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Råstofforsyning til kvægfoder i EF

Die Versorgung der EG mit Grundstoffen für Tiernahrung

Ο ανεφοδιασμός της Κοινότητας με πρώτες ύλες για τη διατροφή ζώων

The supply of animal feed in the EC

L'approvisionnement de la C.E. en matières premières pour l'alimentation du bétail

L'approvvigionamento di materie prime per l'alimentazione animale nella CE

De voorziening van de Gemeenschap met veevoergrondstoffen

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I dette dokument, som er det første, generaldirektoratet for forskning og dokumentation offentliggør om dette emne, behandles de komplicerede forhold inden for foderstofsektoren. Der gives en beskrivelse af, hvordan importen af produkter, der kan erstatte korn, indvirker på markederne i almindelighed og på anvendelsen af fællesskabskorn i særdeleshed, idet Fællesskabet jo har overskud af korn. Ligeledes gives der en beskrivelse af, hvordan importen af proteinholdige produkter, som Fællesskabet har underskud af, indvirker på landbrugsproduktionen, herunder især husdyrproduktionen.

I dokumentet gives der detaljerede oplysninger om og tal for Fællesskabets produktion og importen af de vigtigste foderstoffer efter deres anvendelse. Priserne på foderblandinger er en afgørende faktor på dette område. Endelig nævnes de foranstaltninger, der er truffet med henblik på at støtte Fællesskabets produktion af foderstoffer og for at stabilisere visse former for import, som indirekte indvirker på fællesskabsbudgettet.

Dieses Dossier, das erste, das die Generaldirektion Wissenschaft und Dokumentation zu diesem Thema veröffentlicht, befaßt sich mit der komplizierten Lage auf dem Futtermittelsektor. Darin werden die Auswirkungen der Einfuhren von Getreideaustauscherzeugnissen auf die Märkte allgemein und auf die Verwendung von EG-Getreide im besonderen zu einer Zeit, da die Gemeinschaft Überschüsse in diesem Bereich erzeugt, beschrieben. Ebenfalls untersucht wird, wie sich die Einfuhren von eiweißhaltigen Erzeugnissen, an denen es der Gemeinschaft mangelt, auf die Agrarerzeugung insbesondere die tierische Erzeugung, auswirken.

Das Dossier enthält nach dem Verwendungszweck gegliederte ausführliche Angaben und Zahlen über die Gemeinschaftserzeugung und die Einfuhr der wichtigsten Futtermittel. Dabei spielen die Kosten für Fertigfutter eine entscheidende Rolle. Schließlich werden die Maßnahmen aufgeführt, die getroffen wurden, um die Gemeinschaftserzeugung von Futtermitteln zu fördern und die Einfuhren bestimmter Erzeugnisse, deren Auswirkungen den Gemeinschaftshaushalt indirekt belasten, zu stabilisieren.

Ο φάκελος αυτός, ο πρώτος που δημοσιεύει η Γενική Διεύθυνση Έρευνας και Τεκμηρίωσης για το θέμα αυτό, διαπραγματεύεται την πολύπλοκη κατάσταση στον τομέα των ζωοτροφών. Περιγράφει τις επιπτώσεις στις αγορές γενικά και στη χρησιμοποίηση των κοινοτικών σιτηρών ειδικότερα, των εισαγωγών προϊόντων που μπορούν να υποκαταστήσουν τα σιτηρά , τη στιγμή μάλιστα που η Κοινότητα έχει πλεονάσματα στον τομέα αυτό. Περιγράφει επίσης τις επιπτώσεις των εισαγωγών πρωτεϊνούχων προϊόντων, στα οποία η Κοινότητα παρουσιάζει έλλειμμα, επί της γεωργικής παραγωγής και ιδίως της ζωϊκής.

Ο φάκελος αυτός παρέχει πληροφορίες και λεπτομερή στοιχεία σχετικά με την κοινοτική παραγωγή και τις εισαγωγές των κυριότερων ζωοτροφών ανάλογα με τον προορισμό τους. Το κόστος των σύνθετων τροφών αποτελεί καθοριστικό στοιχείο στο θέμα αυτό. Ο φάκελος αυτός αναφέρει τέλος τα μέτρα που ελήφθησαν για την ενθάρρυνση της κοινοτικής παραγωγής ζωοτροφών και τη σταθεροποίηση ορισμένων εισαγωγών των οποίων οι επιπτώσεις επιβαρύνουν άμεσα τον κοινοτικό προϋπολογισμό.

This paper, the first published by the Directorate-General for Research and Documentation on this subject, deals with the complex situation in the fodder sector. It describes the impact of imported cereals substitutes on markets in general and on the use of Community cereals in particular, at a time when the Community is producing a surplus in this sector. It also describes the impact on agricultural production, with particular reference to livestock, of imports of protein products in which the Community is deficient.

The paper gives detailed facts and figures on Community production and imports of the main kinds of fodder according to their use. The cost of compound feedingstuffs is a crucial factor here. Finally, the paper lists the measures taken to stimulate Community fodder production and to stabilize certain imports having an indirect effect on the Community budget.

Ce dossier, le premier que la Direction Générale de la Recherche et de la Documentation publie sur ce sujet, traite de la situation complexe du secteur des aliments fourragers. Il décrit l'impact des importations de produits pouvant se substituer aux céréales, sur les marchés, en général, et sur l'utilisation des céréales communautaires, en particulier, alors même que la Communauté est excédentaire dans ce domaine. Il décrit également l'impact des importations de produits protéiques, dont la Communauté est déficitaire, sur la production agricole, et notamment animale.

Le dossier fournit des indications et des chiffres détaillés relatifs à la production communautaire et aux importations des principaux aliments fourragers selon leur affectation. Le coût des aliments composés est un élément décisif en la matière. Ce dossier mentionne enfin les mesures prises pour encourager la production communautaire d'aliments fourragers et pour stabiliser certaines importations dont les effets pèsent indirectement sur le budget communautaire.

Il presente dossier, il primo pubblicato dalla Direzione Generale della Ricerca e della Documentazione sull'argomento, tratta la complessa situazione del settore degli alimenti foraggeri. Esso descrive, in generale l'impatto delle importazioni di prodotti di sostituzione dei cereali sui mercati e, in particolare sull'utilizzazione dei cereali comunitari, in un momento in cui la Comunità è eccedentaria in questo settore. Si descrive inoltre l'impatto delle importazioni di prodotti proteici, di cui la Comunità è deficitaria, sulla produzione agricola, segnatamente animale.

Il dossier fornisce indicazioni e dati dettagliati relativi alla produzione comunitaria e alle importazioni dei principali alimenti foraggeri a seconda della loro utilizzazione. Il costo degli alimenti composti rappresenta in questo contesto un elemento determinante. Il dossier descrive infine le misure adottate per incoraggiare la produzione comunitaria di alimenti foraggeri e per stabilizzare talune importazioni che finiscono per incidere indirettamente sul bilancio comunitario.

Dit dossier, het eerste dat het Directoraat-generaal Onderzoek en Documentatie over dit onderwerp publiceert, betreft de ingewikkelde situatie in de sector veevoeders. Het beschrijft de gevolgen van de invoer van graanvervangende produkten voor de markten in het algemeen en voor het verbruik van door de Gemeenschap geproduceerde graangewassen in het bijzonder, terwijl de Gemeenschap op dit gebied reeds met een overproduktie heeft te kampen. Eveneens wordt aangegeven welke gevolgen de invoer van eiwithoudende produkten, waaraan in de Gemeenschap een tekort bestaat, heeft voor de landbouwproduktie, met name op het gebied van de veeteelt.

Het dossier bevat gegevens en gedetailleerde cijfers over de produktie van de Gemeenschap en de invoer van de meest gebruikte veevoeders. De kostprijs van mengvoeders is in dit verband van doorslaggevende betekenis. Ten slotte wordt aangegeven welke maatregelen zijn genomen om de produktie van veevoeders in de Gemeenschap te bevorderen en bepaalde importen waarvan de gevolgen indirect ten laste komen van de communautaire begroting, te stabiliseren.

