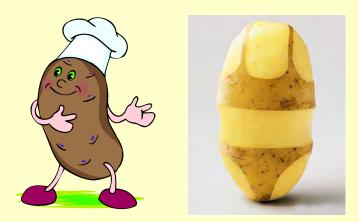


The natural choice for fresh potatoes...

# <u>Potato Variety Development</u> <u>in a Mature Retail Market</u>



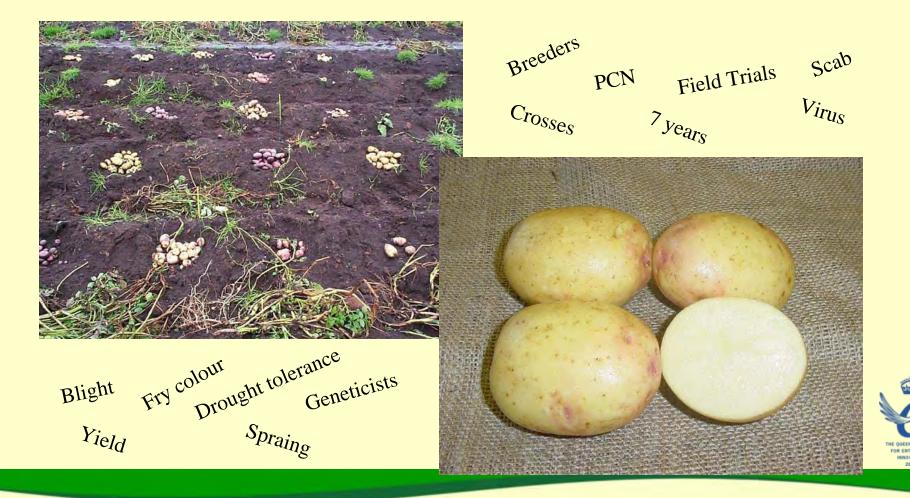
Making potatoes Sexy !





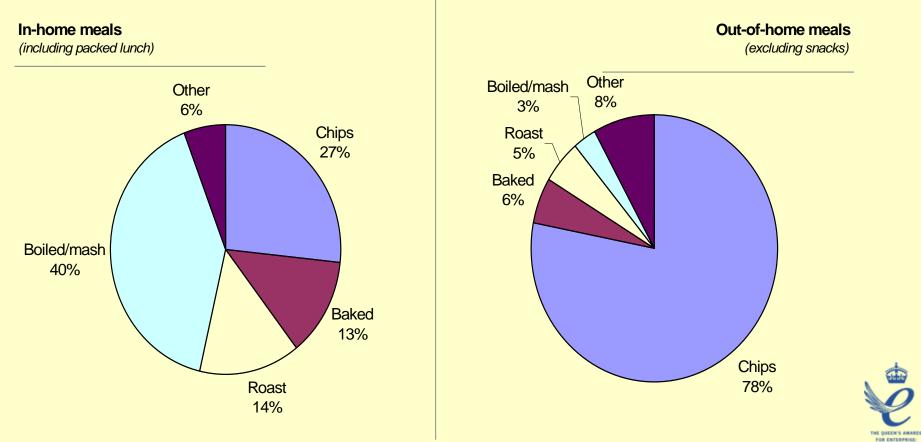
## The natural choice for fresh potatoes...







