

# **Developments in the cost price of pig meat**

## **Production costs in 1998 and as projected for 2003**

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Developments in the cost price of pig meat; Production costs in 1998 and as projected for 2003

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Pig farmers in the Netherlands are concerned about their competitiveness. An important factor here is the continuous rise in production costs. This study compares the average cost price of pig meat in the Netherlands with that in Germany, France, Denmark, Spain and the United States. The anticipated cost price for 2003 is also estimated, based on a survey of the costs which will be incurred in the countries studied in order to improve food safety, animal welfare and environmental protection.

This study shows that the important competitors, France, Denmark and the Netherlands, share a comparable cost price of around NLG 2.34 per kilogram of live weight. In Spain and the US, production costs are approximately 10% lower.

The cost price position in the Netherlands is expected to worsen by 2003, certainly in comparison with France and Spain. It is most important that the authorities in the Netherlands should translate their policy objectives into regulations in a way that allows forward-looking farmers to continue developing their business and take into account the requirements imposed.

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## Preface

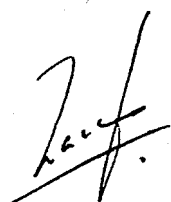
This study on the cost price of pig meat in different countries was carried out by the LEI and commissioned by the Livestock and Meat Marketing Board (*Productschap voor Vee en Vlees, PVV*). This report provides information on the primary production costs of pig meat in the Netherlands, compared with Germany (Lower Saxony), France (Brittany), Denmark and Spain. There is also an indication of the cost price in the USA.

In calculating the cost price, LEI processed and used information from RICA (the European databank of agricultural businesses; RICA-CCE-DG VI/A-3). All amounts referred to in this report are exclusive of VAT.

Besides ascertaining the cost price level for 1998, the report considers how much attention is paid to animal welfare, food safety and environmental protection in the different countries, and what measures have already been taken. Based on this information, the possible developments in cost price are estimated for the next five years.

We would like to thank the experts consulted in each country, for the information they provided. Thanks are also due to Mr Thus (of Rabobank) for his valuable comments on the results of this study.

The director,

A handwritten signature in black ink, appearing to read 'L.C. Zachariasse', written over a horizontal line.

Prof. L.C. Zachariasse



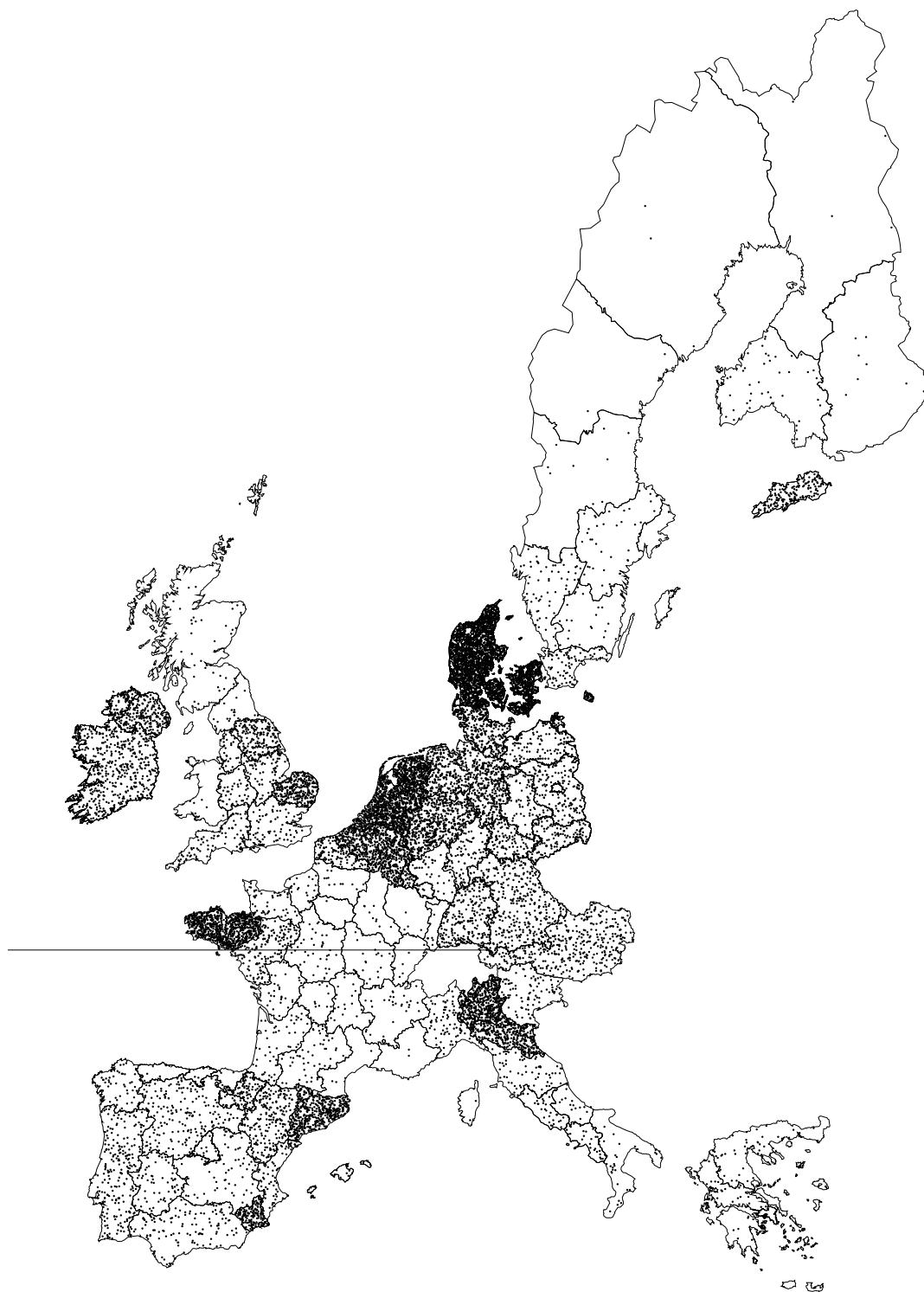


# 1. Introduction

This report provides information on the primary production costs of pig meat in the Netherlands, Germany (Lower Saxony), France (Brittany), Denmark and Spain.

Map 1.1 shows clearly that the areas referred to have the highest populations of pigs in Europe: the Netherlands, Lower Saxony, Brittany, Denmark and north-eastern Spain. Belgium and Italy are both countries with large-scale pig farming, which have not however been included in this study. Spain was included as a country in which production is expected to increase further.

*Map 1.1* Numbers of pigs in the EU



*(1 dot = 100,000 pigs*

*Source: Eurostat, adapted by: LEI)*

### *Restructuring in Spain*

The Spanish Restructuring Act does not in fact provide for restructuring. Rather, it stipulates a minimum distance between farms and an upper limit on the size of new farms. Partly because of this law, it is now difficult to set up a new farm of any significant size in areas which already have high pig populations, such as Catalonia.

