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**COMMUNICATION FROM THE COMMISSION
TO THE COUNCIL AND THE EUROPEAN PARLIAMENT**

Options to promote the cultivation of plant proteins in the EU

Introduction

In its special session of 4 December 2000, addressing the latest developments regarding BSE, the Council called on the Commission to analyse in greater detail the supply and demand for protein-rich plants and to draw its consequences for the policy currently being pursued in this sector and for set-aside. In its session of 26 February 2001, the Council asked to provide such an analysis for its session in March.

This communication concentrates on a limited number of key options that are repeatedly put forward in the political debate to promote the cultivation of plant proteins in the EU. The options are examined against the background of the analysis carried out in the working document of the Commission's services on "Supply and demand of protein rich crops in the EU following the BSE crisis".

All calculations and estimates have been made in a medium term perspective and refer to the latest medium term forecasts of the Commission services.

1. Oilseeds

A key element in the Agenda 2000 decisions was the alignment of the oilseed aid to that of cereals as of 1 July 2002, i.e. 63 €/t. The aid will thereby in the future be fixed and no longer subject to any reduction as under the Blair House commitments in case the total area of some 4.93 Mio ha is exceeded. Any change in the Agenda 2000 decisions which might have some short term benefits should be seen in the context of the disadvantages this would have in the long run.

Having said so, a possible solution to increase plant protein production in the short and medium run (next 2-5 years), would be to maintain the crop specific **oilseeds** aid scheme and to fix the aid at a level sufficiently attractive to increase the area cultivated with oilseeds. However, this solution would be relatively costly and, of course, the oilseeds area would be limited by the Blair House agreement to some 4,93 Mio ha, i.e. some 375 000 ha more than expected according to the latest medium term forecasts by The Commission services. In addition, this solution would de facto dismantle a key element of the Agenda 2000 reform towards more market orientation. The Blair House limit could rapidly become a limiting factor if market prices for oilseeds increase, in the long run, following demand increases.

According to simulations by the Commission services against the background of the latest medium term forecasts, an oilseeds specific aid of about 75 €/t could possibly have the effect, in the short to medium term, to bring the area cultivated with oilseeds (for food purposes) in the EU back to the level of the Blair House limit, if the possibility to apply a crop specific yield for oilseeds would be maintained and if price developments for cereals and oilseeds do not deviate significantly from those assumed in the medium term forecasts. The additional cost (expenditure) of introducing such an aid would amount to some 474 Mio € per year. This amount has been estimated assuming a full implementation of the Agenda 2000 reform, i.e. against a non-crop specific arable aid of 63 €/t. It does not take into account changes in expenditure for (cereal) intervention and refunds. These changes, however, would appear to be minor.

Production of oilseeds on the 375 000 additional hectares would correspond to some 370 000 t of soya meal equivalent (as compared to additional needs of some

1-1.5 Mio t). If one relates the additional expenditure to the additional quantities produced in terms of soya meal equivalent, the opportunity cost would be of some 1.270 € per additional ton of soya meal equivalent. This figure compares to an import price of some 220-230 €/t of imported soya meal.

By far the biggest part of the additional expenditure would benefit the 4.56 Mio ha which would also be sown under Agenda 2000 conditions with a non crop-specific aid of 63 €/t. Therefore, theoretically, a more efficient option might be to limit the additional oilseed payment only to additional oilseed area. However, defining and implementing a concept of “additional area” could raise a number of serious political, legal and administrative problems.

2. *Protein crops*

Protein crops (peas, beans, sweet lupins) are generally sown in spring. They receive a crop specific aid which has been reduced as a consequence of the Agenda 2000 reform, but could be increased again by 6 €/t to 78,49 €/t. Any increase beyond this figure could remove this aid from the protection afforded by the peace clause.

According to simulations carried out by The Commission services against the background of the latest medium term market forecasts, the effect of such an aid increase on production would appear to be quite limited, about 10 000-20 000 ha. Even an increase to 100 €/t, as requested by some professional organisations, would only add some 30 000 to 50 000 ha, according to the simulations. The smallness of the increase is explained mainly by (expected) favourable cereal price developments and thereby the attractiveness to grow cereals. It should be noted, however, that the model forecasts a protein crop area which, after full implementation of Agenda 2000 (and without any additional aid), would be with some 1.3 Mio ha, about 200 000 ha above today's level. The additional expenditure would amount to some 47 Mio € in the case of an increase of the aid by 6 €/t and to more than 220 Mio € in the case of an increase by 27,5 €/t to reach an aid level of 100 €/t.

