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NORTH OF SCOTLAND COLLEGE OF AGRICULTURE

Agricultural Economics Division

School of Agriculture, Aberdeen

THE DUTCH PIG INDUSTRY — GROWTH AND CHALLENGE IN THE 1980s

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W M CALDWELL

October 1982

Economic Report No. 139

The North of Scotland College of Agriculture
Agricultural Economics Division

THE DUTCH PIG INDUSTRY - GROWTH AND CHALLENGE IN THE 1980s

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Organisations Assisting in the StudyThe Netherlands

Agricultural Economics Research
Institute, The Hague

CIBECO - Agricultural Supply Co-
operative, Rotterdam

Commodity Board for Livestock and
Meat, The Hague

COVECO - Pig Marketing Co-operative,
Arnhem

Hendrix' Voeders B V Meat
Processors, Boxmeer

Ministry of Agriculture and
Fisheries, The Hague

Pig Futures Market, Amsterdam

Rabobank Nederland, Utrecht

Royal Netherlands Embassy, London

Stock Exchange, Amsterdam

Van der Laan B V Meat Processors,
Leidsendam

United Kingdom

Capital Meat Centres Ltd

Wm Donald & Son Ltd

FMC (Meat) Ltd

Fitch Lovell Ltd

J H Dewhurst Ltd

Lawson of Dyce Ltd

M C Bacon Company Ltd

Meat Promotion Executive

Matthews (Butchers) Ltd

McKellar Watt Ltd

St Cuthbert's Co-operative Society

UK Provision Trade Federation

West Germany

Carl Mörschmer (Meat
Processors), Hamburg

Cyril Hurvitz Ltd
(International Meat Traders),
Hamburg

Hamburg Authority for
Commerce Traffic and
Agriculture

Hamburg Chamber of Commerce,
Foreign Trade Department

Hamburg Port Authority

Karstadt (Supermarket Chain),
Hamburg

Sachsenwaldau, Hamburg State
Farm, Bergedorf

University of Kiel, Faculty of
Agriculture:

Department of Agricultural
Policy and Market Research.

Department of Micro-Economics
and Farm Management

Asda Superstores

British Home Stores PLC

Fine Fare PLC

Marks & Spencer PLC

John Sainsbury PLC

Tesco Stores PLC

Waitrose Supermarkets PLC

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Preface

This is the second report on EEC pig industries arising from market studies commissioned by the Department of Agriculture and Fisheries for Scotland. The first report "The Production-Marketing Chain from Danish Producers to UK Consumers" was published in February 1982.

The Dutch pig industry (due to its considerable growth during the 1970s) has presented a strong challenge to other EEC member countries. There is general and official recognition in the Netherlands of their interest in the UK market and of the pressure for export growth.

The Danish export industry in the UK represents a mature level in marketing organisation. The Dutch trade, by comparison, is at an undeveloped stage in our market and future activity levels are a matter of considerably speculation on both sides of the North Sea.

This account presents material gathered during a study tour of the Dutch Pigmeat Industry carried out in May 1981. The study also included work in West Germany, a key market for the Netherlands and surveys of wholesale and retail outlets in the UK. The presentation is almost entirely descriptive and is not basically concerned with drawing inferences or making recommendations.

Summary

A. Farm Production

1. From 1972 to 1979 the Dutch pig herd increased in size by over 50 per cent and the number of herds with over 200 sows rose sevenfold from 68 to 534 herds.
2. Pig type is varied in breed and cross with fresh pork requirement the most significant conformation character.
3. Pig rations are based mainly on imported raw material with around 70 per cent of Dutch manioc imports being used for swine feed.
4. Improvements in breeding efficiency have raised average weaned pigs per sow per year from 14.9 in 1970/71 to 16.0 in 1977/78.
5. Profitability deteriorated from 1972/73 to 1977/78 due mainly to the effects of inflation and financial charges.
6. A variety of finance sources operate with the Rabobank a significant force in financing pig production. During the seventies almost all the growth in new mortgages was on a credit (short term) basis.
7. VAT, income tax and corporate tax operate in fairly conventional ways. Under the WIR (Investment Account Law) tax concessions operate for the expansion of pig breeding herds.
8. Co-operative marketing in the pig industry competes with a strong private sector.
9. State advisory services are highly specialised and tailored to regional needs.
10. Environmental problems due to concentrated production are alleviated through special subsidy schemes.

B. Slaughtering and Processing

1. The private and co-operative sectors trade in a highly competitive market with multi-national companies prominent.
2. Pig slaughterings in public premises declined both absolutely and relatively from 34 per cent of total in 1972 to 25.1 per cent in 1976 while private slaughterhouses raised their share from 63 to 72.4 per cent.
3. The substantial private sector, in theory, is well financed but even large international groups like Unilever NV, concerned over losses, have been forced into some disinvestment.
4. Contract production and integration have undergone vigorous development. Approximately half of all slaughter pigs are produced under some form of contract.

5. Over 90 per cent of all slaughter pigs are graded. Since 1975 payment according to grade has not been fixed and this applies also to the price differences between grades.
6. Back fat standards operate for the four weight ranges distinguished - 60-69 kg, 70-79 kg, 80-89 kg and 90-99 kg (cold slaughter weight).
7. The Dutch pork futures market has yet to record a significant level of acceptance, although its potential is recognised.
8. Export pigmeat trade is essentially based on allocating the carcass, hams to Italy, middles to the UK and fores to general EEC trade. Cured pigmeat as yet is still a relatively small trade.
9. Recurring difficulties with swine fever act as a brake on exports and market development.
10. In 1978, under the Agricultural Quality Act a new Order was introduced on bacon quality, aimed to assist with exporting to the UK.

C. Distribution and Marketing

1. Sea-freight cost to the East Anglian coast rose 67 per cent from 1972 to 1981 and haulage from port to supermarkets, south of the Humber went up 67 per cent.
2. Main canned meat manufacturers may quote a delivered price to UK warehouses but direct customer deliveries are increasingly favoured.
3. Between 1970 and 1978 exports of pigmeat rose 89 per cent with export tonnage as a proportion of production increasing by 9 per cent.
4. Around 60 per cent of total output is exported, 60 per cent as carcasses and cuts, 22 per cent as preserved meat and 18 per cent as live slaughter pigs.
5. All exports of live slaughter pigs go to EEC countries. The major customers for live slaughter pigs, carcasses and cuts are West Germany, France and Italy, the biggest customers for preserved meat are the USA, the UK and West Germany.
6. The bacon producing sector, consisting of 19 curers, shipped around 1,000 tonnes a week to the UK at the start of the 1980s.
7. The advent of positive MCAs with the UK due to a stronger sterling, has been slightly discouraging to the build-up of exports to Britain. Insignificant MCAs are strongly favoured.

8. Market research indicates Dutch bacon could be improved by providing a leaner light weight middle. The Dutch now claim around 25 per cent of the British rasher market.
9. Commercial links between Dutch and UK companies in the pigmeat trade are being strengthened and Coveco, the pig marketing co-operative operates a London (Dartford) office.
10. The Dutch government could help finance the launch of new premium bacon grade on to the British market.

D. Support Structures

1. A statutory organisation of the agri-food industry exists in the Netherlands with 21 Industrial Boards (horizontal organisations) and 13 Commodity Boards (vertical organisations).
2. The administrative implementation of the EEC's agricultural policy has been largely entrusted to the Commodity Boards by the Dutch government. The Boards engage in a wide range of activities.
3. Expenditure by the Boards on sales promotional activity in 1978 amounted to some 90 M⁽¹⁾ Guilders - supplementing the brand-oriented advertising by individual firms, which also make financial contributions to the agricultural boards.
4. Funding of the Commodity Board for Livestock and Meat (PVVV) is based on levies on slaughterings of pigs and cattle.
5. The PVVV operates a subsidiary marketing export promotion organisation called PVVVV (the four V's) with a budget in 1981 of 4 M Guilders. Its operations are divided equally between the home and export markets.
6. Farmers organisations have a denominational basis. The Royal Netherlands Agricultural Committee (KNLC), the Catholic Netherlands Farmers and Market Gardeners Federation (KNBTB) and the Netherlands Protestant Farmers and Market Gardeners Federation (NCBTB) have headquarters consisting of secretariat and experts in The Hague.
7. Compared with Denmark, co-operation in the production and marketing of pigs is less significant in its impact on the pig sector nonetheless co-operatives like COVECO and NCB are important forces in the market.

(1)M = Million.

Introduction

This report is based on material derived from wider studies of the economic linkages between main pigmeat exporters and UK consumers.

Compared with the Danes, the Dutch are not yet major exporters to the UK. However the Netherlands has become a major producer and trader of pigmeat. Expanding her export outlets within the EEC and abroad is increasingly important to help maintain profitability and growth. Continuing expansion in the Dutch industry presents a considerable potential challenge in EEC markets.

The clearly expressed Dutch interest in increasing exports to the UK should encourage adequate recognition of this fact and attempts to analyse the present and future performance of the Dutch industry.

This study was designed to provide for the UK industry a description of the Dutch pig sector, its main operational features and an initial assessment of its impact on current and future UK and other EEC markets.

The report is organised into four main sections. Section A. discusses organisational and functional features in farm production. In Section B the slaughtering and processing sector is examined.

Distribution and marketing, with particular emphasis on international aspects is presented in Section C. The last section presents a review of support structures operating within the industry.

The report is concluded with a short discussion focusing on employment and exporting in Dutch agriculture, organisational support, the significance of pig sector growth and the future of Dutch involvement in the UK market.

A. FARM PRODUCTION

1. DUTCH AGRICULTURE - A PROFILE

The total area of cultivated land was 2.02 M hectares in 1980 having fallen from 2.14 M in 1970. The proportion of leasehold was about 40 per cent of total land area in 1980.

Agriculture and horticulture's share of the active working population fell from 7.4 per cent to 5.9 per cent during the 1970s.

The number of farms fell from 185,000 in 1970 to 145,000 in 1980. Grassland now accounts for about 60 per cent of all available cultivated land.

Although wheat production rose from 640,000 tonnes to 882,000 tonnes between 1970 and 1980 barley output fell from 329,000 tonnes to 258,000 tonnes.

In the same period pigs per farm rose from 73 to 230 compared with milk cows per farm up from 16 to 35. Output of pork carcasses rose from 701 M kg to 1,351 M kg and in value from 2,024 M Guilders to 4,351 M Guilders.

Tax concessions have encouraged the expansion of the pig breeding herd but more significant has been the availability of relatively cheap feed.

There are around 600 feed firms, of which about 20 per cent are co-operatives which produce more than half of the pig feed supply.

Four firms slaughter around 50 per cent of all fat pigs with the ten largest organisations accounting for 70 per cent.

Exports of meat and animals in 1981 rose 27 per cent on 1980 to 7,000 M Guilders. The bulk of this was accounted for by pigmeat exports at 4,300 M Guilders.

The animal production sector produces more than two thirds of Dutch agricultural output which itself accounts for over 25 per cent of total industrial sales.

Total agricultural exports, in thousand million Guilders, rose from 11.5 in 1970 to 31.8 in 1980. West Germany's share fell from 40.7 per cent to 34.1 per cent. About 75 per cent of all agricultural exports are sold within the EEC.

Agricultural income's share of net national income fell from 6.4 per cent in 1970 to 4.0 per cent in 1980.

2. FINANCE

This section broadly covers sources of finance through financial institutions, official financial support for agricultural development and rationalisation⁽¹⁾ and co-operative involvement in financing pig production.

(1) Finance and land management is especially important in the Netherlands, mainly due to the smallness of the country.

The following table gives an overall picture of the capital structure of agricultural enterprises.

Table 1 Capital Structure of Agricultural Enterprises at 1 May 1978

	<u>Total</u> <u>M Guilders</u>	<u>Average</u> <u>Per Business¹</u> <u>'000 Guilders</u>	<u>Share</u> <u>in %</u>
Landlord Owner's Capital	28,360	349	32
Longterm debts			
Family	21,300	26	2
Rabobank	5,830	72	7
Others	1,260	15	2
Short Term Debts	1,200	15	1
Net Worth	50,480	621	56
Total	89,260	1,098	100

¹Derived from a fairly broad based concept of the average farm.

Source: Landbouw Economisch Bericht (Agricultural Economic Survey) 1979.

A. Sources

The major sources of finance are reviewed below.

Family as a Source of Finance

Family loans are of fairly frequent occurrence in the agricultural sector, especially when farms are passed on from father to son. To avoid misunderstandings at a later date (eg. in the event of the parents' death) it is usually advised that such loans are set down in writing. It is considered important that the statement should include arrangements for the payment of interest, for redemption, and repayment of the loan on the parents' death. The conditions are often relatively favourable.

Financial Institutions

In this group there are a large number of more or less specialised institutions for different requirements. The conditions on which they loan money and their terms of business varied considerably. They obtain their money from a variety of sources, so that interest has to be paid on it, while security is usually required to cover the amount lent.

Lenders can be divided into a number of groups:-

- (i) Agricultural credit institutions and merchant banks.

Within this category Rabobank occupies by far the most important position in the agricultural sector.

(ii) Finance Companies

These mainly give loans for the financing of movable property such as laying batteries, specialised machines, pig equipment etc. They do so mainly in the form of leasing or hire purchase. The period of these loans varies between one and five years; in most cases a fixed amount of interest is charged and redemption is on a monthly basis.

Often the main reasons for using the services of a finance company are speed of decision and the ease with which the financing arrangement can be made (if necessary, via the supplier). Frequently, however, the purchase of movable assets can be financed through an ordinary bank. Compared with bank financing, the rate of interest for leasing and hire purchase is considerably higher.

Financing through a finance company would be considered if the purchase has a limited economic life. Purchase of this nature would generate sufficient turnover (and profit) to guarantee that interest and capital can be repaid over the relatively short time usually allowed for the completion of such transactions.

(iii) Mortgage Banks, Savings Banks, Insurance Companies, Private Persons, etc.

As a rule, sources in this category only grant mortgage loans on real estate. These institutions do not normally allow overdrafts on current accounts. Very often the financing possibilities are limited to a first mortgage. Thus total financing of an enterprise is not possible.

Other Sources

The term financing is probably not quite appropriate to the following sources. Nevertheless, they should not be omitted from a discussion of possible sources of finance.

(i) Landlords (for tenant farms)

A land user is either owner or tenant. Large sums are generally involved in the financing of real estate. If the land and/or buildings can be leased, their financing is passed on to a third party. The tenant farmer has the considerable advantage that the rent he pays is generally much lower than the repayment of interest and capital when borrowing to finance the purchase of the land. The interest and capital repayments can be ten times as high as the rent. On the other hand, no capital accrues to a tenant as a result of increases in the value of the land. However, the stock of land for renting has decreased markedly in recent years and in many cases

tenants have to erect buildings on rented land at their own cost. Yet the significance of landlord capital in agricultural finance is greater than in Denmark.

(ii) Suppliers

As in the UK suppliers' credit exists when it has been agreed that payment will take place at a later date than the delivery of the goods bought, ie. there is a defined and agreed time difference between delivery and payment. The term suppliers' credit is also used if payment is not made in due time after delivery although no arrangement for extended credit has been made. However, this is in effect credit by default and as such can be called in at any time.

(iii) Government

Compared with the UK the Dutch government operates a more significant role in this field providing finance for the agricultural sector in a variety of ways. The following may be mentioned as being the most important:-

a) The National Group Scheme for the Self-employed

Under this scheme municipalities may grant loans to a wide spectrum of business-owners.

To qualify for a loan under the national group scheme for the self-employed, the following requirements must be satisfied.

- Financing through a bank is not possible or would result in unacceptable charges.
- The enterprise must be shown to be viable and to have good prospects of eventual success.
- The loan must be used to overcome temporary financial difficulties.
- The owner of the business must be under 65 and be able to demonstrate that he or she is competent to direct the business.

b) Finance for the Re-allocation of Land

In the event of re-allocation of land (land consolidation) a proportion of the resulting charges can be met with a low-interest loan.

This applies to the general costs involved in re-allocation. Additionally, under the re-allocation scheme a subsidy can be awarded to finance a proportion of the total cost. To obtain such finance a number of conditions have to be satisfied.

Under the present regulations the sum advanced must be repaid in 26 years at the rate of 6 per cent per year. This includes both interest repayment of capital, the interest element being 3 5/8th per cent.

c) As Landlord

Central and local government often acts as landlord, sometimes granting long leases. It does so by means of the Public Lands Service and the SBL.(1) In addition, it is possible to utilise the services of the Land Bank to arrange a transfer of ownership, purchase of a previously rented farm or expansion of a business. When the Land Bank provides assistance the land is let on a long lease. The annual ground-rent is 2½ per cent of the purchase price of the land, and the amount of the rent may be revised every six years. Applications to the Land Bank must satisfy a number of criteria.

B. Security

Various kinds of security operate in fairly familiar ways. A number of the most important are outlined below:-

(i) Mortgage

a) Fixed Mortgage

In a fixed mortgage security is given for a single debt or obligation specified in the mortgage deed. A fixed mortgage deed shows, in addition to a description of the securities, the amount of the debt, the interest payable and the conditions of redemption. In other words, indebtedness, security and conditions of a single and specific debt are specified in a single deed.

b) Bank Mortgage

A bank mortgage gives security for the payment of everything that the mortgagor owes or will owe the bank on any account whatsoever. This applies not only to existing but also to future debts, suretyships, (2) guarantees, etc. Usually, only the amount of the security provided is stated. The great advantage of a bank mortgage is that when the original loan has been repaid the existing mortgage can be used as a security for a new loan.

If, for example, 80,000 Guilders of the amount advanced is repaid (on a bank mortgage of 500,000 Guilders) over several years, a new loan can be granted up to that amount without a new mortgage; but with a fixed mortgage it is necessary to renegotiate a new agreement. With a

(1) Sighting Beheer Landbouwgronden (Foundation for the Administration of Agricultural Land).

(2) With implied legal security against loss.

bank mortgage the new loan can be arranged by a private acknowledgement of indebtedness, which saves time and expense. However, it should not be concluded from this to conclude that the mortgagor (debtor) automatically has the right to take up the repaid sum again as a loan. The bank will wish to decide afresh whether the proposal seems to be justified.

c) Recent Mortgage Growth

Data on the growth in new mortgages in recent years is given in Table 2. A marked provincial variation is evident. In 1970 a majority of new mortgages were on a conventional fixed mortgage basis. During the 1970s almost all the growth in new mortgages was on an overdraft/term loan basis, a comparable trend to that in the UK. Noord-Brabant is a province experiencing a large growth in pig investment.

Table 2. New Mortgages on Agricultural Properties According to Province 1970 and 1978

	'000 Guilders		% Change
	1970	1978	1970 to 1978
Groningen	64,000	117,000	82.8
Friesland	27,000	401,000	1,385.1
Drenthe	70,000	228,000	225.7
Overijssel	95,000	247,000	160.0
Gelderland	112,000	150,000	33.9
Utrecht	29,000	106,000	265.5
Noord-Holland	141,000	628,000	345.4
Zuid-Holland	246,000	966,000	292.7
Zeeland	31,000	65,000	109.6
Noord-Brabant	188,000	553,000	194.1
Limburg	77,000	178,000	131.2
Nederland	1,080,000	3,639,000	236.9
Basis:			
Overdraft/Term Loan (Est)	479,000	3,003,000	526.9
Mortgage (Est)	601,000	636,000	5.8

1 Approximate UK equivalents.
Source: Rabobank 1980.

(ii) Sureties

a) personal sureties

Personal sureties usually apply when limited amounts are involved. The level of the loan and its term will depend on the quality of the sureties: usually two are required.

Partly because of the Sureties Fund for Agriculture, very little use is made of personal sureties for agricultural financing.

b) Institutional Sureties (Sureties Fund)

The Securities Fund for Agriculture (the BF) was created in 1951 under the auspices of the Ministry of Agriculture. Its objective was, and is, to promote the development of the agricultural sector and one of its chief concerns is to increase productivity and profitability. The bank assumes responsibility for the financing while the Sureties Fund stands surety for all or part of the amount. Before a decision is reached the entire financing and structure of the business is taken into consideration.

C. Methods of Financing

A method of financing is a combination of security, the amount involved and the term of the loan. One security may be sufficient (eg. a mortgage) or there may be a combination such as a transfer of property and assignment of debts. The various forms of financing are shown schematically in Table 3. Which method of financing is used depends to a great degree on specific business circumstances. Thus in practice there are frequent variations of the method listed below.

