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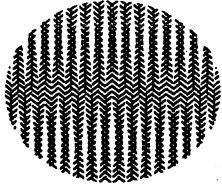
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CAP REFORM AND DIRECT SUBSIDIES TO FRENCH FARMS

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Abstract

Based on the information of the French Agricultural Data Network (FADN), this article analyses, in the first part, the distribution of farm subsidies in France before and after the CAP reform (between 1991 and 1995). In the second part, we evaluate the level of subsidies for three types of farming (cereals and crops farms, milk farms, cattle farms) by taking the economical performance into account. In the third part, we have tested a possible scenario for the limitation of the direct subsidies per agricultural worker. In this respect, we have assessed a limited amount of direct subsidies (Income Direct Support Equivalent = IDSE) and we have decided on three limitation thresholds.

KEY WORDS : COMMON AGRICULTURAL POLICY - DIRECT SUBSIDIES - LIMITATION - INCOME - ECONOMIC PERFORMANCE - FRENCH AGRICULTURE - FADN.

Introduction

The CAP reform, adopted by the Council of the Agricultural Ministers on 21 May 1992, caused great changes in the support system to the farming sector. They decided on a substantial price reduction, compensated by direct subsidies to the farms. This decision maintained public support to agriculture, organizing a transfer of the support system from the consumers to the taxpayers (OECD 1995). While maintaining the three founding principles of the CAP (one market for all EEC countries, Community preference and financial solidarity), the new ways of conducting the common cereals and beef markets organisations aimed at giving a more important role to the market in the production direction. The Community's authorities made it a condition that in order to get subsidies, farmers must respect the rules concerning limitation of production (setting aside part of the COP area, stock-density levels for cattle) ; thus, they wanted to reach a double goal : adapting supply to demand and limiting the agriculture support costs. This new support system strengthened in all European countries the role of direct subsidies in the regulation of the farming sector (Lehmann, Popp, Stucki, 1992). It underlined the determining contribution of public aid in the agricultural income and questioned the economists in the short term on the changes brought in the subsidies distribution and the efficiency of farms, and in the longer term on the equity of the public aid distribution and on the economic meaning of these transfers (compensatory payment for income guarantee or compensation for environmental protection by farmers).

Based on the information of the French Agricultural Data Network (FADN) representing the "professional farming" ¹, this article intends in the first part to show how the CAP reform managed to greatly change the support system to French farms between 1991 and 1995. In the second part, the investigation will try to assess for France as a whole (in three production directions : cereals and crops, dairy farms and cattle farms) the role of the new distribution of subsidies ; the farms will be classified according to their economic performance. In the third part, we have tested a possible scenario for the limitation of direct subsidies per agricultural worker. In this respect, we have assessed a limited amount of direct subsidies (Income Direct Support Equivalent = IDSE) and we have decided on three limitation thresholds.

1- Direct subsidies before and after the CAP reform

In the early 70s, the EEC created direct subsidies for cattle reared in geographically disadvantaged areas, in order to compensate for the low incomes of farmers in these areas. This system of direct subsidies gradually extended to the whole cattle (suckler cows and male cattle subsidies) and the sheep. Before the 1992 reform, the distribution of direct subsidies did not depend on income criteria (Hill, 1995). Nevertheless, they tended to favour the less profitable farms, handicapped by their activity (sheep, cattle) or their location (disadvantaged areas). These subsidies were distributed step by step ; they expressed the mutations that had taken place in the last 25 years, as well as the political will to attenuate the income difficulties some farms

had had to face. The comparison of the direct subsidies received per farm before and after the reform clearly enlightened the extent of the change that had taken place in the regulation of the farming sector.

In 1991, the direct subsidies² only represented a small part (21 %) of public expenses directed to productive farming. The support for the prices of the main agricultural products (intervention system, exports refunds, storage of surpluses) was four times higher than direct subsidies (Hairy, La Villosoye, 1994). A distribution based on production sectors shows the importance of animal subsidies³, which represent two thirds of the farming subsidies. Direct subsidies were not given according to income criteria, yet the distribution system made it possible to balance the revenues. These direct transfers were essential for maintaining a number of farms, especially stock farming in disadvantaged areas. Even if they have a real compensating effect, the direct subsidies cannot offset the great income gaps between holdings and between regions (Bazin, 1994).

