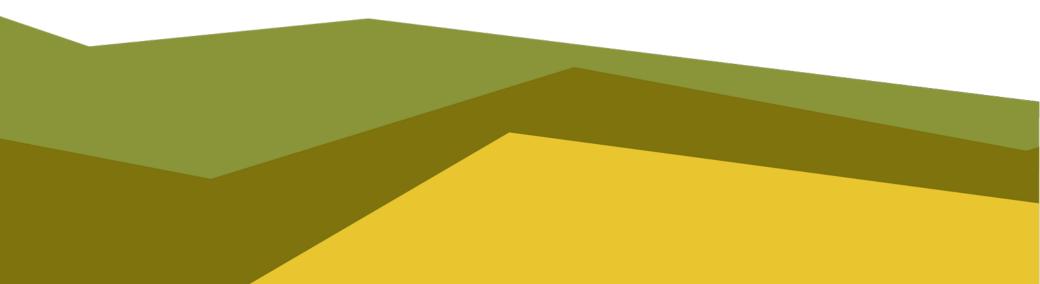
**Home-Grown Cereals Authority** 



# **HGCA R&D Strategy**

#### Susannah Bolton (HGCA Head of R&D and KT)

November 2009



# **Development of HGCA**



- > established in 1965 to improve marketing of cereals
- working for UK growers, traders & processors to improve the efficiency of the grain industry

#### extended in 1989

- include oilseeds
- ➤ more R&D
- export and home market development

#### HGCA's mission....

*"to improve continuously the production, wholesomeness and marketing of UK cereals and oilseeds so as to increase their competitiveness in UK and overseas markets in a sustainable manner"* 

# Market failure and the need for HGCA within AHDB



- Radcliffe Report (October 2005) and consultation confirmed industry support for HGCA
- Independence of HGCA is greatly valued
- Ministerial decision in June 2006 that five statutory levy boards would be wound up and replaced by one new public body with six wholly-owned sector companies.



### Levy kept at 40p per tonne for 10 years

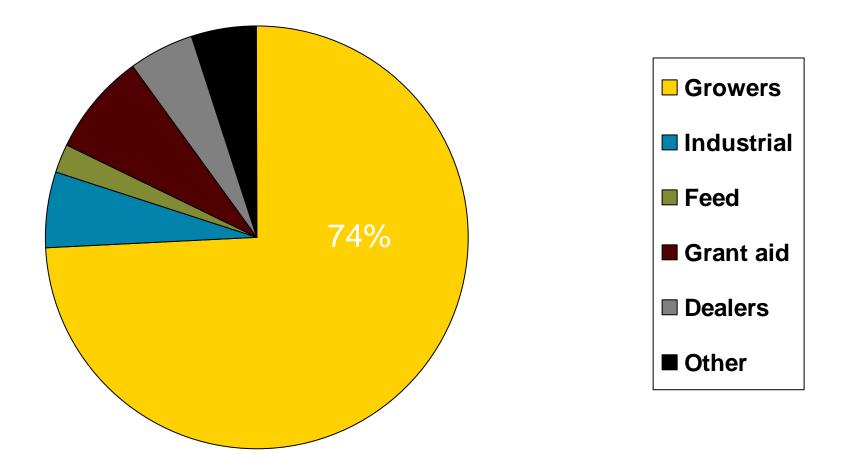
Cereal growers Cereal dealers Cereals processors (millers, maltsters & industrial) Cereals processors (animal feed)

Oilseeds growers

40 p sold off farm 3.3 p 8.25 p 4 p 65 p

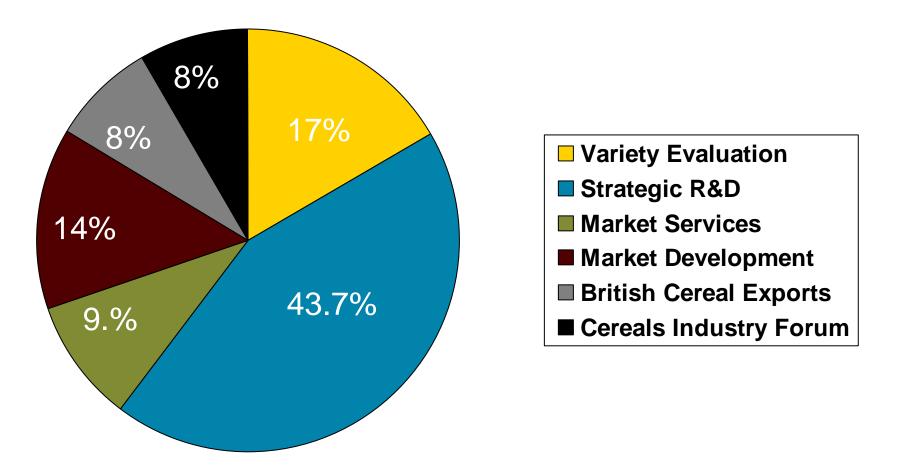
### HGCA income - £10.25 million





## **HGCA** expenditure







- Applied, near-market research
- Robust and independent data
- Improve competitiveness of UK cereals and oilseed

