



Agriculture & Horticulture
DEVELOPMENT BOARD



New Project

HNS 187

Evaluating the potential of plant growth regulators to limit plant growth on tree and hedging species

Project Number:	HNS 187
Project Title:	Evaluating the potential of plant growth regulators to limit plant growth on tree and hedging species
Project Leader:	Mr David Talbot
Contractor:	ADAS
Industry Representative:	Jamie Dewhurst, J&A Growers Ltd Ed Holmes, Trees Please
Start Date:	01/01/2013
End Date:	01/04/2015
Project Cost:	£23,500

Project Summary:

Although widely used in other sectors, plant growth regulators (PGRs) are not currently used on field-grown tree and hedging species, only one product (daminozide) has been tested on a limited range of subjects. As results were poor growers have not carried out further trials. Undercutting is currently used as a means of limiting plant growth during the growing season. However, undercutting cannot be carried out during periods of dry weather, as experienced during summer 2010 and 2011, in many parts of the UK. This project is designed to determine the ability of selected PGRs to reduce the growth of deciduous field-grown nursery stock during the growing season. If successful, it would provide an alternative means to prevent undesirable extension growth. A grower open afternoon in the second year of the trials, prior to lifting or at the end of the growing season, will allow growers to view the treatments and evaluate / discuss the results with the project leader.

Aims & Objectives:

- (i) Project aim(s): To identify plant growth regulators suitable for use to manage growth of cuttings, seedlings and transplants of tree and hedging species.
- (ii) Project objective(s):
 1. To evaluate chlormequat, paclobutrazol and prohexadione-calcium for their effect on growth of a range of field grown deciduous species.

2. To identify any negative effects of the use of these plant growth regulators.
3. To determine the effectiveness of one plant growth regulator when applied via a weed wiper
4. To organise a nursery-based open afternoon to allow growers to view the results.

Benefits to industry

- Increased control of crop growth would give growers increased flexibility, particularly during dry conditions.
- Field-grown stock is graded by height, so excessive growth can result in stock exceeding specifications. This can result in extra cost where stock has to be cut back, reductions in profitability, or wastage where cutting back is not a feasible option (particularly where stock is destined to be sold as a tree).
- As growers within the tree and hedging sector have their own sprayers or use contractors to apply plant protection products application of plant growth regulators would not require additional capital investment.

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