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TWO LECTURES ON THE HISTORICAL DEVELOPMENT OF DUTCH AGRICULTURE, 1600 - 1985

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ABSTRACT

TWO LECTURES ON THE HISTORICAL DEVELOPMENT OF DUTCH AGRICULTURE (1600 - 1985).
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31 pag., tab., figures

This publication contains two lectures on the historical development of Dutch agriculture. The first lecture covers the period from 1600 to the agricultural crisis of the 1880's, paying attention to the relation between agricultural trade and local foodsupplies. The second lecture treats the developments of the 20-th century. It contains figures showing the changing structure of Dutch agriculture from 1880 onwards. Both lectures are focused on the relation between the institutional framework and the development of Dutch agriculture.

This publication is primarily meant for foreigners, to give them some historical background in their contacts with modern Dutch agriculture.

Agriculture/History/Policy/Development/Common market/
International trade/Foodsupply/The Netherlands

Contents

Introduction

The very advanced position of Dutch agriculture stimulates a lot of foreigners, interested in agriculture, to visit The Netherlands. A serious drawback in their efforts to learn about Dutch agricultural development is that most literature about this subject is written in the Dutch language. This was the reason to decide on the publication of the two following lectures. These lectures are rather a comprehensive summary of some interesting aspects of historical developments in Dutch agriculture than an extensive overview of recent findings from research by our institute. They can be useful to anyone, not acquainted with Dutch agriculture and not able to read Dutch.

The first lecture has been written by Wim Huizinga, who now works as an economist at the Economic-Technological Institute Friesland (ETIF) in Leeuwarden, while at the time the lecture was written he was employed by the department for Energy and Environmental Sciences of the State University of Groningen.

The second lecture is written by Dirk Strijker, General Economics Department of the Agricultural Economics Research Institute in The Hague.

The Hague, June 1986

J. de Veer
Director

1. Dutch agricultural development, 1600-1880 1)

1.1 Introduction

Nowadays the Dutch agricultural sector is one of the leaders in the worldmarket and the largest exporter next to the United States and France. For a small country this is most remarkable. In this lecture attention will be paid to the history of Dutch agriculture from 1600 to 1880. For briefness' sake I shall concentrate on the following themes:

- The strong development of Dutch agricultural production and export, to begin with the 17th century,
- The differences in development between the 'sea-districts' and the 'land-districts',
- The question whether the foodsupply was sufficient or not as a result of large exports,
- The role of the government,
- Last but not least, the efforts of the Dutch farmers.

1.2 The general picture in the sea-districts

The first point is the remarkable development of Dutch agriculture in the 17th century, at least in the sea-districts. In that century all sectors flourished, especially trade. Related industries developed, for example shipbuilding. The population grew rapidly, mostly in the large towns. The trade centre, Amsterdam, had about 100,000 inhabitants around 1600, quickly rising to 200,000. In Dutch history this century is known as the Golden Age. What was the background of the development of agriculture in that days?

The Netherlands - also known as the Low Countries - are lying very low, large parts of the country are situated below sea-level. The farm-lands were marshy and mostly too wet for arable farming. The inhabitants constantly had to fight the sea by building dikes and maintaining them. By draining the land, from about 1500 with the help of windmills, it could be used as pasture and hayfields, but not for arable farming. Therefore a specialization in dairyfarming took place. These products could be sold at the butter- and cheese-markets, whence the greatest part was exported, to France among others.

Unfortunately no overall figures for Dutch butter- and cheese-exports before 1800 exist. Although time-series on dairy

1) Text of lecture held at the International Agricultural Centre in Wageningen, 19 June 1984

exports are not available, it is known that these exports increased sharply from 1600 onwards. Some data on the production in the 18th century and some export figures for the 19th century are summarized in Annex 1. Given the export figures from the early 19th century and the fact that production was more or less the same in the 17th century, it is likely that exports were at the same level in this period. Exporting was rather easy because of the good transport facilities through the neighbouring seaport towns like Amsterdam.

The specialization on dairy-farming enabled the farmers in the sea-districts to buy foodstuffs like bread, instead of growing their own grain. They began to buy their tools from the emerging farm implements industry, instead of making their own, and eventually they began to buy luxury goods. In this way the farmers stimulated a further economic growth.

Specialization in dairy products inevitably means less attention for grain growing. Historical research made clear that, certainly in the sea-districts, The Netherlands were not self-sufficient for cereals. They had to import it from other European countries (Poland, Denmark) and pay for it with export-revenues. As said before, butter and cheese were among the most important export products. The long-distance graintrade can be traced back in time as far as the twelfth century.

In the 17th century the specialization process continued. The industries - shipbuilding, textile-mills - needed raw materials. So, as far as grainproduction still existed, farmers shifted more and more to cashcrops like flax, hemp, hop and rapeseed (for lampoil). This meant a further decline of grainproduction.

Yet another specialization could be seen. The urbanization led to a growing need of vegetables and fruits, so horticulture emerged near the cities, not only for vegetables and fruits, but also flower bulbs. This was at the end of the 17th century already one of the famous Dutch export products.

Although there is not much information available on this subject, it seems that most of the necessary investments were financed by the farmers themselves. An exception is the investment in land-reclamation, which was mainly financed by rich citizens who wanted to secure their trade profits. Of course other investments were necessary too, among others, for the trade in manure. Especially the growing of cash-crops demanded heavy manuring and the farmers tried everything beside dung: peat ash, chalk refuse of the towns and even mud from the ditches. The use of dried cowdung as fuel, and this was not unusual in some districts, was very undesirable in this situation. The regulations to prohibit this practise became efficient only when other fuels, such as peat, became available in these districts.