C O N T E N T S

INTRODUCTION

The animal feed supply situation may be looked at in various ways. The most scientific approach is based on the energy-providing carbohydrate ingredients of the feed expressed in feed units[1] and gross protein expressed as total nitrogenous matter (TNM) for the purpose of comparison. Such an approach has not been adopted in this research document, however. This study looks mainly at the Community's raw material supplies from the point of view of common organizations of the market, the common policy in particular commodities or the Community's international trade in a particular group of commodities.

This approach undoubtedly has drawbacks, since the composition of raw materials can vary and they can therefore be covered by different common policies. Such is the case with certain oilseeds, which contain oils and fats, of which the EC has a surplus, and protein production, which in the Community falls considerably and permanently short of requirements.

This document distinguishes between different raw materials: cereals, products that can take the place of cereals (common wheat and barley) in animal feed, oilseeds and high-protein commodities while rejecting the notion that these different commodities can be considered separately, since they are linked by virtue of their nutritional content and the fact that they can be used instead of cereals. It is therefore unavoidable that certain features of cereals are dealt with in the section on cereals substitutes and vice versa.

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[1] FU = feed unit: the energy provided by 1 kg of average quality barley = 0.7 SE (starch energy).

I. ANIMAL FEED RESOURCES

Animal feed resources consist of[2]:

(a) Grassland and permanent pasture

These cover 42% of the energy needs of animals in the Community and 48% of their protein requirement, and they account for 126,000 million FU[1].

(b) Cereals

Cereals resources account for a total of 69,000 million FU, of which 3,500 million FU are imported. The main cereal involved is maize, imports of which have dropped by 12,800 million FU in 12 years. Cereals cover 23% of carbohydrate requirements.

(c) Other merchantable types of fodder

Other types of fodder account for a total of 66,000 million FU, of which 33,000 million are imported (manioc, soya, maize gluten, molasses, etc.).

(d) Other types of fodder

The total here is 40,000 million FU, made up of fodder maize and similar crops. Community-produced fodder maize accounts for a steadily increasing proportion of this total:6,000 million FU in 1970/71 and 19,200 million FU in 1981/82.

The EUROSTAT assessment of the fodder situation in the Community gives a total of 301,000 million FU, of which 36,500 million, or 12.1% are imported.

Permanent pasture accounts for	41.9% of total FU
Cereals for	22.9%
Other merchantable commodities for	21.9%
And fodder crops for	13.3%

This study looks mainly at (b) and (c): cereals, cereals residues and substitutes, and merchantable oils and fats and protein.

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[2] According to the criteria used by EUROSTAT in its assessment of the fodder situation

Green fodder (all the fodder referred to in (a), (b) and (d), from meadowland, pasture and fodder crops including forage roots and tubers) is of considerable importance in animal feeding in the Community. This is due mainly to the area sown to green fodder relative to total crop acreage. The figure for the Europe of the Nine is 58.6%. There are, however, major differences between the Member States:

Ireland	92.5%
United Kingdom	74.4%
Netherlands	65.4%
UEBL	58.8%
France	57.8%
W. Germany	48.1%
Italy	45.1%
Denmark	29.5%

Grassland and pasture account for 44% of total acreage in the Community as a whole.

The Community system

There is no common organization of the market for animal feed. Raw materials for the fodder sector fall under different COMs and special rules and are covered to differing extents and indirectly by their provisions:

- Cereals: the COM also covers manioc and other cereals substitutes,
- Oils and fats, and in particular soya, linseed, oilseed rape, castor seed, sunflower and olive waste,
- Milk and milk products (skimmed milk and skimmed milk powder),
- Dried fodder,
- Peas, beans and lupins,
- Fish products (fish meal),
- Beef (animal meal and beef fat),
- Sugar (molasses, sugar-beet pulp) and isoglucose,
- Fruit and vegetables (citrus cake and other fruit waste),
- Dried grapes and dried figs.

Even though there are no Community rules covering commodities to be used in animal feed, the EAGGF pays substantial aid for them. The aid paid to this sector in 1984, not counting the aid for products such as soya, castor seeds, oilseed rape, turnip rape, sunflower, peas, beans, lupins and dried fodder, totalled 1,200 million ECU. This was paid for the disposal of products in surplus such as minimum-quality breadmaking wheat, liquid skimmed milk and skimmed milk powder, fresh fruit and vegetables and dried grapes.

II. ANIMAL FEED AND LIVESTOCK PRODUCTION IN THE COMMUNITY

Animal feed represents on average 36% of the value of livestock products in the EC. However, this average does not accurately reflect the proportion accounted for by fodder in the different Member States. In the Netherlands and Belgium, feed-related costs account for some 48% of the value of livestock products, as against only 18% in Greece.

Long-term expansion in animal feed production has gone hand in hand with growth in animal numbers. However, this applies mainly to pig numbers and the poultry flock and not to the dairy herd. Yield per livestock unit has increased markedly thanks to the use of a wide range of top-quality concentrated feed. Feed cake plays a major rôle in the fodder sector and covers a considerable proportion of animal protein requirements.

Milk production accounts for 20% of EC agricultural production and is spread over some 1.8 million farms. There is some correlation between the feed given to dairy cows and milk production. According to the Commission, the rise in the rate at which milk production is expanding has been particularly marked in the countries in which feed for dairy cows contains a high proportion of substitutes. Between 1975 and 1982, for example, milk deliveries climbed by 3.4% per year in the Netherlands but only by 2.6% per year in France.

Over the same period net imports of cereal substitutes, which are used mainly for dairy cows (corn gluten feed and citrus waste) rose from 1.1 million tonnes to 2.1 million tonnes in the Netherlands, whereas in France the quantities involved were negligible (in 1975 it was a net exporter of 100,000 tonnes and in 1982 a net importer of 33,000 tonnes). Nevertheless,the annual percentage rise in milk deliveries over this period in the Netherlands was not significantly ahead of that in other Member States which make less use of cereals substitutes in feeding their dairy herds. The average annual rate of increase was 2.91% in

West Germany and the United Kingdom, 2.74% in Italy and 2.59% in France; Ireland was the exception, with a rise in deliveries far in excess of the Community average. For the Community as a whole (EUR 9) the figure was around 2.84%.

The beef and veal sector has undergone considerable structural transformation: 4% of farms, mainly small producers, have gone out of business each year. This has meant that the proportion of the total cattle population on each farm has increased.

Pig production accounts for 45% of total Community meat production. This sector has also undergone structural adjustment, with the number of pig farms falling by 25% between 1973 and 1979. In 1979 there were 2.1 million pig farms. The number of pigs per farm is rising. Fodder accounts for 70% of production costs in the pig industry.

The eggs and poultry sector has also undergone radical structural transformation, and intensive production techniques are spreading.

The self-sufficiency rate in all the livestock sectors is over 100%.

Table 1 shows livestock products as a proportion of final production in the Community. Milk (and milk products) account for a very significant proportion of final production (more than 24%) in Luxembourg, Ireland, the Netherlands, Denmark and West Germany, as do beef and veal in Ireland and Luxembourg and pigmeat in Denmark and Belgium.

Table 1:

Livestock products as a percentage of final agricultural production in the Member States of the Community

	EUR 10	Greece	EUR 9	Germany	France	Italy	Nether-lands	Belgium	Luxem-bourg	United Kingdom	Ireland	Denmark
1	2	3	4	5	6	7	8	9	10	11	12	13
Milk	19.2	8.9	19.7	24.2	17.1	11.7	27.8	17.3	37.1	22.3	33.5	24.2
Beef and veal	14.6	4.4	15.1	17.0	16.2	10.8	11.7	18.3	26.2	16.0	34.5	11.6
Pigmeat	11.9	4.8	12.3	19.8	7.0	7.1	19.0	24.4	8.5	8.6	7.9	28.2
Eggs	3.0	2.6	3.0	3.2	2.3	2.6	4.0	3.4	1.3	4.9	1.2	1.3
Poultry	4.4	3.6	4.4	1.6	5.2	6.2	3.7	3.1	0.1	5.8	3.0	1.8

Source: The Agricultural Situation in the Community
1983 Report

Imports of animal feed into the Community from non-member countries[1]

In 1972/73, 12% of gross production in the Community was obtained from 34 million tonnes of feed units from non-member countries. After several years of fluctuating import levels, 41 million tonnes of feed units from non-Community countries were used in 1982, accounting once again for 12% of gross production (Table 2).

