

Scottish Innovations in Food and Drink Development

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Scottish Crop Research Institute



SCRI – What Do We Do?



- n A leading UK institute for research on plants and their interactions with the environment, particularly in managed ecosystems
- n Our mission is to conduct excellent research in plant and environmental sciences
- n Our vision is to deliver innovative products, knowledge and services that enhance wealth creation and quality of life through the sustainable production of high quality and healthy food

SCRI Group



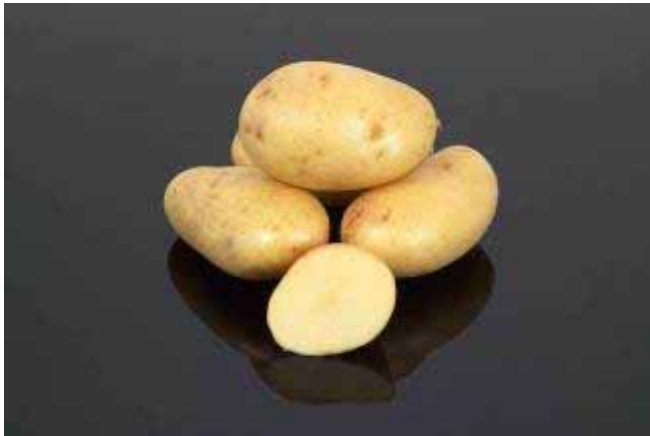
- n Scottish Crop Research Institute (SCRI)
 - Genetics
 - Plant pathology
 - Plant products and food quality
 - Environment plant interactions
- n Biomathematics and Statistics Scotland (BioSS)
- n Mylnefield Research Services (MRS)
- n University of Dundee Plant Sciences

SCRI – www.scri.ac.uk

MRS – www.mrsltd.com



SCRI – Crop foci



Sources of Innovation



- Raw Materials
- Processing
- Chemical Analysis
 - Reformulation
 - Authenticity

Potatoes



- Size
- Shape
- Flavour
- Texture
- Flesh colour
- Skin colour
- Pigmented flesh
- Health benefits
 - Anthocyanins
 - Vitamin C
 - Biofortification (selenium / iodine)
- Weight Control
 - “low calorie”
 - Satiety
- Processability
 - Fry colour
 - Cooking times



Vales Sovereign



- Winner of “Tesco Fresh Variety of the Year Award 2008”
- Exclusive to Tesco via Greenvale
- Good skin finish
- Requires less fertilizer
- Requires less water
- Good disease resistance therefore requires less chemicals
- Already made the top 20 in sales and is predicted to make the top 5



Purple Star

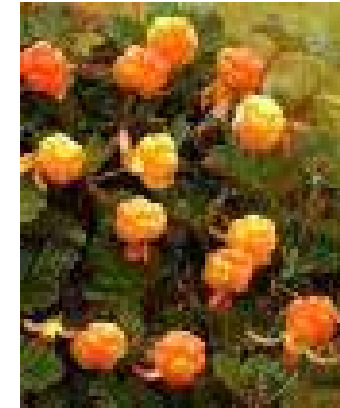


- Potatoes with a purple star pattern in the flesh
- Manufactured by Kettle Crisps exclusively for M&S
- Purple colour from natural anthocyanins

Soft Fruits



- Size
- Flavour
 - Traditional raspberry / Sweet as possible
- Health Benefits
 - Blackcurrants and Alzheimers
 - Bilberries and eye health
 - Toothkind blackcurrants
 - Gut health
 - Cardio Vascular Disease
 - Type 2 Diabetes
 - Higher vitamin content
- Novel Fruits
 - Golden raspberry
 - Hybrid berries (Tayberry / Tummelberry)
- New Fruits
 - Loganberry
 - Cloudberry
 - Sea Buckthorn
 - Arctic Bramble



Extending the Shelf Life of Vegetables



- Moderate thermal treatment for several minutes
- Requires no chemical additives
- Demonstrated for
 - Potatoes
 - Broccoli
 - Spinach
 - Carrots
- Improves
 - Appearance
 - Texture
 - Microbial load
 - Nutritional value



Chemical Analysis: Knowing your products



- n Oils and Fats (www.lipid.co.uk)
 - Trans fatty acids
 - Omega-3 fatty acids
 - Reformulate for healthier products
- n Carbohydrates
 - Starch composition
- n Stable Isotopes
 - Authenticity / Prevention of counterfeiting
 - Identification of source of water in product