(i) Mortgage Finance

Mortgage finance is the method most used in Dutch agriculture because it is the most favourable for the farmer and is best adapted to the capital requirements of agriculture, where the need is long-term. As to the amount borrowed and the minimum redemption:

- normal mortgage financing is not likely to exceed a maximum of 70 per cent of the valuation;
- however, a "topping-up" mortgage is possible, but together with the normal mortgage financing must not exceed 90 per cent of the valuation. The grant of a "topping-up" mortgage is partly dependent on the profitability and solvency of the business but in many cases a guarantee from the Sureties Fund will be cheaper and offer a longer term.
- Depending on the nature of the securities, the minimum redemption payments required (as distinct from interest) may not come into effect for five years and after that period will be from 1½ per cent per annum for mortgages on land to 5 per cent per year for wooden buildings. In the case of "topping-up" mortgages the redemption percentage is at least 5 per cent and frequently higher.

The grant of a loan on which no redemption payments are required during the first five years is intended for farms with a great deal of land. In such enterprise much of their assets are tied up in land which is not

subject to depreciation. The basic principle here is that heavier expenses can be met more easily after the five-year period because by that time the initial problems of starting a new venture should have been overcome.

When mortgages are granted on leasehold property or the right of building the amount of the loan depends to a very large extent on the provisions of the contract. Loans granted vary from 25 per cent of the valuation where a right of demolition is included in the contract to 50-70 per cent when the contract contains a firm right to compensation.

(ii) Seasonal Crop Credits

Seasonal crop credits are intended to meet a temporary need for operating capital. This form of financing is chiefly intended for arable farms in which expenditure and income fluctuate markedly with the seasons and when there is often a large credit requirement until harvest time. Temporary credit can be granted on the basis of the proceeds expected from the harvest and the amount made available depends on the cropping programme. The loan must be repaid after the sale of the produce.

The securities usually required for a harvest loan are the transfer of ownership of the crop and an assignment of debts. On the integrated arable and pig farm crop credits can be a useful finance source.

In principle, loans or overdraft facilities are possible for all types of farms for bridging purposes, covering unexpected and short-term capital requirements, but such loans cannot be used for normal financing purposes. Although securities are not required for such loans the applicants must satisfy exacting requirements as to their credit worthiness and resources.

(iii) Interest Accumulation Arrangement for Young Farmers

The aim of this type of arrangement is to lighten the financing charges on young farmers in particular, by taking over existing farms or businesses. If a number of conditions can be met, such an arrangement can modify the normal requirements relating to interest and redemptions.

Land-tied Businesses

No redemption or interest payments are made on the mortgage loan for the first five years. During the first five years 5, 4, 3, 2 and 1 per cent interest, respectively is added to the principal of the loan. After the first five years liabilities are as follows:-

- the previously agreed redemption payments on the principal
- the interest on the principal plus accrued interest
- the accrued interest to be redeemed in 10 years.

Enterprises not Tied to Land

That part of the loan for which the Sureties Fund has provided a guarantee can be paid back in accordance with a graduated redemption system. Before this arrangement is adopted investigation shows whether this method of redemption is suitable for the particular enterprise, which must be capable of meeting the much higher charges after the fifth year.

Table 3 Capital and Finance in Dutch Agriculture

Security	Required for	Maximum Level of Credit etc	Maximum Duration
1. Mortgage	Land, Buildings Buildings where right of Building Exists	70% of the Valuation 50-70% Depending on the Building Contract	30-35 years 15-20 years
2. Topping up Mortgage	Land, Buildings	90% of the Valuation	15 years
3. Transfer or right of Demolition	Buildings on Rented Land	25% of the Valuation	15 years
4. Transfer or Right of Compensation	Buildings in Rented Land	50% of the Valuation	15 years
5. Transfer of Property	Tools, Stock, Dairy Herd	50% of the Valuation 50% of the Valuation	5-8 years 15-20 years
6. Assignment to Debts	Accounts Receivable	60-70% of the Turnover	reviewed annually
7. Personal Sureties	Resources of the Sureties	Limited	20 years
8. Guarantee from Sureties Fund	Profitability of Business	Not Applicable	20 years
9. Transfer of Ownership of Harvest and Crops, Assignment of Debts	Agricultural Produce	25% of the Expected Harvest; maximum depending on the cropping programme	8 months
10. Transfer of Property, Assignment of Debts, Supplementary Sureties (if necessary)	Livestock	Dependent on Species of Livestock, Varies from One Arrangement to Another	Continuous

(iv) Livestock Financing

There are a number of credit arrangements designed specifically for the financing of livestock in the breeding sector and it is possible to finance the acquisition of the livestock with only very limited contribution from the proprietor's own assets. However, such loans may only be used for current expenditure directly connected with the livestock, eg. the purchase of livestock, their transport and the payment of vets' bills. The arrangement requires a regular stocktaking so that the value of the livestock can be judged in relation to the status of the loan at any time. These special livestock financing arrangements can be divided into what are known as free arrangements and tied arrangements. Under a free arrangement the proprietor is completely free in the choice of both customer and supplier, while a tied arrangement is based on a partial surety from the supplier and/or customer. The latter imposes on the proprietor the obligation to buy his stock from a particular supplier and to sell to a specified customer. This obligation is independent of any other concerning price guarantees, etc. When a proprietor wishes to change his supplier and/or customer, the situation can be reviewed to determine how the financing can be adapted, possibly to a free arrangement. Loans granted under free arrangements are generally somewhat lower than those given under tied contracts.

D. Official Financial Support for Agricultural Development/
Rationalisation

In the Agricultural Development and Rationalisation Fund the Netherlands possesses an instrument for promoting a sound business structure in agriculture and horticulture. The legal form of the Fund (a 'stichting' under Dutch law) and the composition of its executive (government and industry) enable measures for the development and rationalisation of agriculture to be taken on a basis of joint consultation and shared responsibility. The financial resources of the Fund consist of money which is provided annually by the Ministry of Agriculture and Fisheries and in exceptional cases by other Ministries. A particularly important aspect of development policy is the interest subsidy scheme under which farmers and market gardeners may, under certain conditions, receive an interest subsidy in respect of loans taken out for the purpose of financing an approved development plan. The development plan must enable the holding concerned to pay each full-time worker an income which is at least equal to that of workers in other sectors.

The following schemes should also be mentioned:-

- the subsidy schemes for farm labour organisations to promote the activities of these organisations

- the subsidy schemes to promote co-operation between agricultural concerns
- the supplementary subsidy scheme for retraining persons changing over to non-agricultural occupations
- the subsidy scheme for 'manure banks' to help remove surplus of natural manure.

The Investment Account Law is especially important in this context as it provides for certain grants to be paid to investors through the tax system to offset the cost of investment.

The 'land bank' is also important in agricultural development; it is not an autonomous institution but rather a scheme for which the Agricultural Land Management Agency is responsible and enables the Agency to purchase land on certain conditions and lease it to farmers to assist them in enlarging or transferring their holdings to their children or to act as an intermediary between lessors and lessees. The main scheme for implementing rationalisation policy is regulated by the Liquidation Compensation Decree which promotes the liquidation of agricultural holdings and structural improvement, by making use of the farmland which becomes available under the scheme. Farmers (and their employees and the members of their families employed on the farm) who wish to liquidate their holdings may apply for compensation which is awarded subject to certain conditions, relating mainly to the farmer's income and the size of the undertaking. The compensation of the farmer himself comprises:-

- a) a lump sum based on the area of farmland relinquished plus, if farming is his main occupation
- b) a lump sum based on the size of the farm in the case of liquidation before he reaches the age of 50 or a monthly allowance up to and including the month in which the farmer concerned reaches pensionable age (65), in the case of liquidation after the age of 50 but before the age of 65.

The liquidator/owner is obliged to sell his land to the Agricultural Land Management agency or lease it to another farmer. If the land lies outside a land consolidation area, the Agency may grant exemption from the obligation to sell. The obligation lapses in any case if the liquidator is a farmer having an approved development plan or is withdrawing his land from agriculture. If the liquidator is not the owner of the relinquished land, the designation of a new tenant is subject to the approval of the lessor/owner.

In 1971 an average of 250 farmers applied for farm liquidation under the scheme every month, but the figure dropped to 36 in 1976, 20.5 in 1977 and 8.5 in 1978. One of the causes of this apparent loss of interest in recent years has undoubtedly been the poor employment situation outside agriculture. This trend led the Board of the Development and Rationalisation Fund to consider amending the Liquidation Compensation Decree. As a result, short-term liquidation (maximum 6 years) is now also possible. Of the current rationalisation schemes, the principal ones are:-

- the scheme providing assistance towards the cost of demolishing obsolete glasshouses, coupled with liquidation of the undertaking and the assistance scheme for elderly farmworkers.

E. Financing Pig Production - Co-operative Investment

Through the Rabobank Co-operative link, a structure of risk bearing cover has been built up since 1963. Financing is provided through the Rabobank for pig production based on three different ages of pig - weaner, store and fattener. The bank provides financing and currently (1981) guarantees of up to 175 Guilders per pig on average. For example, a stock level of 300 pigs means a financing of 52,500 Guilders. This sum represents working capital and the farmer will supply from his own resources perhaps some 25-40 Guilders per pig. For fattening only that is from weaners, the farmer will get a financing of 154 Guilders per pig. The financing of this working capital is a continuous process and the current interest rate has been around 12-13 per cent.

Coveco, the pig marketing co-operative also guarantees up to 30 per cent of any trading deficit and it takes over all the pigs on valuation. Cebeco - Handelsraad (the supra-body) takes another 30 per cent of this deficit made up of 5 per cent from the Cebeco national organisation and 25 per cent covered by the local co-operative. Thirdly the local Rabobank takes up 30 per cent of the deficit. The final 10 per cent of deficit is covered by the insurance company operated by the Rabobank. This represents the basic risk cover arrangement which has been put together by the co-operative movement in Holland. It is essentially designed for emergencies, uncommon in the past, but more evident in recent years. The financing provided, covers all direct costs except those allocated to land, buildings and labour.

F. Rabobank Structure

This organisation is the agricultural bank for Dutch farmers and its foundation dates back some 85 years. Around 1,000 local 'Rabos' exist with a total membership of about 950,000 members. Each bank therefore has approximately 100 local members. At the start-up, each farmer made an investment in the bank of some 5 Guilders, a trivial amount by today's standards. Not all farmers use the Rabobank so it is an arrangement where farmers with money lend to farmers without. The expectation is that if the local bank runs a deficit then the local members must clear it. Now the reserve supply position is so large that it will completely clear a local Rabobank's deficit with immediate effect.

Today each member gives a guarantee of 5,000 Guilders to his Rabobank. Total membership of some 950,000 co-operators represents a considerable financing level. The relationship between the Rabobank and the Netherlands State Bank is that the latter requires the 'Rabo' to have a liquidity level of 30 per

cent. The considerable size of the Rabobank is evident from the fact that it is the second bank in size in Holland after the private banks. The local 'Rabos' are organised in regional rings with some 20-50 banks in each ring. Each ring has a board and three members of the board are elected to serve on the central ring. There are some 40-44 rings so the total membership of the central ring runs to around 120 members. This represents a fairly unwieldy structure for handling administrative detail. The central ring then has a board of directors numbering only 5 in all and between the central ring and the board of directors there are 3 main levels of management; Policy, Administration and Director of Operations. This representation from the grassroots of the local Rabobank up to the central board of directors is mirrored in reverse by the fact that two or three of the rings are grouped in a regional structure and a representative of the central ring has a local regional office in which policy from headquarters is implemented back down through the local banking structure.

G. Company Law⁽¹⁾

The Besloten Vennootschap Met Beperkte Aansprakelijkheid (BV), the private or closed company with limited liability was introduced into Dutch company law as recently as 1971. In all other member states of the EEC, with the exception of Denmark, the private company has long existed alongside the public company.

Before 1971 the Netherlands had only one form of company, the Naamloze Venootschap (NV) which served the purposes of both the present public company and the private company.

The BV turned out to be very popular, mainly due to the exemption it enjoys from the obligation to publish its annual accounts. Every NV is obliged to do this but a BV is compelled to do so only in exceptional circumstances. Very many smaller NV's which existed prior to the new legislation quickly converted into BV's to gain this exemption. During 1972 alone, over 40,000 conversions of NV's into BV's took place. On 1st September 1975 the total number of BV's in the Netherlands was 90,000 compared with something over 8,000 NV's. The private pig breeding companies, in particular, took advantage of the new regulations.

3. TAXATION

Taxes paid by farmers are:-

VAT 12% - special items 4% (eg. food)
Income Tax
Corporate Tax - 43-46%

(1) Source: Dutch Company Law, P Saunders 1977.
European Commercial Law Library Series.

The specialised nature of tax implications precludes a comprehensive review and the discussion is therefore limited to a number of pertinent features providing a point of reference for UK comparisons.

The main relevant legislation is as follows:-

1. Income Tax Act 1964
2. Turnover Tax (VAT) Act 1968
3. Corporate Tax Act 1969.

Income Tax

Excluded from profit are:-

Gains from an agricultural business involving changes in land value including land on which buildings erected - except insofar as the change in value arises in the conduct of the business. Double taxation is prevented under Dutch Tax Codes by means of the exemption method. This means that any income such as royalties, interest and dividends, after foreign taxation of such income, is treated as ordinary taxable profits of the resident, unless the income is tax-exempt. The conventional rate of Dutch dividend tax is 25 per cent.

VAT (Turnover Tax)

The earlier Turnover Tax was based on the 'cumulative' cascade system. That is, all goods delivered or services rendered in the course of the entire production and distribution process (exclusive of retail stage) were subject to tax at different rates. As a result the tax had a cumulative effect.

The actual impact of the tax was difficult to measure, for it also varied between products and services of the same kind, depending on the number of times the goods changed hands before reaching the ultimate user.

The new Act introduced a general rate of 12 per cent with a reduced rate of 4 per cent applied to a number of essential goods and services, such as food, gas, electricity, medicines etc.

Leasing (including long-term leases) of immovable property is exempt except for leasing of business installations and machinery.

Corporate Tax

Rates are:-

43 per cent if the annual taxable profit is less than 40,000 Guilders.

43 per cent if annual taxable profit is between 40,000 Guilders and 50,000 Guilders plus 15 per cent of the excess over 40,000 Guilders.

46 per cent of the entire profit if the annual taxable profit is more than 50,000 Guilders.

A range of exemptions operate.

WIR(1)

During the 1970s the Dutch government introduced tax concessions, under the WIR legislation, to assist expanding business in all industrial sectors, including agriculture. The regulations when applied to the pig industry encouraged producers to increase breeding sow numbers.

Taxation and the Balance Sheet

The three accepted Dutch approaches to the balance sheet are familiar. The formal balance sheet computes the profit for the purpose of Income Tax and Corporation Tax. Important elements in this connection are the valuations and depreciation calculated in accordance with the taxation laws.

Capital goods are generally shown in the formal balance sheet at historical cost price suitably adjusted for depreciation and new investment. Land is also valued at purchase price with depreciation permitted on improvements to land, such as drainage. Livestock is valued on the basis of age in accordance with taxation requirements, stocks being estimated at nominal value.

In the "business" balance sheet the valuation of capital goods and depreciation is based on the replacement value in accord with current cost accounting. In the agricultural sector only a small number of enterprises use a current cost system of accounting.

The "liquidation" balance sheet shows land and capital goods at sale value. So this balance sheet shows the actual net worth of a business by determining the directly realisable value of the land and capital goods owned by the business.

A typical balance sheet is summarised below firstly for taxation purposes and secondly for liquidation.

(1)Wet Investerings Rekeningen (Investment Account Law)

Assets (Guilders)	Liabilities (Guilders)				
	"Taxation"	"Liquidation"			
Land (25 ha)	300,000	750,000	Rabobank Loan	460,000	460,000
Buildings	200,000	300,000	Rabobank Credit	60,000	60,000
Livestock	70,000	100,000	Trade Debts	15,000	15,000
Machinery	10,000	15,000	Loan From		
Field Stock	5,000	5,000	Third Party	25,000	25,000
Stocks/Receipts	10,000	15,000			
In Hand at Bank	15,000	15,000	Net Worth	50,000	640,000
	610,000	1,200,000		610,000	1,200,000

Source: Rabobank 1980.

The net worth is 640,000 Guilders. This is $\frac{640,000}{1,200,000}$
= 53% of the balance sheet total.

The net worth for taxation purposes is considerably lower, mainly because of the differences in the valuation of land shown in the two balance sheets.

In sectors where less land is used, eg. a breeding piggery, the hidden reserves are usually smaller and may even be non-existent.

4. STRUCTURE OF PIG INDUSTRY

From 1972 to 1979 the Dutch pig herd increased in size by over 50 per cent (Table 4). During the period there was a growth in the numbers of large units and decline in the smaller. Herds with over 200 sows increased over 600 per cent from 68 in 1972 to 534 in 1979 (Table)5.

Table 4 Trends in National Pig Herd Size 1972 to 1979

	1972	1974	1976	1978	1979	% Change 1972 to 1979
Fattening						
Pigs (20 kg & more)	3,293,000	3,542,000	4,046,000	4,763,000	5,038,000	53.0
Piglets (under 20 kg)	2,052,000	2,204,000	2,395,000	3,072,000	3,138,000	52.9
Breeding Sows	668,000	719,000	785,000	958,000	1,008,000	50.9
Young Sows/Boars for Breeding	198,000	228,000	254,000	346,000	326,000	64.6
Service Boars	21,000	24,000	27,000	32,000	32,300	53.8
Total	6,233,000	6,719,000	7,507,000	9,172,000	9,722,000	56.0

Source: Agricultural Data 1980.

Table 5 Holdings According to Number of Breeding Sows 1972 to 1979

	1972	1973	1974	1975	1976	1977	1978	1979	% Change 1972 to 1979
1 - 10	18,037	15,608	13,804	12,409	10,737	9,591	8,445	7,633	-57.7
10 - 20	8,197	7,311	6,947	6,169	5,891	5,774	5,309	4,510	-45.0
20 - 30	4,795	4,440	4,198	3,851	3,762	3,800	3,611	3,032	-36.8
30 - 50	4,714	4,767	4,799	4,556	4,290	4,575	4,412	4,078	-13.5
50 - 75	2,212	2,310	2,611	2,631	2,745	2,953	3,123	2,912	31.6
75 - 100	702	856	1,030	1,231	1,325	1,572	1,802	1,971	180.8
100 - 200	529	641	836	1,075	1,273	1,646	2,200	2,539	380.0
200 & Over	68	91	139	191	241	318	425	534	685.0
Total	39,254	36,024	34,364	32,113	30,464	30,229	29,327	27,209	-30.7

Source: Agricultural Data 1980.

In 1979 some 13 per cent of all breeding sows were in herds with over 200 sows and 11 per cent of fattening pigs were in herds with over 1,000 fatteners (Table 6).

Table 6 Concentration in National Pig Herd 1979

Fattening Pigs			Breeding Pigs		
Number of Fattening Pigs per Farm	% of All Farms With Fattening Pigs	% of All Fattening Pigs	Number of Breeding Sows per Farm	% of All Farms With Breeding Sows	% of All Breeding Sows
1 - 99	54	12	1 - 9	29	3
100 - 199	20	18	10 - 19	18	7
200 - 299	10	15	20 - 49	27	22
300 - 499	9	22	50 - 99	17	30
500 - 749	4	14	100 - 149	6	18
750 - 999	1	7	150 - 199	2	7
1,000 & Over	1	11	200 & Over	1	13

Source: Agricultural Data 1980.

In terms of geographical distribution of the national herd in 1979 the concentration was greatest in the central and southern belts (Table 7). A notable 35 per cent of the herd was located in Noord-Brabant (convenient for Rotterdam) where the average pigs per farm was at its maximum at 321 head.

Table 7 Distribution of National Pig Herd by Province 1979

	% of the National Pig Herd	Pigs per Farm
Groningen	1.0	176
Friesland	1.2	183
Drenthe	2.1	142
Overijssel (incl. Ijsselmeerpolders)	14.4	164
Gelderland	26.3	182
Utrecht	4.1	133
Noord-Holland	0.7	96
Zuid-Holland	3.0	94
Zeeland	0.8	91
Noord-Brabant	35.1	321
Limburg	11.4	281

Source: Agricultural Data 1980.

5. PRODUCTION COSTS AND PROFITABILITY

Results for breeding herds, (Table 8) show that between 1972/73 and 1977/78 sales value per piglet rose 20 per cent while total costs per litter rose 29 per cent including increases of 14 per cent and 75 per cent for feed cost and housing cost respectively.

