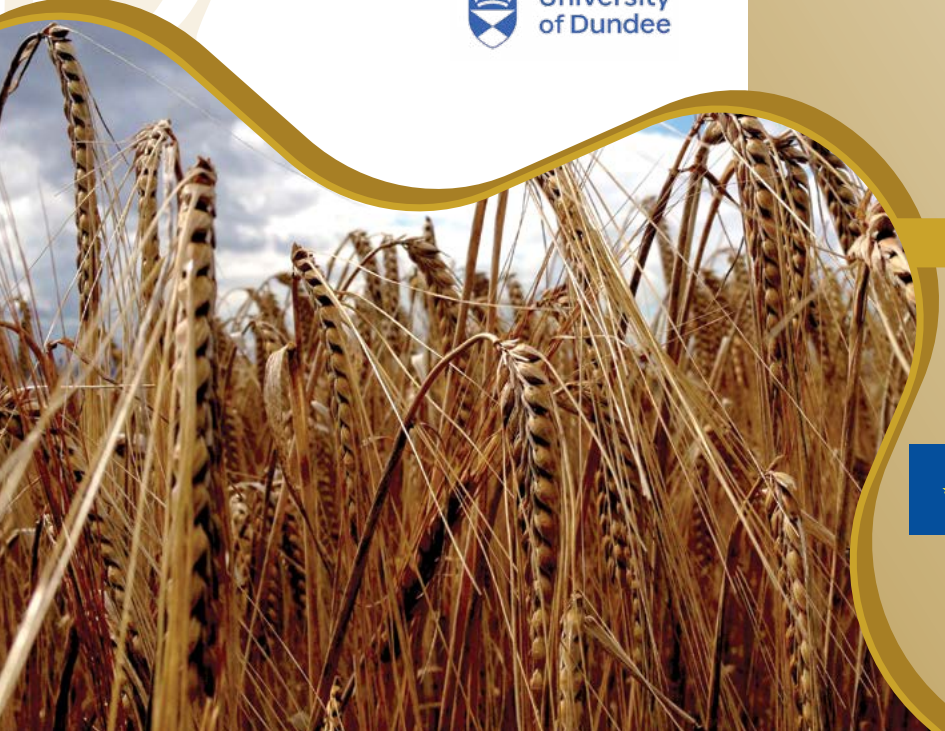
Partners



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UK Research and Innovation

BestCrop

Boosting photosynthESis
To deliver novel CROPs for
the circular bioeconomy

For Consumers

www.bestcrop.eu

Introduction

BEST-CROP is an alliance of European plant breeding companies, straw processing companies and academic plant scientists aiming to utilise advances in our understanding of photosynthesis to improve barley yield and to exploit variability in barley straw quality and composition.

BEST-CROP is developing **Next Generation barley Plants (NGPs)** to replace current varieties with fully renewable alternatives.

Challenges

Climate change solutions usually focus on clean energy, but it's important to recognize that other sectors play significant roles in environmental impact.

of the **world's GHG emissions** are attributable to activities within the **Food System**[1].

of **global operational energy and process-related CO_2 emissions** are related to the **Building and Construction industry**[2].

But it doesn't end there. Sustainability isn't just about reducing greenhouse gases. It's also about cutting down on **harmful pollutants** that we release into the environment. Take **lubricating oil**, for example; many lubricants contain additives derived from petroleum, which can leach into soil and water, posing a threat to ecosystems.

Objectives

BEST-CROP aims to introduce **innovative solutions** that will:

Enhance Food Security through the development of highly productive NGPs.

Mitigate air pollution through a phytoremediation strategy to alleviate extreme ozone pollution, contributing to cleaner and healthier environments.

Promote Sustainability by enhancing the **circular bioeconomy** through the customization of barley straw for efficient conversion into high-value bio-based compounds, such as:

- Quality animal feed
- Bio-lubricants
- Construction materials

1. Hannah Ritchie, Pablo Rosado and Max Roser (2022) - "Environmental Impacts of Food Production" Published online at OurWorldinData.org. Retrieved from: *https://ourworldindata.org/environmental-impacts-of-food* [Online Resource]
2. United Nations Environment Programme (2020). Global Status Report for Buildings and Construction