This table shows that West Germany and the Netherlands import the most fodder from other countries both within and outside the Community. In the last two years for which figures are available (1981/82) the Dutch processing industry used more than 13 million tonnes of FU in non-Community fodder, which was more even than West Germany (which used some 12.6 m tonnes of FU). The next biggest users were Italy and the United Kingdom, with between 6 and 7 million tonnes of FU.

Average use of non-Community fodder (imports from non-member countries) in the Community has risen by an average of 20% since 1972/73, but the increase for France, a country which uses relatively little non-Community fodder, is 87%. For the Netherlands it is 49% and for West Germany 39%.

Table 3 shows the relationship between livestock production and the quantity of non-Community fodder used. It also illustrates the scale of non-Community fodder imports in relation to agricultural area in each country. Averages of the last three years for which figures are available have been used in order to exclude statistics that refer to only one year.

To produce 241 million tonnes of FU in livestock products the Community of the Nine used 42.4 million tonnes of non-Community fodder. 18% of livestock products are therefore derived from fodder from outside the Community, though this proportion varies from country to country.

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[1] This section is taken from the article '10 Jahre Versorgungsberechnungen für die EG' ('10 years of supplies to the EC') by Dr Thiede, which appeared in 'Agrarwirtschaft', No. 5, 1984.

Table 2: Use of fodder from non-member countries in the Community countries (EUR 9) (1972/73 - 1981/82) in million tonnes of feed units

Country	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82
D	9 090	9 273	9 231	10 440	12 297	12 068	13 394	13 788	12 720	12 636
F	3 010	2 798	3 060	3 859	3 816	5 129	5 180	5 572	5 559	5 822
I	7 919	6 318	6 814	7 620	8 058	6 647	9 019	10 017	7 969	6 344
NL	9 126	9 009	9 975	10 401	10 592	11 667	12 996	13 473	13 362	13 372
B/L	4 123	4 388	4 560	4 537	4 545	4 050	4 790	4 066	4 138	4 206
UK	6 901	5 754	5 236	6 290	7 305	5 581	6 027	6 454	5 383	6 157
IRL	755	675	641	683	885	885	879	912	909	942
DK	1 734	1 893	1 685	2 030	2 701	2 637	3 013	2 788	2 871	2 958
EUR-9[1]	34 193	32 253	32 542	35 849	42 154	39 146	43 763	44 405	41 772	40 932

[1] Fodder from non-member countries.

Source: Agrarwirtschaft No. 5, 1984
Dr. Thiede: '10 Jahre Versorgungsberechnungen für die EG'

Table 3: Significance of non-Community-produced fodder (average for 1980-82)

	Livestock production[1]	Production using non-Community fodder		Area equivalent to non-Community fodder[2]	
	m t	GE[3]	%	m ha	%[4]
D	55.7	13.0	23	3.0	24
F	62.0	5.6	9	1.2	4
I	30.9	8.2	26	2.2	13
NL	25.6	13.4	52	2.4	117
B/L	10.9	4.1	38	0.9	55
UK	34.7	6.0	17	1.3	7
Irl	9.0	0.9	10	0.2	3
DK	12.2	2.9	23	0.7	24
EUR 9[5]	241.1	42.4	18	9.7	10

[1] Total production - [2] Production using non-Community fodder divided by national or Community cereals yield per hectare
[3] Grain equivalent - [4] Equivalent area as a percentage of available agricultural area - [5] Not including internal trade (11.8 m tonnes of feed units and 2.1 m hectares); the calculation is therefore based on fodder supplies from non-member countries

Source: Agrarwirtschaft No. 5, 1984
Dr. Thiede: '10 Jahre Versorgungsberechnungen für die EG'

On average over the last three years 52% of livestock production in the Netherlands has been derived from non-Community fodder and 48% from Community fodder. The figure for imported fodder in Belgium, at 38%, is also substantial. In Italy, West Germany and Denmark around a quarter of livestock production is dependent on fodder imports. France has the lowest figure with 9%.

It is also possible to work out an approximate ratio between the increase in capacity facilitated by non-Community fodder and available agricultural area. To do this thecereals value of imported fodder is converted into a theoretical growing acreage using national cereals yield. This process shows that the Netherlands imports the equivalent of an area of nearly 2.4 million hectares. Since it has only 2.03 million hectares of agricultural land, its fodder imports effectively increase its acreage by 117%. Belgium boosts its growing acreage by 55% and West Germany and Denmark by 24%. Imported fodder is of least significance in Ireland and France, which increase their capacity for agricultural production as a result of them by only 3 and 4%.

For the Community of the Nine the acreage equivalent of fodder imported from third countries is 9.7 million hectares, or 10% of the available agricultural area (93.1 million hectares). In calculating this figure for the Community only imports of fodder from non-member countries have been taken into account.

III. CEREALS

The main cereals that can be used as animal feed are wheat, barley and maize. Rye and oats are of lesser importance (see Table 6).

When the COM for cereals was set up permanently in 1967/68, cereals production in the Six was running at 65 to 70 million tonnes. By 1983 it has risen to more than 130 million tonnes. Production by the Nine Member States of the EC had increased by 50% between 1955/56 and 1981. Since the 1973 enlargement production has expanded by more than 30%, although the acreage sown to cereals has expanded little or not at all.

Total cereals consumption in the EC, on the other hand, has fallen. Between 1975/76 and 1980/81 the use of fodder cereals grew slightly (from 67.8 million tonnes to 68.9 million tonnes), except in the Netherlands, Belgium, Luxembourg and Ireland, where it fell. Use of fodder wheat in the Nine declined between 1980/81 and 1983 (no figures are available for Greece). Additional cereals substitutes had to be imported to meet growing carbohydrate requirements.

The striking rise in cereals production is attributable to the tremendous increases in yields due, partly, to the development of more productive seed varieties.

The improvement in yield - more than 3% per year in the case of wheat and 7% in the case of barley - and, to a lesser extent, expansion in growing acreages, have led to a considerable rise in cereals production. The widespread belief that wheat yield is higher in the United States than in the Community is contradicted by the figures: wheat yield in France, which has a wheat surplus, is 5.2 tonnes. The figures for 1982 range from 1.2 tonnes in Africa, 1.6 t in South America, 1.8 t in Asia, 2.2 t in Canada, 1.5 t in the USSR, 3.5 t in the Eastern European countries, 7.4 t in the Netherlands, 6.1 t in the United Kingdom, and 6.7 t in Denmark as against only 2.4 t in the United States[1].

Maize yield, however, is higher in the United States than in the EC: 7 t as against 5.7 t.

Barley is a typically European crop. 80% of the world's barley is produced in Europe and the USSR. Yield is 3.6 t in Western Europe, 4.2 t in the EC, 3.3 t in Eastern Europe and 1.9 t in the Soviet Union. Belgium holds the record, with 4.8 t.

Use of cereals as animal feed

Table 4 shows trends in cereals use since the cereals COM was adjusted in 1975 and 1981. Community production has increased significantly, but this has not been matched by a rise in cereals use in animal feed. Total use of cereals in animal feed rose slightly over this period, but the quantity of cereals fed directly to animals fell by 2.9 million tonnes; the quantity of cereals used in compound feed, on the other hand, increased by 4 million tonnes.