#### Assessing stakeholder needs





#### What the strategy contains



- 4 outcomes
  - Increased competitiveness
  - Equipped for change

- Improved environment
- New market opportunities

- 11 targets
  - Raise yields
  - Reduce costs
  - Realise quality potential
  - Prepare for the future
  - Achieve food safety standards
  - Comply with environmental regulations
  - Minimise adverse impacts
  - Improve farmland biodiversity
  - Reduce GHG emissions
  - Develop biofuels
  - Increase industrial use of crops

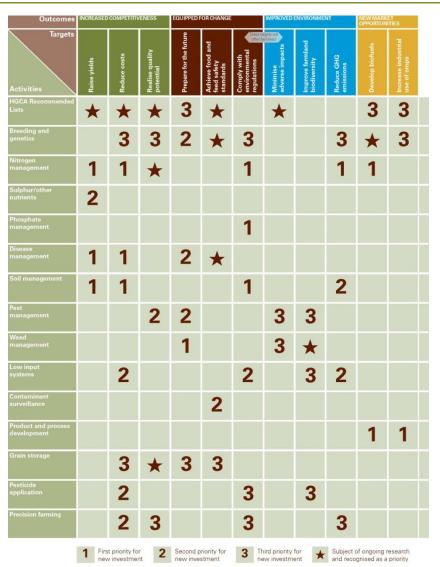
Knowledge transfer integral to strategy

### Matching targets to activities



#### First priority for new investment

- Nitrogen management
- Phosphate management
- Disease management
- Soil management
- Weed management
- Product and process development



#### Implementing the R&D strategy





#### Knowledge transfer integral to strategy

#### Research Projects commissioned against the 2007 R&D Strategy (As of 1 April 2009)



Activity	No. projects
HGCA Recommended Lists	1
Breeding and genetics	10
Nitrogen management	14
Sulphur and other nutrients	1
Phosphate management	3
Disease management	29
Soil management	1
Pest management	11
Weed management	3
Low input systems	3
Contaminant surveillance	14
Product and process development	12
Grain storage	2
Pesticide application	3
Precision farming	2
Activity-spanning projects	8
Additional to strategy	2
Total	119

#### **Recommended Lists**



#### HGCA Recommended List<sup>®</sup> Winter Wheat 2008/09

MARKET OPTIONS AND GRAIN	QUAL	ITΥ																												
RECOMMENDED				<b>C</b> *		С	P2		P1		P2	С	*	С	*	*	*	P2	P1	P1			P2	*	С	*		P2	*	*
HGCA	Xi19	Solstice	Mascot	Malacca	Hereward	Einstein	Battalion	Cordiale	Marksman	Soissons	Zebedee	Robigus	Deben	Claire	Nijinsky	Consort	Riband	Oakley	JB Diego	Duxford	Glasgow	Istabraq	Humber	Brompton +	Alchemy	Ambrosia	Gladiator	Timber &	Welford \$	Gatsby \$ Average LSD (5%)

