

# Delivering Sustainable Wheat (DSW)

John Innes Centre



DSW is working to address challenges in future global wheat production through a multi-institute collaborative research programme, which focuses on increasing productivity and human nutrition, whilst minimising agricultural inputs.

Wheat is an essential staple crop globally, providing ~20% of daily calories. With a projected global population of 10 billion by 2050, the need for sustainable wheat production is urgent.

The current production of wheat is fragile, and the majority of the world's supply comes from just five countries.

The global population is predicted to be

**10bn** by 2050



Wheat was  
domesticated

~10,000  
years ago

Climate change, new diseases, and declining water resources pose significant challenges for farmers. Future increases in production must be achieved without equivalent growth in fertiliser use, which is a significant source of greenhouse gases.



**DSW**

DELIVERING  
SUSTAINABLE  
WHEAT



Our work focuses on different areas of wheat research:

- Targeted discovery of new wheat characteristics important for a changing world
- Discovering and developing new wheat varieties which are resistant to disease
- Understanding how nutritionally enhanced wheat can benefit human health
- Making wheat genetic resources accessible to all

The Delivering Sustainable Wheat (DSW) Research Programme aims to address critical challenges in wheat health, yield, and production in order to safeguard the future of this vital crop.



**Biotechnology and  
Biological Sciences  
Research Council**

DSW brings together the John Innes Centre, Rothamsted Research, Quadram Institute, and Earlham Institute, plus the National Institute of Agricultural Botany, and the universities of Leeds, Nottingham, Lancaster, Bristol, and Imperial College London.

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