With the CAP reform, there was a general rise in the amount of direct subsidies per farm and a new hierarchy in the level of aid among regions (Colson, Chatellier, 1996). In national average and for all production directions, the average direct subsidies amount rose from 22,000 FF in 1991 to 109,000 FF in 1995 (Table 1).

Table 1 : Economic results and direct subsidies in 1991 and in 1995 (in 1,000 FF per farm)

	1991	1995
Farms	526 100	428 700
Gross Farming Excess (GFE)	224	305
Farming Disposable Income (FDI)	92	148
Total direct subsidies	22	109
- including animal direct subsidies	14	26
- including vegetable direct subsidies	1	77
- including other direct subsidies	7	6
Direct subsidies / ha (usable agricultural area)	0,5	1,8
Direct subsidies / agricultural work unit (AWU)	13	61
Direct subsidies / gross farming excess (%)	10 %	36 %
Farming disposable income, no direct subsidies	70	39

Sources : FADN France, sliding sample 1991-1995 / INRA Nantes

The average amount of direct subsidies per hectare usable agricultural area (UAA) is higher in crops regions than in stock farming areas. The calculation per agricultural work unit deepened the gap in favour of the crops regions where the rhythm with which the farms increased their surfaces has been extremely high in the last years. The difference that had existed in favour of the disadvantaged regions is vanishing. Although the compensation

payments for geographic handicaps have been revaluated, they only represent 4 % of the 1995 direct subsidies to French farms, as against 14 % three years earlier.

Direct subsidies, which represent on average one third of the gross farming excess of the French farms and over two thirds of their farming disposable income, have played their part perfectly, compensating the fall of guaranteed prices for cereals and beef. The economic results are even largely higher than the simulations (Blogowski, Boyer, 1993). The development of market prices that was more favourable than expected, and the adapting of farms (increase in size, reduction of the costs of production) caused the increase in income noted between 1991 and 1995. The average amount of direct subsidies per farm (109,000 FF) and per work unit (63,000FF), which was closely bound to the economic size, and thus to the farming income hides great differences between the production types.

Table 2 : Distribution of farms according to the amount of direct subsidies per agricultural worker

	Less than 50 000 FF	50 000 to 100 000 FF	100 000 to 150 000 FF	More than 150 000 FF	Total
Total number of farms	218 400	103 900	48 400	58 000	428 700
including : cereals and crops	15 700	17 900	17 300	42 000	93 000
including : dairy farms	61 800	13 500	800	100	76 200
including : cattle and beef	6 300	19 700	12 000	4 600	42 500

Sources : FADN 1995 / INRA Nantes

A study into each production type shows that the farms which specialize in cereals and crops (farming types 11+12) are highly dependent on direct subsidies, 45 % of them receive an average amount of direct subsidies higher than 150,000 FF per agricultural work unit (Table 2). The distribution is completely different for dairy farms (farming type 41), 81 % of them receiving less than 50,000 FF direct aid per worker. The beef holdings (farming type 42) hold an intermediary position, as for 75 % of them, the amount of direct aid per agricultural worker is between 50,000 FF and 150,000 FF.

2- Direct subsidies and economic performances

In a situation, in which the potential development of today's public support to the farming sector is questioned, it is important to assess if the most successful farms would be able to do without the compensatory subsidies created in 1992 (Colson, Chatellier, 1996). This question largely depends on the future evolution of market prices and on the ability of farms to adapt to the new situation (Boyer, 1996). As we cannot make reliable hypotheses in these fields now, we have only considered the weight of direct subsidies on the revenue of farms for each category of economic performance. In our investigation, we have used a five-category typology, based on the combination of four result ratios, as follows :

Method : Defining the categories of economic performance

The following typology is based on the combination of four result ratios : (i) the production efficiency (gross added value / gross output), which allows us to show the internal efficiency of the production system. (ii) The ability to cope with the loan repayments (debt service / gross farming excess), which assesses the weight of financial charges (financial costs and repayment of loan capital). (iii) The income per family worker (farming disposable income / family work unit), which is one of the key-indicators of the future of the farms. (iiii) The ability of farms to self-finance new investments (net self-financing / total assets), which includes the national insurance contributions paid by the employer, and all that the family needs to live from day to day.