End-use group	nabim G	Froup 1				nabim G	roup 2				nabim G	roup 3						nabim G	roup 4											
Scope of recommendation	East	UK	UK	UK	UK	UK	UK	UK	E&W	E&W	E&W	UK	UK	UK	UK	North	North	UK	UK	UK	UK	UK	UK	East	UK	UK	UK	Sp	Sp	Sp
UK treated yield (% control, 10.1 t/ha)	103	100	97	93	91	102	102	101	100	88	103	102	101	99	98	98	~	108	106	106	105	104	104	104	104	103	103	102	102	101
Main market options (The specific attributes o	market options (The specific attributes of varieties are different so, whenever possible, varieties should not be mixed in store)																													
UK bread-making	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	•	-	-	-	-	-	-	-	-
UK biscuit, cake-making	-	-	-	-	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
UK distilling	-	-	-	-	-	-	-	-	-	-	Y	Y	-	Y	Y	Y	Y	-	-	-	Y	Y	-	-	Y	-	-	-	-	-
ukp bread wheat for export	Y	Y	[Y]	в	Y	В	[B]	Y	[B]	Y	-	-	-	-	-	-	-	-	-	?	-	-	-	-	-	-	-	[B]	-	-
uks soft wheat for export	-	-	-	-	-	-	-	-	-	-	Y	Y	-	Y	в	Y	-	-	-	-	Y	Y	-	-	в	Y	-	-	-	[Y]
Year first listed	02	02	06	99	91	03	07	04	08	95	07	03	01	99	04	95	89	07	08	08	05	04	07	05	06	05	04	07	04	06
Grain quality																														
Endosperm texture	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Soft	Soft	Soft	Soft	Soft	Soft	Soft	Hard	Hard	Hard	Soft	Soft	Hard	Hard	Soft	Soft	Hard	Hard	Hard	Soft
Protein content (%)	11.8	12.3	12.6	12.5	13.2	12.2	12.4	12.6	13.0	13.0	11.6	11.8	11.4	12.0	12.0	11.8	11.8	10.9	11.3	11.4	11.4	11.2	12.0	11.7	11.8	11.9	12.0	12.6	11.8	11.8
Hagberg falling number	274	272	278	312	238	266	248	304	247	249	264	206	204	242	219	226	200	165	292	266	179	207	288	219	247	190	263	249	261	236
Specific weight (kg/hl)	75.9	78.4	77.3	75.3	79.0	77.2	76.0	79.3	77.0	79.3	74.4	76.5	75.7	76.3	74.7	76.8	74.3	75.5	77.4	76.2	76.5	78.2	76.8	73.6	77.3	76.8	77.1	77.5	74.4	76.6
1000 grain weight (g)	51.8	50.5	[51.5]	45.7	48.4	50.7	[50.2]	47.5	-	46.4	[49.3]	45.5	53.0	47.6	47.2	50.7	53.0	[48.5]	-	-	[44.7]	49.5	[51.0]	50.0	[49.1]	[53.1]	46.8	[47.0]	43.5	[43.6]
Zeleny volume	46.7	51.0	[51.7]	47.9	[58.1]	42.7	-	50.9	-	[59.3]	[22.6]	24.7	-	24.1	[29.2]	[23.5]	-	-	-	-	-	-	-	-	[12.2]	-	-	-	-	-
Chopin alveograph W	178	189	[231]	217	254	171	177	239	290	296	86	101	125	96	106	112	[83]	[120]	[220]	173	85	73	[103]	[77]	55	[72]	95	184	78	[78]
Chopin alveograph P/L	0.7	0.7	[0.7]	0.7	0.5	0.5	0.8	0.7	1.0	0.6	0.3	0.3	0.6	0.3	0.3	0.3	[0.4]	[0.5]	[1.8]	1.0	0.2	0.3	[1.0]	[2.1]	0.5	[0.3]	0.7	0.8	1.0	[0.4]

#### **Pre-breeding research**



#### CEREALS



Project 2492

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The selection report for prover stars and first export for 2015 will be evaluation on 1904 years to seven because



#### It's in the genes

Working towards a better understanding of wheat genetics and the needs of the baking industry could load to varieties with greater. marketing opport unities. Sarah Henly reports on key HGCA research

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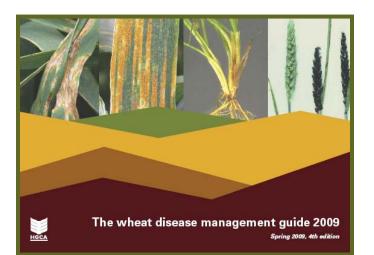
Working with breeders

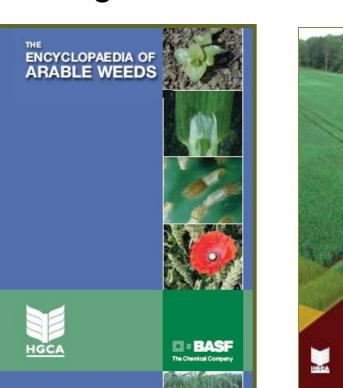
 Funding from DEFRA through LINK

#### APRs, Final Project Reports, Research Reviews

~ 11,000 on 'technical mailing list'

