

A close-up photograph of a person's hand holding a plant root system. The roots are light-colored and fibrous, with many small, pinkish, bulbous structures (likely mycorrhizae) attached to them. A small, green seedling with a white root is attached to the top of the root system. The background is blurred, showing more of the hand and some green foliage.

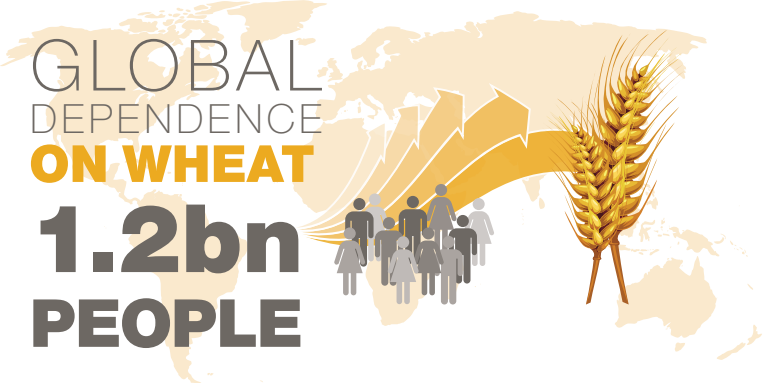
  
John Innes Centre

Science  
with impact

Economic & social contribution to society

# JIC TODAY

GLOBAL  
DEPENDENCE  
**ON WHEAT**  
**1.2bn**  
**PEOPLE**



**JIC** RESEARCH INTO  
WHEAT GENETICS LEADS  
TO **INCREASED YIELD**  
AND **INCREASED**  
**DISEASE RESISTANCE**

## JIC WHEAT RESEARCH ANNUAL CONTRIBUTION

**UK  
ECONOMY**



**GLOBAL  
ECONOMY**



**ANTIBIOTICS  
SAVE MILLIONS  
OF LIVES**



**JIC IS A  
WORLD  
LEADING  
STREPTOMYCES  
RESEARCH  
INSTITUTE**

**1/2**  
OF ALL OF THE  
**WORLD'S  
ANTI  
BIOTICS**  
DEVELOPED FROM  
**STREPTOMYCES  
SOIL MICROBES**

**JIC ANTIBIOTIC RESEARCH  
ANNUAL CONTRIBUTION**

**GLOBAL  
ECONOMY**





John Innes Centre

Economic & social contribution to society

# JIC IN 2023



**OIL SEED RAPE**  
IS THE THIRD LARGEST  
UK ARABLE CROP

**COULD SAVE**  
UK FARMERS  
**£115m**  
IN DROPPED SEED  
EACH HARVEST



JIC OIL SEED  
RAPE RESEARCH  
INTO **POD SEED**  
**SHATTER**

SEED PODS  
OPENING  
BEFORE  
HARVEST  
LEADS TO  
**15% LOSS**  
IN YIELD



JIC RESEARCH HAS  
**DEVELOPED A**  
**TECHNIQUE** FOR  
GROWING VACCINES  
IN PLANTS

THIS **CUTS**  
**THE TIME**  
TO PRODUCE  
**10,000,000**  
**DOSES OF**  
**FLU**  
**VACCINE**

FROM  **9** MONTHS TO  **30** DAYS



TECHNIQUE IS IN  
PERMANENT READINESS  
FOR PANDEMIC FLU  
IN USA POTENTIALLY  
**SAVING**  
**LIVES**

**JIC BIOTECHNOLOGY**  
**ANNUAL CONTRIBUTION**

**GLOBAL**  
**ECONOMY**



# Unlocking Nature's Diversity

Economic & social contribution to society

## JIC IN 2043

MAIZE IN  
SUB SAHARAN  
**AFRICA**  
LIMITED TO  
**20-40%**  
OF POTENTIAL  
YIELD DUE TO  
**LACK OF  
NITROGEN  
FERTILISER**



JIC RESEARCH  
**DEVELOPING  
NITROGEN  
FIXING IN MAIZE  
TO CREATE ITS  
OWN FERTILISER**

INCREASED  
PRODUCTION  
**WILL MEET  
THE STARCH  
NEEDS OF**

**436m  
PEOPLE**



THAT'S 6x POPULATION OF GB



JIC NITROGEN RESEARCH  
**ANNUAL CONTRIBUTION**

**GLOBAL  
ECONOMY**



**⇒•••⇐**  
IN THE EU  
**25,000  
DIED  
IN 2012**  
DUE TO ANTIBIOTIC  
RESISTANCE



JIC DEVELOPED  
**DNA**  
BASED TECHNOLOGY  
**COULD  
ADDRESS  
ANTI  
BIOTIC  
RESISTANCE**

REPLACING  
EXISTING  
**ANTI  
BIOTICS**

CONTRIBUTING  
**£1.26bn**  
TO THE EU  
ECONOMY  
EACH YEAR

# Science with impact

The John Innes Centre is a world-leading plant and microbial research institute.

JIC's blend of research spans the spectrum from new discoveries in fundamental science to strategic applications to practical outcomes for agriculture and human health.

JIC receives strategic funding through the UK's Biotechnology and Biological Sciences Research Council (BBSRC). This public funding has enabled research to underpin benefits for today and for the future.

Every pound invested in research at the John Innes Centre today will result in a £12 return on that investment in 10 years.

This is a snapshot of some of our major impacts.

Data independently assessed by Brookdale Consulting (2013)

**Cover image:**

Nodules on the roots of peas and beans help the plant to secure its own Nitrogen, reducing the need for artificial fertiliser. John Innes Centre scientists are researching how this could be applied to other crops.



**John Innes Centre**

*Unlocking Nature's Diversity*

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