



A Nuffield Farming Scholarships Trust Report

Award sponsored by

**The Worshipful Company of Fruiterers
and the
Three Counties Agricultural Society**



The Export of Great British Hops and Niche Apple Varieties

Alison Capper

November 2014

NUFFIELD UK

NUFFIELD FARMING SCHOLARSHIPS TRUST (UK)

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A Nuffield (UK) Farming Scholarships Trust Report



Date of report: October 2014

*"Leading positive change in agriculture.
Inspiring passion and potential in people."*

Title	The Export of Great British Hops and Niche Apple Varieties
Scholar	Alison Capper
Sponsor	The Worshipful Company of Fruiterers and The Three Counties Agricultural Society
Objectives of Study Tour	<ol style="list-style-type: none">1. To identify and scrutinise successful exporters of hops and apples2. To use these learnings to establish a strategy and approach for the export of British Hops and British Apples (cider and dessert or eating apples)3. To identify how the British hop and apple industries may need to change to exploit these and other opportunities
Countries Visited	Germany, New Zealand, Canada, USA, France, Belgium, Vietnam
Findings	<ul style="list-style-type: none">• International hop & apple growers who collaborate (with transparency) to market and sell with a cohesive strategy achieve the greatest returns• Clear, concise communication to identify unique selling points (USP's) is key to creating differentiation in a crowded global market• Marketing needs to be "unpicked" from selling – it is a different discipline - successful export requires high quality, consistent creative marketing• Hop and apple growers should recognise their world competitiveness and play to their "British" strengths: highest farm assurance standards; sustainable, low irrigation levels; tightest regulations, highest quality products; world leading growing system innovations & hop breeding programme; heritage; history; integrity – a trusted global brand. We do not need to act like a commodity, we should be seeking to create desire in the premium market segments• In-depth and on-going understanding and engagement of the market is critical• Direct selling by Growers or groups of growers (rather than intermediaries) is far more prominent internationally than in the UK• The biggest export opportunities for British Hops and for cider apple juice are USA, South America, Europe, Australasia & Asia (Vietnam). For British dessert apples the opportunities are niche and include ex-pat markets, Commonwealth countries & aspiring middle classes in developing countries• An import substitution strategy is as important as export in each sector• Farmers need to become better influencers to gain broader respect from all their communities for the high quality of food that is produced in the UK• British farmers ought to choose selling methods that deliver them the greatest value back to farm gate rather than the easiest sale

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The opinions expressed in this report are my own and not necessarily those of the Nuffield Farming Scholarships Trust, or of my sponsor, or of any other sponsoring body.

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1. Personal Introduction

I am a farmer's daughter but a career in farming was never a consideration. I studied Fashion & Textiles at Bath and moved in 1989 to Knightsbridge, London, to work for the then number one marketing communications agency, IMP. In 1994 I moved as an Associate Director to The Marketing Store and in 1996, joined Black Cat as a Director. In 2001 the business was sold to Sir Martin Sorrell of WPP. Clients included Woolworths, McVitie's, Sainsbury's, Coca-Cola, ASDA, ntl, Nationwide Building Society, NatWest, Going Places, Heathrow Express and British Airways.

In 2006 I married Richard Capper, a lifetime farmer of hops (47 ha), apples (40 ha) and chickens (300k/yr). In 2007 he asked me to help out by doing the farm books and the farming bug started to take hold (much to the amusement of my father and farming brother). We farm in the most beautiful part of England, in my humble opinion, with the Malvern Hills Area of Outstanding Natural Beauty as our backdrop, and the idea of leaving the farm every day to work elsewhere seemed an odd choice to make.



Alison Capper standing beside Sovereign Hops growing on the low trellis growing system developed in Herefordshire & Worcestershire. Gala apple orchard at harvest time, with Malvern Hills in the background.

I started asking the same difficult questions of my husband and his father that I used to ask of my clients: What's the commercial imperative? Which products have the best margins? How are we marketing the farm and our produce? Where is our new product development, where are our new variety trials? What's our USP (unique selling point)? How are we connecting with our customers? Why are we growing this crop if it's not making a sensible profit? Looking back on it I have to give huge credit to my father in law and husband for their enduring and continued patience!

From 2009 to 2011 I was responsible for marketing and selling a Marjorie Seedling plum crop, concluding with my recommendation to grub the orchard as we were consistently losing money. In 2009 I was asked to sit on the Cargill Growers' Association representing chicken farmers issues at quarterly meetings with Cargill. This got me involved during 2010 in a great piece of work to promote British Chicken but also exposed me to the politics involved in trying to get a global processor and UK supermarkets to support a British message. It also highlighted to me the complexities of EU funding for Red Tractor that prevented us from saying "British" chicken on pack.

In 2009, I started to attend our Hop Selling Group meetings. And eventually the British Hop Association meetings where our breeding programme was the main agenda item. And I got the bug for hops. In 2009 we created a dessert apple replanting business plan and started a new relationship with Wye Fruit in Ledbury, just 10 miles from the farm. The closer working relationship with our



packhouse allowed us much greater control of any picking and grading issues. In 2010/11 I started to get more involved with the NFU, joining the National Board for Horticulture & Potatoes and discovered an amazing team of people working hard on behalf of farmers in Stoneleigh.

In 2011 Richard and I sat down with an external consultant to assess how we would sustain our future business plans following a localised May frost that had halved our dessert and cider fruit crop. When we had all the numbers analysed, it was clear that our hops were a nice hobby but were not making us much money. And cider apples were similar.

In 2011 Hops were a nice hobby but were not making a profit and Cider Apples were similar

At about the same time I bumped into Stephen Watkins, Chairman of Nuffield UK who said “if you have a passion and a problem, you need to undertake a Nuffield Farming Scholarship”. As I was not an “Agric”, I thought I would not qualify, and I thought I was too old.

I owe Stephen a huge debt of gratitude for not only suggesting a Nuffield Farming Scholarship but for staying on my case to apply and for all his quiet support throughout. A Nuffield Farming Scholarship has given me the chance to meet many like-minded people, pose the questions, understand the successes and failures of others, observe parallels from other sectors and apply them to our farm business. I didn’t anticipate how much I would learn from other Nuffield Scholars. And I’m very proud to have been part of the 2013 UK Scholar group – a fantastic bunch of people. It’s amazing how many of our problems are shared and how many of their ideas helped to spark new ideas for our farm business. I’ve learned a lot about how UK agriculture ticks, meeting policy makers, influencers and politicians, and spent many hours feeling excited, inspired but also often underwhelmed leading to spells of trying to find solutions. The last two years has been busier than when I was responsible for a 20-strong agency team that was billing ntl £230,000 a month (in 2002). It has not been as profitable (yet!) but it has been great fun.

Today I am a partner in our farm business and a member of: the NFU’s national Horticulture & Potatoes Board, the Board of The Norton Cider Growers Association, the NFU Mutual’s Regional Advisory Board, the Board of Trustees of FACE (Farming and Countryside Education), the Board of Red Tractor and the Boards of the British Hop Association & Wye Hops. I was humbled to be given the 2013 Nuffield Returning Scholar Trustee position and would like to thank my Nuffield cohort for their vote of confidence.

My husband Richard and father in law Mark have been huge supporters throughout every stage of my Nuffield journey. Richard has enjoyed accompanying me on some trips (especially those involving brewery visits!), he’s learned to cook again (it was that or starve), he’s embraced all the new ideas that Nuffield travels inspire and he’s been my best sounding board. I owe huge thanks to Richard, and our gorgeous Paddy and Serena (12 and 7) for giving me the space to travel and to sit down and write up this report.



2. Background to my Nuffield Study

My obsession with hops really started at the Brau Bevale in Nuremberg, Germany, in November 2011 and was reinforced by a visit to the American Craft Brewers Conference (CBC) in San Diego, USA, in May 2012. The Brau Bevale is the number one European beverage convention. It's where brewers from all over Europe, Asia and Russia go to find new ideas and new suppliers. I went to both events with one of our hop merchants, Charles Faram Ltd, to see how British Hops were being marketed abroad.

I came home utterly underwhelmed because we were hardly represented but also ironically excited by what I'd found. On one hand there was almost no marketing or selling of any sort for our Hops except for the excellent work being done by Charles Faram Ltd. On the other hand I was lucky enough to have three days on a trade stand to talk to hundreds of brewers from all over the world and it was clear there was a huge opportunity. It was exhausting work but I learned that craft brewers, all over the world, love hops and they use a lot of hops (Brewing Process, Appendix 1). They want "something new, something different and something they haven't tried before".



Charles Faram Ltd's (hop merchant) stand at Brau Bevale in 2011 and American Craft Brewers Conference in 2012

Reflecting on all this with my husband, Richard, we felt that export was not something our farm could do alone and that we needed to influence the British hop industry to learn lessons from the other hop growing nations exhibiting at the Brau Bevale & CBC and re-shape the British hop industry. In the summer of 2012, I embarked on a campaign to improve the Publicity for British Hops, detailed in Appendix 2, at the same time as I applied to Nuffield Farming Scholarships.

Craft brewers all over the world want:
"something new, something different and something they have not tried before"

In 2012 there was very little talk about export of fruit and vegetables - in fact not of export of any agricultural products. A lot has changed in two years. British Pork, West Country Beef and Scotch Beef have made great strides. British dairy is getting serious about export. When I first started talking about doing a better job of exporting British Hops and even considering opportunities to export British apples, my comments were met with a lot of scepticism from the industry. Hop



merchants told me there were already quite a lot of exports and the apple industry told me they did not want to let down UK supermarkets and wanted to focus on import substitution. Cider-makers rather than cider apple growers had started to look at export.

So in 2012 what were the threats and opportunities to UK farmers in each of our industry sectors?:

	Threats	Opportunities
British Hops	<ul style="list-style-type: none"> • Shrinking industry • Unsustainably low returns • International ownership and objectives of 2 of 4 UK hop merchant businesses • 50 UK farmers in 3 hop selling groups competing with each other • Pervading attitude that selling is someone else's job • Little marketing or branding • British Hops little known and misunderstood 	<ul style="list-style-type: none"> • Growth of craft beer globally • Hop utilisation rates in craft beer • Exploit the "unknown" status of British Hops to become the "new", "different", "not tried before" hops • British Hops niche position and unique proposition in world hops • British hop breeding programme • Grower collaboration • Strategic export and import replacement • To "mine" our history and landscapes
British Cider Apples	<ul style="list-style-type: none"> • Oversupply driven by "attractive" long term contracts from cider makers (25 years) • Long term unsustainably low returns • No control at farm level on price negotiations with cider makers • Restricted cider maker-owned pressing facilities • Global dessert apple juice concentrate 	<ul style="list-style-type: none"> • To market and export a unique British apple product • Export of cider apple juice and concentrate • The uniqueness of British cider apples • Bittersweet cider apples only grown in the UK, a small part of France and Ireland • Use the niche to drive higher value • Growth of craft cider globally • Growth of flavoured cider
British Dessert Apples	<ul style="list-style-type: none"> • Dominance of New Zealand bred commodity apple varieties • Dominance of global "club" varieties • Lack of any British breeding programmes • Oversupply/poor returns on traditional British Bramley and Cox varieties • Labour costs/land prices • Sales strategy dominated by multiple supermarkets whilst retail growth coming from Discounters and Convenience retail • Falling consumption rates 	<ul style="list-style-type: none"> • Export – if UK buys New Zealand apples, why not sell British apples to middle class in Asia? • Export Bramleys to nations that still cook from scratch? • "Britishness" • Sell more of the crop, sell a wider range of apple sizes • Import substitution • Value proposition • Snack, health and convenience proposition, especially with the rise of UK obesity levels



The Nuffield Farming Scholarship has enabled me to look at each of these sectors and examine good examples of export to learn about what is required to succeed. It has also allowed me to think about and begin to tackle these and other critical industry issues.

This report is structured according to each industry sector:

- Hops
- Cider apples
- Dessert apples

The intention is to make it easier to digest each industry sector. Reports on where I've travelled and what I've learned are built into these three sectors. There is a brief description for those unfamiliar with the UK hop and apple industries at the start of each industry sector

The hop industry is where I have invested the most time and have been able to reach fairly clear conclusions. My travels have highlighted that cider apples and hops are very different but interestingly have many parallels, and I have attempted to draw these out for cider growers and provide recommendations. British dessert apple production is world leading in many respects and this report aims to reinforce this position and provide new ideas for the industry. It has and continues to be a very interesting journey.

This quote sums up nicely my post-Nuffield approach to our business and our industry sectors.

Socrates: "The secret of change is to focus all of your energy, not on fighting the old, but on building the new"



3. My Study Tour

Where	When	Why
New Zealand, South Island	Feb 2013	Excellent exporters. Strong New Zealand Hops brand. Gala, Jazz and Braeburn apples bred here. These varieties now dominate world apple production. (Gala is the number one eating apple sold in the UK)
Canada, Ontario	Mar 2013	The Nuffield 2013 Contemporary Scholars' Conference involving a wide range of trips including wine grape growing, grape propagation, the Vineland Research & Innovation Centre, a supermarket visit, and other dairy and arable visits
USA, Washington DC	Apr 2013	To attend the American Craft Brewers Conference attended by over 6,000 craft brewers from all over the USA
France, Paris	Apr 2013	To attend the International Hop Growers Convention Meeting
Poperinge, Belgium	Aug 2013	To attend the International Hop Growers Convention Hop Tour
USA, Portland Oregon State	Jan 2014	To attend the American Hop Growers Congress and Hop Research Council Meetings
USA, Yakima Washington State	Jan 2014	Visits to Hop and Apple farms in the USA's largest hop and apple growing region
Ho Chi Minh, Vietnam	Mar 2014	To attend and speak at the Institute of Brewers & Distillers (IBD) Asia Pacific Conference. Presented a technical paper co-authored with Dr Peter Darby: "What makes British Hops unique?"
Mekong Delta & Hoi An, Vietnam	Mar 2014	Visits to rice and fruit farms
USA, Denver Colorado	Apr 2014	To attend the American Craft Brewers Conference attended by over 8,000 craft brewers from all over the USA
UK	Throughout	Berry Gardens, Kent: for the art of grower collaboration East Malling Research: for the future of UK horticultural science UK Hop Merchants: to assess export opportunities Numerous overseas & UK brewery visits to assess/discuss needs Scottish Rural Leaders Conference: to speak about British Hops and to observe the issues facing exporting Scottish farmers Fruit Focus and National Fruit Shows, FPJ (Fresh Produce Journal) Live: for industry focus on the key issues

In hop production terms the two biggest hop exporters are the USA and Germany with approximately 35% each of world hop production. I chose to focus on the USA rather than Germany as the USA is where the trend for craft beer started and their hop growers have responded much



faster than the rest of the world. The attendance at conferences was a great way to meet everyone in one place. These conferences have led to many subsequent meetings with key contacts and that together with the Nuffield attitude of an “open door” has led to many reciprocal visits to our farm.

