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Summary

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ABSTRACT/REFERAAT

AGRICULTURAL ECONOMIC REPORT 1991; SUMMARY
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This Periodical Report offers a summarized overview of the contents of the Agricultural Economics Report 1991 (244 p.), that is published in the Dutch language.

A general survey is given of the economic situation of Dutch agriculture and horticulture, mainly for the years 1989, 1990 and 1990/91. Among other subjects, attention is paid to the Common Agricultural Policy, the agricultural production in the world, in the EG and especially in the Netherlands, to some aspects of the structure of Dutch agriculture and to the relation between agriculture and the natural environment. Furthermore, the report deals with the development of rentability, incomes, investments and the financial situation of agricultural and horticultural holdings in the Netherlands.

Agriculture/Agricultural Incomes/Agricultural Policy/Agricultural Production/Farm Structure/Netherlands

LANDBOUW-ECONOMISCH BERICHT 1991; SAMENVATTING

Deze Engelstalige Periodieke Rapportage vormt een samenvatting van het Landbouw-Economisch Bericht 1991, dat een overzicht geeft van de economische situatie van de Nederlandse land- en tuinbouw, vooral voor de jaren 1989, 1990 en 1990/91. Daarbij wordt onder andere aandacht besteed aan het EG-landbouwbeleid, de ontwikkeling van de landbouwproduktie in de wereld, in de EG en meer in het bijzonder in Nederland en aan enkele aspecten van de landbouwstructuur en de agrarische milieuproblematiek. Voorts wordt ingegaan op de ontwikkeling van rentabiliteit, inkomens, investeringen en vermogenssituatie van de land- en tuinbouwbedrijven.

Landbouw/Landbouwbeleid/Prijspolitiek/Bedrijfsstructuur/Produktie/Bedrijfsuitkomsten/Inkomens/Financiële positie/Nederland

Contents

Preface

The Agriculture Economic Report is an annual publication, offering a global survey of the economic situation of Dutch agriculture and horticulture. The report contains a summary in English, which is published separately as part of the series "Periodieke Rapportages" (Periodical Reports). The complete report is available only in Dutch.

The report is based on data and contributions stemming from nearly all divisions of the Institute. The coördination and editorship of the report is in the hands of the General Economics and Statistics Division. The final draft of this issue of the report was closed in the course of July 1991.

The Managing-director,

The Hague, September 1991

L.C. Zachariasse

Summary

1. General economic developments

The joint OECD countries attained a lower economic growth in 1990 than in 1989, namely 2.6% as against 3.3%. According to OECD forecasts a further decline will occur in 1991, above all as a result of the German reunification and the Gulf crisis. Whereas for the EC constant growth rates are estimated, for 1991 a fall is expected for among others the USA and the UK. The expectations for 1992 are more optimistic. In 1990 the unemployment percentages in the OECD countries were somewhat lower than in the preceding year, but an increase is foreseen for both 1991 and 1992. The inflation in the joint OECD countries barely changed in 1990, and is expected to be approx. 4.5% in 1991 too. The EC average was somewhat under that figure in 1990.

The Dutch economy developed in 1990 somewhat more favourably than that of many other OECD countries. At over four percent economic growth was fairly high; the unemployment rate fell further and inflation - though picking up - remained well below the OECD average. Just as in 1989 much of the economic growth was caused by higher business investments and more private consumption. Against this, wage costs rose more in 1990 than in a number of years before then. The latter development, added to the higher inflation rate, gives reason for sombre expectations about economic development in 1991 and, in particular, 1992.

The course of events in the years thereafter will depend among other things on the extent to which the EC member states can shape European integration. Though completion of the internal EC market (1992) seems to be well on schedule, there is still a long way to go before realization of both the Economic and Monetary Union (EMU) and the European Political Union (EPU).

2. Agriculture in the world

World agricultural production was two percent higher in 1990 than in 1989. The growth of animal production lagged somewhat behind that of vegetable production, in which above all fibre crops, pulses, cereals and sugar increased strongly in production. As a result of the relatively high cereal production (+4%), world cereal stocks were able to increase again for the first time since 1987. Although agricultural production in the joint developing countries grew more strongly than in the developed countries, food production per head of the population in 1989-1990 in the former increased only slightly (0.3%). In the developing countries of South America and Africa food production per head even fell by an average 1.5% and 2.5% respectively. The prospects for 1991 and following years are rather sombre as regards these countries.

