



UK AGRICULTURE; BUILDING A POSITIVE FUTURE POST BREXIT

NORTHERN FARMING CONFERENCE 2016 Peter Kendall



Speaking as:

- Chairman AHDB
- Past President NFU England and Wales
- Committed Farmer

WHERE I SEE MY FUTURE?



Business as usual

- Nothing has changed yet.
- UK businesses remain bound by all the current EU rules and regulations for up to two years after Article 50 is triggered.
- Some payments (including agricultural support) guaranteed by Treasury until 2020
- Depending on any UK/EU trade deal, rules such as State Aid may still apply.



Four major areas of concern for agriculture

- · International trade
 - UK/EU
 - With third countries
- Agricultural policy
 - Support payments
 - Rural development
 - Market management
- · Migrant labour
- Regulations



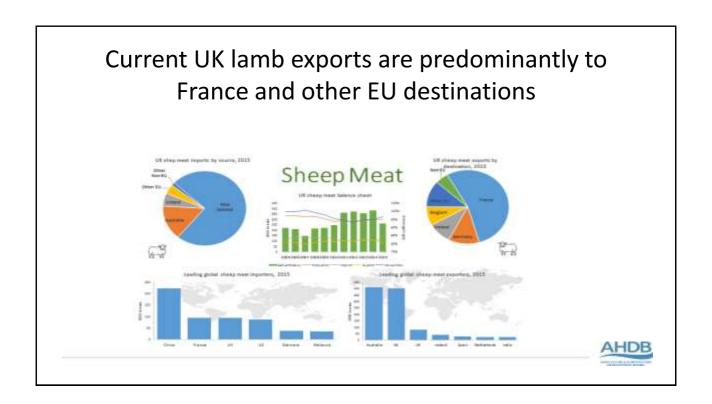
Latest report launched Oct 12



Explores UK trading relationships with the EU and rest of the world for each sector.

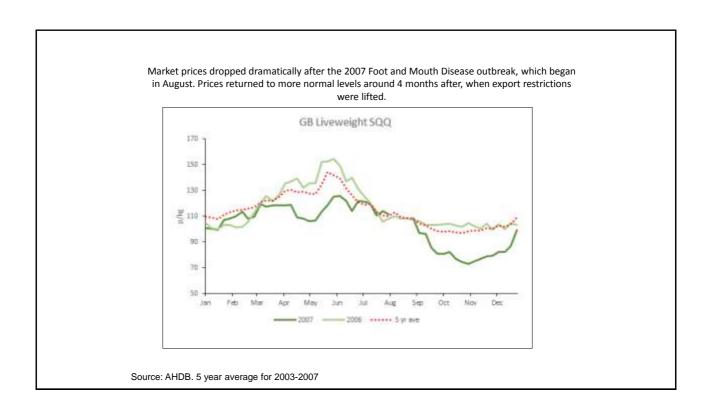
Reviews the potential opportunities and threats to our sectors post-Brexit.





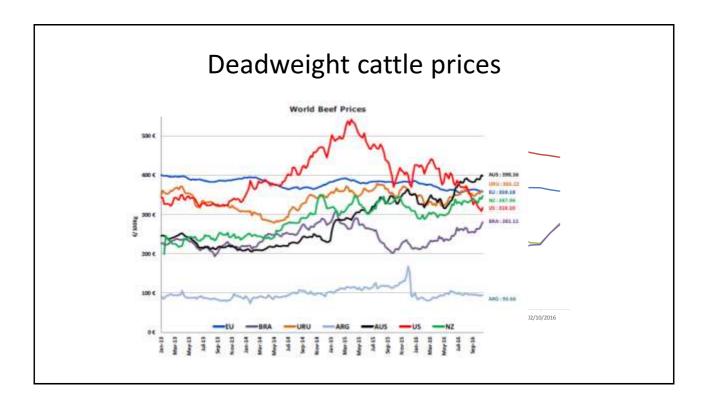
Tariffs insulate EU & UK markets from competition

Product	Tariff rate
Fresh/chilled boneless beef cuts	12.8% + €3,034 per tonne
Fresh/chilled lamb carcases	12.8% + €1,713 per tonne
Fresh/chilled boneless pork cuts	€869 per tonne
Milk/cream (fat content 3-6%)	€218 per tonne
Cheddar	€1,671 per tonne
Fresh cut flowers	8.5% - 12%, depending on season
Fresh/chilled potatoes (excl. new/seed)	11.5%
Wheat (excl. Durum/seed)	€95 per tonne
Barley (excl. seed)	€93 per tonne
Rapeseed	Tariff free

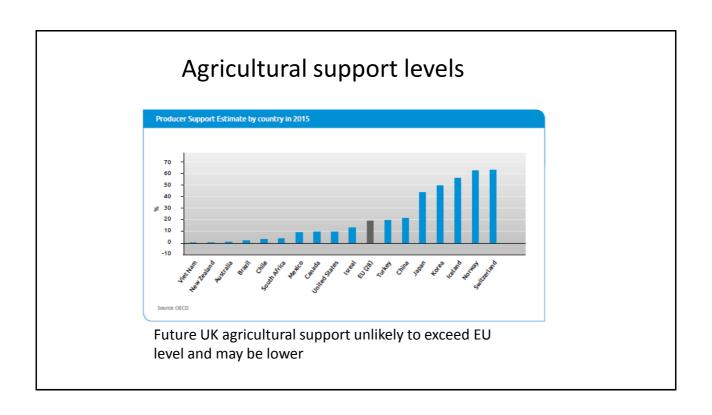












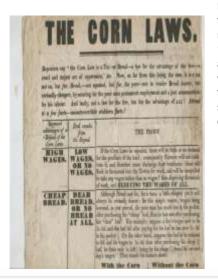
EU farming subsidies could be diverted to NHS after Brexit, says Theresa May adviser.

Daily Telegraph Oct 3 2016

George Freeman; Chair of No 10 policy team.



Our Future?



Robert Ensor wrote that these years witnessed the ruin of British Agriculture, 'which till then had almost as conspicuously led the world, (and which) was thrown overboard in a storm like an unwanted cargo,





Single Market

Eliminates all tariffs, quotas or taxes on trade.

Free movement of goods, services, capital and people.

Removes "non-tariff barriers"

Common regulations across the area. Attempt to create a level playing field; this doesn't happen in a free trade

The EU is not just a free trade area - it is a single market.

Customs Union

Countries apply the same tariffs to goods from <u>outside</u> the union.

Goods clearing customs in one country can be shipped to others without further tariffs.

Norway is not part of the EU customs union.

Norway sets own tariffs on goods from outside the single market.

As a member of Single Market, most Norwegian goods are imported tarifffree into the EU.

Norwegian exports have to originate in Norway for tariff-free entry to EU.

The EU is a customs union (as well as a Single Market).

Free Trade Area

No tariffs, taxes or quotas on goods and services from one country entering another.

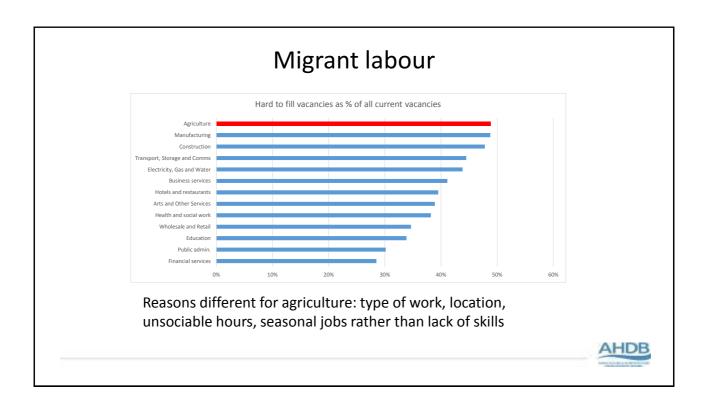
May include exceptions and not all encompassing.

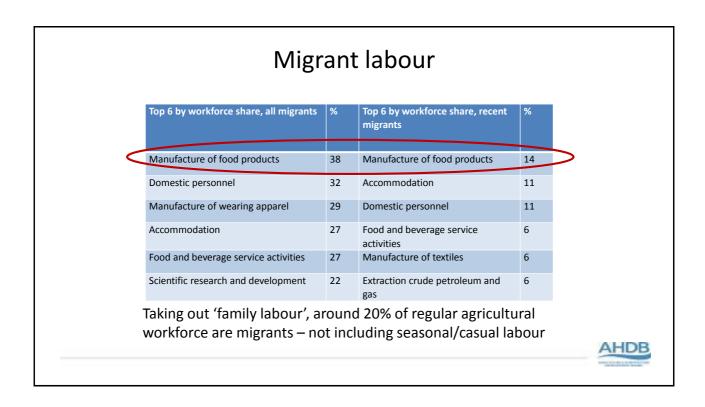
Imported goods have to comply with the laws of country they are being sold in

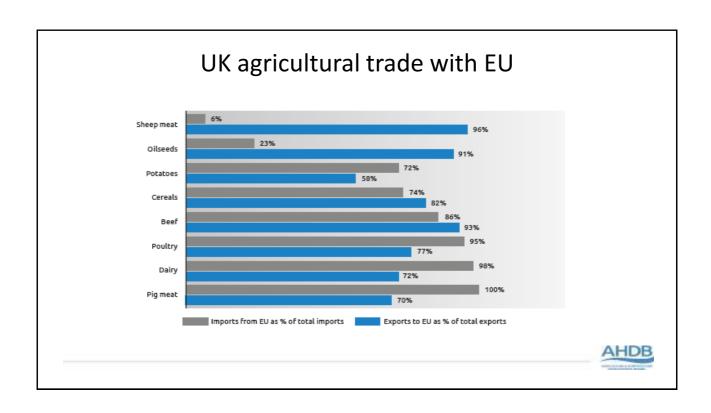
There is a free trade area in Europe called the European Free Trade Association (EFTA)and consists of Norway, Iceland, Switzerland and Liechtenstein.