## Potato meal types in and out of home



Source: TNS Family Food Panel data from June 2004-May 2005

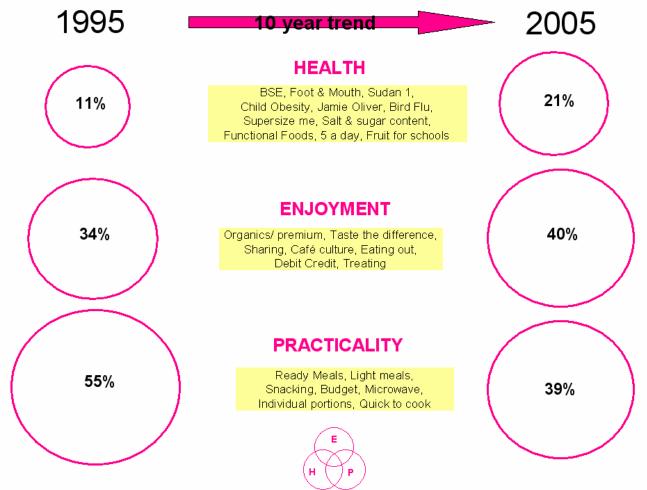
NUMBER

Back

Greenvale AP



## The natural choice for fresh potatoes...





Worldpanel Usage In Home - Ann to Nov 2005



#### The natural choice for fresh potatoes...

#### The potato category is a complex marketplace



50% of shoppers in the potato category have only bought into <u>one</u> of these areas in the latest six months...

...38% of shoppers are happy to shop across two of these sectors...

...while only 13% will shop across all three

dunhumby



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# **SCRI & Greenvale**

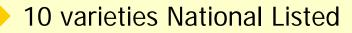
- + 18 year partnership
- SCRI

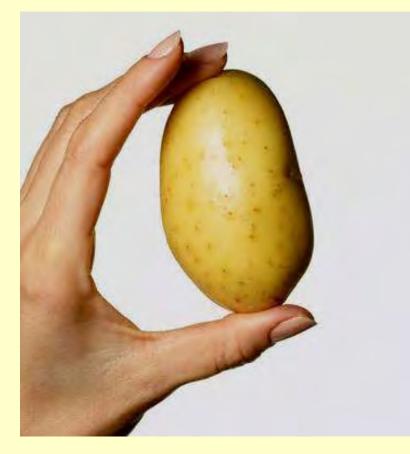
Greenvale AP

- Genetics
- Pest & Disease
- Extensive parental material
- Expert Breeding team

#### Greenvale

- Market leaders
  - Fresh, organic & processed
- Consumer trends
- Consumer taste panels
- Fully integrated
  - Seed to table







# Lady Balfour

## Organic (Premium)

- Selected under organic production

#### SCRI multi trait

- Crossed 1988, NL 2001

#### Strengths

Greenvale AP

- Blight resistance
- High yield / low fertility
- Rapid bulking

#### Market

- Dominant UK organic variety
  - Sainsbury named pack
- Egypt
- 🔶 Blue 13 blight ?
- Doesn't flower



#### The natural choice for fresh potatoes

**Disease Resistance** 

#### Organic Maincrop

Lady Balfour is the first patato variety bred specifically to be grown under organic conditions. The variety is named after Lady Eve Balfour, a pioneer of the organic movement and founder of the Soil Association in 1946

- Outstanding high yields
- Long domancy
- Excellent blight resistance
   Excellent PCN RO1 resistance

Divellent for two r resistunce

Lody Ballour is a very high yielding organic variety with excellent foliage and excellent tuber blight resistance.

The first potato to be specifically bred for organic production, Lady Balfour has the highest partial resistance to G.pallida of



reeder	Scottish Grop Research Institute
laturity	Early Maincrop
Varket	Organic
kin Colour	White/Pale Red Eye

<b>Field Characteristics</b>		
Tuber Yield	Very Hig	
Tuber Number	Modera	
Tuber Shape	Ow	
Dry Matter	Low 16-18	
Flesh Colour	Creat	
Eye Depth	Shallo	
Dormancy	Long (8	
Bruising		

h	Foliage Blight	7
0	Tuber Blight	7
	Blockleg	1
5	Common Scab	4
1	Powdery Scab	9
1	Potato Leaf - Roll	Vite 3
1	Virus Y	9
5	PCN R01	Partial Resistant
	PCN G.Pallida	Partial Resistance (5)
t.	Spraing	5
	Dry Rol	