Within the international agricultural forums such deficit problems, however, receive in general less attention than the troubles of trade policy. Although the countries participating in the current round of GATT negotiations had stated that they would clinch matters by the end of 1990, the differences between them proved too great to wrap up this Uruguay round on schedule. In the conflicts about agricultural world trade the USA and the EC in particular were diametrically opposed to one another in December 1990. Not only the 30% reduction of support between 1986 and 1996 offered by the EC, but also and in particular the extremely vague "promises" on the reduction of the export refunds are a thorn in the flesh of the USA.

The reform proposals of the European Commission made public in June 1991 may have the (side-)effect that the GATT discussions can ultimately be concluded with an agreement after all. For the heart of these proposals is to have income support proceed less by way of producer prices and more by direct payment. This would mean among other things that the role of the criticized EC export refunds would be considerably reduced. Much of the international criticism of the Common Agricultural Policy might as a result cease to exist.

3. Agriculture in the European Community

Among other things as the result of production-limiting measures, the annual growth in the volume of agricultural production in the EC since 1984 is less than half that in the preceding ten years (0.8% as against over 2%). Production is thus keeping almost equal pace with internal consumption. The milk quota system has made a considerable contribution to this, but in the vegetable sector too annual growth has been more or less halved.

Development of the producer prices corrected for inflation does not display a trend break of this kind. Just as for many years before, excepted 1989, they fell also in 1990, namely by approx. five percent. Because at the same time inputs became somewhat more expensive, agricultural incomes fell sharply. And yet the level of these incomes was still above the average for the eighties. An analysis of the development of the relative income position in EC agriculture shows that the income gap between agriculture and non-agriculture steadily grew between 1973 and 1988. Evidently the relatively strong increase in labour productivity in agriculture has been insufficient to compensate for the deterioration in the price ratio.

The relative decline in agricultural income is one of the motives behind the above-mentioned proposal of the EC Commission. Another, and at least as important motive is the fear of a further rise in the agricultural budget, which is already regarded as high. Although expenditure in 1989 and 1990 more or less stabilized, for 1991 and 1992 a strong increase is expected. Also because of its findings that much of the expenditure accrues to a minority of farmers, and that the policy reforms of the past years have not had the expected result, the Commission has proposed a drastic change of course. Thus producer prices ought to be reduced, those of cereals even by 35%. The resultant drop in income would have to be compensated for on certain conditions - directed among other things towards control of production and extensification - in the form of direct payments per hectare or per animal. The political discussion is now concentrated chiefly on the conditions for compensation and other problems of implementation. However, it is in keeping with the developments in the policy of recent years that elements of the Commission's proposal gradually acquire a permanent position within the policy instruments.

In 1990 the EC had to make some adjustments to agricultural policy in connection with German reunification. It looks as if it will cost a good deal of trouble and money to adjust the large-scale organized agricultural sector of the former German Democratic Republic to the new situation.

4. Farm numbers and land use in Dutch agriculture

In May 1990 125,000 farms and horticultural holdings were counted in the Netherlands; 98,200 of them were full-time businesses. These numbers mean a fall in respect of 1989 by 1.9% and 2.5% respectively. The number of part-time businesses stayed about the same. This group of farms occurs relatively often in areas that have long had mainly small farms.

From the trend of the number of full-time businesses in the eighties it can be derived that the annual drop in the second half of this period was clearly stronger than in the first half. A broad estimate of the future number of full-time businesses works out for the year 2000 at approx. 80,000, or an annual decrease of an average two percent.

The national cropping plan barely differed in 1990 from that of 1989, except that more grassland has been ploughed up on behalf of arable and vegetable crops. In the years before 1986 grassland was mainly turned into green maize.