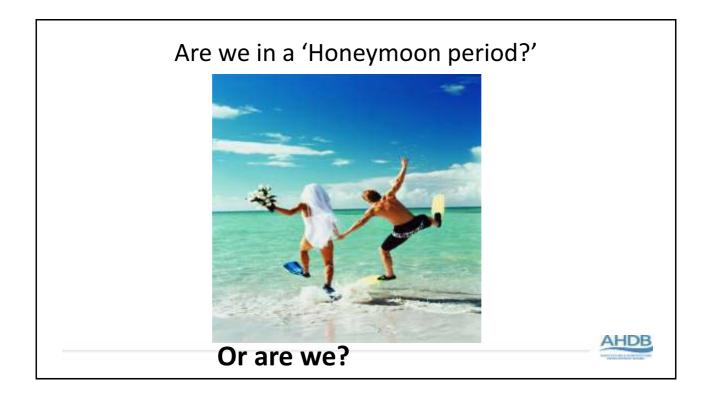
The EU also has free trade arrangements with other countries in Europe and beyond, including Turkey, Ukraine and other countries that are applying to join the EU.







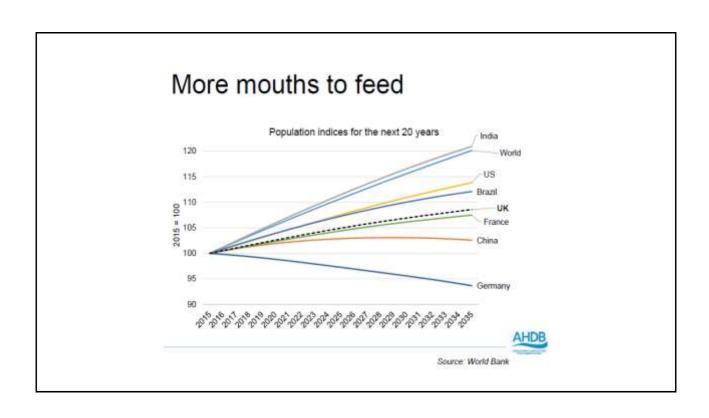




Positives

- · Economy growing
- · Weak pound increasing prices and support payments
- Payments guaranteed until 2020
- Markets remain open and free





More opportunities to capitalise on overseas market growth

Surge in the global middle class

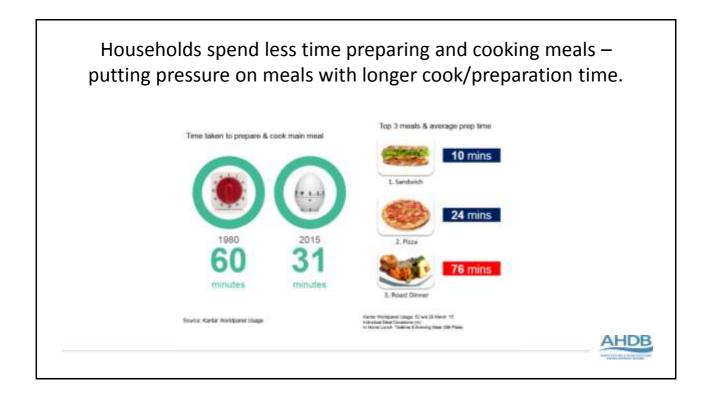
millions	2009		2020		2030	
North America	338	18%	333	10%	322	7%
Europe	664	36%	703	22%	680	14%
Central and South America	181	10%	251	8%	313	6%
Asia-Pacific	525	28%	1740	54%	3228	66%
Sub-Saharan Africa	32	2%	57	2%	107	2%
Middle East and North Africa	105	6%	165	5%	234	5%
World	1845	100%	3249	100%	4884	100%

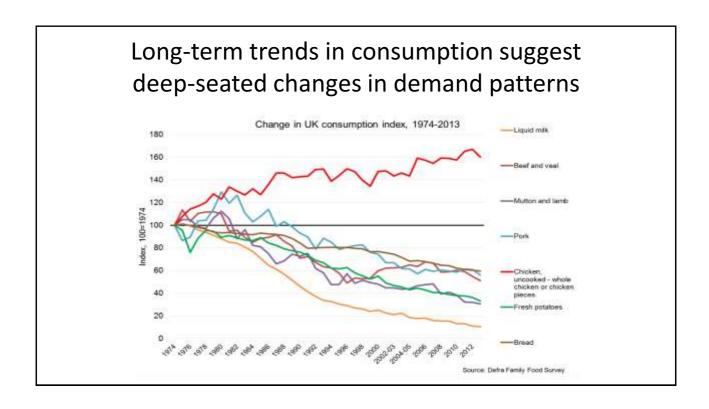
Source: The World Bank, Kharas and Gertz 2010

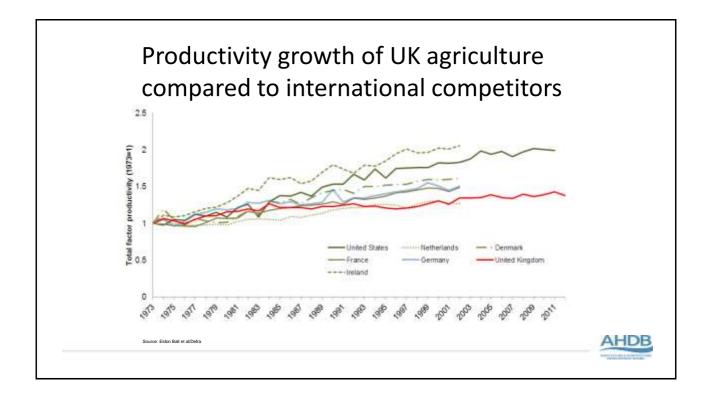


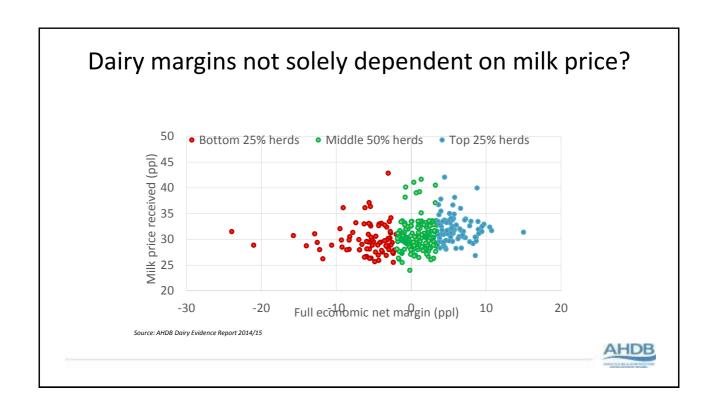












Precision Farming and The Internet of Things



A new purpose

"Inspiring our farmers and growers to succeed in this rapidly changing world"

AHDB Vision

"A world class food and farming industry, inspired by and competing with best"

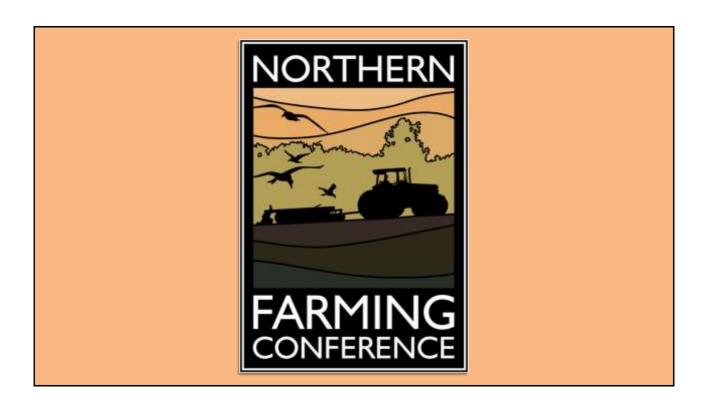


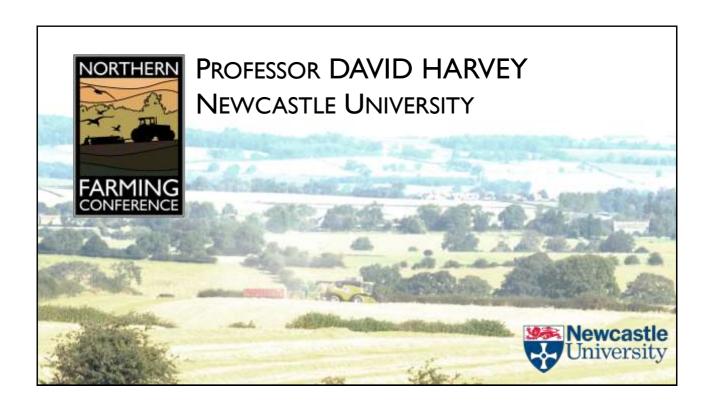
Conclusion

- 1. Make the most of the 'Honeymoon'
 - Look at your own business
 - Plan for less support and more competition
- 2. Understand the importance of trade
 - Download the AHDB Horizon documents
- 3.Getting this right; the biggest challenge for 60 years









7th Northern Farming Conference

Hexham Auction Mart 9th November, 2016.

Farming: where I see my the Future?