So far, the picture of agriculture in the sea-districts is favourable. In the wake of trade and industries agriculture could develop. However, there was also a problem for the agricultural sector: the heavy taxes of the federal government, which had to finance one war after another in the struggle for power with England and France. This power was necessary to continue the trade activities. The government did nothing in return for agriculture, so, in the end, farmers had to choose: to specialize in intensive production for the market in order to be able to pay the taxes or to retreat from agriculture. This is probably also the explanation for the fall in agricultural investments by the end of the 17th century, as is observed by some historians.

1.3 The land-districts

In the remaining of The Netherlands this process of specialization did not take place, at least not in the 17th and 18th century. Roughly, the land-districts consist of sandy soils of poor quality. Cereal-production prevailed and cattle were kept only for manure. One can say that in general self-sufficiency for the family was the rule. So, there existed hardly any exportable surplus.

What could have been the cause of this different development. Several reasons have been given:

1) The poor quality of the land. It was only in the 19th century, when guano and, later on, fertilizers became available, that the land in these parts of The Netherlands became more productive,
2) Another problem concerns transportation. In the eastern and southern parts of the country were few roads and canals and only in the 19th century this situation improved, and the region became less isolated.

But there is more than bad natural conditions and a poorly developed infrastructure.

3) In some of the land-districts the feudal system seemed to have a strong influence. It is supposed that this feudal system impeded agricultural development (not only in The Netherlands, but also in France and Germany) in the following way:
   a) a strict hierarchical relationship between noblemen/landlords and peasants/tenants.
   b) The peasant had to pay the landlords several duties which varied with the return of the land. In practice this did not stimulate investments in agriculture.
4) Another cause for the slow development was the system of common grounds: mostly pastures shared by all the inhabitants of the village. This system proved to be a hindrance for individuals who wanted to innovate, because everybody had to agree upon such a change. As a matter of fact several

efforts were made from 1800 onwards to abolish the commons, but it took three quarters of the nineteenth century to solve this problem by legislation. On the other hand, most farmers in the sea-districts owned their land or rented it on favourable conditions. This meant that the profits of specialization or intensification fell to the farmer and this can be seen as a strong incentive to modernize.

5) A last point concerns the difference between a barter economy and a money economy. In large parts of the land-districts the economy was mainly a barter economy, although the inhabitants of the land-districts knew about money; money rents existed alongside rents in kind. And in some places farmers were producing for, mostly the local, market. As a matter of fact, this group of farmers succeeded in buying more and more land. They bought it from the government, which was always in need of money because of debts, and from the noblemen, whose financial position worsened because of diminishing rent-income. A sharpening of the social relations was the result, because a class of bigger farmers came into existence together with a large group of peasants who had missed the opportunities and got poorer and poorer. This development shows that it was not only a question of man-to-nature struggle for existence, but rather a man-to-man struggle.

1.4 Foodsupplies and foodexports

My third point on Dutch agricultural development concerns the foodsupplies and the possibly negative influence of food exports. We will look first at the sea-districts where dairy production and exports played a central role. The greater part of the Dutch butter and cheese production was exported. It is known however that in the 17th century cheap butter was imported from Ireland for home consumption. So the Dutch exported good quality butter in order to import butter of a poor quality. Bread was in those days a very important foodstuff and, as I said, the necessary grain was imported. In general, it seems that the grain stock was sufficient for the towns. So, the 17th century looks like a Golden Age indeed, but this impression is not quite correct.

In this Golden Age starvation frequently occurred in the cities and towns of Holland. This happened usually in times of high grain prices. However, this starvation must have been a consequence of a lack of purchasing power, or to put it differently, an incorrect distribution of food. The diet of the well-to-do people was excellent, whereas the poor had nothing but ryebread and fat, or, as times got worse, carrots, leaves or even grass.

In years of starvation, there was a lot of charity of churches and town councils, mostly in the form of bread or soup distribution. For instance, in 1616 Amsterdam counted around 100,000 inhabitants; 16,000 of them were dependent on charity. Sometimes the poor protested against high foodprices. Protests could result in bloody riots, but seldom in lower prices.

In the land-districts no significant specialization took place before 1800. The goal of the farmers was self-sufficiency, but as historians have shown, these districts often had to import cereals. When this happened, a lot of people were in trouble. Contrary to the specialized regions they had hardly any product to sell for exchange. There is evidence that the small farmers in these parts of the country were much poorer then those in the sea-districts. So, the land-districts also had their share of grain shortages and high foodprices. There is some information about the efforts of local or regional governments to cope with this situation.

In some towns the local government decided to subsidize foodstuffs like bread, probably as a result of successful protesting. It sometimes happened that, because of shortages, the graintrade to other regions was forbidden or that beerbreweries were not allowed to use grain. Bearing in mind that in that time beer was used all day long instead of water or milk, the situation must have been really bad.