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[1] FAO 1983 Production Yearbook

Table 4: Use of cereals as animal feel (EC 9)

(million tonnes)

	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81
Production	96.4	90.0	102.5	115.4	113.7	119.6
Total quantity used	110.3	109.8	111.4	116.0	115.7	114.9
Quantity used as animal feed	67.8	67.1	67.6	70.7	70.3	68.9
Animal feed as % of production	70.3	74.5	66.0	61.3	61.8	57.6
Animal feed as % of total quantity used	61.5	61.1	60.7	60.9	60.8	60.0
Quantity fed direct	42.1	39.2	39.6	42.8	41.7	39.2
As % of animal feed	62	58	59	61	59	57
Quantity used in compound feed	25.7	27.9	28.0	27.9	28.6	29.7
As % of the quantity used as animal feed	38	42	41	39	41	43

Source: Commission
Supply situation: cereals 1960/61 to 1980/81
(No VI/3906/82) September 1982

Table 5: Use of cereals as fodder by type and by Member State in 1981/82

(thousand tonnes)

Country	Wheat	Rye	Barley	Oats	Maize	Other	Total
FRG	3 521	680	6 754	2 943	1 609	50	15 557
France	5 200	313	5 320	1 904	5 209	188	18 134
Italy	111	26	1 929	480	8 093	104	10 743
Netherlands	400	16	402	63	1 300	60	2 241
Belgium/ Luxembourg	279	35	717	184	435	175	1 825
UK	3 609	13	4 928	426	500	6	9 482
Ireland	90	-	900	96	200	5	1 291
Denmark	224	75	5 025	161	190	-	5 675
Greece	50	3	810	77	1 606	-	2 546
EC 1981/82	13 484	1 161	26 785	6 334	19 142	588	67 494
EC 1980/81	13 430	1 380	28 711	6 721	20 603	524	71 369

Source: 1983 Annual Report of 'Produktschap Veevoer' (Netherlands)

The table below gives a comparison of the use of the different types of cereals according to whether they are home-grown or bought on the market.

Table 6: Use of home-grown and market bought cereals as animal feed in 1981/82 broken down by cereal type

Cereal type	Home-grown (000 t)	Market-bought (000 t)	Total	
			000 t	%
Wheat	5 682	7 866	13 548	19.7
Rye	894	265	1 159	1.7
Barley	14 954	12 009	26 963	39.1
Oats	4 927	1 560	6 487	9.4
Maize	4 578	15 542	20 120	29.2
Other	72	561	633	0.9
Total	31 107	37 803	68 910	100.0
	45.0 %	55.0 %	100.0%	

Source: Commission, DG for Agriculture

Until 1975/76, use of home-grown cereals as animal feed accounted for around 50% of total fodder use of cereals. Since then, however, the figure has fallen to around 45%. This is due to the fact that farmers are tending to sell their cereals into intervention and to buy in compound feed.

However, the quantity of wheat used in animal feeding rose by 6 million tonnes in the Community in 1983, and this was due to the Commission's policy of placing on the market large quantities of minimum quality bread-making wheat for animal feeding. This wheat was from intervention stocks and was sold at a reduced price. In addition, manioc and soya price levels have risen considerably on the world market: in 1983 manioc prices were close to those of wheat. The manioc price has risen as a result of the voluntary restraint agreement between Thailand and the Community.

Imports of Maize

Maize has a high protein content. It is used in the food industry, in starch manufacturing and in the chemicals, cosmetics and pharmaceuticals industries; isoglucose is one of the main products derived from it. Many of its by-products, such as gluten, are used in animal feed.

Most maize imports come from the United States. Under the cereals COM there is an import levy on maize itself but not on its by-products. The 4.2 million tonne fall in maize imports since 1980 is offset by an increase in imports of by-products of maize processing such as corn gluten feed (see Table 12). Maize is used mainly in poultry rations and corn gluten mainly for feeding dairy cattle.

Table 7: The fall in maize imports[1]

Year	Quantity (tonnes)	ECU per tonne
1975	15 483 178	111.83
1976	18 173 394	119.55
1977	16 457 158	103.76
1978	12 733 309	96.09
1979	11 229 015	103.30
1980	9 885 192	111.37
1981	9 471 301	150.18
1982	7 185 509	135.71
1983	5 642 055	168.82

Source: Tables on foreign trade
NIMEXE - EUROSTAT

[1] NIMEXE 10.05-92

This table shows a considerable fall in imports since 1976 and a rise of almost 52% in prices since 1980. This has meant that the EC budget has lost revenue from levies.

IV. COMPOUND FEED

The compound feed industry has expanded substantially since the CAP was set up. Production rose by 24.9 million tonnes between 1975 and 1983, reaching 83 million tonnes in 1983. In 1982, 33% of compound feed was used in the pig industry, 27% in poultry rations and the rest was broken down amongst other animals (see Table 8).

The major expansion in livestock production in the EC has prompted work to improve animal feed so that it matches requirements more closely. A wide range of mixes of fodder raw materials is available to farmers. Many raw materials are interchangeable; in other words, they can be used in place of each other according to their nutritional value. Thus 100 kg of barley can be replaced by 80 kg of manioc provided that 20 kg of soya residue are added to give roughly the same energy and protein content. The broad range of raw materials available means that the feed type used can be matched to the specific needs of livestock.

Compound feed contains three basic ingredients: protein, carbohydrates or starch, and fibre. Most substances used in animal feed contain protein and carbohydrate, but in greatly differing proportions.

Protein is supplied mainly by oilseed cake and meal (i.e. the residue left when oilseeds have been crushed) and, to a lesser extent, animal meal (fish meal, meat meal, dried blood, etc.) and milk products. In terms of volume, cereals are also a major source of protein, and oilseed waste also supplies significant amounts of carbohydrates. Carbohydrates, however, are obtained mainly from cereals, cereals residue and by-products and from manioc. There is no clear demarcation between the different groups: oilseed residue has a gross protein content of 30% to 50%, while manioc has a starch content of around 95%. Bran and beet pulp are used mainly because of their high fibre content. Molasses is used mainly as a binding material and to improve the taste of feed, but it also provides 80% of the energy supplied by an equivalent weight of cereals.

These ingredients may also be varied according to the use to which the feed is to be put, their nutritional value and other properties and availability and prices. The cost of the raw materials is ultimately the most important factor.

Table 8 : Total compound feed production in the EC (excluding Greece) from 1975 to 1983 broken down by species of animal

(thousand tonnes)

	FRG	Fr	It	NL[1]	B/lux	UK	Irl	DK	EC 9
Compound feed for									
1. Poultry									
1975	3 480	3 810	2 530	2 180	1 020	3 350	240	550	17 160
1978	3 269	4 405	3 690	2 460	1 030	3 434	251	552	19 091
1979	3 248	4 740	4 060	2 690	983	3 480	272	573	20 046
1980	3 217	5 191	4 252	2 793	936	3 472	269	546	20 676
1981	3 496	5 603	4 240	2 972	961	3 459	263	543	21 537
1982	3 398	5 668	4 363	3 095	1 081	3 530	272	567	22 074
1983[2]	3 272	5 300	4 032	3 102	958	3 532	278	522	20 996
2. Pigs									
1975	4 130	4 200	2 040	4 550	2 650	2 180	400	1 110	21 250
1978	5 683	4 690	2 026	5 429	2 764	2 257	492	1 668	25 049
1979	6 177	4 716	2 075	5 968	2 661	2 380	541	1 945	26 463
1980	6 249	4 839	2 314	6 112	2 617	2 269	508	2 106	27 019
1981	6 290	4 752	2 541	6 219	2 469	2 182	492	2 102	27 047
1982	6 140	4 670	2 556	6 222	2 445	2 297	489	1 981	26 800
1983[2]	6 173	4 620	2 562	6 256	2 580	2 292	474	1 900	26 857
3. Cattle									
1975	3 470	2 220	1 130	3 740	920	4 470	360	1 150	17 460
1978	5 305	2 972	2 735	4 611	1 110	4 969	875	1 901	24 568
1979	6 486	3 183	3 150	5 211	1 256	5 390	1 186	2 127	27 989
1980	6 841	3 287	3 207	5 354	1 271	4 985	958	2 088	27 981
1981	7 251	3 452	3 404	5 197	1 239	5 011	1 070	2 005	28 629
1982	7 163	3 636	3 475	5 193	1 344	5 482	1 034	1 957	29 284
1983[2]	7 787	3 745	3 695	5 821	1 456	5 960	1 228	2 228	31 696
of which milk ingredients									
1975	410	708	256	421	53	34	25	23	1 927
1978	389	857	303	521	62	33	41	20	2 228
1979	401	900	342	518	61	40	49	28	2 348
1980	378	848	325	512	60	33	42	28	2 226
1981	388	837	298	509	55	34	49	28	2 198
1982	366	889	270	527	69	31	42	22	2 216
1983[2]	363	921	266	540	68	35	52	20	2 265
4. Other animals									
1975	420	870	300	230	110	200	20	90	2 230
1978	505	1 229	534	226	115	264	25	96	2 994
1979	527	1 368	715	188	95	390	34	105	3 422
1980	489	1 378	705	197	81	361	31	102	3 344
1981	587	1 349	771	182	109	355	35	103	3 491
1982	534	1 378	788	194	123	406	30	104	3 557
1983[2]	494	1 535	519	238	103	450	-	118	3 457
5. Grand total									
1975	11 500	11 100	6 000	10 700	4 700	10 200	1 020	2 900	58 100
1978	14 852	13 296	8 985	12 726	5 019	10 964	1 643	4 217	71 702
1979	16 438	14 007	10 000	14 051	4 995	11 640	2 033	4 750	77 920
1980	16 796	14 695	10 478	14 456	4 905	11 082	1 766	4 842	77 020
1981	17 624	15 156	10 956	14 570	4 778	11 007	1 860	4 753	80 704
1982	17 235	15 352	11 182	14 704	4 993	11 815	1 825	4 609	81 715
1983[2]	17 727	15 200	10 808	15 417	5 097	12 234	1 996	4 528	83 006