Although the total registered area of land under cultivation in 1990 was even somewhat greater than in 1989, for the coming decades a relatively strong decrease is expected. The total area required between now and 2020 for non-agricultural purposes is at any rate estimated at 163,000 hectares. That is eight percent of the present area of land under cultivation. More than one half of these land claims are needed for realization of the Nature Policy Plan.

The prices of both arable land and grassland rose further in 1989/90, but still remained below the level of 1986. Once again there were great differences between regions; the price of land not on lease in the most expensive region (the province North Brabant) was nearly three times as high as that in the cheapest regions (Groningen and Drenthe).

The prices of milk quota also increased further: from an average of *f* 3.75 per kilo in 1989 to *f* 4.49 in 1990, whereas in 1986 only *f* 1.24 was paid. Because in the second half of 1990 a decline in the quota prices set in, continuing at the beginning of 1991, an end seems to have come, at least for the time being, to the strong price increases of recent years.

5. Productive capacity and production structure

The productive capacity of the Dutch agricultural sector - measured in Standard Farm Units 1) - which had been constantly falling between 1984 and 1988, increased somewhat in 1990, just as in 1989, and returned to the level of 1984. The most pronounced growth occurred in horticulture, but the capacity of intensive livestock farming also enlarged somewhat.

The structural changes in dairy farming that have started since the introduction of the milk quota system continued between May 1989 and May 1990. Thus the number of specialized dairy farms further decreased and the number of cows per farm also fell. Against this, the productive capacity and the acreage of larger dairy farms in the Netherlands - with more than 70 cows - increased between 1984 and 1990. On these farms much of the quota cuts has evidently been compensated for by quota acquisition. This was to a less extent the case on the smaller dairy farms.

The difficult position of arable farming in the provinces Groningen and Drenthe can be seen from the relatively great interest in these provinces for the fallow scheme introduced in 1989: nine out of ten applications for the scheme come from these regions. As at the end of 1990 a total of 14,000 hectares was lying fallow. On the participating farms, where on average 16 hectares is laid fallow, not only the area under cereals proves to have been reduced, but also that under pulses, agricultural seeds and oil and fibre crops. From 1988 to 1990 the share of cereals in the cropping plan of these farms fell on average from 27% to 12%, and that of the other crops mentioned from 15% to 4%. The greater part of the land lying fallow is sown with green

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1) A Standard Farm Unit (s.f.u.) is a unit for expressing the size of agricultural production on a basis of standardized net value added per hectare of crops or per animal. For example: 1 dairy cow = 2.5 s.f.u. and 1 ha of sugerbeet = 6.8 s.f.u.

manure crops. For the time being silviculture proves to be a not very attractive alternative.

Horticulture under glass expanded again in 1989-1990. The area under glass increased, the size of the holdings grew, and the process of specialization continued unabated. Within these developments the South Holland Glass District still predominates. Gradually the drawbacks of setting up horticulture under glass holdings outside the large glass centres are becoming less, not least because the provision and exchange of knowledge has strongly developed outside these centres too and at the same time - through the sharp rise of automated data transfer - takes less heed of geographical boundaries.

6. Agriculture and environment

The reduction in the phosphate standards that came into effect at the beginning of 1991 - as part of the legislation on manure - intensified the manure problem. Through this administrative measure the manure surplus increased, the outlet possibilities on deficit farms in surplus regions decreased, and manure selling expenses for producers rose. The policy objective for the reduction of the nitrogen burden of ground water and surface water - a reduction by 50% between 1985 and 1995 and by 75% in 2000 - cannot be attained with this policy, so that supplementary measures are required. For the Veenkoloniën - a region in the northern part of the Netherlands, with an important production of starch potatoes - in particular this will lead to a drop in income.

Incidentally, agricultural environment policy does not relate solely to fertilizer and animal manure, but also to the use of pesticides in the whole of agriculture and horticulture. The possibly considerable consequences of this policy for income require more or less drastic adjustments to farms and holdings.