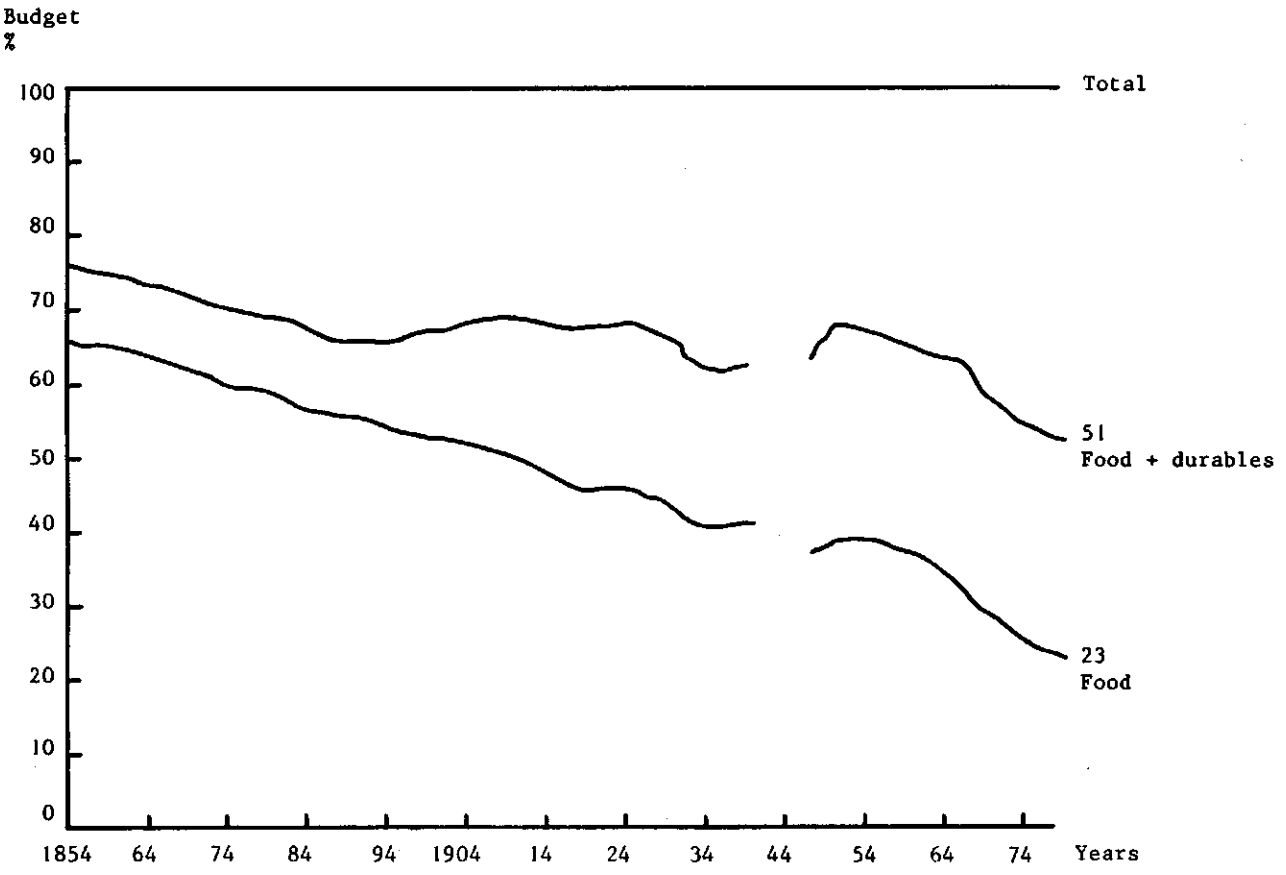
Nevertheless, as a conclusion, I would say that grain exports were not a cause of shortages or even starvation. For in the sea-districts there existed hardly any graingrowing, and in the land-districts there was hardly any production for the market. Therefore, exports will have been very small.

It is not possible to show a quantitative picture of food consumption in the 17th and 18th century. Figure 1.1 shows the development from 1854 onwards. From this figure it appears that the share of food in the total budget gradually declined, while figure 1.2 shows the tremendous decline of the portion of bread in total food expenses.

1.5 The role of the government

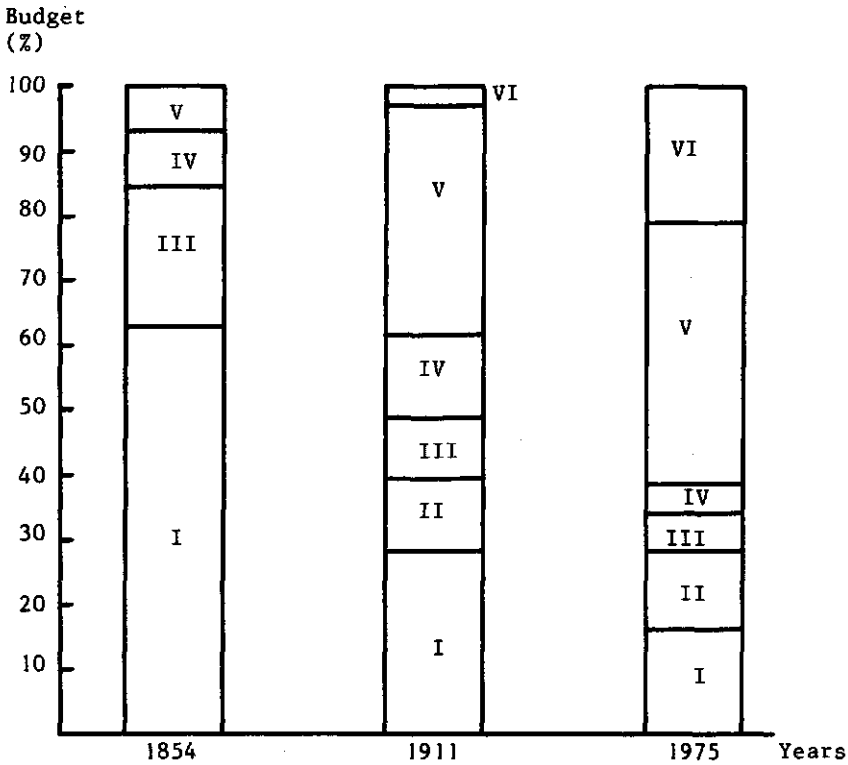
Before 1800 The Netherlands were a republic consisting of several more or less independent provinces. The national government did not have much power, at least not at home. The government was constantly kept busy with foreign affairs and the struggle for power, first with Spain, later with England and France. An agricultural policy did not exist. Evidence suggests

Figure 1.1 Budget expenditures (%) foods/durables, 1854-1979



Calculated from: H. van der Meulen, The Potatoe eaters, I.E.O.-memorandum 138, Groningen, 1985.

