Annexe 9 du rapport d'évaluation

SET ASIDE COMUNITARY MESURES EVALUATION

REGIONAL REPORT

Castilla la Mancha

SPAIN

DEPARTAMENTO DE PROYECTOS Y PLANIFICACIÓN RURAL

ESCUELA TÉCNICA SUPERIOR DE INGENIEROS AGRÓNOMOS

UNIVERSIDAD POLITÉCNICA DE MADRID

GENERAL INDEX

2. REGIONAL CONTEXT 5

2.1. *Synthetic description of the region at the agricultural level* 5

2.1.1. Climate 5
2.1.2. Population 5
2.1.3. Types of holdings 5
2.1.4. Irrigation land 6
2.1.5. Main regional farm productions 6
2.1.6. Place of the COP over the period 1985 – 1999 7
2.1.7. Fallow 7

2.2. Set Aside implementation context 8

2.2.1. Implementation data 8
2.2.2. Characteristics of the Regionalisation plan. Castilla La Mancha 9
2.2.3. Traditional fallow Rate 11

3. ANSWER TO QUESTIONS 411 TO 421 12

3.1. Question 4.1.1: 12

3.2. Question 4.1.2: 17

3.3. Question 4.1.3: 19

4. ANSWER TO QUESTIONS 422 TO 434 21

4.1. Question 4.2.2: 21

4.2. Question 4.3.1: 24

4.3. Question 4.3.2: 26

4.4. Question 4.3.3: 28

4.5. Question 4.3.4: 31

5. ANSWER TO QUESTIONS 4.4.1. TO 4.4.4. REGARDING ENVIRONMENTAL IMPACT. 34

5.1. Question 4.1.1 34

5.2. Question 4.4.2 36

5.3. Question 4.4.3 38

5.4. Question 4.4.4 40

6. ANSWER TO QUESTIONS 451 AND 452 REGARDING REGLULATION COMPLEXITY AN ITS APPLICATION. 42

6.1. Question 4.5.2 42

7. ANNEXES ..... Erreur ! Signet non défini.

FIGURES INDEX

Figure 1 Rain evolution (mm) . Ciudad Real. 5
Figure 2 Share of SAU in ha by class of holdings. 1987 – 1997 (source INE) 6
Figure 3 Holdings medium size evolution (source INE) 6
Figure 4 Irrigation land Evolution. Castilla La Mancha and Spain. 6
Figure 5 Main regional farm productions 6
Figure 6 Surface evolution (ha). Cereals, Oil seeds and Protein crops Castilla La mancha 1985 –1999. 7
Figure 7 Production evolution (ha). Cereals, Oil seeds and Protein crops Castilla La Mancha 1985 –1999. 7
Figure 8 Fallow surface evolution (ha) 1980 – 1999. Castilla La Mancha. 8
Figure 9 Surface COP evolution and distribution by crops. 13
Figure 10 Evolution of cereal surface area by species 14
Figure 11 Evolution and distribution of protein products surface area 14
Figure 12 Evolution and distribution of COP surface area by major species. 15
Figure 13 Evolution and distribution of COP production. 16
Figure 14 Evolution of fallow land and other unused lands and set aside of land 18
Figure 15 Evolution of no food surface compared compulsory set aside rate 19
Figure 16 Current sell prices of COP plus aids (€/t) 23
Figure 17 The evolution of yields of the three types of COP crops during the period 85-99. 28
Figure 18 Relation between yields and spring rain. 1985-1999 29
Figure 19 Cereal yield evolution. 30
Figure 20 Cereals surface evolution by type of holding and holding medium size evolution. 32
Figure 21 Labour land prices evolution at Castilla la Mancha. 32
Figure 22 Use of nitrogenous fertilizers (t of N) Spain 38

TABLES INDEX

Table 1 Climatological data. Castilla La Mancha. Average 1961-1990.....5
Table 2 Fallow surface and compulsory set aside rate in the period 1985 to 1999.....8
Table 3 Set aside implementation data. Castilla La Mancha. Dry land.....8
Table 4 Set aside implementation data. Castilla La Mancha. Irrigation land.....9
Table 5 Base Area Castilla La Mancha (has) 9
Table 6 Yield cereals distribution. Mean value. Castilla La Mancha 10
Table 7 Regionalisation plan bases. Castilla La Mancha. 1.....10
Table 8 Regionalisation plan bases. Castilla La Mancha. 2.....10
Table 9 Regionalisation plan bases. Castilla La Mancha. 3.....10
Table 10 Regionalisation plan bases. Castilla La Mancha. 4.....11
Table 11 Average cop production by groups of crops 16
Table 12 Percentage of no food production at set aside land. Castilla la Mancha.....19
Table 13 Percentage of activity variation at surveyed holdings due to set aside.....23
Table 14 Base criteria to manage surveyed holdings.....24
Table 15 Matrix to analyse the effect of set aside in the rotation system 25
Table 16 Effect of set aside on crop rotation.....25
Table 17 Percentage of set aside rotation at surveyed holdings 25
Table 18 Location of set aside lands at surveyed holdings 26
Table 19 Main criteria to evaluate the agronomic effect of set aside of land 27
Table 20 Agronomic effects of set aside on surveyed holdings.....27
Table 21 Main criteria to evaluate the economic effect of set aside of land 27
Table 22 Economic effects of set aside on surveyed holdings 28
Table 23 Optimum period of years to perform climate studios (W.M.O) 29
Table 24 Percentage of land afected by the erosion.....35
Table 25 Matrix for analysing the relationship between agricultural practices on fallow land and soil management 36
Table 26 Matrix to analyse relationship between management of fallow land and water management (excluding water issues associated with erosion discussed above) 37
Table 27 Table Units of macronutrients used by hectares.....38
Table 28 Matrix to analyse the relationship between agricultural practices for fallow land and their impacts on the landscape 39

2. REGIONAL CONTEXT

2.1. *Synthetic description of the region at the agricultural level*

Castilla La Mancha is located in the south east half of the Spanish *meseta* covering 7.922.500 which represents 15´7 per cent of the total national surface. About 67% of the land is between 600 and 1000 metres altitude. A map of the Region location appears in annex 1.