David Harvey









'SHORT' TERM PROSPECTS

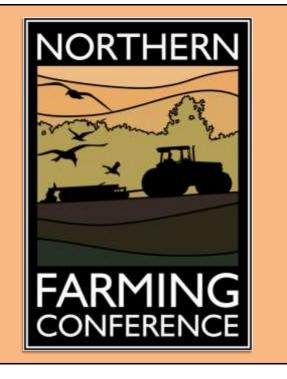
- Impacts might continue to be OK (to 2019/20)
- for British Farming (£ depreciation & BAPs)
- AND for Professional Ag. interests
 - Trade Analysis and Advice
 - Agric. & Env. Policy Analysis & Advice
 - Comparative analysis
- AND even for academics
 - Major socio-economic experiment
 - BUT problems for research networks/groups & funds.

Future Trade Relations?

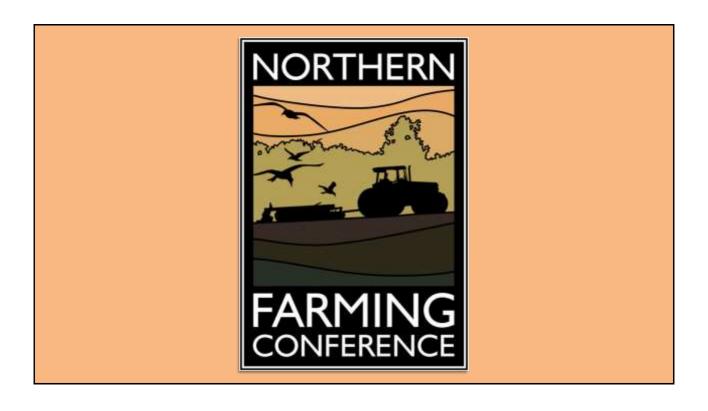
- Continued Single Market or Customs Union?
- Bespoke UK/EU 'trade agreement' will take years;
- Interim arrangements?
 - WTO rules (need to be defined & agreed with WTO members) hard
 - 'Norwegian' EEA arrangement?? soft
- FTRs are extremely hazy, & may not be clarified much by A50 terms.

British Agric. Policy (BAP)?

- Brexit DOES mean NO more CAP post 2020.
- So what are the options?
- Simple: Continued direct payments?
- Obvious: all(?) in Pillar 2?
- Or smart: CARTs with a horse + BAP Bond?
- Over to you you have the control! and good luck