Figure 1.2 Food expenditures (%), working man 1854-1975



I = bread
II = milk etc.
III = groceries
IV = coffee, tea etc.
V = meat, vegetables
VI = stimulants

Calculated from: H. van der Meulen, The Potatoe eaters, I.E.O.-memorandum 138, Groningen, 1983

however that on a regional or local scale a lot of regulations existed. As examples I mention:

1) regulations about sizes of bulls used for breeding;
2) regulations about materials and sizes of butter tubs;
3) a prohibition to paint butter. Painting of inferior butter to make it look like good quality butter became practice in the 18th century, with the result that butter exports declined after this deceit was discovered. Cheese exports suffered too as a consequence of these practices. The background of this prohibition was of course financial. Less exports meant less income from export duties.
4) Quality control of the food sold at the town markets and shops. Again, because of financial reasons and not, for instance, for reasons of public health. In this case income from excise duties was involved.

Unfortunately, there is little information on the effectiveness of these regulations. Probably the results were not so good. An example of an ineffective regulation concerns the cattle-plague. In the 18th century several epidemics ravaged the herds all over the country. The government tried to stop the disease by prohibiting cattle transports. However, this didn't stop cattle-traders. In the end the epidemics stopped because the government started to stimulate research, in fact the beginning of veterinary science in the Netherlands.

After 1795 things changed, due to the occupation by the French under Napoleon. The French wanted a strong national government to execute their orders. Now, there was an opportunity to regulate the agricultural sector. This resulted, among other things, in the appointment of a state-secretary of agriculture. This representative did a good job by developing statistics, stimulating land reclamation and the writing of schoolbooks on agriculture. Unfortunately, this did not mean that the national government felt the need of an elaborated and long-term agricultural policy. When the state-secretary resigned, the government did not bother about a successor.

In the next 75 years of the 19th century government involvement decreased. Sometimes people complained that nobody knew whether regulations on agriculture still existed or not. Typical in this situation was the attitude towards agricultural schooling. In 1815 universities had started introductory courses on agriculture and in 1842 a private agricultural school was founded. This was far from enough and besides the resources were limited. A general feeling was that a state agricultural school was needed. However, the government replied that others should organize it.

It was clear that those 'others' could not cope with it, and at last, in 1876 the State school was founded in Wageningen. It is nowadays known as the Agricultural University.

The turning point for government action was the severe depression around 1880. Large imports of cheap grain from especially the United States of America resulted in very low prices and this threatened the farmers all over Europe, that is to say, grain growing farmers. Most countries closed their borders, the Netherlands did not. The government - convinced by leaders of the farmers' movement - decided to help by promoting education, research and advisory services. Key-words at that time were specialization and export-promotion with the help of new methods and research. This strategy succeeded and was maintained in the 20th century until the Great Depression of the thirties. Now I will show you some developments in this process of specialization.

In table 1.1 the production per man year between 1810 and 1910 is summarized. It appears that the real production hardly increased until 1880; after the agricultural crisis of the 1880's production per worker increased rapidly. The stagnation in the 19th century is mainly found in the sea-districts. In the land-districts things went better, due to better technical progress and the introduction of fertilizers. This was extremely important for the rather poor soils.

Table 1.1 Development of production per man year 1810-1910, constant prices, guilders

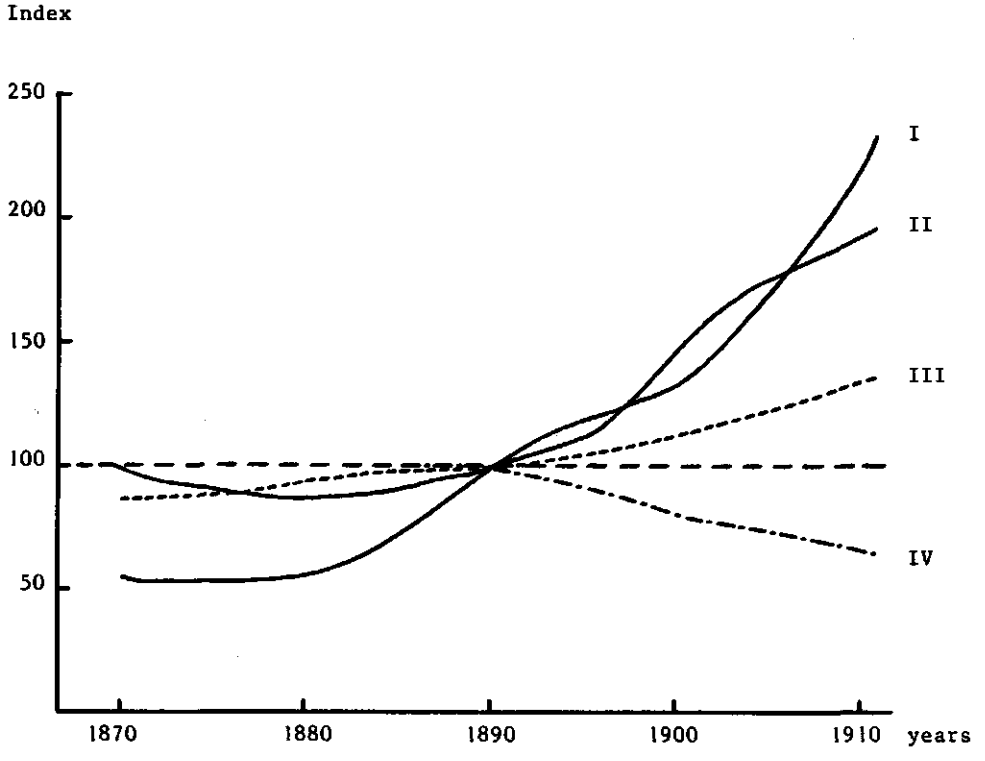
	1810	1850	1880	1910
Netherlands	710	627	741	1059
Land-districts				
- Drenthe	592	612	758	1216
- Overijssel	429	455	555	919
- Gelderland	537	555	610	906
Sea-districts				
- Groningen	1039	964	1182	1549
- Noord-Holland	915	883	917	1119
- Zeeland	1066	794	910	1239