[1] Marketing year

[2] Provisional figures

Source : 1983 Annual Report by Produktschap Veevoer (NL)

It can be seen from Table 8 that production of cattle feed in the Europe of the Nine has increased significantly since 1975, above all in Ireland, West Germany, Denmark, the Netherlands and Italy.

The Netherlands, France and Italy have increased their production in the poultry sector far more than the other Member States.

There has been a net increase in production of compound feed for pigs in West Germany and Denmark.

Greece produces negligible quantities of compound feed and it has not been taken into account here.

1. Raw materials used in animal feed

The Community depends to a high degree on imports to cover its raw materials requirements, particularly its protein requirements. The table below (9) gives details of the main raw materials used in animal feed.

Table 9: Use of raw materials in animal feed, EUR 9

Raw material	1973	1981	(tonnes)	Annual increase
Cereals	27.0	29.7	+ 2.7	0.34
Manioc	1.4	5.7	+ 4.3	0.54
Food industry by-products	7.5	14.4	+ 6.9	0.86
Oils and fats	0.7	0.9	+ 0.2	0.02
Oilcake and meal	12.0	18.6	+ 6.6	0.83
Animal meal	1.7	2.1	+ 0.4	0.05
Milk products	1.3	1.7	+ 0.4	0.05
Dried fodder	1.1	1.4	+ 0.3	0.04
Miscellaneous	5.7	7.2	+ 1.5	0.19
Total	58.4	81.7	+ 23.3	2.91

Source: European Feed Manufacturers' Association (FEFAC)

1.a Total demand in FU and compound feed production - EUR 9

The expansion in compound feed production may be charted by assessing the proportion of total demand in FU covered by compound feed. The table below illustrates the growth in demand in FU since 1975, compound feed production and the percentage of compound feed used in each livestock sector for the Community of the Nine.

Year	Cattle			Pigs			Poultry		
	Total demand m FU	Compound feed production m t	%	Total demand m FU	Compound feed production m t	%	Total demand m FU	Compound feed production m t	%
1975	171.8	17.5	10.2	42.1	21.3	50.4	26.8	17.2	64.1
1976	171.4	22.0	12.9	42.7	22.6	52.9	27.1	18.3	67.4
1977	170.8	23.0	13.4	44.1	23.7	53.7	27.3	18.3	67.0
1978	171.8	24.6	14.3	46.4	25.0	53.9	28.1	19.1	67.9
1979	172.1	28.0	16.3	48.3	26.6	55.1	28.5	20.0	70.2
1980	170.3	28.0	16.5	49.9	27.0	54.2	29.3	20.7	70.9
1981	169.1	28.6	16.9	50.3	27.0	53.2	30.1	21.3	70.6
1982	170.6	29.3	17.2	50.2	26.8	53.4	31.4	22.1	70.4

It can be seen that while in 1975 only 10.2% of feed requirements in the cattle sector were met by compound feed, the figure had climbed to 17.2% by 1982; this was again a slight increase over the previous year. The percentage figure appears to be stationary in the poultry and pig sectors, but at a high level: over 70% and over 53% respectively.

As regards what is meant by the term 'compound feedingstuffs' statistics on industrial production make no distinction between compound (complete) feedingstuffs, protein and other concentrates, mineral compounds, etc. Over the years concentrated supplements seem gradually to have given way to complete feedingstuffs. This change in the nature of the feedingstuffs declared, which is now slowing down, partly explains the growth of production in the past and the slackening recorded now.

Source: Situation on the agricultural markets - 1983

2. Imports of cereals substitutes

Use of Community-grown cereals in fodder fell by 2 million tonnes between 1975 and 1984 despite the rise in overall carbohydrate requirements. This extra demand was met by an increase in imports of cereal substitutes, which mainly replaced barley in the pig industry: manioc, one of the main cereal substitutes, is used principally in pig farming. Substitutes have also to a large extent replaced imported United States maize.

Table 10 compares Community and non-Community production of the main cereals substitutes.

The figures for Community production and imports obviously vary from commodity to commodity. The Community produces little oilseed cake but imports very large quantities of it. Only in the case of bran is Community production increasing, but even so the Community cannot meet all its requirements.

Compound feed manufacturers use cereal substitutes - manioc, corn gluten, citrus cake and wheat bran - mainly for economic reasons.

The advantage of cereals substitutes is that they have the same nutritional value as cereals in feed mixes if they are used in certain ways, but they are less expensive than other feeds on the Community market. This serves to increase the user's income and encourages him to boost his production, since the cost of inputs is less than the additional income from the sale of the extra produce.

In the Netherlands and West Germany cereals substitutes are on average cheaper than fodder cereals such as wheat, maize and barley because of advantageous import, storage, transport and processing arrangements. The situation in France, the largest cereals producer in the Community, is exactly the reverse: it is more economical for the fodder manufacturing

Table 10: Comparison of Community production and imports of products capable of being used as cereals substitutes (1975-198

('000 t)

	Manioc			Processing by-products											
				Bran*			Molasses from sugar production			Oilseed cake					
										Total			Soya cake		
	Production	Imports	Total	Production	Imports	Total	Production	Imports	Total	Production	Imports	Total	Production	Imports	Total
1975/76	2	2 429	2 431	5 517	2 845	8 362	1 544	838	2 382	5 163	13 538	18 701	1 746	8 661	10 407
1976/77	7	3 583	3 590	5 801	3 338	9 139	1 731	1 380	3 111	3 589	15 306	18 895	1 275	9 468	10 743
1977/78	0	4 435	4 435	5 767	2 784	8 551	1 865	1 340	3 205	3 503	15 637	12 140	1 343	10 257	11 670
1978/79	9	6 680	6 689	5 925	2 742	8 667	2 122	n.a.	n.a.	3 614	18 372	21 986	1 644	11 980	13 624
1979/80	-	4 806	4 806	6 018	2 882	8 840	1 315	n.a.	n.a.	3 852	20 216	24 068	1 868	13 219	15 087
1980/81	-	5 388	5 388	6 167	2 638	8 805	n.a.	n.a.	n.a.	3 975	19 310	23 284	1 324	12 946	14 270
1981/82[1]	1	7 318	7 319	6 204	2 645	8 849	1 559	1 802	3 361	2 924	19 060	21 984	20	13 371	13 391

[1] EUR 10, provisional figures

n.a. = not available

Source: Fodder supply situation, EUROSTAT

*Even though bran is a type of cereals waste it is classed here as a cereals substitute.

industry to use cereals, as the cost of transport to farms and storage centres is lower.