We have welcomed many visiting Nuffield Farming Scholars and many other people from whom we have shared and learned new ideas. Some of the most notable are:

- Julian Raine – Hop & Apple grower, New Zealand
- Ashley Huntington a barley, hop and apple grower from Tasmania undertaking a Churchill Fellowship
- Dr Paul Matthews – Senior Research Scientist, Hopsteiner, Yakima, Washington State, USA
- Distinguished Professor Charles Bamforth – University of California: [Anheuser-Busch Endowed Professor of Brewing Science and President of the Institute of Brewers and Distillers \(IBD\)](#)
- Dr Thomas Shellhammer, Professor of Fermentation Science, Oregon State University, USA
- Clare Greener NSc, Institute of Agricultural Management visit
- Caroline Millar NSch, Rural Scottish Leader. Caroline runs the 5 star Hideaway holiday accommodation brand and made me think more carefully about our beautiful setting, agri-tourism, and also the parallels between Scotland and rural Herefordshire/Worcestershire



4. Hops

4.1 The British Hop Industry in the Global Context

4.1.1 Growing Hops (This section is targeted at non-hop growers to explain the basics)

- We grow 24 ha of tall hops and 13 ha of low trellis hops
- The hop is a perennial plant that grows back every year
- Two growing systems: tall (4-6m) and low trellis (2m) which was developed by British scientists and Herefordshire/Worcestershire growers in the 1990s
- The post and wirework structures cost between £20–30,000/ha to erect
- The traditional Tall Hop:
 - March: The hopyard in Herefordshire/Worcestershire or the hop garden in Kent is “strung” involving a man and a “monkey” (a long bamboo cane with tube at the end to guide the string). A peg in the ground and hook on the top wire (4m high) are continuously linked using coir string that naturally degrades
 - April: Two or three shoots from each emerging plant are “tied” or trained clockwise up each string, by hand
 - April – June: The hop plant grows to its full height of 4-6 metres
 - Summer: pest & disease protection against powdery & downy mildew, aphids and red spider
 - July: the plant puts out lateral growth
 - August: the hop comes into “burr” – the precursor to the hop flower
 - September: harvest commences, the whole plant (string, bine or stem, leaf and hop) is taken from the field into a barn that houses the hop picking/separating machine, where the hop is picked, separated from the leaf, dried in the kiln (from 80% to 11% moisture), conditioned and baled
 - The infrastructure required to separate and dry hops is a significant capital investment. To purchase and construct a new hop picking machine and kiln would cost in the region of £750,000 - £1,000,000
 - November: harvested bines are cut back to the ground and cleared, “bine-cutting”



Left: Tall hopyard of Pilgrim hops, right: low trellis hopyard of Sovereign hops, both being harvested at Stocks Farm



- The Low Trellis Hop differences:
 - April: The plant emerges and self trains up a black plastic net
 - September: a hop harvester, based on a blackcurrant harvester, straddles the row plucking leaf and hop from the hedgerow of hop plants. The leaf and hop is taken by trailer to the same barn where the hop is separated, dried in the kiln, conditioned and baled
- On our farm the “hop waste” is composted and used as a mulch on young apple orchards
- We farm on heavy clay sandstone and do not irrigate our hops. Lighter, sandy soils do require irrigation. The majority of the UK crop is not irrigated
- The lupulin gland at the base of the hop flower contains the hop oils, resins and alpha acids that impart aroma and bitterness to beer. Hops are sold as baled leaf, pellets or extract (liquid)
- The brewer evaluates the crop based on its aroma (the “rub and sniff”) and its visual quality
- It is a complex and expensive plant to grow and manage

4.1.2 The History of a Declining Acreage

Hops originated in Egypt and as far back as the first century AD were described as a salad plant. Today, the words beer and ale mean much the same, but the word ‘ale’ was originally reserved for brews produced from malt without hops. This was the original drink of the Anglo-Saxons and English, whereas ‘beer’, a brew using hops, probably originated in Germany. Hops were cultivated in the Low Countries (modern Belgium and Holland) from the 13th century.

The cultivation of hops was probably introduced from Flanders to Kent, England, at the end of the 15th century. Our national drink until then had been ale, unhopped and sometimes flavoured with herbs such as wormwood. Brewers started to import dried Flemish hops but these contained so much extraneous matter that an Act of Parliament was passed in 1603 imposing penalties on merchants and brewers found dealing in hops adulterated with “leaves, stalks, powder, sand, straw and with loggetts of wood drosse”. In those early days, the sole reason for using hops was to preserve the beer in good condition: the bittering effect was “reluctantly accepted by Englishmen”.

Hops have been a significant commercial crop for global and UK agriculture for at least 200 years, reaching an acreage peak in the UK of 77,000 acres (31,161 ha) in 1878. The UK acreage has declined to 982 ha today for many and various reasons:

- Pasteurisation arrived in the late 1870s and fewer hops were needed as a preservative
- Clean water availability meant that “treated” alternative drinks such as beer were less in demand
- Imported hops were stipulated for use by brewers contracted to brew foreign beers
- EEC rules in 1982 led to the disbanding of the Hops Marketing Board
- Large acreage was lost to verticillium wilt (a soil-borne disease) in the mid-late 20th century
- Lager grew in popularity from the 1980s and its lighter taste meant a lower hop requirement or hop utilisation rate
- British Hops are seeded and were purported by competing countries to be inferior – a myth since disproved, but one that did serious damage to the UK industry
- 982 ha now grown in Herefordshire & Worcestershire and Kent, Sussex, Hampshire & Surrey
- Unsustainably low returns experienced since late 90s as the UK struggled to compete in a global commodity marketplace for the bittering component of hops, alpha acid



- Lack of cohesive marketing or promotion of UK hops in recent years has led to the UK being a net importer of hops.

The structure of the UK hop growing industry has remained fairly stable since the Hops Marketing Board was disbanded in 1982 but it has failed to compete as a global commodity, has lacked a clear proposition and has failed to take full strategic advantage of the export markets.

The UK is a net importer of hops.

4.1.3 Key Facts about British Hops Today

- 982 ha representing 1.5% of world hop production¹
- Producing over 75% aroma hops, less than 25% alpha hops (commodity hops for bittering)
- Lower Myrcene than other world hops delivering more delicate and complex aromas (see 4.4.3 British Hops – Defining the USP and Appendix 3)
- Less than 50 growers in 3 selling groups
- Acreage/production split almost evenly between West Midlands and South East
- 25+ varieties grown commercially, a much higher ratio of varieties:acreage than the rest of the world
- Majority sold through 4 British based Hop Merchants to brewers often on 3-5 year contracts
- No statutory levy board. Growers pay a voluntary levy to the British Hop Association (BHA) which funds new varieties, crop protection and publicity
- Wye Hops Ltd is a wholly owned subsidiary of the BHA. It is run by Dr Peter Darby and is rightly considered to be a world leading hop breeding programme
- Accurate British Hop export and import figures (Appendix 4) are notoriously difficult to find, primarily because hops often cross borders for processing only and then are returned or sold on again; and hops store so in any given year hop movements will include previous crop years
- For each million hectolitre of beer produced in the UK, 19.31 tonnes of German hops are imported, 10.14 tonnes of Slovenian hops and 9.55 tonnes of American hops
- By comparison in the USA for each million hectolitre of beer produced, they import 4.98 tonnes of German hops, and 2.68 tonnes of British Hops. All other imports are less than 1.5 tonnes per hop growing country
- In 2009 The USA imported 365 tonnes of British Hops. That has almost doubled to 600 tonnes in 2013

4.1.4 Key Facts about World Hop Production

- 2013: 45,694 ha producing 82,267 tonnes¹ (lower yields than expected due to drought, hail and high temperatures)
- 2014 forecast: 46,455 ha producing 90,355 tonnes¹

¹International Hop Growers Convention (IHGC) April 2014 Report



Key hop producing countries in 2013¹:

2013 Production	Hectares ¹	Tonnes produced ¹	% world production (calc)	No of Varieties (est)
USA	14,254	31,454	38%	50+
Germany	16,848	27,554	34%	27-30
Czech Republic	4,319	5,330	6.5%	6 (87% Saaz)
China (home use)	3,000	7,000	6.5%	5+
Poland	1,407	2,421	3%	5+
Slovenia	1,165	1,297	1.6%	5+
UK	982	1,235	1.5%	25+
Australia	449	1,138	1.3%	10+
New Zealand	378	703	0.8%	15+

¹International Hop Growers Convention (IHGC) April 2014 Report

4.2 The Brewing Industry in the Global Context

4.2.1 The Beer Category: Key Statistics

- Globally, beer has an 11% “share of throat”, with tea 22%, bottled water 17%, milk 15%, carbonates 12%, coffee 8%, juice drinks 5%, and other alcohol 4%²
- The five biggest beer producing regions³ are:
 - China 507 million hectolitres (mn hl)
 - USA 224 mn hl
 - Brazil 135 mn hl
 - Russia 88 mn hl
 - Germany 94 mn hl

Followed by:

- Mexico 82 mn hl
- Japan 57 mn hl
- UK (at no. 8) 42 mn hl³

Significant consolidation: In 1998 the top 10 brewers worldwide represented 34% of global market. By 2012 this figure was 66%².

Today the big 6 brands represent 54.7% of world beer: AB Inbev, SABMiller, Heineken, Carlsberg, China Res. Snow Breweries & Tsingtao Brewery Group³ but relatively few are truly international².

They are all mass-producers of Lager. 70% of top 10 brands are sold on promotion⁴.

AB Inbev have a monopoly in USA, Brazil, China & Mexico and make 40% of world beer profit⁴.

²Canadean Strategy & Business Consulting – Global Market Beer Trends 2013: <http://www.business-review-webinars.com/webinar-slides/RjdyqcNV.pdf>

³Barth Haas Report Hops 2013/14: http://www.barthhaasgroup.com/images/pdfs/reports/2014/BarthReport_2013-2014.pdf

⁴Ina Verstl, Brauwelt International presentation at Institute of Brewers & Distillers Asia Pacific Conference, Vietnam, 2014



- China's Snow brand is the leading brand in the world by volume but sold in only one market²
- Brands exhibiting strong growth tend to be in Asian markets, 6 of the fastest growing beer brands are Chinese but profitability remains a challenge in China due to low prices²
- Emerging markets driven by population growth, urbanisation and robust economic growth²
- Mature markets hit by ageing population, de-industrialisation, health concerns, recent economic crisis²
- Growth in premium, super-premium and private label brands²
- Craft beers are the key growth driver in the world's second largest market – the USA
- Continuing trend away from on-trade (pub) to off-trade (retail) sales²

Markets to watch are India, Vietnam, Brazil and Nigeria²

Craft beer is the key driver of growth in the USA. With 3% market share of US beer in 2004, craft beer reached 8% share in 2013 and is forecast to reach 20% by 2020.

And the trend is moving inexorably into other markets.

(USA Brewers Association keynote address, Craft Brewers Conference, Denver 2014)

4.2.2 What is Craft Beer?

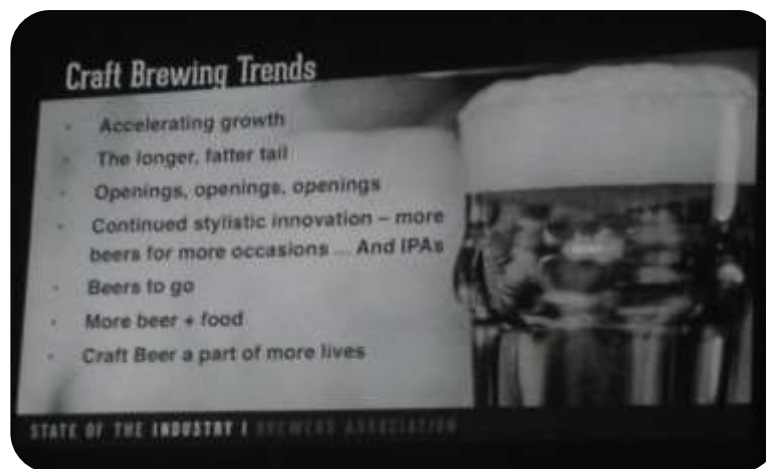
As defined by the Brewers Association (USA), a craft brewer is:

- **Small:** 6 million barrels of beer or less (6 million US barrels = 7.04 million hl)
- **Independent:** less than 25% of the craft brewery is owned or controlled by a beverage alcohol industry member that itself is not a craft brewer
- **Traditional:** A brewer who has either an all malt flagship (the beer that represents the greatest volume amongst that brewers brands) or has at least 50% of its volume in either all malt beers or in beers which use adjuncts to enhance rather than lighten flavour

In the US, overall beer sales declined by 2% in 2013, but Craft Beer grew by 18%³

4.2.3 Key facts on US Craft Breweries from US Brewers Association, Denver USA 2014

- 2,768 craft brewers, in 2013 sold 15.6 million barrels (or, 18.3 million hl)
- 44 closings, 413 openings, 1,744 breweries in planning
- 119 breweries producing over 15,000 barrels (12,780 hl) each
- US craft brewer exports up by 49%
- Current craft beer share of USA beer sales: 7.8% volume, 14.3% \$ value



Slide presented by Charlie Papazian, Founder of Association of Brewers, CBC, Denver 2014

4.2.4 The UK Craft Brewing Scene

In the UK the growth in craft beer is mirroring the growth in the USA. The UK's SIBA (The Society of Independent Brewers) has seen its membership rise from 235 breweries in 2002 to over 651 in 2014. In 2011 SIBA members brewed 2.234 million hl and sales grew by 7%⁵.

The total number of breweries in the UK is estimated to be in excess of 1,200. In no small part assisted by the Progressive Beer Duty (PBR) introduced by Chancellor of the Exchequer, Gordon Brown, in June 2002 for brewers producing up to 30,000 hl per year. In 2004 PBD was extended to 60,000 hl per year. Two thirds of breweries have entered the market since PBR was introduced.

4.2.5 Hop Utilisation Rates

Craft beer uses considerably more hops per pint than Lager. Lager uses the hop alpha acid content to "bitter" the beer early in the process. Craft brewers do this but in addition they add a lot more hops at the bittering stage and later in the brewing process for aroma and flavour (late or dry hopping), detailed in Appendix 1. The Master Brewers Association quoted in their report at the American Hop Growers Congress that the hopping rate for craft beer is 1.31lbs/barrel. Anecdotally craft beer hopping rates are up to 25 times higher than those used by industrial scale brewers⁶.

c. 2,800 US breweries produce 8% of the total US beer volume and use 65-70% of the US aroma hops grown⁷. US Craft beer accounts for 1% of world beer production and uses 10% of world hop crop³.

The total number of UK breweries in the 2014 Good Beer Guide is 1,147

The impact of the craft beer movement on the hop and beer markets is well documented. The Barth Haas Hop Market Report, May 2014 report states that many aroma hops are fully contracted and a Financial Times article⁸ in the same month about soaring hop prices sparked quite a debate in the hop industry. Marstons have reported that standard lager sales have fallen by as much as 40%⁹.

⁵SIBA 2013 report: <http://siba.co.uk/Local%20Beer%20Reports/LBR-2013.pdf>

1 US barrel = 31 US gallons. 1 hectolitre = 0.852 barrels (Source: <http://www.beerinsights.com/numbers/definitions.html#Conversions>;

⁶Source: Brewdog – The Economics of a dry hopped beer, 16/01/2012: <http://www.brewdog.com/blog-article/the-economics-of-a-dry-hopped-beer>

⁷American Craft Brewers Conference, Keynote Speech, Denver, Colorado, USA, March 2014

⁸<http://www.ft.com/cms/s/0/e3d52290-d781-11e3-a47c-00144feabdc0.html#slide0>

⁹<http://protzonbeer.co.uk/news/2014/01/27/it-s-boom-time-for-ale-as-lager-sales-dive>



4.2.6 Highlights of Asian Beer Market Overview

(Keynote Speech: Institute of Brewers & Distillers Asia Pacific Conference, Vietnam, March 2014)

- Asia Pacific region is full of contrasts: India has a big whiskey consumption, complex tax regime, poor perception of beer and low beer consumption; Vietnam is the opposite with rapid growth in beer consumption; in Australia beer has an equal share to wine & spirits
- Beer in Asia = lager. Craft beer scene is yet to emerge but is forecast to be imminent
- Beer consumption increases with income levels and then levels out. As Asians earn more they “premiumise”. Premiumisation is forecast to drive growth in craft beer.
- Beer profit is highest in Japan, Vietnam and Australia and lowest in China. Australia is described as “exquisitely profitable”
- Large brewers focused on availability of one raw ingredient – barley: a crop grown outside Asia but required in Asia. China is a net importer of barley
- There was no mention of hops – in direct contrast to the American Craft Brewers Conference who focused on hops and hardly mentioned barley
- The Asia Pacific region is complex with issues including: illegal alcohol, legislation, over capacity, competence, diversity, supply chain complexity, sustainability, culture & attitudes

Beer in Asia = lager but as Asians earn more they “premiumise”.
Premiumisation is forecast to drive the growth in craft beer

4.3 What does our Consumer, the Beer Drinker want?

4.3.1 Recent Beer History - Lager

The beer market used to be about beers produced locally with lots of flavour. And then in the mid 1970s, in response to calls for a diet beer, a new style of premium lite beer was introduced by American brewers. It was a derivation of the German Lager style. Miller Lite launched in 1975, Coors Light in 1979 and Budweiser Light in 1981. It was a lighter beer with less flavour and it grew to be produced on an industrial scale. It has driven a lot of the global consolidation in brewing that we have seen in the last 20 years. Industrial lager is about big brands, huge advertising and sponsorship deals, market dominance, product consistency, lowest cost raw ingredients, low flavour and low hop utilisation.