Source: J.L. van Zanden, De economische ontwikkeling van de Nederlandse landbouw in de negentiende eeuw 1800-1914, Utrecht, 1985

1.6 Efforts of the farmers

The decisions made at the end of the 19th century determined the nature of Dutch agriculture, even after the Second World War. Existing regulations and policies were enlarged or intensified. This may give the impression that it was only government action that did it, but that would not be correct. It will be clear that before 1800 farmers themselves were responsible for the innova-

Figure 1.3 Agricultural development around 1880 (1890=100)



I = number of pigs
II = cheese exports (quantity)
III = number of cows
IV = wheat (hectare)

Calculated from: J.L. van Zanden, De economische ontwikkeling van de Nederlandse landbouw in de negentiende eeuw, Utrecht, 1985.

tions and progress in Dutch agriculture. But what happened after 1800? The new appointed state-secretary tried to organize Committees of Agriculture in all the districts of the country with the intention to promote new methods and improve agriculture. He wanted prominent farmers for these committees but in the end only notables were appointed (professors, doctors, noblemen and lawyers). It was generally thought that farmers were not capable of making propaganda. So one can say that the committees were more or less forced upon the farmers. Besides, the appointed members - often men from the city - had little practical know-how and acted from the books. As a consequence, the farmers dissociated themselves from the committees and around 1850 they were abolished (the government did not want to pay for them anyhow).

In the same period farmers began to organize themselves - helped by some trusted notables - in regional societies to look after their interests. This approach was successful. After some time, the King tried to bundle these societies into a national one, succeeded, but again it appeared that solutions from above did not work if the farmers themselves did not see the necessity: as a result the national society collapsed after a few years. Only the depression of 1880 could bring the local societies together again. They organized on a national scale because they needed government support desperately. The so called 'green lobby' was born.

Yet, the efforts of the state-secretary and his committees showed that there was something wrong with agriculture. In the Golden 17th century Dutch agriculture was known for its innovation and progress. After some time, however, the farmers seemed to be resting on their laurels. The Netherlands began to loose ground to England and France. Around 1800 complaints emerged that Dutch agriculture was relatively stagnating or, stronger, that most farmers were considered to be behind the times. In fact, in the 19th century, butter and cheese were produced with the methods of the 17th century. Some gentlemen-farmers were convinced that something had to be done. They started experiments with new methods from England and France, but they failed to pursuade their fellow-farmers to abandon their traditional approach. Later in the 19th century some of these gentlemen founded journals to spread information on agricultural topics. They even managed to organize a congress for rural economics, that met yearly henceforth. These actions were stimulated by comparable developments in other countries, especially Germany. Despite these efforts, the complaints about backwardness remained. Unfortunately, the tide for changes was unfavourable, especially in the years 1850 to 1875. This was the period of high prices and good returns. So, an attitude of laziness developed: why improve if things go well?

The stage changed completely after 1880, when farmers looked for help to get out of trouble. The national farmers-society founded agricultural schools with financial support of the government and took care of a part of the advisory services. On a local level, farmers founded co-operatives both for buying inputs and for selling products (for instance dairy-factories. Other activities were started in the field of mutual insurance and financing). These co-operatives gave the farmers the necessary market-power because they had to cope with big industries.

Until now I have mainly been talking about farmers. Honesty requires, however, to say that the farmers were assisted by local notables who were interested in farming and possessed the necessary managing qualities.

1.7 Conclusions

Now, coming to the end of this lecture, what could be learned from the developments in Dutch agriculture?

First of all, it will be clear that I could give only a very restricted account of Dutch agricultural history. Although a lot of research still can be done on the subject, my comments suggest the following:

1) In the 17th century Dutch agriculture in the sea-districts managed to grow alongside trade and industries, notwithstanding the lack of support by the government or others. Only the tax-collectors knew how to find the farmers. In the land-districts agriculture fell behind, partly because of production conditions - partly because of impeding social systems.
2) Foodshortages or even starvation in the 17th and 18th century were not result of inadmissible food-exports. From the 12th century onwards the Dutch were not self-sufficient in grain production and needed imports to get their daily bread. Evidence suggests that the cause of starvation lies in the field of income distribution and lack of purchasing power.
3) During the French occupation about 1800, the national government tried to regulate agriculture, mainly because she was afraid of food-shortages. This concern disappeared slowly after the occupation came to an end.
4) The steady complaints about backwardness after 1800 seem paradoxical. Was Dutch agriculture - at least in the sea-districts - not a leader in the 17th century and maybe even in the 18th century?
   Certainly, but that does not mean that methods remain the same forever and that there is not any progress in other countries. Clinging to the methods of 1600 meant stagnation and this resulted, in the end, in an old-fashioned agriculture.