If 20 000 additional hectares would be put into production with a 6 €/t increase of the aid, the additional production would correspond to some 50 000 t of soya meal equivalent. The total price to be paid in terms of additional support expenditure would be about 990 € for each additional ton of soya meal equivalent.

With an additional aid of 27.5 €/t and 50 000 additional hectares the additional production would correspond to some 120 000 t of soya meal equivalent. The total price to be paid in terms of additional support expenditure would be about 1.840 € for each additional ton.

The main disadvantage of an increase in the aid for protein crops, is its very limited efficiency (relatively high cost, very modest increase in protein supply). It has, however, to be noted that this low efficiency has been calculated on the basis of model results. The modelling conditions for protein crops in the model used by The Commission services are more limiting than for other arable crops.

If one assumes, for the purpose of illustration, that an increase in the protein crop aid to 100 €/t would lead to the cultivation of an additional area of 150 000 ha, i.e. three to five times the outcome of the model simulation, the overall result compared to the

Agenda 2000 baseline would improve, but the final conclusions would remain basically the same:

- increase of production in soya meal equivalents: + 360 000 t,
- additional cost: 242 Mio €,
- opportunity cost per tonne of additional soya meal equivalent: 675 € (to be compared to 220-230 €/t for imported soya meal).

As in the case of oilseeds, most of the additional aid would benefit the area, which would also be sown under Agenda 2000 conditions. In other words: it would give an additional economic advantage to protein crop producers for what they already produce.

Protein crop growing is most likely to lead to increased nitrate leaching from agricultural fields with consequent water pollution unless particular environmental precautions are taken. This would represent another obstacle for promoting these kind of crops.

3. *Protein rich crops on set-aside land*

The option of authorising the growing of protein crops or other protein rich fodder crops on **set-aside** land looks attractive at first glance as there would be no direct budget cost and could nevertheless present a strong incentive to produce more protein rich plants. However, this solution, too, raises a number of questions.

There are, first of all, two questions of principle:

- (Compulsory) set aside was introduced as a market regulation instrument (market regulation through production limitation, mainly for cereals). It was meant to be reduced if the market suffered from scarce supplies. Dedicating the set-aside area to other crops reduces the flexibility needed for using it for market regulation. Some experts expect the wheat market to boom again in the years to come so that this flexibility might be needed.
- Set aside is a provision of the EU's arable regime, which plays an important role in its production limiting effects. By growing a crop on set-aside land which competes on the market with cereals and oilseeds the EU would somewhat diminish its effectiveness in this regard. This would not be a step to be taken lightly in view of the importance the EU attaches to the Blue Box as a contribution to the process of agricultural reform. A basic requirement of Blue Box payments is that they are given under production limiting programmes.

Apart from these questions of principle, other arguments deserve consideration:

- If the cultivation of protein crops, which already get the arable crop aid plus 9,5 €/t (peas, beans, sweet lupins), would be allowed on set-aside land, there is a risk that farmers will reduce the normal production of these crops (and grow instead more profitable cereals) and replace it by production on set-aside land (in order to continue to have the agronomic benefits of these crops in crop rotation).

- If the EU would allow the cultivation of those protein rich fodder crops on set-aside land which is also eligible for the per tonne dried fodder aid, there would be a risk that producers benefit from both aids. Of course, this could be excluded in the legal texts.
- If the cultivation of protein rich fodder crops would be allowed on both compulsory and voluntary set-aside land (or only on voluntary set-aside land), the large margin farmers have to enter into voluntary set aside would lead to a de facto introduction of these crops into the arable crop regime.

Taking account of these different arguments the Commission has so far proposed – to foster organic production - to authorise the cultivation of nitrogen fixing fodder crops like clover grass on set-aside land for organic farmers only who depend more than other on well studied crop rotations and have, in many cases, mixed farms so that they can benefit directly from the fodder crops for on-farm use.