#### Guides & guidelines







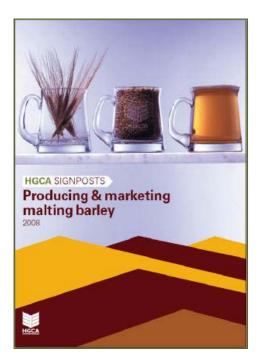


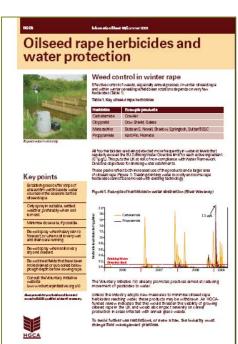
#### **Publications**

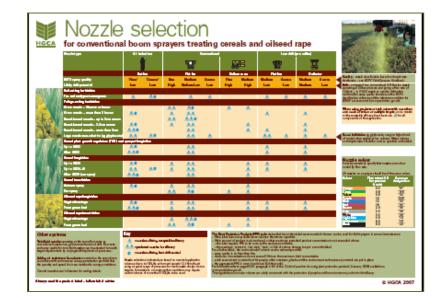
#### **Publications**



- 'Signpost' documents
- Topic Sheets & Info Sheets
- Posters







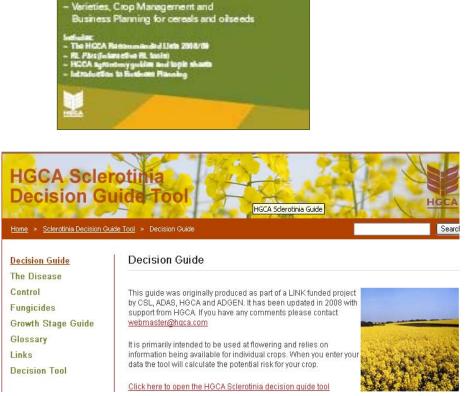
#### Crop Oracle CD-ROM

#### • Crop Research e-Newsletter

- ~ 2,700 recipients
- Website

e-Services

- calculators, fungicide performance tool, disease prediction etc
- Knowledge Centre
- User friendly 'shorts cuts'
  - e.g. www.hgca.com/grainstorage www.hgca.com/currentprojects