7. Production and sales

As a result of the considerably lower prices for most products, the production value of Dutch agriculture and horticulture in 1990 was several percent lower than in 1989 (table 1). Above all the products of arable and stock farming became a good deal cheaper. These two branches of farming together represent over 70% of agricultural production value. Of the arable products, the prices of table and seed potatoes fell the most sharply (by nearly 25% and over 12% respectively), while starch potatoes followed the price drop of cereals (over 4%). Milk prices fell in 1990 by nine percent to 73 cents per kilo; that was the lowest level since the introduction of the superlevy. Pig prices also declined in 1990, despite price increases in the first half of that year

Table 1 Development of volume and prices of agricultural and horticultural production

Product	Value mln. Hfl.	Changes in % in relation to previous year					
		volume			price		
	1989 (prov.)	1988	1989 (prov.)	1990 (est.)	1988	1989 (prov.)	1990 (est.)
Arable products	3,680	-1.5	7.2	1.6	14.5	10.7	-9.7
Milk	9,730	-2.3	0.3	-1.0	5.5	2.1	-9.0
Meat and eggs	14,340	-0.8	-3.0	3.5	-2.6	16.6	-7.0
Vegetables and fruit	4,410	4.1	7.7	3.1	-8.1	4.5	3.6
Cut flowers	3,250	4.3	6.5	3.5	2.0	-5.1	3.9
Pot plants	1,880	11.6	11.3	5.7	-3.8	-0.1	4.7
Other horticult. products	1,480	1.4	7.5	12.4	-1.0	-3.2	-4.3
Total/average	38,770	0.4	1.9	2.6	0.8	7.6	-5.0

The production value of poultry meat rose by some ten percent, while that of eggs worked out just a little lower than in 1989. As a result of both volume and price increases for fruit and vegetables, cut flowers and pot plants, the production value of horticulture as a whole was able to increase by some seven percent. Above all in fruit growing higher prices were quoted, while the increase in the production value of tree nurseries and bulb growing was the result of a considerably greater volume.

8. Processing and consumption of agricultural products

More than half of the products of Dutch agriculture and horticulture are processed in the food and beverage industry; in 1989 58% of the products were involved, while in 1980 that percentage was still 63. The majority of the other products (above all from horticulture) are exported in unprocessed form; only some eleven percent are sold directly on the domestic market or used in agriculture and horticulture themselves. Between 1980 and 1990 the gross production volume of the food and beverage industry grew by nearly 20%; that was less than in the rest of the industry, and also significantly lower than the growth in agriculture and horticulture.

In comparison with other industrial sectors, the food and beverage industry has a major share in domestic consumption, but conversely is somewhat less oriented towards export. The high domestic share has fallen in recent decades (from 90% in the sixties to 75% in 1990), but the orientation towards export has increased, at least in the eighties (from 31% in 1980 to 41% in 1990). About three quarters of that export is destined for other EC member states. The strong orientation towards the EC means that the Netherlands has a proportionately high share in the EC market.

9. Imports and exports of agricultural products and foodstuffs

The trade balance of agricultural products and foodstuffs in 1990 was again higher than in the previous year and worked out at 25 billion guilders (Table 2). That came about above all because import prices fell more sharply than export prices. Thus imported cattle feed was over 14% and imported cattle over 20% cheaper than in 1989. Conversely, the import value of horticultural products rose from 3.1 to 3.6 billion guilders, as a result of higher prices and volumes. Thus the import volume of tomatoes increased by over 60% and over 20% higher prices were quoted for apple imports.

Table 2 Imports and exports of agricultural products in 1990

	Value in 1000 mln. Hfl.		Changes in % in relation to previous year			
			world		EC	
	world	EC	volume	price	volume	price
Imports						
Arable products	8.7	6.1	6.3	-7.1	7.4	-3.5
Horticultural prod.	3.6	2.1	13.5	3.4	7.1	4.6
Animal products	5.9	5.3	-1.2	-10.8	-3.2	-10.1
Other agricultural products	15.1	6.5	10.6	-10.0	5.7	-4.1
Total	33.3	20.0	7.4	-8.2	3.7	-4.9
Exports						
Arable products	9.8	6.7	9.3	-1.6	9.2	-2.2
Horticultural products	13.8	11.4	10.8	-0.1	10.3	0.4
Animal products	19.0	15.9	-2.5	-2.7	4.4	-4.3
Other agricultural products	15.7	12.2	8.2	-2.7	7.6	-0.5
Total	58.3	46.2	5.2	-1.9	7.4	-1.9

The increase of the export value came about thanks to a larger volume, in particular of arable and horticultural products. Exports of dairy products to countries outside the EC in 1990 were about one milliard guilders lower than in 1989, a fall of some 14%. Against that, imports of dairy products fell by about the same value. In both cases decreases in both volume and price occurred. A considerable contribution to the rise in total export value was made by the again strong growth in exports of horticultural products, notably of fruit and vegetables to the reunited Germany.