### *Image*

Pig farming has a bad public image in both France (not only Brittany) and Denmark, as well as in the Netherlands. In Germany, the sector only suffers a lack of social approval in certain regions. In Spain, this problem has scarcely arisen to date.

### *Increased production*

Partly because of the bad image of pig farming in the Netherlands, France and Denmark, no further increase in livestock numbers is expected in these countries. In the Netherlands, the numbers of pigs are expected to fall, due to the general cut-back and the very restrictive manure market.

There are nonetheless opportunities for expansion in Spain, although the production area around Lerida is already fairly full. Expansion may be expected in the areas to the north-west of Madrid (Castilla-Leon and Galicia): these areas have land available, large numbers of consumers, and the infrastructure and climate are good enough to allow pigs to be kept.

## 2. Cost price in 1998

The cost price of pig meat on specialised and closed pig farms was studied in relation to the following countries or regions: the Netherlands (NL), Germany (Lower Saxony; D), France (Brittany; F), Denmark (DK) and Spain (E). The cost price in the United States (USA) is also touched on. The results are based on information from the accounts of a representative sample of pig farms, and not on model calculations. This allows an impression of the average production costs in each area in practice. The cost prices found are compared with the cost price in the Netherlands. Only primary production costs have been included, 'ex works'. The results relate to the year 1998.

In figure 2.1, two cost prices are quoted for each country; the integral cost price (*long-term cost price*) and the cost price exclusive of interest and labour costs (*medium-term cost price*). In the longer term, farm owners must be compensated for the integral production costs, in order to avoid a shift in capital and labour to other sectors. In the medium-term, farmers can continue production as long as expenditure and depreciation costs are covered by the yield, even if the interest on the farmer's own capital, and the cost of labour, are compensated only partly or not at all.

Long-term cost price is most relevant to a comparison of structural competitiveness. However, in figure 2.1, the medium-term cost price is also given, in order to shed light on structural differences.

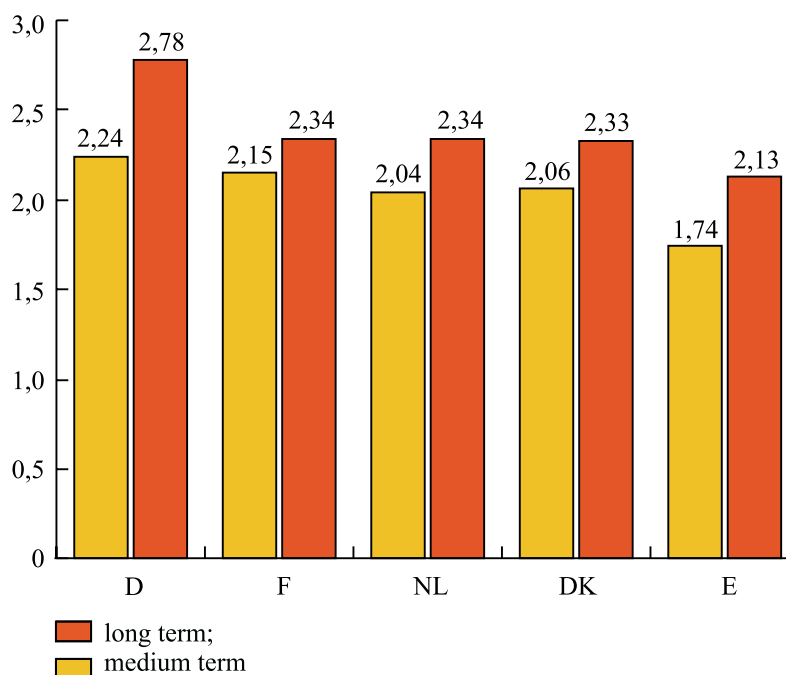


Figure 2.1 Total cost price in Dutch guilders per kilogram of live weight  
The long-term cost price relates to total production costs minus subsidies (see also figure 2.3).

## *Waste disposal*

### *France*

Approximately half of Brittany is included in designated 'ZES' areas. ZES stands for *Zone en Excédent Structurel* (manure surplus area). No increase in livestock numbers is allowed in these areas, while nitrogen emissions are limited to 140 kg per hectare, and manure processing is to be made compulsory for surplus manure.

Behind these strict regulations lies a deep concern for water quality. The subsoil in Brittany is very rocky, and therefore very susceptible to minerals being washed down into surface waters.

In Brittany, substantial investment in manure-processing units (FRF 1.2 to 1.4 billion) is expected over the next few years. In the spring of 2000, only a few dozen pig farms had their own manure processing units.

### *Germany*

Lower Saxony is the most intensive pig-farming area in Germany. Here too, waste disposal costs are expected to rise. However, many farms have their own land and therefore have room to store their own manure.

### *Denmark*

Strict legislation limiting livestock numbers to the area of land available is restricting the development of pig farming in Denmark. Previously, farms could be set up anywhere. Now there are strict limits on the minimum land area available so as to ensure adequate waste disposal opportunities. A closed farm with 200 sows for example needs almost 80 ha of land (whether owned, leased or available under a waste disposal contract).

### *Spain*

In Spain, waste disposal costs are nil, except in a very few intensive pig-farming areas. Waste disposal costs are expected to rise significantly over the coming years, due to stricter policy on manure. The manure is often stored as slurry in lagoons, where it is allowed to dry. The dried slurry is generally welcomed by arable farmers and market gardeners. Recently, requirements have been imposed on these lagoons in order to avoid seepage of minerals. Covering the lagoons may also become compulsory in a few years.

Figure 2.1 shows that there is no difference in primary cost price in the long term between the important competitors France, Denmark and the Netherlands. This means that the leading position of the Netherlands in the 1980s (due to an advantage on feed costs) has been lost. That position has been taken over by the newcomer Spain, where production costs per kilogram of live weight are significantly lower, by about 20 cents. Germany forms an exception, with a remarkably high cost price. However, Germany is less exceptional if we look at the medium-term cost price. In Germany, the costs calculated for labour and capital are high. This is because on average, German farms are highly solvent (they have large amounts of their own capital).

Some important marginal notes on these results:

- 1) Dutch farms are quite a lot larger than those in France and Denmark (see table 2.1). Given the advantages of scale and of a higher degree of specialisation, one would expect a cost price of about 10 - 20 cents less in the Netherlands.
- 2) Each country has a different starting position, if we look at the extent to which such matters as animal welfare, food safety and similar had been addressed in 1998. This starting position partly determines the increase in cost price anticipated in future.