For each of these four indicators, the position of a farm compared with the medium value allows us to assess its performance in relation to the other farms in the same group. Thus, each farm (j) gets a mark (N_j) corresponding to the sum of the marks (n_{ij}) which characterizes its position compared with the medium value (M) of each of the four ratios (r_i). The mark equals zero if the farm's position is bad ⁴ ($n_{ij}=0$ if $r_{ij} \leq M_{ri}$) and equals 1 if it is good ($n_{ij}=1$ if $r_{ij} > M_{ri}$). The adding of the marks ($N_j = \sum n_{ij}$) allows us to define five categories in order to characterize the economic performance : "very weak" (cat.1) when $N_j=0$; "weak" (cat.2) when $N_j=1$; "medium" (cat.3) when $N_j=2$; "high" (cat.4) when $N_j=3$; "very high" (cat.5) when $N_j=4$.

The distribution of the farms into five categories once more underlined the big gaps existing within the French farming sector. These differences, which were not related to the age of the farmer or to his educational level, mostly resulted from the joint effects of the gaps existing in technical efficiency and in work productivity on the one hand, and of scattered financial charges on the other hand. In 1991, the direct subsidies (10 % of the gross farming excess in average) generally had a compensating effect on the income inequalities for the "weak performance" farms, in which the cattle and sheep farms from disadvantaged areas took a proportionally larger part (Table 3).

As against the results of the 1992 simulations on the same FADN sample, the CAP reform did not seem to have had yet a real income distributing effect in favour of the economically weakest farms. The former income hierarchy was maintained and the 1995 gross farming excess for all performance categories was by far higher than in 1991. The part of direct subsidies in the income increased in the considered five categories and the dependence on public support remained bigger since the economic performance was weak. Yet the average aid amount per farm (from 78,000 to 124,000 FF according to the categories) covered a very strong scattering within each category (Table 3).

Table 3 : Economic results and direct subsidies in 1991 and 1995 according to the economic performance categories (all types of farming, in 1,000 FF per farm).

	Economic performance categories					Total
	Very weak [1]	Weak [2]	Medium [3]	High [4]	Very High [5]	
Gross farming excess 1991	125	162	218	275	330	222
Farm disposable income 1991	5	33	78	136	198	89
Direct subsidies 1991	30	26	23	19	14	22
Direct subsidies / GFE 1991	24 %	16 %	10 %	7 %	4 %	10 %
Gross farming excess 1995	154	210	310	391	461	305
Farm disposable income 1995	27	67	142	216	296	148
Direct subsidies 1995	104	106	124	119	78	109
Direct subsidies / GFE 1995	67 %	50 %	40 %	30 %	17 %	36 %
FDI 1995, no direct subsidies	- 77	- 39	18	97	218	39

Sources : FADN France, sliding sample 1991-1995 / INRA Nantes

In 1995, the average income without direct subsidies was negative for the typology's first two categories. Yet, it remained positive in the group of the most successful farms, where more farms had not been affected by the changes due to the reform (horticulture, viticulture, vegetable cropping). The consequences of a potential deletion of the compensatory payments could only be assessed in the study into the production directions most concerned by these aids.

2-1- Cereals farms cannot do without direct subsidies

From 1992 onwards, the farms specialized in cereals and crops (22 % of French farms) benefited from higher market prices than expected when the reform was decided. The fall in the incomes that had been forecasted in the simulations did not take place. As the cereals compensatory payments were fixed⁵ and as the farmers adapted quickly and efficiently, the farms (especially the most successful ones) benefited from a rise in their annual income.

The amount of direct subsidies represented less than 5 % of the gross farming excess of crops farms in 1991, whereas it corresponded to over 58 % in 1995 (94 % of the GFE for category 1 and 43 % for category 5). With an average subsidy of 216,000 FF per farm, this amount, which was considerably higher than in the other productions, greatly rose in relation to the economic performance. Actually, the most successful farms were the slightly larger ones and these were more numerous in the areas where the production reference for cereals yields were the highest (Table 4).

Table 4 : Economic results and direct subsidies in 1991 and 1995 according to the economic performance categories (farming type "cereals and crops", in 1,000 FF per farm)

	Economic performance categories					Total
	Very weak [1]	Weak [2]	Medium [3]	High [4]	Very High [5]	
Gross farming excess 1991	184	190	257	343	352	266
Farm disposable income 1991	6	25	81	147	177	87
Direct subsidies 1991	17	15	12	13	10	13
Direct subsidies / GFE 1991	9 %	8 %	5 %	4 %	3 %	5 %
Gross farming excess 1995	198	228	385	478	600	373
Farm disposable income 1995	43	80	173	258	351	177
Direct subsidies 1995	186	170	229	241	257	216
Direct subsidies / GFE 1995	94 %	75 %	60 %	50 %	43 %	58 %
FDI 1995, no direct subsidies	- 143	- 90	- 56	17	94	- 39

Sources : FADN France, sliding sample 1991-1995 / INRA Nantes

Although 1995 was already a favourable year, as far as cereals market prices were concerned, the value of direct subsidies represented in average more than the income. This dependence on public aid was particularly strong for the farms belonging to the first three categories. Yet, today even the most successful cereals farms could not do without the subsidies if they want to keep a balanced financial situation.