4.3.2 The Lager Backlash – The Emergence of Craft Beer

Boston Beer Company was one of the first American Craft Brewers. Arguably they started the craft beer revolution in 1985 in their quest to produce an alternative to the pale lagers from the mass-market brewers that dominated America. Jim Koch, the founder believed “if you offered people a better beer they’d be thirsty for it”. He created Samuel Adams Boston Lager. Today this craft brewery employs over 12,000 people, produces 50 different beer styles and their beers are available in over 50 different countries. They are focussed on making “the best beer possible”.

Boston Beer Company 1985: “If you offered people a better beer they’d be thirsty for it”



Left back, clockwise: Ali, Richard, Paddy, Serena on a pre-Nuffield visit to Boston Beer Company.

4.3.3 Who is today's beer drinker and what are their preferences?

On my Nuffield journey I have learned from brewers, industry professionals and drinkers that today's beer drinker is more discerning, is experimental, considers flavour to be very important, cares about quality and is concerned about provenance.

It wasn't until a session in the American Hop Growers Congress, USA in January 2014, that I had really heard this concept encapsulated properly, and ironically it was from a mass-market brewer.

David Ryder, VP Brewing, Research & Innovation at Miller Coors spoke about their preoccupation with declining pale lager sales. SAB Miller is the no 2 brewing company in the world so I was confident that the research he was presenting would be robust. The research had focussed on 800,000 consumers, over 10 years, in 3 countries – USA, UK and Australia. The project determined two types of consumer who “might as well be from different planets” but helps explain the boom in craft beer (and brands like Apple's iphone, ipad) during the worst recession in modern times.

Today's consumer falls into one of two categories:

1. Planet Traditional:

- 52% of the consumer population
- Rely on price, features and status to spend
- Cut discretionary spend drastically during the recession
- Now a deal needs to be extraordinary to open their wallets

2. New Economic Order (NEO's):

- Smaller group responsible for 77% of all spend and 93% of biggest spend and almost all profit that businesses make
- Price is a factor but more important is the connection they feel with the product they are purchasing



- Design, authenticity, discovery, originality, newness and provenance are key to the purchase decision
- As the economy crashed they also cut back but spent more on products they “truly connected” with

This research resonates with some of the statements at the American Craft Brewers Conference Keynote address in Denver, USA in March 2014:

- “The urge to brew is the urge to be local”
- “It’s more than just a trend, it’s a cultural shift”
- “It’s about the localisation of beer”

Design, authenticity, discovery, originality, newness & provenance are key to the craft beer and most profitable purchase decisions

4.3.4 What are the UK Nuances?

These trends are all being copied here. We have a point of uniqueness in our beer delivery system, although that is changing too. British beer is synonymous with cask ale. Cask ale is fresh, natural, unpasteurised, contains live yeast, is fermented twice once at the brewery and then in the pub, is not fizzy, is served at 11-13°C and must be sold within 72 hours once opened. It requires knowledgeable management.

In the USA beer is served from kegs, put simply kegs last longer (up to 6 weeks), the beer is colder and fizzier. Keg beer is filtered, has no live yeast, is brewery conditioned, pasteurised and served at 6-8°C. It is associated with cheap lager. But Keg is used for most US craft beers and keg craft beer is becoming more popular here especially in London where small, hot cellars and high staff turnover make cask beer much more expensive to manage.

British pubs have been in significant decline in recent years although that is now slowing. Off-trade (retail sales) of UK beer stand at 48%. The growth category is Premium Bottled Ales (PBA’s), the category is up by 9.8% YOY and for some regional breweries by as much as 20% YOY¹⁰. 6 in 10 drinkers consume straight from the fridge. They are buying from supermarkets, in particular through top up Convenience and Online retail¹⁰ as seen in Appendix 5.

Brewers achieving 20% growth in Premium Bottled Ales (PBA’s) from Convenience and Online retail¹⁰

4.3.5 Beer Fashion Trends

So craft beer is king, but what about beer styles? The most prominent fashion today is for “American” IPA. For the uninitiated, India Pale Ale was first brewed in Britain in the 19th century to be sent to the troops in India. Hops help to preserve beer so making it highly hopped meant it would travel.

¹⁰Marstons Premium Bottled Ale Report 2013: http://www.marstons.co.uk/docs/Premium_Bottled_Ale_Report_2013.pdf.



The acronym has been re-branded by American craft brewers. They have taken the term and made it their own, and it now describes a vast range of highly hopped, higher alcohol, high bitterness and very high flavour pale/golden ales. And the most fashionable IPA's today "are brewed to smack you in the face with a citrus fist and then be wonderfully drinkable"¹¹.

And, herein lies one of the dilemmas for British Hops in recent years. High intensity, single hop, citrus aromas tend to be found in American and New Zealand Hops, so British brewers have increased their imports of hops and British Hops have fallen out of fashion. As Rupert Ponsonby, joint founder of the UK's Beer Academy, says "New Zealand Hops are over-sexed, over-priced and over here".

The latest trend coming from the USA is much better news for British Hops. It's all about drinkable, "session" beers. British Hops delicate and complex aromas are particularly well-suited to producing session beers. The trend was repeatedly discussed at the 2014 Craft Brewers Conference in Denver, Colorado, USA. American craft brewers want to broaden their range and include beers that are easier to drink in their range. And I understand that American brewers are now briefing their hop breeders for hops containing lower Myrcene that will deliver a more sessionable beer (see 4.4.3).

The latest trend coming from the USA all about lower Myrcene hops and session beers. British Hops delicate and complex aromas are particularly well-suited to producing session beers.

4.4 Defining the Brand & USP (unique selling points)

4.4.1 Key Findings New Zealand Hops: The Brand & USP's

In New Zealand I was lucky enough to be looked after by Julian Raine, a fellow hop and apple grower, as well as the Chairman of Nuffield in New Zealand. Julian, together with Doug Donelan, CEO of New Zealand Hops, introduced me to the key hop growers, agronomists and Dr Ron Beatson responsible for hop breeding at Plant & Food Research in New Zealand. A summary of my overall findings is in Appendix 6.

In terms of the marketing and export of the New Zealand Hop USPs and brand, the key observations were as follows:

- All 17 New Zealand hop growers are in one grower-owned co-operative, New Zealand Hops, with no other hop growers sitting outside the group
- Unlike in the UK, the processing facilities to pellet hops and extract oils sit in the grower-owned co-operative. In the UK these facilities sit in separate privately owned hop merchants
- Responsibility for all sales and marketing is taken by the cooperative who employs a team to carry out Marketing, Sales, Processing, Logistics and Distribution
- The growers and New Zealand Hops team take great pride in what they do and the quality of the hop crop they produce on 378 hectares, they have a clear marketing & sales strategy that every grower endorses
- They focus on the craft beer segment

¹¹Mark Dredge: <http://www.pencilandspoon.com/2009/09/what-hell-is-ipa.html>



- The marketing is excellent, from the brand logo, signage on farm, at their storage/pelleting facility, to branded merchandise for customers, trade show materials and their website. I understand the website is due to be updated with the new logo and brand colours shortly



Top & Bottom Left: New Zealand Hops signage complementing on-farm signage;
Bottom Right: signage waiting at the warehouse to go out to other farms.

- Key marketing messages to brewers include: the “pristine environment” in New Zealand and excellent plant health controls: “no diseases with spray free pest control”
- They use their history: “150 years of continuous supply”
- They use the brand values often associated with New Zealand: “pure & “wholesome”
- Hop names are often based on the local geography/region reinforcing the NZ brand values
- Even coal-fired kilns to dry hops as are marketed as: “hot water radiators are the source of heat, thereby ensuring the hops stay free from any contamination by exhaust gases”



Above: The home page of the New Zealand Hops website



Above left: Dr Ron Beatson hop breeder with Doug Donelan CEO New Zealand Hops.
Right: Richard Capper, my husband with Colin Oldham, owner of New Hoplands Farm

- There is close collaboration between their CEO Doug Donelan, responsible for Marketing & Sales with their hop breeder, Dr Ron Beatson – they meet weekly during the growing season
- The vision for their hop breeding is simple: “Hops with a difference”
- They have had notable success with Nelson Sauvin, a high intense aroma hop, so sought after by brewers that it is the only sample that has been stolen at a trade show in the last three years. It has created a lot of hype
- The growers have an excellent intranet to ensure smooth lines of two-way communication
- They are careful to control the supply of hop volumes at a slightly lower rate than forecast demand and as a consequence achieve premium prices of as much as £15+/kg versus much lower average prices in Europe
- Farms are experimental and grow a high number of varieties on a low acreage including overseas varieties, which due to the different climate may have much lower yields. But if they are in demand, they will grow them for the right price.



Liberty & Chinook from the USA, Argen from France, Green Bullet from New Zealand, Wye Challenger & Goldings from the UK all being grown in small plots on one farm in New Zealand.



In summary, New Zealand Hops have earned an enviable reputation on the world stage through:

- Clever, clear marketing that emphasises New Zealand's brand values – pure & wholesome
- Consistent stand out branding on farm and at trade shows
- Collaboration of all growers to present one consistent strategy to their customers
- Excellent emphasis on hops with a difference to appeal to craft brewers worldwide
- Nelson Sauvin: the sexy hop from New Zealand that has helped to build the brand and create desire for all New Zealand Hops

4.4.2 Key Findings USA, Canada & Europe: The Brand & USP's

During my various visits to the USA, I have met, got to know and become friends with many of the characters of the industry. Their insights, discussions, observations and help have been invaluable.

- The marketing of individual hop variety and farming family brands are often as important as the brand values of the country in which they are grown
- Good examples include:
 - Amarillo® Hop, grown by the Gamache family, Virgil Gamache Farms Inc, is trademarked and the farm has its own Facebook page to promote the variety, <https://www.facebook.com/pages/Virgil-Gamache-Farms-Inc/659189977429954?sk=timeline>
 - Citra™ is a special aroma hop variety developed by the Hop Breeding Company (a joint venture between John I. Haas, Inc. and Select Botanicals Group, LLC). It was



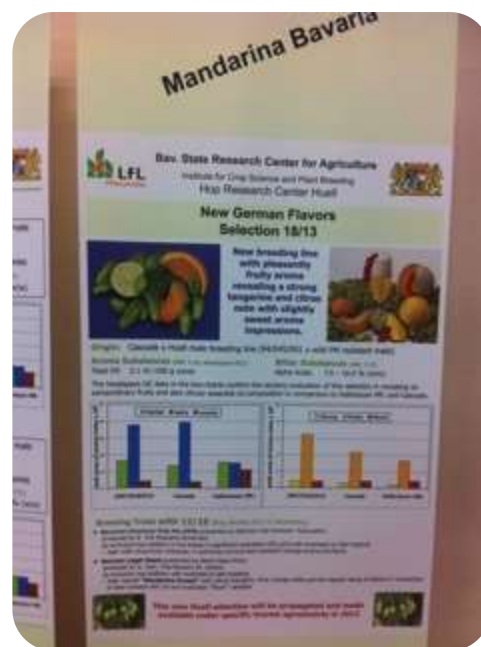
released in 2007. The variety imparts interesting citrus and tropical fruit characters to beer

- Cascade is an aroma hop that was developed by the U.S.D.A. breeding program in Oregon and released in 1972. It's an older variety rejuvenated by the trend for American IPA's. The aroma is of medium strength and provides a unique floral/spicy character with well-balanced bittering potential. It is the most popular hop within the U.S. craft brewing industry. Interestingly when it was first assessed it was said to have the characteristics of an English hop and for that reason it was desirable
- Belma™ Hop which has its own Facebook page: <https://www.facebook.com/belma.hop> and is described by Dr T Shellhammer as imparting aromas of: very orange, slight grapefruit, tropical pineapple, strawberry, and melon aroma
- Mandarina Bavaria is Germany's answer to brewers looking for fruity flavor notes. It has been given significant marketing support, see P.22
- Many farms have Facebook pages, including: Loftus Ranches, Yakima; Hop Head Farms, Michigan; Big Head Hops, Ontario. European hop farmers have been slower to adopt social media



Belma Hop from Puterbaugh Farms has it's own Facebook page

- The USA and Germany farm a similar acreage of hops. The USA has around 100 hop growers; Germany has almost 1,000
- US hop farmers, merchants and traders are much more engaged with their brewing customers, perhaps because the craft brewing revolution is happening in their backyard
- US growers now respond very quickly to the changing demands of their customers, removing less popular varieties and replanting with newer, sought-after hop varieties
- The US Hop Quality Group is driving improvements at farm level, ensuring hops are treated as a food product by everyone in the supply chain. One change is that all hop separating machines in the USA are now enclosed and protected from birds entering the buildings
- All have a strong presence at: Brau Bevale, Germany & the Craft Brewers Conference, USA



The German hop, Mandarina Bavaria launched (above) to US Craft brewers at the CBC using national costumes



2011	2012	2013
Cascade	Cascade	Cascade
Centennial	Centennial	Centennial
Chinook	Chinook	Chinook
Amarillo	Willamette	CTZ
Willamette	Simcoe	Simcoe
CTZ	CTZ	Amarillo
Crystal	US Golding	Crystal
Simcoe	Crystal	Willamette
US Golding	Amarillo	Sazer (CZ)
Ahtanum	Ahtanum	US Golding



Above left: Top ten American hop varieties for Craft Brewers; above right: grubbing hops in Yakima, Washington State, USA



Hops treated as a food grade product. Above left & right: signage on farm includes Hop Quality Group (a brewer initiative)



Hop separating machine at Leslie Roy Farms now fully enclosed to prevent birds entering the area



Hop growing countries and merchants (above) at the American Craft Brewers Conference, Denver 2014



Hop and raw ingredient wholesalers (above) at the American Craft Brewers Conference, Denver 2014



4.4.3 Key Findings: Researching and Refining The British Hops Brand & USPs

In 2012 the USPs of British Hops were:

- Delicate & complex aromas
- “High note” varieties: Admiral, Target, Bramling Cross
- World leading hop breeding programme

This section closes the circle from the beginning of my Nuffield journey to its end. I started by wanting to go to New Zealand to immerse myself in New Zealand Hops and there I realised we needed to be much clearer about the unique selling points of British Hops.

The multiple visits to American trade shows and conferences have given me an excellent perspective on the export success of hops from the USA and from other world producers; and my time with international hop growers in France and Belgium provided other vantage points. The hop merchants based in the UK have provided additional observations, especially Paul Corbett at Charles Faram Ltd who has been very supportive of my quest to improve the perception, brand image and export potential for British Hops.

One of my last trips was to Vietnam. This was my “wild card” trip. Six months into my Nuffield Farming Scholarship, I sat at home questioning my approach. I had started out thinking that I would visit the countries that did a great job at hop exports and bring home learnings for the industry. There was just one problem – this approach would not include a visit to anywhere in Asia because although hops are grown in Asia, they are not exported. A focus on export demanded a trip to Asia, especially as India and Vietnam are top of the markets to watch, as discussed in 4.2.1 The Beer Category: Key Statistics.