Cost prices are quoted per kilogram of live weight. The cost price for the Netherlands of NLG 2.34 per kilo of live weight works out at NLG 3.04 per kilo of slaughtered weight.

The following table gives some details of the structure of the farms whose production costs were calculated.

Table 2.1 Structure of the specialised closed pig farms (1996)

	D	F	NL	DK	E
Number of sows	105	134	203	123	106
Number of slaughter pigs	543	751	1,164	684	634
Hectares of cultivated land	62	36	12	58	25
Value of land owned (%)	34	34	83	79	52
Number of workers	2.1	1.8	1.8	1.7	1.6
Family labour (%)	66	84	86	65	89
Borrowed capital per livestock unit-pigs a)	945	1,812	2,582	2,949	161
Production per average slaughter pig (kg live weight)	328	341	344	326	272 b)

a) 1 sow is equivalent to 0.5 livestock units (*grootvee-eenheid*) and 1 slaughter pig is equivalent to 0.3 units;

b) In estimating productivity in Spain, sources other than RICA were used.

Farm solvency is particularly high in Spain and Germany, see figure 2.2. This is also reflected in the relationship between interest costs as calculated and actually paid. In both countries, hardly any of the interest costs included in the calculations were actually paid.

The high solvency of Spanish farms is partly due to their relatively small size, but partly also to the financing methods. Lending for agricultural activities is limited in Spain, and in addition to this, the banks will not generally lend more than 50% of the collateral value, and will only take immovable property into account.

### *Transport of manure*

Manure is transported over long distances (100-200 km) in the Netherlands and from the most intensively farmed area in Lower Saxony. Long-distance transport is also beginning to happen in Brittany and Catalonia.

In areas with less livestock such as eastern Germany, northern France and north-western Spain, we hear of manure being transported over distances of 10-15 km using tractors.

### *Genetically modified organisms (GMOs)*

In France as elsewhere, many consumers appear to be concerned about the use of GMOs. A number of supermarkets have now begun discussions with the pig-farming sector on the use of GMO-free raw materials for feed.

### *Animal welfare*

Enforcement of the German law on keeping pigs, the *Schweinehaltungsverordnung*, is still very lax. The regulations concern daylight, half-grid flooring and surface area per animal, and can require substantial investment. The possibility of attention from animal welfare organisations means this has the potential to become a live issue in Germany.

In Denmark, accommodation in groups is compulsory, with a transitional period until 2014 for existing pig pens.

The majority of boar piglets in Spain are not castrated. Males to be exported for processing are castrated, but sometimes only when they exceed 100 kg.

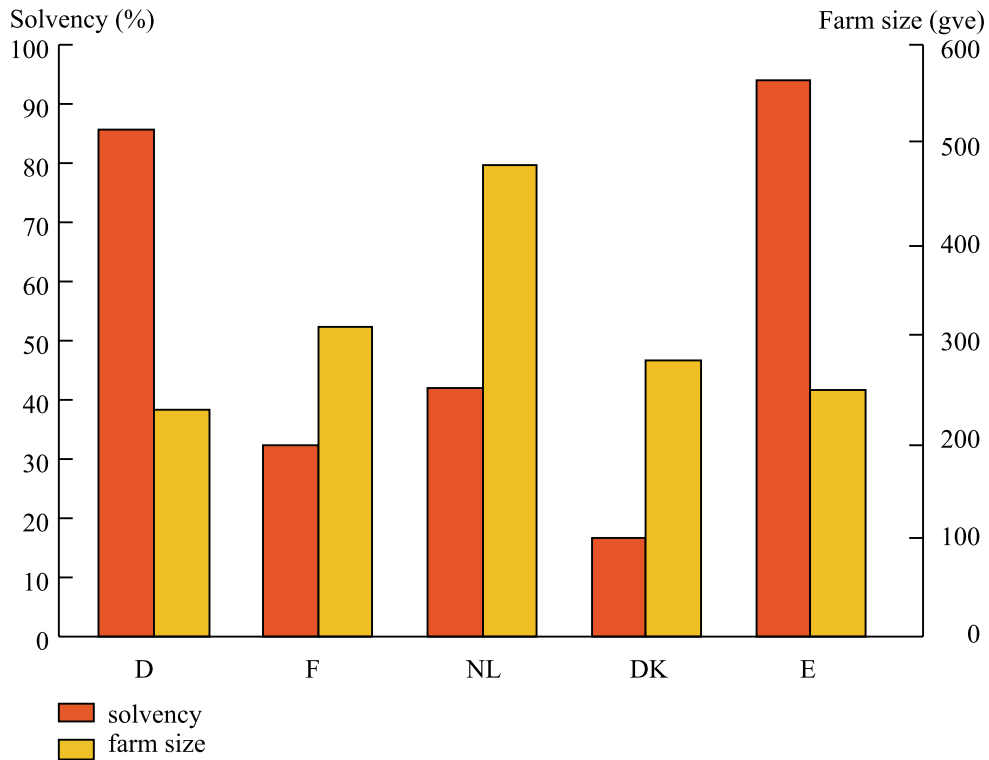


Figure 2.2 Solvency and farm size

Subsidies play an important role, particularly in Germany and Denmark, primarily in the form of Mac Sharry premiums. The subsidies on production of crops means lower feed prices in the calculations for feed produced on the same farm. In this sense, subsidies also play a role in countries where farms use their own crops as feed. Figure 2.3 indicates the amounts concerned.

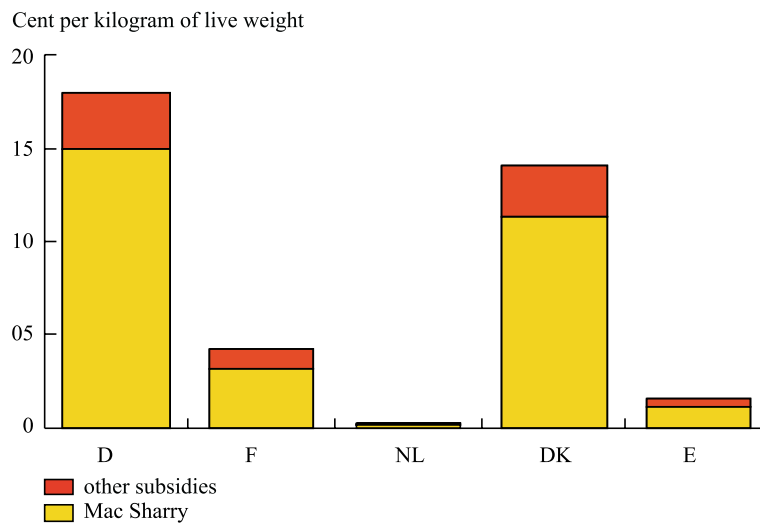


Figure 2.3 Subsidies (including Mac Sharry premiums)



### *Salmonella*

In Denmark, the DT104 strain of salmonella bacteria has practically been eradicated. Monitoring for salmonella bacteria takes place at the slaughter stage. If salmonella is found, the farmer is penalised with a price cut of 40 DKK (approximately NLG 12) per pig.