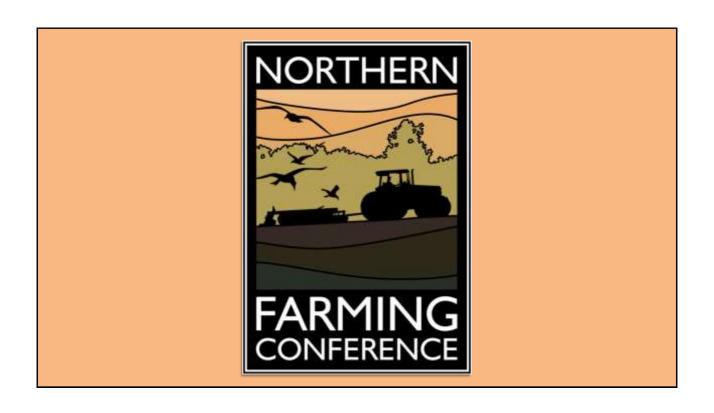


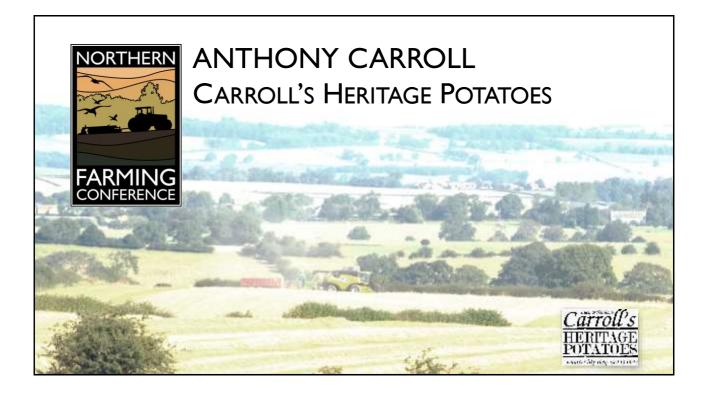


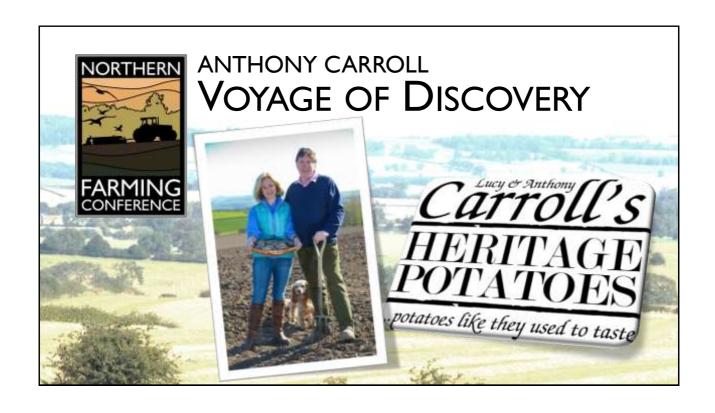


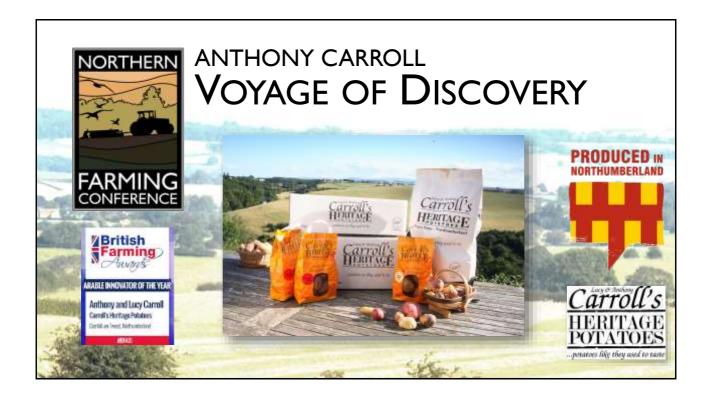


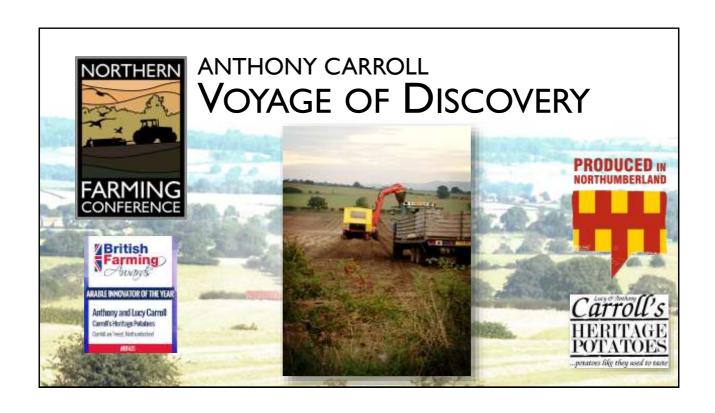


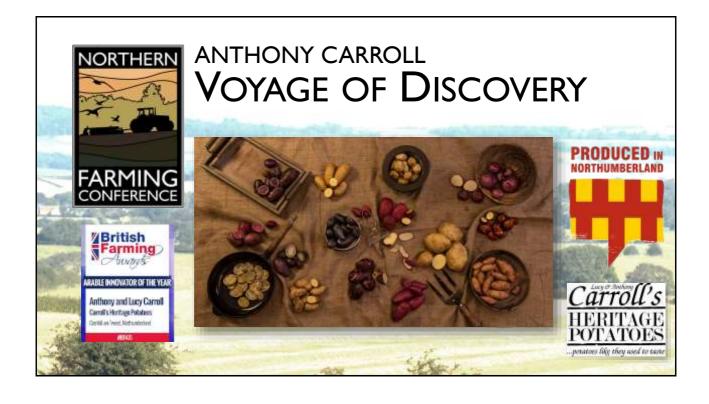


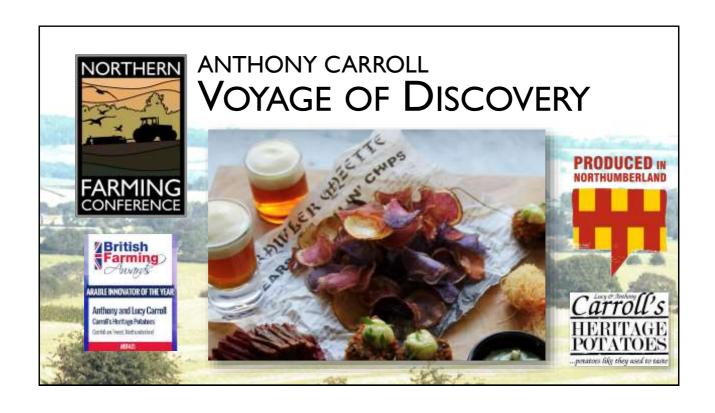


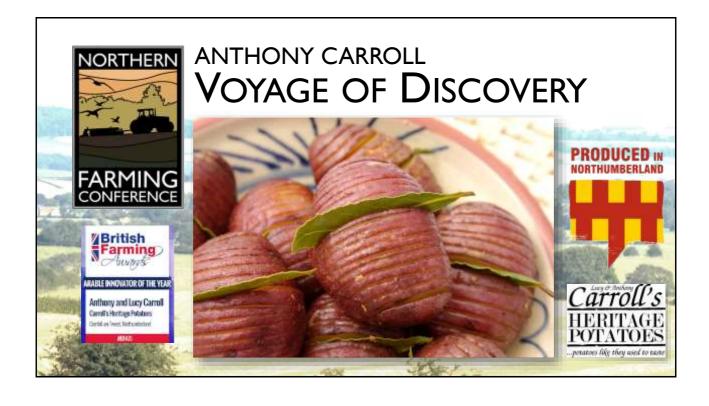


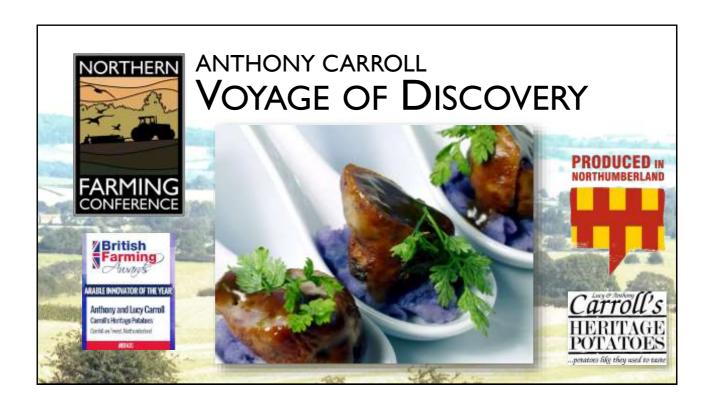


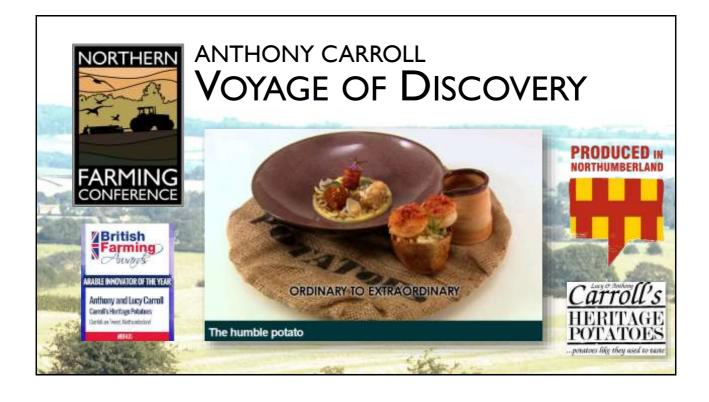


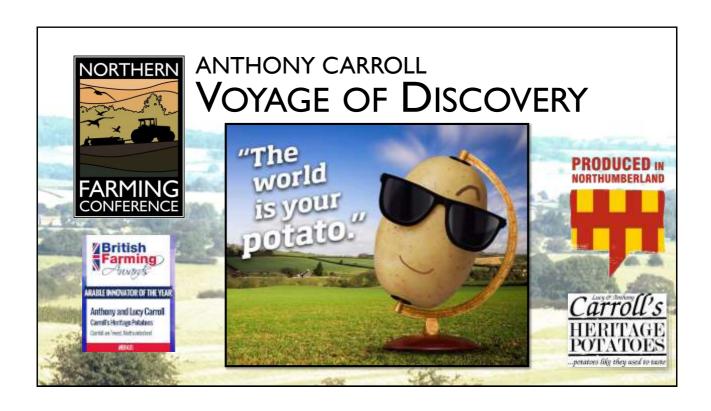


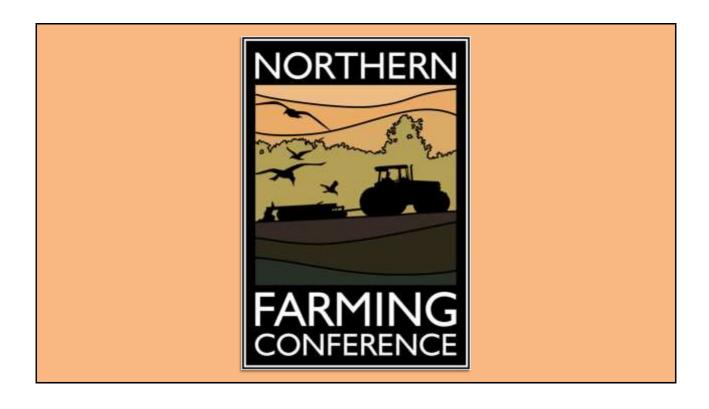


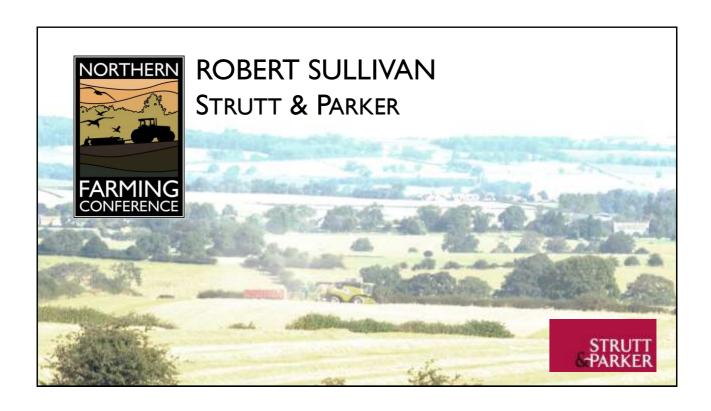


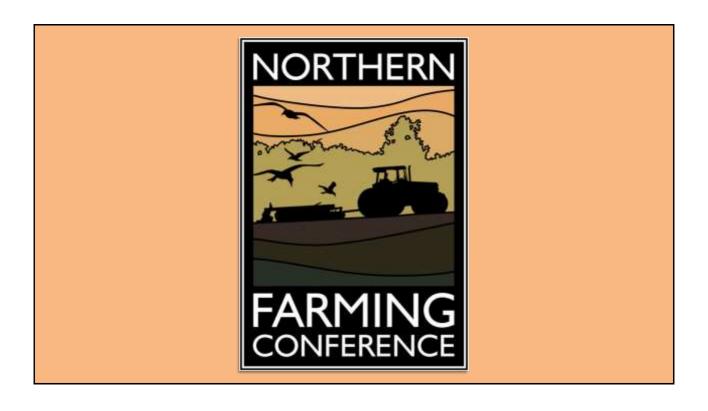


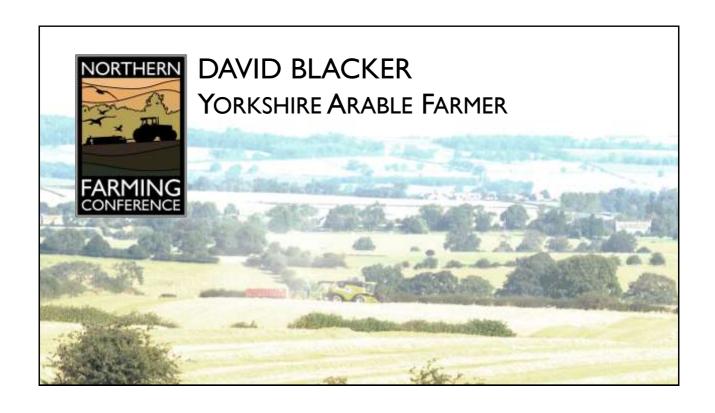












PRECISION FARMING

DAVID BLACKER

CHANGING SYSTEMS

- HISTORIC
- WW1-MIN TILL
- WW2-PLOUGH
- WBLY-PLOUGH
- WOSR-MIN TILL
- ALL GROUP 1 WHEAT
- Solstice, Gallant,

- NEW ROTATION
- WW MZURI
- WOSR-MZURI
- WW-MZURI
- SPRING BEANS-MZURI
- GROUP 3-4 WHEAT
- Siskin, Graham, Crispin



COSTS SO FAR

• 35,000 LTR DERV LESS **SAVING £14,100**

LESS LABOUR
 SAVING £13,500

• NO TRACTOR HIRE **SAVING £5,000**

• TOTAL SAVINGS £32,600

5 year average wheat yield 7.9t/ha

1st wheat target 10t/ha

2.1t/ha @130 = £273/ha £110/ac

FARMING PRECISELY

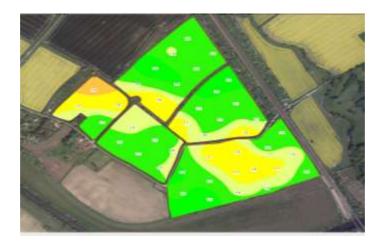


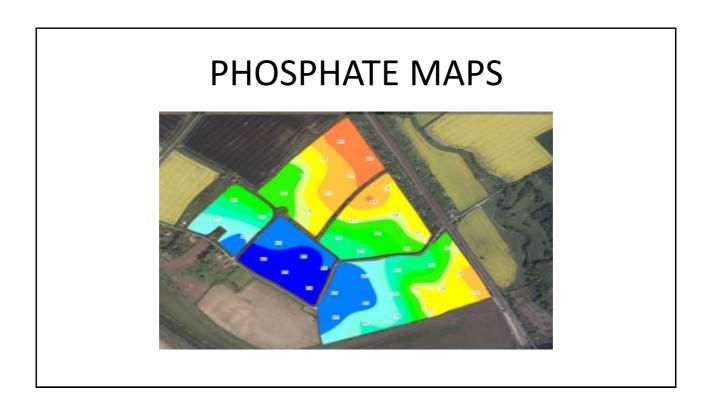
- +/- 10% We've all done it
- Blackgrass areas marked on a map. Now iPhone App
- Every farmer knows his soil type and where it changes.