2-2- Dairy farms got high indirect aid through quotas

The average disposable income of dairy farms (17 % of all French farms) increased between 1991 and 1995 (+ 68 %) in the same proportions as cereals farms. This development is due to the joint effect of important reorganisations (enlargement, increase of the average quota), of the maintaining of market prices (cereals and beef) and of the creation of subsidies on the acreage under home-consumed cereals and maize silage (Table 5).

Table 5 : Economic results and direct subsidies in 1991 and 1995 according to the economic performance categories (farming type 41-"milk", in 1,000 FF per farm)

	Economic performance categories					Total
	Very weak [1]	Weak [2]	Medium [3]	High [4]	Very High [5]	
Gross farming excess 1991	122	151	168	208	223	174
Farm disposable income 1991	22	51	70	105	127	75
Direct subsidies 1991	21	17	18	17	16	18
Direct subsidies / GFE 1991	17 %	11 %	11 %	8 %	7 %	10 %
Gross farming excess 1995	159	207	259	302	321	251
Farm disposable income 1995	40	81	130	175	201	126
Direct subsidies 1995	48	54	57	57	52	54
Direct subsidies / GFE 1995	30 %	26 %	22 %	19 %	16 %	22 %
FDI 1995, no direct subsidies	- 8	27	73	118	149	72

Sources : FADN France, sliding sample 1991-1995 / INRA Nantes

The amount of direct subsidies per dairy farm increased on average from 18,000 FF in 1991 to 54,000 FF in 1995 (in which 60 % were compensatory aid for the vegetable sector). The total amount of subsidies varied slightly according to the economic performance category. Due to their low profitability, the less successful farms depended more on public transfers. Actually, the part of direct subsidies in the gross farming excess represented 30 % for category 1 (as against 17 % in 1991) and 16 % for category 5 (as against 7 % in 1991).

Dairy farms were less dependent on direct subsidies than crops or cattle farms, yet they remained particularly receptive to the variations in milk price. If you consider that consumers indirectly support milk price for about 10 % of its value.- in addition to the direct aid - (see Mac Sharry's project) ⁶, you come to a total amount per dairy farm which is very near the average direct aid received by French farms.

2-3- The cattle sector : direct subsidies make up the whole income

The farms which specialized in beef production represented 9 % of all French farms and were mostly located in the disadvantaged areas. The first consequences of the CAP reform's implementation were particularly favourable to this type of farming, in which the average income per farm rose from 44,000 FF in 1991 (which was a catastrophic year as regards beef prices) to 103,000 FF in 1995 (Table 6). This development led to a sharp tightening of the income hierarchy between cattle farms and the other types of farming. The results followed the trend foreseen in the simulations made three years earlier. But the redistribution effect expected within the economic performance categories was only slight, as the extensification subsidy was available to most cattle farms.

Table 6 : Economic results and direct subsidies in 1991 and 1995 according to the economic performance categories (farming type 42-"beef", in 1,000 FF per farm)

	Economic performance categories					Total
	Very weak [1]	Weak [2]	Medium [3]	High [4]	Very High [5]	
Gross farming excess 1991	79	82	138	163	179	128
Farm disposable income 1991	1	2	49	74	92	44
Direct subsidies 1991	49	45	53	58	55	52
Direct subsidies / GFE 1991	62 %	54 %	38 %	35 %	30 %	40 %
Gross farming excess 1995	114	151	194	237	294	198
Farm disposable income 1995	19	60	99	141	197	103
Direct subsidies 1995	111	120	129	124	144	126
Direct subsidies / GFE 1995	97 %	79 %	66 %	52 %	49 %	64 %
FDI 1995, no direct subsidies	- 92	- 60	- 30	17	53	- 23

Sources : FADN France, sliding sample 1991-1995 / INRA Nantes

Before the CAP reform's implementation, direct subsidies already made up the average income of cattle farms. With the reform, the average amount of direct subsidies doubled (from 52,000 FF to 126,000 FF per farm), but the very strong increase in the average income in 1995 weakened its relative weight (40 % of the GFE in 1991 and 64 % in 1995). The 1995 direct subsidies mostly came from the animal sector (101,000 FF of which 57,000 FF was for suckler cows subsidies and 16,000 FF for male cattle subsidies). The amount of subsidies was higher in the more successful farms because they had more suckler cows (the average herd counted 64 herbivore livestock units in cat. 1 and 92 in cat. 5).