Salmonella monitoring is currently under way in Germany, with the involvement of local *Landwirtschaftskammer* or Chambers of Agriculture. Much of the costs are being met by the authorities. In North Rhine-Westphalia, 30% of the costs are being passed on to the farms, in proportion to the size of each.

### *Producers' organisations*

In Brittany, a lot of pig production takes place through producers' organisations. These associations vary in their size, additional requirements and the degree of farmer influence. There is a tendency for the organisations to increase in size so that they can negotiate with purchasers from retail organisations. However, the increased size does come at the expense of farmer influence.

### *Charte Qualité Regionale*

In France, pig meat is produced under a variety of labels, referred to together as *Charte Qualité Regionale* (CQR). CQR has some similarities with IKB (*integrale ketenbewaking*, integral chain monitoring) in the Netherlands. The requirements are: treatment with medicines is fixed for each herd, invoices must be retained and pigs are earmarked if they are still receiving treatment in the last month before being slaughtered. Earmarked animals are not included as CQR produce.

Some of the CQR programmes impose additional requirements relating to the use of meat meal and antibiotics in feed.

As of the spring of 2000, some 90% of farms were participating in a CQR scheme (accounting for 70% of production).

Figure 2.4 compares the cost price of pig meat in the Netherlands and the United States. A cost price comparison between the US and NL has limitations however. Pig farming in the US is characterised by diversification within the industry. The economic potential of family farms on the one hand and the so-called mega-farms on the other hand is very different. That makes a comparison based on averages difficult.

It should also be noted that certain differences in potential competitiveness are hardly or not at all expressed in the cost price. In particular, how much pressure there is on available space can make a big difference to how much opportunity there is to achieve advantages of scale.

A cost price comparison based on two different databases should always be carried out with the necessary caution. There may be important differences in accounting rules, data definitions and similar. However, the database used for the US (source: USDA) has many similarities with the RICA database:

- it is based on a random sample representative of (almost) all farms;
- the costs of farmers' own work and capital is included;
- only closed farms were included.

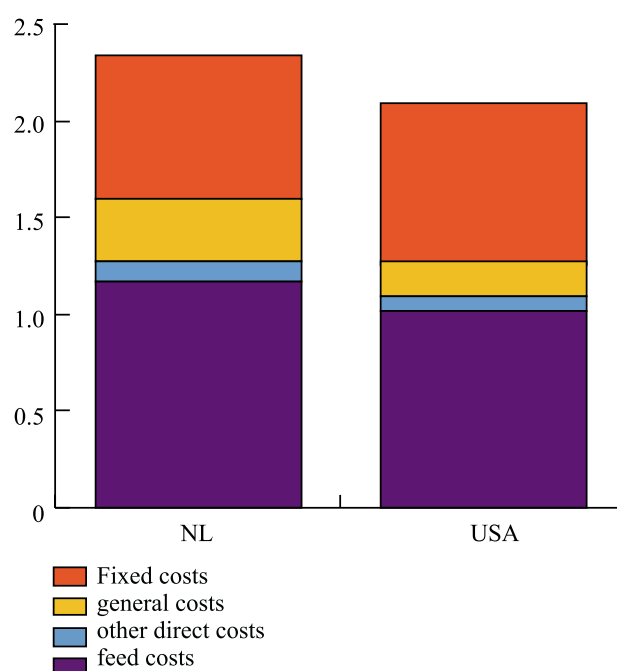


Figure 2.4 Long-term cost price in the USA compared with NL (NLG per kilogram of live weight)

It is also possible to make corrections for certain differences. The American way of classifying costs was converted to the EU method, to allow more accurate comparison. For the period 1992 to 1998, production costs in the US are approximately 10% less than in the Netherlands (see figure 2.4).

### *Feed prices*

It is said that the cost of feed in Brittany is the lowest of all the European pig-farming countries; this has to do with strong competition and relatively low energy value. However, feed consumption is clearly higher than in the Netherlands, and therefore the feed costs per kilogram of meat are also higher. Pig farmers in Brittany hardly use any by-products as feed. In northern France, more by-products are available.

In Germany, feed is relatively cheap, probably because of the smaller price component for the provision of information and because farmers mix feed themselves. In Lower Saxony, pigs are often fed a mash: a complete feed mix in semi-liquid form. In this area hardly any by-products are available from the foodstuffs industry.

In Spain on the other hand, the feed price per 100 kg is a few guilders more than in the Netherlands. The transport distances are large, both for raw materials and feed. Furthermore, Spain has no 'granary' areas as France has, and the available waste and leftover products are hardly used as yet. In north-eastern Spain, not much is available in the way of by-products, and what is available is often seasonal.

### *Growth promoters*

In Denmark, growth promoters have been almost completely banned in practice by a series of individual covenants.

One large producers' association in Brittany is shortly due to forbid the use of growth promoters for pigs above 35 kg. This may be followed by a ban affecting weaned piglets.

It is not clear whether growth promoters have also been abandoned in some of the Spanish organisations.

By contrast, the American average includes very small farms. The difference in cost price between small and large farms is much larger in the USA. The cost price for the large farms (> 1,000 pigs) is 20% lower than for the average farm. In the Netherlands, the cost price for the larger farms is no more than 5% lower than for the average farm. This 15% difference, together with the 10% difference referred to above between the average American and Dutch farm, gives a 25% difference in cost price for the larger farms.

The study included figures from America over a number of years, due to the fact that feed prices in the USA fluctuate more than in the EU. Figure 2.5 shows the movements in cost price.