1 susceptible - no data

resistant Spraing
 SCRI Data
 Dry Rot



## The natural choice for fresh potatoes...

# **Vales Sovereign**

#### Tesco named pack

- Standard Plus
  - Not in shopping basket

#### SCRI multi trait

– Crossed 1993, NL 2003

#### Strengths

- Blackleg
- Common scab
- Drought
- Black dot

#### Reduced Carbon footprint

- Low production costs
  - Reduced Nitrogen & Water

#### • Organoliptics

- Highly rated & consistent
- Top 20 UK variety

Consistency for the consumer



#### The natural choice for fresh potatoes

#### Early Maincrop

An extremely attractive potato with excellent disease resistance and superb eating quality

- Highest resistance to Black Dot of any commercial pre-pack variety available
- Good common scab resistance
- Atradive appearance

Ideal for Integrated Crop Management production

Vales Sovereign is an exciting new variety and has already been approved by the UK's major supermarkets after topping taste panels.

Value Sovereign's suitability to Integrated Crop Management production, exceptionally high yield and superior eating qualities, are making it a favourite of the growers too.

 Grown for the general bakers' prepack market and offering low waste levels, Vales Sovereign is an early-maturing main app with excellent cooking qualities.

The variety was taken from our multi-trait disease resistance program with SCRI. It demonstrates excellent disease resistance to Common Scab, Blackleg, PCN RO1, Black Dot and Blight, making it an ideal variety for growers, packers and consumers.

Breeder	Scottish Crop Research Institute
Maturity	Maincrop
Market	Table (prepack
Skin Colour	White Part Red

ield Chara	cteristics	Disease Resistance	e
uber Yield	High	Foliage Blight	5
iber Number	Low/Moderate	Tuber Blight	*
uber Shape	Ova	Blockleg	8
by Matter	Moderate 18-209	Common Scab	7
lesh Colour	Cream	Powdery Scab	3
ye Depth	Shallow	Potato Leaf - Roll Virus	2
cornercy	*Moderate (4)	Virus Y	4
huising	6	PCN 891	Resistant
		PCN G.Pallida *Partial	Resistance (5)
susceptible	9 resistan	Block Dot H	gh Resistance
<ul> <li>no data</li> </ul>	* SCRI Data	Wart Disease	Resistant (9)
	analis analis		



117

# **Vales Emerald**

#### Market Trend "Local"

– Fresher

Greenvale AP

- Less food miles
- Local is the new organic

#### Standard (regional)

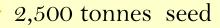
• "Suffolk Gems"

#### New season

Early new potato

#### Quickest pollen to plate

- Crossed 1997
- Ware "test" sales 2004
- NL 2005





#### **First Early**

An exciting new first early variety - ideal for baby potato production

High tuber number

- Early bulking
- Excelent eating quality
- Atractive appearance

Vales Emerald, on outlanding early builting variety available exclusively from Geenvale AP, is a Peer/Charlotte cross with an attractive appearance on the shelf, excellent flavour on the table and very robust characteristics in the field.

Vales Emerald, bred principly for use within the pumet potato market, has shown yield increases of up to 25 per cert in comparison to standard existing punnet varieties in 2005 and is already proving to be an externely popular variety with growers and retailers alike.



GEMS

Locally produced guality potatoe

r numbers, Vales Emerald OS. Combining early an ideal variety for retailers. lety can be packed off auidity and in

The natural choice for fresh potatoes

Breeder	Scottish Crop Research Institute
Maturity	First Early
Market	First Early/Baby Polatoes
Skin Colour	Cream

# Field Characteristics Disease I Tuber Yield Moderate Fologe Big Tuber Number High Tuber Bight Tuber Shape Round Bladdeg Dry Mater 16-20% Common Sc Flesh Coloar Grean Powdery Sc Eye Deph Shallow Potato Leaf Domoncy Short [3] Vins Y Brutsing 6 PCN R01 PCN G. Pall Scraing Dry Rot