2.1.1. Climate

Climatological data detailed in Table 1 is the mean value registered in the observatories existing in the region during the period 1961-1990. Figure 1 shows annual rain registered in Ciudad Real from 1984 to 1999.

Table 1 Climatological data. Castilla La Mancha. Average 1961-1990

	Rain days	Frost days	Rain (mm)	Mean Tª
Albacete	78,3	63,6	336	13,5
Guadalajara	104,6	121,7	524	10
Ciudad Real	85,1	48,6	450	14,3
Cuenca	102,7	73,7	561	12,2
Toledo	82,6	40,6	337	15,5

Source: INM Spain

Figure 1 Rain evolution (mm) . Ciudad Real.

Source: INE

2.1.2. Population

Castilla la Mancha population has decreased from 1.959.562 inhabitants in 1940 to 1.712.529 in 1996. The population density is under 22 persons per km^2 . Agriculture employed over 11'43 % of the active population in 2000.

2.1.3. Types of holdings

Figure 2 shows that the majority of the lands are included in the biggest holdings. And this majority increases from 1933. Holding medium size also increases during the period 1987-1997 (see Figure 3).

Figure 2 Share of SAU in ha by class of holdings. 1987 – 1997 (source INE)

Source: INE

Figure 3 Holdings medium size evolution (source INE)

Source: INE

2.1.4. Irrigation land

Figure 4 Irrigation land Evolution. Castilla La Mancha and Spain.

Source: INE

2.1.5. Main regional farm productions

Figure 5 Main regional farm productions .

Source: INE

2.1.6. Place of the COP over the period 1985 – 1999

The figures bellow show surface and production evolution (by group of crops) in Castilla la Mancha. Detailed data appears in annex 2.

Figure 6 Surface evolution (ha). Cereals, Oil seeds and Protein crops Castilla la Mancha 1985 –1999.

Source: MAPA

Figure 7 Production evolution (ha). Cereals, Oil seeds and Protein crops Castilla La Mancha 1985 –1999.

Source: MAPA

2.1.7. Fallow

Fallow data available includes other no occupied lands, that is to say, abandoned lands and temporarily out of use lands. So these surfaces are influenced by different factors and it is diffucult to

find a relation between them and set-aside rates. Nevertheless in the case of Castilla La Mancha there was a slightly decreasing tendency which seems to stop at 1993.

Table 2 Fallow surface and compulsory set aside rate in the period 1985 to 1999

	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Surface (ha)	1241200	1097500	1068000	981118	972875	978173	1021398	989578	960762	1077425	911030	1079709	1218118	946067	1015384	953115
Compulsory set-aside ratio										15 %	15 %	12 %	10 %	5 %	5 %	10 %

Source: MAPA

Figure 8 Fallow surface evolution (ha) 1980 – 1999. Castilla La Mancha.

Source: MAPA

2.2. Set Aside implementation context

2.2.1. Implementation data

Table 3 Set aside implementation data. Castilla La Mancha. Dry land.

	1993/94	1994/95		1995/96		1996/97		1997/98		1998/99		1999/00	
Compulsory set aside rate	15%	15%		12%		10%		5%		5%		10%	
COP applicants number (professional scheme)	n.d.	26335		32540		n.d.		29587		n.d.		n.d.	
SCOP (ha) all producers (COP + set-aside)	1772611	1796092		1825287		1719948		1737305		1671591		1695706	
SCOP (ha) professional scheme (COP + set-aside)	1377301	1511105		1607394		1549715		1576231		1540738		1531251	
SCOP (ha) simplified scheme	395310	248987		217893		169951		160709		130552		164129	
Real set-aside scheme (set-aside/SCOP all producers)	12,69%	18,46%		19,64%		16,71%		16,39%		18,52%		19,03%	
Professional set-aside rate (set-aside/SCOP Professional scheme)	16,27%	21,81%		22,22%		18,55%		18,07%		20,10%		21,07%	
Total set-aside (ha)	224903	331613		358414		287426		284791		309634		322622	
Rotational set-aside (ha)	209317	230734		66889									
Total set-aside (ha) (apart from extraordinary)	224903	331613		358414		287426		284791		309634		322622	
Compulsory set-aside		255612	77%	269040	75%	169256	59%	89008	31%	87023	28%	168759	52%
Voluntary set-aside		76001	23%	89374	25%	118124	41%	195747	69%	222597	72%	153846	48%
Paid at 48'3 ecus set-aside						152	0,1%	152	0,1%	152	0,0%	132	0,04 %

	1993/94	1994/95		1995/96		1996/97		1997/98		1998/99		1999/00	
No paid set-aside						46	0,02 %	36	0,0%	14	0,0%	17	0,01 %
No food set-aside		10876	3,3%	11971	3,3%	1789	0,6%	621	0,2%	613	0,2%	3246	1,01 %
Five year set-aside (R.2328/91)	15587	12031		6546		4360		2413					
Extraordinary set-aside													

Source CE DG Agriculture (MAPA)

Table 4 Set aside implementation data. Castilla La Mancha. Irrigation land.