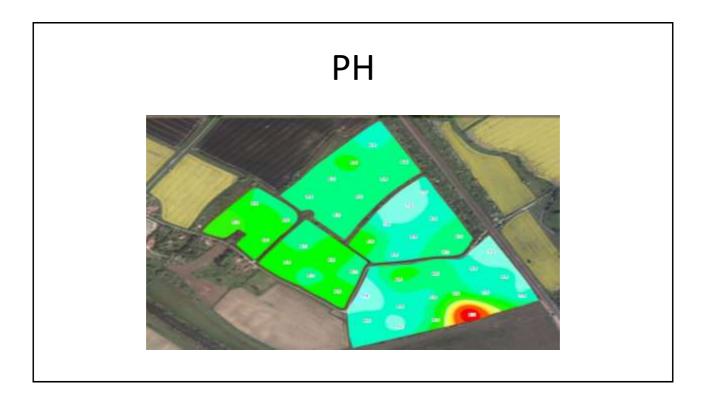
PRECISION FARMING

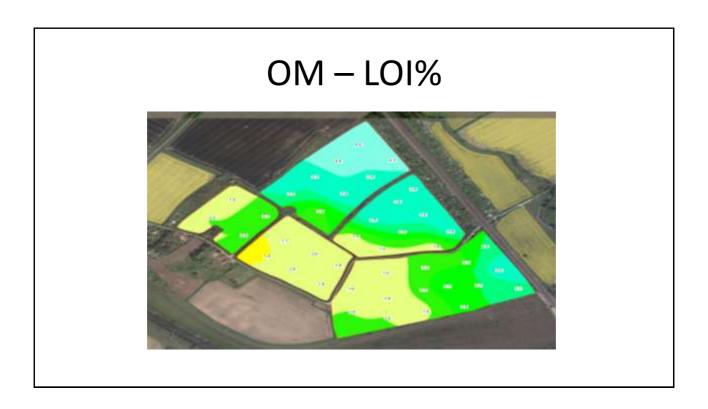
- CAPTURE DATA AND USE TECHNOLOGY TOO
- SAVINGS IN INPUTS AND TIME
- INCREASES IN EFFICIENCY OR YIELD

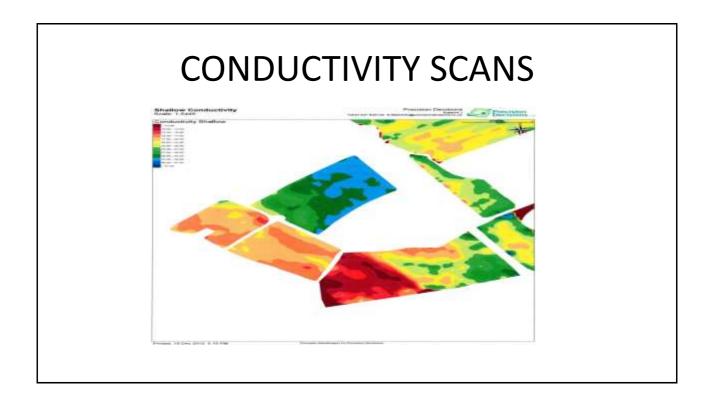
K Index Map







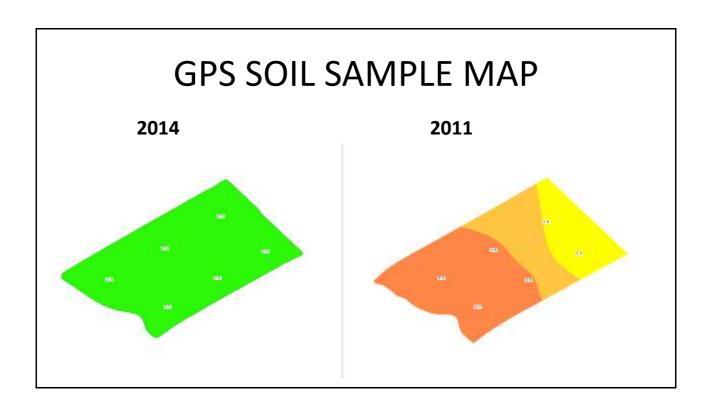




VARIABLE RATE SPREADING



- SOIL DEFICIT +
- CROP OFFTAKES
- SPREADING IS FIELD SPECIFIC
- SAVES NUTRIENTS
- ENVIRONMENTAL
- EVERY FARMER CAN ACHIEVE THIS.



SO WE KNOW WHERE THE NUTRIENTS ARE! DO WE REALLY?

TEST	Р	К	MG	PH
NORMAL	2.6	2.3	2.7	6.6
INCH 1	3.2	2.7	2.8	7.0
2	3.0	2.3	2.8	6.9
3	2.8	2.3	3.0	6.6
4	2.1	2.1	2.9	6.2
5	1.7	1.8	2.7	6.0
6	1.5	1.7	2.7	6.0
7	1.4	1.4	2.6	6.0
8	1.7	1.7	2.1	6.0
9	1.5	1.3	2.6	6.0
10	1.1	1.3	2.8	6.2
11	0.7	1.2	2.9	6.4
12	0.6	1.1	2.9	6.4

RTK AUTOSTEER

- MANY DIFFERENT SYSTEMS
- RANGE FROM 30CM 2CM ACCURACY
- GREATER ACCURACY = GREATER COST
- 30 CM LIGHTBAR £ 750
- RTK 2CM ACCURACY £ 5000-15000 ISH
- 24M TRAMLINES ARE 24M NOT 22M
- NO WASTED SEED, FERTILIZER OR SPRAYS

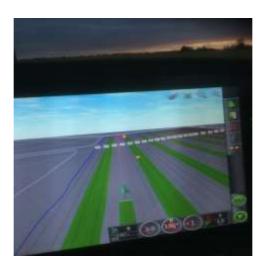
FIXED AND MOBILE BASE STATION







NIGHT TIME DRILLING



VARIABLE RATE FERTILIZER

Tractor mounted online sensors

GreenSeeker®	OptRx	Isaria	N-Sensor® ALS
	E C		70
boom in the front hitch or sprayer boom	boom in the front hitch or sprayer boom	boom in the front hitch (6 or 6.9 m wide)	on tractor cabin
2 - 50 (typical 4)	2 - 7 (typical 2)	2	2
60 - 140 cm	75 - 150 cm	40 - 100 cm	300 - 600 cm
nadir view	nadir view	nadir view	oblique view
4 x 0.6 m = 2.4m	2 x 0.8 m = 1.6m	2 x ca. 0.5 m = 1m	2 x 3 m = 6m
free on-field calibration by the farmer	free on-field calibration by the farmer	free on-field calibration by the farmer, optional 1-point-and absolute calibration for wheat	1-point-calibration (on-field or target rate) for cereals, maize, potato; absolute calibration for OSR
	boom in the front hitch or sprayer boom 2 - 50 (typical 4) 60 - 140 cm nadir view 4 x 0.6 m = 2.4m free on-field calibration by the	boom in the front hitch or sprayer boom 2 - 50 (typical 4) 60 - 140 cm 75 - 150 cm nadir view 4 x 0.6 m = 2.4m 2 x 0.8 m = 1.6m free on-field calibration by the	boom in the front hitch or sprayer boom 2 - 50 (typical 4) 2 - 7 (typical 2) 60 - 140 cm 1 - 150 cm 1 - 100 c

	GreenSeeker®	OptRx	Isaria	N-Sensor® ALS
Developer/Producer	Ntech, USA	Holland Scientific, USA	Fritzmeier, Germany	Yara
Distributor	Trimble,	Ag Leader	Claas	Precision Decisions
Price (incl. Standard software and terminal)	> 18,000 €	ca. 15,000 €	> 20,000 €	ca. 30,000 €

Satellite based systems

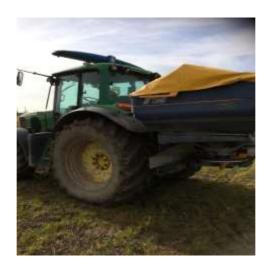
SOYLsense

Prescription maps for variable rate nitrogen based on satellite imagery in the UK price: 3,- £/ha,

10/11/2016

- No equipment purchase
- Not real time data.