In average as well as for each performance category, the part of subsidies in the gross farming excess was similar for specialized cattle farms (farming type 42) and crops farms (farming types 11+12). However, related to a unit area or a work unit, the average amount of direct subsidies was higher in crops farms (2,300 FF per ha and 140,000 FF per agricultural work unit) than in cattle farms (1,900 FF per ha and 91,000 FF per agricultural work unit). The subsidies were given according to the unit area, directly for the standard aid per ha COP area, and indirectly for the subsidy per head of livestock which varied according to the stock density. Thus, in order to maximize the amount of aid, farmers had to quickly get access to more land as the new evolution of surface area per worker showed (Table 7).

Table 7 : Direct subsidies per ha and per agricultural work unit according to the types of farming (in 1,000 FF) and evolution of the usable area per worker between 1991 and 1995

	Cereals (11+12)	Dairy (41)	Cattle (42)	France
Direct subsidies 1995 / ha	2,3	1,1	1,9	1,8
Direct subsidies 1995 / Agricultural work unit	140	35	91	61
Ha / Agricultural work unit (1995)	60	32	49	33
Variation 1995 / 1991 (%)	22 %	16 %	26 %	22 %

Sources : FADN France, sliding sample 1991-1995 / INRA Nantes

Today the very high levels of direct subsidies to farms are doubly questioned as regards their social acceptability and their economic efficiency. Both questions raise the problem of the opportunity of putting an upper limit to the aid. This solution had already been considered but was put aside when the reform was implemented, (Allanson, 1993).

3- Towards a greater efficiency in the aid distribution

The great increase of direct payments in the farmers' income questions their economic efficiency and therefore the future of the present support system to the farming sector (Buckwell, 1996). Both questions give birth to numerous discussions within the farmers' unions and the European institutions. Different opinions are expressed for example on the necessity of separation between the production volume and the level of support, on the nature of the direct subsidies (on produce, surface, herd, holding, worker) and their justification (economic, social, environmental).

The OECD recognizes various types of direct subsidies to farms : the aid bound to environmental criteria (compensation for geographical handicaps, agricultural-environmental measures), the aids concerning natural calamities, the subsidies for structural adjustments and those designed to stabilize and regulate the incomes (OECD, 1995). The aids compensating falls in price, created with the reform and belonging to the later category, now hold a determining position in the overall support to the farming sector. Based on the units of production factor (hectare and head of livestock) and not on the real production unit, these compensatory aids create a first separation . This separation between the support level and the delivery volume was recognized during the GATT negotiations. Yet, it remains relative, as shows the very close relation between the amount of direct aid per holding and the economic size measured at the gross standard margin ⁷ (r=0.95 for cereals farms, r=0.85 for cattle farms and r=0.65 for dairy farms).

Today, the mechanisms of direct payments distribution prove to be an incitement to quickly increase the size of the holdings and to substitute labour in favour of capital (Guyomard, Mahé, 1994). But it allows the increase of the area per worker unit. As stated in the new US Farm Bill, the next GATT negotiations will probably compel the authorities to really disconnect the amount of aids from the agricultural production volume. After the transition period, they will have to look for a new justification (accepted by the other social classes) for the level of these aids. Farmers are obliged to consider also new criteria in relation to the environment (landscape and natural resources conservation). Recognizing the "multifunctional" role of agriculture will mean that public policies will have to favour employment in rural areas. Considering this prospect, we suppose that a limitation of direct subsidies to the income per agricultural worker (family work or salaried work) would be able to slow down the fall in the number of agricultural workers and to incite to a greater efficiency in using the production factors.