Table 8 Financial Results from Pig Breeding 1972/73 to 1977/78

	unit	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
Breeding sows		58	61	66	72	77	84
Feed/sow/day	kg	4.37	4.28	4.06	4.11	4.05	4.09
Number/litter		8.8	8.8	8.7	8.5	8.6	8.5
Litters/sow/year		1.77	1.80	1.77	1.77	1.80	1.83
Sale value/piglet	Gld	96.10	116.20	123.80	123.80	112.60	116.00
Financial Results per Litter							
Total sale value	Gld	1,012	1,156	845	1,171	1,138	1,138
Sow purchase cost	"	40	52	52	55	71	64
Feed cost	"	464	527	499	503	563	530
Housing cost	"	76	87	108	111	122	133
Miscellaneous cost	"	88	99	114	131	146	138
Total Cost	"	668	765	773	800	902	865

Source: Agricultural Data 1980.

In Table 9 the results for feeding herds show that during 1972/73 to 1977/78 the purchase price per pig rose 22 per cent. Sales value rose 20 per cent with total costs rising 25 per cent, feed cost up 21 per cent and housing cost up 60 per cent.

Table 9 Financial Results from Pig Feeding 1972/73 to 1977/78

	unit	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
Average No. of Fattening Pigs		351	351	352	340	381	419
Fattening pigs delivered		4857	879	918	850	953	1077
Feed per kg LW	kg	3.54	3.51	3.40	3.44	3.44	3.43
Purchase price per pig	Gld	94.80	112.40	84.10	121.10	111.50	115.90
Income per kg deadweight	"	3.19	3.74	3.03	3.85	3.73	3.79
Financial Results per Delivered Fattening Pig							
Total sale value	Gld	268.00	317.40	255.30	324.20	318.40	322.20
Litter cost (include mortality)	"	96.70	115.50	87.20	124.50	116.30	121.70
Feed cost	"	127.40	150.80	138.20	141.00	161.90	153.80
Housing cost	"	9.40	10.70	13.20	14.00	14.90	15.10
Miscellaneous costs	"	9.10	10.30	10.60	11.40	12.60	11.90
Total Cost	"	242.60	287.30	249.20	290.90	305.70	302.50

Source: Agricultural Data 1980.

The higher levels of cost increase in housing in both breeding and feeding results draws attention to the fixed cost trend and indirectly to the effects of inflation and finance costs during the period.

Table 10 Labour Income/Pig/Year 1970/71 to 1977/78
(Guilders)

	Per Sow			Per Fattening Pig		
	Gross Income	Costs (Labour Excl.)	Labour ¹ Income	Gross Income	Costs (Labour Excl.)	Labour ¹ Income
1970/71	1,360	1,080	280	577	543	34
1971/72	1,400	1,090	310	595	548	47
1972/73	1,790	1,180	610	661	598	63
1973/74	2,070	1,370	700	790	715	75
1974/75	1,520	1,390	130	665	649	16
1975/76	2,100	1,440	660	829	759	70
1976/77	2,042	1,616	426	799	767	32
1977/78	2,080	1,587	493	831	780	51

¹Income available to cover labour cost.

Source: Agricultural Data 1980.

Aspects of labour cost and income, are examined in Table 10 where results are given on a per sow per year and per fattening pig per year basis for the period 1970/71 to 1977/78. Gross income per sow rose 16 per cent while at the same time the income available to cover labour cost fell by 19 per cent. Gross income per fattening pig rose 27 per cent with income to cover labour cost also falling 19 per cent.

6. FEED REGIME AND LAND UTILISATION

Background

Initially the Netherlands recognised the EEC Cereal policy as disadvantageous to the Dutch pig economy. The country, the arable land area, and the cereals acreage are all small and the Dutch are thus modest cereal growers. The pig industry traditionally has been based on the importation of basic raw materials for compound feed manufacture. The emergence of high cost cereals grown within the Community added fresh impetus to pursue this basic historical approach to feed costs. During the sixties, and latterly much more noticeable during the seventies, Dutch importation of cassava/manioc and citrus pulp as basic raw materials from low cost producers in the Far East increased and became a markedly more important element in compound manufacturing and in assisting in the drive to keep feed costs contained. The Dutch have been more than successful in this in that their average cost of feed per pig has been amongst the lowest if not the lowest within the whole of the Community.

They are also enthusiastic exporters of pig meat particularly to West Germany, the easily accessible neighbour. Their own consumption has increased as has consumption throughout the EEC

and this together with their feed cost "solution" encouraged a considerable growth in the Dutch pig herd which has virtually doubled since they entered the Community. Several other features supported this increase in the Dutch industry; the developments at the Rotterdam Europort of facilities for handling the bulk carriers for unloading and onward trans-shipment through the canal system on barge to the inland feed factories were important new infrastructure features. Also the Dutch government during the 1970s introduced tax concessions (under the WIR) for businesses which were expanding including the agricultural sector and the pig industry.

The availability of cheap imported starch has been a major factor in influencing the downward trend in the grain area (Table 11).

	1956/60	1961/65	1966/67	1971/75	1977/79	% Change 1967/70 to 1977/79
Grain	5,171	4,971	4,178	2,964	2,360	(-43.5)

Within the arable sector individual crops have fared differently. Table 12 shows that from 1970 to 1978 the number of hectares under all the cereal crops fell, wheat 15 per cent, rye 70 per cent, barley 32 per cent and oats 55 per cent.

Table 12 Utilisation of Arable Land 1970 to 1978 ('000 hectares)

	Arable Land	Wheat	Rye	Barley	Oats	Potatoes	Sugarbeet	Fodder Maize	Other Products
1970	686	142	57	105	56	157	104	6	59
1978	698	121	17	71	25	162	131	118	53
% Change 1970 to 1978	1.7	(-14.8)	(-70.2)	(-32.4)	(-55.4)	3.2	26.0	1,886	(-10.2)

Source: Agricultural Data 1980.

Potatoes rose modestly by 3 per cent while sugar beet increased by 26 per cent. The growth in fodder maize was outstanding, the crop was non-existent until the mid-sixties.

The Compound Industry and its Raw Materials

Some highly significant trends are apparent in raw material usage in the Dutch feed industry (Table 13). From 1970/71 to

1975/76 total grain, home produced and imported fell 10 per cent with home production falling 56 per cent. Imported citrus pulp rose 351 per cent to 492,000 tonnes and manioc 134 per cent to 1.2 M tonnes. By the mid-seventies the feed industry's raw material supply had been basically re-structured.

During the late seventies the basic trends continued at a slower pace, consolidating the overall change so that in 1978/79 total citrus pulp and manioc had reached 3.5 M tonnes compared with 0.6 M tonnes in 1970/71.

Table 13 Raw Materials Available to the Feed Manufacturers 1970/71 to 1978/79
(^{'000} Tonnes)

	1970 /71	1973 /74	1974 /75	1975 /76	1976 /77	1977 /78	1978 /79	% Change	
								1970/71 to 1975/76	1976/77 to 1978/79
Grain	3,165	3,349	3,564	2,836	2,362	2,470	2,453	(-)10.4	3.9
Home produced	627	580	525	274	261	306	492	(-)56.3	88.5
Imported	2,538	2,769	3,039	2,562	2,101	2,164	1,961	0.9	(-)6.7
Citrus Pulp									
All imported	109	296	408	492	749	766	970	351.4	29.5
Manioc									
All imported	523	858	1,225	1,225	1,837	1,904	2,490	134.2	35.5
Total citrus pulp & manioc	632	1,154	1,633	1,717	2,586	2,670	3,460	171.7	33.8

Source: Agricultural Data 1980.

Detail for the production of compound feed according to kind of livestock, given in Table 14, shows that from 1970 to 1978 pig feed production rose 64 per cent from 3.3 M tonnes to 5.4 M tonnes.

Table 14 Compound Feed Production According to Kind of Feed 1970 to 1978
(^{'000} tonnes)

	Cattle	Calf	Pigs	Poultry	Misc.	Total
1970	2,074	334	3,307	2,033	103	7,851
1971	2,066	362	3,833	2,188	146	8,595
1972	2,374	389	4,081	2,162	120	9,126
1973	2,955	429	4,341	2,230	123	10,078
1974	3,131	458	4,515	2,255	153	10,512
1975	3,334	407	4,545	2,184	202	10,672
1976	3,714	467	4,749	2,276	184	11,390
1977	4,212	459	5,047	2,348	194	12,260
1978	4,098	513	5,429	2,460	226	12,726
% Change 1970 to 1978	97.6	53.6	64.2	21.0	119.4	62.0

Source: Production Board for Animal Feedstuffs

In the late seventies three-quarters of the available manioc was being incorporated in pig feed while almost all the citrus pulp was being used for cattle (Table 15).

Table 15 Usage of Imported Raw Materials 1976/77 and 1977/78

	% of Total		
	Cattle	Pigs	Poultry
Manioc 1976/77	22	70	8
1977/78	14	77	9
Citrus pulp 1976/77	91	9	-
1977/78	90	9	1

Source: Ministry of Agriculture

Development in Co-operative Feed Supply

Co-operatives have increased their market share from around 45 per cent in 1970 to 52 per cent in 1980. The private sector has been losing more of its smaller plants. The 1960s was a period of concentration generally within the industry. There have also been co-operative mergers and the co-operatives generally have been investing in very large feed mills. In Brabant Province there is a large mill investment owned by the biggest co-operative CEHAVE with an output of 2½ million tonnes of feed per year. There is also a new large mill proposed at Bos and another, later, at Oss. The history of compounding in the Netherlands is important in understanding these developments. Cebeco was always a major importer of feed grain and the mills generally have used a variety of imported raw material. So it was fairly naturally that expansion would be based on past trends.

The EEC cereals price policy was disadvantageous to a country like the Netherlands. The Cereals policy was expected to be damaging to Dutch pig production. The favourable world price levels for cereal substitutes such as cassava/manioc and citrus pulp were attractive to a major importer like the Netherlands with modern port facilities for bulk handling in Rotterdam and a canal system for distribution. The strong export orientation of the pig industry also stimulated more output and this in turn drew in more low cost feed imports. Several problems due to high production levels have emerged. The disposal of farm waste has become a problem in areas of particularly high pig density. Currently there are no laws for farm waste disposal but a new law is proposed to cover for soil pollution. Industrial companies have also started to move into agricultural investment and it is possible that new law will emerge to keep out industrial capital. Further growth within the pig industry still seems possible because of the deficits in supply which exist in other markets. The Dutch view generally is that market clearing will continue at internal market price levels which are likely to be below import prices.

In the late seventies three-quarters of pig feed was being incorporated in pig feed. Manioc and Related Problems

The introduction of low cost manioc feed into the Dutch pig industry has been the prime 'trigger' to an important pattern of events within the EEC. The Dutch have penetrated export markets formally dominated by the Danes in West Germany, the UK and elsewhere. Outside the Netherlands there has been increasing criticism of how the Dutch industry has expanded on the basis of low cost, imported material. This was replacing EEC barley which was rising in surplus forcing the Community to export greater amounts, with considerable restitution payments involved, to third countries. Clearly these two features are in direct conflict. The Dutch are reluctant perhaps to admit that it would have been more reasonable for them to have used the importation of cheap raw material simply to stabilise their industry with perhaps a modest growth. However, the fact that it has been used to more than double the size of the pig herd and the pigmeat industry while in policy conflict with the EEC cereal regime is not likely to be regarded as satisfactory by its Community partners. The Dutch defend their position as a natural reaction to a high price cereal regime and their need as a small country to expand their exporting industries of which food is a major one.

The Netherlands have adopted a defensive posture which has led to some rather bizarre solutions for their pig sector problems. For example in Noord Brabant where the pig herd has undergone the most notable expansion the land is not suitable for heavy applications of effluent slurry. The Dutch government after pressure from the Farmers' Unions agreed to provide a transport subsidy for pig slurry.

The level of manioc imports into the EEC is now engaging major attention in Brussels. To compete with the low feed costs in the Netherlands other countries have followed the 'manioc trail'. It is a contributory factor to cereal surplus and restitution payments on cereal export are becoming a significant drain on Community funds.

The EEC cereals price policy was disadvantageous to a country like the Netherlands. The cereals price policy was expected to be attractive. The attraction of these imports is purely price. For example in March 1982 feed barley with a similar metabolisable energy content of 11.1 MJ/kg delivered to UK mills was around £112 per tonne while hard quality manioc pellets from Thailand were up to £115 a tonne cheaper. The UK's argument has been that the Community is deficient in protein crops and manioc contains only about 2 per cent of protein against an average of 10 per cent for cereals. By the same token, according to MAFF sources, maize gluten feed, mainly from the USA, with an average protein content of about 20 per cent is an acceptable import.

The EEC and Thailand have formally signed an agreement limiting imports of Thai tapioca to the Community until 1986. It provides a quota of 5 M tonnes for 1983 and 1984, 4.5 M tonnes for 1985 and 1986 with a 10 per cent flexibility margin - (Financial Times 3/9/82).

The Future

The World feed outlook is important to the future of the Dutch pig economy. Forecasts of world feed price patterns naturally vary. The possible 'Gasahol' revolution in the USA suggests a variation in the maize to soya substitution equation with more by-product maize gluten becoming available and the market generally favourable for substitutes.

However, Thailand also has a 'gasahol' programme using manioc as the feedstock and a reasonable broad view would be that cereal and cereal substitute prices are likely to continue increasing. Much less is clear about the behaviour of the basic ratios in the EEC between animal products and feed grain. The impact of the EEC's high cereal price policy has had very significant effects on Community agriculture.

Compared with animal product surpluses the cereal surplus to a degree, is potentially politically more tenable. On feed cost terms the 'inflated' Dutch pig industry does not yet look significantly vulnerable. However in terms nationally of locational economics (pollution and ecology) and political acceptability to other EEC members it does look suspect, even allowing for that special Dutch talent of creating their own environment.

Problems of Intensification

The pursuit of high intensity in livestock production in a country with very limited land resources inevitably leads to management and economic problems. Farm size and stocking density the key variables are closely related to the income expectations of the family farm.

The level of profitability in pig production in the Netherlands in recent years has meant that some 2,500 fatteners per year were regarded as representing a living wage unit. With a margin of 20 guilders per pig the unit produced something like 50,000 guilders per year. Information provided by CIBECO indicates that returns on capital in the Netherlands during 1980 were broadly as follows, barley production at 20-25 per cent, laying hens at some 20 per cent, dairy cows at 10-25 per cent, with little had fluctuation in these three enterprises. However pig profitability fluctuated in recent years from 0-20 per cent return on capital and this has kept pressure on pig keepers to expand herd size to retain income levels.

The disposal of farm waste, estimated by the Central Statistics Office, from the expanding pig industry on farms in the Netherlands has been a subject of increasing importance since the early 1970s. The increases in pig production even then in areas like Brabant were leading to high levels of manure production (Table 16) and a possibility of serious land pollution. The government responded to emerging NFU pressures by introducing a subsidy for manure transportation in 1973-74. The subsidy then was 5-6 guilders per tonne for around a 20 kilometer transportation move. A comprehensive schedule of subsidy is available for manure transportation. In 1981 one Guilder per tonne was available for the first 20-30 kilometres, 2 Guilders per tonne for 30-40 kilometres with the scale

continuing up to 7 Guilders per tonne for distances of over 100 kilometres. Currently farmers are transferring pig slurry which cannot be put on immediately available land, distances of 50-200 kilometres and more. Transport subsidies are likely to be a source of continuing discussion. The expenditure on this area of government support and others feature in the annual report of the Fund for Development. A recent report⁽¹⁾ emphasised effluent disposal problems as an "important obstacle to further expansion of the pig industry."

Table 16 Manure Production from Cattle, Pigs and Poultry 1970 to 1978

	m. kg					% Change
	1970	1975	1976	1977	1978	1970 to 1978
Cattle	28,051	32,146	32,277	31,664	32,138	14.6
Calves	964	1,036	1,045	1,092	1,224	27.0
Pigs	8,873	12,200	11,242	12,386	13,474	51.9
Laying hens	731	912	921	959	1,134	55.1
Broilers	334	345	347	342	334	-

Source: Dutch Centraal Bureau Voor de Statistiek (CBS) 1981.

Proposed new legislation related to pollution control has recently been under discussion. The proposals set limits to stocking density eg. a maximum of some 5,000 pigs on individual farm holdings. Dutch pollution law, surprisingly is less organised than for example that for West Germany, but pressures are growing to strengthen control.

Effect on Land Prices

Land in the Netherlands has always been a "scarce" asset and competition in the market generally intense. These factors allied to inflation and a CAP attractive to Dutch farming activities, led in the 70s to excessive price increases which then started to turn down in 1979. Land prices from mid to late seventies were raised to around the 50,000 Guilders (£11,000) per hectare mark, pushed up further in some areas by non-farmers buying agricultural land as an investment.

Declining profitability in farming has made land prices at these levels even less of an attraction for the prospective young farmer. In the 1980s the land market has so far been fairly confused. Apart from unleased farms, for which prices improved slightly in the latter half of 1980 compared with the first six months, the second half of 1980 showed a continuation of the slump in land prices which set in at the end of 1979. The CBS put the average price fall on land values at 10 per cent with unleased land showing the greater decline (Table 17).

(1) Nota Varkenshouderij 1981-1985, Ministry of Agriculture and Fisheries, July 1981.

Table 17 Dutch Farm and Land Prices 1979 and 1980

		Guilders/Hectare			
		2nd Half 1979	1st Half 1980	2nd Half 1980 ¹	% Change 2nd Half 1980:1979
Farms	- leased (a)	30,640	33,000	25,460	-17
	- unleased	59,440	44,820	50,090	-16
Arable Land	- leased	24,740	23,740	22,350	-9
	- unleased	39,270	36,920	34,550	-12
Grassland	- leased	24,210	23,690	22,490	-7
	- unleased	40,270	38,260	35,810	-1

¹Provisional; (a) 1 ha and more

Source: Dutch Centraal Bureau Voor de Statistiek (CBS) 1981

In May 1981 the government promised to introduce early in 1982 the Wet Agrarisch Grondverkeer - a law to restrict land transactions, aimed to keep farmland prices steady and within the financial grasp of farmers. This advance 'notice' of legislation had little immediate steadying effect on the market, although some was predicted.

The Dutch have already had 'their fingers burnt' in another property market namely housing, where prices spiralled upwards to 1978 and have plummeted ever since reaching 1976 values in late 1981. Neither farmers nor politicians want the same thing to happen in the agricultural land market. Expectations (late 1981) were that the market would stabilise at an average 25,000 Guilders (£5,500) per hectare.

7. PIG IMPROVEMENT

The structure of pig improvement took its present shape in 1971 with the foundation of the National Pig Breeding Organisation of Herdbook Societies and Breeding Companies (NPBO). Artificial insemination was introduced in 1958. A selection programme using the 'combination' test⁽¹⁾ started in 1974.

National Pig Breeding Organisation (NPBO)

For many years, pig breeding interests in the Netherlands were looked after by Herdbook Societies, as in the UK. During the fifties and sixties, however, this position had been changing as a result of the development of pig breeding companies who run their own breeding programmes and who in most instances have emerged from the meat processing and/or the animal feed industries. Maintaining an ordered national pig breeding effort was regarded as a necessity and it was judged desirable to continue the already existing boar regulation.

In 1971, in order to advise on legislation in this field and to allow discussion on problems of mutual interest that could arise in pig breeding work, the Dutch set up a consultative body, known as the National Pig Breeding Organisation of Herdbook Societies and Breeding Companies.

(1) See page 30 for description.

Under the Industrial Board⁽¹⁾ for Agriculture the NPBO applies a system of licensing for breeding boars. This does not imply licensing of individual boars since a breeding organisation once 'recognised' is free to decide which boars to use. The rules only consider the presence of a testing system together with registration while breeding methods, objectives and selection intensities are solely up to the breeding organisations. Under NPBO rules, the breeding organisations, at nucleus level, are not allowed to use each other's material. An exception is made for experimental purposes.

Breeding Companies

These breeding groups form part of or often work in association with a feed manufacturer and/or a meat processing company. For example, shareholders in Cofok B.V. are Coveco (The Central Organisation of Cattle Marketing and Meat Processing Co-operatives), Cebeco Handelsraad and Landbouwbelang, both agricultural supply co-operatives.

Herpen Breeding Co-operative is a subsidiary of the agricultural supply co-operative Cehave and of the Central Cattle and Meat Organisation of the NCB, (Noordbrabantse Christelijke Boerenbond, the North-Brabant Christian Farmers' Association). Euribrid forms part of the Hendrix concern, as does Stegeman, a firm manufacturing preserved meats, and the parent company Hendrix, manufacturers of compound feed. Euribrid also makes its product Hypor available to other feed manufacturers and meat processing firms.

Homburg B.V., which manufactures preserved meat, co-operates organisationally with Fomeva, and Hedelse Pig Breeding B.V. co-operates with Koudijs N.V. United Mixed Feed Company and the slaughtering firm of Gevato.