10. Returns and costs of the agricultural sector

The production value of agriculture (arable and stock farming) in 1989/90 was some seven percent higher than in the preceding season. This was entirely due to higher prices, because the volume of production barely changed (table 3). In 1989/90 the average price of the non-factor costs was somewhat higher than that in the preceding year. However, the volume fell by 2.5%, among other things because of the eight percent lower use of fertilizer.

As a result of the favourable development of both the returns and the non-factor costs, the net value added could increase strongly. This also applied to the percentage of cover, which expresses the ratio between the net value added and the factor costs. This figure improved from 66 in 1988/89 to 82 in

Table 3 Returns and costs of the agricultural sector (excl. horticulture)

	Value mln. Hfl.			Changes in % in relation to previous year			
				volume		price	
	1988/89	1989/90 (p)	1990/91 (est.)	89/90 (p)	90/91 (est.)	89/90 (p)	90/91 (est.)
Returns	25,290	27,150	25,490	0.5	3.0	6.5	-9.0
Non-factor costs	17,730	17,420	17,050	-2.5	2.0	0.5	-4.0
Net value added	7,560	9,730	8,440	8.0	5.0	19.5	-17.5
Factor costs *)	11,400	11,780	12,190	-2.5	-1.0	6.0	4.5
Total costs	29,130	29,200	29,240	-2.5	1.0	3.0	-1.0

*) Revised calculation, not comparable with preceding years; costs of land are calculated on a tenancy base.

1989/90, despite the rise in the amount of factor costs by over three percent. The latter was the result of higher interest rates, more expensive capital goods and higher wage costs.

The downward trend that the non-factor costs in agriculture have displayed since 1983/84 also continued in 1990/91: this time it was entirely the result of lower prices. Cattle feed, which had again become cheaper, made a major contribution to this. Breeding material and fertilizers also fell in price. Because the production value in 1990/91 was considerably lower than in 1989/90, the net value added decreased. Nevertheless, this remained well above the 1988/89 level (table 3). The factor costs, however, in 1990/91 rose as much as the year before, so that the percentage of cover fell back to 70.

11. Returns and costs of the horticulture under glass sector

The production value of horticulture under glass in 1989 exceeded the limit of seven milliard guilders, despite the on average somewhat lower prices than in 1988 (table 4). In the rise in non-factor costs too the greater volume was the deciding factor, which is bound up with the considerable increase in production and the switch to substratum cultivation. As a result the net value added hardly changed on balance. Because the amount of factor costs increased by approx. 13% through rises in both price and volume, the percentage of cover deteriorated from 98 to 88. In the cultivation of vegetables under glass the result differed in a positive sense from the average for the sector.

Table 4 Returns and costs of the horticulture under glass sector

	Value in mln. Hfl.			Changes in % in relation to previous year					
				volume			price		
	1988	1989	1990 (est.)	1988	1989	1990 (est.)	1988	1989	1990 (est.)
Returns	6,740	7,105	7,655	7.5	6.5	4.0	3.5	-1.0	3.5
Non-factor costs	4,255	4,570	4,990	4.0	7.5	2.0	4.5	0.0	7.0
Net value added	2,485	2,535	2,660	14.0	5.5	8.5	-15.0	-3.5	-4.0
Factor costs	2,545	2,880	3,145	2.0	6.0	3.5	0.0	6.5	5.5
Total costs	6,800	7,450	8,135	3.0	7.0	2.5	3.0	2.5	6.5

The results in 1990 did not differ much from those in 1989. Against a once more somewhat stronger growth of production value (+8%), both non-factor costs and factor costs rose. In all cases price increases and volume growth contributed to this. In the price increases on the cost side those of energy (18%) and labour (6%) in particular were important. This led to an improvement in the net value added by nearly five percent, but also to a further fall in the percentage of cover to 85.