	1993/94	1994/95		1995/96		1996/97		1997/98		1998/99		1999/00	
Compulsory set aside rate	15%	15%		12%		10%		5%		5%		10%	
COP applicants number (professional scheme)		9073		11702		n.d.		5756		n.d.		n.d.	
SCOP (ha) all producers (COP + set-aside)	240317	246315		267900		184105		241851		231753		236241	
SCOP (ha) professional scheme (COP + set-aside)	205077	222119		251874		174272		228930		217733		219327	
SCOP (ha) simplified scheme	32241	24195		16026		9819		12819		14018		16912	
Real set-aside scheme (set-aside/SCOP all producers)	13,33%	17,79%		28,79%		21,74%		17,88%		15,18%		22,31%	
Professional set-aside rate (set-aside/SCOP professional scheme)	15,59%	19,68%		30,58%		22,96%		18,89%		16,16%		24,03%	
Total set-aside (ha)	32027	43823		77133		40017		43241		35182		52699	
Rotational set-aside (ha)	31506	29274		5829									
Total set-aside (ha) (apart from extraordinary)	32027	43823		77133		40017		43241		35182		52699	
Compulsory set-aside	32027	35318	81%	43468	56%	18838	47%	15325	35%	14169	40%	25887	49%
Voluntary set-aside		8505	19%	33665	44%	21160	53%	27914	65%	21013	60%	26812	51%
Paid at 48'3 ecus set-aside													
No paid set-aside						19	0,05 %	2					
No food set-aside		573	1,3%	450	0,6%	61	0,15 %	264	0,61 %	165	0,5%	1671	3%
Five year set-aside (R.2328/91)	521	495		298		129		114					
Extraordinary set-aside													

Source CE DG Agriculture (MAPA)

2.2.2. Characteristics of the Regionalisation plan. Castilla La Mancha

Table 5 Base Area Castilla La Mancha (has)

CCAA	1994			1997		
	Dry land	Irrigation land		Dry land	Irrigation land	
		Total	Maize		Total	Maize
CASTILLA LA MANCHA	1.814.084			1.795.398	300.000	49.000
ESPAÑA	8.096.192	1.123.521	720.360	7.848.624	1.371.089	403.360

Source: MAPA

COP base area in Castilla la Mancha represents 22'87 % in dry land and 21'88 % in irrigation land over total national COP.

Table 6 Yield cereals distribution. Mean value. Castilla La Mancha

1994				1997			
Dry land	Irrigation land			Dry land	Irrigation land		
Mean yield Tm/Ha	Mean yield. Tm/Ha	Maize yield Tm/Ha	Other cereals yield Tm/Ha	Mean yield Tm/Ha	Mean yield. Tm/Ha	Maize yield Tm/Ha	Other cereals yield Tm/Ha
1.8	6.0	6.6	5.3	1,8	4,8	5,9	3,7

Source: MAPA

The table above shows mean values in the region as a whole. The region is made up of rural areas each one being assigned different yields. Every rural area yields are detailed in annex 3 as well as a map showing homogeneous areas in relation to regionalitation plans.

Table 7 Regionalisation plan bases. Castilla La Mancha. 1.

Professional Scheme - Dry land												
Year	Cereals			Oilseeds			Protein seeds			Set Aside		
	€/t.	t./ha.	€/ha.	€/t.	t./ha.	€/ha.	€/t.	t./ha.	€/ha.	€/t.	t./ha.	€/ha.
93	25	1,8	45	163,9	1,8	295	78,49	1,8	141,28	68,83	1,8	123,894
94	35	1,8	63	172,8	1,8	311	78,49	1,8	141,28	68,83	1,8	123,894
95	54,34	1,8	97,812	0	1,8		78,49	1,8	141,28	68,83	1,8	123,894
96	54,34	1,8	97,812	94,24	1,8	169,632	78,49	1,8	141,28	68,83	1,8	123,894
97	54,34	1,8	97,812	83,87	1,8	150,966	78,49	1,8	141,28	68,83	1,8	123,894
98	54,34	1,8	97,812	94,23	1,8	169,614	78,49	1,8	141,28	68,83	1,8	123,894
99	58,67	2,1	123,207	81,74	2,1	171,654	72,5	2,1	152,25	58,67	2,1	123,207

Source: MAPA , FEGA

Table 8 Regionalisation plan bases. Castilla La Mancha. 2.

Simplified Scheme Dry land									
Year	Cereals			Oilseeds			Protein crops		
	€/t.	t./ha.	€/ha.	€/t.	t./ha.	€/ha.	€/t.	t./ha.	€/ha.
93	25	1,8	45	5	1,8	45	25	1,8	45
94	35	1,8	63	35	1,8	63	35	1,8	63
95	54,34	1,8	97,812	54,34	1,8	97,812	54,34	1,8	97,812
96	54,34	1,8	97,812	54,34	1,8	97,812	54,34	1,8	97,812
97	54,34	1,8	97,812	54,34	1,8	97,812	54,34	1,8	97,812
98	54,34	1,8	97,812	54,34	1,8	97,812	54,34	1,8	97,812
99									

Source: MAPA , FEGA

Table 9 Regionalisation plan bases. Castilla La Mancha. 3.

Professional Scheme - Irrigation land						
Year	Other Cereals			Maize		
	€/t.	t./ha.	€/ha.	€/t.	t./ha.	€/ha.
93	25	5,3	132,5	25	6,6	165
94	35	5,3	185,5	35	6,6	231
95	54,34	5,3	288,002	54,34	6,6	358,644
96	54,34	3,7	201,058	54,34	5,9	320,606
97	54,34	3,7	201,058	54,34	5,9	320,606

98	54,34	3,7	201,058	54,34	5,9	320,606
99	58,67	4,2	246,414	58,67	6,1	357,887

	Oilseeds			Protein seeds			Set Aside		
	€/t.	t./ha.	€/ha.	€/t.	t./ha.	€/ha.	€/t.	t./ha.	€/ha.
93	49,166	6	295	78,49	6	470,94	68,83	6	412,98
94	51,833	6	311	78,49	6	470,94	68,83	6	412,98
95	0	6		78,49	6	470,94	68,83	6	412,98
96	94,24	4,8	452,352	78,49	4,8	376,752	68,83	4,8	330,384
97	83,87	4,8	402,576	78,49	4,8	376,752	68,83	4,8	330,384
98	94,23	4,8	452,304	78,49	4,8	376,752	68,83	4,8	330,384
99	81,74	5,3	433,222	72,5	5,3	384,25	58,67	5,3	310,951

Source: MAPA , FEGA

Table 10 Regionalisation plan bases. Castilla La Mancha. 4.