Nieuw-Dalland is a unit of the Unilever Meat Group in Holland, and co-operates with among others the Zwanenberg/Hartog preserved meat manufacturers as well as with the U.T.D. compound feed factory (likewise Unilever).

The breeding corporations, generally operate breeding farms (basic stock breeding farms), sub-breeding farms and rearing farms; however, the two latter types operate as contracted farms. The breeding farms are generally used to produce the grandparents, which are then supplied to the sub-breeding farms for the production of the parents, which in turn are supplied to the rearing farms. In some cases the breeding farm supplies parent animals directly to the rearing farms.

Breeding companies do not sell stock from all levels of the breeding pyramid. The end product is either a crossbred or a hybrid pig, depending on the breeding system used.

(1) see later description, page 67.

Table 18 Recognised Breeding Organisations in the Netherlands and Types of Commercial Crosses.

Organisation	Boar	Sow
CBV	Yorkshire(Y)	Landrace(L) Y x L
Bovar	A x B	Duroc x L
Cofok	Yorkshire	C x D Reciprocal cross of Dutch and Norwegian Landrace
Herpen	A	-
Euribrid	A x B	-
Reuling	A	C x D
Fomeva	Yorkshire	C x D
	Belgium Landrace x Yorkshire	Duroc x Landrace
Seghers	A x B	C x D
	B	C x D
United Pig Breeders ¹		
Nieuw-Dalland	Synthetic	Large White x Landrace C x D

¹UPB crossbred sows are commercially used with Dutch Yorkshire boars.

(Breed names serve as an indication and breeds are replaced by letters A to D if breed identification is not generally used).

Crossbreeding

Crossbreeding has been fully introduced only in the last decade. Compared with 1970 when about 5 per cent of female breeding stock was crossbred in 1981 this had risen to 65 per cent while nearly all fattening pigs were crossbred.

Rotational crossbreeding is not used. Generally crossbred sows produced at one herd serve as replacements for a second herd, while pigs are fattened at a third. Fixed arrangements often exist between producers at different levels of the production pyramid.

The most common type of fattening pig is a cross between a Dutch Yorkshire boar and a Dutch Yorkshire x Landrace sow. This back-cross forms about half of the slaughter pigs produced within the CBV organisation with the remainder mainly Yorkshire x Landrace first crosses (Table 18).

The breeding companies work with either three-way or four-way crosses. At nucleus level, most companies work with lines which essentially are isolated strains within known breeds like Belgian, Norwegian and Dutch Landrace, Yorkshire, Petrain and Duroc. Exceptions are some lines produced by Euribrid and Nieuw-Dalland, which are better described as synthetics.

Trends in Dutch pig breeding include dropping the use of Hampshire the introduction of Duroc in crossbred sows (CBV, FOMEVA and REULING) and a revival of interest in the Belgian breeds. Norwegian Landrace is used to produce crossbred sows (COFOK) and this has resulted in recent importations of Finnish Landrace for use in a crossbreeding programme with CBV pigs.

Artificial Insemination

Artificial insemination in pigs has been utilised since 1958 and has made a major contribution to improving the quality of the pig herds. The rules for the use of artificial insemination are laid down by the Industrial Board for Agriculture.

Since 1974 testing stations (Figure 1) are only permitted to accept litters with an AI boar as a sire. Artificial insemination has had an enormous effect on pig breeding in Holland. The AI societies purchase only the very best of the young boars tested and close co-operation is maintained with the herdbook societies. Concentration has taken place. The number of AI societies fell from 24 in 1964 to 5 in 1974 (Figure 2). A co-ordinating organisation, the Federation of Societies for AI in Pigs was set up in 1972.

The number of farms utilising artificial insemination has risen considerably in recent years and as a result of the increases in scale the number of inseminations performed has also increased sharply. In the season 1975/76 the number of first inseminations exceeded 140,000 and the number of farms utilising artificial insemination was about 11,000. The pregnancy percentage has been fluctuating around 86 per cent in recent years (this is the percentage of non-return after 60 or 90 days). The number of AI boars in 1975 was over 330, almost all of which were pedigree animals.

Pig Testing Stations (used by the Herdbook Societies)

Research at the testing stations has been carried out in Holland since 1930. Originally the litters sent in were housed in groups, but now individual accommodation is used. A total of 2,560 testing pens are available.

Until 1968, progeny testing was concentrated on determining the breeding value of sows and boars. Since that date the emphasis has shifted to the individual performance test and progeny testing of young boars by means of the combination test and the boar performance test. 1974 saw the beginning of a selection programme concentrating almost exclusively on the combination test.

The Combination Test

In the combination test two boars and two gilts are sent in. Litters are only accepted from farms 'affiliated' to the veterinary service, and which have been issued with a certificate of health. The sire of the litter must be a young AI boar whose performance has already been established at the testing station.

Figure 1 Herdbook Societies and their Pig Testing Stations

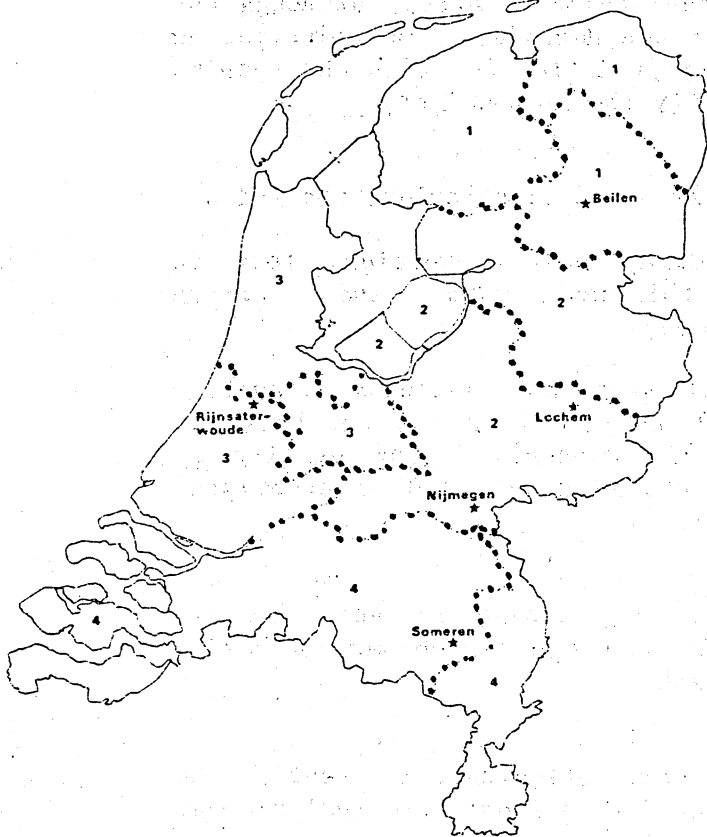


Figure 2 Pig AI Societies

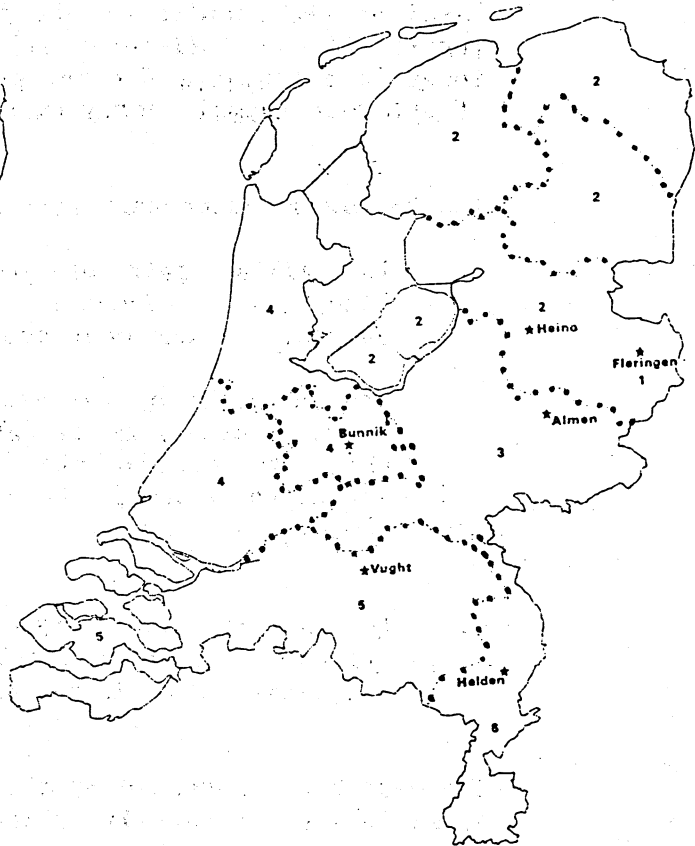


Figure 3 Regional Extension Services for Pig and Poultry Keeping

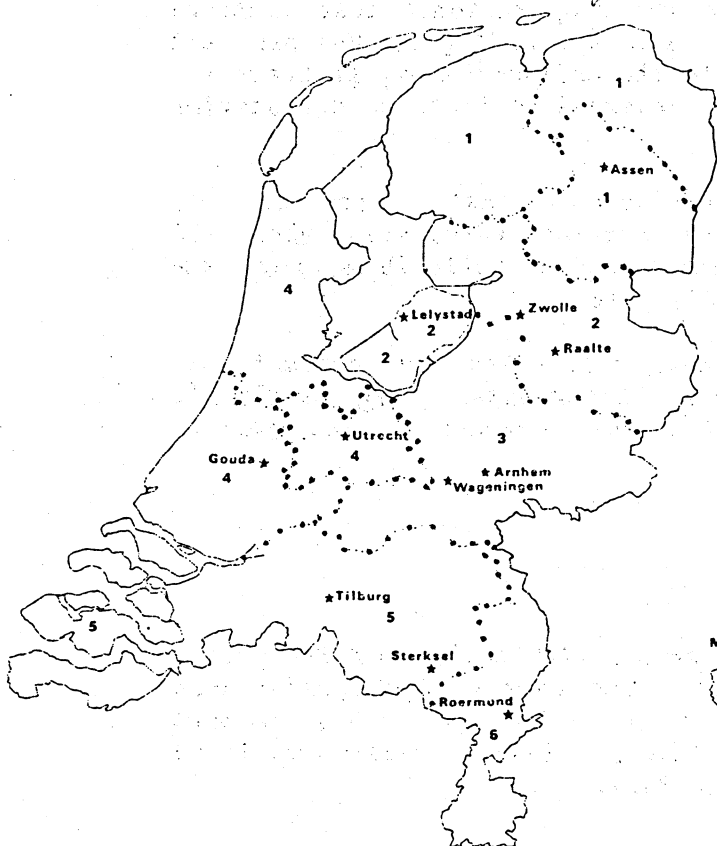


Figure 4 Veterinary Service and Provincial Animal Health Service



Source: Figures 1-4: De Varkenshouderij in Nederland in Getallen, 1979.

At the end of the trial an index is calculated for each pair based on the results of all four animals tested, although the results of the individual boar are decisive. In addition, an index is calculated for the entire litter in which the results of all four animals carry exactly the same weight.

The following characteristics are used to calculate the index.

- a. For gilts: rate of growth, feed conversion, loss on slaughter, back-fat thickness, ham and cutlets percentage, and meat quality.

The thickness of the back fat is calculated as an average of four measurements, (at the shoulder, on the back, in the loin and on the loin muscle). Meat quality is evaluated visually (colour, structure and water-holding capacity).

- b. For boars: growth rate, feed conversion and side fat thickness, ultrasonically measured 5 centimetres beside the median line of the back.

The best boars revealed by the combination test are sent to the AI societies and quickly subjected to a final 'proving' through the first 30 litters by insemination.

The situation with the Herdbook Societies is quite different from the private companies, simply because nucleus pigs are distributed over about 400 herds. The central features in CBV's selection programme are the four regional test stations (Figure 1) and the fact that nucleus breeding is 100 per cent by artificial insemination. In the CBV programme, AI boars are tested at a station, while new generations entering the station are sired by AI.

The approach used is the performance test system to help produce a boar index. The index combines information about the boar itself, a full-sib brother and a full-sib sister, the latter being slaughtered and dissected.

Private and co-operative breeding activities have demonstrated dynamic characteristics in the Netherlands. Pig breeding's future capability appears set to be enhanced by its greater freedom.

Technical Results

The results from the national sample (Table 19), for the period 1970/71 to 1977/78 show useful gains in technical performance with litters/sow/year up from 1.76 to 1.89, weaned pigs/sow/year up from 14.9 to 16.0 and feed conversion ratio on fattening improved from 3.42 to 3.22.

Table 19 Technical Results in Pig Keeping 1970/71 to 1977/78

	National Sample				
	1970/71	1972/73	1974/75	1976/77	1977/78
<u>Breeding</u>					
Live Born Piglets/Litter	10.1	10.1	10.1	10.1	10.0
Litters/Sow/Year	1.76	1.80	1.85	1.86	1.89
Live Born Piglets/Sow/Year	17.7	18.2	18.8	18.8	18.9
Percentage of Dead Piglets	15.6	14.5	15.3	15.7	15.4
Weaned Piglets/Sow/Year	14.9	15.5	15.9	15.8	16.0
<u>Fattening</u>					
Daily Gain (g/day)	586	601	614	622	629
Feed Conversion (kg feed/ kg gain)	3.42	3.39	3.28	3.24	3.22
Daily Intake (kg feed/day)	2.00	2.04	2.02	2.02	2.03
Percentage of Dead Pigs	2.6	1.9	2.2	2.4	2.4

Note: The fattening results are corrected for a starting weight of 22 kg live weight and a finishing weight of 83 kg slaughtered weight.

Source: De Varkenshouderij in Nederland in Getallen, 1979.

Performance Indicators from 'Combined' Tests

'Combined' tests on the Dutch Landrace from 1971 to 1978 in Table 20 give some indication of the levels of breeding stock performance available to commercial producers. Improvements in meat content and reduction in sidefat thickness are the most noticeable features.

Table 20 Results of the 'Combined' Tests on Dutch Landrace at Pig Testing Stations 1971 to 1978

	1971	1973	1975	1977	1978
Number of Groups	208	750	969	961	1,079
Daily Gain - Boars (gr/day)	815	793	799	806	806
Feed Conversion - Boars (energy value ¹ /kg gain)	2.57	2.63	2.59	2.56	2.57
Sidefat Thickness - Boars (mm)	15.8	13.9	12.6	11.9	11.7
Daily Gain Sows (g/day)	772	745	748	753	748
Feed Conversion - Sows (energy value ¹ /kg gain)	2.76	2.88	2.82	2.80	2.83
Backfat Thickness - Sows (mm)	27.4	25.6	24.1	23.7	23.4
% of Cutlets	19.2	19.6	20.1	19.9	19.8
% of Ham	26.3	26.6	26.7	26.7	26.9
Meat Quality ² /points	6.0	6.3	6.0	6.5	6.6

¹Energy value: 2,100 Kcal. net energy per kg feed (= 8,790 Joule/g feed).

²Subjective judgement of meat quality: 4 = bad, 8 = good.

Source: De Varkenshouderij in Nederland in Getallen, 1979.

For the same characteristics in the Dutch Yorkshire White (Table 21) the gains are even more significant.

Table 21 Results of the 'Combined' Tests on Dutch Yorkshire Large Whites at Pig Testing Stations 1971 to 1978

	1971	1973	1975	1977	1978
Number of Groups	114	761	819	1,107	1,270
Daily Gain - Boars (gr/day)	817	820	826	832	828
Feed Conversion - Boars (energy value ¹ /kg gain)	2.55	2.56	2.50	2.45	2.48
Sidefat Thickness - Boars (mm)	15.3	13.0	11.8	10.9	10.5
Daily Gain Sows (g/day)	783	777	782	791	779
Feed Conversion - Sows (energy value ¹ /kg gain)	2.71	2.73	2.70	2.63	2.68
Backfat Thickness - Sows (mm)	27.7	25.3	23.5	22.6	22.0
% of Cutlets	18.5	19.0	19.7	19.5	19.6
% of Ham	25.6	26.3	26.6	26.6	27.0
Meat Quality ² /points	7.0	7.1	7.2	7.4	7.5

¹Energy value: 2,100 Kcal. net energy per kg feed (= 8,790 Joule/g feed).

²Subjective judgement of meat quality: 4 = bad, 8 = good.

Source: De Varkenshouderij in Nederland in Getallen, 1979.

8. ADVISORY SERVICES

There are three basic approaches to advisory services in the Netherlands:-

1. The National Advisory Service
2. Co-operatives Services
3. Private Company Services

National Advisory Service

The strategy of advisory work revolves on three specific aims - briefly outlined as:-

- 1) Promoting within the scope of agricultural policy, the provision of technically, economically and socially sound assistance to farmers.
- 2) Helping farmers to understand how general social changes will affect them.
- 3) Contributing to the policy-making of the authorities.

It operates on a countrywide scale with a comprehensive range of services all coming under the direction of the Ministry of Agriculture in the Hague. The service has a staff of around 1,200 with some 160 academically trained advisory officers heading the 11 provincial directorates, the 38 regional advisory offices and the 22 specialised advisory offices at national level.

About half the field personnel are local farm advisers, specialising in the type of farm that predominates in the area where they work (roughly one adviser for every 300 farms). The other half are specialised in subject areas - farm management, mechanisation, farm buildings, animal health and feeding etc. The Dutch view is that it is necessary to have the two types of advisers since it is impossible for the local farm adviser to have complete and up-to-date knowledge of all different subjects.

When the local adviser meets problems requiring detailed advice he can call upon the relevant specialised adviser who in turn is backed by a specialist advisory office at national level. The national 'specialists' have regular contact with the experimental stations which form a link between the advisory service and the Applied Agricultural Research Network.

Of the 38 regional advisory centres 4 give advice on arable farming, 10 on cattle husbandry, 10 on horticulture, and 6 on pig and poultry keeping, while the remaining 8 advise on both arable farming and animal husbandry (Figure 3).

The highly specialised nature of the Dutch Advisory Service requires co-ordination between the various disciplines. This is provided by the farm management advisory officers at local level, by the Heads of the advisory centres at regional level, by the provincial directors and overall by the Director-General of Agriculture and Food.

The government consults at various levels with farmers' representatives concerning the advisory service. The consultative body at national level is the National Council for Farm Development. Initiatives from the farmers themselves have in the past led to the establishment of numerous trade organisations, associations involved in information work, study clubs, working groups etc. with the advisory service working in close co-operation.

The Netherlands has no special institutions providing training for advisers. Special training courses are provided for the specialised advisers. Regular in-service training is given through monthly meetings at national level and fortnightly meetings at regional level.

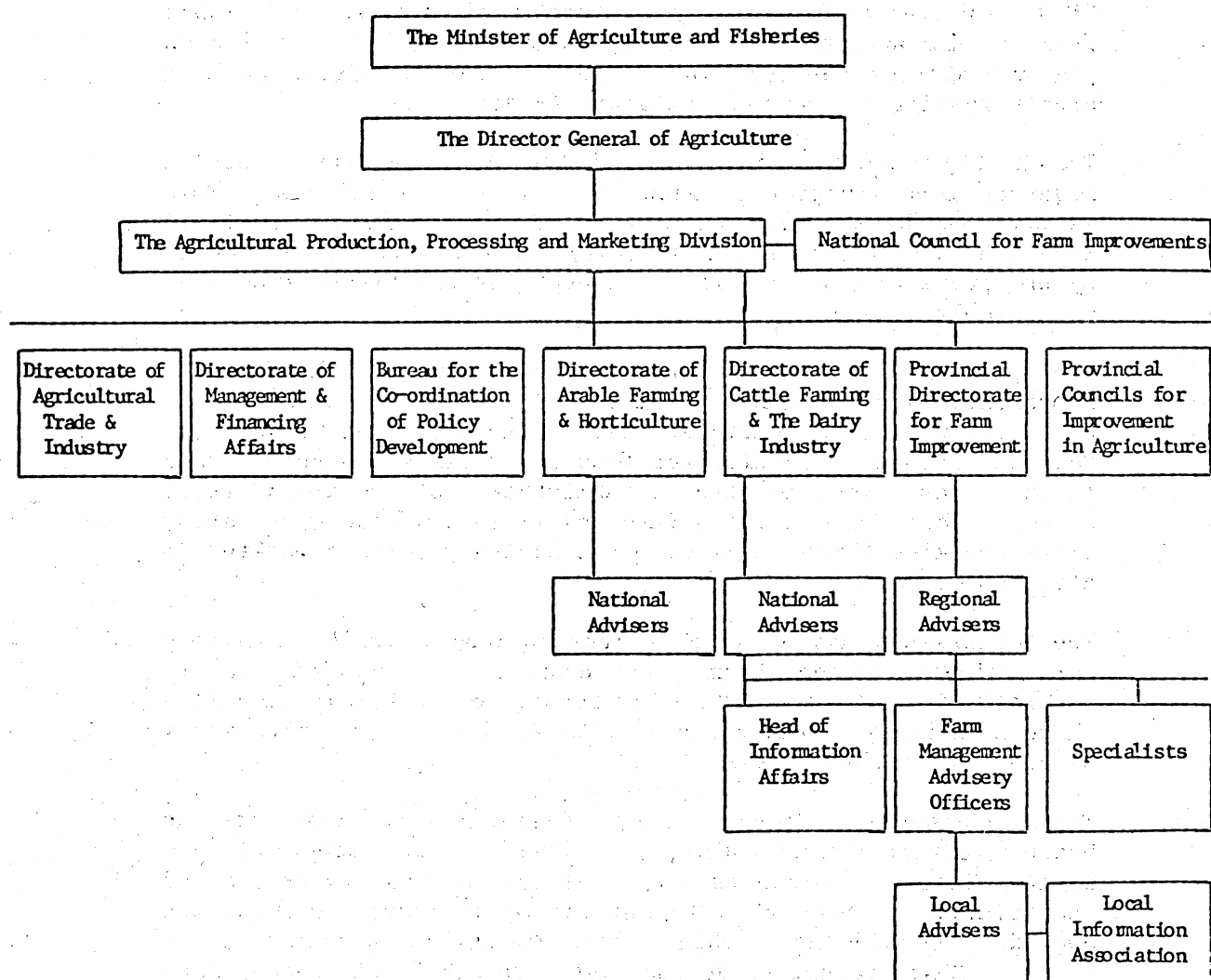
The organisation (Figure 5) and functional features of the Dutch service have much in common with Scottish and English/Welsh arrangements. Agricultural advisory work started essentially in 1875 when Wageningen agricultural college was opened. Considerable change has inevitably occurred since then. Most recently during 1963 to 1969 the Government Agricultural Advisory Service was re-organised to meet the new requirements for advice, and was re-named the Farm Development Service.