HGCA

Crop Oracle 2008



#### **Responsiveness and flexibility**

180



#### Daily Mail, Wednesday, February 11, 2004 Page 39 **Cereal toxins fears** 🄇 · 🜔 · 🖹 🗟 🏠 🔎 🌟 🌒 🏵 🍰 🖬 · 📒 More than half Level of T-2 and HT-2 TOXINS ALERT Level of Deoxynivalend (micrograms per kilo) (micrograms per kilo) FOOD of oat products The Health Store Medium Oatmeal 129 STANDARDS Food Promotion and Children Debate Scotland Morrisons Bettabuy Muesli 404 Outspan Muesli bars 129 AGENCY Suma Deluxe Muesli **Bondgate Bakery Oatmeal Bread Rolls** 297 129 26 February 2004, Assembly Rooms, Edinburgh, from 7 to 9pm contaminated Kellogg's Honey Loops Flahavan's Porridge Oats 100 233 Quaker Harvest Crunch-Oat Clusters Paterson's Scottish Oatcakes 195 91 > <u>Homepage</u> > <u>Media Centre</u> > <u>News archive</u> > **Mycotoxins in oats survey** Pepperidge Farm Oatmeal Cookies Flahavan's Irish Porridge Oats 193 67 **By Sean Poulter Realeat Vege Banger Mix Quaker Oat Krunchies** 192 65 Home Search site Consumer Affairs Correspondent **Boots Organic Creamy Porridge** 180 The Health Store Oatbran Mycotoxins in oats survey (GO) Nestle Cheerios Whole Grain Cereal Mornflake Medium Oatmeal MORE than half of breakfast News Centre 142 53 Friday, 06 February 2004 cereals and muesli bars made Vege Banger Mix 106 Co-op Instant Hot Oats Press releases Advanced search with oats are contaminated The Health Store Fine Oatmeal **Daily Bread Oat Bran** 101 with traces of toxins, A survey carried out by the Food Standards Agency to investigate Coming up... **FOOD DIRECTORY A-Z** Proposed EU child safety limit 100 Proposed EU child safety limit scientists have found. levels of mycotoxins in oat products suggests that the amounts in Diet and Health Their study of 335 brand-name our diets are very low. products such as Kellogg' campaigners, who say many parents feed their babies oat-based cereals nany years has been reported to of a normal weekly diet. It added: problem the industry was th Safety Nestle's and Quaker detected harm the immune system and 'The survey does not raise any safety concerns about oat to eradicate. traces of mycotoxins. m an early age ge an unborn baby. A spokesman for Boots s register to attend Hygiene In large quantities, such sub-stances can lead to sickness, diar-rhoea and in extreme cases death. Kath Dalmeny, spokesman for But it says the levels found in its study of products - which included Kellogg's Honey Loops, Nestle's Cheerios, Quaker Harvest Crunch-Oat Clusters with real red berries and Boots The survey was carried out to provide information on the levels of products on sale to the public 'We are not taking this lig That said, we are absolu Kath Daimeny, spokesman for The Food Commission, said: 'Many of these foods are popular with children. It is not enough to fob and so consumers do not need to venue details mycotoxins in oat products, such as porridge oats, biscuits, BSE happy this product is sa Cereal Partners UK, which m change their diets as a result. Researchers from the Food Stan-dards Agency found three different types of mycotoxins in 174 samples. The Food & Drink Federation cereals and baby food. Mycotoxins are a group of toxic chemicals ask a question people off with the idea it is perfectly Labelling claimed the agency had given its members a clean bill of health. Cheerios, said it would review findings 'as a matter of urge formed by some fungi that are widespread in certain cereal crops. ife and we should not worry. Manu Ask Sam The agency says the levels recorded are minimal and not facturers can and should do more to Organic Creamy Porridge – would not cause concern in terms But a spokesman admitted Kellogg's said the survey 'did GM They may pose long-term risks to people's health if they eat food reduce the levels seen in foods. raise any significant concerns that contains high levels. considered a health risk for adults Mycotoxins are linked to fun <u>(our Views</u> who follow a varied, Is it safe to freeze However, in 21 prod levels exceeded prop ctive Tools fresh meat? Researchers bought 335 samples of a wide range of retail oat limits designed to p and children aged th products at random from a variety of UK shops. No mycotoxins The findings have cement were found in 48% of these samples. The levels measured in the Answer. rest of the samples were generally extremely low, typically below ce and Research ... MORE QUESTIONS ) the level of 10 micrograms/kg for each mycotoxin analysed. us TODAY'S FEATURES CAFFEINE ADVICE nd There are currently no regulatory limits for these mycotoxins in When you're pregnant oats in the UK. However maximum limits are under discussion in :/Cvmru New labelling rules the EU and the vast majority of the levels found in this survey are ern Ireland below the proposed EC limits. The survey does not raise any TOP SEARCH TERMS safety concerns about oat products on sale to the public and so Jobs consumers do not need to change their diets as a result of the Farmhouse ch findinas. Salt rlands Additives The Agency will continue to monitor for mycotoxins in these and ct Us Obesity other foodstuffs and is working with industry to ensure that levels Updates AVIAN FLU remain low Chicken ban ext Alerts



Retail oat products survey

See the full survey

DEFRA advice

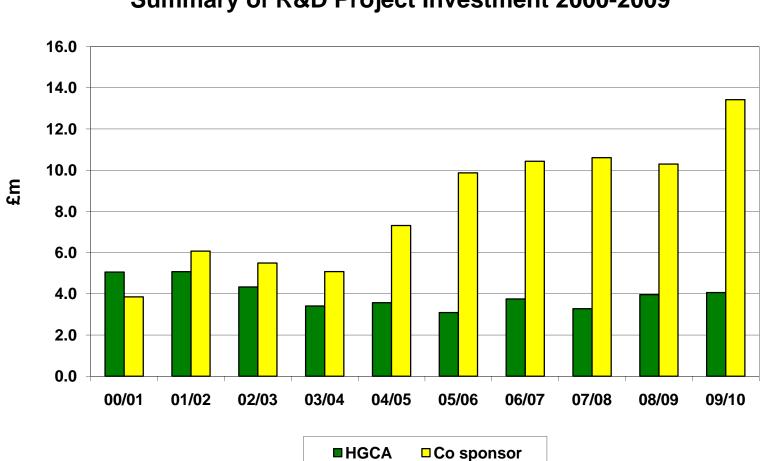
PREGNANCY

What to eat

WHO information

### **Co-funding for R&D**





#### Summary of R&D Project Investment 2000-2009



- Assessment of performance against current strategy
- Industry & contractor consultations March & April
- Grower & Agronomist consultations March & April
- Questionnaire May
- Cereals interactive display June
- Consultations August
- Approval by HGCA Board October
- Strategy launched January 2011



### Thank you

