A new research report from the University of Reading’s renowned Centre for Agricultural Strategy asks whether the UK livestock sector could increase its level of self-sufficiency in protein for livestock feeds. The report explores this question by assessing the extent to which it would be feasible to replace imported soya in manufactured livestock feeds with protein derived from home grown crops.

UK livestock production has become increasingly intensive over the last 20 years, with fewer, more productive animals, with higher feed protein requirements. UK agriculture has been unable to meet all of this protein demand, so imported soya bean meal has largely filled the gap. Environmental groups argue that in some places soya is produced at too high an environmental cost and so have been calling for policy changes to encourage greater supply of domestically-produced alternatives to soya. The UK Government has also begun looking at ways of reducing reliance on imported soya as a means to increasing security of feeds supply. This in-depth study uses data supplied direct from the commercial feeds manufacturing sector to estimate the potential to replace soya meal in livestock diets.

The research found that it would be technically feasible to substitute up to 50% of imported soya in manufactured livestock feeds, using temperate crops that can be grown in the UK. The rate of soya replacement varies by livestock type, but is highest for dairy. Only a few crop substitutes are prospective as soya replacements, i.e. peas and beans, lupins, and crop extractions such as oilseed meals and cereals residues from the distillery/bio-ethanol industries. The feed manufacturing sector would be well placed to handle higher volumes of these domestic crops, but raw material and manufacturing costs would be higher, leading to higher feed prices for livestock producers. However, an important finding is that increasing the area of protein crops grown in the UK would displace other crops that produced almost as much protein per hectare. As a result, net protein supply from UK agriculture would not significantly increase and supplies of carbohydrate would fall, leading to more cereals imports. Consequently, the only viable way of increasing net protein supply from UK sources is via plant breeding programmes to increase the protein yield of UK-grown crops.