3-1- Evaluation of an Income Direct Support Equivalent (IDSE) per agricultural worker

Considering the present system of direct subsidies distribution, an upper limit to the aids per worker would penalize the holdings with productions getting high subsidies per unit area (oilseeds and high-protein plants) and would not concern farms with quota productions (milk and sugar beets). That is why we proposed to decide on an IDSE (Income Direct Support Equivalent) corresponding to the evaluation of the support brought by direct payments and production quotas. This IDSE, which does not take into account the Community's protection against the global market, can be expressed as follows :

$$IDSE = [\sum_i (\alpha_i P_{di} + \beta_i p_i * v_i)] + [\sum_j (\alpha_j P_{dj})]$$

- α_i = coefficient applied to the amount of direct payments concerning the produce (i)
- P_{di} = total amount of direct payments concerning the produce (i)
- β_i = coefficient applied to the production value of the produce (i) subject to a quota
- p_i = price of the produce (i) subject to a quota
- v_i = volume of the produce (i) subject to a quota
- α_j = coefficient applied to the amount of direct payments concerning specific actions (j) : payments for geographical handicaps, for difficult climatic situations...
- P_{dj} = total amount of direct payments concerning specific actions (j)

Based on the national information of the FADN 1995, it was possible to simulate the effects of an upper limit of the IDSE per agricultural worker thanks to several hypotheses - presented below- for the various coefficients (Table 8). The direct payments per produce for which the limited amount equals the amount actually received by the farmer ($\alpha_i = 1$) are the following ones : compensatory payments on cereals and fallows ; subsidies for maintaining suckler cows and special subsidies to male cattle (including extensification aid) ; compensatory aid to sheep.

Table 8 : Direct subsidies, coefficient applied and the Income Direct Support Equivalent (IDSE)
(in 1,000 FF per french farm, all types of farms)

	Total direct subsidies 1995	Coefficient applied	IDSE 1995
Subsidies to acreages under cereals	47,1	$\alpha_i = 1$	47,1
Subsidies to acreages under high-protein plants	16,9	$\alpha_i = 0,70$	11,9
Subsidies to fallow lands	11,0	$\alpha_i = 1$	11,0
Subsidies to male cattle	5,1	$\alpha_i = 1$	5,1
Subsidies to suckler cows	10,4	$\alpha_i = 1$	10,4
Subsidies to sheep	3,5	$\alpha_i = 1$	3,5
Equivalent subsidy for milk	0	$\beta_i = 0,15$	18,1
Equivalent subsidy for sugar beets	0	$\beta_i = 0,15$	2,3
Subsidies for geographical handicaps	4,1	$\alpha_j = 0$	0
Subsidies for grasslands	2,9	$\alpha_j = 0$	0
Subsidies for difficult climatic situations	0,5	$\alpha_j = 0$	0
Other direct subsidies (national financing)	7,7	$\alpha_j = 0$	0
Total	109,2	—	109,4

Sources : FADN France 1995 / INRA Nantes

A α_i coefficient amounting to 0.70 was applied to the amount of compensatory payments to oilseeds and high-protein plants in order to reach an equivalent to the amount of aid per ha for acreages under cereals. For quota productions (milk and sugar beets), a β_i coefficient amounting to 0.15 was applied to the production value ($p_i \cdot v_i$) : their equivalent subsidy per hectare is similar to that of cattle and cereals productions. The other subsidies for specific actions (geographical handicaps, difficult climatic situations, grass subsidy, aid for restructuring the milk production, various local and regional subsidies) were applied a α_j nil coefficient because their aims are different and generally clearly explained.

We decided on three IDSE thresholds per agricultural worker : 50,000 FF ; 100,000 FF ; 150,000 FF. The simulations show us that in 49 % of French farms, the IDSE is lower than 50,000 FF per worker ; in 25 %, it is higher than 100,000 FF and in 13 %, the IDSE is higher than 150,000 FF (Table 9). The amount of the IDSE is all the higher as the agricultural area, the income and the amount of direct subsidies per hectare are high. The holdings in which the IDSE per worker is higher than 150,000 FF employ on average only a few workers (1.41 AWU) and reach a high income per farm (241,000 FF). On the contrary, the holdings in which the IDSE is lower than 50,000 FF per worker have on average more workers (2.04 AWU) and a lower income (121,000 FF).