12. Profitability of farms and horticultural holdings

The trend of farm profitability naturally is in close agreement with the developments at sector level. On the average farm (arable and stock farming) an entrepreneur's income of nearly 79,000 guilders was earned in 1989/90, an increase of over 40%. The differences between the types of production and between farm sizes were admittedly considerable, but the income improvement occurred almost all along the line (Table 5). Only in dairy farming did the entrepreneur's income remain at the - historically high - level of 1988/89. The most striking improvement occurred in intensive livestock farming. The operation in this type of production in 1989/90 was on average amply cost-effective, as it also was in pig feeding, despite the higher prices of piglets. As regards both pig keeping and poultry farming one has to go back quite a few years to encounter comparable results. As

Table 5 Average entrepreneurs income on farms on some groups of horticultural holdings (in 1000 guilders)

	1986/87	1987/88	1988/89	1989/90	1990/91 (est.)
Dairy farms					
- larger farms	58.1	75.7	91.7	91.4	60.0
- smaller farms	22.7	27.2	41.1	39.5	29.0
Intensive livestock farms					
- larger farms	40.1	13.1	23.8	116.0	85.0
- smaller farms	26.6	4.0	9.4	42.2	35.0
Arable farms					
- larger farms	57.8	3.3	48.4	88.9	55.5
- smaller farms	33.5	7.3	21.7	40.7	19.3
Horticultural holdings *) with mainly:					
- vegetables under glass	47.4	111.8	73.9	81.2	91.5
- cut flowers under glass	58.6	81.8	91.8	56.6	46.1
- pot plants under glass	93.7	96.7	115.0	112.8	125.5

*) 1986/87 = 1986, etc.

a result of the sharp improvement in the returns-cost ratio, also the entrepreneur's income on arable farms increased strongly.

For most types of production the estimates for 1990/91 point to a clear decline in operating results. The ratio of returns and costs of the average dairy farm deteriorated by approx. nine percentage points, while in arable farming a decline by some 12 points occurred. Comparatively speaking, the entrepreneur's income on smaller dairy farms (fewer than 158 s.f.u., but more than 79 s.f.u.) maintained its level better than that on the larger farms. That did not apply to the smaller arable farms, and not at all to those in the Veenkoloniën. There the entrepreneur's income has for years been far below the average and for the third time in five years the return from labour per entrepreneur was negative. The decline in entrepreneur's income on the average intensive livestock farm relates mainly to pig keeping: in poultry farming a further improvement in income occurred in accordance with the estimates in 1990/91 too.

The entrepreneur's income of the average glasshouse grower fell from 1988 to 1989 from 87,000 guilders to rather less than 74,000 guilders. Through an increase in the balance of interest calculated and paid, and of the calculated wage of the entrepreneur, the net operating result was, for the first time since 1986, again negative. The deterioration was entirely for the account of the cut flower holdings, and then in particular for the growers of carnations, chrysanthemums and gerberas, which were low-priced that year. On the average vegetables under glass holding the entrepreneur's income increased, whereas that on the pot plant holdings fell only slightly (Table 5). The estimates for 1990 point to a further decline on the average cut flower holding, whereas for pot plant growing and (again) for vegetables under glass holdings a clear improvement in income is estimated.

The operating results of the other horticultural holdings display a very varied picture. In comparison with the preceding year, 1989 was a very good year for the average mushroom grower: the entrepreneur's income rose from over 68,000 guilders to nearly 93,000 guilders. However, for 1990 a decline is estimated to below the 1988 level. Substantial income improvements in both years occurred in outdoor vegetable growing and fruit growing. In the tree nurseries the downward trend of the results continued to a limited extent in 1989. In that year the bulb growers were faced with a much stronger decline, but they displayed a limited recovery again in 1990.

