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Enquiries concerning the technical content of chapters should be addressed directly to the authors but other matters should be directed to the Executive Officer, AAB Office, Warwick Enterprise Park, Wellesbourne, Warwick CV35 9EF, UK.

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INTRODUCTION

Legumes are foodstuffs that are naturally high in protein and also provide micronutrients and essential dietary fibre. They are a key constituent of healthy diets (WHO) and are hugely important in efforts to improve nutrition in the world’s poorest countries. Forage legumes are grown across the European continent in agricultural systems and form the basis of many traditional agricultural systems in Southern Europe. Forage legumes form an important source of protein for grazing livestock whilst grain legumes are used to feed cattle, poultry and pork.

From a food perspective, legumes are a relatively inexpensive source of protein, carbohydrate and other nutrients that are readily available to a large proportion of the world’s population. Grain legumes, including pulses, typically require little processing and have long shelf lives and so generate very little food waste while contributing to food security in remote communities.

From a grower’s perspective, legumes require little if any nitrate fertilisers due to their association with N fixing bacteria, and their inclusion in rotations improves the fertility of soil for following crops. Legumes are also able to access phosphorus in the soil which is not readily available to other crops. Legumes form an integral part of pastures and are included in cover crop mixtures. Many legumes are drought tolerant, which alongside their low requirement for key soil nutrients, allow their cultivation in marginal agricultural areas. Furthermore, the group is characterised by a broad genetic base providing great adaptation potential to climate change.

Environmentally, legumes provide a resource for pollinators, add diversity to modern rotations, fit well into intercropping regimes and perform well in conservation systems. By reducing the use of synthetic N fertilisers, legumes reduce GHG emissions associated with fertiliser manufacture. Furthermore, on a weight for weight basis, GHG emissions associated with legume grain production can be up to 40 fold lower than meat from ruminants and over five fold lower than white meats and fish. Cultivation of legumes can also help to build up stocks of soil organic matter, removing CO\textsubscript{2} from the atmosphere and improving soil quality.

However, despite the multiple advantages of legumes in both agricultural systems and diet, the extent of their cultivation can be limited. Farmers view some legume species as risky due to patchy germination and variable yields, while meat is increasing in popularity as a source of dietary protein (especially in developing countries) while legumes can be perceived as a fad food. For these reasons, it is propitious to bring together a broad range of researchers and stakeholders interested in legumes at this time. Developing more sustainable farming and food systems requires an inter-disciplinary approach and this conference will facilitate both formal and informal discussion which will promote opportunities for future research collaborations. This two-day conference aims to bring together individuals from broad spectrum of disciplines to explore how legume research and practice is advancing, and what parallels exist between specialities.

Christine Watson and Rob Carlton
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