5) The reaction to the crisis of 1880 determined the structure of Dutch agriculture until now. The recovery was a result of government regulation mixed with the efforts of farmers and notables together. To put it differently, the government supplied the framework, the farmers and their organizations did the rest.

2. Structural development towards a modern agricultural sector, 1880-1985 1)

2.1 Introduction

Most historians interested in the development of Dutch agriculture believe that in the last quarter of the 19-th century fundamental policy choices were made, which are still now, 100 years later, not without importance. As an answer to the agricultural crisis of the 1880's, caused by the opening up of new areas of production in America and Russia, a choice could be made between:

- a protectionist policy, to keep foreign competitors outside the Dutch market. Such a policy could lead to higher internal prices immediately,
- an open policy, in which Dutch agriculture had to compete with competitors from abroad. Such a competition could only be sustained with succes, when Dutch agriculture would become an efficient producer, which it was not at that time.

The last alternative was chosen, not because the government thought along liberal lines, and not because it was gifted with second sight, but because The Netherlands were in those days an exporting country, with Great Britain as most important market. A protectionist Dutch policy would soon lead to a reaction of the British government, which surely would put restrictions on Dutch exports to England. For a country which was (and still is) heavily involved in international trade in all kinds of agricultural and non-agricultural products, protectionism could have very negative consequences. Besides, a protectionist policy is very expensive for a net-exporting country. Other countries, like Germany, had an other answer to the agricultural crisis. As a net importer of agricultural products, higher internal agricultural prices could be realized easily by putting levies on imports. Higher prices could stimulate production, which was welcomed because it could lead to a more reliable food supply. Germany tried to protect and stimulate its agriculture, not its agricultural processing industry. The reason was that although high agricultural prices were welcomed, the process off industrialization demanded low food prices. Therefore levies were put on raw materials and not on processed agricultural products. This stimulated the Dutch food industry.

The Dutch farmer's organisations were well aware of the risks of protectionism. Notwithstanding this, in a few cases they demanded restrictions on imports. Such measures however, were not taken. To help the agricultural sector in the process of inter-

1) Text of an introduction for students of the Institute of Social Studies in The Hague, 2 October 1985

national competition at low prcices, some government activities were initiated, most of them in the sphere of agricultural education, extension services and research stations. At the same time some specifications were set to guarantee the quality of exported agricultural products.

Until the economic crisis of the 1930's the picture remained more or less the same: not a very detailed government policy regarding the economic functioning of the sector, and stimulation of exports by creating the conditions to compete. The period of the First World War was an exception on the rule because the possibilities of imports decreased and agricultural prices rose sharply. With detailed rules the government prevented the exports of agricultural products, which were needed for internal food-supply and stimulated the production of agriculture. After the First World War government withdrew quickly.

From 1933 on the government pursued a more active policy towards the agricultural sector. In the first instance incidental rules were formulated to regulate production, distribution, land-rents and so on, as the economic crisis created problems both in the agricultural sector and in food supply. Lateron these rules were intergrated in the 'Law on the agricultural crisis'. This title suggested that these governmental actions were only temporary, until the crisis was over. The law contained very detailed rules on maximum quantities to be produced and also price-guarantee measures for most agricultural products.

A comparison shows that in 1880 hardly anything was spent on agricultural policy, whereas in 1937 government spendings in this field already reached 180 mln. guilders or about 4% of national income.

Before the economic crisis was over, so before the government could withdraw from agriculture, the Second World War started. Again the Dutch economy had to be transformed in a war-economy, with detailed rules for production, trade and distribution. The agricultural policy of the 1930's had to be continued.

After the war the government kept in touch with the agricultural sector. It did not take its hands off, as it had done after the First World War.

2.2 The period after the second world war

When the war was over, agriculture and the economy as a whole had to recover. It took several years before all shortages of food were over. At that time about 20% of the total active population was still engaged in agricultural production and an even higher percentage when agricultural processing industry is included.

The (re-) building activities, and the growing industrialization gave good job opportunities for the agricultural workers who wanted to leave the sector. At the same time the discrepancy between income per head in agriculture and in industry drew away a lot of people from agriculture (income per head in agriculture being only about 60% of that in industry). The development of the agricultural workforce is summarized in table 2.1.

Table 2.1 The development of the agricultural workforce, 1899-1983

Year	Agricultural workforce	
	x 1000	in % of total workforce
1899	592	31
1920	641	24
1930	655	21
1947	747	19
1960	447	11
1971	291	6
1983	273	6

Source: Landbouwcijfers, Den Haag, LEI/CBS, various years

Until the post-war period the agricultural workforce increased in an absolute sense, because of the growth of the population. In relative figures it diminished already since the 19-th century. The absolute decrease of the agricultural workforce started after the Second World War and developed in a very rapid way. The policy of the government was formulated clearly in 1948/49 when the minister of agriculture (Mansholt, later an important member of the EC-commission) stated that:

1. Agricultural policy should be directed at improving agricultural productivity and at decreasing production costs,
2. Intensification of agricultural production would be necessary to guarantee the economic well-being of the agricultural workforce,
3. In the long run income support for agriculture should be avoided,
4. Intensive governmental support would be necessary in education, extension service and in infrastructural works.

Notwithstanding the governments' strive for avoiding permanent income support, the existing system of guaranteed prices was continued. This system prevented prices to fall to the low worldmarket level. Every year 'reasonable' prices were calculated

(by the LEI). 'Reasonable' meant that a normal efficient farm of a normal size was to yield an income comparable to incomes in other sectors. This enabled medium- and large sized farms to stay in competition, while at the same time smaller farms had at least troubles to do so.

The disappearance of many smaller farms had of course tremendous consequences for the structure of agriculture. Table 2.2 shows the development of the number of farms per size group.