Simplified Scheme Irrigation land												
Year	Other Cereals			Maize			Oilseeds			Protein seeds		
	€/t.	t./ha.	€/ha.	€/t.	t./ha.	€/ha.	€/t.	t./ha.	€/ha.	€/t.	t./ha.	€/ha.
93	25	5,3	132,5	25	6,6	165	25	6	150	25	6	150
94	35	5,3	185,5	35	6,6	231	35	6	210	35	6	210
95	54,34	5,3	288,002	54,34	6,6	358,644	54,34	6	326,04	54,34	6	326,04
96	54,34	3,7	201,058	54,34	5,9	320,606	54,34	4,8	260,83	54,34	4,8	260,832
97	54,34	3,7	201,058	54,34	5,9	320,606	54,34	4,8	260,83	54,34	4,8	260,832
98	54,34	3,7	201,058	54,34	5,9	320,606	54,34	4,8	260,83	54,34	4,8	260,832
99												

Source: MAPA , FEGA

2.2.3. Traditional fallow Rate

Traditional fallow rates are specific for each rural area. The detail is in annex 3

3. ANSWER TO QUESTIONS 411 TO 421

To answer these evaluation questions we have performed a **quantitative analysis** of official data[1], finished off with a **quantitative analysis** taken from surveys[2] made to farmers and interviews performed to managers and experts[3] familiarised with this sector or with some specific aspects of the implementation of the set aside of land.

To analyse surface area, production and yield of COP crops official data and the set asides and fallow, we have taken a reference period before the implementation of land set aside and we have extracted the trend of this period to compare it with the data obtained during the period of implementation of the set aside of land. The outcomes of this analysis were compared and finished off with the data obtained from the surveys made to farmers and the answers of managers and experts. Finally, we have summarised quantitative and qualitative information to give a synthetic answer to the evaluation questions.

3.1. Question 4.1.1:

Have voluntary and compulsory set aside of land measures significantly contributed to control the production of arable crops? What is its particular contribution to reduce cereal surplus production?

- **Synthetic answer**

Set-Aside implementation has contributed to the decrease of COP surface in Castilla La Mancha and consequently to control his production.

All majority COP species surface decreases as a result of set-aside measure implementation excluding sunflower surface. Globally during the period 93-99 the average COP surface area decreases in a 10 % with relation to the average COP production of the previous period.

Most of the set-aside land is incorporated at crop rotation (86'7% of surveyed) Consequently the impact in COP production is quite direct as set-aside is not located in the less productive lands.

However, we can say that, not having the set aside of land measure but keeping the compensatory payments, the production would be a 16'56 % higher. This increase of production corresponds almost exactly with the set aside land area (a 16'58 % of the total)

The average production of the period 1993- 99 decreases a 18% from the average production of the period 1985-92. It is observed that production reduction is higher than surface reduction. So we point other factors contributing to control COP production (mean yields reduction).

The reduction of surplus cereals production is about 21% in relation with the reference period It is higher that the reduction of COP production as a whole, which is diminished by a slightly increase of oil seeds and protein crops production.

- **Detail of answer**

[1] VID annex 2 Data
[2] VID annex 7 Survey Outcomes
[3] VID annex 8 Interviewed Managers and experts

Surface COP evolution and distribution by crops.

The Cop surface area in Castilla La Mancha maintained an increasing trend in the period 1985-92. From 1993 on, the surface area decreases and maintains a downward trend during the whole implementation of land set aside measure period being this decrease specially important the first years

Figure 9 Surface COP evolution and distribution by crops.

Source: MAPA

The total COP surface area for the period 93-99 (light blue line, Figure 9.) remains in an average of a **16'37 %** below the surface area that would be expected for the same period as indicated by the trend line extracted for the previous period (red line, Figure 9).

Figure 9, shows that the falling of surface area is a result of the implementation of the set aside measure because it causes an inflection point in 1993 when the upward trend of previous period broke. Nevertheless, total set aside lands represent 16'58 % of total COP surface, that is a higher percentage than the reduction of crop surface. As a result total surface area (COP + set-aside) is above the trend line of the period 85-92. during the period 93-95. This is due to the fact that some marginal land was recovered mainly to sow sunflower and partly to locate a small share of set-aside land. In the period 96-99 total surface area (COP + set aside) keep on decreasing until it situates under the trend line in the last year.

Cereals represent more than 82% of total COP surface area, oil seeds represent 17 % and protein crops less than 1%. Nevertheless the three types of crops have a different trend.

- Cereals being the majority indicate global surface COP trend. Cereals surface line slightly increases during the first period and changes abruptly in 93 decreasing a 20 % with respect to the previous year. During the period 93-99 cereals surface maintains a constant trend.

- The surface area of **oil seeds** is the highest in 1993 in which surface increases more than a 60 %.. The increasing of 1993 is due to the appeal shown by the financial aids for sunflower. The following years oil seed surface decreases reaching a similar value than it had before 93 and starts a decline which is more clearly the last years.

- CAP implementation has clearly influenced protein crops. Despites it represents a minimum surface (1-2% over COP), protein surface multiplies itself by 9 in 1993. From 93 on, protein crops

surface decreases and this decrease is higher last years. How ever, it is still 4 times higher than the previous period.

COP surface decreases a 16' 58 % in relation with the surface that would be expected in absence of the measure By crops, cereals set the surface area decreasing trend, decreasing with more intensity than the whole arable crops, while oil products and protein products are increasing its cultivated area.

In each group of crops there is a specie which is the main one

Evolution and distribution of COP surface area by species.

Figure 10 Evolution of cereal surface area by species

Fuente: MAPA, FEGA

In the case of cereals the main specie is barley representing a 68% along the whole period. Wheat is also important because it represents 22% and Oat representing an 8% . Rye and Triticale have a very little influence.
Concerning evolution Figure 11. shows that barley surface keeps on paralell to total cereals surface untill 1998 in which they start to be divergent as a result of a decrease in barley crop being displace by wheat. Barley is the only crop in which the influence of CAP is clear because an inflexion point is observed in 1993. Otherwise wheat has a decreasing trend until 1996.and from 1996 on, this trend is inverted increasing more and more every year. The percentage of oat increases along the whole period.

