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Current position of proteinseeds production and alternative future prospects

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SUMMARY - The author explains the production and the consumption of proteinseeds, distribution, and the potential of proteinseed consumption. He also explains the tendencies in the production of the 80s and the influence of the CAP reform. He describes the evolution in the proteinseed importation, its origin and its end. Finally, he explains how the CAP could be oriented for the proteinseeds and the future role of these products in the European Union, which are deficient.

Key words: CAP, proteinseeds, import, export, production, consumption.

Proteinseeds: Peas, field beans and lupins

Proteinseeds in Europe: a North-based production that interests the South

A production above all concentrated in the countries of the North, but which could develop in the South (Table 1).

Table 1. Proteinseeds production in EU countries from 1990 to 1996

<table>
<thead>
<tr>
<th>Proteinseeds production (1,000 t)</th>
<th>1990/91</th>
<th>1992/93</th>
<th>1993/94</th>
<th>1995/96</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>3,681</td>
<td>3,293</td>
<td>3,811</td>
<td>2,784</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>812</td>
<td>706</td>
<td>944</td>
<td>560</td>
</tr>
<tr>
<td>Denmark</td>
<td>551</td>
<td>305</td>
<td>456</td>
<td>274</td>
</tr>
<tr>
<td>Germany</td>
<td>214</td>
<td>138</td>
<td>290</td>
<td>383</td>
</tr>
<tr>
<td>Spain</td>
<td>51</td>
<td>38</td>
<td>30</td>
<td>66</td>
</tr>
<tr>
<td>Other</td>
<td>269</td>
<td>266</td>
<td>258</td>
<td>117</td>
</tr>
<tr>
<td>Total of the 12 EU countries</td>
<td>5,578</td>
<td>4,746</td>
<td>5,789</td>
<td>4,184</td>
</tr>
<tr>
<td>Total of the 15 EU countries</td>
<td>-</td>
<td>4,914</td>
<td>5,925</td>
<td>4,301</td>
</tr>
</tbody>
</table>
Very high consumption in the North but non negligible in the South (Table 2).

Table 2. Use of peas and field beans in EU countries in 1993/94 (1,000 t)

<table>
<thead>
<tr>
<th>Country</th>
<th>1,000 t</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>2,600</td>
</tr>
<tr>
<td>Germany</td>
<td>820</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>770</td>
</tr>
<tr>
<td>Belgium</td>
<td>540</td>
</tr>
<tr>
<td>Spain</td>
<td>580</td>
</tr>
<tr>
<td>Italy</td>
<td>430</td>
</tr>
<tr>
<td>Other</td>
<td>1,060</td>
</tr>
<tr>
<td>Total of the 12 EU countries</td>
<td>6,800</td>
</tr>
</tbody>
</table>

A consumption potential as animal feed of about 14 million tons against current 5 million tons.

Although the consumption potential figure of 14 million tons is certainly only a theoretical maximum, it is should be noted that incorporation percentages have continued to rise due to changes in the knowledge of and quality of peas produced in Europe. It is consequently not rare to observe percentages of 35% of peas in pig feeds for whereas ten years ago, a percentage of 20% was virtually a maximum (Fig. 1).

In view of its nutritional qualities and the improvements that have been made in animal feed techniques, the pea hence has a significant consumption growth potential.

Fig. 1. Pea consumption growth potential in EU countries.
Production trends

Strong development in production in the 1980s

The EEC’s policy to reduce the dependency on proteins followed after 1973 (embargo on US soya) within the framework of market organization, allowed the production of proteinseeds to increase from 900,000 tons in 1981 to 5.8 million tons in 1993.