In May 2013, I realised that the Institute Of Brewers & Distillers (IBD) were promoting their 2014 Asia Pacific Technical Conference and calling for speakers. I’m not sure why I felt I had to achieve a speaker slot to justify going there, but that was the deal I did with myself – if I was asked to speak I would have to go. After all a Nuffield Farming Scholarship is about taking yourself outside your comfort zone. I asked Dr Peter Darby, our British hop breeder if he would co-author a technical paper with me, entitled: “What makes British Hops Unique?” and in September 2013 my speaker slot was confirmed: http://www.ibdasiapac.com.au/img//misc/Program_Overview_V3.pdf, so I had to go.

Vietnam was my “wild card” trip. The Asia Pacific Brewers Technical Conference - if I was asked to speak I would have to go. To present a technical paper: “What makes British Hops Unique?”

In the Publicity work that I had created for British Hops from September 2012 (see case study in Appendix 2), including a new brand, website and media strategy; we had started to describe British Hops as having delicate and complex aromas. I wanted to underpin this with some scientific evidence and better explanation, which is what Dr Peter Darby and I set out to do in the paper for the conference, “What makes British Hops Unique in the World of Hop Growing?”¹²

¹² <http://www.britishhops.org.uk/wp-content/uploads/2014/06/Asia-Pacific-Final-Paper.pdf>



When I first started to explore the USPs of British hops, in the summer of 2012 it was clear was that the hop aromas were, in the main, more delicate and traditional than some of the new world aromas that were exciting the brewers. What was also true was that British Hops were often more complex than their competitors. And the UK also had an enviable reputation for brewing excellent beer.

I wanted to use the chance to speak at the IBDs Asia Pacific Technical Conference to achieve a number of things:

- To put some scientific validation behind our claims and explain them in terms that brewers would understand
- To use “terroir”¹³ (soil & climate) in the same way that wine growers use it to differentiate British hop varieties from their global competitors
- To bust the myths about seeded hops
- To demonstrate the world leading position of the British Hops breeding programme
- To highlight the contribution that British hop varieties have made to world hop breeding



Above: Alison Capper (right) waiting to speak at the IBD Asia Pacific Conference with Dr Thomas Shellhammer on her right.

I must offer huge thanks to Dr Peter Darby, our British hop breeder, based at Wye Hops in Kent for his patience, support, assistance and editing. The process has helped me to refine the British hops proposition as follows:

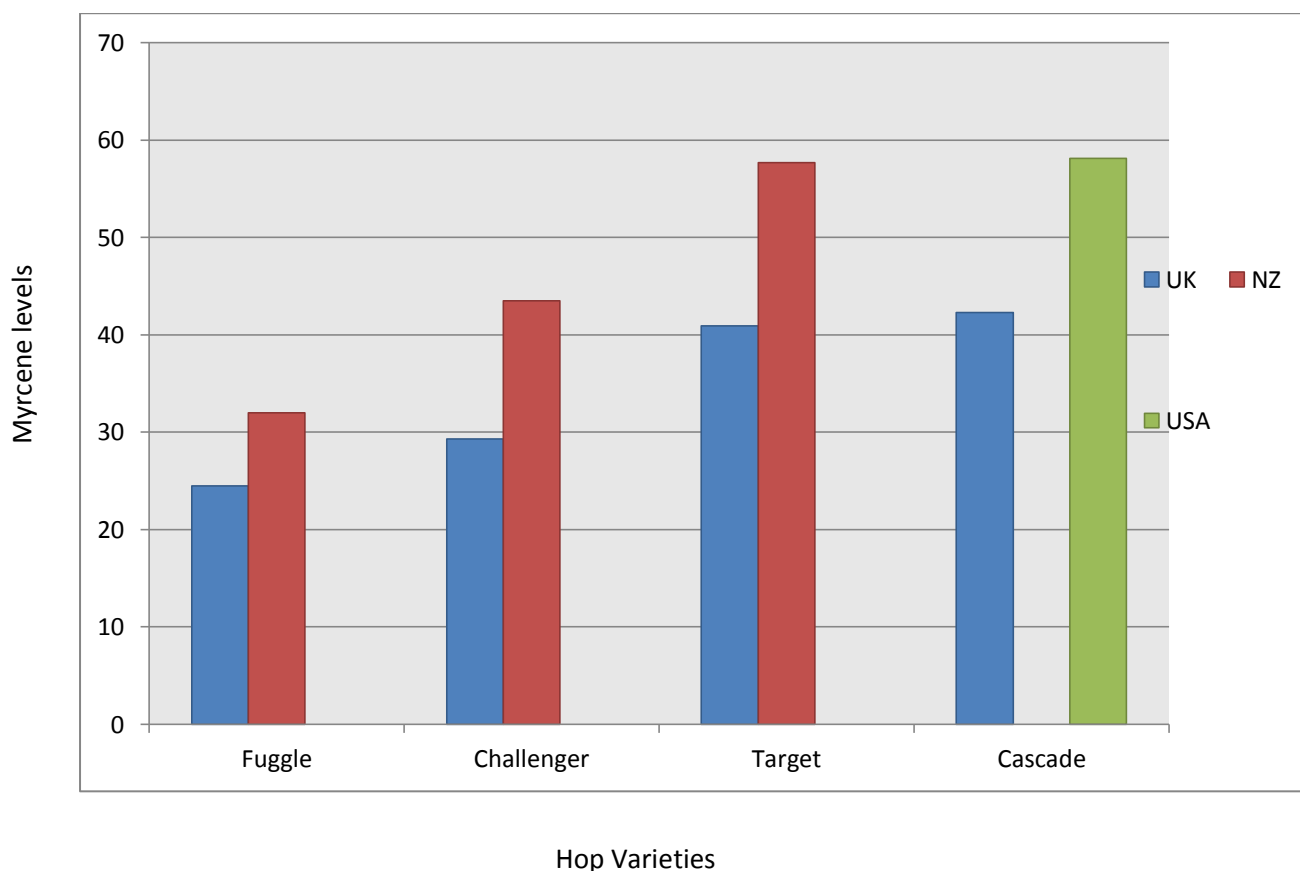
“The unique British “terroir”¹³ makes British hop aromas unique and gives them stand out in terms of world hop growing. We have sought analysis from the USA and New Zealand for British hop varieties to see how they differ when grown in different parts of the world: Fuggle, Challenger and Target. And we have also compared data for Cascade, an American hop now also grown in the UK. This indicates that the hop variety is less well adapted to it’s new growing region.

¹³Terroir: The factors that affect the “terroir” are the soil, geography, geology, topography and climate. The term is derived from the French “terre” meaning “land” and the concept of terroir has come from the French wine industry.



Within the hop oils analysis it can be seen that Myrcene is significantly lower in the UK across all the varieties regardless of where they were bred (see table below). We believe this directly relates to the British “cloudy maritime” climate. Myrcene in itself is not a main contributor to the aroma that the hop flower delivers, but it is an indicator of the monoterpene content. With less Myrcene there is more room for other hop oil characteristics to come through into the hop aromas. As a consequence British Hops tend to have a more delicate, complex aroma with significantly higher oil content when grown in their country of breeding origin, the UK.

These delicate but complex aromas that are typical of British Hops produce delicate and complex flavours for the brewer in the beer. British Hops tend to produce drinkable session beers. The styles most closely attributed to British Hop flavours are Pale Ale, India Pale Ale, Porter and Stout.”



In developing this thinking and the evidence base I was reminded of a talk we were given at the Nuffield Contemporary Scholars Conference (CSC) in March 2013 by the late Howard Staff from Ontario Wines about the uniqueness of ice wine from Ontario. Their USP was also their “terroir”. Howard said something else that resonated - pinot noir is 5% of their production but 30% of the “noise”. In other words a making a variety sexy, especially linked to “terroir” will create hype.

Thanks to our breeding programmes based in Kent and Herefordshire, British Hops now have some great “sexy” varieties: Endeavour, Jester, Archer, Minstrel, Olicana – all have been creating a lot of “noise” in the last year.

One final aspect of the British Hops brand that we often overlook is our Britishness, our culture, our landscape and heritage. A famous American craft brewer made it very clear last year when he advised British Hop growers: “you must mine your heritage and sell those landscapes – no one else



in the world has anything like it". Having travelled around the world looking at hop farming, I would agree.

4.4.4 Creative Marketing of the British Hops brand and USPs

We must market smarter and harder than ever before. Historically brewers had long training in college and on the job. They knew their hops and they understood the science. Today's international craft brewers have not necessarily taken the traditional path of a brewing science degree. Many know a lot about hops, but many don't. They know and understand only those that they have had access to but if they are brewing in the USA, Asia or parts of Europe they may have found it difficult to access British Hops. We must remember to:

- Educate
- Inform
- Create need
- Arouse need
- Satisfy the need
- Make it sexy
- Mine our history



4.4.5 Other Key Findings from around the World

Crop Protection: Crop protection products are used as an export trade barrier with the UK having by far the shortest list of available actives to use compared to the USA and other parts of Europe. I have been involved at an industry level (NFU) in trying to support my colleagues at the British Hop Association in trying to overcome some of the inequities in crop protection politics. Our goal is to ensure that British Hop growers have the same actives available to them as hop growers in Germany and the USA. It is a complex area and one which will take time and, no doubt political support, to crack.

Paper String: Hop growing systems all over the world are based on the tall system of post and wirework. There are slight differences in each country compared to here but on balance it would seem that the UK system of continual stringing from peg to hook is the most efficient and cost effective. In the UK we use a coir based biodegradable string. Stacey Puterbaugh introduced me to a string based on paper which we are now trialling on the farm to see if it can withstand our wetter growing conditions as this would be more sustainable. (The 2014 trial was a success; however we will need a wetter growing season to be confident, so the trial continues).



Above: paper hop string used in the Yakima valley, USA

Irrigation – Sustainability: Finally the heightened focus on the sustainable use of natural resources that has come about with the climate change debate, made me realise that the UK is one of the most suitable places in the world to grow hops as very little of our crop is irrigated. New Zealand uses overhead irrigation methods throughout the growing season and Yakima in the USA is irrigated from the Cascade mountain snowpack.



4.5 Considerations for the British Hop Industry

4.5.1 Export – Target Countries

Based on the examination of the key market data and statistics we should focus on:

- The USA and Canada
- South America
- Europe
- Australasia
- Asia (especially Vietnam)

4.5.2 Export – Marketing the Brand and USPs

Clear communication of the unique selling points of the British Hop brand that give it a standout from hop varieties grown in other parts of the world:

- The unique terroir gives British Hops lower Myrcene than any other world hops
- Lower Myrcene results in delicate and complex hop aromas
- British Hops are the most suitable for brewing drinkable, sessionable beers
- High intensity aroma notes to be found in Admiral, Bramling Cross, UK Cascade, Target and a significant number of new trial varieties: Endeavour, Jester, Archer, Minstrel, Olicana
- The unique climate, with almost no irrigation of the hops crop makes British Hops the most sustainably grown hops in the world
- The most well respected and productive hop breeding programme in the world which has been the basis of much of world hop breeding
- Over 500 years history of hops growing in the UK for brewing
- The UK provides some of the most picturesque and historic hop growing areas in the world with wonderful landscapes and historic (often listed) architecture
- “Mine” our British heritage, history and landscapes

4.5.3 Export - Grower Collaboration

Growers already work well together to drive hop breeding and growing system strategy for the industry, lobby on crop protection issues and to support a publicity strategy and programme.

British Hop growers would benefit from working more closely together to:

- Define and drive marketing and promotional strategies for the British Hops brand and individual British Hop varieties
- Engage with worldwide craft brewing customers as an entity rather than as individuals at trade shows, exhibitions and global industry events. This can be alongside a Hop Merchant or in support of Hop Merchants.
- Disseminate the British Hops brand values through the industry, right back to farm level through quality assurance, consistent communication and signage
- Define and drive sales strategies rather than leave this in the hands of independent intermediaries. As a niche player (1.5% of world hop production), British Hops have a unique opportunity to choose to sell to the highest value market segments worldwide – small and medium size craft brewers
- Identify business cost efficiencies and infrastructure reinvestment opportunities
- Grow profitability and in the next 2-3 years strategically increase profitable hop production



The New Zealand model of one grower owned co-operative presents some legal complexities due to EU and UK competition laws that do not exist in New Zealand. Outside of this Nuffield Farming Scholarship, I have started to investigate how British Hop growers might overcome current legislative limitations. I will report on this to the industry at some point in the near future.

4.5.4 Export - Processing, Logistics & Distribution

To export successfully, the processing has to be of the highest quality, and the logistics and distribution must exceed customer's expectations. For a number of years these three areas have mostly sat outside the control of growers and in the hands of independent hop merchant businesses, or the processing at least has been contracted to them. On the whole this works well and is cost efficient. There have been some issues with quality, traceability, customer service and satisfaction.

In the last 12 months there have been some significant changes with UK Merchants reinvesting in the processing and logistics aspects of their businesses. We must wait to see if these changes deliver the quality that the British Hops brand needs to succeed in the high value export market segment.

British Hops do need much better cold store facilities at the hop merchants to ensure the quality of the crop beyond the farm gate. As our climate warms and our craft brewer customers demand the highest quality, we must influence Hop Merchants to make the necessary cold storage investment.

4.5.5 Import Substitution – Key Messages for British Brewers

British Hops have begun a fight-back in the UK to ensure that British Brewers consider and brew with British Hops and this is having some success, most notably the recent announcement by Wetherspoons to make British Hopped Beer the theme for their Autumn Beer Festival.

The British Hops brand needs a marketing plan that provides continual drip feed communication out to brewers. We also need to ensure that British beer drinkers understand the raw ingredients in their beer and are actively seeking beer containing British Hops. This is starting to be addressed through the use of the “Brewed with British Hops” logo. There is a lot more work that needs to be done.

In addition hop varieties should be listed on beer bottle labels with the key aroma notes they deliver. This will help educate beer drinkers as to the hop varieties that are delivering the flavour notes they prefer. So if you are a brewer reading this, please consider using the logo and listing hop names on your beer pump clips and labels.



4.5.6 Funding

Critical to the success of the future growth of British Hops is funding. For the marketing campaigns required to create the brewing customer and beer drinker “pull”, British Hop growers need to seek creative funding from industry, government and EU sources.



Cider Apples

5.1 The British Cider Apple Industry in the Global Context

I did not really intend to cover cider in any depth when I embarked on my travels, instead focusing on dessert apple and hop production. I did not spend time seeking out cider apple farms or cider makers. Neil McDonald (2014 Nuffield Scholar reporting in 2015) will hopefully fill this gap with his report. However, in researching the beer market and immersing myself in the trends in craft brewing and new craft developments, I have learned there are a lot of parallels for cider apple growers and huge opportunities. But to exploit the craft cider opportunities will require a new way of thinking about British cider apples, as special world-niche apples rather than as commodity apples.

To exploit the craft cider opportunities will require a new way of thinking about British cider apples as special world-niche apples rather than as commodity apples.