YARA N-SENSOR

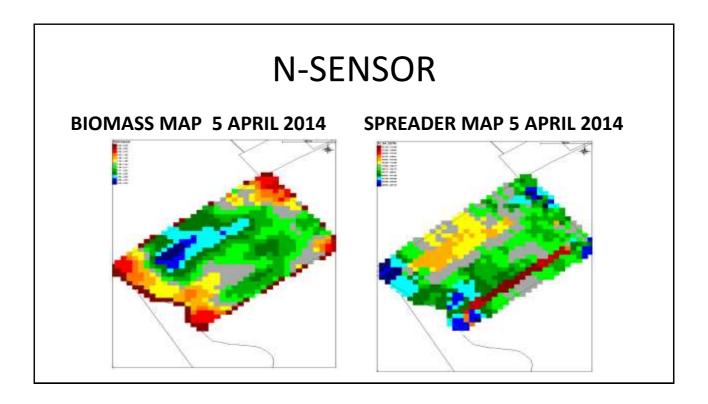


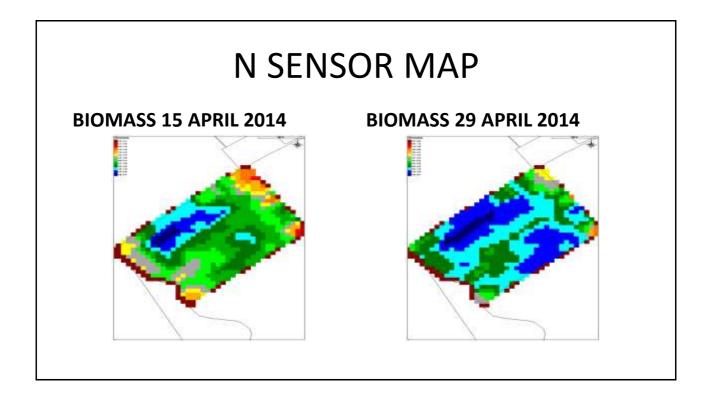
BENEFITS

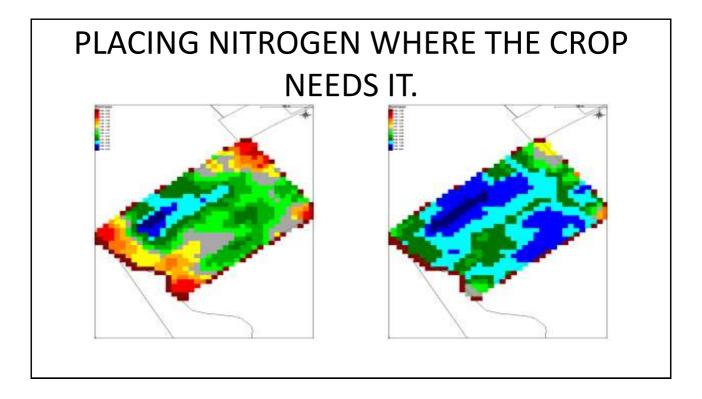
• 3% YIELD INCREASE WW £130

- £40/HA £16/AC INCREASE IN OUTPUT.
- DONT THINK IT SAVES N ON CEREALS.
- I STILL DECIDE HOW MUCH TO APPLY.
- N-SENSOR DECIDES WHERE TO PUT IT.
- BUT.... IT CAN SAVE UP TO 40% ON OSR IF YOU LET IT AND TRUST IT.

OSR £45/HA - £18/AC SAVING IN N







NITROGEN

- ICI
- YARA
- ROTHAMSTEAD
- NIAB
- ADAS
- AHDB
- UNIVERSITIES
- ALL DONE RESEARCH ON NITROGEN FOREVER.

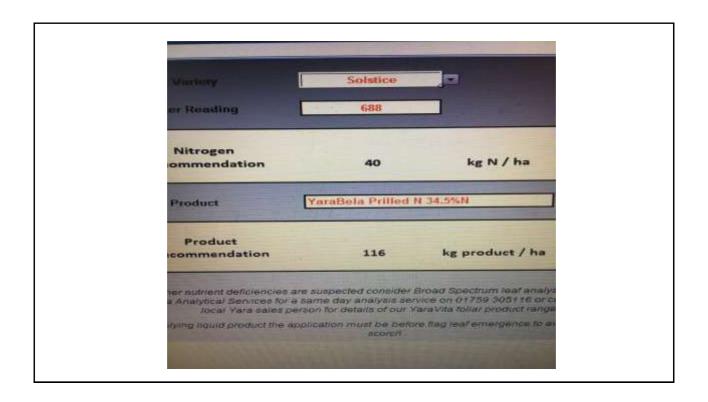
160-220KG/N/HA

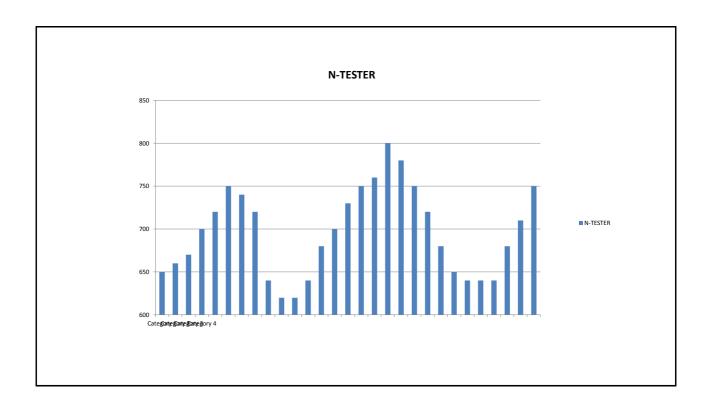
- N EFFICIENCY RATE IS 60%
- 60KG/N TAKEN UP FROM 100KG/N APPLIED

N-TESTER



- Measures Chlorophyll in plant
- Chlorophyll related to N in plant
- Below 650 plant is deficient
- Above 700 sufficient N
- Testing every week
- · Newest fully emerged Leaf.





N-Tester Trial Results.

DATE	PRODUCT	FLAT RATE	N-SENSOR	N-TESTER	ACTUAL N TESTER
13 MARCH	SULPHUR +	60	56	58	58
1 APRIL	SULPHUR +	75	98	36	36
3 MAY	34.5	80	74	45	45
25 MAY	34.5				45
	TOTAL N	215	228	139	184
	YIELD T/HA	8.45	8.74		9.35

7% YIELD INCREASE FROM 24% LESS NITROGEN. ARE WE WASTING IT??

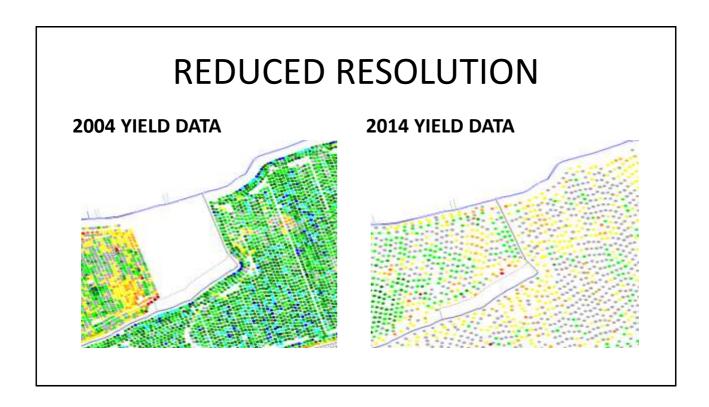
30FT CUT - PROGRESS ??

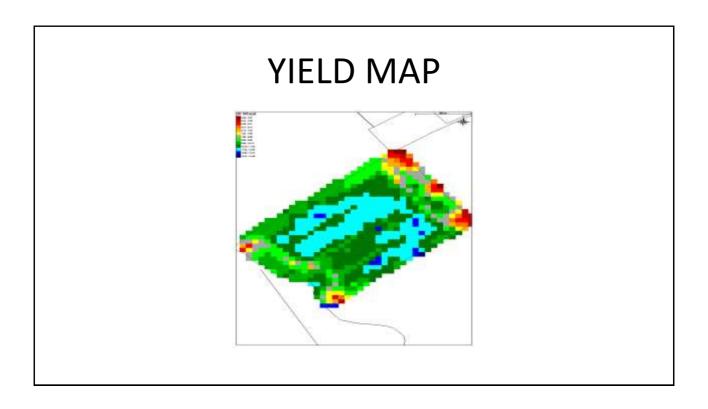


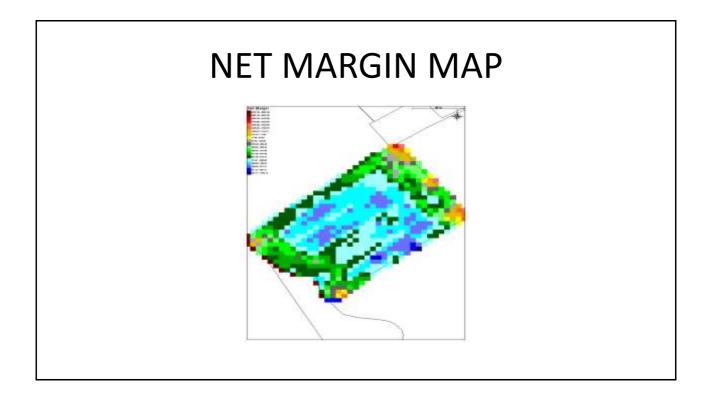
BUT IS IT PROGRESS







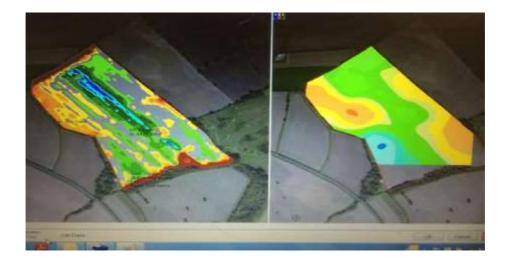




Best yielding area is most fertile!

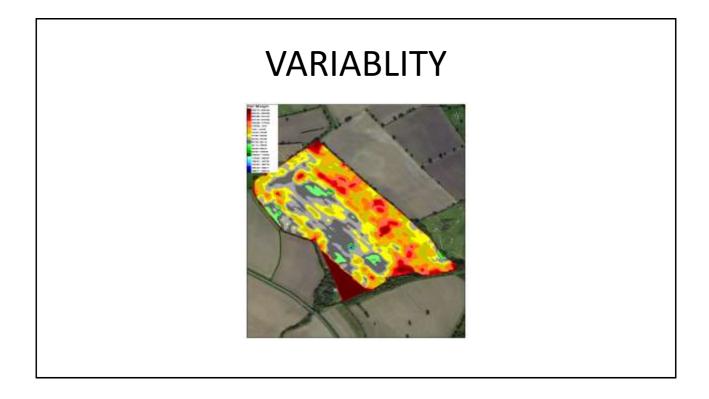
- WRONG
- Best Yield is the area of crop that's had the least restrictions through the growing season.
- Nutritional, competition, moisture.
- Areas change from year to year.

YIELD VS PHOSPHATE









RESTRICTING FACTORS. LAND INJURED BY WATER..