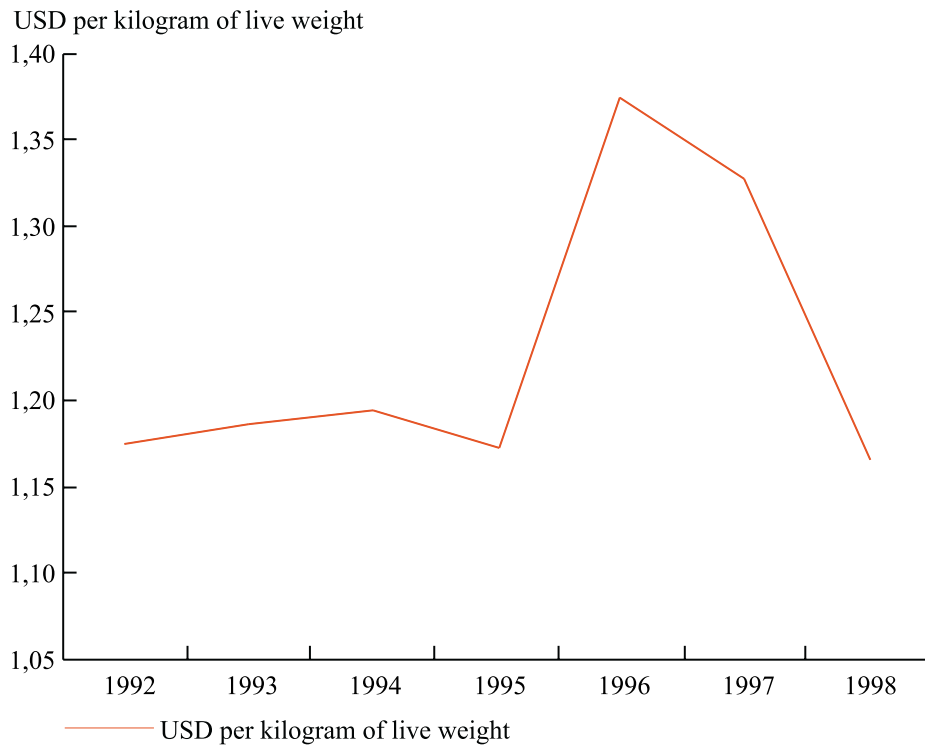


Figure 2.5 Cost price in the USA in dollars (USD) per kilogram of live weight

### *Animal health*

In Denmark, Germany, France and Spain, pig farmers are permitted to vaccinate pigs themselves. In Spain, a licence is required which may be obtained by any pig farmer.

In Denmark and France, visits by vets are relatively seldom (partly due to the large distances involved).

In France and Spain, vets are employed by the producers' associations or unions. The costs of this are included in the feed price.

In France, a programme was started in 2000 to eradicate Aujeszky's disease. The fund available for this had a budget of FRF 46 million per year, one third of which was contributed by pig farmers.

### *Productivity*

Productivity in pig farming is significantly lower in Spain than in the other countries, as a result of the genetic quality of the animals, the climate, accommodation and farmers' expertise.

Production results could be significantly improved by improving genetic characteristics and professional expertise. This means it will be possible to reduce the cost price per kilogram of product more in Spain than in the other countries studied.

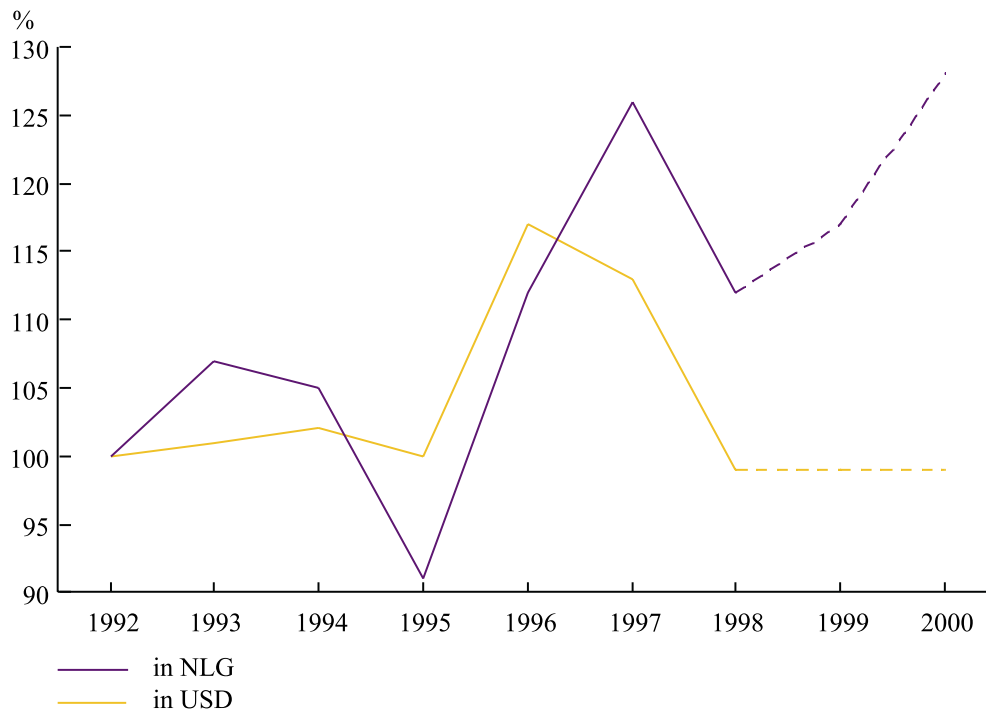


Figure 2.6 Cost price in the USA in dollars and in guilders (1992 = 100%)

In addition to the large fluctuations in feed prices, exchange rates also play an important role. The influence of currency exchange rates is shown in figure 2.6 by stating cost prices in both dollars and guilders. The amounts are indexed with 1992 as a baseline. The years 1999 and 2000 have been added in order to show the effect of the recent exchange rate rises on the American cost price. The cost prices shown for the years 1999 and 2000 are in fact the cost price of 1998 converted at the dollar exchange rate for 1999 and 2000 respectively.

Exchange rate fluctuations have significant effects. Developments in agriculture are therefore highly dependent on external developments. The same goes for the competitiveness of European agriculture in relation to the United States. The developments in the exchange rate have meant an increase in cost price in the USA of almost 15% over two years compared with cost prices in the Netherlands.

### *Pollution tax*

In France, a programme has been set up in which all farms will pay a graduated pollution tax. This will affect the larger farms from 2000, and small farms in 2001 or 2002. The amount of the tax charged depends on the degree of pollution. Farms will receive subsidies for renewing equipment and facilities.

The pollution tax will amount to, for example, around FRF 8,000 or NLG 2,500 to 3,000 per year for a closed farm with 200 sows where everything is in order. If the farm is not doing things properly, the tax will amount to NLG 15,000 to 20,000 per year. The amount of the tax depends on the equipment used, manure storage, manure use and the scale of production. In 2002, the tax will be based partly on nitrogen levels.

### 3. Cost price in 2003

A survey was made of the costs to be incurred in the countries studied over the five-year period of 1998-2003 in improving animal welfare, food safety and environmental protection in primary production. In estimating the future cost price, the following factors were considered: food safety (meat meal, antibiotics, zoonoses) animal welfare (space per animal, dung grid flooring, accommodation in groups) and environmental protection (ammonia, manure, environmental taxes). The political importance of each factor was considered, as well as the economic importance of the measures to be taken, and the degree to which improvements had already been carried out in 1998, or will have been carried out by 2003.

In estimating the cost price for 2003, attention was focused exclusively on the anticipated effect of various policy measures. No correction was made for developments in such factors as feed price, productivity, the cost of labour, interest or the structure of the sector.