5.1.1 Growing Cider Apples (This is for non-cider apple growers to explain the basics)

- We grow 17 hectares of Dabinett and Harry Masters
- Cider trees are planted today, on average at about 750 trees to the hectare, with trees planted 2.4m apart and row widths of approximately 5.8m. These are called Bush Orchards
- Cider apple blossom tends to be 2-3 weeks later than dessert apple blossom in April/May
- A 10-14 day spray programme is used by most growers during the growing season to nourish, protect and overcome various disease issues such as scab, mildew, fireblight; and pest issues such as blossom weevil, aphids, spider, rust mites and apple sawfly
- The large cider makers issue delivery permits in August based on crop forecasts from growers. The permits are timed to ensure that the cider makers can press at optimum capacity throughout the harvest
- Harvesting peak is mid October to mid November
- Cider apples are shaken from the tree mechanically, blown into rows and swept up by a harvester into trailers
- Cider apples have to be cleaned in wet or muddy conditions prior to delivery using various methods to clean off foreign material to avoid deductions or rejections
- Most cider apples are delivered to the large cider makers in 28 tonne loads on a 2 hour delivery permit
- The winter months are spent pruning trees, often by hand, to create the optimum shape to get the maximum light into the tree and to manage old wood and encourage new growth
- Mechanised pruning methods are also used where possible to reduce manual pruning



Above left: after shaking trees, cider apples are blown/swept into rows. Above right: cider harvester sweeping up cider apples from the ground



Above left: cider apples being harvested from the ground. Above right: the cider apples on the pad waiting to be loaded onto lorries for delivery to the mill.

5.1.2 British Cider Apples - Commercial Context

- Cider apple hectareage has grown from 6,271 ha in 2007 to 7,178 in 2012²³
- 25 or 30 year contracts are usually offered to growers by the larger cider makers
- 15 years ago the profitability models used by cider makers to persuade growers to plant cider apple orchards did not take into account inflation
- Prices with the two largest makers are negotiated on behalf of growers by one of two growers' associations: Heineken/Bulmers: Herefordshire Cider Growers Association; and C&C/Magners: Norton Cider Growers Association
- These prices are used as the market benchmark for negotiating with non-contract growers
- The large cider makers control the majority of the cider apple pressing facilities in the UK
- It is estimated that about 90% of British cider apples are grown on contract
- There is no known export of cider apple juice of any consequence by growers
- A cider Bush Orchard costs around £6,500/hectare to establish (ground preparation, drainage, trees, stakes, ties, rabbit guards, planting, fencing, gates, windbreaks, etc)

²³ DEFRA: Basic Horticultural Statistics 2013



- A cider apple orchard will not come into full production until year 8. Payback will not be achieved until year 15-20 at least. One visitor from abroad suggested that British cider apple farmers must have “very benevolent bankers”
- The price offered for cider apples in 2014 by the largest cider maker is £114/tonne. From this price the grower must fund their original investment in the orchard establishment, year 1-7 yield shortfall, overheads, annual growing costs, fruit cleaning and transport to the cider mill. Today’s price/tonne for cider apples is a long way short of breakeven and even further from sustainable profitability for cider apple growers
- No costs are passed back to the grower from the cider mill
- The last three growing years (2011, 2012 & 2013) have been difficult for UK growers due to adverse weather conditions: late frosts, extremely wet weather (summer 2012 & winter 2013) and the late start to the season of 2013. All have resulted in reduced yields which many are starting to suggest may need to be forecast into future yield models
- Recent new variety development work has been driven by the cider makers desire for earlier varieties. This work has not produced consistently high yielding, agronomically-sound early varieties
- Little or no industry-wide work has been done to develop modern, high intensive growing systems to increase yield/ha and that would allow improved and more cost efficient mechanisation. There has been some good development work undertaken in this area privately by Thatchers Cider

Today’s price/tonne for cider apples is a long way short of breakeven and even further from sustainable profitability for cider apple growers

5.1.3 Cider Apples – Global Historical Context

Apple trees in the UK pre-date the Romans who then organised their cultivation. It’s likely that wandering people introduced “shekar” (Hebrew for strong drink), from Northern France and Spain to the UK. Cider became an established alternative to wine in England after the Norman Conquest in 1066 and by 1300 there were references to cider production in many southern and western English counties. Cider was produced in substantial quantities on UK farms and often used to pay farm workers. In fact farm labourers were said to select their employer according to the quality of the cider on offer. The use of cider as payment was prohibited in the late nineteenth century.

As British explorers settled around the world, cider production went with them. And so did cider apple tree saplings. But the different “terroir”¹³ did not always suit British varieties. Trees were mostly multiplied using cuttings and seeds and so new varieties were created. In America apples were bred that would cook well in sweet and savoury dishes and also had enough juice to ferment into alcohol, so cider was being produced from culinary apples. In America immigration from Central and Eastern Europe saw cider replaced by lager and with the advent of prohibition, cider production collapsed and never recovered.

In most parts of the world today, cider means an alcoholic drink made with culinary or dessert apples except in the UK.

¹³Terroir: The factors that affect the “terroir” are the soil, geography, geology, topography and climate. The term is derived from the French “terre” meaning “land” and the concept of terroir has come from the French wine industry.



British cider apple varieties are special because they are not grown anywhere else in the world in any depth. A cider apple is distinctive from culinary and dessert apples because its flesh is fibrous, making it easier to extract the juice.

The juice from a cider apple is high in tannin, which gives the cider body and colour, and it is high in sugar but low in acidity¹⁴. Cider apples are split into four categories: sweet, bittersweet, bittersharp and sharp¹⁴.

In most parts of the world today, cider means an alcoholic drink made with culinary or dessert apples except in the UK. British cider apple varieties are special because they are not grown anywhere else in the world in any depth. The juice from a cider apple is high in tannin, which gives the cider body and colour, and it is high in sugar but low in acidity¹⁴

5.2 Cider Production in the Global Context

5.2.1 The Global Cider Category

- Worldwide cider production is c. 17 million hectolitres and 50% of consumption is in the UK¹⁵. So if the UK is consuming c. 8.5 mn hl of cider, this equates to 15% of the 42 mn hl³ of beer produced in the UK
- Cider flavour is arguably more diverse than beer: dry to sweet, many flavour variants (citrus, tree fruit, soft fruit, toffee, spice)¹⁵ and has unisex appeal and broad age appeal¹⁵
- “The perception of cider has moved from a low cost, high ABV alcoholic beverage to a fun and vibrant drink with a trendier image than beer”¹⁶. This started with the famous Magners “cider over ice” TV campaign in 2005
- Cider has premiumised in the last 10 years. It is perceived as refreshing¹⁶.
- Emerging markets for cider are: USA & Canada where it is seen as an extension of craft beer; Australia, Finland and South Africa
- In 2012, the top ten cider brands in the USA collectively grew by 62%¹⁷
- In 2013 US cider volume sales grew by 64% and value by 69%, in part due to the entry into cider of brewing giants AB InBev (Stella Artois Cidre & Michelob Ultra Light Cider) and Miller Coors (Crispin Cider) in 2012. Existing distribution channels have propelled growth in cider¹⁸
- Boston Beer Company’s Angry Orchard cider (launched 2012) is 59% of US market in 2014¹⁹
- In the US cider is equal to less than 1% of beer sales¹⁸, so the growth potential is huge

The perception of cider has moved from a low cost, high ABV alcoholic beverage to a fun and vibrant drink with a trendier image than beer.

In 2013 US cider volume sales grew by 64% and value by 69%. In the US cider is equal to less than 1% of beer sales¹⁸ so the growth potential is huge.

¹⁴Cider Apples: http://cideruk.com/cider_making/cider_apples

¹⁵http://www.candcgroupplc.com/__data/assets/pdf_file/0019/19252/Canadean-International-Beer-Strategy-Conference-30-May-2012.pdf

¹⁶<http://www.canadean.com/news/thoughts-on-cider-a-reinvigorated-image-for-cider-in-the-uk/>

¹⁷<http://www.usatoday.com/story/money/business/2014/02/15/hard-cider-comeback/5488087/>

¹⁸<http://www.euromonitor.com/cider-perry-in-the-us/report>

¹⁹<http://www.chicagobusiness.com/article/20140531/ISSUE01/305319937/why-millercoors-doesnt-want-to-miss-this-party>



- The USA cider explosion has just one problem, not enough cider apples: <http://modernfarmer.com/2014/04/americas-hard-cider-boom-one-problem-enough-apples/> and there is a great quote in this article from Jim Allen, the New York Apple Association's executive director: "You've got to remember: the lowest-valued apple is the apple that's crushed up and made into juice; the highest-valued apple is the apple that ends up at Trader Joe's. Nobody's planting apples to do anything but try to put them into that high-value category."

5.2.2 The British Cider Category

- The UK represents c. 50% of all cider consumption¹⁵
- Cider bestsellers²⁰:

Strongbow	Heineken	£279m	11.3% YOY
Koppaberg	Cider of Sweden Ltd	£95.7m	40.7% YOY
Bulmers	Heineken	£93.6m	24.4% YOY
Own label	mostly Aston Manor	£90.2m	1.9% YOY
Stella Cidre	AB InBev	£68.3m	-0.7% YOY
Magners	Magners	£67m	-8.2% YOY
Frosty Jacks	Aston Manor	£52.7m	-0.6% YOY
Rekorderlig	Abro/Chilli Marketing	£30.3%	64% YOY
Scrumpy Jack	Heineken	£23.2m	5.9% YOY
Omega White	Aston Manor	£15.5m	36.5% YOY
- The cider category is dominated by large global brewers. A backlash is being forecast against the dominance of the world's biggest brewers in cider²⁰
- Largest growth in imported flavour ciders from Sweden, appealing to young people "the saccharine generation; who have become used to a sweeter taste profile through drinking more soft drinks and fruit juices" David Scott, Carlsberg Trade Marketing Director²⁰
- Big growth in craft apple ciders from smaller private makers such as Westons, Thatchers, Hogans and many other smaller makers. There are c. 500 cider makers in the UK
- A new export strategy for beer and cider has been launched by the British Beer & Pub Association (BBPA) and the National Association of Cider Makers (NACM) earlier in 2014, <http://www.beerandpub.com/news/new-strategy-for-beer-exports-makes-most-of-world-s-growing-taste-for-british-beer>
- The top 5 export countries for British cider, in 2013, ranked by value were²¹:

Canada	£6.9 million
Irish Republic	£5.5 million
USA	£5.3 million
Australia	£1.9 million
France	£1.8 million
- Cider suits a hot climate – Asia is not being overlooked by companies such as Westons Cider.

The cider category is dominated by large global brewers. A backlash is being forecast against the dominance of the world's biggest brewers in cider²⁰

Big growth in craft apple ciders from smaller private makers such as Westons, Thatchers, Hogans and many other smaller makers. There are c. 500 cider makers in the UK

²⁰The Grocer, 28th June 2014, data provided by IRI

²¹www.statista.com



5.2.3 Cider Apple Usage in British-made Cider

- In 2010 HM Revenue and Customs decreed that to be called cider a drink must contain at least 35% apple or pear juice and must have a pre-fermentation gravity of at least 1033 degrees. The legislation was introduced to prevent cheap high alcohol content drinks taking advantage of the lower duty rates applied to cider
- In contrast the Campaign for Real Ale (CAMRA) defines “real cider” as containing at least 90% fresh apple juice with no added flavourings or colourings, and prohibits apple/pear concentrate
- Large Cider makers are quite coy about what %age of their cider is made from freshly pressed cider apples, rather than concentrate. Dessert fruit concentrate is a global commodity - big producers are China and Poland. Broadly speaking big cider brands use more concentrate than small brands
- Most craft cider makers take pride in their high cider apple juice content and often promote the specific varieties or blends of varieties within the brand

Large Cider makers are quite coy about what % of their cider is made from freshly pressed cider apples, rather than concentrate.
Dessert fruit apple concentrate is a global commodity - big producers are China and Poland.
Big cider brands use more concentrate than small brands

5.2.4 Craft Cider – Brewers and Craft Cider Brands

The trend for craft cider is in huge growth, especially in the USA:

- “The fastest growing alcoholic beverage category? It’s not craft beer”: <http://time.com/82620/fastest-growing-alcoholic-beverage-category-its-not-craft-beer/>
- “Is cider the next frontier for craft alcohol?”: <http://americancraftbeer.com/item/is-cider-the-next-frontier-for-craft-alcohol.html>
- Vermont Hard Cider CEO Bret Williams says: “It’s all about education,” he said. “Cider is, in a lot of ways, where craft beer was 20 years ago. It has to evolve over time and there is no magic bullet”: <http://www.brewbound.com/news/2013/craft-cider-gaining-momentum>
- Cider has a huge growth potential around the world as it arguably has a broader appeal than craft beer
- Brewers around the world, large and small, are buying into or creating cider brands to compliment their beer range

“The fastest growing alcoholic beverage category? It’s not craft beer”

“Is cider the next frontier for craft alcohol?”





FIRST BREWED	2007
STYLE	Cider
ALC/VOL	4.8%

CIDERS

HARPOON CRAFT CIDER

YEAR ROUND

We first started making a pure and natural cider for the same reason that we started brewing: we loved the idea of cider but could not find one that we really liked drinking. The end result is a unique craft cider with no artificial colors, flavors, or any preservatives. Just local apples and our proprietary ale yeast. It's great for cooking with and to drink while cooking too.

Description

Harpoon Craft Cider is crafted from only one ingredient: freshly pressed apples. No flavoring, no preservatives. We ferment it with our ale yeast, yielding a clean but refreshing all natural cider.

Harpoon Craft Cider is also naturally gluten-free. Its gluten content has been independently measured at less than 20 parts per million, meeting the FDA's proposed threshold for gluten-free.

Tasting Notes

- ◆ **Appearance:** straw-golden and lightly effervescent. Perfectly clear.
- ◆ **Aroma:** Fresh apples and apple skins. Light hints of alcohol and fruity esters.

 Like 28

 FIND BEER

Thirsty for Harpoon Craft Cider? Find it here.

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Above: Harpoon Brewery (since 1986), Boston USA launches Harpoon cider



Above: Angry Orchard Cider (59% US market), owned by but not branded by Boston Beer Company.



Townshends Craft Brewery, Moutere, New Zealand offer two cider brands



Above: McCashins Brewery, Nelson, New Zealand offering Stoke Beer and Rochdale Cider



Above: The Sprig & Fern Brewery, Nelson, New Zealand offer Crisp Apple & Berry Ciders



PECKHAM'S CIDER

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Our Orchard

It all begins with the fruit.

As with wine, good cider begins with excellent fruit. Names like Kingston Black, Broxwood Foxwhelp, Tremlett's Bitter and Chisel Jersey allude to the rich history of heritage cider apples, cultivated over many years specifically to produce elegant, full bodied, balanced ciders.

Cider apples are rare in New Zealand, and quantities available for cider making are extremely limited.

Since 2007 we have developed NZ's largest cider orchard in the heart of the Moutere Valley, with some 6,000 cider apple trees, and 1,000 pear trees. The orchard is a balanced mix of sharp, bittersharp, sweet and bittersweet cider apples.

As true perry pears are unavailable in New Zealand, we use dessert varieties to make our Perry. Elderflower grows wild in the verges of the pear orchard, providing flowers to make a limited release summer cider with elderflower.