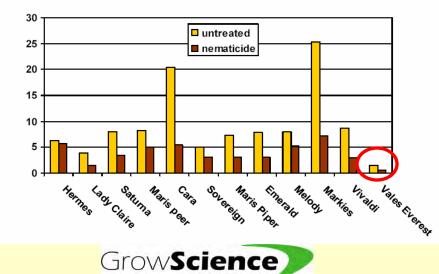
Foliage Blight Tuber Blight Blackleg	3
	4
Blackleg	7
Common Scab	4
Powdery Scab	7
Potato Leaf - Roll Virus	4
Virus Y	4
PCIN R01	2
PCN G.Pallida	2
Spraing	8
Dry Rot	3
	Powdery Scab Potato Leaf - Roll Virus Virus Y PCN ROI PCN G. Pallida Spraing

NE COLLEY'S ARREST FOR EXTERNOL FOR EXTERNOL

# **Vales Everest**

Figure 10 - Effect of variety and nematicide on PCN population dynamics (Pf:Pi).

Greenvale AP



Maincrop	Breeder		Scottish Crop Research	Institut
	Maturity			aincra
An exceptionally high yielding variety – suitable for processing	Market		Organic/Fresh/French Fr	-
1 5	Skin Colour		White/Pale F	ink E
<ul> <li>Performed well in organic trials.</li> <li>Sought after by several processing companies.</li> </ul>	Field Character	ristics	Disease Resistance	
Achieved conditional approval for major retailers lats.	Tuber Yield	Very High	Foliage Blight	
Very High yielding.	Tuber Number	Moderate	Tuber Blight	-
N.L. P	Tuber Shape	Oval	Blackleg	
Vales Everest is well regarded as a good maincrop potato, particularly suitable for those growing in hat dry climates such as	Dry Matter	19-21%	Common Scab	
the Mediterranean.	Flesh Colour	Cream	Powdery Scab	
	Eye Depth	Shallow	Potato Leaf - Roll Visus	
This drought tolerant variety has shown to offer good tolerance levels	Domancy	*6	VILS Y	
to a number of the more common diseases, particularly Blackscurf,	Bruising	0	PCN 801	
PVY and Powdery Scab.		(	PCN G.Pallida	
Vales Everest has a particularly high level of tolerance and	1 susceptible	9 resiston	Spraing	_
resistance to PCN Pallida and is resistant to PCN RO1 making it a major player in the management of PCN in the potato rotation.	- no data	<ul> <li>SCRI Data</li> </ul>	Dry Rot	
Offering good dry matters of between 19 and 21%, this particularly high yielding variety has proved popular, particularly for those			Marine Law	
growing for the French Fry and general ware potato markets			and the second second	
in the UK and has also proved itself to be an excellent				
'crisper' when grown in hot climates such				
os iscel				

THE QUEEN'S AWARD FOR ENTERPRISE: INNOUNTION 2006

# **Re-Discovering Flavour**

## Phureja Potatoes



Greenvale AP

- Long day adapted population

#### Departure from the "norm"

- Deep yellow flesh
- Smooth texture
- Prominent flavour

#### Hurdles

- Low yields ( cost of production ! )
- Disintegration when boiled
- Appearance
- Short dormancy