In addition, to fulfil the need for more information on the relations between social developments, agriculture and the family farm, new advisory services were set up by the Agricultural Organisations (NFU's etc.) These services were integrated into the socio-economic advisory service in 1970.

As part of the process of re-organising the Farm Development Service, more experts in advisory methods and instructional matters have been recruited in recent years.

The organisation of the technical services has been outlined earlier. The socio-economic information and advice is provided by the agricultural organisations who employ about 240 advisers (40 of them part-time) for which they receive a Government subsidy of about 90 per cent to cover costs. Apart from a small number with positions at national level, the advisers work within the areas covered by the regional or provincial agricultural organisations.

Figure 5 Organisation Chart of the Government Agricultural Advisory Service 1973



Source: The Agricultural Advisory Service in the Netherlands, 1973.

Although the Dutch advisory service is highly specialised its inter-disciplinary co-ordination, organised at local, provincial and national level is facilitated by the relatively small size of the country. The Veterinary Service and the Provincial Animal Health Service operates from key centres around the country (Figure 4).

Co-operative and Private Services

The co-operative service structure depends on the region, farming type and level of co-operative activity and is more modest in scope.

The private advisory services are mainly those operated by U.T.D. and Hendriks. They tend to be much more commercial and sales oriented to company products.

9. RESEARCH AND DEVELOPMENT

Research in the field of pig production is carried out by:-

- The 'Schoonoord' Institute for Animal Husbandry at Zeist, - research into breeding, reproduction, climate, behaviour, slaughter quality, cross breeding and meat quality.
- The 'Hoorn' Institute for Animal Feeding Research, at Hoorn, - research into digestion, raw materials and additives.
- Institute of Agricultural Engineering, at Wageningen, - work includes research in housing, climate, labour, and problems connected with manure surpluses and odours (environmental research).
- The Agricultural Economics Research Institute, at The Hague, - economic studies in the field of pig production.
- The Central Veterinary Institute, at Rotterdam, - research in the field of pig diseases.
- The Veterinary Department in the University of Utrecht, - research into reproduction, hereditary defects and artificial insemination.
- The Livestock Department in the Agricultural University at Wageningen - work includes research into reproduction, blood groups, housing, climate and meat production.
- The Institute of Agricultural Research into Biochemical Products, - research into nutrition, additives, new feedstuffs, and the environment.
- The experimental pig farms 'Zuid-en West Nederland' and 'Noord-en Oost-Nederland' at Sterksel and Raalte, - research into housing, nutrition and farm management.

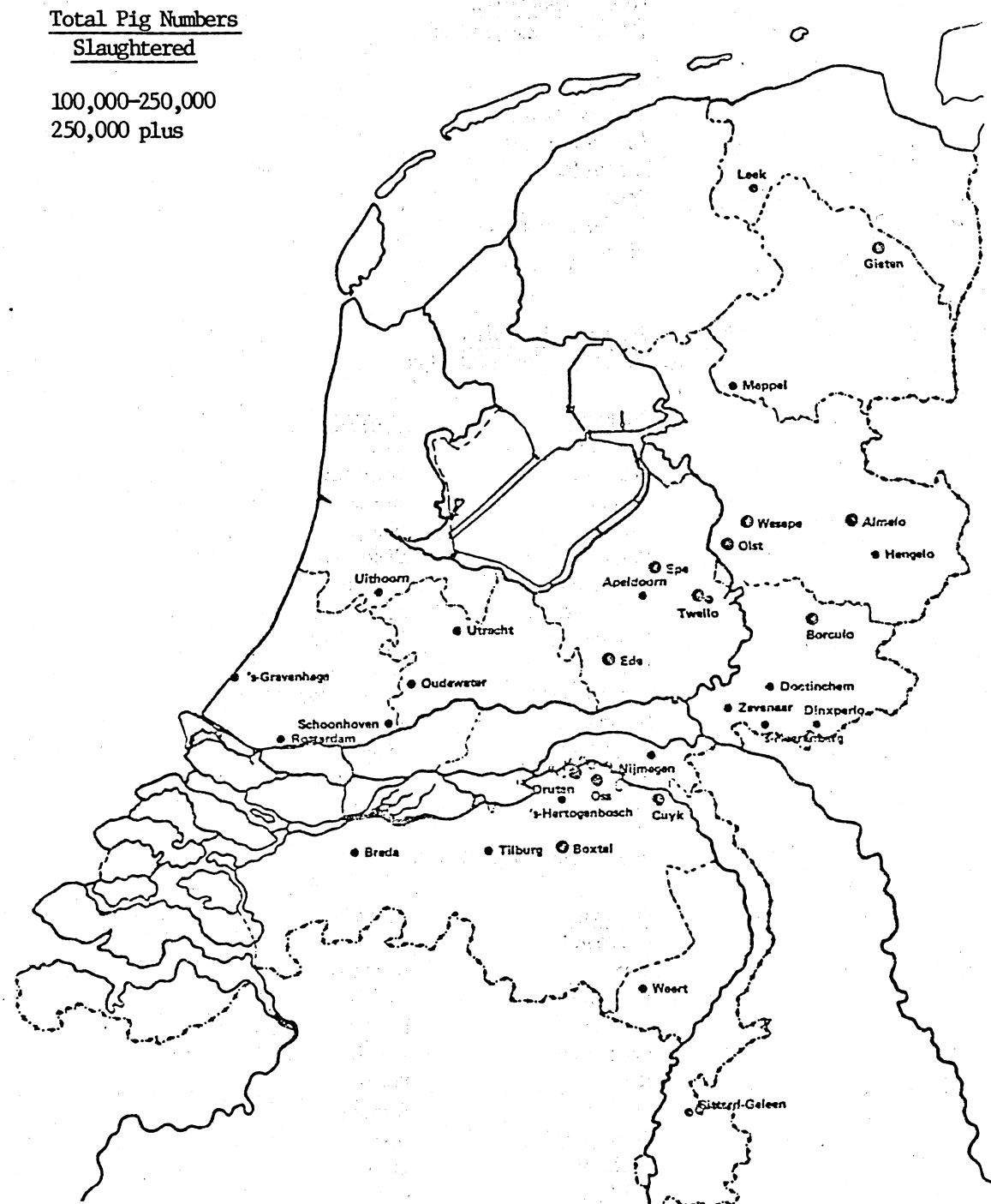
- The Regional Colleges for animal husbandry at Barneveld, Almelo and Horst. These institutions are largely educational although to a limited extent they also carry out comparative research in the field of pig keeping.
- The work of the Provincial Animal Health Services, includes the development of recorded data to establish factors which affect the animals' state of health. Mention should also be made of the breeding institutions (breeding research), the compound feed industry (tests on trial farms and laboratory research), experimental farms of the farmers' organisations.

B. SLAUGHTERING AND PROCESSING

1. LOCATION AND STRUCTURE

Abattoir and processing plant location follows pig herd location in being concentrated mainly in the central and southern provinces eg. Noord Brabant and Limburg, (Figure 6).

Figure 6 Location of Abattoirs Slaughtering more than 100,000 Pigs in 1977¹



¹Most recent mapped data available.

Source: Consultenshap Van Varkens en Pluimveehouderij, Arnhem, 1980.

Information on company, location and scale is combined in Table 22. The Dutch pig producers' co-operative COVECO has two large plants slaughtering more than 250,000 pigs per year at Borculo and Twello and a medium size plant (100,000-250,000 slaughterings) at Weert. Unilever has a main location at Oss while Homburg operates at Cuyk with a medium scale plant at Twello.

Table 22 Abattoirs Slaughtering More than 100,000 Pigs per Annum 1977

1. Public Abattoirs

100,000 - 250,000 pigs

Utrecht
Sittard-Geleen
's-Gravenhage
Rotterdam
Breda
's-Hertogenbosch
Tilburg

2. Private Abattoirs

A. 100,000 - 250,000 pigs

<u>Company</u>	<u>Location</u>
v.d. Bend	Leek
Compaxo	Zevenaar
Coveco	Weert
Dinex	Dinxperlo
UVAS	Uithoorn
Homburg	Twello
B.J. Jansen	Apeldoorn
Lunenburg	Oudewater
Drost	Schoonhoven
Hendriksen	's-Heerenberg
Murris	Meppel
Stachhuis	Nijmegen
Sturko	Doetinchem
TSC	Hengelo

B. More than 250,000 pigs

<u>Company</u>	<u>Location</u>
Unilever	Oss
Coveco	Borculo
Coveco	Twello
Jansen	Wesepe
Drostimex	Almelo
NCB	Boxtel
Hendrix	Druten
Gosschalk	Epe
Homburg	Cuyk
Salland	Olst
Stroomberg	Ede
Udena	Gieten

Modern transport permits market supply from fewer and larger slaughterhouses. In addition private slaughterhouses, generally large, have been established for supplying the meat processing industry.

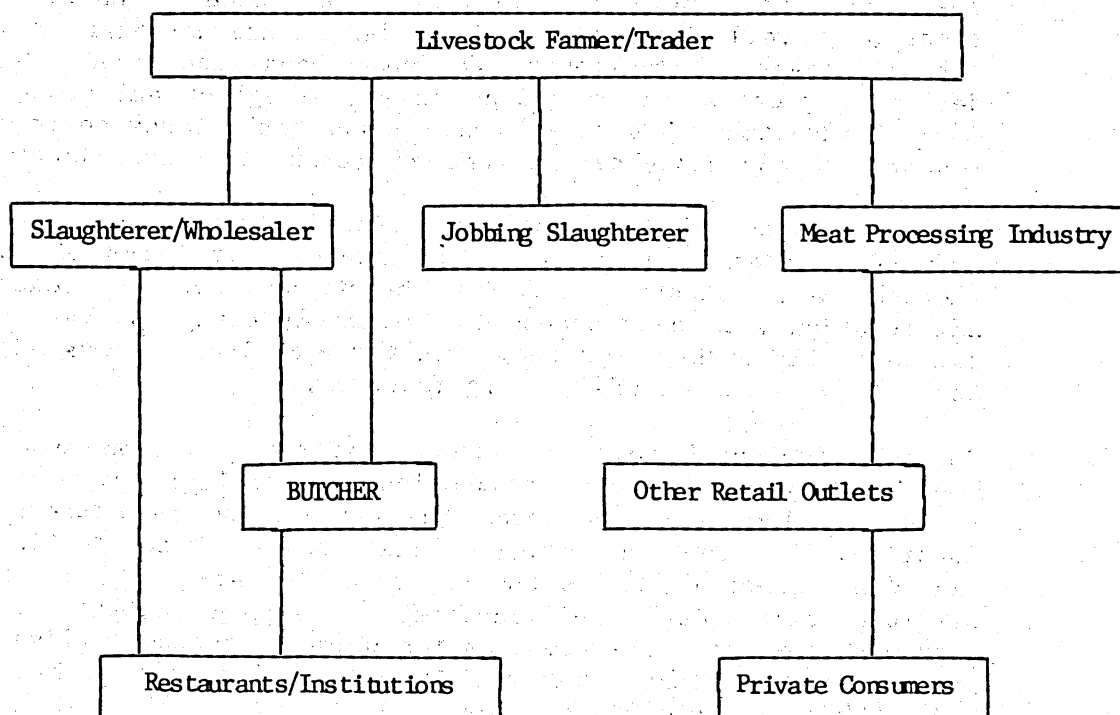
Dutch butchers obtain their meat in one or more of the following three ways (see Figure 7):

- Buy live animals and have them slaughtered by their own staff or in the public slaughterhouse.
- Buy live animals and have them slaughtered by a jobbing slaughterer in the public slaughterhouse.
- Buy halves or quarter animals or else boned meat from a slaughterer/wholesaler, who may be working in the public slaughterhouse or on his own premises.

In addition the butcher buys processed meat and meat products as required from manufacturers. Manufacturers, without slaughter facilities, will buy from a range of suppliers.

Public slaughterhouses have been declining in significance during the 1970s. In pig slaughtering, the trend was more marked than in cattle slaughtering. Those in public premises declined both absolutely and relatively from 34 per cent of total in 1972 to 25.1 per cent in 1976, while private slaughterhouses raised their share from 63 to 72.4 per cent.

Figure 7 Meat Sales Channels¹ in the Netherlands



¹Simplified.

In the 1979 to 1981 period profitability in slaughtering and processing had declined. In 1981 COVECO was 'declared' bankrupt and some companies eg. Unilever, Homburg closed facilities and reduced manning. The industry was generally depressed but many of its problems had been home-made.

2. OWNERSHIP AND FINANCING

The pigmeat slaughter and process sector is predominantly in private hands with co-operatives much less significant compared with the Danish industry. Large companies are involved and perhaps surprisingly some with substantial UK financial backing eg. Unilever, Homburg.

The level of co-operative activity in pig slaughter is not insignificant Table 23 but it is a good deal less than in Denmark. In this sector 'co-op share' over the period, early sixties to late seventies, has demonstrated only modest growth, rising from 23 to 27 per cent of total. Table 23 also gives for comparison, co-op shares in banking and feed supply, closely related activities.

COVECO the pig sector's main co-operative is financed by producers who stand as joint guarantors with the Rabobank. In mid 1981 the co-op ran into serious financial difficulties after a period of unsatisfactory trading. Crisis meetings failed to produce the expected constitutional solution involving the producer guarantors and the Rabobank was virtually forced to cover all the losses involved.

The substantial private sector in the Dutch industry, in theory, is well financed but even large international groups like Unilever Ltd/Unilever NV have been concerned about declining profits and/or losses in pig slaughter and process. Some disinvestment has taken place in the Netherlands sometimes requiring close consultation with government over redundancies.

The operations of international meat concerns in the EEC industry are of more than passing interest, in terms of both tactics and strategy. The benefits from a central EEC location with easy access to relatively cheap raw material are generally highly regarded. However high labour costs and a weak currency can be off-setting features.

Dutch agricultural policy, conducted within the framework of the CAP, encouraging meat production, particularly pigmeat at relatively low cost, has made the Netherlands an attractive location. When a company has several international plant/investment locations the opportunities are increased for flexible responses to difficulties in supply, labour cost, currency, tax etc. The problems for primary producers aligning themselves too closely without adequate safeguards with such organisations should be apparent.

Table 23 Activities of Selected Agricultural Co-operatives 1963 to 1978

<u>Sector</u>	<u>Activity</u>	<u>1963</u>	<u>1971</u>	<u>% Share</u>		<u>1977</u>	<u>1978</u>
				<u>1975</u>	<u>1976</u>		
Co-operative Bank	Savings and trust facilities for agriculture/horticulture	40	42	41	42	42	42
	Creditbank	-	-	90	90	90	90
Supply	Cattle feed	45	51	52	52	52	53
	Fertiliser	61	63	61	61	61	60
Livestock Slaughter	Pigs	23	29	26	26	26	27
	Cattle	18	18	17	18	18	18

Source: National Co-operative Board.

3. CONTRACT SELLING

Development in contract production and integration have tended to go hand in hand in the Netherlands. The growth of the pig herd and increasing specialisation has led to greater capital requirements and consequently also to a greater need to spread the risks. Contract production and integration have undergone a vigorous development as a result. The pig farmer wishes to reduce his price risk and to be assured that his products will find a customer while the feed industry wants an assured market for its feed, and the meat processing industry wants an assured supply of good-quality slaughter pigs.

In a number of cases, the financing of buildings and/or livestock forms one of the reasons to enter into a contract. The following forms of contract can be identified:

- earnings contracts, with or without participation in the profit;
- supply/offtake contracts;
- guaranteed minimum price contracts;
- guaranteed minimum return contracts;
- finance contracts;
- integration contracts.

In addition, there are also forms of co-operation between pig farmers, in which the supply and offtake of fattening piglets or breeding stock is arranged; these are often verbal contracts, and pricing is carried out on the basis of a price schedule. Combinations of the above-mentioned forms of contract frequently occur.

Contract production is more widespread in pig fattening than in pig breeding. It is estimated that approximately half of all slaughter pigs are produced under some form of contract.

Contract production in the weaner sector will probably increase as a result of further implementation of the full vertical integration of breeding, weaner production, slaughter pig production, cattle feed supply, slaughterhouses and the trade. Contract production in the weaner sector will probably increase as a result of further implementation of the full vertical integration of breeding, weaner production, slaughter pig production, cattle feed supply, slaughterhouses and the trade.

In 1975 the Industrial Board for Agriculture issued the General Contract Terms for Slaughter Pigs, which form a model for legally sound agreements. They do not, however, cover the financial and economic aspects of such a contract.

Classification and Payment According to Grade

The system of classification of slaughtered pigs into various slaughter grades and payment according to the grade supplied was introduced in Holland in 1933. At first, only baconers fell under this scheme, but it was later extended to heavier pigs of up to 100 kg slaughter weight.

Interest in classification and payment according to quality has increased very considerably over the past 20 years. In 1951 only 23 per cent of all pigs slaughtered were graded, but by 1975 this figure had risen to almost 90 per cent.. Until 1975, classification and payment was made on a voluntary basis. The slaughterhouses were able to conclude an annual contract with the Commodity Board for Cattle and Meat, undertaking to have the pigs classified. Under the contract, they were also obliged to pay the suppliers the full price for the slaughtered pigs according to their grade, while at least 70 per cent based on grade had to be paid out to the fatterer.

The price differences between the various grades were established for one year or longer by the Commodity Board in consultation with the industry. In 1975 the grading scheme became statutory for slaughterhouses handling more than 10,000 pigs annually. Payment according to grade was not fixed and nor were the price differences between the grades. However, if so requested, the slaughterhouse is obliged to inform the fatterer as to the grades of the pigs supplied by him, and to notify the Commodity Board of the price fetched by the pigs. Besides statutory grading, it is also possible for the slaughterhouses to conclude a voluntary contract with the Commodity Board, undertaking to pay the fatterer the full price according to grade, subject to fixed agreed price differences between the grades.

Classification is carried out by about 110 dependent graders, who are employed by the Ministry of Agriculture and Fishery. These graders first have to follow a special training course lasting about a year. The scheme is supervised by two inspectors, who ensure that it is uniformly implemented at the various slaughterhouses.

The costs of grading are covered by charging a fee of 0.5 Guilders each pig slaughtered, which is paid to the Commodity Board.

Until 1972 grading was carried out according to the Dutch system. This was based on measurement of the back fat at 4 places; at the shoulder, the back, the loin and loin muscle, as well as on a subjective evaluation of the animal's muscular development.

Since January 1972, grading has been carried out according to the EEC classification schedule for slaughtered pigs. This community classification system is based upon the following aims:

- The use of uniform quality concepts.
- Clarification of the market, in order to promote trade.
- Improving the comparability of the prices fetched within the member states for pigs of comparable quality. This is of major importance for the market and price quality of the EEC, for example for establishing refunds and import levies, and for decisions to take intervention measures, for example the acquisition of whole or half carcasses by national intervention offices and granting of subsidies or private storage of whole or half carcasses and/or parts.