Table 9 : Distribution of the holdings according to the amount of IDSE per AWU

	Less than 50 000 F	50 000 F to 100 000 F	100 000 F to 150 000 F	More than 150 000 F	Total
Farms	207 500	113 300	52 500	55 300	428 700
Agricultural work unit (AWU)	2,04	1,62	1,55	1,41	1,79
Usable agricultural area	30	63	89	137	59
Herbivorous livestock unit	19	56	63	34	36
Direct subsidies per farm	41	104	170	317	109
Direct subsidies per ha UAA	1,4	1,7	1,9	2,4	1,8
Total gross output	624	683	870	1 167	740
Gross farming excess	247	280	367	513	305
Farming disposable income	121	136	178	241	148

Sources : FADN France 1995 / INRA Nantes

The hypothesis of an upper limitation of the IDSE to 150,000 FF per worker would entail budget savings⁸ amounting to 8 % of the total direct subsidies (50 billion FF in 1995). These savings would amount to 16 % in the case of a limit at 100,000 FF and to over 30 % if the IDSE are limited to 50,000 FF.

3-2- A differential impact according to the types of production

The cereals and crops farms represent 73 % of the holdings whose IDSE per worker is higher than 150,000 FF, and only 8 % of the farms whose IDSE per worker is under 50,000 FF. In order to make this analysis more precise, a study was conducted on the basis of the economic size on the three types of farms most concerned by the CAP reform (Table 10).

With an average total of direct subsidies amounting to 216,000 FF per farm and an IDSE amount of 203,000 FF, the farms which specialize in cereals and crops are particularly sensitive to the limitation proposals. In the hypothesis of a limitation at 50,000 FF, the average income loss per farm is assessed at an average 100,000 FF (i.e. a reduction of the gross farming excess by 27 % and of the income by 56 %), as against 64,000 FF in the case of the 100,000 FF limit and 38,000 FF in the case of the 150,000 FF limit.

Considering the adoption of an equivalent subsidy on milk production, the average amount of IDSE (97,000 FF) for dairy farms is higher than the amount of direct subsidies (unlike in the other types of production). However, it remains twice as low as that of cereals farms. Actually, most dairy farms are still hardly affected by the limitation measures. As a matter of fact, the limitation at 150,000 FF per worker only concerns 2 % of the farms, as against 13 % for the 100,000 FF limit and 57 % for the 50,000 FF limit. In all 76 100 dairy farms, the average fall in income amounts to 15 % for a 50,000 FF limit and there is no income reduction for the other two hypotheses.

Table 10 : Consequences on the income of the IDSE limitation per worker
(in 1,000 FF per farm)

Types of farms	Economical size	Disposable income	IDSE	Limitation IDSE / AWU		
				50 000 FF	100 000 F	150 000 F
Cereals	Less than 20 ESU ⁷	40	46	- 8	- 1	0
	20 to 40 ESU	107	112	- 53	- 19	- 4
	More than 40 ESU	251	292	- 149	- 104	- 65
	Total	177	203	- 100	- 64	- 38
Dairy farms	Less than 20 ESU	68	41	- 1	0	0
	20 to 40 ESU	115	88	- 18	- 2	0
	More than 40 ESU	224	189	- 44	- 12	- 2
	Total	126	97	- 19	- 3	- 1
Cattle	Less than 20 ESU	58	52	- 6	0	0
	20 to 40 ESU	115	98	- 30	- 4	0
	More than 40 ESU	213	192	- 60	- 20	- 4
	Total	103	91	- 23	- 5	- 1
Total	Less than 20 ESU	56	38	- 3	0	0
	20 to 40 ESU	109	77	- 22	- 5	- 1
	More than 40 ESU	236	181	- 70	- 41	- 23
	Total	148	109	- 37	- 18	- 10

Sources : FADN France 1995 / INRA Nantes

Unlike in dairy farms, the amount of IDSE in cattle farms (91,000 FF) is lower than the amount of direct subsidies (126,000 FF). The 150,000 FF limitation per worker only affects 3 % of cattle farms, as against 18 % for the 100,000 FF limitation and 60 % for the 50,000 FF limitation. The average effects on the income are mainly discernible for the 50,000 FF limitation (-22 %). Only the large farms are really sensitive to the limitation measures.

3-3- Strong sensitivity of the regions specialized in cereals

The differential economic impact of the limitation according to the production types affects the distribution of direct payments among the regions (Doyle, Mitchell, Topp, 1996). A study conducted on the various French regions shows that the areas with a high proportion of cereals and crops farms are actually the most sensitive to the limitation. In 1995, the average amount of direct subsidies per farm was over 150,000 FF in five regions (Ile de France, Centre, Picardie, Bourgogne, Lorraine) and under 50,000 FF in four regions (Provence-Alpes-Côte d'Azur, Languedoc-Roussillon, Rhône-Alpes, Bretagne). The average disposable income per holding exceeds 150,000 FF in the five regions where the level of subsidies is the highest. It is under 120,000 FF in the four regions where the level of aid is the lowest.

