards of production relating to food safety and hygiene, animal welfare and environmental protection.

High profile support comes from the Government, leading supermarket chains and many of Britain's food brands and restaurants.

Bedford based brewer Wells and Young's was the first to have beers awarded with the Red Tractor stamp of approval.

In June 2011, Molson Coors (UK & Ireland) announced that Worthington's had joined Carling in achieving Red Tractor certification. All Worthington's ales now use 100 per cent British barley sourced from Red Tractor certified suppliers - demonstrating the company's continued commitment to quality assurance.



RURAL PUBS – AT THE HEART OF THE COMMUNITY

In rural Britain, there are pubs everywhere. They showcase not only local beers, but also local and regional foods, actively supporting local producers.

As pub numbers have declined nationally, so have the number of rural pubs. The level of support available for rural business, government regulation and high taxation have all played a part.

As well as being an important employer, rural pubs provide a unique service to the community. They are an important focal point for local life, especially when other services, such as shops and post offices, are in decline. They provide company, communication, sports and other leisure activities for rural communities.

For pubs seeking to take advantage of their crucial role in rural tourism, planning restrictions and rural business rates remain an issue. Tourism businesses seeking to expand, modernise or diversify their business face obstacles.



Partly funded by the British Beer & Pub Association, 'Pub is the Hub' has worked to bring many vital local services to rural pubs. Initiated by HRH The Prince of Wales in 2001, it is a not-for-profit advisory organisation that encourages local authorities, local communities, licensees, pub owners and breweries to work together to support, retain and locate services within rural pubs.

Pub is the Hub assists with guidance on availability of project funding. It has formed successful partnerships with regional development agencies, local authorities, rural community councils and other public and private sector organisations, developing a solid track record of rural project development and delivery, and assisting the public and private sector to invest funds effectively.

Projects have included opening shops and post offices within the pub itself, providing a vital service to the local community and visitors.

Pub menu celebrates all things local



Whether tucking into a tasty meal in the restaurant or sipping a pint in the bar it is almost inevitable you'll be enjoying the best of Yorkshire at The Angel Inn in Hetton. Local sourcing is at the heart of the award-winning pub which dates back to the 15th century and today food and drink comes from more than 22 farms and suppliers from across Yorkshire.

Chef director Bruce Elsworth is a proud Yorkshireman and, like the produce he sources, hasn't travelled far to the kitchen in The Angel Inn. In fact he grew up on a farm in Embsay five miles down the road where he learnt from an early age about the importance of farming. "I know that it is farmers who do the real work and that is why we sing about them on the menu.

"We're really lucky to have some great suppliers on our doorstep and we take staff on farm visits as part of their training. There they can learn important lessons like why we use certain animal breeds and cuts for different dishes," he says.

It is no surprise that the beer is local and the bar serves three Yorkshire ales – currently Black Sheep, Timothy Taylor and Hetton Ale – which is brewed half a mile down the road from the pub.

HOW FARMING AND PUBS BOOST BRITISH TOURISM



Farming and tourism

Fields of crops, bordered by hedgerows, ripening in the summer sun are an iconic feature of the British landscape. Alongside their role as food producers, the UK's farmers are increasingly appreciated for their role as environmental managers.

The countryside, and therefore farming, is inherently interlinked with rural tourism. For example, farmers help to maintain the 188,700km of public rights of way that provide access to the English countryside. In Wales the figure is 33,000km. Since 2000, rural tourism has benefited from greater access to the countryside. Farmers have provided

access to some 566,300 hectares of mountain, moor, heath and down, and a further 369,000 hectares of registered common land.

Each year, around two thirds of the British population make at least one visit to the countryside, adding up to an annual total of more than one billion day trips. And with the diverse appeal of the UK countryside, it is no surprise that many people opt for rural destinations for their holidays. Each year, some 18.8 million holiday trips are to the countryside.

To help meet tourist demand, farmers are continuing to diversify their businesses to provide accommodation and leisure activities – ranging from farm shop and pick-your-owns to adventure and farm parks for tourists to enjoy. Farmers need flexible planning policies that allow farm businesses to flourish.

Pubs and tourism

British tourism wouldn't work without the pub. They are an essential part of the local tourism infrastructure. With potential for growth in the 'staycation' as well as from overseas visitors, the sector also has enormous potential to generate rural economic growth and create jobs, through hospitality, food, and accommodation.

Pubs support holiday cottages, caravan parks, as well as walking, cycling, camping activities and all the other pursuits which are enjoyed by visitors to the British countryside. Pubs encapsulate some of the key elements of rural tourism – recreation, picturesque settings, local architecture, food, heritage, culture and community. Pubs can also assist business tourism in rural areas, with many already providing tourism expertise and information, offering meeting rooms and facilities for local businesses and community groups.

A BETTER ENVIRONMENT

How the beer supply chain plays its part

Farmers, brewers, pub owners and their customers all have a vested interest in, and a responsibility to, protecting and enhancing the environment in which they live.

Most farmers are passionate about the environment and their challenge is to produce more and impact less. Brewers and pub owners have a responsibility to reduce their energy use, minimise the impact of their packaging and cut waste. Customers can also play their part through recycling.

The entire supply chain works together. Farmers provide goods to brewers to produce beer and to pubs to sell food, and in return receive nutrient-rich brewing co-products to use as animal feed and fertiliser. Pubs and brewers are intrinsically linked by draught beer, dispensed from a keg or cask that is returned and reused for up to 25 years.

Major advances are taking place in each sector. Brewing companies have signed up to ten environmental commitments. These include reducing carbon emissions by two-thirds and improving water efficiency by 42 per cent by 2020 (against a 1990 base). Targets are also being developed on a range of other areas, such as packaging and waste. Progress against these will be measured and reported annually as brewers strive to reduce their environmental impact.