4. *Dried fodder*

Dried fodder is mainly fed to ruminants for which animal meal is already forbidden since a number of years. Nevertheless, some argue that if ruminants consume more dried fodder, they are likely to consume less other proteins, which are then available for other animals. There are also discussions about the environmental friendliness of dried fodder production. In the Southern Member States, the areas are often irrigated and in all Member States the process of dehydration needs energy (usually fuel), with the exception of sun dried fodder the production of which is, however, declining.

A relatively simple option would be to increase the maximum guaranteed quantity, for example, by 10% or some 440 000 t and to decrease the aid slightly, for example by 5%. This would lead to additional costs of some 13,7 Mio €.

An additional quantity of 440 000 t of dried fodder, if really produced, would correspond to some 150 000 t of soya meal equivalent. The total price to be paid in terms of additional support expenditure would be about 93 € for each additional ton of soya meal equivalent. However, one has to be aware that dried fodder production is currently overshooting the maximum guaranteed quantity by about 200 000 t in 1999/2000 and an estimated 600 000 t in 2000/01. It is therefore not certain that an increase in the maximum guaranteed quantity will really lead to the same increase in production. It could in fact be used simply to cover the already exceeding quantities.

Concluding remarks

1. As the use of animal meals for ruminants is already forbidden for a number of years in the EU, the ban decided by the Council in December affects mainly pig and poultry meat production.

Moreover, following the BSE crisis, the demand for and the production of pig and poultry meat are expected to increase. This will increase the need of feed proteins in these two sectors, in addition to the need to replace about 2 Mio t of animal meals.

2. There is no major problem to replace protein from animal meals by protein from plants. The best source of plant protein in this respect is soya meal.

However, under current price relationships between cereals and soya meal (as well as other oil meals), the feed industry and the farmers will not react by simply using more soya meal. Their response will be threefold:

- The feeding of protein-rich ingredients will be reduced to the minimum zoo-technical requirements. This is expected to lead to a slight overall reduction of the use of crude protein in animal feed as compared to 1998 and 1999, when soya meal prices were extremely low.
 - The uptake of cereals in animal feed will increase. Of course, cereals provide mainly energy and less protein. But with an average protein content of 10-12%, an expected additional uptake of 5 Mio t in 2001 (calendar year) would also provide some 0.5-0.6 Mio t of crude protein.
 - Any remaining deficit will be mainly covered through additional imports of soya meal. Taking into account the slight reduction of crude protein use and the additional protein provided through cereals, the additional quantities of soya meal needed would appear to remain quite limited (1-1.5 Mio t).
3. There is no problem of availability of soya meal on the world market. On the contrary, the additional quantities needed can easily be imported. They would add some 5% to existing imports.
 4. The options presented in this communication would lead to an increase in domestically produced plant proteins. However, each of them would satisfy the additional needs only to a limited extent, and in some cases only in an indirect way, as they would be mainly targeted at ruminants and not at pigs and poultry. Some of the options would lead to additional expenditure and the opportunity costs per additional ton of soya meal equivalent would appear to be relatively high. In all cases, careful attention has to be paid to possible WTO implications.

**POTENTIAL IMPACT and COST
OF INCREASING OILSEED AND PROTEIN CROPS AID**

OPTIONS	Impact by 2005/06		Costs		Soya meal
	INCREASE IN AREA	Extra PROTEIN produced	ADDITIONAL BUDGET COST (2)	COST PER TON SOYA MEAL EQ.	Current IMPORT PRICE OF SOYA MEAL
Increase in aid from 2002/03 onwards	000 ha	(soyameal equivalent) 000 t	mio EUR	(opportunity cost) EUR/t	(CAF Rotterdam) EUR/t
Oilseeds					190-220
- to 75 EUR/t (1)	376	372	474	1 272	
Peas, beans and sweet lupins					
- to 78,49 EUR/t	20	48	48	992	
- to 100 EUR/t	50	120	221	1 842	

Notes:

- (1) With an oilseed-specific aid, the maximum oilseed area corresponds to the Blair House limit, thus not all of protein shortage can be covered.
- (2) Additional budgetary cost compared to Agenda 2000, taking into account shifts in area between oilseeds/protein crops and cereals (by 2005/06) but not changes in market expenditure for cereals.