The amount of IDSE represents over 140 % of the amount of direct subsidies in Nord-Pas de Calais, where sugar-beet production is particularly strong, but also in Bretagne and Basse-Normandie where milk production is dominant. But it corresponds to 70 % of the amount of

direct subsidies in Provence-Alpes-Côte d'Azur, in Languedoc-Roussillon, Auvergne, Limousin and Midi-Pyrénées, where the aids for geographical handicaps and the grass subsidy play an essential part in the compensation for low incomes.

In the case of a limitation of the IDSE, as proposed in this article, the most affected regions would be the ones with the highest average incomes per holding. That would mean that the holdings with the lowest income per worker would get slight compensation, which could be increased thanks to a redistribution of the budget savings coming from the limitation plan. The hypothesis of a limitation of the direct support per worker - corresponding to stronger separation - would compel the farmers to adapt : they would have to try to reach more efficiency for the production factors and pay more attention to the development of employment.

Conclusion

The aim of the compensatory payments was to attenuate the consequences of the drops in price during the transition period on the income of the more intensive farms, so their amount per ha COP area was dependent on the potential of the region. What's more, the limitation per holding of the aids to the COP area could not be implemented because of the opposition of the farmers' unions. The resulting distribution system is contrary to the principle of separation between the amount of aids and the production volumes. Moreover, through the direct subsidies, this distribution confirms the profits realized thanks to the heterogeneity of the soils' agronomic potential (Loyat, 1994). The continuing after the transition period of this distribution mode would result in a bad distribution of resources and thus in wasting part of the public support system to the farming sector.

Maintaining the various compensatory payments is indispensable to guarantee the survival of most French farms (European Commission, 1996). But this means that new distribution modes have to be created in order to get more equity, but also a stronger separation - that would make the large holdings more efficient. The limitation of aid per worker is one hypothesis of the discussion among others. This debate between the government, the farmers and the taxpayers has just started. The system of aid distribution between farmers and regions depends on its outcome ; it should lay the foundation of a new contract between the farming sector and society.

Notes

1- The FADN is a sample of the accounts of "professional" holdings in France, and in the 14 other member states of the European Union. The 1995 sample is based on 7,232 holdings which represent 428,700 extrapolated production units. The FADN, which takes region, production types and economic dimension into account, gives a good representation of the French agriculture. It seems to be entirely adapted to establish a precise technical, economic and financial diagnosis of the holdings, and to evaluate the CAP reform's consequences.

2- This study is limited to the direct subsidies for the production activities ; the direct subsidies to investments are not taken into account.

3- The direct subsidies distribution between the three mentioned categories was realized as follows : the vegetable sector subsidies are made up of subsidies to acreages under cereals (including maize silage), oilseeds, high-protein plants, set-aside of farmland, and more marginally, the sector's other specific aids. The animal sector subsidies are made up of subsidies for the maintaining of suckler cows herds, special subsidies for male cattle, compensation payments for geographical handicaps and other cattle subsidies (including the grass subsidy). The mention "other subsidies" is made up of compensation payments for difficult climatic situations, other state subsidies and local aids which don't concern the other two mentions.

4- For the debt costs indicator (debt service / gross farming excess), a favourable position for the farm corresponds to a mark lower than the medium.

5- In opposition to the compensatory payments on acreages under oilseeds, which vary according to the market price evolution of oilseeds.

6- Contrary to the first reform draft, presented in 1991 by R. Mac Sharry, who expected a fall in milk price by 10 %, compensated by the creation of subsidies to suckler cows according to the stock density thresholds, dairy farms still get strong support from the consumers (high price of the produce) and a limited support from the taxpayers (direct aid) compared to the cattle farms.

7- The standard gross margin of a holding corresponds to an assessment of its potential value added. It is measured in Economic Size Units (one ESU equals 1,200 Ecus) and determined applying coefficients (different coefficients for the different regions) to the production units (surfaces and herd). This standard gross margin allows us to realize comparative studies among farms with different productions and located in different regions.

8- These budget savings could finance actions for employment in the French farming sector.

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