In the case of oil seeds sunflower covers 99% during 87-94. From 95 on, the percentage of oil seed surface occupied by sunflower decreases representing 92% in 99. This is because cole crop almost inexistent at the beginning of the period occupies an increasing surface

Figure 11 Evolution and distribution of protein products surface area

Source: MAPA, FEGA.

In the case of protein crops the small surface assigned to these crops in the period 87-92, was shared by peas and beans. In the period 93-99 peas occupy more than 97 %.

Globally, barley is the main surface because it occupies more than a 50% over total COP surface. Five crops (barley. sunflower, wheat, oat and maize) cover a 97 % of the total surface.

Figure 12 Evolution and distribution of COP surface area by major species.

Source: Data taken from MAPA

Crop surface in all main species decreases as a result of the implementation of the land set-aside policy excepting sunflower surface.

Evolution and distribution of COP production

Production line along the period 1985-1997 is very irregular owing to the fact that yields change every year. Nevertheless during the period 1993 – 99 mean annual COP production decreases an 18% **in relation with the mean annual production of the previous period** Figure 13

Reduction of production attributable to the set aside of land

Data from the survey regarding set-aside allocation are:

- A 77 % of them perform rotational set-aside and 13% of them rotate a part and fix other part
- A 20 % situate part of the set-aside in small, extended, not very big or not-watered, sloped or rarely cultivated plots.
- A 3'3 % of them have acquired plots to locate set-aside

It is important to note that the set aside is free, rotational or fixed set aside does not indicate an acquired commitment but a decision of the producer to rotate set aside or to set it always in the same plots.

Set aside directly contributes to the reduction of production because compulsory and voluntary set-aside land is incorporated to the crops rotation, (as confirmed by 77% of farmers surveyed and all experts consulted) and is not concentrated in the less productive lands.

How ever, it is observed that production reduction (18%) is higher than surface reduction (10%). This is due to a drop in yields which decrease an 8'5 %, from 1'92 t/ha to 7'6 t/ha. This drop in global yields is a result of a drop in cereals yields and of the substitution of part of the cereals surface by oil seeds and protein crops surface whose yields are lower.

Figure 13 Evolution and distribution of COP production.

Source: MAPA

To estimate the production that would exist in case of absence of set aside of land policy we may do the following:

- The area which appears below the trend line of cultivated surface area for the period 85-92, and above total COP 93-99 line as shown in Figure 9 (a total of 2407556 has approx.) would be non-marginal land and would have average yields equivalent to the rest of cultivated surface area (1'76 t/ha).
- The surface area above the trend line and below total COP + Set-Aside land (a total of 35969 has. Approx). we assume that it corresponds to marginal land and it would have minimum yields. (1'2 t/ha)

Pr = (2407556*1'76) + (35969*1'2) =4256385 t. Aprox. 600.000 t by period.

According to these estimations, as a result of the set aside of land the total production is reduced in a 16'56% with respect to the production that would have been expected in absence of the measure while the set aside area represents a 16'58% of the total surface area.. So production reduces almost exactly than surface because **only a 1'4 % of set-aside is located in marginal land**.

Distinction between the impact of voluntary and compulsory set-aside will be answered in question 412.

Particular contribution to the reduction of production of surplus cereals

The following table shows the average total production of each cultivation group for both periods and the variation percentage.

Table 11 Average cop production by groups of crops

	Cereals (tn)	Oilseeds (tn)	Protein crops (tn)	Total COP
Average 85-92	3.567.087	184.207	2.095	3753388
Average 92-99	2.820.442	216.659	25.161	3062261
%	-21%	+18%	+1101%	-18

Source: MAPA, FEGA

The reduction of surplus cereal production is around a 21% with respect to the production in the reference period, i.e., a reduction bigger than the one observed in the total of COP crops. This is due to the fact that other oil seeds and protein crops production increases.

- **Limits**

To give an answer to the particular contribution of COP reduction to surplus production of cereal we have assumed that the distribution of COP groups in set aside land will be the same as the one for the rest of areas.

3.2. Question 4.1.2:

In what proportions has the remuneration of the voluntary set-aside strengthened the effectiveness of the set-aside instrument? Estimate the share of the voluntary set-aside areas that would have been unproductive in the event of absence of the measure.

The estimation of set aside surface areas non-productive in absence of the measure will be done under two assumptions: in absence of the set aside of land measure and in absence of compensatory payments policy and continuation of the previous system.

- **Synthetic answer**

The voluntary set aside reinforces in a 41 % the efficacy of the measure of set aside of land

In absence of this measure, the whole surface area will be sowed to get all compensatory payments

We estimate that a 40 % of the surface area of set aside (without reference to compulsory or voluntary set aside) would be non-productive in absence of the compensatory payments policy.

- **Detail of answer**

The proportion of voluntary set aside which reinforces set aside of land will be equivalent to the proportion of voluntary set aside over the total set aside, because farmers do not distinguish between the fields of both types of set aside.

$$P = S_v /(S_v + S_o)*100 = 994892/(994892 + 1448633)*100 = 41\ \%$$

The **outcomes of the survey** indicate that a 34 % have performed voluntary set aside, the reasons given were the following:

- Preventive measures for not to have penalties in case of being under the maximum set aside rate: 53’3 %
- Economic reasons (payments for the best set aside in relation with the crop): 70 %
- Reduction of the on-going activity: 70 %
- Chance to enlarge the lifetime of the machine: 43’3 %

Cereals holdings profitability in Castilla la Mancha is very low (real average yields under 2 t/ha in the period), so set-aside alternative worths economicaly as 70 % of surveyed affirm.