DRAINAGE



CLAY SOILS

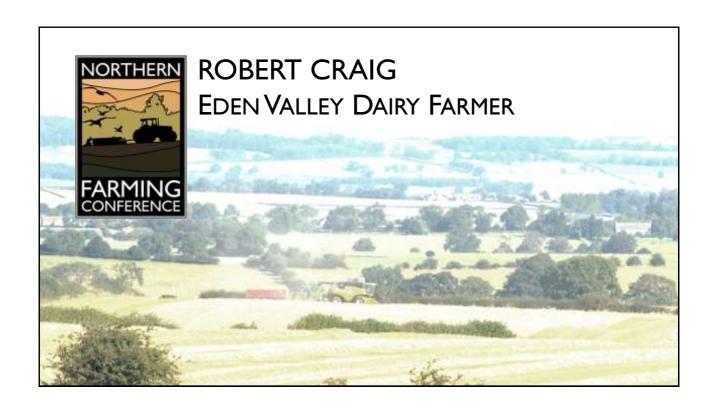


THE FUTURE

- DRONE IMAGERY
 ALREADY BIG DEVELOPMENTS WITH BLACKGRASS
- VARIABLE RATE DRILLING (AGAIN) SPRING 17
- AUTO-SECTION CONTROL ON SPRAYER
- VARIABLE RATE GR + FUNGICIDES
- HOPE THAT POLITICS DOESN'T DESTROY OUR INDUSTRY.