The reform of the CAP has changed the balance: for the last 2 years, areas and productions have regressed

Reduction in the areas of proteinseeds in the European Union (15 countries of the EU) for the second consecutive campaign (-250,000 ha in 2 years)

The Community proteinseeds areas have decreased by 13% overall in comparison with 1994 and by almost 18% in relation to the 1993 areas. This decrease has been particularly pronounced (-19% and -27% in comparison with 1994 and 1993 respectively) in the countries traditionally producing proteinseed (France, United Kingdom, Denmark for the pea, United Kingdom, Italy for the field bean). In Spain, the sown areas have remained stable after the rapid increase observed in 1994. In Germany, pea and of lupin areas are increasing (Fig. 2 and 3).

In all, the proteinseed areas in the EU represent 1,183,000 ha of which: (i) 897,000 ha for peas, representing a drop of 12.3% in comparison with 1994; (ii) 227,000 ha for field beans, representing a decrease of 25.6% as compared with 1994; (iii) 59,000 ha for lupins, representing an increase as compared with 1994.

Fig. 2. Trend in the proteinseeds EU area.
Production has dropped by 1.6 million tons in 2 years

Under the effect of the reduction in areas, globally mediocre yields this year (less than those of 1993 and 1994 in France and United Kingdom) and a more limited production potential in the new areas where the crop is tending to be developed, the Community production of proteinseeds fell back by 18% in 1995 (-27% as compared with 1993) to 4.3 million tons (3.6 million tons of peas, 0.56 million tons of field beans, 0.12 million tons of lupins), i.e. 925,000 tons less than last year (Fig. 4).
With the exception of Germany, all countries registered a net downturn in proteinseeds production. In France, the decrease in pea production has been very pronounced (-19% as compared with 1994, -27% as compared with 1993) (Table 3):

Table 3. Pea production in France (t)

<table>
<thead>
<tr>
<th></th>
<th>1993</th>
<th>1994</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>3,758,000</td>
<td>3,379,000</td>
<td>2,736,000</td>
</tr>
</tbody>
</table>

Although the proteinseeds areas of the three new countries of the EU represent 42,000 ha (of which 36,000 ha for peas), yields are low, in view of the climatic conditions (yield in peas: 10 q/ha in Finland, 26 q/ha in Sweden) in 1995. Their production reached 117,000 tons (89,000 tons in Australia where the production decreased by half as compared with 1994, 30,000 tons in Sweden, 5,000 tons in Finland).

Importations are taking over from Community proteinseeds

Trend in the imported tonnages: After increasing from 800,000 tons in the 90s to 1.5 million tons in 1993/94, Community importations of proteinseeds forward again in 1994/95 rising to almost 1.7 million tons. This increase (+6% of the total) in fact corresponds to a very high increase in the importations of peas (+45% to 1.3 million tons) and masks a distinct downturn in the importations of field beans (-30% to 0.24 million tons) and lupins (-47% to 0.21 million tons) (Fig. 5).

Fig. 5. EU imports of proteinseeds.

Origin of imported proteinseeds: The origin of imported peas is significantly different from that of the previous campaign with the arrival of new exporters such as the Ukraine and Russia (about 500,000 tons) and the withdrawal from the market of Australia whose 94 harvests was very strongly affected by drought. Canada remains the main country exporting peas towards the European Union (500,000 tons). The imported tonnages of the PECO (principally the Czech Republic) are stable in comparison with the previous campaign (about of 200,000 tons) (Table 4).
For the lupin, the 94/95 campaign marked a break in the uniform progression of importations observed since the 1991/92 campaign, due to the reduced supply this year from Australia (virtually-exclusive supplier of the EU).

The decrease in the importations of field beans is related to the lack of Polish field beans on the European market in 1994. The quantities imported from China (main supplier of the EU) remained stable.