Due to the specific climatological conditions of this last period, which have make difficult the sow of winter cereals, set aside lands have increased. We estimate that being this is a very recent fact is the reason why 70% of farmers declare to perform a voluntary set aside in order to reduce the on going activity.

- **Limits**

We can not distinguish between voluntary and compulsory set aside due to the fact that both are having the same bonus and the farmers do not distinguish between them when located in the fields. Nevertheless we can understand that in most cases compulsory set aside is located in more productive

lands than voluntary set aside because farms which only perform compulsory set aside are the richer ones. So that, the estimation done to know how much the voluntary set aside reinforces the efficacy of the set aside will be reduced.

The share of the voluntary set-aside areas that would have been unproductive in the event of absence of the measure.

In opinion of all people asked, if the possibility of set aside a part of the surface area would not exist, the land would be recovered anyway and sown to get the compensatory payments.

If compensatory payments policy does not exist and the system of previous period is still on going there will be non-productive land (fallow or unused land). To estimate the surface area of set aside that would be non-productive we have to look at the trend followed by total fallow land and other lands not used during the last period and compare them with the period of implementation of set aside of land.

Figure 14 Evolution of fallow land and other unused lands and set aside of land

Source: Data taken from MAPA and FEGA

Figure 14 shows that total fallow land and other unused lands follow a clearly downward trend during the period before the implementation of the set aside of land policy. If we compare the non-productive total area for the period 93-99 (dark blue line) with the trend line taken from the previous period (red line) we can see that the increase of surface area is lower then the surface area declared as set aside.

In Figure 14 we can estimate that the area between the total fallow – Set Aside land (light blue line) and the extrapolation of the fallow trend line period 75-92 (red line) represents the set aside surface area that would be non-productive in absence of compensatory payments. The figure indicates that this surface area is equivalent to a 40% approximately of the total set aside area.

This conclusion is concordant with the crop surface area data. As we have seen in previous question COP surface decreases a 10 % while set-aside surface represents a 19 % of total surface (COP+ Set-aside), that is to say , 40% approximately of set-aside surface does not affect in a decrease of crop surface. And so, we can estimate that this surface would have been non-productive if compensatory payments does not exist.

But this estimation has different **limitations**:

- The fallow data and other unused lands (pink line), and fallow and other unused lands + set aside (dark blue line) came from the same historical series in the yearbook of Ministerio de

Agricultura Pesca y Alimentación. It had some methodological changes when obtaining the data, precisely during the years when the 1992 reform came into force.

- The set aside of land data (yellow line) came from declarations of crops presented to the payer organisms, so this source is different from the fallow data, although both are official data.

3.3. Question 4.1.3:

To what extent was the set-aside instrument determining in the no-food crop production trend?

The existing data and the opinion of experts confirm that the production of non-food crops was almost non-existent until the beginning of the set aside policy. Consequently, the **set aside measure was determinant in the non-food crop production. How ever the performance of this crops has been very low and have scarcely evolutioned**.

Table 12 Percentage of no food production at set aside land. Castilla la Mancha

	1993	1994	1995	1996	1997	1998	1999
Total Set Aside	256930	375436	435547	327443	328032	344816	375321
Total No Food		114491	12421	1850	885	778	4917
%		3,0%	2,9%	0,6%	0,3%	0,2%	1,3%

Source: Data taken from MAPA and FEGA

Non food crops cover less than 1% in the period 96-98 The opinion of managers is that the low rates of non food are due to:

- Rules are very exigent, there are too many contractual requirements and producers don't want to face the risk of penalties affecting all the applicant lands
- Payments arrive later
- An industry to put a contract into correct form is required

Manager's opinion is concordant with the data extacted from the survey:
The reasons given by producers for not to perform set aside with non-food crops are the following::

- Not profitable : 56'7 %
- So many contractual requirements: 30 %
- Others (ignorance, lack of water, non ecological owing to the use of fertilizers): 36'7 %

Two of the producers asked have performed set aside with non-food crops. The reason given by both of them was agronomic interest in rotation.

Figure 15 Evolution of no food surface compared compulsory set aside rate

Source: Data taken from MAPA and FEGA

During the first years of implementation non food crops were mainly sunflower and some opium poppy (*papaver somniferum*) in irrigation land. The crop was almost disappeared during the periods 96, 97 y 98 partly owing to a decrease in compulsory set aside rate. Last year roundup is due to the fact that cereals came as a result of an ecofuel transformer industry.

4. ANSWER TO QUESTIONS 422 TO 434

There is a double criterion to answer these questions.

In one hand, we used the set of indicators used to answer the previous questions, as well as the conclusions, to establish the practical impact of the implementation of set aside of land on surface areas and productions.

Also, we have made other specific indicators regarding to yields of crops and market conditions. To make this we took a reference period previous to the implementation of the set aside of land.

In the other hand, we have analysed the behaviour of farmers and the opinion of managers and experts was required. This second element has more significance in this second set of questions than in the other, because we have evaluated in a direct way the criteria followed by farmers of this region for the set aside implementation. The surveys to managers and experts were used as a validation element for the surveys to farmers, to use them as generalised of the whole region.

Finally, the analysis of information shown by the answer is summarised in a synthetic answer following every question..

- **Limits**

The sample size for the area where surveys were performed is very small and is not representative enough. Also the farmers can give their opinions with the intention of giving the image of being good producers.

So it is important to compare the outcomes of the analysis with the global image of managers and regional experts.

4.1. Question 4.2.2:

Is the impact of the compulsory set-aside rate and of the payment level on the large producer's income likely to amend their crop choice so as to answer better the requests of the market? This question will be analysed at the level of the selected production regions for the question 411. The consultant will carry out then a synthesis at the Community level of the main conclusions.

- **Synthetic answer**

Allthough a 77 % of farmers admit to have performed modifications in their choices, we cannot establish a direct relation between set aside of land and the transformations performed in crop rotations. Agricultural production in Castilla La Mancha is mainly determined by environmental limitations (dry climate and poor land) So set aside did not make significant changes in crops or cultivation methods because farmers were performing traditional fallow and they were used to these practices.