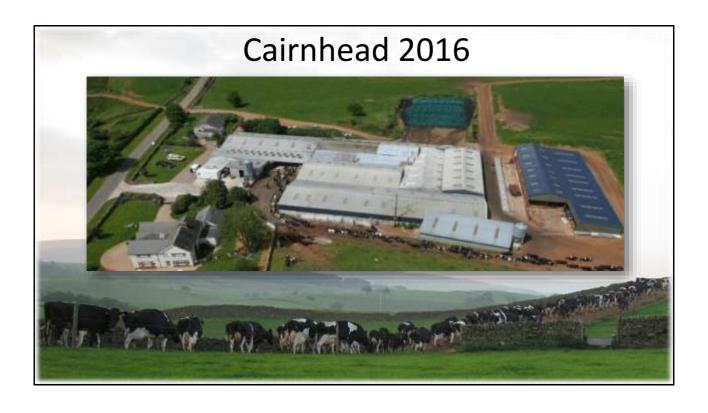
THANK YOU



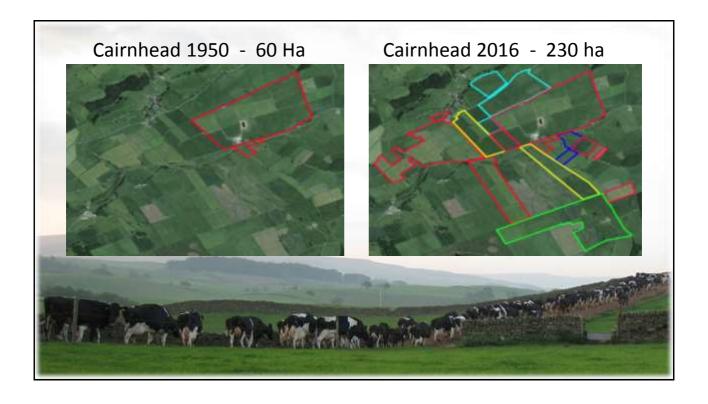


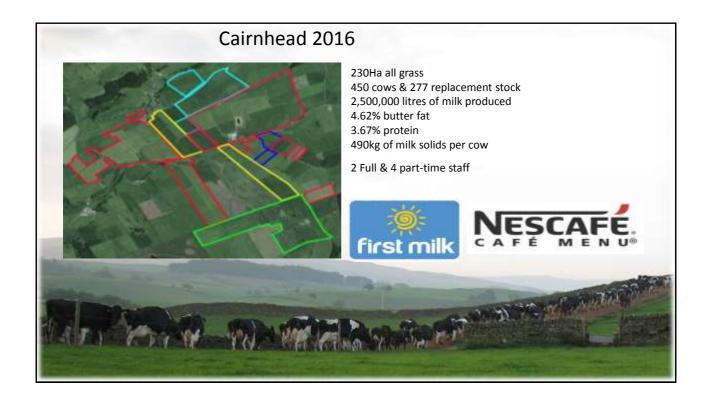


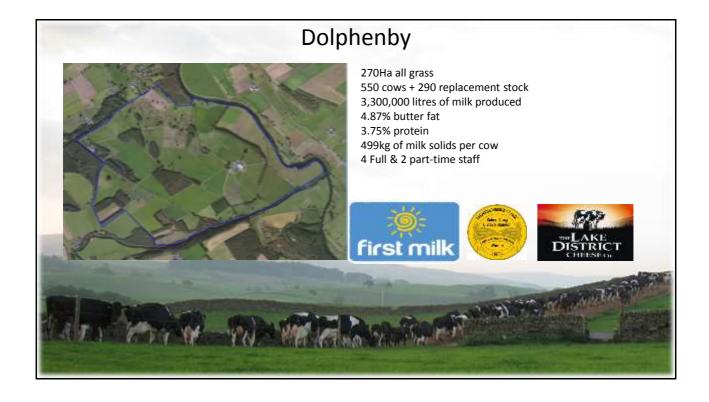


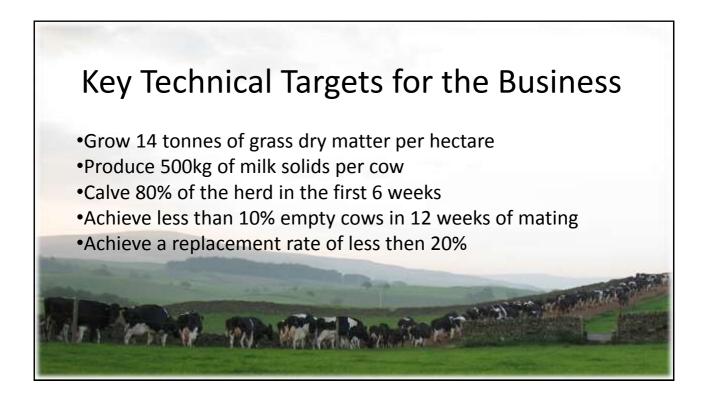


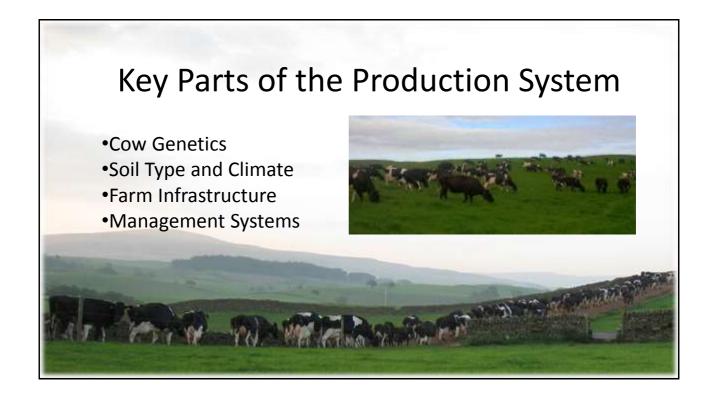


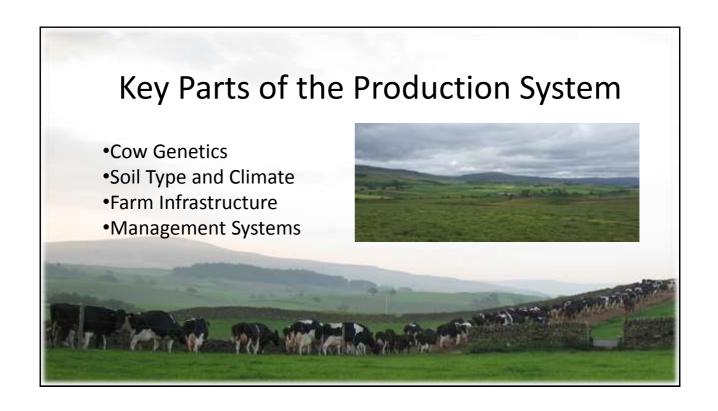


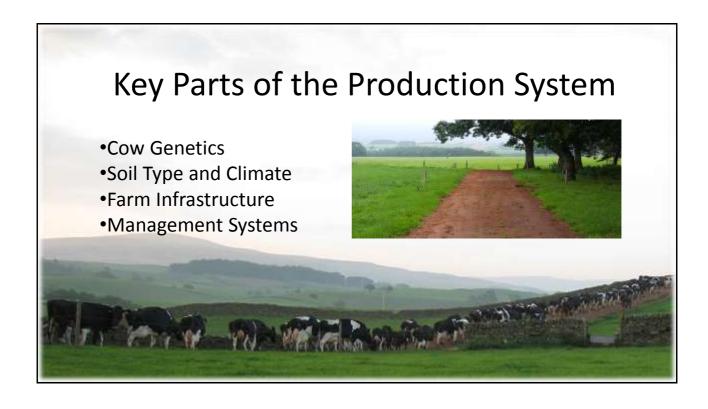


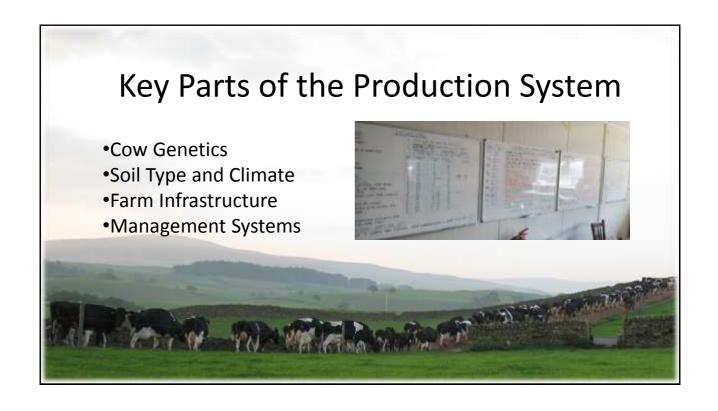






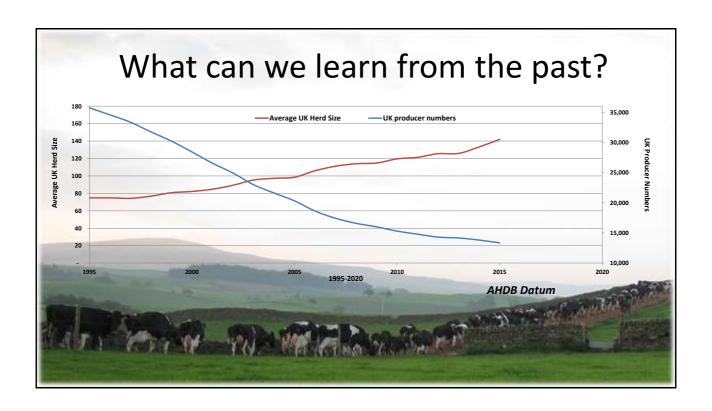


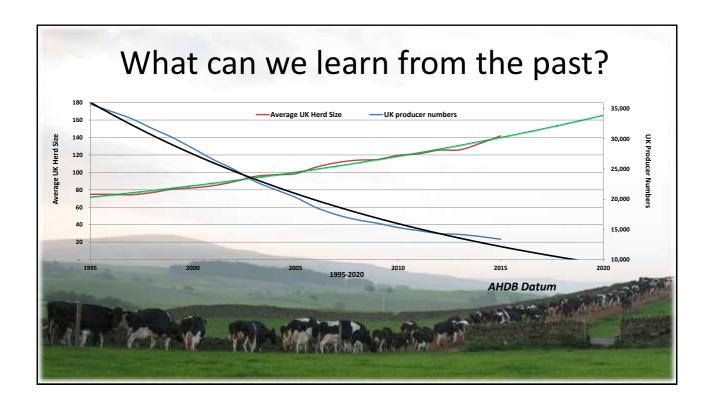




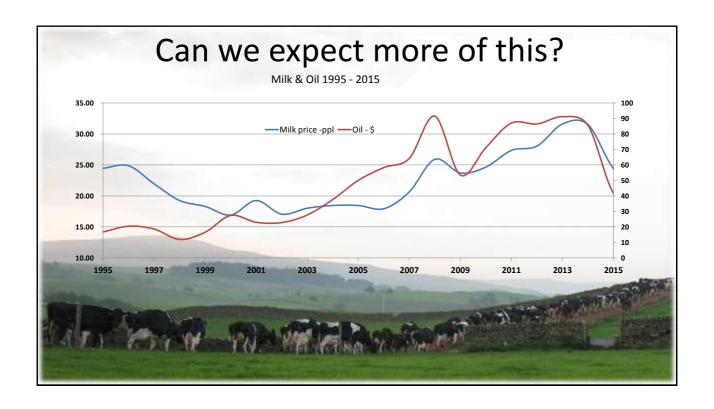


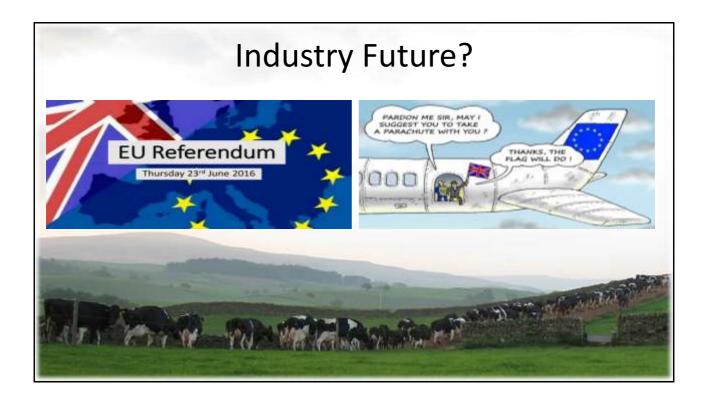










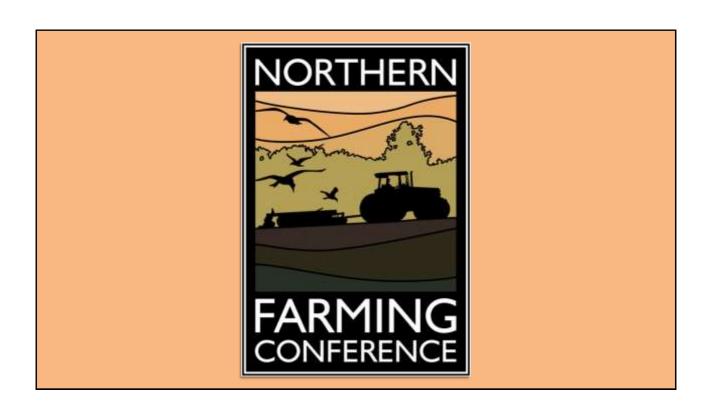


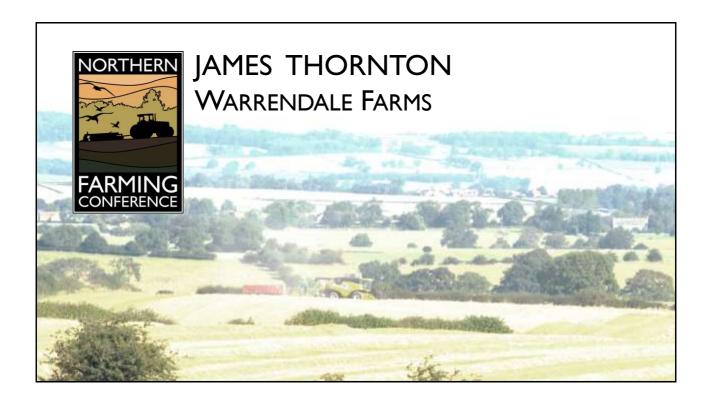




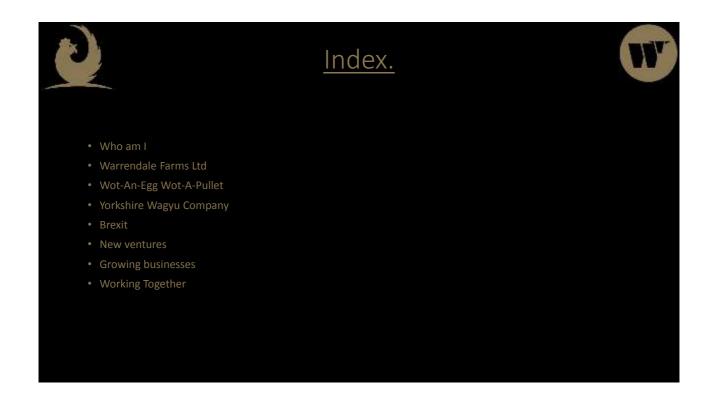
Conclusion My business future is all about people and building high quality relationships • Attractive to top graduates who want to farm • Opportunity to add value through branding and explore new markets • BREXIT ?! – Likely to see little noticeable change (dairy) • Educate and inform consumers • UK well placed to produce highly sustainable food







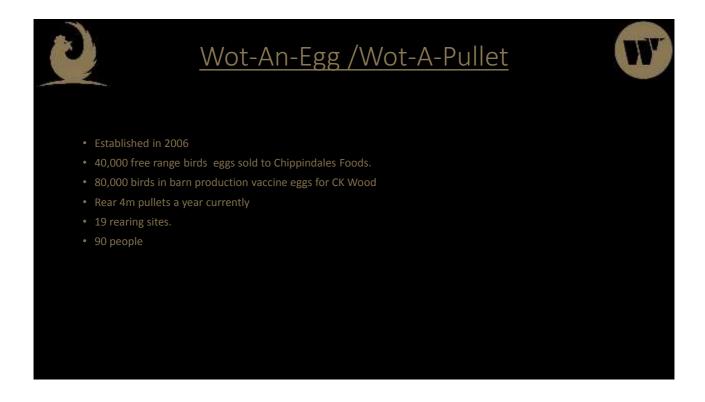




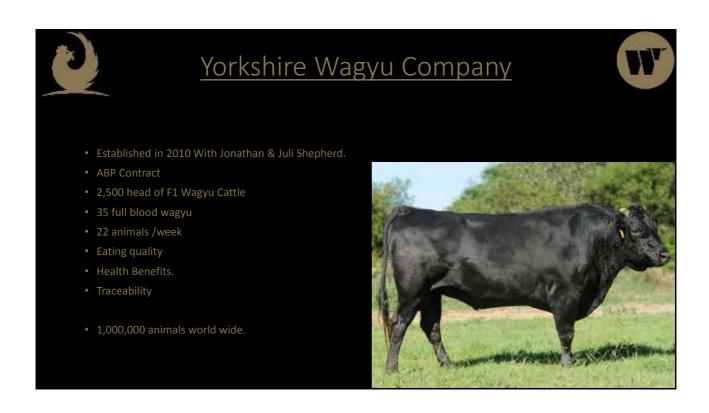
















The WestWood Buying Group



- Access to the buying power of a group made up of like-minded businesses and individuals.
- Access to reduced rate services and commodities, including lower electricity rates and higher export rates for renewable generators.
- Hassle free contract negotiation.
- Expandable model to encompass and facilitate any product.
- Access to complex, but lucrative markets such as the Capacity Market and Frequency Response.

