

Research and Development

# Final Project Report

(Not to be used for LINK projects)

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Research Policy and International Division, Final Reports Unit
DEFRA, Area 301
Cromwell House, Dean Stanley Street, London, SW1P 3JH.
An electronic version should be e-mailed to <a href="mailto:resreports@defra.gsi.gov.uk">resreports@defra.gsi.gov.uk</a>

Project title	Reproducible <i>Agrobacterium</i> -mediated transformation systems for wheat and barley	
DEFRA project code	AR1003	
Contractor organisation and location	John Innes Centre Norwich Research Park Norwich NR4 7UH	
Total DEFRA project costs	£ 60,271.00	
Project start date	01/10/00	Project end date 01/10/01

## Executive summary (maximum 2 sides A4)

- ? A reproducible *Agrobacterium tumefaciens*-mediated transformation protocol has been established for barley (*Hordeum vulgare*).
- ? 14 independent barley lines have been developed, with a further 19 putative lines to undergo analysis.
- ? Plants have been engineered to express a number of different visual marker genes (Luciferase & ?-Glucuronidase) and selectable markers (resistance to the herbicide Bialaphos & resistance to the antibiotic Hygromycin).
- ? The protocol outlined here-in underpins future investigations into "Clean Gene Technology" and the subsequent development of superior, novel crops.

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- ? On going field trials are providing valuable data in relation to the performance of transgenic plants in an agricultural environment, despite the loss of this years trial through criminal damage.

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**Scientific report (maximum 20 sides A4)**

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