13. Income and financing of farms

As a result of the improvement in operating results in above all arable and pig farming, the family income from the farm on the average farm in 1989/90 was nearly 40% higher than in 1988/89 (table 6). With this increase a level not gained previously was

Table 6 Income, savings and investments on farms (x 1000 guilders per holding)

	1986/87	1987/88	1988/89	1989/90	1990/91 (est.)
Family income from farm	64.5	61.0	81.7	113.5	84.0
Total family income	78.2	75.2	97.9	131.5	101.0
Disposable income	64.9	61.0	85.6	119.9	84.0
Savings	14.7	7.3	32.7	62.8	27.0
Total own financial resources	51.2	43.9	73.2	104.5	n.a.
Increase in outside capital	15.3	3.1	8.7	-1.1	n.a.
Gross investments in holdings	60.9	46.3	70.6	76.4	n.a.

attained. There were, however, considerable differences in the level of farm income between the various types of farm. On the intensive livestock farms this income, at over 130,000 guilders on average, was the highest, and on the arable farms, with over 90,000 guilders, the lowest. Of the disposable income of all farmers of on average nearly 120,000 guilders, over half was saved. Through the high savings the total amount of available own funds for financing came to 6.5 milliard guilders, or nearly 105,000 guilders per farm (table 6). On account of the favourable financial situation the total amount of funds made available by outsiders (chiefly banks) could be reduced somewhat on balance.
A large part of the available funds was used for investments, which in 1989/90 therefore rose 8% in respect of the preceding year. A rather considerable additional amount was invested mainly in machinery and equipment, as also in milk quota and livestock.

For 1990/91 the income picture is less favourable; a decline in income and savings on the average farm to more or less the 1988/89 level is estimated (Table 6). The decline was the strongest on the arable farms, where the average family income from the farm fell to approx. 60,000 guilders (-35%). The decline was the least (-20%) on the intensive livestock farms, so that the average farm income still remained above 100,000 guilders. The dairy farms occupied a position in the middle as regards both percentage of decline (-30%) and estimated income level (over 80,000 guilders).

14. Income and financing of horticulture under glass holdings

In horticulture under glass the average family income per entrepreneur in 1989 was nearly 13% lower than in the year before

Table 7 Income, savings and investments on horticulture under glass holdings (x 1000 guilders per entrepreneur)

	1986	1987	1988	1989	1990 (est.)
Family income from holding	71.4	110.2	100.9	87.9	90.0
Total family income	86.2	124.1	113.7	101.3	104.0
Disposable income	65.3	103.2	86.6	71.7	75.0
Savings	12.0	51.3	31.0	15.1	19.0
Total own financial resources	94.6	106.0	97.8	88.5	n.a.
Increase in outside capital	-30.3	-12.3	38.2	56.6	n.a.
Gross investments in holdings *)	83.1	100.0	167.3	179.4	n.a.

*) 1000 guilders per holding.

(table 7). The decline in income was the strongest (nearly 30%) on the cut flower holdings, which, with an average amount of 77,000 guilders per entrepreneur, also attained the lowest holding income of the three groups of horticulture under glass holdings. On the pot plant holdings the average holding income fell by about 20% to over 108,000 guilders per entrepreneur. On the vegetables under glass holdings an increase of a few percent occurred and on average a family income from holding of in excess of 91,000 guilders was realized.

Of the average disposable income of all glasshouse growers of nearly 72,000 guilders, over 15,000 guilders was saved in 1989. That was about half of the 1988 figure. This resulted in a reduction of about 10% in the amount of own funds available. However, much more outside capital was additionally borrowed than repaid, so that on balance 12% more funds nevertheless became available. A large part of these funds was used for investments, which in 1989 were nearly 8% higher than in the previous year. Above all investments in glasshouses increased strongly, namely by over 50%. With the mentioned increase, total investments of the horticulture under glass sector came, in real terms, back on the high level of some ten years ago.

The income situation in horticulture under glass in 1990 does not differ much on average from that in 1989. An increase of a few thousand guilders has been estimated both for incomes and for savings (Table 7). This increase was the result of an improvement in income on the vegetables under glass holdings and pot plant holdings (6% and 10% respectively) on the one hand and a further decline by 8% on the cut flower holdings on the other.