Table 11 - Average price of imports

ECU/1000 kg

Year	Manioc	Wheat Bran	Molasses	Cake	Maize gluten	Soya cake
1976	109.15	108.23	53.35	152.10	126.91	173.00
1977	100.73	109.10	52.07	197.22	136.33	211.80
1978	81.45	81.77	49.78	150.82	118.48	168.70
1979	102.64	99.29	79.66	157.18	136.59	178.14
1980	123.68	111.88	101.52	168.20	143.95	186.53
1981	126.78	129.77	111.95	217.52	166.41	245.38
1982	125.14	130.62	78.48	216.98	173.51	240.99
1983	154.86	134.15	80.27	231.86	191.52	262.02

Source: Foreign trade tables
NIMEXE and SITC, EUROSTAT

Trends in manioc prices have on the whole matched those in international cereals prices and they have in general been considerably below Community cereals prices. In 1979 and 1983, however, the price rocketed and temporarily reached the cereals price level.

In September 1984 the dollar was so strong that the Community cereals price was close to the world market price. This will push imports of cereals substitutes down but it is not yet possible to tell whether this will be a short- or longterm phenomenon.

Net imports of cereals substitutes

Table 12 shows net imports of cereals substitutes and other commodities that contain both energy and protein from 1976 onwards.

Table 12

	1976	1979	1980	1981	1982	1983
Manioc						
F	174 411	530 360	335 700	596 473	650 390	234 009
B/Lux	642 755	883 746	921 715	939 003	1 005 352	552 416
NL	1 508 475	2 337 052	2 399 885	3 380 007	4 687 378	2 810 223
FRG	684 308	1 421 595	1 378 775	1 371 914	1 265 022	812 697
It	12 857	189 817	105 236	236 932	213 922	115 247
UK	9 026	23 818	10 912	153 628	306 056	118 288
Irl	927	9 363	8 501	11 418	10 544	3 763
DK	6 263	22 211	11 521	9 772	5 971	8
Total	3 039 022	5 455 931	5 189 548	6 765 496	8 156 481	4 646 651
Wheat bran						
F	157 282	67 319	74 876	70 093	49 608	133 638
B/Luz	386 071	238 217	238 798	243 167	335 726	386 382
NL	658 002	799 446	766 656	670 779	516 549	547 470
FRG	456 006	254 932	190 373	286 248	320 037	200 438
It	100 537	291 696	241 060	264 110	229 954	310 755
UK	296 850	253 445	315 538	341 109	391 071	223 556
Irl	31 740	50 123	64 156	107 086	108 633	157 378
DK	173 213	62 164	59 079	14 475	12 684	6
Total	2 259 701	2 017 342	1 950 536	1 997 067	1 964 262	1 959 623
Molasses						
F	260 473	293 319	286 850	262 205	294 686	297 405
B/Lux	236 745	203 406	217 345	133 311	199 610	193 297
NL	582 250	747 225	620 900	625 521	660 049	601 533
FRG	251 585	339 429	332 991	181 303	265 730	260 473
It	197 228	378 448	239 706	127 258	175 845	243 891
UK	590 623	720 107	592 774	496 163	639 652	638 178
Irl	64 924	66 896	88 750	85 714	97 885	128 414
DK	14 659	569 601	326 283	248 764	439 672	476 230
Gr	0	0	0	1	1	0
Total	2 198 487	3 317 431	2 705 599	2 160 940	2 773 130	2 839 421
Oilcake						
F	1 816 566	2 409 191	2 651 148	2 734 835	2 676 587	2 775 238
B/Lux	447 413	475 389	602 892	569 912	847 131	994 779
NL	1 593 545	1 715 517	2 101 239	2 454 461	2 602 215	3 553 189
FRG	2 655 650	3 709 599	4 112 708	3 960 124	4 143 395	4 402 298
It	937 408	1 357 583	1 273 964	1 206 890	1 312 876	1 571 132
UK	646 312	840 274	714 984	872 160	1 265 739	1 405 790
Irl	180 036	344 770	207 651	263 190	174 944	207 504
DK	884 928	1 318 021	1 366 390	1 247 286	1 237 690	1 522 561
Gr	0	0	0	14 512	17 858	11 471
Total	9 161 858	12 170 544	13 030 976	13 323 370	14 278 535	16 443 962
Soya cake						
F	1 222 080	1 793 131	2 065 850	2 528 326	2 557 664	2 597 447
B/Lux	240 363	203 065	330 397	365 447	544 475	557 244
NL	731 325	799 032	1 130 883	1 347 431	1 274 788	1 540 038
FRG	735 942	1 302 972	1 576 426	1 855 146	1 930 294	2 077 855
It	801 973	1 225 174	1 185 481	1 104 085	1 215 001	1 446 355
UK	125 277	315 357	365 237	436 107	752 741	791 954
Irl	137 237	163 572	113 358	94 217	77 596	52 542
DK	245 417	350 470	407 689	465 926	494 151	759 756
Gr	0	0	0	7 357	17 758	10 404
Total	4 239 614	6 152 773	7 175 321	8 204 042	8 864 468	9 833 595
Maize gluten						
F	220	40	0	29 248	32 874	28 218
B/Lux	65 534	40 439	27 338	39 730	51 050	111 302
NL	725 680	1 176 195	1 450 966	1 247 544	1 251 741	1 714 656
FRG	346 140	766 334	1 004 126	1 081 394	963 423	1 236 455
It	7 229	5 466	49 420	41 714	21 852	48 991
UK	2 319	32 135	57 658	394 329	520 503	402 266
Irl	0	22	0	1 000	0	3 013
DK	0	0	6 295	2 439	609	21 071
Total	1 147 122	2 020 631	2 595 803	2 837 398	2 842 042	3 565 972

Source: NIMEXE

In 1982 total imports of raw materials that could be used in exactly the same way as cereals in animal feed because of their carbohydrate content was over 17.6 million tonnes (see Table 14). These imports consisted mainly of manioc, maize gluten, citrus cake, wheat bran and molasses. The other raw materials used are sweet potatoes, sugar-beet pulp, brewing waste and grape waste and other fruit waste.

Imports of manioc, which had been climbing since 1975, declined in all the Member States as a result of the 1982 voluntary restraint agreement between Thailand and the EC, falling from 8,156,000 tonnes in 1982 to 4,647,000 in 1983. Imports of soya cake and other oilseed cake, on the other hand, have remained at very high levels and maize gluten imports have risen: 3,566,000 tonnes in 1983 as against 2,842,000 tonnes in 1982 - see Table 12. Imports of molasses have been increasing slowly and totalled 2,839,000 tonnes in 1983.

Total imports of commodities in competition with cereals, which contain both carbohydrates and a certain amount of protein - including oilseed cake - came to 46.7 million tonnes in 1982.

The EC self-sufficiency rate in maize gluten, a by-product of the food industry (alcohol), at 5%, is very low. The remaining 95% are imported from the United States. Maize gluten is highly sought after because of its nutritional value - it has a protein content of 23%[1] - relatively low price and zero-rate import duty. It is used above all for the (dairy) cattle herd. The quantities imported are set out in Table 12; they have been rising steadily.

According to Commission estimates, the use of imported animal feed in the different livestock sectors breaks down as follows:

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[1] Peas and beans have a protein content of 24%

Table 13: Use of imported animal feed in the different livestock sectors

Imported Products	Pig (%)	Poultry		Cattle		Total	
		Meat (%)	Eggs (%)	Meat (%)	Milk (%)	%	'000 tonnes
Manioc	60-70	6-9	9-11	5-6	10-14	100	8,1
C. n gluten feed	10-15	2-4	3-6	20-25	55-60	100	2,8
Fruit waste	4-6	1-2	1-2	25-30	60-70	100	1,4
Bran	30-40	4-9	6-11	10-20	30-40	100	2,0
Soya	40-45	10-13	18-20	7-10	17-20	100	20,9

Table 14: Imports of cereals, high-protein feed and high-energy feed (1982)

Millions of tonnes

A. Cereals		B. High-energy feed		C. High-protein feed	
Common wheat grain	3.0	Manioc	8.1	Soya beans and soya cake	20.9
Grain barley	0.5	Maize gluten	2.8	Other oilseed and oilcake	7.2
Grain maize	7.2	Citrus cake	1.4	Meals of animal origin	0.7
Other cereal grain	0.2	Wheat bran	2.0	Other	0.3
		Molasses	2.8*		
		Other	0.5		
Total:	10.9	Total:	17.6	Total:	29.1

* Molasses is not used solely in compound animal feed

Source: Commission
EP Written Question No. 1655, 1984
OJ No. C 200, 1984

Table 14 shows that in 1982 imports of cereals (A) and cereals substitutes (B) totalled 28.5 million tonnes, while imports of commodities that mainly provide protein (C) came to 29.1 million tonnes. The developing countries account for approximately the following proportions of these imports into the Community:

5% in the case of cereals
68% in the case of cereals substitutes and
27% in the case of high-protein feedingstuffs.