Table 2.2 Number of farms (x 1000) per size bracket (1 ha and more)

Size	1910	1930	1950	1955	1962	1970	1983	1984
1- 5 ha	110	111	102	94	81	42	29	30
5-10 ha	41	56	64	66	59	39	24	24
10-20 ha	31	41	49	50	55	52	34	33
20-50 ha	24	24	25	24	25	28	31	30
50 ha and more	3	3	2	2	2	3	4	4

Source: Landbouwcijfers, Den Haag, LEI/CBS, various years

One can see that the smallest groups declined first and the larger the farm-size the later the decline set in. At the moment the group between 20 and 50 ha has probably reached its top in absolute figures. The development of average farm-size in The Netherlands reflects the above mentioned decline of the smallest groups. The average farm-size increased from 9.0 ha in 1930 to 9.5 ha in 1950, 10.2 ha in 1962, 12.9 ha in 1970 and 16.4 ha in 1984.

In the tables 2.3 and 2.4 the development of land-use per sizebracket is summarized, showing that nowadays only 4% of the total agricultural area is used by farms between 1 and 5 ha, and 47% by farms between 20 and 50 ha. The land-use in this last size-bracket, showed a relative decrease between 1910 and 1950, illustrating the decline of large farms with hired labour, and increased after 1950, reflecting the growth of the larger family farm. Contrary to many other countries land-use by very large farms (50 ha and more), has been very limited (13% in 1910, 8% in 1950). Only since about 1960 the land-use in the largest size-bracket increases, although number and land-use of farms larger than 100 ha is still very limited (less than 1% of all farms, with 4% of total land-use). The decline of the number of farms with hired labour is more or less reflected in the declining percentage of hired labour in total agricultural labour force which ran from 24% in 1909 to 22% in 1930, 19% in 1947, 17% in 1950, 14% in 1960 and 15% in 1984.

Table 2.3 Land-use (x 1000) per size bracket (1 ha and more)

	1910	1930	1950	1955	1962	1970	1984
1- 5 ha	257	274	263	244	206	114	78
5-10 ha	287	387	466	482	436	290	173
10-20 ha	427	567	682	701	763	737	481
20-50 ha	703	696	704	696	704	794	939
50 ha and more	237	185	182	158	163	198	338

Table 2.4 Land-use per size bracket (ha and more) in % of total agricultural area

	1910	1930	1950	1979	1984
1- 5 ha	13	13	11	5	4
5- 10 ha	15	18	20	14	9
10- 20 ha	22	27	30	35	24
20- 50 ha	37	33	31	37	47
50-100 ha				7	13
100 ha and more	13	9	8	3	4

Source: Landbouwcijfers, Den Haag, LEI/CBS, various years

The growth of the farm-size meant new demands for the agricultural infrastructure. More and more heavy machinery came into use, demanding better and larger roads and better bearing capacity of soils. Small farms which became part of larger ones had a deteriorating influence on the lay-out of the parcels. The answer to these challenges was land-consolidation. Land-consolidation was hardly carried out in The Netherlands until the 1930's because of lack of money and an inefficient law. In the 1930's the government made a start with unemployed workers. This at least led to some activities in the restructuring of the rural areas. After the war the government started a much more active policy, culminating in a new land-consolidation law in 1954. The direct financial support of the government for land-consolidation projects changed from 20 mln. guilders in 1950 to 80 mln. in 1960 and 230 mln. in 1970. Nowadays about 40.000 ha per annum is reconstructed, at average costs of 8.000 - 10.000 guilders per ha. This costs per ha are much higher than in other European countries, reflecting a very intensive way of land-consolidation.

The use of capital in the agricultural production process increased sharply. Total capital use in agriculture increased from 16 billion guilders in 1957 to 90 billion guilders in 1983.

The development led to an enormous increase in both production and labour productivity. When the level of 1950 is 100, real production value is 139 in 1960, 167 in 1970 and 183 in 1983.

Labour productivity rose from 100 in 1950 to 318 in 1970 and 559 in 1980. Compared with other countries both landproductivity and labour productivity in The Netherlands are very high. Measured in 1975 - US $ the gross value added per worker in The Netherlands in 1980 was $13,700, in West-Germany $7,300, in Japan $1,600 and in the USA $15,100. But at the same time the gross value added per hectare is also high, amounting to $1,785 in 1980, while it was $768 in West-Germany, $1,220 in Japan and $113 in the USA. Therefore the rather small scale of Dutch farms is not really a problem for viability.

2.3 The agricultural policy

2.3.1 Prices

The way in which the agricultural policy in The Netherlands was determined, changed around 1960 when the European Communities came into being. Until that time the policy was formulated by the Dutch government, after that decisions were taken in Brussels. The policy as such remained however more or less the same. After the war Dutch agricultural production had increased so rapidly, that at the end of the 1950's there was a considerable overproduction. As it costed much money to sell these surpluses abroad, the general belief was that the agricultural price policy had to be changed fundamentally.

When the EC started, free trade in a large region came into existence, making it possible to sell Dutch surpluses without levies, quantitative restrictions and so on on the EC-market, or, with financial support of the EC, on the worldmarket.

The price policy of the EC was in a technical sense more or less comparable to the former Dutch policy. An important difference however was that for most memberstates the average price level was set fairly high. For the EC this policy acted as a stimulus for production, as it had acted in The Netherlands before. The growth of production was not an acute problem because the EC was an importing region at that time.

Between 1960 and 1967 Dutch prices were replaced by EC-prices. As can be seen in table 2.5, in that period real prices of agricultural products remained more or less the same, a development which had not been possible if the Dutch government would have had to pay for it herself.