Table 4. Origin of imported proteinseeds

<table>
<thead>
<tr>
<th></th>
<th>Peas</th>
<th>Field beans</th>
<th>Lupins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total imports</td>
<td>1,265</td>
<td>261</td>
<td>244</td>
</tr>
<tr>
<td>Total imports</td>
<td>(1,000 t)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Of which:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>541</td>
<td>48</td>
<td>2</td>
</tr>
<tr>
<td>Ukraine</td>
<td>370</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Russia</td>
<td>134</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PECO</td>
<td>195</td>
<td>80</td>
<td>7</td>
</tr>
<tr>
<td>China</td>
<td>-</td>
<td>222</td>
<td>4</td>
</tr>
<tr>
<td>Australia</td>
<td>7</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

Destination of imported proteinseeds: The destination of proteinseeds imported into the EU in 1994/95 is similar to the previous campaign, the largest three importers remain Spain (570,000 tons, importations up by 38%), Germany (330,000 tons, importations down by 17%) and Italy (nearly 310,000 tons, stable importations). Substitutions between products were able to take place according to the availabilities and prices of the various proteinseeds (Fig. 6).

![Fig. 6. Importations of proteinseeds in the main importing countries of the EU.](image)
The proteinseeds market: between cereals and oilseeds meals

The former proteinseeds EU regulation considered that proteinseeds correspond to a mixture of 55% barley and 45% soybean meal.

More recently, simulations performed by the CEREOPA "Prospective alment" model gives a fairly close relationship:

Peas price = 0.55 x wheat + 0.33 x soybean meal

This is confirmed by the trend in the price (Fig. 7).

![Graph showing the trend in the prices of peas, wheat, and soybean meal.](image)

**Fig. 7.** Trend in the prices of peas, wheat and soybean meal (delivered to user).

The CAP reform must be completed for the proteinseeds

The current problem in the decrease in the areas and production of proteinseeds lies in an imbalance between the 3 different arable crop regimes:

- Cereals: intervention + fixed aids
- Oilseed: no price support + variable with market price level
- Proteinseeds: no price support + fixed aid

Only proteinseeds do not profit from an income stabilisation mechanism.

The competitiveness of proteinseeds has dropped since 1992

In 1993 as in 1992, the cereal and proteinseeds gross income are equal (Fig. 8).

The decrease observed between 1992 and 1993 originates from the difference between the reference yield and the real cereal yield.
Since 1993, a diverging trend has been observed: (i) drop in the proteinseeds gross income which in 1994 and 1995 remained less than its 1993 reference level; (ii) increase in the cereal gross income.

In a stabilised CAP with of cereals at the intervention price and average protein prices: (i) cereals rise back to their 1993 reference level; (ii) proteinseeds lose 130 ECU/ha, i.e. the equivalent of 20 ECU/T of proteinseeds base aid.

![Graph showing per ha gross income](image)

Fig. 8. Per ha gross income.

Regulations adjustment provisions have been made in the CAP reform

The 1765/92 regulation -Art. 15-2 provides the possibility of supplementing the proteinseeds regulation from 1994/95 on: "the provisions applicable to oilseeds compensatory payments may also be applied to proteinseeds".

To increase the competitiveness of proteinseeds, two solutions are possible: (i) a fixed increase of the aid; (ii) an aid adjustment mechanism according to market price trends, (oilseeds system).

*Fixed increase of the aid*

The level of this increase should be around 20 ECU/T (former green ECU).

A drawback of this solution, however, is that it does not provide the possibility of compensating the fluctuations due to change in protein prices.

*An aid variability mechanism*

As provided for in the regulations, the following should be determined: (i) a reference price (at the 1993/94 market price level at the beginning of the reform); (ii) a mechanism providing variable additional help to compensate for market price fluctuations.

**Proteinseeds: a strategic challenge in the EU protein deficit**

Since 1993 political will has made it possible to increase the EU self-sufficiency rate from 0 to 37% in 1990. In 1994, it had regressed to 29%.
The consumption of proteins is continuing to increase in Europe at a rate of 4 to 5% per year.

The production of European Proteins Rich materials is subject to the GATT limitation (Blair House) for oilseed meals. Proteinseeds provide the only possibility of tracking growth in European demand. Regulations still have to allow this.

This necessity is all the more pressing given that the Asian demand for proteins will in all probability explode in the medium term and a renewing on market tensions as in 1973, could remind us of the interest in maintaining a strategic supply threshold in Europe.