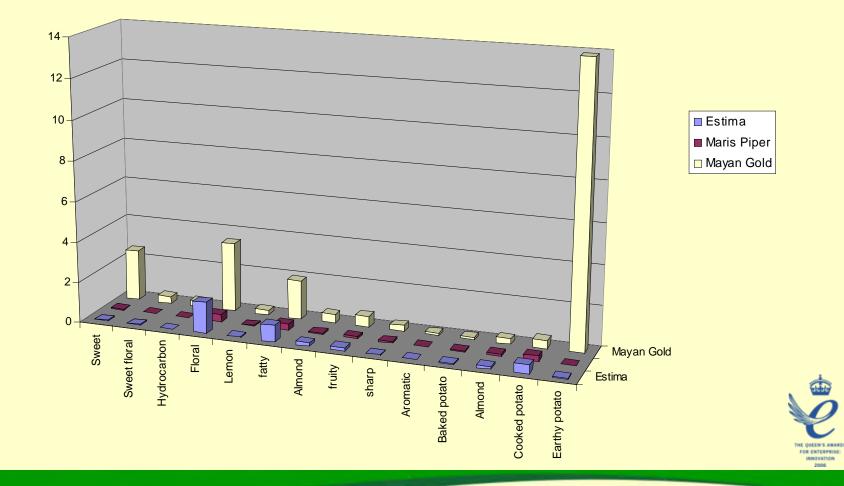




HE QUEEN'S AMAR FOR ENTERPRISE INNOVATION 2006

# **LINK Flavour Project**

Greenvale AP



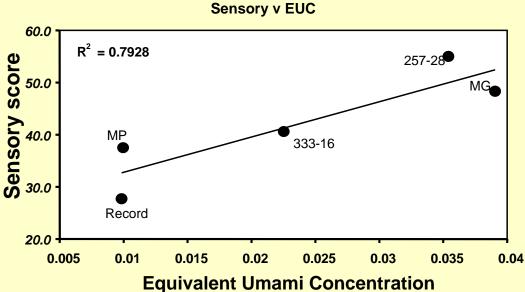




- Backed by good science
- Good PR story

Greenvale AP

- Home of the potato
- Unique Umami flavour







Breeder

Tuber Shape

Dry Mater

Flesh Colour

Eve Deph

Domoncy

1 susceptible

no data

Bruising

# Mayan Gold

#### Premium

**Tesco** Finest

Greenvale AP

Sainsbury Taste The Difference

#### Should have been a winner



- BUT
- Consumers by with their eye first
- Packaging message v Corporate ID
- Price

#### Consumer

A potato is just a potato !

	0 10
Marina	Cold
Mayan	Gold

#### Maincrop

A Distinctive variety - ideally suited for processing into gourmet potato products

Golden coloured gournet potato

- Univaled ruty facur
- Roosts, crisps or chips

Unlike modern European potatoes, Maryan Gold has its roots fimly planted in the foothills of the Andes of Peru, where its ancestors were once formed by the Incas. Maryon Gold is a golden colouted tuber with a real taste of history.

Offering a nuty flavour, Mayan Gold was national listed in 2001, and has since proved to be an exceptional variety for chip, crisp and roast manufacturing.

Aimed at the "best in class sector" Mayan Gold has already been bought by many top chefs, including several currently working on television, for use in their own restaurants, a real testament to the unique taste and flavour of this variety.

Originally developed in association with the SCRI it has already been successfully grown on a commercial basis in the UK and offers entry into a fast developing sector of the industry.



Scottish Crop Research Institute Maturity Maincrop

The natural choice for fresh potatoes

Market		Specialist	Gourmet
Stin Colour Field Characteristics			Yellow
		Disease Resistance	
Tuber Yield	Medium/Low	Foliage Blight	7
Tuber Number	Very High (9)	Tuber Blight	- 4

Medium/Low	Folioge Blight	
Very High (9)	Tuber Blight	
Long Oval	Blackleg	
21%	Common Scab	
Golden	Powdery Scab	
Medium	Patato Leaf - Roll Vitus	
Short (4)	Virus Y	
6	PCN ROT	5
	PCN G.Rallida	\$
9 resistant	Spraing	
* SCRI Data	Dry Rot	

-
Appenda
V
THE QUEEN'S AWARD
INNOVATION

usceptible

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# <u>"Mayan" Series</u>

#### The natural choice for fresh potatoes

Scottish Crop Research Institute

Susceptible

Susceptible

121

#### Maincrop

An exciting Phureja variety - perfect for pre-pack with the unique 'Umami' flavour as Mayon Gold

Mayan Queen

Greenvale AP

- High saleable yield
- Long domancy

Good disease resistance

Suitable for pre-pack organic production

Mayan Queen is a very exciting addition to the unique Nayan polato series of varieties from Greenvale AP. Mayan Queen's origins are from the foothills of the Andes of Peru just like its sister variety Mayon Gold

Mayan Queen has been selected exclusively with the Scottsh Crop Research Institute to offer potatoes with the same rich yellow flesh and unique "Unami" flavour of Maxan Gold, but more suitable for baking and wedges.