Above: Peckhams Cider, Moutere, New Zealand who recognise how rare cider apples are in New Zealand

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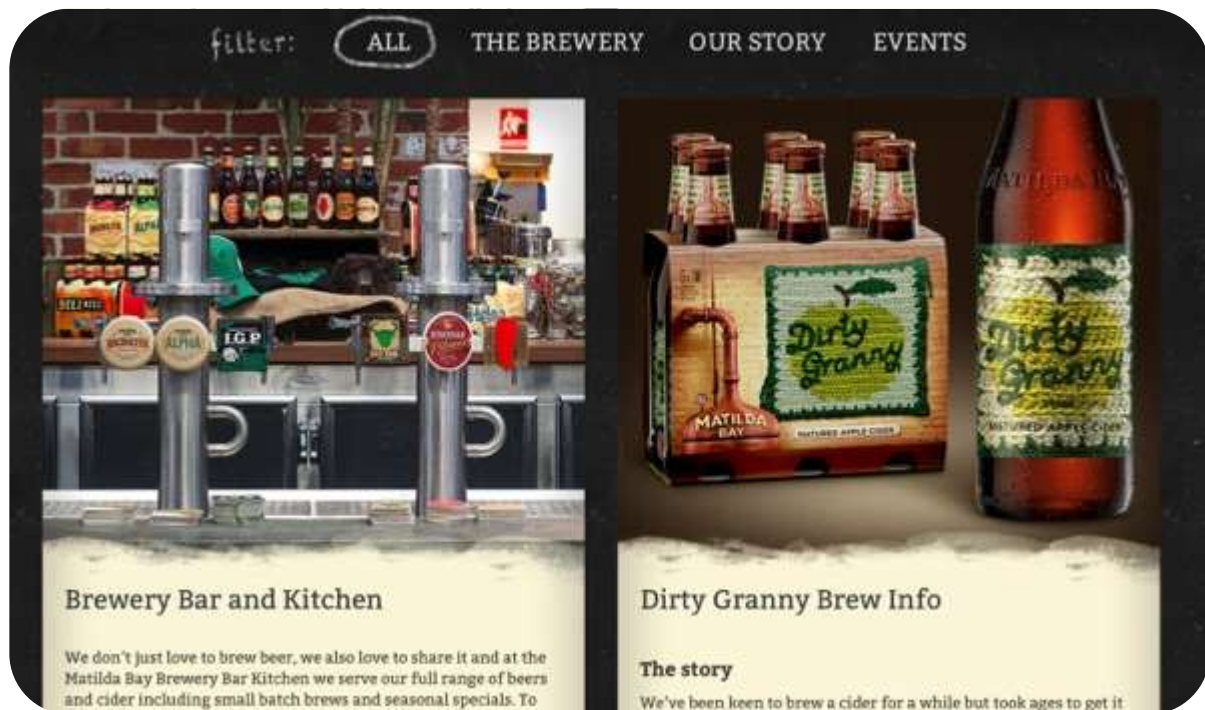
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OUR BEERS & CIDERS



Cheeky Monkey Brewery, Western Australia offering beer and cider



Matilda Bay Brewing Company, Port Melbourne, Victoria, Australia offering Dirty Granny cider



Cider has pride of place on the bar and on the shelf at Monteith's Brewing Co, Greymouth in New Zealand and in their brewery vision on the wall at the brewery.



Big Rock Brewery, Vancouver, Canada offering three craft ciders



The screenshot shows the homepage of 'NEW VISION IMPORTS' for 'WESTONS CIDER IN VIETNAM'. The header includes navigation links: HOME, ABOUT US, PRODUCTS, FAQ, STORE LOCATOR, and CONTACT US. Below the header, there's a banner with images of Stowford Press and Westons cider bottles. The main heading is 'Great Tasting Authentic English Cider in Vietnam'. Below this, there are four product cards, each with a 'Learn More' button and a description:

- STOWFORD PRESS**: A clear, sparkling lightly golden cider with a ripe apple aroma underpinned with subtle tropical.
- WESTONS PREMIUM CIDER**: A high quality, modern style cider. Rich, amber in colour it has a
- WESTONS MEDIUM SWEET**: Lightly bodied with characteristic fruity and a perfumed apple aroma.
- WESTONS PERRY CIDER**: A superior quality, lightly sparkling perry, crafted to deliver a fresh

Vietnam has an import offering that includes Westons cider from Much Marcle, Herefordshire.

The screenshot shows the homepage of 'BRUNTYS' for 'PREMIUM CIDER'. The header includes navigation links: PRODUCT, MAP, CONTACT, and a Facebook icon. The main heading is 'PREMIUM CIDER BRUNTYS' with the tagline 'Best of British Made in Asia'. Below this, there are images of Bruntys cider bottles and boxes. The section 'The BRUNTYS story' is followed by a paragraph:

What if you could bottle the clean flavour of a freshly picked apple, the juicy taste of a ripe pear, or freshly picked fruit sourced from the orchards of Europe and then slowly fermented and matured to And, to compliment traditional cider favourites, apple and pear, Brian has introduced strawberry

Example 4: Cambodia, Asia. Bruntys making "British" Cider in Cambodia for sale all over Asia



5.3 What does the drinker want?

See 4.3.3 – the same trends in consumer behaviour that apply to beer consumption also apply to cider consumption. Wherever I have travelled and visited breweries, brew pubs and retailers, I have found a very serious craft cider offering and a lot of excitement from craft brewers about the future growth of their cider sales. Being well connected to UK brewers we have had numerous approaches from brewers looking to launch a cider offering. Craft brewers in the UK want proper craft cider as a part of their offering. Cider is in exponential growth.

Cider is in exponential growth

5.4 Considerations for Cider Apple Growers

5.4.1 Export – Target Countries

Based on the examination of the key market data and statistics we should focus on the export of juice or concentrate to:

- The USA & Canada
- South America
- Europe
- Australasia
- Asia (especially Vietnam)

5.4.2 Export – The Brand

Could growers export cider apples or pressed juice to cider makers elsewhere in the world? Could growers take a greater control of the way British cider apples are marketed and sold? Yes I think we could. European cider makers have been approaching British cider apple growers in 2014 to access cider apples. There is an opportunity if we choose to take it. The limiting factors are the existing cider maker contracts and the lack of independent pressing facilities.

- The British cider apple unique selling point (USP) is very simply the bittersweet varieties that we grow here in depth, that are not grown in depth anywhere else in the world
- Our unique climate means that most cider apples are grown without irrigation, making them very sustainable
- Cider apples have been grown in the UK for over 1,000 years

5.4.3 Export – Grower Collaboration

Growers have very little formal collaboration beyond membership of the two growers' associations and many growers are not members of either association. British cider apple growers would benefit from membership of one association that could:

- Drive new variety breeding work
- Trial new growing and harvesting systems
- Define and drive marketing and promotional strategies to create more demand for British cider apples in the UK and overseas
- Engage with worldwide cider making customers as an entity



- Define and drive profitable global sales strategies for cider apples, be it on long term contract or for spot sales
- Create a strong set of brand values that drive a better understanding from cider makers and drinkers, drives quality assurance, cost efficiencies and infrastructure reinvestment
- Make every acre of cider apple production in the UK profitable

5.4.4 Export – Processing, Logistics & Distribution

There is no large, grower-owned independent apple-pressing facility. Cider makers own all the large facilities. There is an opportunity for growers to collaborate to invest in a facility that gives them control of the sale of their cider apples and to allow them to find new markets.

As well as a processing facility, growers would need to set up a marketing and sales function and a sales logistics and distribution function.

5.4.5 Import Substitution

The biggest competitor we have for British cider apples is dessert or culinary fruit concentrate, which is a world commodity. So for those cider makers for whom the cost of raw ingredients is more important than the flavour, taste and quality of their cider, concentrate will always be a significant ingredient.

British cider apples are a niche market and with an expanding cider market we could choose to sell only to the highest value segments of our market rather than the commodity buyer.

5.4.6 Funding

To create the understanding and buying desire from both the cider maker and the cider drinker for the unique qualities that British cider apples can offer, will require a communications strategy and plan. Growers could collaborate to fund this and seek external additional creative funding (industry, government, EU) also.

5.4.7 A Lateral Thought – British Hop & Cider Apple Grower Alliance

As global brewers are now British cider apple growers' biggest customers, it would be worth exploring whether British Cider Apple growers could form an alliance with British Hop growers. Many of the issues that both sectors face are very similar.



5. Dessert Apples (Eating Apples)

5.1 The UK Dessert Apple Industry

I intended to travel to look at how other dessert apple growing areas successfully exported apples all over the world and bring this learning back to the UK industry. But my travels have also identified changes that are needed in the British dessert apple industry that could make us much more successful in UK-based sales too.

The industry is in growth and is consolidating. The price per kg of a dessert apple has remained static for about 20 years, however, growers have maintained profitability by innovating their growing systems to produce more apples per hectare and therefore improve profitability per hectare.

The challenges facing British dessert apple growers include:

6.1.1 Challenges - Growing the crop

- We are at the northernmost latitude for successful commercial top fruit production meaning yields are often lower than for the same variety grown elsewhere in the world
- There is a lack of collaboration between British growers to deliver a lower cost, highly efficient and sustainable future for the industry through:
 - New variety breeding programmes
 - Innovations in growing systems
 - Innovations in harvesting techniques
 - Innovations in storage
 - Improved marketing of British apples to UK retail and export customers
- The British apple industry does not have a clear cohesive strategy to deliver against any of the above. Where work is going on it is piecemeal. The UK tends to take new variety, new growing system and innovation developments from the Southern Hemisphere or Europe
- The British customer (and consumer) demand is for a 365 day supply of sweet, red skinned apples; for skins free of blemishes, bruising or russet; for consistent quality and size; and for a smaller size than is bought in many parts of Europe and America
- The Gala apple is now the number one apple grown in the UK. It was bred in New Zealand

Gala is now the number one apple grown and consumed in the UK. It was bred in New Zealand

6.1.2 Challenges - Marketing/Selling the crop

- The British apple crop is picked from August to November and is stored in cold store and sold through until c. May the following year, depending on the variety. Bramley, a culinary apple stores for 12 months
- There is an annual pressure to limit the “merchandising window” for British fruit by British supermarkets keen to take supply from Europe, South Africa, Brazil, Chile and New Zealand apple growers. The British apple window tends to go from mid October to March/April



- The industry is made up of a few big growers and a lot of smaller growers often brought together by one larger grower with a packhouse or in Producer Organisations
- The marketing effort for British apples in recent years has tended to focus on culinary fruit rather than eating apples. It is hoped that this will change with a new campaign.
- There is a lack of price clarity with few grower contracts in place for apples
- Privately owned marketing desks between growers and retailers often import fruit and rarely work in the best interest of British apple growers
- The UK has the most powerful supermarkets in the world whose share of the margin continues to increase whilst grower margins erode
- 2013/14 has witnessed the greatest changes and consolidation in the UK dessert apple supply chain for over a decade. The changes are long overdue

Lack of price clarity, few grower contracts in place

6.1.3 Export of British Apples and Import of Apples into the UK

- Looking at DEFRA figures for the last 5 years (2009-2013), overall fruit exports have fallen by 5% and imports have risen by 30%²²
- Export of the apple crop is not a core part of any British grower's strategy
- UK pack houses are set up to supply UK retail with Class 1 fruit. Any non-Class 1 supermarket fruit is either being sold as:
 - Class 2 mainly for wholesale markets (some multiple retailers)
 - "Fruit for Schools" for smaller apples
 - Processing for apple juice
 - Processing for culinary uses
 - Juice sale to the cider manufacturers
- Export sale is not a core part of the strategy to sell the apple bin
- Given the global nature of apple trade, strategic export looks like a big opportunity
- Within the EU, the value of apples and pears leaving the UK is c.£18 million or just 6% of the value of the imports arriving into the UK, valued at c.£271 million²³ (Appendix 6)

Since 2009 overall fruit exports from the UK have fallen by 5% and imports have risen by 30%²²

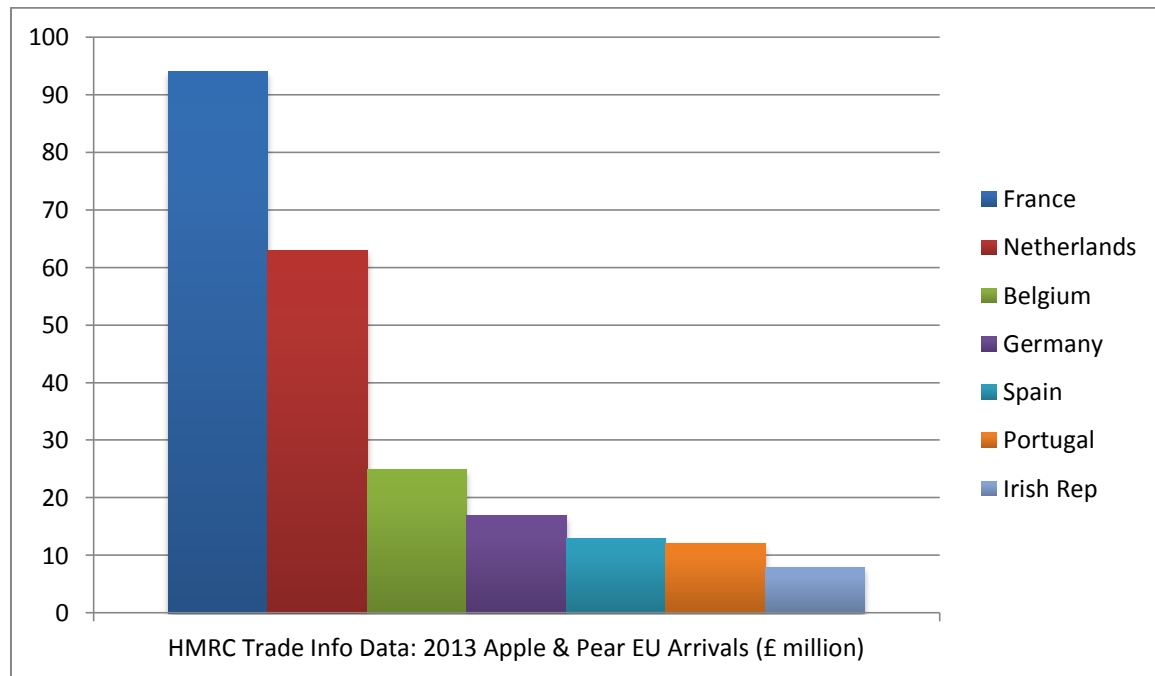
British Apple & Pear EU Exports = £18mn, whilst Imports = £271mn²³

²²Source: DEFRA

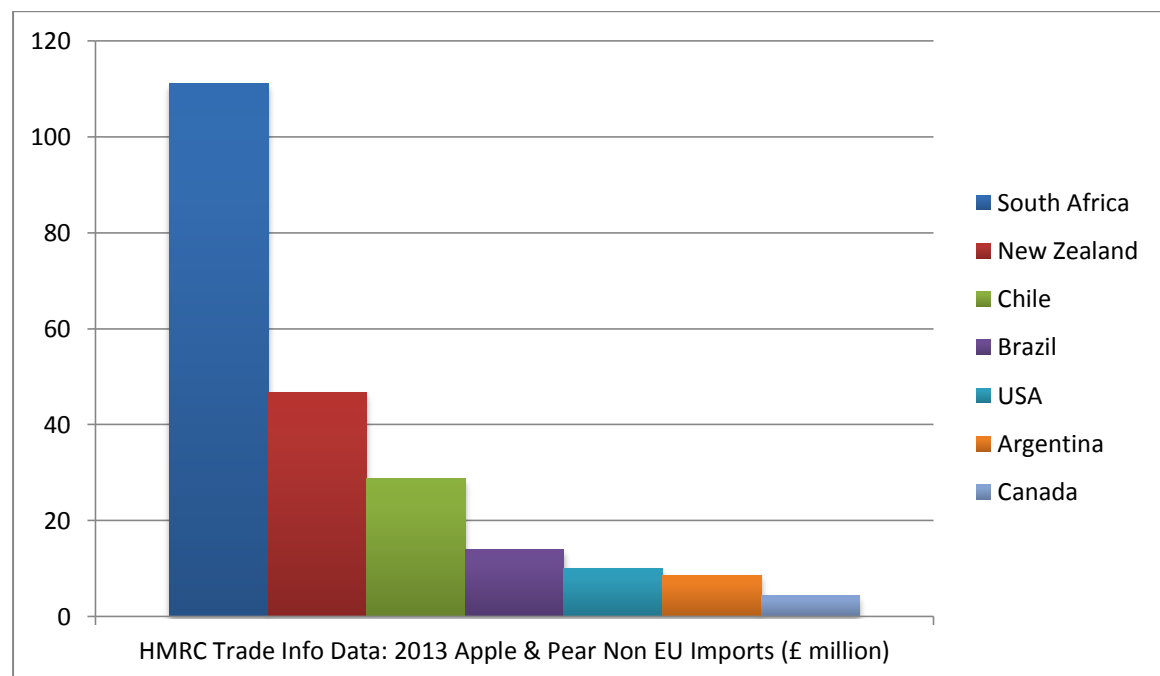
²³Source: HMRC UK Trade Info: <https://www.uktradeinfo.com/Pages/Home.aspx>