The EEC classification regulation is implemented in the Netherlands as follows. Back fat thickness is measured at two places on the median; on the back above the last rib and on the loin muscle. The higher of these two measurements is decisive.

Four weight ranges are distinguished: 60-69 kg, 70-79 kg, 80-89 kg and 90-99 kg (cold slaughter weight).

Back fat standards have been laid down for each of the weight ranges (heavier pigs can have thicker back fat than light pigs). Four back fat classes are identified; E (extrathin), I, II and III.

The muscular development of the animal is evaluated subjectively, and here again four grades are distinguished; AA, A, B and C. The AA grade only applies to back fat grade E and vice versa. Combination of the back fat grade and the muscular development grade yields the quality grade. In addition, five commercial grades are distinguished:

- Commercial grade E, comprising quality grade EAA
- Commercial grade I, comprising quality grade IA
- Commercial grade II, comprising quality grade IIA and IB
- Commercial grade III, comprising quality grade IIIA, IIB and IC
- Commercial grade IV, comprising the rest (ie. quality grade IV)

In 1975 the following price differences inter alia existed between the commercial grades:

- Between E and I : 5 cent/kg
- Between I and II : 15 cent/kg
- Between II and III : 10 cent/kg
- Between III and IV : 5 cent/kg

This represents a price difference of 35 cent/kg between grades E and IV. In 1975 the following classification results were attained:

Commercial grade E: 7.4 per cent, I: 55.2 per cent: II 28.6 per cent, III: 6.4 per cent and IV: 2.4 per cent.

From 1970/71 to 1979/80 grading as EAA + 1A rose from 60 to 66 per cent.

4. PORK FUTURES MARKET

The futures market in the Netherlands was set up in 1977. As UK interest in "futures" is currently being actively discussed Dutch experience and organisation is outlined here in some detail. The original idea for the market came from Professor Bocken Hof who put the suggestion forward to the Amsterdam Foundation. The market operates in the exchange building in Amsterdam. Both the pork futures market and the potato futures market are housed in the same callroom in the exchange. The futures or terminal market is organised under a set of rules by the Stichting Vee-En Vleestermijnmarkt (the Stichting) with main offices in Rotterdam. The NV Netherlands Liquidatiekas known as the Kas or exchange in Amsterdam registers the contracts concluded on the pork terminal market in accordance with its relevant rules and guarantees the due completion of the contracts. The rules of the foundation (the Stichting) and the exchange (the KAS) supplement each other and together they form a complete set. The terminal market exists side by side with the physicals market consequently it does not interfere with customary trade channels. The difference between the two markets is that transactions in the physicals market are exclusively aimed at the actual delivery or receipt of goods on agreed dates, whereas on the terminal market contracts are mainly concluded as a hedge against price risk.

Contract details are as follows:

- a) quantity - a contract comprises 100,000 kilos net weight of cold slaughtered pigs - a maximum deviation of 1 per cent over or under the net cold slaughter contract weight is permitted. The pigs must be delivered in two carcass sides.
- b) price basis - prices are quoted on the basis of f.o.b. receivers vehicle at the site of a Dutch slaughterhouse admitted by the foundation.
- c) quality - 1. The quality of the pigs must be class 1A.
 2. Pigs of the quality class EAA may be delivered without price surcharge.
 3. A maximum of 34 pigs may be of a lesser quality than class 1A provided that not more than 6 of them are a lesser quality than class 2A/1B. For these pigs no price reduction is allowed.

- d) Weight apiece - the slaughter pigs must not be lighter than 65 kilos or heavier than 90 kilos individually.
- e) The lot - the lot of slaughtered pigs must consist of whole slaughter pigs each divided into two sides with heads, legs, heart and kidneys but without tongues and claws.

Quotations are made for all months of the calendar year. At the end of each delivery month a new month is included in the quotation which maintains the 12 months in advance at most. A qualified market superintendent (known as the Chairman) supervises the market. Trading in the terminal market can take place only through the intermediary of the middle men (brokers) admitted by the exchange. They are not permitted to conclude futures contracts for their own account. Transactions may be effected only during market hours. Trading takes place on all working days except Thursday in the dealing room of the Amsterdam Commodity Exchange. It also operates on Thursdays on the upper floor of the cattle market in Utrecht. The market hours are established and announced by the exchange in agreement with the foundation. Price quotations are per kilo in Guilders and Cents exclusive of VAT at 4 per cent.

Settlement/liquidation of contracts is conducted by set-off or by delivery/receipt.

- a) Set-off - a contract of purchase may be set-off against a contract of sale of the same contracting party for the same delivery month or the other way round. The difference in price between the two contracts is settled at the end of the delivery month in question.
- b) delivery/receipt - if desired a seller may effect settlement of his contract by making delivery in the delivery month. Delivery may be made only on the days designated by the receiver on the site of the Dutch slaughterhouse admitted by the foundation where the pigs have been slaughtered. For the terms of delivery reference is made specifically to the rules of the pork terminal market of the foundation. The main outlines of the delivery procedure can be obtained from the foundation and from the exchange.

Any contract not yet settled is referred to as an open contract. For each contract not settled or not applied in setting off against another a cash deposit must be promptly paid to the exchange. For the present this deposit has been fixed at 1,500 Guilders. On each market day a settlement price is fixed, per delivery month, to establish the difference between the price in force on that day and those of the outstanding contracts. For any adverse differences additional margins must promptly be deposited with the exchange by the contracting parties concerned.

In principle no party is barred from taking part in trading on this market. The participants can be divided into two main groups:

- The group of producers and dealers who wish to avoid the risk of an adverse price trend and
- The group of persons who deliberately accept the possibility of a price fluctuation in the hope of gaining a profit.

Anyone who in the ordinary course of his business is associated with the livestock and meat industries may at his request be admitted as an associate member of the foundation. The entry fee payable only once is 25 Guilders. In addition an annual contribution is payable.

For each contract of purchase or sale that is concluded the buyer and the seller pay to the KAS a commission in favour of the exchange and a commission in favour of the middle man (broker). For the associate members this commission is 25 Guilders and 50 Guilders respectively per contract. For all other participants, the commission is 25 Guilders and 65 Guilders per contract respectively. Where settlement is made by delivery the same amounts are payable and in addition an extra charge of 10 Guilders in favour of the exchange.

Developments

The development of the market is interesting. It started in 1977 and in the three years 1977 to 1979 the annual number of contracts was roughly 5,000. This level fell to 3,000 in 1980. The Amsterdam potato futures market has been running around 40,000 contracts a year. Physical delivery level has been a feature of the market with 300 contracts delivered physical in 1977, 400 in 1978, 600 in 1979 and down to 200 in 1980. The market is a carcass market based on specified quality and weight. The progress of the market, viewed in Amsterdam, has been somewhat less than satisfactory. The reasons given for the disappointment and the lack of growth in the market are firstly that slaughterers who have been main users have an insufficient knowledge of the futures market and naive appreciation of how it operates. Secondly, the pig meat trade has suffered low profitability and this has helped give the exchange poor publicity. Only two brokers have become established in the pig futures market and this is an insufficient number. There were too many hedges at the beginning and too much speculation. The potato futures market got off to a better start and there are now 6 brokers operating.

The number of customers operating in the pork terminal in the four year period were approximately 100 from the Netherlands, 1 from the UK and 1 from Germany. Most of the users are m traders who are both hedgers and speculators. Farmers have shown little interest in the exchange believing their money would be better employed in straightforward daily dealing than lying with the futures market. The meat industry and the trade generally were well circulated and visited by the broker from the exchange in the initial period. Much interest was shown then but very little interest has materialised in actual contract business. The carcass market has caused difficulties,

a particularly troublesome period occurred in 1979 where up to 6 contracts were delivered physical. The capacity to make physical deliveries of carcasses presents problems to the meat traders who say too often that they are unable to deliver the contracts tonnage and quality demanded. This seems somewhat surprising. However as a result of the difficulties the decision was made to stop the carcasses terminal in November 1981. At the same time there is to be a new start made with a live pig futures market, a tougher action on the problem

This futures market was originally planned to be an European terminal market but this has not been realised and the change to a live pig market will make the problems, more rather than less difficult. Dutch animal law at present would prevent the regular physical transport of live pigs to other countries so it will in all probability for the near future, stay as a Dutch market only. The live pig futures starting in November 1980 from then until May 1981 attracted between 500 and 600 contracts. It is difficult to see the futures market in live pigs extending beyond Dutch boundaries. The main problem here is that the futures market depends on the reliability of flow of physical commodities onto the market, not upset by such problems as disease outbreak and closed national frontiers. A straightforward physical livestock market operating internationally has quite enough difficulties with border closures and such events makes it impossible to operate a satisfactory futures market in the long term. The live market operates over a 9-10 month forward trading period based on the technical features that pig conception to pig slaughter occupies roughly that period of time. Prices are quoted without VAT Tax at 4 per cent. A good deal of forward market planning activity both for the farmers and for meat traders takes place on a Saturday from 12 am when 80 per cent of business is planned for the Dutch meat exported to England which was the next week for consumption in some cases, led to the introduction in 1907 of a futures market situated in Continental Europe whether in Amsterdam, Brussels or Frankfurt could have the benefit of a broader price effects. For example, German prices can effect those in Denmark, and the Benelux countries generally. The location of the market in Amsterdam has been questioned because of the strong correlation between the cereal and feed futures market and the pig futures market. The suggestion is made that the two should be located very close together. Interest has been shown in the Frankfurt/Hanover area of the Ruhr in West Germany which has a large consumer market and is close to a large production sector for pigs in West Germany. The possibility of a UK futures market was questioned, the view being held that the bacon market in the UK dominates prices and would adversely effect a futures market. Overall the Dutch pig futures market has yet to make any significant impact on the market. However, the potential still exists for it to do so sometime in the future.

The statistics confirm the enormous growth in production volume for pork from 1970 to 1980. This magnitude of expansion almost within the terms of health and export regulations individual organisations pursue their own private trade channels without the intervention of a central organisation as in Denmark. A very substantial export trade in live pigs and fresh pigmeat takes place with the continental neighbours, particularly West

Germany with the 'normal' requirements for healthy pigs and clean carcasses operating. The main emphasis is on good muscle and ham development. Since much of this pigmeat goes into manufacture there is less concern over fat content.

The recurring difficulties with swine fever on the continent have regularly troubled the Dutch who would like to see much tougher action on the problem, supported by the EEC.

Cured pigmeat export, as yet, is still a relatively small trade. The Wiltshire side and cure is basically little recognised. If the export trade to the UK develops the emphasis will be on lean meat, eye muscle and reduced fat cover.

The export pigmeat trade is essentially based on allocating the carcass for example sending middles to the UK, hams to Italy and France and fores into the general EEC trade often for manufacturing.

Quality Control(1)

The Agricultural Quality Act (Landbouwkwaliteitswet) combines a number of previous Acts which regulated the quality of such agricultural products as dairy produce, fruit, vegetables and meat. The Act enables the Queen-in-Council and in some cases the Minister of Agriculture to issue Orders concerning quality. One of the most recent was the Order on bacon quality introduced on 27 February 1978.

At the beginning of this century concern about the quality of Dutch meat exported to England which was declared unfit for consumption in some cases, led to the introduction in 1907 of preventive inspection of all meat with export destinations. It lasted until 1919 when the current legislation based on municipal autonomy providing for general meat inspection was enacted. Today the relevant regulatory body is the Dutch Bacon Quality Control Board. However consumer legislation in the importing country eg. the UK, seems likely to be also important in quality control.

6. SUPPLIES TO SLAUGHTERHOUSES

From 1970 to 1978 the percentage of slaughtered pigs being classified increased from 78 to 91 per cent (Table 24). Over the same period the total numbers slaughtered and classified rose 47.5 per cent and 72.2 per cent respectively. The average slaughter weight has been around 83 kg.

The statistics confirm the enormous growth in production volume for pork from 1970 to 1980 compared with other main livestock product sectors. This magnitude of expansion almost inevitably creates problems both for the Dutch and the rest of the market.

(1) Source: Consumer Legislation in the Netherlands, E H Hondius 1980, A Study Prepared for the EC Commission.

Table 24 Number of Pigs Slaughtered and Classified in the Netherlands 1960 to 1978

	Slaughtered	Classified	%
	'000		
1960	5,116	3,187	62
1970	8,468	6,595	78
1971	9,658	7,803	81
1972	9,575	7,843	82
1973	9,695	7,982	82
1974	10,517	8,653	83
1975	10,624	9,491	89
1976	10,946	9,796	89
1977	11,395	10,363	91
1978	12,494	11,358	91
% Change 1970 to 1978	47.5	72.2	

7. LABOUR COSTS

Data from the CBS Sociale Maandstatistiek, 1980 show that from 1970 to 1978 working hours for male adult workers in manufacturing industry fell 7.6 per cent from 44.5 to 41.1 hours per week and earned wages for these workers rose 127.5 per cent from 247 to 562 Guilders per week.

Similar data for workers in agriculture/horticulture show that in the same period working hours for male adult workers fell 14.2 per cent from 48.7 to 41.8 hours per week and earned wages for this group rose from 219 to 494 Guilders per week, up 125.6 per cent.

The hourly wage rate for workers in manufacturing rose 146 per cent from 5.55 Guilders in 1970 to 13.66 Guilders in 1978. During the same period the hourly rate for agriculture/horticulture workers rose 162.6 per cent from 4.49 to 11.79 Guilders.

In the early 1980s labour manning levels and cost in the pigmeat manufacturing sector became an area of very active concern. Labour costs and a marked fall in profitability led to job losses.

Table 24
Number of Pigs Slaughtered and Classified in the Netherlands 1960 to 1978
C. DISTRIBUTION AND MARKETING

1. **FOREIGN TRADE**

General

The strategic position of the Netherlands at the heart of the EEC is highly conducive to a flourishing foreign agricultural trade. The free EEC market is of enormous importance to the Dutch because about 75 per cent of all their agricultural exports are sold there, with West Germany by far the main consumer of the Ten.

Table 25 Dutch Agricultural Exports 1960 to 1980

	1960 to 1970	1970 to 1978	1980
Total agricultural exports (TMG) ¹	4.7	11.49	31.8
Percent total to West Germany	30.5	40.7	34.1
Percent of total to remaining EEC Countries	36.1	35.3	40.1

Source: Dutch Agriculture in Facts and Figures 1981.
TMG = Thousand Million Guilders.
Data from the CBS Sociaal-Monitair Jaarboek 1980 show that from 1978 to 1980 the number of working hours for male adult workers in manufacturing industry fell 1.6 per cent from 41.1 to 40.5. Wages per week and earnings per hour rose 12.2 per cent from 1978 to 1980.

Similar data for workers in agriculture/horticulture show that although the agricultural export share of all exports, Table 25 has diminished, it is still some 22 per cent of total in 1980 representing a total value of 32 thousand M Guilders per week.

The credit balance of 9.3 thousand M Guilders in 1980 covered more than half the export deficit of all the other products, Table 26. During the same period the hourly rate for agriculture fell from 5.25 Guilders in 1970 to 13.66 Guilders in 1978. Exports Composition and Trade Balance 1960 to 1980

	1960 to 1970	1970 to 1978	1980
Share of agricultural exports in total exports (%)	30.7	27.2	22.2
Trade balance of agricultural production (TMG) ¹	+1.7	4.24	+9.3
Trade balance of remaining products (TMG)	-3.68	-10.12	-15.3

¹TMG = Thousand Million Guilders

Source: Dutch Agriculture in Facts and Figures 1981.

Pigmeat

Between 1970 and 1978 Dutch export of pigmeat rose 89 per cent from 369,000 to 698,000 tonnes, (Table 27). During the period export tonnage as a proportion of production increased by 9 per cent. Home production increased 62 per cent and consumption by 41 per cent.

Table 27 Pigmeat Production/Consumption/Export 1970 to 1978

Year	Production	Import	Available	Export	Consumption	Export as % of Production
'000 tonnes						
1970	705	9	714	369	345	52
1971	809	11	819	433	386	54
1972	816	17	833	448	384	55
1973	841	22	863	497	365	59
1974	916	24	940	529	408	58
1975	939	34	972	543	432	58
1976	976	37	1,013	570	442	58
1977	1,028	44	1,073	632	436	61
1978	1,142	43	1,185	698	487	61
<hr/>						
% Change						
1970 to 1978	62.0	377.8	66.0	89.2	41.2	-

In 1975 total pigs slaughtered numbered 11.68 M of which 10.62 M were slaughtered in the Netherlands and 1.06 M were exported live.

Of the 938,500 tonnes of pigmeat produced, 432,350 tonnes was taken up by the domestic market where the per capita consumption was 31.7 kg.

In 1975 almost 58 per cent of all total output was exported 60 per cent as carcasses and cuts, 22 per cent as preserved meat and 18 per cent as live slaughter pigs. By 1978 some 61 per cent of total output was exported.

All exports of live slaughter pigs go to EEC countries, as do almost all exports of carcasses and cuts plus 50 per cent of the preserved meat. The major customers for live slaughter pigs, carcasses and cuts are West Germany, France and Italy; the biggest customers for preserved meat are the USA, the UK and West Germany.

2. FREIGHT COST

(a) To UK

Sea freight cost, for canned meat, from Dutch ports eg. Schevingen Ro-Ro to the East Coast eg. Yarmouth rose from around 60 Guilders per tonne in 1972 to about 100 Guilders per tonne in 1981 - a rise of 67 per cent.

The cost of average haulage from Yarmouth to main supermarkets, depots etc. south of the Humber during the same period rose 7.5 times from 20 to 150 Guilders per tonne.

Main manufacturers like Van der Laan, producing around 200,000 tonnes a year, quote a delivered price to warehouses in the UK. The Leeds, Manchester, Liverpool belt is usually serviced by sea-freight into Hull to reduce land haulage costs.

The freight service available from Dutch ports in 1981 was varied. International Ferry Freight Ltd (IFF) operated unassisted containers on three sailings per week. Nipres (Dutch) provide self driver freight to Felixstowe for 1 day customer's delivery (load tonight deliver tomorrow). Norfolk Line (owned by Unilever) provided its own containers⁽¹⁾ and operated into Yarmouth and Townsend-Thorensen operated into Hull.

Compared with Denmark, the Dutch enjoy a relatively short sea crossing to East Coast ports. Manufacturers therefore try to avoid storage costs and warehousing by making direct customer deliveries. Exports of pork and bacon to the UK are still at relatively low volume levels. It is questionable whether volume will grow large enough to justify anything comparable to Denmark's UK transport organisation. This does not deny that growth in UK imports can be anticipated.

(b) To Rest of EEC

The Netherlands enjoys a very favourable central location in EEC markets which makes a useful impact on road freight costs. The close proximity of the main German market in the Ruhr and the fast motorway links provides very economical haulage costs for both live pigs and carcass meat. The same is true of distribution to markets in Belgium and Northern France while haulage to Italy and Southern France is traditional and supported by the availability of return loads facilitated by established trading links. The Dutch road haulage sector is a strong component of the EEC's land freight industry and the Dutch are often referred to as the 'hauliers of Western Europe.'

(c) To Overseas Markets

No advantages exist in freighting to other non-European markets. There is a strong and developing interest in overseas markets eg. Japan, Middle East and USA. Some economics in international distribution may be available however from the Dutch unified approach to multi-product agri-food markets as exemplified in the export ship and exhibit train organised jointly by the Ministry of Agriculture, export organisations and commercial concerns.

(1) Most shipping lines prefer to stay out of container ownership.

3. PIGMEAT EXPORT MARKETS

During the seventies West Germany became an increasingly significant export market for Dutch pigmeat and pigs (Table 28). This growth was largely at the expense of Denmark whose traditional trade with West Germany suffered from unduly high positive MCAs.

Work at Kiel University in the early seventies indicated that pig prices in France were the main factors determining pig and pork exports from the Benelux to West Germany. Pig and pork exports of the Benelux countries are highly elastic with respect to price changes in West Germany and France. The variation of exchange rates from 1969 to 1973 and the consequent differences of price levels between these countries which were insufficiently levelled out by border levies made exports from Benelux to West Germany more profitable. In the late seventies this situation changed somewhat and the Dutch became concerned about the strength of the Deutschmark.

Dutch trade with France and the USA declined, as a percentage of the total but grew with Italy and remained relatively static with Great Britain and Belgium/Luxembourg.