Possible cost increases in other links in the production chain were left out of account.

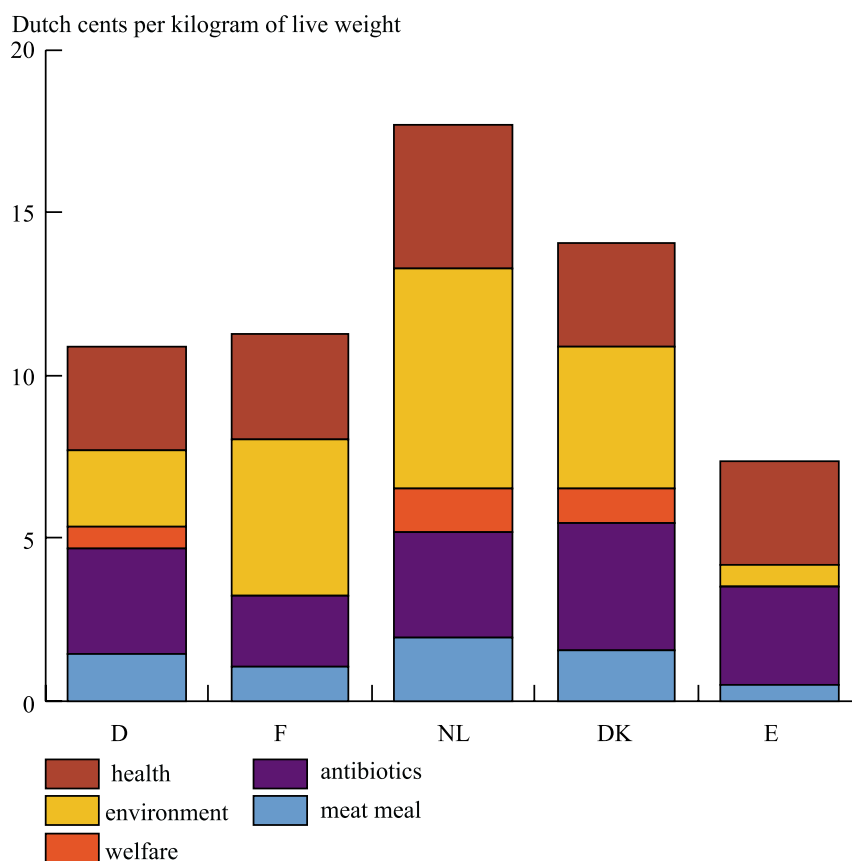


Figure 3.1 Average anticipated cost developments in each country expressed in (Dutch) cents per kilogram of live weight



### *Agricultural loans*

In Spain, there is almost no lending for agricultural activities. To the extent loans are made, personal communication (trust) is very important, and loans are not granted for more than around 50%, and then only for immovable property.

Payment on pigs delivered to abattoirs in Spain usually takes 40 to 60 days.

### *Agricultural industrial areas*

In Germany, the existing legislation encourages the retention of smaller farms (or branches). It is legally possible to create agricultural industrial areas; however this is not expected to catch on. Concerns about animal health (the possibility of diseases spreading) play an important role here.

### *Quality*

In Spain, payment does not generally depend on the quality of the pig meat supplied. This means an incentive to improve quality is lacking. Some producers' unions do carry out some evaluation of product quality.

On the other hand, great significance is attached in Spain to branded products. For example, the special Iberico ham has a high added value. Many organisations have their own special brand names.

In Brittany, there is still a strong emphasis on bulk production. A lot of work is being done on further improving quality, for example through the *Charte Qualité Regionale*, a sort of integral chain monitoring. At the same time, there are efforts to increase production under brand names. The well-known '*Label Rouge*' currently accounts for no more than 2% of the total production. An example of a regional product is the '*Jambon de Bayonne*', which is produced in the south-west of France.

Figure 3.1 shows that the anticipated average cost increase in the Netherlands, at 18 Dutch cents per kilogram of live weight, is almost 7 cents higher than in Germany and France, and 10 cents higher than in Spain. The anticipated difference between this figure and Denmark's is almost 4 cents.

Given the policy developments, a substantial increase in costs is to be expected in the Netherlands. However the average cost price for 2003 is not expected to rise much, particularly because it is anticipated that not all farms will have introduced the required changes by 2003.

#### *Animal welfare*

In the Netherlands, the largest cost increases are expected to be a consequence of the Decree on Pigs (*Varkensbesluit*). It is anticipated that in 2003, some 15% of Dutch pig farms will be in compliance with the requirements under the Decree. In Germany and Denmark too, cost increases are expected as a result of welfare measures, although to a lesser extent than in the Netherlands.

#### *Antibiotics*

Figure 3.1 shows that a considerable increase in costs is to be expected in all countries as a result of the banning of antibiotics as a feed additives. It is believed that some farmers mixing their own feed are already partly working without preventive antibiotics.

#### *Meat meal*

The expectation is that in Spain, meat and bone meal will not be prohibited in the near future. In the other countries, the chance of a prohibition is substantially greater. In France in particular, some production is already carried out with feed free of meat meal.

#### *Health and zoonoses*

The animal health levy will not result in any great cost increase in the Netherlands; a levy of 50 cents per slaughtered pig is anticipated. The original pig levy of NLG 9 per slaughter pig and NLG 52 per sow would have led to an extra cost price increase of more than four cents per kilogram.

It is expected that zoonoses will be combated on a broader front in the Netherlands than in other countries. Nonetheless, all countries will be confronted with costs for combating these diseases.

#### *Environmental protection*

Manure disposal costs are set to increase in all countries. Future cost increases due to environmental policies are largest in the Netherlands. However, the position is not greatly different in France or Denmark: in the Netherlands it is a question of increasing already high environmental costs, whereas in the other countries costs for environmental protection have been low until now.

In Denmark, the increase in environmental costs is caused by a substantial increase in land prices. Rising land prices in the Netherlands are not directly relevant to the costs of pig farming.

### *Meat meal*

The use of meat meal is certainly not a consumer concern everywhere. There is an ongoing discussion on this in Denmark and France at present, but hardly any in Spain. Even in Germany, people do not yet seem to be too concerned about meat meal.

Pig farmers who makes their own feed do not use meat meal.

### *Accommodation costs*

There is increasing interest in Germany in cheaper building methods. It is expected that the cost of newly-built pig pens will approach DEM 700 per place, whereas the price was originally around DEM 1,000 to 1,100.

Investment in environmentally friendly pens can be rewarded by tax incentives, but this only applies to special pig-keeping systems, such as the use of straw and similar. In practice, these methods are not widely used.

Spain has lower accommodation costs, partly because of the use of plain, standard buildings (modular construction). However, this often produces only moderate technical results. In the summer, high temperatures result in slower growth, and more losses. If excellent technical results are to be achieved despite the warm climate, investment in cooling systems is necessary.