- The key EU countries that the UK buys apples and pears from are:

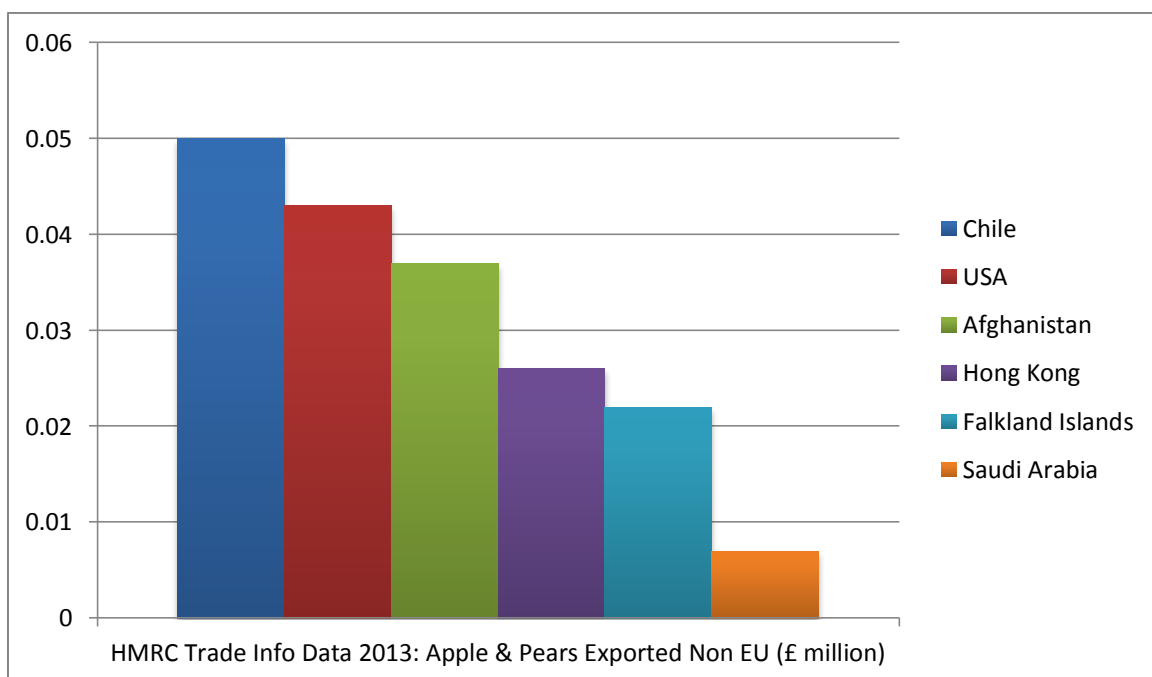
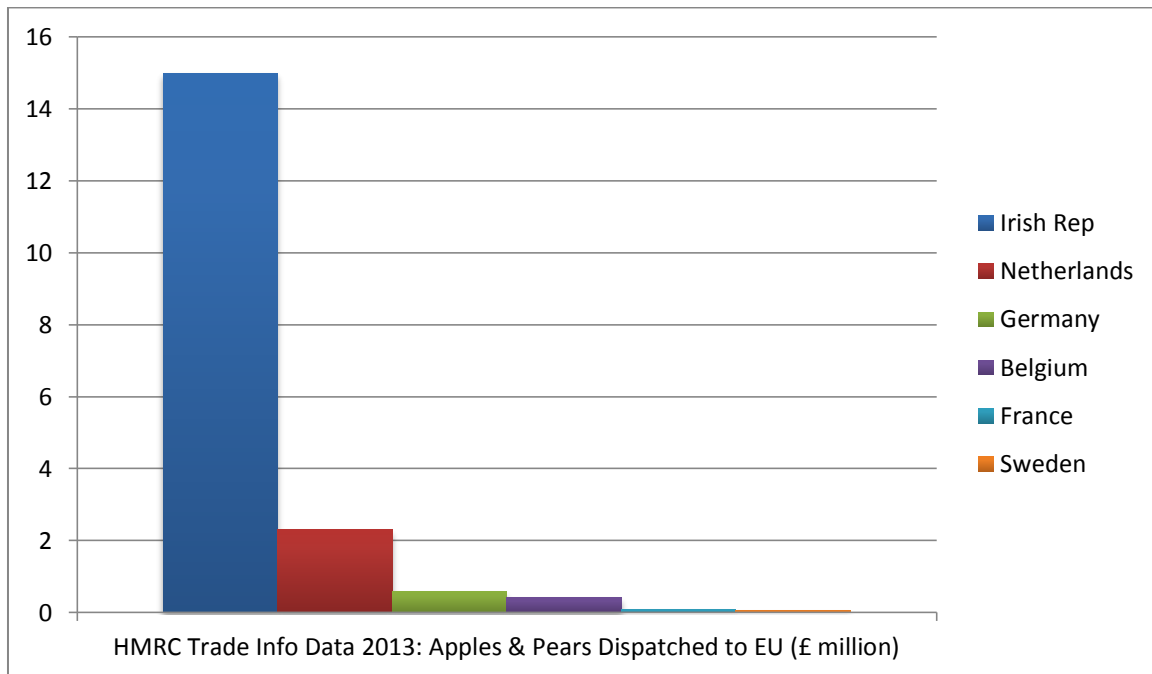


- The non EU countries that the UK buy apples and pears from are:





- And this compares to the apples and pears dispatched from the UK:



- British dessert apples make up 32% of all apples bought in UK supermarkets and if you strip out culinary apples, only 20% are British
- A Gala apple will store until April or May. The potential is there for British growers to at least double the self-sufficiency measure

Only 20% of eating apples bought in UK supermarkets are grown in Britain



6.1.4 British Consumer Proposition:

- The consumer predisposition to buy British apples has been weakening due to a lack of British bred and British sounding apple varieties
- Retailers do use union jack stickers on loose apples and boxes to denote British, but in a “bagged” fixture, the shopper often has to look very carefully at the small print on the bag to understand the origin
- Every consumer wants choice and wants to try “new” varieties so it is inevitable that some apple varieties will be imported
- Apples grown in the UK are some of the least irrigated in the world, meaning that they taste great. We have some of the best flavour profiles of any apple growing country in the world
- But today’s consumer demands convenience, immediacy and ready-prepared – the British apple industry is selling apples today in the same way it did 10 years ago
- There is a low (and declining) consumption level of fruit and vegetables in the UK. The World Health Organisation recommends that an adult consumes 400g per day. The UK ranks 15 out of 19 EU countries with an average intake of only 258g of fruit and veg per adult²⁴
- Apple consumption is under threat from “more convenient” fruit e.g. bananas and grapes
- There has been a well-documented structural shift in UK food retailing seeing growth in Convenience and Discount retail, which has led to the recent supermarket price wars. British apples don’t have a credible “convenience” proposition and the industry seems reluctant to consider how we could capitalise on the growth in the Discounters

Today’s consumer demands convenience, immediacy and ready-prepared

6.1.5 Growing Dessert Apples

- We personally grow 23 ha of Gala, Braeburn and Red Windsor eating apples for the supermarkets
- Modern dessert apple orchards are based on a post and wirework frame, designed to create a “wall of fruit”
- Tree density has increased significantly in recent years. Today most growers are planting trees between 0.6-1.0 metre apart (majority at 0.7/0.8m). Row widths are c. 3m apart and tree height is about 3m
- A mix of mechanical and hand pruning is used to shape the tree and optimise light levels
- Trees are sprayed every 7-10 days to nourish and protect the crop against mildews, scab and pests
- Before picking a dessert fruit orchard for a class 1 supermarket sale, a sample of apples is tested from each orchard. Using Gala apples as the example here, they must be:
 - Colour - 50% red colour
 - Size - 60mm minimum
 - Starch – moving
 - Sugar – 12%
 - Pressures – firm
 - Skin finish – clean, unblemished, scab free
 - With stalk to prolong storage capability

²⁴ Source: European Food Information Council 2102



- Fruit is harvested by hand into “buckets” and then wooden bins, using bin trains on the ground and picking platforms at height. Most UK farms do not use ladders
- Apples are stored in CO² storage and graded and packed as required
- More than half the cost of the crop is incurred by growers post-harvest for storage, grading, packing and distribution
- The crop is all outdoors and is prone to being effected by frost damage, which reduces yield and occasionally by hail, which affects quality and value. Unlike in Europe where hail is common and hail nets, hail turbines and irrigation are used to prevent damage, the risk in the UK is much smaller and growers either insure against hail or take the risk



Stocks Farm – a photo to show how growing systems have changed in 50 years: The Bramley apple tree on the right in the foreground was planted by hand in 1963 at a distance of 11m apart. In the background is its replacement, a new orchard of Red Windsor with trees planted 0.8m apart, using GPS.
16,000 trees were planted in 1½ days in the spring of 2014



Harvesting Gala at Stocks Farm from a picking platform



Picking Gala apples into plastic "buckets" which are carefully emptied into a wooden bin on a bin train



6.1.6 Key Facts about British Dessert Apples Today

- The total UK dessert fruit area (excluding culinary) declined from 4,810 ha in 2007 to 4,750 ha in 2009. In 2012 5,267 ha were being farmed.²⁵
- Culinary fruit has declined from 2,168 ha in 2007 to 1,794 ha in 2012²⁵. The decline in culinary fruit is directly linked to consumer's requiring ease and convenience and the decline in people "cooking from scratch" – only 1 in 8 households use a conventional oven at least once a week
- Cox acreage has been replaced with Gala acreage which has grown from 740 ha in 2007 to 1,312 ha in 2012²⁵ and has become the number 1 eating apple in the UK
- Cox is a wonderful tasting British apple but has suffered as a result of its naturally poorer skin finish, which reduces class 1 grade-outs to below 75% making it unprofitable to grow. The demand for perfect skin finish plus reduced margins back to farm gate means that growers require their apple varieties to deliver class 1 grade-outs above 85% to deliver the sustainable profitability that allows for reinvestment. Gala, although susceptible to scab, has a much improved skin finish, hence the growth in its acreage.
- A lot of attention has been given to club varieties, developed with global marketing campaigns designed to achieve higher returns. The trees tend to cost more, the grading specifications are higher but in the UK they are sold by a single exclusive marketing desk
- There has been no British-based or funded breeding programme in recent years. In June 2014, Worldwide Fruit launched a breeding programme initiative with East Malling Research

6.1.7 Waste

Most years there is an improvement "tweak" to our class 1 spec. The crop is very much defined by the weather during the growing season and although the retailers do try to accommodate issues that the season creates, there is too much waste in the chain and too many examples of sellers chasing the "easy sale", instead of looking for creative ways to sell "more of the bin".

The decision to leave fruit that does not meet the spec in the orchard is based purely on economics. The labour cost to pick it has to be covered and a margin achieved to make that labour cost worthwhile. And the decision is usually driven by the price for juice, which is a global commodity. Some years the value is simply not high enough.

We rarely hear about the waste at farm level. Instead the media likes to lambast the housewife for the waste in the home.

The last time we personally had a lot of "waste" apples was in 2012 after the very wet weather. The lack of sunshine hours meant that the fruit did not colour up as well as usual. We had no choice but to leave it in the orchards. The upside was that our fruit provided a feast for waxwings that had changed their migratory path due to a berry shortage in Scandinavia.

²⁵DEFRA: Basic Horticultural Statistics 2013



A waxwing feasting on “waste” Gala apples



6.2 British Food Retailing and Today's Consumer

In 2014 British food retailing is experiencing the biggest changes we have seen for a decade. Some are describing those changes as a seismic shift.

And the patterns in British food retail appear to be very similar to those described by Miller Coors when trying to understand their declining lager sales. See P. 15 for a detailed description of their research carried out across three continents. In summary, they concluded that there are two types of consumer:

The first - larger - group:

- Relies on price and an extraordinary “deal” to open their wallets

The second - smaller - group:

- Responsible for 77% of all spend and 93% of biggest spend and nearly all the profit that businesses make
- Need a connection with the product based on design, authenticity, provenance, newness and discovery

British food retailing reflects these findings too: today's winners are the discounters or the premium retailers and there is no middle ground.

Today's profitable consumer wants: design, authenticity, provenance, newness and discovery.

Today's retail winners are the discounters or the premium retailers – there is no middle ground.

6.3 Key Findings

6.3.1 Key Findings – New Zealand

I was very lucky to meet Julian Raine, David Easton of the Heartland Group, Ian Palmer (ex-Chairman of Pipfruit New Zealand), Morgan Rogers of ENZA/Turners & Growers and Grant McKay of AgFirst. I observed packhouses, agronomists, labs, databases and lots of orchards. The key findings:

- 8,500 hectares of dessert fruit that overall is achieving 36 T/ha class 1 (c. 51.5 T/ha total)
- 2012 production was 306,000 class 1 tonnes
- Growers are targeting 80T+/ha on Gala and Braeburn
- Home consumption is less than 7% of sales
- 17million TCE (Tray Carton Equivalents), exported in RDT's (Retail Display Trays) or Boxes with significant secondary packaging requirements when fruit reaches Europe or America
- Packaging costs are high
- There is a high level of administration required on multi-export channels
- New Zealand has a high cost of living, high prices and a high minimum wage – all at least equivalent to the UK in February 2013



- My conclusion was that their higher yields subsidised the additional costs of secondary packaging and higher admin costs providing them with a similar return to a British grower
- Although New Zealand growers do not benefit from any EU-type subsidies, their R&D programme is extremely well funded by government

Higher yields subsidised secondary packaging and export admin costs

Orchard Observations:

- No concrete posts, all wooden posts in use
- Similar growing systems, not quite as intensive
- Outdated harvest techniques, using ladders to pick
- Everything heavily irrigated
- Hail nets in use and sun reflectors to improve colour
- Picking platforms used for thinning and pruning only
- Health & Safety and red tape as burdensome as here

Marketing/Selling Observations:

- Excellent marketing and creative communication of both New Zealand and the individual apples brands
- Club varieties under performing – Jazz growers were disillusioned with recent returns, feeling that the brand has been diluted by the variety being grown all over the world, that it had been commoditised
- Very clear switch in export focus from Europe and USA to Asia/Pacific rim – Asian retailers were less demanding and costs of export were much lower
- Very consumer/customer focused
- Very flexible systems and logistics to respond to market needs



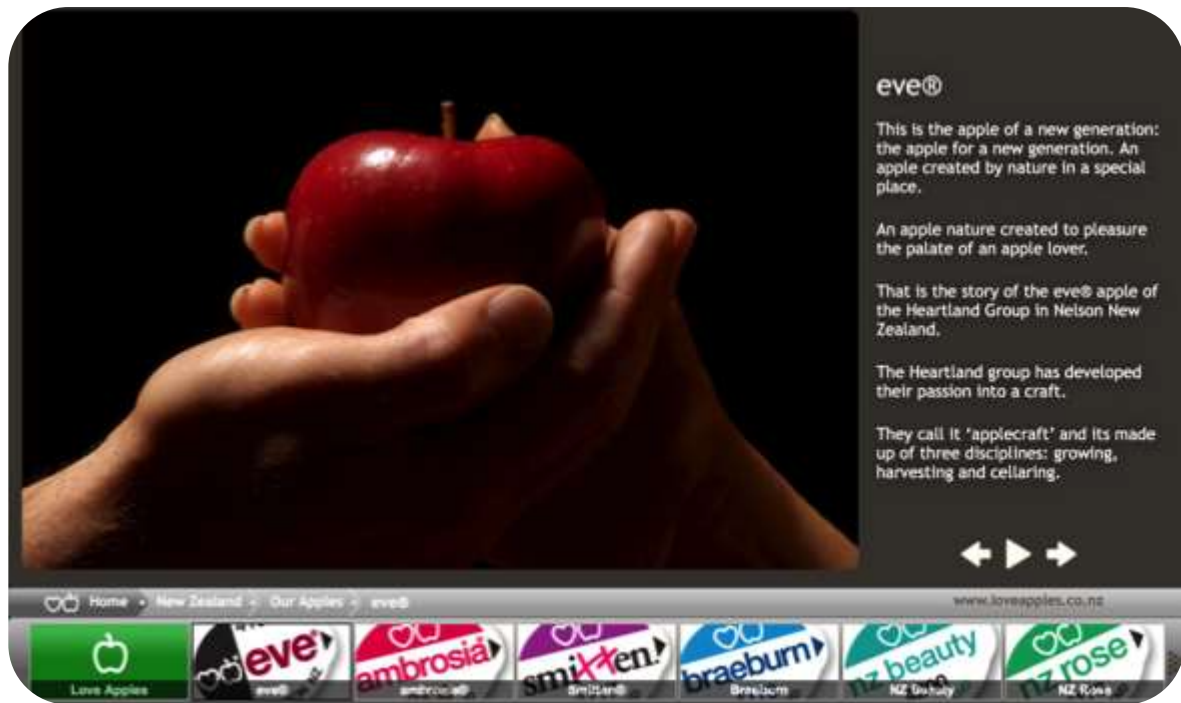
Julian Raine and Richard Capper looking at a Tentation orchard



Two examples of excellent branding from the Heartland Group



Health & Safety signs, Spray Operator records date of operation in the Orchard



Eve apple – a great example of an apple brand created to “de-commoditise” Braeburn

6.3.2 Key Findings - USA

I was lucky enough to visit Oregon and Washington State in the USA and met with apple growers Leslie Roy, Gary Morford, Craig O’Brien and stayed and travelled with Greg Pickels, a lead agronomist for Washington State. I also met packhouse owners, marketers and scientists.