Farmers are increasingly expected to find the right balance of food production and environmental protection. With more than three-quarters of the UK land area in agricultural management farmers and growers carry a unique responsibility. The area of farmland entered into conservation agreements in England alone now exceeds 6.4 million hectares. Cereal farmers are able to manage activity to promote biodiversity, protect natural resources and wildlife with agri-environment payments. These stabilise income foregone as the payments encourage farmers to deliver benefits of more wildlife on and around the farm, whatever happens in the cereals market-place.

Soil health, including structure and organic matter, is paramount to successful cereal cropping. Currently 44 per cent of all cultivated land is managed with zero or minimum tillage (where appropriate), 81 per cent of cultivated soils were covered with crops or overwinter stubble in the winter of 2009/10 and 85 per cent of cereal growers incorporate the manure they spread and 62 per cent incorporate their slurry. These measures help ensure nutrients are kept in the field and help keep soils healthy for production and wildlife. The average English loamy soil contains 25 tonnes of micro-organisms per hectare – including four tonnes of earthworms, 10 tonnes of fungi, and one tonne of springtails, spiders, beetles and snails – important foods for larger species including farmland birds

UK consumption of fertiliser and nutrients has reduced by 34 per cent over the last 10 years and pesticide usage in Great Britain fell by 37 per cent between 1997 and 2006. These changes in farming practices are leading to improvements in the landscape which are starting to be felt by some environmental indicators. Between 1998 and 2007, the richness of plant species on British arable and

horticultural land increased by 30 per cent, including species used as food by birds and butterflies. Bat populations are considered to be a good indicator of the broad state of wildlife and environmental quality. Since 2000 populations of bats have increased by 20 per cent.

Creating a better environment

This work continues to go on against the backdrop of an uncertain regulatory climate, with carbon reduction schemes in particular providing little predictability. Various incentives have been, or are in the process of being, introduced that will drive energy efficiency but many are yet to be fully understood, let alone adopted. The agricultural and brewing sectors need a settled landscape in which to operate.

With a stable regulatory framework providing further incentives, the development of new initiatives and the dedication and collaboration on behalf of the entire supply chain will lead to a better environment for everyone.



CHALLENGES IN THE 21ST CENTURY

From grain to glass, the beer supply chain plays a vital part in our economy – yet faces a range of economic challenges that are often compounded by tax and regulation. From farmer to publican, the sector relies on tens of thousands of small businesses, often operating outside heavily-populated and resourced urban centres. They are typically self-reliant and resilient businesses.

The coalition's commitment to smaller government and increased local delivery of decision making is instinctively attractive to the whole supply chain. For farmers, smaller government offers the prospect of more streamlined regulation and less burdensome red tape. This could help to save businesses costs, freeing them up to focus on where the risks really are, and what outcomes are needed, rather than the processes associated with heavy-duty reporting.

For pubs, which provide crucial rural jobs, deregulation is also the way forward, alongside reducing the overall tax burden faced by publicans and licensees. Rural rate relief, planning, access to finance, mobile broadband and support for environmental initiatives are areas where Government and local authority action could make a positive difference.

In recent years the arable sector has had some success with independently verified Red Tractor farm assurance. This means a full set of food industry standards is audited each year on farms producing grain for food and feed markets and is used as a way to automatically reduce the regulatory burden. One example is the Food and Feed Hygiene Regulations where local authorities are required to inspect farms producing food or feed. The FSA looked at assurance schemes in detail and assessed the rigour for food and

feed hygiene. The result was they now permit a risk-based approach to selecting farms. The NFU believes there is scope to extend this principle further throughout agriculture and horticulture.

For beer, and pubs, facing the challenges of the economic downturn has been compounded by a rapidly increasing tax and regulatory burden. Beer duty has increased by 36 per cent since 2008 and over 4,000 pubs have closed in the last two years, many of which were in rural areas. Excise duty alone now accounts for around 50 per cent of total brewing turnover. It is stifling the industry's ability to undertake necessary investment and innovation programmes for long term growth and a sustainable future – both in supporting the UK economy and meeting an increasing interest in UK beers overseas.

AN ACTION PLAN FOR THE BEER SUPPLY CHAIN

Better regulation

- A better regulatory experience. All businesses should feel that they are understood, trusted and empowered
- Regulators should focus their efforts on where there is the greatest risk of non-compliance and should only intervene when necessary, relying on alternatives to regulation where they are most effective
- That regulation is only part of the complementary suite of Government interventions
- Regulation is outcome-focused
- Fewer regulators, with between them better understanding of agriculture

Initiatives for barley growers and pubs

- Align UK transport regulation covering the type approval of tractors, trailers and their appliances with that of the EU allowing British farmers access to grain movement efficiencies with more modern and larger machines allowed on the continent.
- Spend a greater proportion of the publicly-funded research and development budget on applied research in plant species and growing issues relevant to the UK, including for barley, so growing quality crops remains a competitive option for British growers.
- Review the structure and impact of beer duty on employment and growth in the rural economy
- Make Local Enterprise Partnership core funding available for promoting tourism in rural areas
- Continue support for Visit Britain and Visit England in the marketing of rural tourist destinations where pubs are a key part of the local offer
- Extend broadband coverage to more pubs in rural communities to allow wi-fi access for customers
- Review, by all Government departments, of the impact of the Red Tape Challenge on rural pubs and active implementation of the moratorium on regulation affecting small businesses
- Create more flexible planning systems to allow for diversification projects such as those developed by Pub is the Hub
- Encourage local authorities to adopt strategies to support community pubs, including rate relief, access to finance initiatives, business planning advice, and local transport



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