## HIGHLIGHTS FROM 100 YEARS OF OAT BREEDING



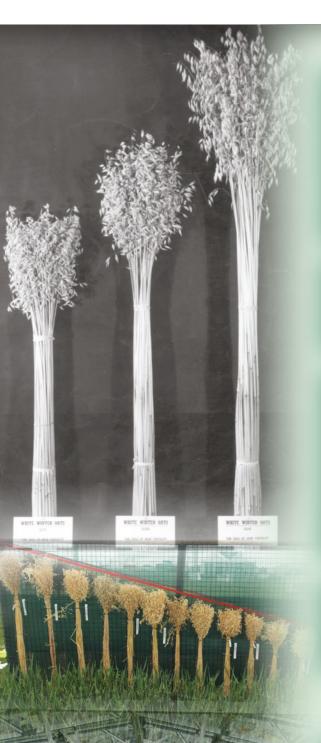
## IBERS

Sefydliad y Gwyddorau Biolegol, Amgylcheddol a Gwledig Institute of Biological, Environmental and Rural Sciences



WELSH PLANT

Mascani



• First selections of oats, based at Penglais farm in Aberystwyth

 Foundation of Welsh Plant Breeding Station at Aberystwyth University

- First new spring oat varieties released for a range of soil fertility
- **S172** winter oat with high yield and very short straw: Europe's first semi-dwarf cereal
- Oat breeding suspended due to World War II, resumed in 1946
- Peniarth released Market leader in UK and France
- Start of long term marketing partnership with Semundo (now Senova)
- BBSRC Institute of Grassland and Environmental Research formed incorporating WPBS
- Bullion Spring naked oat added to NL
- NIAB Variety Cup awarded for winter oat Gerald
- First dwarf oats added to the NL Hendon (naked), Buffalo (husked)
- First molecular markers identified for use in precision breeding
- 2009- 2014: QUOATS Harnessing new technologies for sustainable oat production and utilisation

Funding: BBSRC, DEFRA, Scottish Government, Welsh Government, AHDB plus industry partners

- Balado a high yielding dwarf husked oat added to RL
- 2014- 2019 BBSRC-LINK project InnovOat: Developing enhanced breeding methodologies for oats for human health and nutrition with industry partners BOBMA and Senova and additional funding from AHDB
- Peloton a early high yielding winter naked oat added to RL

1919

1920

1930

1938

1939

1956

1964

1982

1987

1990

1993

1995

1997

1996

2001

2004

2009

2010

2011

2012

2014

2017

2019

First crosses made

• S147 – breakthrough winter oat variety to combine moderate height, high yielding, quality grain spring oat with winter hardiness from Grey winter land race

- NIAB Variety Cup awarded to winter oat Powys
- WPBS moved to Gogerddan site
- Rhiannon first naked (huskless) oat
- Naked oats shown to have higher nutritional value than any other cereal
- Gerald, still popular with growers today added to RL
- Grafton winter naked oat released
- Approval of health claim for oat beta-glucan and reduction in Coronary Heart Disease in USA
- Approval of health claim in the UK on oats and reduction of blood cholesterol
- Mascani, the UK's most popular milling oat with its consistent grain quality added to the RL
- 2004- 2009 Defra-LINK project Oatlink: The incorporation of important traits underlying sustainable development of the oat crop through combining 'conventional' phenotypic selection with molecular marker technologies.

Funding: Defra, SEERAD, AHDB plus industry partners.

- Conway a high quality spring oat added to RL
- Queen's award for plant breeding
- Winter husked oat Galloway, a novel feed oat with low lignin husk. RL candidate 2019
- Winter husked oat Penrose, a milling oat RL candidate 2019

The future – oats for new markets, forage, milling, feed