A 80% of surveyed farmers declare that they have maintained their incomes. The percentage of producers surveyed who consider the current system as profitable is very similar in case of great producers (81%) than in small producers (79%). These data is in concordance with the level of income maintenance of the region.

Farmer, as agricultural enterpriser, must get the higher profitability, mainly if their production surface decreases. Otherwise, under the present aids conditions, set aside is a profitability activity at less productive regions holdings, which are the main part, thus there has no place the need of increasing the yield to increase the economical profitability to compensate an hypothetical income reduction.

- **Method**

The evolution of the surfaces of the different crops along the periods 85-92 and 93-99, (see Figure 9. and Figure 10), states the global effect of the possible modifications experienced by the individual crop alternatives of producers. Surveys of farmers were used to estimate how much these modifications are influenced by the implementation of set aside or other reasons.

The claims of the market are estimated across the evolution of prices for the main COP products along this period. Other elements influencing the determination of crop rotation must be established in order to differentiate them from the effects of set aside of land.

- **Detail of answer**

The average yields of the area selected in Castilla la Mancha are 1.8 t./ha. for dry land and 4.8 t./ha. for irrigated land. Given these values, the limit to be considered great producer is 51.1 ha. of dry land or 19.2 of irrigated land. According to this classification, more than the 80% of the COP surface in the area taken into account is a part of big holdings, so we can assume that the behaviour of the variables at regional level is representative of the reality of big holdings.

Income of holdings

Among the farmers surveyed, the 13.3 % affirm having a decrease in their global income due to PAC, while a 80 % did not have a decrease in their incomes.

Regarding the payment of set aside, a 70 % note that it meets the function of helping the maintenance of incomes and other 70 % also say that these subventions are directed to afford maintenance costs of set aside plots, without being remarked by other functions.

The average set aside maintenance cost declared by surveyed producers is 139.7 €, , being the average aid by hectare in Castilla La Mancha 117.34 € (dry land) and 310.95 € (irrigation land). The data obtained show that aids compensate the maintenance costs of set aside plots only in irrigation plots. But this margin is negative in case of dry land holdings.

The 70% of surveyed farmers consider set aside more profitable than crop and 53,7% would like to exceed the maximum set aside limit. Thus, set aside has had a positive effect on regional rent.

19 % of big producers and 21 % of small producers consider the current system as negative. Percentages are enough similars to think that set aside has had an equalitarian effect.

The evolution of incomes is closely related to the market conditions. As seen in Figure 16, the price of products does not decrease as much as it would be expected, due to the fact that the productions in other regions are low. So, the first half of the period taken into account is formed by very profitable years for COP producer in the region.

Cultivation choices and market claims

The 77% of surveyed farmers agreed that they have performed changes in the crop choices to maintain their yields. As shown in Figure 10, the implementation of set aside causes a decrease of cereals surface area. We can also see the following:

- Decrease of barley surface and increase of wheat and set aside surface, mainly in the last year.
- Increase of oil seeds surface depending on year.

- Increase of protein crops

These modifications are not only due to a reduction of crop surface area derived from the compulsory set aside, but also to a search for efficiency of crops to face market claims. These claims are established in Figure 16 as the addition of aids plus market price received by the farmer.

Figure 16 Current sell prices of COP plus aids (€/t) .

Source: data taken from INE.

Market conditions in the period 92-99 are not less unfavourable than in the period 85-99, but, excepting oil seeds, maintain previous period mean.

Market conditions are better than the periods immediately previous to PAC implementation but not with respect to the years before.

Most of producers do not consider as significant the impact of set aside on the yields, but consider the PAC effects globally.

On the other hand, we can not establish a direct relation between set aside of land and the transformations performed in crop rotations, due to the fact that the **agricultural production in Castilla la Mancha is mainly determined by environmental limitations (Dry climate and poor land).** Also, the set aside did not make significant changes in crops because farmers were performing traditional fallow and they were used to these practices.

Relation with surplus productions

Regarding the modifications made in the crop rotations, the majority of them were made in COP crops. As derived from the data of the following table, there is a clear trend of re-balance going through an **enhancement of the significance relations among COP crops**, according to the functions of each one, as well as a slower **diversification trend**, **through the implementation of new non-COP** crops, and the development of other non-agricultural activities.

Table 13 Percentage of activity variation at surveyed holdings due to set aside

	Variation of activity	Developed activities	Reduced activities
COP crops	90%	86%	63%
Non-COP crops	53%	12%	34%
Other activities	7%	2%	3%

Source: Data taken from surveys to producers

Profitability is the main criteria followed to plan crop rotation (see Table 14) This is why crops under subvention represent the main choice for the production in extensive holdings of Castilla La Mancha, which means a guaranteed minimum income.

Table 14 Base criteria to manage surveyed holdings

Main criterion	Agronomic	Profitability	Easiness
	23 %	74 %	3 %

Source: Data taken from surveys to producers

4.2. Question 4.3.1:

Did the existence of a remunerated set-aside encourage good crop rotation and which were the alternative crops in the plots where a set-aside was established?

- **Synthetic answer**

Voluntary paid set aside had an important effect over the evolution of crop choices in the region. We may consider that it favoured crop rotation in a 60 % of holdings surveyed, and in a 33% the effect was neutral, being negative in a 7% of cases only.

A 87% of farmers rotate the total or part of their set aside plots regularly, what means a 88% of regional COP surface.

Voluntary paid set aside inserts an element of flexibility and security into the profitability of the holdings of the region, with edaphoclimatological limitations that will affect the crop rotations.

Holdings at less productive dry lands in region have maximized set aside surface because of the economical yield of set aside aids. So the high practice of set aside has enhanced the practice of land rotation.

Set aside has no move minority crops out of crop rotations, but its surface has been obtained decreasing main COP crops surface. So set aside enhance the place of minority crops in crop rotations.