- The scale is enormous with 1,000 acre fruit farms not unusual
- Everything is heavily irrigated with snow-pack water from the Cascade mountains
- Growing systems are not as advanced as Europe’s, with most growers moving to post and wirework systems but a lot of older orchard systems were observed
- In export terms, the rest of the USA demands logistics similar to the UK exporting to Europe
- The apple marketing is very similar to New Zealand with a lot of focus on club varieties
- The proportion of sales of Washington State grown apples within the state has increased to almost 100% through investment in storage technology. Washington State retailers had historically imported a large proportion of fruit. When growers made the investment and could offer apples that would store for 12 months+, they were able to deliver a 365 day supply taking away the need to import: “crack the storage windows and put the control back with growers”
- 25-30% of most growers apples were destined to be exported ex-USA & Canada
- 60-100 T/ha of Gala apples was being achieved

“Crack the storage window and put the control back with growers”



Valley Fruit, Yakima: (left) multiple lanes for export and home sale. Waxing of apples (right)



Above: new growing systems and picking platforms. Older orchards and ladders below



6.3.3 Key Findings – Canada: Honeycrisp

During the hectic CSC schedule, I managed to get a bus to stop at a discount retailer so that we could quickly look at how food was being retailed in Canada. And Honey Crisp stood out in the fresh produce section because of its premium price. This is a public variety, which is difficult to grow but well marketed. It retails for more than double the price of a commodity Gala apple and uses the USP of “Explosively crisp”.



Honeycrisp apples set themselves apart from other apples in many ways. Honeycrisp apples have what we call their "Explosively Crisp® texture and are juicy created by the large cells that explode with juice in your mouth.



Honeycrisp apples have a cream colored flesh and the taste is a wonderful, well balanced, sub acid and sugar flavor. Honeycrisp has double the cell structure of other apples. Double the cells double the pleasure when eating Honeycrisp.

Like McIntosh apples, Cortland apples, and Macoun apples, Explosively Crisp® Honeycrisp do best when grown in the coldest areas of the country. Minnesota, Michigan, Wisconsin, New England and Upstate New York (where we are) produce some of the finest Honeycrisp apples. If you want the "Crunch" look for the "Explosively Crisp® Honeycrisp" logo. You can't miss it as it is the label that has the fireworks exploding out of the apple just like the juice explodes out of Honeycrisp. If you experience Honeycrisp from warmer areas most likely they just won't be the same.



6.3.4 Key Findings – Vietnam

Apples only grow in the northernmost part of Vietnam which I did not see. But my trip included an exploration of the agricultural practices along the Mekong Delta in the south of the country; a stay in Ho Chi Minh (Saigon) and an exploration of the area around Hoi An. I used this time to explore the markets, talk to the locals, meet local farmers and find out about rice farming.

- The diversity of fruit and veg in the markets is extraordinary. There is a much greater variety than one would find in a British supermarket
- Most fruit and veg markets (outside the city) sold the produce off the pavements
- Locals visit the market every day to shop either on foot or their mopeds
- In the north of Vietnam rice farmers have 2 harvests a year; in the middle of Vietnam they achieve 3 harvests a year; and due to the heat and humidity in the south, 4 harvests a year!
- The Mekong delta, as well as being the “rice bowl of Vietnam” (42 million tonnes in 2011²⁶), is also the M25 of South Vietnam – people live, work and travel on the water – it is one of the most crowded waterways in the world
- Exporting 7.4 million tonnes in 2011, Vietnam was the second largest exporting rice country in the world²⁶
- Rice husk is not wasted, it is used as a fuel source to “kiln” bricks for construction industry
- Apples from China are not desirable and are mistrusted. Vietnamese seek European imports



Left: a floating fruit and veg market on the Mekong Delta. Right: rice husk is transported by boat to kiln bricks



Overloaded boats entering/leaving the market



²⁶http://www.fao.org/fileadmin/templates/ess/ess_test_folder/Workshops_Events/APCAS_24/PPT_after/APCAS-12-20-Rice_Production_Viet_Nam.pdf



A huge diversity of fruit and veg available in the markets, often sold direct from the pavement



6.4.1 Considerations for the Dessert Fruit Industry

6.4.1 Export – Target Countries

I have not spent as much time examining the export country opportunities for eating apples as I have for hops and cider apples. That said, common sense would suggest:

- Ex-pat communities
- Asia: up and coming middle class populations
- USA, especially East Coast
- Commonwealth countries, with an emphasis on British heritage
- Eastern Europe for culinary Bramley apples and other populations that still cook from scratch

6.4.2 Export – The Brand

British apples have a lot of unique selling points (USPs) in their favour that we need to communicate to achieve successful export. In world terms we have some of:

- The highest eating quality, flavour and nutrition profiles
- The least irrigated apples
- The highest farm assurance standards – after all we grow for UK retail
- The tightest regulations
- The most forward thinking and innovative growers

And we also have:

- A world renowned British heritage: some of the most beautiful farms in the world
- Our British history: apples have been growing here since before Roman times
- A world renowned reputation and trading heritage
- The strongest visual mnemonic in the world: the Union Jack

6.4.3 Import Substitution – The Brand

We know “British” is important to the UK consumer, but the profitable British shopper is very sophisticated and cares about provenance, taste, flavour, newness, and wants to discover newness. We need to offer:

- New apple varieties
- New apple brands, based on existing varieties
- New ways to eat apples
- New ways to buy apples
- New health messages for apples

New does not always mean new. “New” is often a new way of presenting the existing.

We need to make the British apple brand more convenient and available “on the go”. Today is not about fruit bowls, it’s about “buy now, eat now”.

Apples are one of the healthiest fruits you can eat. EU legislation makes it hard to make these claims on pack. But in today’s multi-media world, we can explain these claims online, in social media, through good PR – we need to raise the profile of the healthiest snack available.



6.4.4 Grower Collaboration

Improved grower collaboration would allow us to market “British” apples at home and abroad. To succeed at export and import substitution the industry requires creative marketing of the unique selling points of British apples. And that will require collaborative funding.

A collaborative effort could:

- Define and drive more profitable marketing and promotional strategies for the whole industry
- Define and drive sales strategies rather than leave this in the hands of intermediaries
- Identify business cost efficiencies and infrastructure reinvestment opportunities
- Drive a British public apple breeding programme
- Improve our crop protection lobbying work

6.4.5 Import Substitution

To succeed at replacing imported fruit we need to make British consumers WANT British apples. British retailers will want them if the industry creates demand. This will take clever and creative marketing of the USPs of British apples and if we are to succeed at becoming the first choice for “on the go” food, we will need to retail apples in new ways. We will need to directly compete with confectionery and crisps, in the same space, at the same price.

In my opinion as a mother and shopper, to compete with other “on the go” snacks, apples will need to be presented in single and double apple packs, wrapped but with minimal packaging.

We need to think Convenience retail and in addition to the fresh produce section, apples need to be available to buy from garage forecourts in the confectionery aisle; from coffee shops; from vending machines in schools, colleges, swimming pools, gyms and health clubs; in the eat-now confectionery section of supermarkets; from the corner shop and from sandwich bars.

I am hopeful that a campaign to promote British eating apples will be launched for the first time soon to support the 2014 British apple crop. At the time of writing it has not been confirmed.



6. Recommendations & Conclusions

7.1 Recommendations

There is significant potential for export growth of British Hops, Cider Apples and Eating Apples.

Successful export will be dependent on clear, creative marketing and communication of the British Hop, Cider Apple and Eating Apple USPs (unique selling points).

Growers in each sector would benefit from much greater collaboration, to take control of their industry issues and to drive greater profitability in each sector. There is a clear potential for British Hop and Cider Apple growers to consider a cross-sector alliance.

An import substitution strategy is as important as export for all three sectors.

Growers need to be much more proactive in seeking funding from industry, British government and the EU to achieve their aims. Collaboration will be key to improving funding streams.

7.2 Conclusions

International hop & apple growers who **collaborate** (with transparency) to market and sell with a cohesive strategy achieve the greatest returns.

Clear, concise communication to **identify unique selling points** (USP's) is key to creating differentiation in a crowded global market.

Marketing needs to be “unpicked” from selling – it is a different discipline - successful export requires high quality, consistent **creative marketing**.

Hop and apple growers should recognise their world competitiveness and play to their “**British**” **strengths**: highest farm assurance standards; sustainable, low irrigation levels; tightest regulations, highest quality products; world leading growing system innovations and hop breeding programme; heritage; history; integrity – a trusted global brand. We do not need to act like a commodity, we should be seeking to create desire in the **premium market segments**.

In-depth and on-going understanding and engagement of the market is critical.

Direct selling by growers or groups of growers (rather than intermediaries) is far more prominent internationally than in the UK.

The biggest export opportunities for British Hops and for cider apple juice are USA, South America, Europe, Australasia & Asia (Vietnam). For British dessert apples the opportunities are niche and include ex-pat markets, Commonwealth countries & aspiring middle classes in developing countries.

Farmers need to become better influencers to gain broader respect from all their communities for the high quality of food that is produced in the UK.

British farmers ought to choose selling methods that deliver them the greatest value back to farm gate rather than the easiest sale.



8. After My Study Tour

1. Reviewed and updated British Hops website to ensure that the brand messaging and USPs are as clear as possible.
2. Introduced new signage onto our farm in September 2013, to promote the British Hop brand in a the brand style of the British Hops website; and encouraging other hop growers to produce similar signage for their own farms:



3. Re-clarify individual hop variety messages, especially the “sexy” varieties
4. Reviewed and updated Stocks Farm marketing messages and re-launched our farm website
5. Trialling a new hop string made of paper
6. Launched a new business targeting home brewers
7. Introduced soil mapping tests
8. Introduced new pruning trials
9. Introducing yield mapping trials
10. Presented a thought-piece to the English Apples and Pears Promotions Committee to encourage greater collaboration and collaborative marketing
11. Writing regular columns to promote the conclusions in this report (Appendix 7)



7. Executive Summary

The UK is a small island with a large population and as such growers have become very reliant on supplying their home market. Comparing the UK to a landmass of a similar size in New Zealand and yet with a population of less than 1/12 of ours, less than 10% of agriculture in New Zealand is destined for the home market.

This reliance on our home market has arguably made us complacent and very reliant on being able to sell within our borders. In both the case of Brewers/Beverage Companies buying hops/cider apples and Supermarkets buying eating apples, growers are generally family businesses supplying huge global corporate companies. Not all these family grower businesses are small but even for the large ones there is a disparity in negotiating power between the buyer and the supplier.

My primary goal was to look closely at those parts of the world exporting hops and apples and to identify the successes, failures, challenges and opportunities and see what our farm and UK growers could learn. UK agriculture is not renowned for its ability to collaborate, although there are some notable exceptions in the soft fruit industry. I was keen to learn if collaboration was an important component for successful export.

With a background in marketing I have been surprised by the lack of good marketing in UK agriculture, be that trade marketing to trade customers or consumer marketing to the end consumer. I was keen to learn how other countries have utilised marketing techniques.

We farm hops, cider apples and eating apples and I have dealt with each sector separately. For each sector consideration has been given to the global and home market; the consumer; the use of USPs (unique selling points) and what ours should be; creative marketing; why new variety development is important; the export strategy for each sector; import substitution; improved collaboration and industry funding. This report identifies the learnings from my travels and draws conclusions and recommendations for our farm and each sector of the industry.

The 5 most critical learnings are:

- International hop and apple growers who collaborate (with transparency) to market and sell with a cohesive strategy achieve the greatest returns.
- Clear, concise communication to identify unique selling points (USPs) is key to creating differentiation in a crowded global marketplace
- Marketing needs to be “unpicked” from selling – it is a different discipline - successful export requires high quality, consistent creative marketing
- Hop and apple growers should recognise our world competitiveness and play to our “British” strengths: highest farm assurance standards; sustainable, low irrigation levels; tightest regulations, highest quality products; world leading growing system innovations & hop breeding programme; heritage; history; integrity – a trusted global brand
- We do not need to act like a commodity, we should be seeking to create desire in the premium market segments



9. Acknowledgements

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Tony Redsell – UK Hop Grower	Ken Knox – Knox Farms
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Dr Ron Beatson: Plant & Food Health NZ	Hensall District Co-op
Dean Palmer – New Zealand Hops	Don Nott – Switch Energy
Peter Lines – New Zealand Hops	Kelly Daynard – Farm & Food Care
Colin Oldham – New Zealand Hops	Bern Tobin – Fresh Air Media
Doug Donelan – New Zealand Hops	Andrew Campbell – Fresh Air Media
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Gary Walton: Beef & Lamb NZ	Howard Staff - Staff Farms Sue Ann Staff – Staff Estates Winery
Pre- CSC London:	Meglomaniac Winery
Baroness Byford	Wes & Briar Weins - VineTech Canada
Lord De Mauley	Helen Hambly Otami – University of Guelph
The Duke of Gloucester	Norm Ragetlie – Rural Ontario Institute
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Brendan Bailey – HM Treasury	Andrew Novakowicz – Professor Ag Economics, Cornell
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Meurig Raymond – President NFU	Ryan Koeslag – Agricultural Management Institute, Canada
Matt Ware – NFU London	Steve Larocque – Beyond Agronomy
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David McInnes, Agri-Food Institute, Canada	Gary Morford & Junior Gomez
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10. Appendices

The following appendices can be seen at this link: <http://nuffieldscholar.org/ali-capper-report-appendix/>

1. The Brewing Process
2. British Hops Publicity – Case Study
3. What makes British Hops Unique? – Presentation co-authored with Dr Peter Darby for the Institute of Brewers & Distillers Asia Pacific Conference, Vietnam in March 2014
4. British Hop HMRC Import/Export Data and USA Hop Import/Export Data
5. New Zealand Hops – An Overview of Hop Growing, Processing & Marketing
6. Marstons Premium Bottled Ale Report
7. HMRC Dessert Fruit Export/Import
8. NFU British Farmer & Grower & Fresh Produce Journal articles