### *Ammonia*

In Denmark, there are as yet no regulations on ammonia. Manure silos do have to be covered with a layer of straw in order to limit the smell. Where manure slurry is to be applied, the use of drag hoses is recommended, but in practice they are not much used. This point may be included in future environmental legislation.

Energy prices will increase due to the introduction of environmental levies. The possible consequences of the deregulation of the energy market have not been taken into account here. A less regulated energy market could be an advantage for the Netherlands.

Part of the difference in costs due to environmental measures can be explained by the ammonia problem. It is estimated that by 2003 one fifth of pigs in the Netherlands will be housed in low emission pens, which is considerably more than in the other countries.

In Germany and Denmark, the main aim where low emission accommodation is used will be to reduce odours in intensive farming areas and urban areas, rather than to reduce ammonia emissions in acid-sensitive areas.

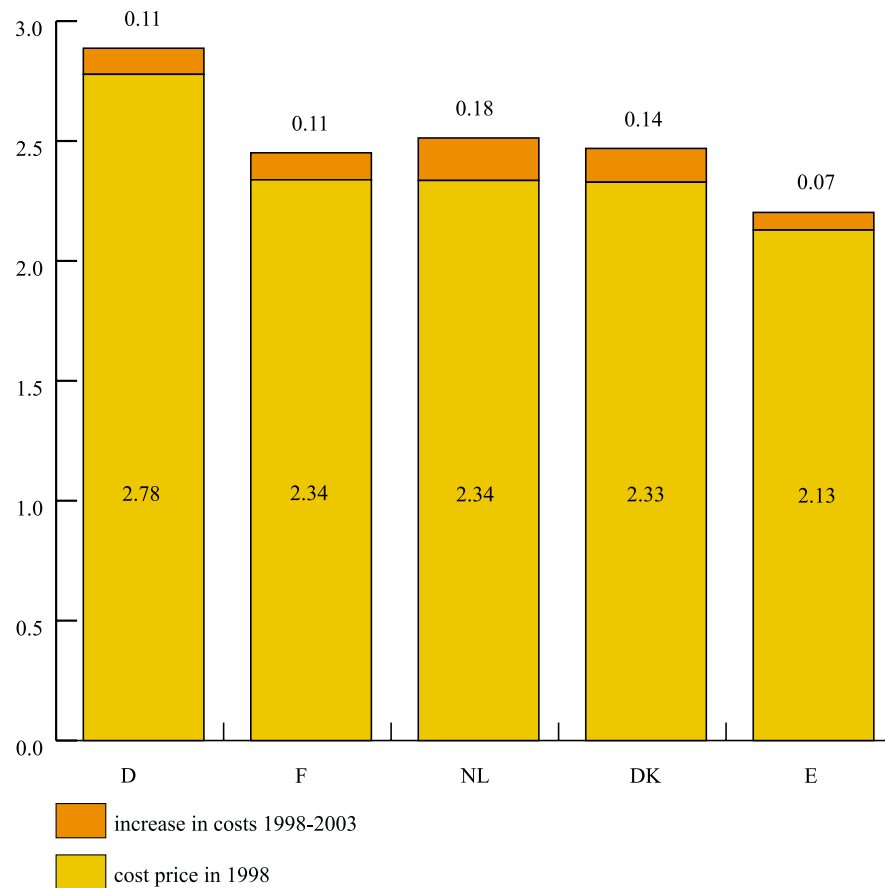


Figure 3.2 Estimated average cost price in 2003 in Dutch guilders per kilogram of live weight

The bar chart below combines the estimates of the economic impact of various policy measures with information on the cost price in 1998. Figure 3.2 gives an idea of the anticipated average cost price in 2003. Whether this will turn out to be correct will of course depend to a large degree on:

- changes in policy objectives;
- how policy is translated into concrete regulations;
- changes in implementation costs;

- how quickly objectives are put into effect in practice;
- monitoring and enforcement.

If we add to this information the cost price figures for 1992, 1994 and 1996, we get the following picture (figure 3.3).

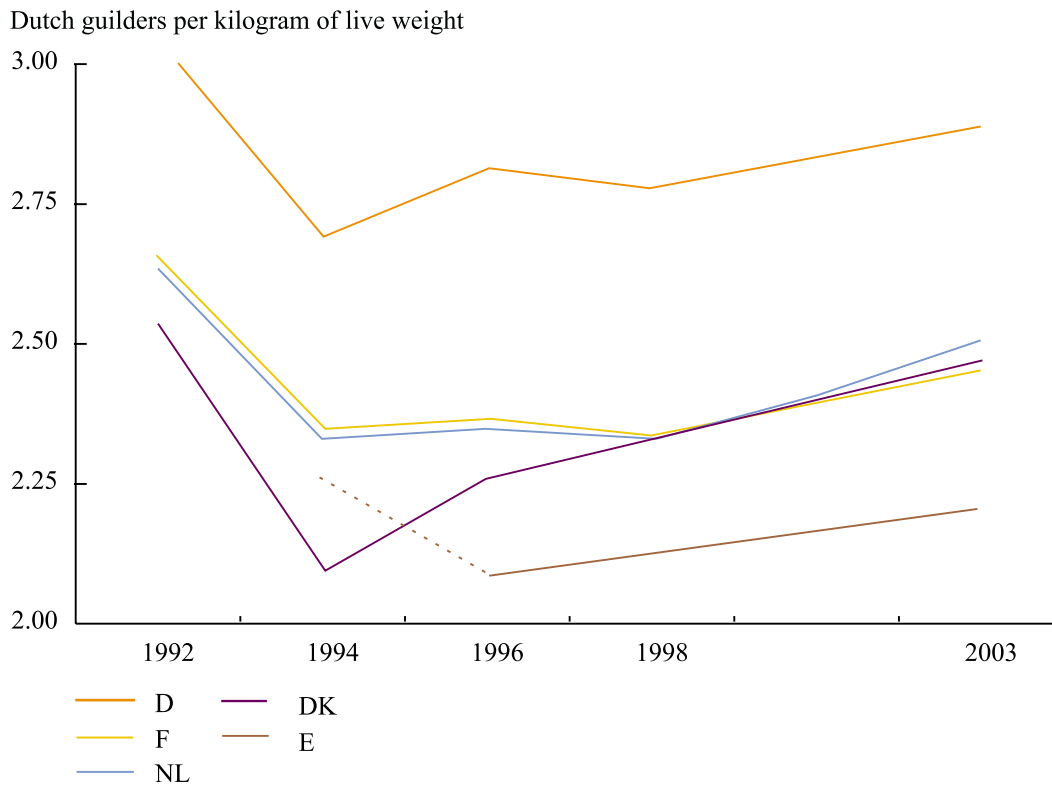


Figure 3.3 Developments in cost price 1992 to 2003 (Dutch guilders per kilogram of live weight)

The following conclusions can be drawn from figure 3.3:

- cost prices have developed in roughly similar ways;
- Denmark has now lost its cost price advantage;
- the Netherlands' cost price advantage in relation to its competitor France has also been lost;
- Spain is increasing its cost price advantage;
- Germany continues to have a significantly higher cost price than other countries.