Table 28 Percentage of the Total Dutch Export of Pigs and Pigmeat(a) Destination and (b) Main Product Distribution 1970 to 1978

	1970	1972	1974	1976	1978
<u>(a) Destination</u>					
West Germany	25	40	40	38	40
France	27	19	15	14	17
Italy	16	17	20	24	22
Belgium & Luxembourg	5	5	3	5	5
Great Britain	10	9	9	12	11
United States	11	6	7	4	1
Rest	7	4	7	3	3
<u>(b) Distribution</u>					
Live Pigs	9	16	18	16	19
Carcasses	34	33	29	33	37
Cuts	20	24	24	25	26
Fat	2	1	1	1	1
Meat Products & Conserves	32	24	26	20	14
Offal	3	2	2	5	4

Surprisingly trade in live pigs as a percent of total, increased, mostly with West Germany partly due to her lower slaughter costs (Table 28b). Trade in carcasses and cuts increased with meat products and conserves assuming a lower proportion of the total.

From 1975 to 1980 the canned meat industry suffered fluctuating fortunes. Dutch and UK production tended to fall over the period while Danish and American output demonstrated some growth (Table 29).

Table 29 Canned Meat Production¹1975-1980
'000 tonnes

Origin	1975	1976	1977	1978	1979	1980	% Charge 1975 to 1980
Netherlands	204.5	197.6	185.7	175.8	175.0	167.0	(-)18.3)
Denmark	200.6	212.2	227.8	214.4	228.6	226.3	12.8
USA	1,277.0	1,266.1	1,364.4	1,417.8	1,366.3	1,331.6	4.2
UK	121.7	140.6	124.2	116.4	112.8	86.1 ²	(-)29.3

1 Includes non-pig meat

2 January-September

Source: Meat and Dairy Products, May 1981

Dutch trade in pigs and pigmeat, 1978 to 1980, grew considerably, up 66 per cent although the live pig traffic with Germany suffered a reversal in 1980 (Table 30). Trade in pigmeat during the period, Table 31, rose by 12.6 per cent with 10 per cent growth in the dominant markets of France, West Germany and Italy.

Table 30 Netherlands Export Trade in Pigs 1978 to 1980
'000 head

	1978	1979	1980	% Charge 1978 to 1980
Belgium	229.6	376.0	471.9	105.5
France	424.7	626.9	833.0	96.1
West Germany	769.9	902.7	705.9	(-)8.3
Italy	228.3	362.9	732.9	221.0
Other Countries	2.2	1.9	2.1	(-)0.5
Total	1,654.7	2,270.4	2,745.8	65.9

Source: Meat and Dairy Products, May 1981.

Table 31 Netherlands Export Trade in Pigmeat 1978 to 1980
'000 tonnes

	1978	1979	1980	% Charge 1978 to 1980
Belgium	8.7	10.1	13.1	50.6
France	77.5	84.5	100.5	29.7
West Germany	187.5	171.1	210.0	12.0
Italy	134.8	166.3	129.7	(-)3.8
UK	40.8	49.6	51.5	26.2
Other Countries	1.1	0.9	2.4	118.2
Total	450.4	482.5	507.2	12.6

Source: Meat and Dairy Products, May 1981.

Comparison of export growth 1975 to 1980 between the Netherlands and Denmark (Table 32) shows that for pork Dutch exports grew 63 per cent and Danish 142 per cent, while bacon and ham exports went up 110 per cent from the Netherlands' low starting base, and fell 17 per cent from Denmark.

Table 32 Exports of Pork and Bacon and Ham 1975 to 1980
'000 tonnes, shipped weight

	1975	1976	1977	1978	1979	1980	% Change 1975 to 1980
Pork							
Netherlands	281.7	319.5	349.9	404.0	431.5	459.3	63.0
Denmark	123.6	115.1	131.4	162.1	257.7	298.7	141.7
Bacon & Ham							
Netherlands	22.8	26.8	33.8	44.4	51.0	47.9	110.0
Denmark	235.5	217.8	218.0	222.3	207.8	195.7	(-) 16.9

Source: Meat and Dairy Products, May 1981

During the same period (Table 33) UK imports of pigmeat rose, pork by a significant 139 per cent and bacon and ham by 5 per cent.

Table 33 UK Imports of Pork and Bacon and Ham 1975 to 1980
'000 tonnes, shipped weight

	1975	1976	1977	1978	1979	1980	% Change 1975 to 1980
Pork	16.3	12.2	16.2	38.6	37.3	38.9	138.7
Bacon & Ham	287.4	269.3	278.8	311.6	306.4	303.0	5.4

Source: Meat and Dairy Products, May 1981.

4. EXPORTS TO THE UK

Bacon

The Dutch bacon producing sector, consisting of 19 curers shipped around 1,000 tonnes a week to the UK at the start of the 1980s. The Dutch Bacon Manufacturers Association, chaired by the technical director of the Unilever Meat Group (Walls and Mattesons in the UK) at OSS has expressed optimism about expanding this trade.

Pork

Development in pork exports to the UK has suffered from recurring outbreaks of swine fever in the Netherlands. The trade has made progress but under the circumstances it has so far tended to be somewhat speculative.

The higher average slaughter weight of 83 kg compared with UK and Danish pigs, tends to produce some cuts which are too large for the traditional UK retail outlet. The trade has so far been mainly in middles which provide chops with a good 'eye.'

Canned Meat

This is a long established trade with the UK. The main companies involved are:-

Van der Laan
Unilever
Homburg
Coveco

Dutch canned pigmeat products are sold throughout the UK's grocery and supermarket sector with Van der Laan the main supplier in the late 1970s.

Total imports into the UK of canned hams and shoulders fell from approximately 60,000 tonnes in 1978 to 46,000 tonnes in 1981. The Danish share has been increasing since 1975 mostly at the expense of the Netherlands and Poland (Table 34).

Table 34 UK Imports of Canned Hams & Shoulders 1975 to 1981

	Tonnes	Supplying Countries, %-share			
		Denmark	Poland	Netherlands	Other Countries
1975	48,322	13.5	8.6	51.6	26.3
1976	54,047	19.7	4.9	50.5	24.9
1977	55,387	22.1	0.4	51.0	26.5
1978	60,303	23.4	0.4	44.0	32.2
1979	64,147	27.2	0.3	40.8	31.7
1980	51,500	35.9	0.6	34.7	28.8
1981	46,000	35.0	0.5	32.0	32.2

Source: Meat and Dairy Products, May 1981.

Total imports of chopped and minced products were fairly stable from 1979 to 1981 with the Dutch share fairly constant (Table 35).

Table 35 UK Imports of Chopped & Minced Products 1975 to 1981

	Tonnes	Supplying Countries, %-share			
		Denmark	Poland	Netherlands	Other Countries
1975	56,118	61.9	7.4	17.9	12.8
1976	61,410	56.9	5.2	22.5	15.4
1977	62,349	51.8	5.7	24.1	18.4
1978	53,344	59.3	6.8	16.7	17.2
1979	58,476	61.7	5.2	13.9	19.2
1980	59,300	60.6	7.3	12.9	19.2
1981	60,000	60.6	6.0	15.0	19.0

Source: Meat and Dairy Products, May 1981.

Overall

Official sources in the Netherlands view the UK as a useful export market perhaps more with an eye on an outlet for a disposable surplus. Commercial traders give the impression that since the main markets lie elsewhere, they will continue coming in at the "edge" when it produces adequate profit expectations.

5. EMS, MCAs AND TRADE

With a strong agri-food export trade the Dutch not unnaturally feel that the impact of the EMS, currency changes and MCA levels are very important to them. The main export customer is West Germany and the strength of the Deutschmark can be a problem. Nonetheless in that market during the seventies, MCA levels worked against the Danes and in favour of the Dutch.

The advent of positive MCAs with the UK due to a strong sterling has been slightly discouraging to the build-up of Dutch pigmeat trade. Opinion in the Netherlands seems to be much in favour of a more effective EMS and relatively insignificant MCA levels.

Advice to the Ministry from the Agricultural Economics Institute (LEI) is to seek the elimination of MCAs as soon as possible. They believe they act as a continually disrupting force in Dutch export markets. It is recognised that economic problems at national level are major barriers to monetary and economic union within the community. However, the basic task of the EMS should be to stabilise exchange rates. It is feared that further revaluation of the German mark in the long term is likely and this will mean an increase in German MCAs which are disadvantageous to Dutch exports to Germany. The Dutch feel strongly that they need new arrangements on the level of MCAs in general. Fluctuating MCAs tend to encourage the search for alternative markets.

6. MARKETING IN THE UK

Market research in the UK in late 1981, commissioned by the Dutch Department of Agriculture, pinpointed, for the curing industry, the strengths and weaknesses of their products as perceived by the UK consumer and the bacon trade (Table 36). The broad conclusion of the survey was that Dutch bacon could be improved by providing a leaner lighter weight middle with a standardised low backfat measurement for top grade products.

The Dutch Bacon Quality Control Board then set up a working party to investigate the suggestions that the Netherlands should establish a new premium quality grade for the UK market.

Table 36 Dutch Bacon in the UK Market - Strengths & Weaknesses

<u>Strengths</u>	<u>Weaknesses</u>
Large rasher eye	Rasher sometimes too big -
Good for slicing	meaning less per lb.
Flexible ordering	Cure at times too wet
Prompt service	Backfat at times too thick.
Competitive pricing	

The group basically has to decide whether it is commercially possible to produce a middle with a large eye and a thin amount of backfat from the breeding and production resources currently available. This seems unlikely to be a very difficult task. The Dutch already claim to have achieved around 25 per cent of the British rasher market over the four years up to 1981.

It should be noted that sections of the UK trade query Dutch quality control and claim to have good evidence of past inadequacies eg. over-pumping.⁽¹⁾

Developments in Commercial Links

Growth in trade depends on several factors and developments of commercial links are a key element. For example late in 1981 W Devis and Sons, a division of British Beef Company of Union International announced rationalisation of its arrangements for first hand Dutch bacon sales.

Previously business was channelled through its associated company, John Layton and Company, based in London and Manchester. The new arrangements mean that a new unit, W Devis and Sons, (Bacon Sales), is responsible for all first hand sales from the group's factories at Middlesburgh and EDE, Netherlands.

The Devis Middlesborough bacon factory claims to be the largest single bacon curing unit in Britain, specialising in 'extra' lean sides probed at 12 mm and below and sold under the Devis XX classification. Short-cut middles and primal cuts from the same extra lean quality are also offered throughout the country.

The Dutch factory, one of the largest pork abattoirs in the Netherlands is Stroomberg NV, Ede, a substantial shipper of short cut bacon middles, vacuum packed backs and streaks to the UK. Following recent amalgamation with Buijvoets NV, it is planning expansion of its UK shipments through the W Devis and Sons bacon sales division.

Promotion

It is possible that the Dutch government will help finance the launch of a new premium grade bacon on to the British market. Normal budget resources are available for export promotion of agri-food products and it would simply be a question of augmenting these funds.

Several years ago Coveco, the pig marketing co-operative, opened a full-time office in London with two marketing specialists - a demonstration of real interest in developing the market.

(1) Meat processing can involve the addition of normal amounts of water but excessive amounts are described as over-pumping.

7. AGRICULTURAL TRADE AND INDUSTRY

Exports of agricultural products from the Netherlands show a clear surplus over imports: in 1978 they accounted for about 24 per cent of total exports and 16 per cent of total imports.

In 1978 exports totalled 26.5 thousand million Guilders and imports 18.2 thousand million Guilders, so that the agricultural export surplus amounted to 7.7 thousand million Guilders. The principal agricultural products imported from other countries are raw materials for livestock farming and the food industry.

In 1978 the main items imported were as follows:

	M Guilders
Oil seed, crude oil and fats	2,874
Cereals	2,174
Animal feed	2,792

The livestock and horticultural sectors account for the greater part of agricultural exports. Below is a breakdown of some of the main items in 1978.

	M Guilders
Poultry and eggs	1,501
Livestock and meat products	4,567
Dairy products	4,242
Fruit and vegetables	2,770
Flowers, plants and bulbs	2,268

During the 1970s considerable growth was registered in livestock production with pork rising 93 per cent from 1970 to 1980 (Table 37). Livestock production value during the same period rose even more with pork up by 115 per cent (Table 38).

Table 37 Livestock Production Volume 1960 to 1980
(M kg)

	1960	1970	1980	% Change 1970 to 1980
Pork (slaughter weight)	435	701	1,351	93
Beef & Veal (slaughter weight)	236	343	430	25
Table Poultry (slaughter weight)	56	288	375	30
Eggs	284	263	530	101
Milk	6,838	8,238	11,775	43

Source: Dutch Agriculture in Facts and Figures, 1981.

The agricultural industry processes about three-quarters of agricultural and horticultural produce. The food and drink and tobacco industry is the largest industry in the Netherlands, accounting for about 29 per cent of total industrial turnover, rising from 10 Thousand Million Guilders in 1960 to 47 Thousand Million Guilders in 1977. The range of products has been considerably extended.

Table 38 Livestock Production Value 1960 to 1980
(M Guilders)

	1960	1970	1979	% Change 1970 to 1979
Pork	837	2,024	4,351	115
Beef & Veal	705	1,565	3,140	101
Table Poultry	169	571	1,020	79
Eggs	574	394	886	125
Milk	1,478	3,103	6,715	116

Source: Dutch Agriculture in Facts and Figures, 1981.

Table 39 shows that turnover has increased in all branches of the industry, even if allowance is made for the devaluation of the Guilder. Growth is most pronounced in meat products, beverages and fruit and vegetables.

Table 39 Food Products Industry, Turnover and Establishments 1960 and 1977

Branch	Turnover (M Guilders)		Number of Establishments		Average Turnover per Establishment	
	1960	1977	1960	1977	1960	1977
Stock feeds	-	7,160	-	208	-	34.42
Grain proc.sector	892	3,190	449	561	1.99	5.69
Sugar	463	1,210	14	12	33.10	100.83
Sug.proc.sector ¹	187	2,560	87	79	2.10	32.41
Marg + fats	996	3,620	50	20	19.92	181.00
Dairy prod	2,420	9,760	491	130	4.93	75.08
Meat prod	1,172	7,340	120	253	9.77	29.01
Veg + fr.prod	372	1,610	109	79	3.41	20.38
Beverages	596	3,490	161	81	3.70	43.09
Others	1,666	4,220	362	137	4.60	30.89
Total	8,764	44,160	1,843	1,560	5.29	28.31

¹Incl.cocoa and chocolate

Source: The Kingdom of the Netherlands, Facts and Figures - Ministry of Foreign Affairs, 1980.

The drop in the number of establishments is partly the result of mergers. However the meat products sector went against the general trend with a substantial growth in the number of businesses. The number of people employed in the food industry fell from 137,000 in 1960 to 133,600 in 1977.

8. PRODUCTION MARKETING CHAIN

Compared with Denmark the Dutch industry presents a much more varied structure due mainly to:-

- (a) Many private and co-operative processors operating.
- (b) More markets for fresh and processed pigmeat and live pigs.
- (c) No real concentration of 'control' or of product development.

Diversity rather than "concentration" is the key to the Dutch industry. Rather than a broad industry strategy centrally controlled by the co-operative movement there is a multiplicity of forms of business organisation with a very strong private sector.

In organisation and style of operation the Dutch industry comes close to the UK "model." The main and very important difference is the marked orientation towards exporting throughout the industry, in live pigs, pork, cured and canned pigmeat products.

No one sector or group of product requirements dominates the industry as in Denmark. The variety of chains which operate can be highly individual in approach depending on the main operators involved in the processing sector. Several chains operate to the UK market.

The development of a distinctive marketing chain to the UK seems unlikely to be a dominant activity for any of the existing operators for their trading 'spread' is already broad. Development of the UK market is more likely to be managed as a supplement to current trade using agents and existing channels. However its potential is clearly recognised. Seen from the Netherlands the key question is - 'How far can this potential be realised?'

D. SUPPORT ORGANISATIONS

1. STATUTORY ORGANISATION OF THE AGRICULTURAL INDUSTRY IN THE NETHERLANDS

General

In addition to the various private trade associations in and around the Dutch food sector, a co-ordinating form of organisation came into being under a basic law enacted in 1950. The resultant statutory industrial organisations have the task of "promoting a conduct of business by the enterprises for which they have been instituted that serves the good of the Dutch people and fosters the mutual interests of those enterprises and the persons employed by them."⁽¹⁾

The co-ordinating form of organisation embraces both horizontal organisations - which co-ordinate the activities of firms and enterprises working in the same field - and vertical organisations, which do this for all the firms engaged in the various stages of manufacturing and distributing a commodity or a group of commodities. In the agricultural/food sector in the Netherlands there are accordingly 21 horizontal organisations, called *bedrijfschappen* (Industrial Boards) and 13 vertical ones, called *produktschappen* (Commodity Boards).

Particularly the agricultural sector and the related food industry and trade have availed themselves of the possibility of instituting Commodity and Industrial Boards presented by the 1950 basic law. The food trade comprises in this context the collecting of produce from farms and markets, the distributive trade and export. Under their statutory powers the Commodity Boards have been charged with regulating matters connected with economic transactions between the various stages of production and marketing. The industrial boards are equipped to lay down within their own branch of industry binding rules of, for instance, a technical, economic or social nature.

Commodity and Industrial Boards are also involved in co-operating with the Government in acts of government, making recommendations, notably to the Government and Acts of 'free administration,' ie. not requiring further parliamentary sanction.

Since the 1950s the manner in which substance is given to their activities has changed along with economic and social conditions in the Netherlands. With the advent of the European Communities (EEC) the autonomous powers of the Netherlands Government to follow its own agricultural policy were considerably curtailed. This also had consequences for the statutory industrial organisations in the agricultural sector. This is particularly true of their authority to enact rules of agricultural policy applicable to all.

(1) Commodity Board for Livestock and Meat (PVVV) based on *Organisatie Beschikking*, Ministry of Agriculture and Fisheries, 1970.

Practically all Boards have adopted ordinances making reliable recording of data possible. As a result, information becomes available that forms an excellent basis for statistical insight tailored to the branch of industry in question. Finally, levy ordinances enable the necessary funds to be acquired for financing the various activities. This relates to both internal expenditure and that for certain specialised objectives, such as research, control of animal disease etc.

On request and of their own volition they advise the Government on general agricultural policy. The Commodity Boards in particular have assisted in the enactment of the various EEC market regulations. These organisations also give requested or unsolicited advice concerning the policy of lower authorities, such as provinces or local authorities, insofar as this affects the agricultural or food sector.

Scientific Research

The agricultural Boards are closely involved both financially and administratively in scientific research in agriculture and related sectors being represented on a wide range of research bodies.

Sales Promotion

For Dutch agriculture, horticulture and fisheries the marketing of products abroad has long been of particular importance. The share of exports of products from the agricultural and food sector in 1978 was over 25 per cent of the value of total Dutch exports.

The activities of the Boards in this field - which amounted in expenditure to some 90 M Guilders in 1978 at home and abroad - supplement the brand-oriented advertising by the individual firms, which also make financial contributions to the agricultural boards.

The Provision of Information

The agricultural Boards are increasingly acting as information centres on their branch of industry. Both the large group of smaller firms and the limited number of larger ones have a growing need for information tailored to their field of work. For example production and marketing trends at home and abroad, give a clearer picture of the market. In addition to the demand for general economically oriented information there is also a need for specific information on existing and possibly forthcoming EEC regulations. In view of their involvement in implementing EEC agricultural policy, the Commodity Boards in particular have a thorough knowledge of the Communities' regulations and their background.

Financing

The Boards acquire the funds for financing all activities chiefly by means of levies paid by the firms for which they have been instituted. In addition, insofar as they perform acts of government in co-operation with the Government, the expenses incurred are reimbursed. The total expenditure of the statutory organisations at present is in excess of 300 M Guilders. In addition to internal expenditure, the various Boards together spend some 100 M Guilders on financing scientific research, furthering plant and animal health, quality controls and economic and market research. In 1978 about 90 M Guilders was made available for improving sales possibilities at home and abroad. These amounts do not include the sums that business makes available for restructuring. The agricultural Boards employ some 1,400 staff of whom about 900 work for the Commodity Boards and some 500 for the Industrial Boards. The annual budget of the Commodity Boards is about 200 M Guilders and that of the Industrial Boards approximately 100 M Guilders.

2. THE INDUSTRIAL BOARD FOR AGRICULTURE

This was set up in 1954, as a public body which enables lateral co-operation to take place between employers' and employees' organisations and since its inception it has evolved into the main organ of co-operation within the industry. It can call upon all types of expertise and is advised by committees and experts in the secretariat on all facets of agriculture and market gardening. It also has provincial councils which represent agricultural interests in matters relating to land utilisation and physical planning. The Board also performs an important function in international agricultural relations and its premises house the international secretariat of the three central agricultural organisations. Finally, the Board acts as a permanent consultative body for the Ministry of Agriculture and Fisheries. The problems and wishes of the agricultural community are discussed at monthly meetings between the Minister and a delegation from the Board.