3. Protein products, oilseeds and oilcake

Oilseeds are used for various purposes. The oil is used for human consumption and oilcake - a by-product of oilseed crushing - is used in animal feeding. Oilseeds have a high protein content, though this varies from species to species. Because of their protein content they are also known as protein seeds.

Community production and the supply situation

In 1963 Community production of oilseeds and protein seeds covered only 10% of Community requirements. From the very outset the Community's policy was therefore to import these commodities free of customs duty. The most important commodity in this group, soya, is mainly imported from the United States (92%), with the remainder coming from Argentina and Brazil. Oilcake comes mainly from Brazil (40%) and the United States (31%).

Since the submission by the Commission in 1973 of a report on protein production in the Community[1], there have been incentives for production of oilseeds in the Community in the form of production aid. The Commission is seeking to reduce the Community's dependence on the world market and in particular on the United States. Production of rapeseed and sunflower seed has thus increased by over 550% and 900% respectively in 8 years. Production doubled between 1979 and 1980 alone.

Community production of soya has not expanded much as yet; it was running at 27,000 tonnes in 1982 compared with total consumption of soya residue of 16 million tonnes. Production rose to 80,000 tonnes in 1983/84 following an increase in EAGGF support.

The Community has a very low self-sufficiency rate in protein products: ± 20.6% on average, with considerable variations from product to product.

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[1] COM(75) 1850

Table 15: Self-sufficiency in % (EUR 10)

		Oilseeds and oleaginous fruit	Vegetable oils and fats	Oilcake (total)
Colza and rape	1	85,7	90,1	46,6
	2	92,4	95,7	50,8
Sunflower	1	21,7	13,3	5,9
	2	34,9	18,0	10,1
Soya	1	0,2	0,2	0,1
	2	0,2	0,2	0,1
Lin-seed	1	15,2		
	2	9,9		
Total	1	36,6	31,0	5,8
	2	34,4	29,4	5,4

[1] 1980/81 [2] 1981/82

There are major differences in self-sufficiency in certain other highprotein commodities.

	Protein content %	Self-sufficiency in % (1982)
Soya meal	44	0
Maize meal and germs	18	8
Other oil meal	31/33	29
Maize gluten meal	23	5
Fish meal	63	54
Peas and beans	24	100
Dried fodder	18	88
Brewing waste	23	74
Meat meal	50	100
Skimmed milk powder	35	100

All these commodities are mixed into compound feed in quantities sufficient to add protein to high-carbohydrate raw materials. They are to a large extent interchangeable. The only touchstone is the composition of the compound feed desired for particular types of animal.

The Community is the world's largest importer of oilseeds and oilcake. In terms of protein for animal feed the 1978-1982 average was 9.3 million tonnes, of which 6.9 million tonnes were from soya beans. This represents 74% of total world imports.

Table 16: Use of oilcake in compound feed

	% of production of compound feed			000 t			% VAT	
	1980	1981	1982	1980	1981	1982	1981/1974	1981/1960
1	2	3	4	5	6	7	8	9
FRG	40.5	34.0	36.1	6 802	5 991	6 228	10.1	-12.0
France	19.5	19.2	:	2 872	2 915	:	4.3	1.5
Italy	14.3	14.3	:	1 500	1 570	:	5.0	4.7
Netherlands	19.6	20.0	16.1	2 839	2 919	2 373	1.9	2.8
Belgium/Luxembourg	22.2	23.6	22.6	1 088	1 126	1 126	0.9	3.5
UK	14.7	16.1	15.0	1 633	1 774	1 774	9.3	8.6
Ireland	19.4	16.5	16.8	343	306	306	-	-10.8
Denmark	41.3	42.1	:	2 000	2 000	:	-	0
EUR 9	24.1	23.1	:	19 077	18 601	:	6.2	- 2.5
Greece	15	:	:	240	:	:	:	:
EUR 10	24.0	:	:	19 317	:	:	:	:

Source: FEFAC

In 1983, 16.4 million tonnes of oilcake were imported (see Table 12). A country-by-country breakdown, however, reveals considerable variation: Ireland and Greece import little oilseed protein, while West Germany and the Netherlands at present account for up to 50% of the total.

Italy uses olive waste in animal feeds, while in Denmark fish meal, which has a high percentage protein content, is used and the United Kingdom uses animal meal to help cover its protein requirements.

Soya

There has been a major increase in net imports of soya cake into the EC: they more than doubled between 1976 and 1982. In 1983 France accounted for 26% of EC imports, West Germany for 21%, the Netherlands and Italy for around 15%,

Belgium and Luxembourg for 6%, the United Kingdom and Denmark for 8% and Ireland and Greece for less than 0.5%. The reason for the increased use of soya lies in the expansion in livestock production and greater use of compound feed.

It is possible to observe some correlation between the sharp rise in milk production and the use of soya in compound feed for dairy cows. However, it is difficult to assess how much of this increase is attributable to soya.

Skimmed milk

Drastic steps were taken at the end of the 1970s to create outlets for skimmed milk powder, which is in surplus: it was made compulsory for it to be incorporated into animal feed and subsidies were provided. From the very outset this move was highly controversial and it was eventually ruled by the Court of Justice to be inconsistent with the principles of the CAP.

Table 17: Use of skimmed milk in animal feed by Member State in 1982 (Quantity that received aid)

000 t of liquid skimmed milk equivalent

Country	Calves		Other animals		Total		Grand total	
	Liquid	Powder*	Liquid	Powder*	Calves	Other animals	1000 t	%
B	170	449	191	94	619	285	904	4.7
DK	600	173	212	48	773	260	1,033	5.3
FRG	833	2,634	836	16	3,467	852	4,319	22.2
F	86	6,279	24	71	6,365	95	6,460	33.3
Irl	11	127	233	-	138	233	371	1.9
It	3	1,875	65	100	1,878	165	2,043	10.5
Lux	1	11	-	-	12	-	12	0.1
NL	24	2,576	37	575	2,600	612	3,212	16.5
UK	32	368	592	78	400	670	1,070	5.5
EUR 9	1,760	14,492	2,190	982	16,252	3,172	19,424	100.0

*Conversion coefficient: 11.5

Source: The Agricultural Situation in the Community

The Community still pays subsidies for the inclusion of skimmed milk powder in animal feed. In 1982, 1.27 million tonnes of skimmed milk powder, or 58% of total

production, were released for use in animal feed and the price was cut by 40%.

V. COMMUNITY ANIMAL FEED POLICY

1. The cereals sector

Substantial surpluses of cereals have built up in the Community (9 million tonnes of common wheat in 1983 and 7.6 million tonnes in July 1984) due to: the major increase in cereal fodder production in the EC, which rose from 63 million tonnes in 1972 to 72 million tonnes in 1983; increasing use of manioc and maize gluten meal to replace cereals in compound feed because of their quality and price; and, lastly, export opportunities on to the world market being restricted, mainly by a fall in demand.

The Community's policy to curb rising costs under the CAP consists of the following elements:

- closing the gap between Community cereals prices and those of the Community's main competitors;

- narrowing the gap between the intervention price for minimum quality bread-making wheat and that for fodder wheat;

- converting more minimum quality bread-making wheat into fodder;

- stabilizing imports of maize gluten meal and citrus cake.

In its Memorandum of 23 October 1981, 'Guidelines for European Agriculture'[1], the Commission highlights the need for a general policy for the cereals sector aimed at narrowing the gap between Community prices and those charged by the Community's main competitors. It states that the Community must embark on a programme of phased reductions in cereals prices in real terms aimed at gradually closing this gap.

