

EUROPEAN PARLIAMENT
COMMITTEE ON AGRICULTURE & RURAL DEVELOPMENT

**“OPTIONS TO PROMOTE THE CULTIVATION OF
PLANT PROTEINS IN THE EU”**

Hearing on 16 April 2002

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PROTEINS, BIOFUELS AND MULTI-USE CROPS

1. The short-fall in Material Rich in Proteins (MRPs) in the EU is structural, has been at a level of around one third for more than a decade, has been repeatedly pointed out by experts and specialists, and clearly predates recent stresses created by BSE, Foot and Mouth and other animal diseases, and consumer pressure over GM imports. Agenda 2000 was seen at the time of its inception as inevitably aggravating this shortfall.
2. Long-term solutions to this deficit were required then and are required now. The continuing erosion of Europe's ability to supply its need for MRP takes us back to the situation experienced in the 1970s – a near-complete reliance on imports from very few countries. In the 1970s, the shock of increased oil prices had the knock-on effect of distorting international trade in MRPs (at a time when Europe was only 9% self-sufficient). It is not difficult to see that events, foreseen or unforeseen, can again leave Europe at the mercy of an unstable market.
3. The best long-term solution is, where possible, the encouragement of production of protein and fodder crops, not through fiscal and regulatory measures but through the provision of better cultivars and better agronomic methods in an economic and political environment that permits profitable agriculture to flourish. In practical terms, this means the supply of crops with in-built pest and disease resistance, higher protein levels, higher overall yield, optimum nutritional qualities for livestock, and adaptation to local environments. Multi-use crops for human food, livestock food, and industrial feedstocks are required.
4. European industry has failed to deliver these resources. Low profitability, aggregation and globalisation in the plant breeding industry have helped withdraw plant breeding targets from supposedly niche and less-rewarding crops to focus on the bigger returns. Simultaneously, the EC and many national governments withdrew from funding pre-competitive research on these crops, consolidating on fewer major crops or model organisms unrelated to protein crops. As a result, genetic improvement of protein and fodder crops has stagnated and hence these crops slipped further in competitiveness. Indeed, despite the contribution of plant breeding to the achievements of modern agriculture, it is suffering from being regarded as a low-priority activity.
5. It is clear that in the light of a further reduction in Europe's self-sufficiency in MRPs, a degree of long-term planning is required in addition to short-term fiscal and regulatory approaches.

6. Proposing that organic producers only can grow protein-rich fodder on set-aside land does not make sense. The arguments given are spurious: not only organic farms depend on crop rotations, and not only organic farms benefit from on-farm fodder use in mixed farms.
7. The models in the Commission's document give a surprisingly low increase in protein crop production with a given subsidy. Surely, the year-to-year fluctuations in area within single member states can be of this order.
8. Grain legumes tend to be spring-sown crops. The switch to autumn-sown cropping in parts of N Europe has removed large areas of crop stubble as an important wildlife habitat, and may be one factor contributing to changes in wildlife populations, especially birds, in arable areas. Encouraging spring cropping may therefore have some environmental benefits.
9. In the UK, the main forage crops are grass/silage, lucerne, red clover, fodder beet, forage maize, rye, forage rape, kale, stubble turnips, forage peas, field beans, mangels, Swedes, sainfoin, fodder radish, westerwold ryegrass, triticale, and whole-crop cereals (single or mixed crop). Factors affecting the uptake of suitable forage crops include climate, soil type, farm size, storage space, capital, availability of labour, pests and diseases (which may affect other crops), farming system, risk (mainly economic), yield (tends to be variable) and nutrient cost/feeding value (*i.e.* yield, energy and protein levels). The main advantages of home-grown protein crops of various types include disposal areas for livestock slurry, green feed out of season, improvement of palatability and nutrient quality of livestock feed, possible cash income, dietary variation, and potential cost-effectiveness. International trends point to greater specialisation coupled to vertical and horizontal integration of agricultural businesses and food processes will lead to larger livestock and cropping enterprises, with quality-assurance schemes, operating in specific regions of the EU, unless enterprise-quashing rural social therapy policies are adopted.
10. Depriving EU livestock producers of cost-effective imported feedstocks is not the answer; competitiveness will be obtained through the uptake of new technologies and practices to improve efficiency and quality. Biotechnological solutions are available for reducing inputs, modifying composition, improving yields, sustaining quality by reducing the depredation of pests and diseases, and introducing novel multi-use types (*e.g.* improved oil yields for biofuels, as well as high protein production in brassicas and legumes). Thus, plant breeding is enhanced by methods to identify the best parental material and operate rapid selection systems on the derived genetic crosses. High-grade phytosanitary and propagation systems can be introduced, and new decision-support systems can aid crop management. Diagnostics, bioinformatics, proteomics, metabolomics, deploying gene insertion and controlled gene expression systems, and expert systems/artificial intelligence, have much to offer.
11. Given the hostile reception given by pressure groups to the introduction of GM crops by industry to the EU, perhaps the public sector should take the lead role initially in ensuring that EU consumers benefit from the rapid and profound advances in plant biotechnology, until the private sector is permitted to function properly in the market place. Contorting world trade is no panacea.