In Spain, only limited cost price increases are expected by 2003. However, as Spain increases the amount of pig meat it produces and exports, Spanish producers will increasingly be confronted with requirements imposed by foreign buyers in the field of animal welfare, the use of antibiotics, meat meal and similar. Production costs will therefore increase significantly.

The development in the cost price in Spain between 1994 and 1996 is indicated with a dotted line, as the figures for Spain for 1994 may be less reliable.

The average cost price in the Netherlands is expected to increase further in the years after 2003, as more and more farms will implement the new policy requirements. In order to clarify this effect, and in order to allow a comparison with normative studies, the cost increase has been calculated for a hypothetical situation in which all farms are complying with these requirements in 2003. In that case, the increase in cost price will not be 18 cents, but 42 cents per kilogram of live weight (working out at 54 cents per kilogram of slaughtered weight).

## 4. Conclusions and discussion

This study of the cost price position in the Netherlands and the ways in which this may be expected to change leads to a number of conclusions:

- cost price positions may be expected to shift over time: in the 1980s, the Netherlands were in the lead, they were then followed by Denmark which has now been replaced by Spain;
- the important competitors France, Denmark and the Netherlands had approximately the same average cost price in 1998;
- the competitiveness of the EU in relation to the USA is highly dependent on movements in the exchange rate.

An average cost price development was calculated in the study, with the level in 2003 partly depending on the degree to which new requirements had already been implemented in practice. In 2003, the new accommodation requirements will not yet apply to all farms in the Netherlands. This limits the average cost price increase. However the relevant individual farms are already affected by the full cost price increase.

The average cost price in a production area or country is not the only way of measuring competitiveness. Other factors are the cost price differences between farms: the differences within countries appear to be significantly greater than differences between countries. It is worth considering calculating various cost prices for different categories of farms, according to farm size or cost price level (for example, the 25% of farms with the lowest cost price).

This study ascertained the costs of primary production. A better understanding may be gained by looking at the costs at column level. Given increasing market segmentation, it makes sense to ascertain specific cost prices for the different segments: IKB, Japanese market, retail, bacon and organic. In relation to future competitiveness, one should look not only at cost price, but also the pricing of pig meat. However this study has confined itself to the issue of cost price.

There is an important link between the political influence of the sector and movements in cost price. The conditions imposed on production methods are dependent on the influence of the sector, and therefore also its image and the degree of social support it enjoys. Pig farming is increasingly losing influence, not only in the Netherlands, but also in France and Denmark. Reduced political influence can lead to primary businesses being confronted with a large number of requirements imposed by society which must be implemented in a relatively short time.

The future competitiveness of the Dutch pig-farming industry will depend, among other things, on the degree to which the potential dynamism in the sector is utilised. This concerns, among other things:

- opportunities for business development and takeover;
- the range of available incentives;
- capacity to adapt and innovate.

The capacity to adapt can also involve looking for new ways to reduce costs. The costs of business consultancy can probably be reduced by using it in a more focused way. Another possibility is that farms participating in column certification may be allowed to pay lower taxes.

How cost price develops in future is heavily dependent on the way in which policy objectives are turned into legislation and regulations. The final form of regulations determines the cost effectiveness of the policy. To the extent that environmental and welfare requirements become easier to fit into the investment cycle, the eventual additional costs may be surprisingly reasonable. For example, the costs of welfare regulations with stricter standards on area per animal depend on the conditions imposed on the adjustment to those new requirements. Must farms switch to the new method immediately, or may they phase in changes within investment cycles? If the switch has to take place immediately, it may not be possible for many farms. The result may be that farms do not adjust. In the short term, there will be little change in cost price, but the dynamism in the sector will be missing. It is therefore extremely important that the authorities should translate their policy objectives into regulations in a way that allows forward-looking farmers to continue developing their business and take into account the requirements imposed. The sooner it is made clear how regulations are to be applied, the more this will help competitiveness.





## Appendix 1      Individuals consulted

### *Germany*

- H. Fehrendt and H. Martens, Landwirtschaftskammer Weser-Ems, Oldenburg
- P. Spandau, Landwirtschaftskammer Münster
- H.W. Windhorst, ISPA, Universität Vechta

### *Denmark*

- Nicolaj Nørgaard, SJFI, Copenhagen
- Jacob Rasmussen (Finn Udesen), Danske Slagterier, Copenhagen
- Torben Ulf Larsen, Danish Advisory Centre, National Department for Farm Economy, Århus
- Erik Nørgaard, Danish Advisory Center, National Department for Pig Production, Århus
- Richard and Marianne Sieg, pig farmers in Pilkaergaard in Hadsten
- Kent Skaanning, President of the National Union of Danish Pig Farmers (LADS)

### *France*

- Philippe Le Grand, director of Porc Ouest producers' organization, Etrelles
- Laurent Glattleider, vet at Glon Sanders
- Juliette Lataillade, Vincent Auvigne and Agnes Guy, Union de Groupements de Producteurs de Viande de Bretagne (UGPVB)
- Gilles Laudren, director of the Chambre d' Agriculture Bretagne and member of the Association Regional Interprofessional (ARIP), Rennes
- J.Y. Caugant (director, pigs) and Emmanuel Bénêteau (quality manager) of producers' organization ARCA, Saint-Armel
- Clement Nijenhuis, pig farmer in Piré sur Seiche, Brittany
- Yvon Salaün and Onésime Teffène, Institut Technique du Porc, Le Rheu

### *Spain*

- José Antonio del Barrio, director of ANPROGAPOR, Madrid
- Mateo del Pozo (technical director) and Gustavo Martin de Bustamante (general director) of Proinserga, Segovia
- Joaquin Serna Hernandez, deputy director-general for pigs, poultry and other livestock, Ministry of Agriculture, Fisheries and Food, Madrid
- Mr Hans Stegeman, business manager in Bujaraloz
- Jose Maria Costa Casa, general director, Piensos Costa, Fraga/Huesca
- Francisco Gimenez (commercial director), Luis Cerdan (director of nutrition) and Joan Bove (director, piglets trade) Vall Companys Grup, Lerida
- E.M. Rijnen, pig farmer in Spain and the Netherlands
- G.T.A. de Vent, Agriculture Council, Dutch embassy in Madrid.