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[1] COM(81) 608

The price advantage currently enjoyed by cereals substitutes will therefore gradually disappear. However, difficulties on the Community cereals market will continue for as long as this advantage exists. The Commission therefore says that the Community must open negotiations with the main non-member countries that supply cereals substitutes on agreements restricting imports to their present levels while prices are being adjusted. These talks must cover all the main cereals substitutes (and, if necessary, new products), in order to ensure that the measures taken are consistent and to forestall any shift in demand from one commodity to another.

2. Imports of substitutes

Since the Community's aim is to stabilize imports of manioc, bran and maize gluten, it has sought to pursue a selective policy on imports of cereals substitutes. There is no escaping the fact that EC cereals production has climbed by more than 30%, despite the reform of the COM in 1975, while use of cereals in fodder has declined.

(a) Manioc

To promote the use of European cereals in fodder the Community has concluded agreements with major manioc suppliers (Thailand, Indonesia and Brazil) to restrict their exports or at least stabilize them.

Under the agreement with Thailand, the largest supplier of manioc, the Community has undertaken in 1985 and 1986 to charge only a duty equivalent to a maximum of 6% of the value of imports - 4.5 million tonnes per year plus a maximum of 450,000 tonnes spread over these two years or all in one year.

Under the agreement with Indonesia and Brazil, a maximum duty equivalent to 6% of the value of the imported manioc will be levied on 950,590 tonnes in 1985 and 970,590 tonnes in 1986. 85% of these quantities are allocated to Indonesia.

Non-member countries other than Thailand, Indonesia and Brazil will be able to export specified quantities to the Community with a 6% levy.

(b) Maize gluten

In June 1984 the Commission, supported by the European Parliament, opened negotiations with the United States within GATT aimed at stabilizing imports of maize gluten, maize residue and maize germ cake. The Commission is seeking to establish what compensation should be granted to the United States in exchange for the unbinding of the Community customs duty. If the negotiations fail, the EC could take unilateral action, but the United States would then be able to suspend its tariff concessions on an equivalent value of imports. $562 m worth of these commodities were imported in 1983.

The Commission is attempting to introduce a variable import levy of roughly the same level as that charged on barley.

(c) Wheat bran

The CAP's aims with regard to wheat bran, which is used in fodder primarily because of its fibre content, have been achieved. The levy on bran has been increased by altering the way it is calculated.

3. Oils fats and protein products

Zero-rate duty on imports of vegetable protein, chiefly soya, was introduced at a time when this was deemed appropriate because of the EC's considerable shortfall in protein production. Soya covers 50% of the Community compound feed industry's protein requirements. Its protein content is higher than that of skimmed milk powder. Soya imports rose by an average of 6% per year between 1974 and 1982.

The marked build-up in milk surpluses, which is due in part to soya-based animal feeding, has prompted the European Parliament to call for curbs on soya imports by means of a levy under the EC's oils and fats policy. The United States, which supplies 90% of the Community's imported soya, is strongly opposed to any barriers to its exports. Part of the thinking behind the EP resolution on this issue is strategic, since the Community is concerned to become independent where its protein supplies are concerned.

The United States administration suspended soya exports for a few months in 1973. At the time this threatened the Community's supplies and led to a rise in prices.

Promoting use of EC protein sources

The Community is approximately 20% self-sufficient in vegetable and animal products that can be used in fodder. Since setting out the policy that the Community should follow in its 1973 Memorandum, the Commission has taken measures, or caused measures to be taken, on soya beans, peas, beans and lupins and dried fodder.

Since the inception of the CAP the Commission has been in favour of an overall oils and fats policy including an import levy on oilseeds and vegetable oils and fats that are at present exempt from duty under GATT,

and a temporary levy on oils and fats produced in the EC. The European Parliament has always expressed support for the introduction of an overall oils and fats policy. In 1982, when it was considering the impact of Spanish and Portuguese accession on the South of the Community, it called for the introduction of a levy on oils and fats; the proceeds were to be paid to the developing countries that export oils and fats. In 1984, when discussing the reform of the CAP, it again gave support to a levy, though with a very small majority and with some reservations.

The reservations stressed the need for negotiations with the United States within GATT on the oils and fats levy. As a result of changing majorities during the vote there are certain inconsistencies between the resolution and the text of the regulation as amended by Parliament. The Council has not yet taken any action on this matter.

Aid paid by EAGGF for certain products

The cost of the aid per hectare paid for rapeseed, sunflower seeds, soya, common wheat and barley varies from marketing year to marketing year because of fluctuations in world market prices and differences in yield. Costs therefore have to be calculated over more than one marketing year to take account of these differences. Table 18 gives the figures for average yield and average aid paid or refunds in the last three marketing years.

Table 18: EAGGF aid by product

(ECU/ha)

Product	1979/1980	1980/1981	1981/1982	1982/1983*
Rapeseed	375	480	480	645
Sunflower seed	410	375	495	660
Soya germ	280	345	500	655
Common wheat	260	260	290	400
Barley	250	175	165	340

Source: Commission

*Assuming exactly the same aid levels as in 1981/1982

Soya

Production aid is paid to persons who buy soya germ from producers at at least the minimum price. The aid level is set by the Commission at regular intervals and amounts to the difference between the target price and the world market price. The system favours those who store soya rather than producers, and this is one of the reasons why producers have not yet switched to soya production. Even though it is thought that the varieties now available in Europe are the best possible derivatives of American species, there is still much research work to be done to establish which variety is best suited to the Community's weather and soil. Increased EAGGF aid, which has doubled in two years and was 710 ECU/ha in 1983/84, has nevertheless led to an increase in production.

(b) Peas, beans and lupins

Production aid is paid to the processing industry so that its products can compete with imported soya residue. The aid is made available when the world market price falls below the activating threshold price for the aid scheme. The aid is 45% of the difference between the threshold activating price and the world market price for soya residue. Production has been rising steadily since the introduction of the aid system:

- 165,000 tonnes in 1978/79
- 270,000 tonnes in 1979/80
- 332,000 tonnes in 1980/81
- 352,000 tonnes in 1981/82
- 613,000 tonnes in 1982/83.

(c) Dried fodder

Additional production aid is set by the Commission according to the difference between the target price and the world market price. This aid is equal to:

- 100% of the price difference in the case of artificially heat dried fodder and high protein concentrates,

- 50% of the price difference in the case of dried fodder.

In 1983 the Community was 91% self-sufficient in dried fodder. The figure has ranged from 77% to 91% (1978 to 1983) depending on weather conditions.

VI. THE EFFECT OF SUBSTITUTES ON THE COMMUNITY BUDGET

It is hard to assess the effect on EAGGF spending of imports of cereal substitutes, in particular manioc, soya and maize gluten, at low or zero rates of customs duty. Manioc is used in place of barley and common wheat. The Community has mounting surpluses of these products which have to be exported on to the world market by means of refunds; it also takes the place of imported maize, which means that there is a loss of revenue from levies. One cereals substitute can also take the place of another according to price levels. There is zero-rate duty on soya, maize gluten and citrus waste, but no outlets can be found for milk products and they have to be disposed of at a considerable loss by means of export refunds and consumer aid.

The Commission has tried to estimate total losses to the Community in 1979/80 as a result of imports of cereals substitutes.

A straightforward calculation shows that exports of manioc, maize germ and cereals bran in 1979/80 were equivalent to 8.9 million tonnes of fodder cereals; assuming that this quantity left the Community market, this means a net cost to the Community budget of some 400 million ECU.

However, attention should also be drawn to the positive effect on the Community budget of the fact that these imports bring down the cost of Community production of livestock products; this reduces prices and boosts consumption (Written Question No. 1552/80 - OJ No. C 180, 22.7.1981).

The exact figure for a particular year depends on the quantity imported and world market prices.

In the Draft General Budget for 1985 the Commission estimate that reduced-rate or zero-duty imports of cereal substitutes (in particular manioc and corn gluten feed) give rise to refund expenditure for this sector in surplus of some 1,000 m ECU (included in Article 100). The reduced-rate or zero duties on imports of these products are a result of the GATT regotiations. The Community accepted them as a concession in exchange for the unbinding of cereal import charges. This in turn enables the Community to support the cereals sector at a lower cost to the budget than would otherwise be the case.