The other public bodies in the agricultural and food sectors, the Commodity Boards, have a vertical structure in that they are responsible for each of the various stages through which a product or a category of products passes: production, trade and processing. Their function is to make recommendations with regard to the policy pursued by the Ministry of Agriculture and Fisheries and to implement Government regulations. To this end they may themselves issue regulations which in many cases are binding on all the undertakings within a given sector. Commodity Boards have been established for most of the main agri-food sectors.

It should be noted that all sectors in the economy had or have production boards but only the agricultural ones generally have been successful. These sector boards were set up after the second World War after a considerable amount of debate and discussion amongst partisan workers and people in prisoner of war camps. The basic philosophy was to get economic democracy operating within society.

3. THE COMMODITY BOARD FOR LIVESTOCK AND MEAT (PVVV)

The organisation is over twenty five years old being founded in 1956. It is a public body based on an older public body structure which originally had greater authority and powers. In the 1930s the original board was involved in a good deal of crisis management and had a considerable amount of authority which was sanctioned by law. In 1950 new law was produced for public bodies based on a philosophy of 'social economic development' and during the fifties these bodies were involved in a good deal of active market activity. In 1962 accession to the European Community saw the end of active market work for the old style board. Funding of the board activities is based on levies on slaughterings of pigs and cattle.

The board activities are based on four main lines of action.

1. Executing EEC regulations eg. paying levies to Third countries.
2. Preventive health care for animals and disease control under the Livestock Act.
3. Sales promotion in home and export markets.
4. Scientific research and the provision of information.

The board does not execute intervention buying since new bodies were set up in the the Netherlands for these particular functions. The board sends members regularly to advisory committees meeting in Brussels. It also advises Government on EEC matters either through the Ministry of Agriculture or more directly to the Minister's office. The structure of the Ministry of Agriculture is important here, the Secretary General in the Ministry is not the same as our own Permanent Secretary. The structure of the board is as follows:- there are 16 board members eight from labour unions and eight from employers bodies. The eight labour union representatives are constituted - three from farm and agriculture, three from factory workers and two from general services. The eight from employers bodies are constituted - three from farmers, one from manufacturing associations, both private and co-operative and one from bacon manufacturing, both private and co-operative, one from private abattoirs, one from live cattle associations and one from butchers federations. The union representatives are paid by the unions to serve on the board with their expenses being covered along the lines of 105 Guilders per meeting. The Chairman of the Board is appointed from outside for two years. Appointment is by the Queen, after the Minister's recommendations.

Developments

Health care in pig production and in other livestock enterprises in the Netherlands is important due to the strength of her export trade. The production board has become increasingly concerned about the disruptive effect which outbreaks of swine fever are having on the export market and a number of initiatives are now being taken. The board also operates a regulatory function on meat quality.

Export promotion and marketing activity generally has become more important. Coveco raised its export market in 1980 to more than 2 M Guilders and NCB the other co-operative raised its total to 11 M Guilders. Coveco has a bacon marketing export office in London. The production board's subsidiary marketing export promotion organisation had a budget of 4 M Guilders in 1981. It was originally set up in 1958/59 on a very small budget. Its operations are divided approximately 50 per cent in the home market and 50 per cent in the export market.

Several developments are important to the future of the export market. It is estimated that it will take at least another 3 years for the EEC to be free of the swine fever problem. The board feels it needs much more information to give real advice on how to undertake new marketing initiatives. It has engaged two main research studies to provide background information, which it feels it needs, on the cost structures of both production and marketing in other Member Countries. The board is also carrying out cost recording schemes for both processors and abattoirs. The intention here is to try and identify the really efficient producers, processors and abattoirs which may be recommended for further government aid in order to strengthen this particular sector of the industry. Clearly there are underlying political implications in this sort of directed aid approach which would not be tenable in the UK with its greater emphasis on free market forces.

The UK market is considered to be one of some difficulty requiring further research and a proper approach to the marketing of each particular product type. The need for a good operating structure particularly within co-operative marketing organisations such as Coveco (described later) has been heavily underlined by recent events (bankruptcy). However Coveco's recent problems have some particular historical features which are important. In August 1978 the company (co-operative) capitulated to a workers strike and in fact awarded 12 per cent, more than the going rate. It was also involved in losses due to worm contamination in exports of bacon and meat to Germany and they were the main sufferers in the severe salmonella restrictions on imports which were introduced by Italy. For example some 20 transporters carrying some 18 tonnes per vehicle were returned from the Italian border and had to be turned into processed meat. However Coveco's basic management structure has been recognised as having weaknesses. The co-operative is currently involved in considerable restructuring, under the watchful eye of the Commodity Board.

4. "FARMER" ORGANISATIONS

Agricultural organisations in the Netherlands like those in industry and in the arts, have a denominational basis. Farmers' organisations are thus Roman Catholic, Protestant or specifically non-denominational and each category runs its own agricultural organisation, women's organisation and youth organisation. There are also three separate agricultural workers' Unions and three central agricultural organisations, the Royal Netherlands Agricultural Committee (KNLC), the

Catholic Netherlands Farmers and Market Gardeners Federation (KNBTB) and the Netherlands Protestant Farmers and Market Gardeners Federation (NCBTB). The latter three organisations which have their headquarters consisting of a secretariat and experts in The Hague, form the apex of the pyramid. The base consists of the regional sections and departments. The three women's and youth organisations have fairly close links with the central agricultural organisations.

5. CO-OPERATIVE BODIES

COVECO

Several provincial co-operatives selling cattle were created by cattle producing organisations in the 1930's. Coveco's present structure was based on the amalgamation of seven regional co-operative societies viz. the FCE in Friesland, Drentex in Drente and Groningen, GOS in Guelderland and Overijssel, the selling societies of the ABTB in Guelderland and Overijssel, Limco, in Limburg, Cuva in Utrecht, CVV 'West-Holland' in North and South Holland and Zeeland.

The society's activities cover most of the Netherlands with the exception of North Brabant province. The 12,000 members are organised in about one hundred sections with around twenty sections forming a district; the Netherlands being divided into five districts.

The section boards elect a district council and a district commission. The district councils in turn propose representatives for the Board of the co-operative society. The Board is elected by the members' council. One member from each section forms the council which is the supreme authority within COVECO. The philosophy behind these arrangements is that the members themselves entirely control the policy and decide how to manage the profits.

Table 40 COVECO Turnover 1977 to 1979

	Million Guilders			<u>% Change 1977 to 1979</u>
	<u>1977</u>	<u>1978</u>	<u>1979</u>	
Total Turnover	1,233	1,287	1,363	10.5
Home Market	797	842	884	10.9
Foreign Countries	436	445	479	9.9
Product Group - Livestock	444	486	518	16.7
Home Market	432	472	503	16.4
Foreign Countries	12	14	15	25.0
Product Group - Fresh Meat	640	643	696	8.8
Home Market	306	312	327	6.9
Foreign Countries	334	331	369	10.5
Product Group - Meat Products	149	158	149	0
Home Market	59	59	54	(-)8.5
Foreign Countries	90	99	95	5.6

Source: COVECO 1980.

COVECO is a 'double-barrelled' organisation with strong co-operative societies of cattle and pig producers and a large meat processing industry with approximately 3,000 employees at five factories located in separate regions and servicing six wholesale outlets. The processing activities are run under COVECO NV which is entirely owned by the co-operative society. The company increased turnover by 10 per cent from 1977 to 1979 (Table 40) but more recently ran into financial difficulties.

COVECO works in close liaison with the co-operative Rabobank, the co-operative manufacturers of animal feeds, the CEBECO Trade Council Group and the Landbouwbelang. A range of co-operative services is jointly offered to the members/suppliers. Co-operation in respect of integration, price guarantee and financing are the most important aspects of the overall strategy. The society's relationship with the member/suppliers is very important and it is nurtured by a field staff of about a hundred representing a wide variety of professional skills.

COVECO is a significant force in the Dutch pig industry. The society operates 'COFOK' the co-operative breeding group and 'COOSTA' the co-operative pedigree breeding programme and arranges annually the transfer of hundreds of thousands of weaners from breeding to fattening units.

Approximately 2 million pigs are annually supplied, slaughtered and processed within COVECO as well as several thousands of cattle, calves and sheep. Slaughtering and processing takes place under COVECO's own management at sites throughout the country. Three factories kill pigs only. The Twello factory is geared to the production and sale of fresh meat. Borculo is also engaged in slaughtering pigs for fresh meat production. In addition all COVECO bacon is produced here for export to the UK; the plant collecting suitable raw material from other Coveco factories. The Borculo plant also produces a selected range of about fifty different meats and sausage. The WEERT factory slaughters pigs for fresh meat and produces ham and shoulder conserves and other meat preserves in catering sizes. Coveco Weert are specialists in original small German sausages in natural casings. In Wierden the plant produces a large range of consumer pack meat preserves and canned and vacuum packed hams and shoulders.

NCB (Encebe Boxtel)

This co-operative operating in Brabant in the south of the Netherlands, looking after the interests of some 12,000 producers, has an annual turnover of 800 M Dutch Guilders. It has one of the largest modern abattoirs in Western Europe at Boxtel with a capacity of 20,000 pigs a week. It runs a breeding programme through its advisory service to encourage members/suppliers to produce quality slaughter pigs. The co-operative has a strong link with the Italian market through its subsidiary NCB Socopa (Italia) S.R.L.

The Co-operative and Private Sectors

In the Netherlands the co-operative sector shares the market on a less than equal footing with a private sector which has several large operators. This maintains a much greater degree of internal competition within the Dutch market compared to Denmark.

6. MINISTRY OF AGRICULTURE AND FISHERIES

A survey would be incomplete without a brief description of the Ministry of Agriculture and Fisheries.

The Ministry is divided into:

- a) the general administrative departments.
- b) the Directorate-General of Agriculture and Food.
- c) the Directorate-General of Land Development, Land and Forest Management.

The Directorate-General of Agriculture and Food is responsible for:

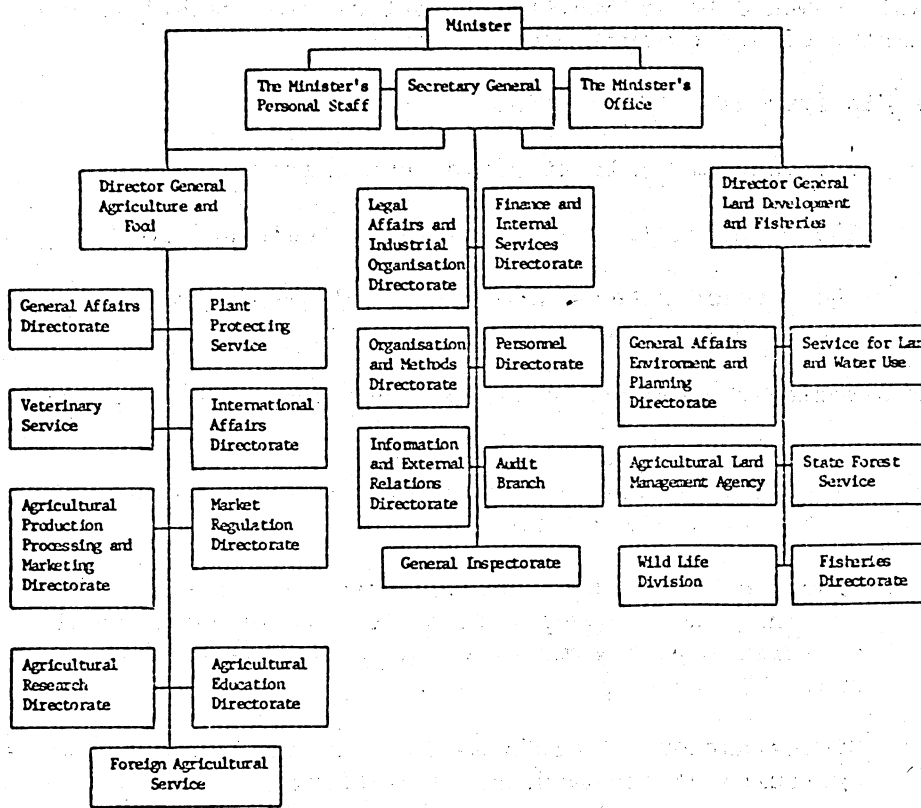
- Matters relating to production, processing and marketing in the agricultural sector.
- Problems connected with market regulations and international co-operation in general economic and commercial policy matters and in the field of development aid.
- Dissemination of information on agricultural matters, agricultural research and education.
- Food and quality, phytosanitary and veterinary matters.

The Directorate-General of Land Development, Land and Forest Management is responsible for:

- Land utilisation and improvement of the use of rural areas.
- Physical planning and control of the environment.
- Purchase and temporary management of land for agricultural purposes and for other purposes in the public interest.
- Matters concerning the 'Land Bank' and the management of agricultural land, which is to be used in harmony with the interests of conserving nature and the countryside.
- The management of forests and nature reserves.
- Hunting and shooting and the control of wildlife.
- The fishing industry and angling.

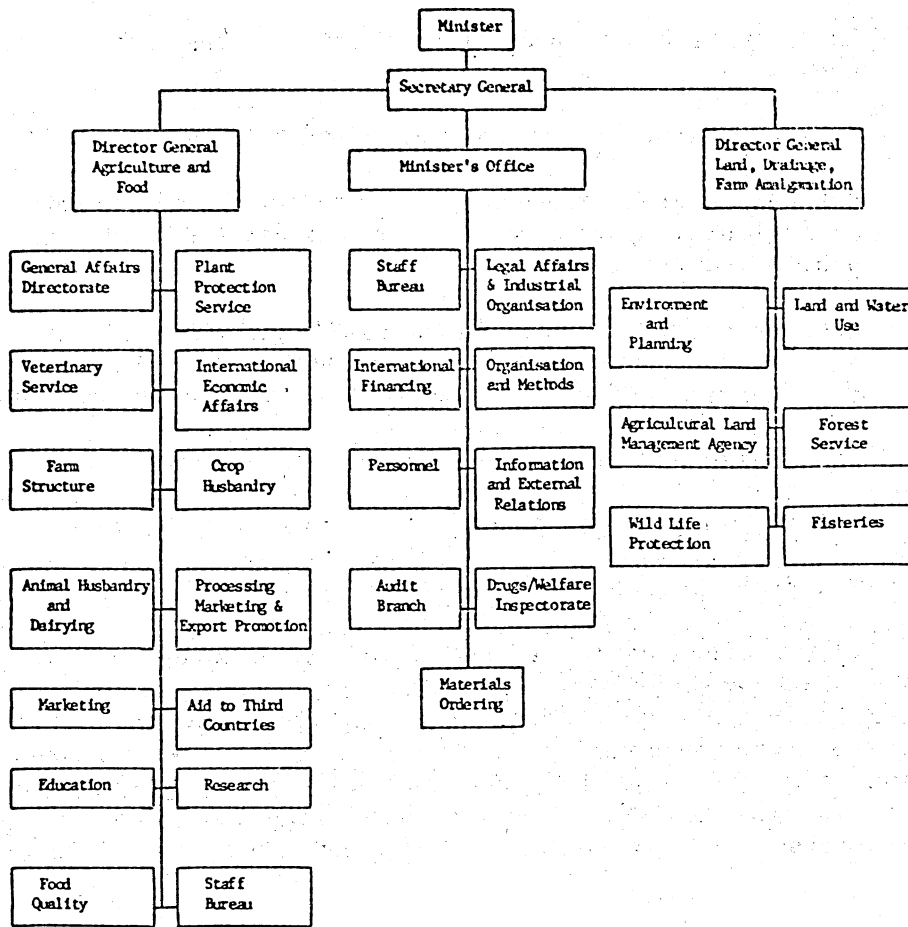
Since 1970 reorganisation in the Ministry (Figures 8 and 9) has given more appropriate recognition to the importance of processing, food quality, marketing and export promotion. There is some evidence that Ministry officials may be more active now in promoting the well-being of the agri-food industry, particularly the export function, through new initiatives. The pig sector has already received assistance.

Figure 8 Organisation Plan of the Ministry of Agriculture and Fisheries, 1970



Source: Ministry of Agriculture and Fisheries, 1970.

Figure 9 Organisation Plan of the Ministry of Agriculture and Fisheries, 1981



Source: Ministry of Agriculture and Fisheries, 1981.

Discussion

Dutch Agriculture, Employment and Exporting

The agricultural industry now accounts for over 25 per cent of total Dutch industrial sales and it is therefore a major industrial sector. The "credit trade balance" of agricultural production covers more than half the export deficit of all the other products. The importance of agriculture to the Dutch economy can hardly be over-estimated and a vigorous approach to political 'backing' (eg. fuel subsidy to glasshouse growers) should always be anticipated by other EEC members.

How significant is the pig trade? More than 60 per cent of Dutch pigmeat and output is exported and in 1980 exports were worth 3,000 M Guilders (£649 M) accounting for some 12 per cent of total farm exports. Employment in the pig industry in 1979 was estimated at 28,000 man years on farm and 28,000 man years in trade, industry and services connected with pig production.⁽¹⁾ In agriculture and horticulture total employment is estimated at 280,000 man years.

The future intentions of the Dutch in the food trade should not be under-estimated. The level of commitment and organisation displayed in their exporting gives emphasis. The Dutch Dairy Bureau based in central London operates a demonstrational and educational programme on Dutch agriculture and the food industry. One of its recent advertisements⁽²⁾ aimed at school parties indicated that "travelling costs by public transport within the boundaries of the Greater London area will be re-imbursed by the Bureau."

Organisational Support

Co-operation in the Dutch agri-food sector is significant but of a lesser magnitude in impact when compared with Denmark. The agricultural bank, the Rabobank, is a very strong element within the industry. Although its roots are in agriculture, it now has considerable international investments on a wide spread. The primary industry can benefit from this robust financial base as it did under the COVECO collapse.

The Ministry of Agriculture and Fisheries supports and seems under its re-organisation, to be even better geared to service a strong export function. The commodity/production boards, a peculiarly Dutch structure, hold a central position in industry. The boards in agriculture are probably more active than in other sectors and the board for meat and livestock, the PVVV, is a significant force in the industry.

However, any impression that bureaucratic, organisational and official support functions are paramount would be misleading. The Dutch industry on and off the farm has a very strong innovative and highly competitive entrepreneurial drive. In the processing sector the multi-nationals are particularly important and strongly export oriented.

(1)Nota Varkenshouderij 1981-1985, Ministry of Agriculture and Fisheries, July 1981.

(2)Times Educational Supplement 3/9/82, p 10.

The Pig Industry

Growth during the 1970s, in the Dutch pig sector has made it into a major force in the EEC pigmeat market. If this rate of growth were to be continued during the eighties it could have significant implications for the continental market, the EEC pigs regime and the UK import market.

Although pigmeat consumption within the EEC has been on a rising trend for several years, there are increasing doubts about further growth through the eighties. Competition from other meats and almost zero population growth projections are among the key factors influencing decision makers.

Self-sufficiency level in pigmeat within the Community has already reached 102 per cent in the early 1980s. Although the pig regime has been relatively successful within the CAP as well as a low budget policy it seems unlikely that the Commission would like to give much encouragement to higher levels of surplus.

For the Dutch the viability of the EEC's new cereal pricing strategy (lower relative levels viz a viz animal products) the continuance of high levels of manioc importation and the costs of pollution control are important issues affecting future growth in their industry.

However there seems little doubt that some degree of surplus in the EEC will be a factor during the rest of the decade. There is therefore likely to be considerable interest in where the surplus is generated, how it will be disposed of and which outlets will be on the receiving end of the required marketing push.

The UK Market

Many traders on both sides of the North Sea hold the view that the Netherlands will be a continuing source of surplus supply and the UK an important likely recipient. The information and considered views assembled during this study have created little room for doubting the broad generalisation.

Dutch success in the UK, in marketing rather than surplus trading will depend mostly on improving the product, currently offered, to meet market specifications. Competition from 'Danish' and hopefully the continually improving standards of the UK product should ensure that the Dutch do not have an easy task. The future is generally uncertain but what is certain is that no established position in the UK market can be taken for granted.

The UK as a major import market has an obvious vulnerability within the EEC to becoming an outlet for surplus disposal. The only really effective home industry defense to this in the long run is to attack through better products, better marketing and greater efficiency on and off the farm. These facts appear to be receiving increasing recognition within the UK, the most recent evidence being the 'Bacon Charter' and 'Food from Britain.'

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Appendix 1The Dutch Guilder Exchange Rate Against Sterling 1973 to 1981

	1973	1974	1975	1976	1977	1978	1979	1980	1981
Annual Average	6.84	6.28	5.60	4.78	4.28	4.15	4.26	4.62	5.03

Source: Bank of England.

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