Organic herbage seed production in Wales – working with farmers to develop the technology

H. McCalman and A.M. Marshall
Institute of Grassland and Environmental Research, Plas Gogerddan, Aberystwyth, Ceredigion, SY23 3EB, UK, Email: heather.mccalman@bbsrc.ac.uk

Keywords: farmer participation, organic, herbage seed

Introduction The National Assembly Government of Wales is providing incentives for organic farming through its agri -environment schemes and has set a target of 10% by 2010. The organic systems in Wales are grassland based, including some with crop rotations and grass-clover leys. Reseeding currently relies on 60% conventional seed, but this derogation to the organic standard of 100% will be removed by August 2005. Conventional methods of seed production are not acceptable under organic standards. Following farmer discussion group meetings highlighting the difficulty of sourcing and the cost of organic seed, a feasibility project to tackle some of the practical challenges of organic seed production was set up with the IGER Grassland Development Centre and local farmers. The key challenges for Welsh and UK organic seed producers range from weed control to harvesting methods (Marshall & McCalman, 2003) as well as creating links between farmers and seed companies to build a local organic forage seed industry. Building on on-going plot work at IGER, this project is developing techniques for field-scale seed production working with a group of farmers and seed companies.

Materials, methods and results Four farmers with a range of farm types and systems were recruited from within organic discussion groups. Field plots were designed with the farmers, each looking at different aspects and approaches to organic forage seed production and providing a range of demonstration points. The topics explored included the (a) use of white clover (sown as a companion crop) as a nitrogen source for a hybrid ryegrass seed crop; potential of different fertility-building legumes (white clover/red clover/vetch/lupins/crimson clover) sown in the year before the grass seed crop (b) response of different grass species (perennial ryegrass/hybrid ryegrass/timothy) to a red or white clover fertility- building phase and (c) Integration of herbage seed crops into a whole organic farm system.

Importantly, the decision making process for the management of plots was guided by the participating farmers and other group members. On one site weed control is an important issue. On another capitalising on fertility build stimulated a good discussion particularly when taking into account the practicalities of integrating herbage seed production into a crop rotation that fits the farm and meets seed crop regulations. Initial results showed that producing seed crops that meet official seed standards is not a problem. Using white clover as a companion to a hybrid ryegrass seed crop produced a seed yield of 650kg/ha. However there was insufficient nitrogen within the systems to enable a silage cut in the spring of the harvest year, a common practice amongst conventional seed growers. Where a fertility-building crop was used prior to the grass seed crop, the number of fertile tillers was comparable with a conventional seed crop. Where perennial ryegrass was grown after lupins, there was insufficient nitrogen in the system for the crop to lodge, an important characteristic for attaining high seed yields. However this was achieved by sowing the perennial ryegrass with a white clover companion. To optimise input of interested parties ('stakeholders'), the participating farmers met with Organic Seed Certification and NIAB seed certification personnel to explore the issues in organic forage seed production and to develop a better understanding of the challenges involved for all. Input from these other interested parties is invaluable so that the problems and challenges are tackled together.

.

Conclusions This project has confirmed that organic seed production may be feasible in Wales. Working with farmers on commercial farms has enabled rapid adoption of techniques into farm practice, and, supported by IGER, given the farmers confidence to develop methods on their own farms. Inclusion of other stakeholders at the outset has improved the understanding of the key issues for all parties. There are limitations to this approach - key challenges are to engender the 'ownership' of the project to the farmer and to ensure timeliness of procedures, e.g. accuracy of recording at harvest. The work is on-going and the interest and enthusiasm of the farmers has continued to increase following on-farm meetings and discussions.

Acknowledgements The financial support of the Farming Connect Programme of the National Assembly Government of Wales is gratefully acknowledged.

Reference

Marshall, A.H. & H. McCalman (1993). The use of white clover as a source of nitrogen for organic grass seed crops. *Proceedings of the Fifth International Herbage Seed Conference*, Gatton, Australia, 59-63.