The relatively high level of EC-agricultural prices is at least partly caused by the fact that the production structure in a lot of regions of the EC is much worse than in for instance The Netherlands. For The Netherlands and other favourable production regions the prices were rather high, for the less favourable regions they were hardly enough to earn a living.

Table 2.5 Development of real prices for agricultural products in The Netherlands, 1960 = 100

	1950	1955	1960	1961	1963	1965	1967	1969	1971	1978	1983
Animal production	136	125	100	98	101	102	97	93	85	68	64
Crop production	130	112	100	113	107	105	98	93	97	57	57

Calculated from: Landbouwcijfers, Den Haag, LEI/CBS, various years

In the period between 1960 and now real prices decreased, as the level of production even in the bad regions became higher. This decline of prices was not enough to stop the increase of production. So, the EC became more and more self-sufficient. This caused, and still causes a lot of problems for the continuity of the policy. The agricultural policy of the EC (protection and high prices) was initiated in an importing situation. It is not really possible to continue this policy in a net-exporting situation.

2.3.2 Structure

To make agriculture more efficient and more competitive, the founding fathers of the EC had also planned to pursue structural measures. By structural policy is meant: the reshaping of the economic structure by rural development schemes, infrastructural policy, support for investment by individual farmers, financial support for co-operatives or agricultural processing industries, and so on. This type of policy was already pursued by the individual member countries. On the Community level however it came hardly into being. Only in 1968 and later on in 1972 some smaller plans were decided on. So on a Community level, of the two types of agricultural policy only price policy was decided on. The reason was that without a Communal price policy an open intra-market would be hardly possible, because of the direct impact of (local) prices on production and trade. Structural policy has hardly any influence on the short-term competitiveness of agriculture and does, in the short-term, not disturb the intra-market. For the creation of an open market it was enough to incorporate national policies in some community rules. The consequence was that the memberstates could freely pursue types of structural policy that increased production, while at Community level growth of production made the functioning of the market- and price-policy more and more difficult.

2.4 Some consequences of EC-policy for Dutch agriculture

It is difficult to quantify the impact of the foundation of the EC and its agricultural policy on Dutch agriculture. In a qualitative way some elements can be mentioned.

1. The most important effect was the free entrance to a market with 270 mln. consumers. On this market Dutch agricultural and industrial products could be sold without any levy or other trade barrier. From 1956/59 to 1972/75 Dutch agricultural exports to the EC rose from 2 billion to 12 billion guilders. This opening of the market came at the moment that Dutch national agricultural policy had run into surplus-problems.
2. A second effect was the stimulus on agricultural production by high and guaranteed prices, prices which The Netherlands could not have realized itself. From 1958/59 to 1973/74 the quantity of production grew 66%.
3. A third effect was the growth of animal production in North-west Europe, based on feedstuffs imported from outside the EC. The imports enter the EC through the Rotterdam harbour, leading to a cost advantage for the Dutch animal sector. Between 1958/59 and 1973/74 meat production increased 90%.
4. The relatively high level of education and knowledge of production techniques, partly stimulated by a policy that favoured full-time farming above part-time farming, is one of the elements that made it possible for the Dutch agricultural sector to react properly on the market chances of the EC. This was also favoured by the scale of agriculture. Although the scale of production in agriculture is that of the family-farm, the scale of the other stages, processing, distribution etc. is much larger. Both large private firms and co-operatives had the possibility to penetrate new markets. The Dutch tradition of trading in stead of manufacturing played a role too.

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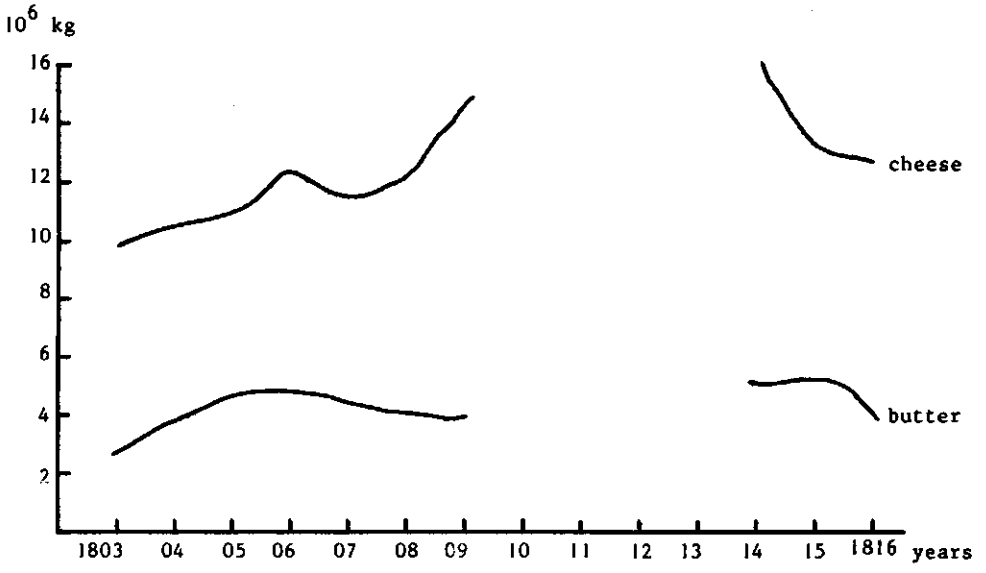
Annex 1

A. Exports of butter and cheese, 1803-1816, 1000 tons



B. Production of cheese in the district of North-Holland x 1000 tons

Year	1707	1755	1785	1795	1804
Production	8,8	8,5	8,1	7,6	9,2