Maryan Queen has a particularly smooth texture and has topped a series of premium taste panels organised by some of the UK's leading. retailers. The Mayan Potatoes have proved particularly popular with gournet chefs for use in the catering industry and are endorsed by Antony Wonall Thompson. All our Mayan Potatoes cook in two thirds of he normal cooking time because of their delicate nature while preserving that perfect potato flavour.

An and a set		www.intern salary reserved set to arrest		
Mahirily		Maina	0	
Morlet		Table (prep	×	
Skin Colour		Pole Red I	ży	
Field Character	ristics	Disease Resistance		
Tuber Yield	Moderate	Foliage Blight		
Tuber Number	Moderate	Tuber Blight		
Tuber Shape	Long Oval	Blockleg		
Dry Matter	Medium	Common Scab		
Flesh Colour	Yellow	Powdery Scab		
Eye Depth	Deep	Potato Leaf - Roll Virus		

Vins Y

PCN ROI

Spraing

Dry Rot

PCN G.Palida

7

Short (5)

9 resistont

Bruising 1 susceptible - no data N.B. All provisional data based on

Breeder

Domancy

Greenvale trials.

www.mayanpotatoes.co.uk The original taste of potatoes



#### Maincrop

An exciting Phureja variety - perfect for pre-pack with unique 'Umami' flavour as Mayan Gold

- High saleable yield
- Long domancy Good disease resistance
- Suitable for pre-pack organic production

Mayan Twilight is a very exciting addition to the Mayan potato varieties from Greenvale AP, offering something a little different. A unique appearance of this attractive red and white skinned salad type potato is just the wrapping to an even more exquisite experience inside. This deep yellow dense flesh with a flavour that is both sweet and morish will make a talking point of any fine dinner party.

Mayan Twilight's origins are from the foothils of the Andes in Peru, as are Greenvale's two other 'Phurejas' Mayan Gold and Mayan Queen.

Mayan Twilight has been selected from the Phureja lines developed exclusively with Scottish Crop Research Institute to offer potatoes ideal for a salad eaten either hat or cold with skins on. Best steamed to preserve the skin colour Mayan Twilight has particularly excited some of our customers who have reserved all of our production for years to come. All our Mayan Potatoes cook in two thirds of the normal cooking time due to their delicate nature while preserving that perfect potato flavour.

ine natu	ral choice	tor tresh	potatoes

Breeder	Scottish Crop Research Institute	
Waturity	Maincrop	
Varket	Table (prepack	
škin Colour	Red and White	

Greenvale trials

Field Characteristics		Disease Resistance	
Tuber Yield	Low	Foliage Blight	5
Tuber Number	Moderate	Tuber Blight	4
Tuber Shape	Very Long Oval	Blackleg	8
Dry Mater	Medium	Common Scab	8
Flesh Colour	Deep Yellow	Powdery Scab	6
Eye Depth	Moderate	Potato Leaf - Roll Virus	
Dormancy	Short (5)	Virus Y	
Brutsing	7	PCN RO1	Susceptible
1 susceptible - no data	9 resistant	PCN G.Palida	Susceptible
	A testhout	Spraing	
N.B. All provisional data based on		Dry Rot	4

www.mayanpotatoes.co.uk

The original taste of polatoes:

23





The natural choice for fresh potatoes...

# Thank You For Your <u>Attention</u>