- **Detail of answer**

The existence of set aside lands, as voluntary as compulsory, and the current laws on the management of them, has increased the performance of some cultural works as well as developing new ones.

Set aside did take part in the traditional crop choices generating a rebalance between surfaces and cultural practices.

The payment of set aside has included a new economic factor, lacked from the traditional practice, that influenced the rebalance of the new choices.

Fallow is a really traditional activity in Castilla la Mancha dry lands. As shown in Figure 14, the fallow surface in period 85-92, was about one million hectares, and along next period fallow has continue being usual besides of set aside.

The practice of fallow has had a basic significance on crop rotations before 1992 in all Castilla La Mancha. In driest areas it was an essential element for cereal production (because of the poor soils and climatic conditions of Castilla la Mancha), because it improves soil structure, and its contain of organic material and water. (J.M. Mateo Box, 1985).

An 67% of farmers surveyed have performed fallow before the implementation of compulsory set aside. The other 33% are in the majority irrigation holdings.

No one of surveyed farmers has declared that compulsory set aside had supposed problems with management of set aside lands at the beginning of regulation, what is logical due to the tradition of fallow existing in region. But that is a problem for the 13% of them currently. The reason is not set aside, but the added environmental regulation existing in the area.

With the implementation of paid set aside, an **88% producers asked have always practised voluntary set aside.** Among the reasons given we can highlight that in a 47% this is due to a precaution measure to guarantee the fulfilment of the subvention standards in force. Moreover, they argued direct economical reasons (70%), or indirect, as for reduction of activity (70%), continuation of the life span of machinery and its better amortisation (43%).

The criteria followed for the study of the influence of set aside in crop rotations of surveyed producers are the following:

Table 15 Matrix to analyse the effect of set aside in the rotation system

Type of effect of set aside in the rotation system	Rotation disfavoured by set aside	Neutral effect of set aside on the rotation	Rotation favoured by set aside
Cross-sections of cultivation practices regarding rotation system that allows for a classification (to be validated by interviewer according to the features of the region)	• High percentage of fixed set aside • Protrude of a crop from the rotation as a result of set aside • Increase of single crop farming trend • Not sowing of plants that enhance fertility (e.g. Leguminous plants in set aside	• Continue with the same crops and rotations before and after set aside • Cultivation of set aside lands with the same species but devoted to non-food cultivation	• Mainly rotational set aside • Use of set aside with vegetable cover to enhance fertility • Cultivation of set aside with new species (for production or not)

Source: Self made criteria regarding main regional features

The classification obtained from this analysis matrix reveals an effect of set aside which is mostly non-unfavourable about an adequate rotation:

Table 16 Effect of set aside on crop rotation

Type of effect taken into account	Rotation disfavoured by set aside	Neutral effect of set aside on the rotation	Rotation favoured by set aside
Classification of holdings according prevalent practices	7 %	33 %	60 %

Source: Data taken from surveys to producers.

Most of the surveys performed have shown that set aside did not displace minor crops of the choices, but powered them. Figure 9 and Figure 10 indicate how set aside surface area is got in detriment to barley, major COP crop. As a result of the increase of set aside, and the subsequent agronomic benefits it has for the land and crop, the production of other minor and more demanding COP crops on water conditions and land is increasing, as wheat, and, in a lesser way, protein seeds.

These conclusions are reinforced by the fact that a 88% of farmers rotate the total or part of their set aside plots:

Table 17 Percentage of set aside rotation at surveyed holdings

Type rotation of set aside	100% rotational set aside	Mixed rotation of set aside	100 % fixed rotation
Classification of holdings according to	77 %	10 %	13 %

the rotation of set aside			

Source: Data taken from surveys to producers.

The modifications of crop choices are done in 90% of cases in COP crops and only in the 60% in non-COP ones, as the previous answer indicates.

Non-food cultivation of set aside does not promote rotation, because barley is the crop most cultivated, so it tends to single crop farming. But it has a poor scope. Only a 7% of surveyed farmers have practised non-food cultivation of set aside, in a 41% of their set aside surface area.

4.3. Question 4.3.2:

Did the location of the plots set-aside in use encourage better cultivation methods?

- **Synthetic answer**

We can not establish a direct relation between the location of set aside plots and the evolution of cultural techniques, but we can affirm that it have contributed to consolidate and recuperate a series of good traditional cultural practices.

Set aside plots are rotated if they do not mean a complication added to cultural labours, in these cases the trend is to remain it fixed.

Fixed set aside is used to optimise the management of holdings performing it in these plots where cultivation is not profitable for the holding.

With the set aside of land fallow is revaluated in crop rotation, as well as the specialisation in the different techniques of management.

When favourable conditions, they tend to locate set aside plots in areas less adequate to use by the holding, which have contributed to increase the global efficiency of cultural practices.

- **Detail of answer**

The payment of set aside, as well as the compulsory feature of it, have included new judgement elements when deciding the location of set aside plots, that were not significant for the decision of traditional fallow.

Starting from the reality of land, where fallow practice was usual before 1992, due to the fact that a 67% of farmers performed fallow customarily, the locations chosen for set aside plots are the following:

Table 18 Location of set aside lands at surveyed holdings

Option		*%*
Rotational set aside	Use of rotational set aside	*87%*
Fixed or voluntary set aside	Location of set aside along water courses	*3%*
	Location of set aside in very small plots	*17%*
	Location of set aside in little rich or non-watered plots	*10%*
	Location of set aside in plots far away from the holding	*7%*
	Location of set aside in sloped plots	*3%*
	Location of set aside in less cultivated plots	*10%*

Source: Data taken from surveys to producers.

Absolutely, a 88 % of surface area of the region is rotated regularly. By holdings, a 77% practises only rotational set aside, a 10% performs both rotational set aside and fixed set aside, and a 13% remaining holdings does not rotate the set aside.

Set aside has been widely used as traditional fallow, in order to profit their positive agronomic effect with the next crop. Fixed set aside has been practised at the same time at plots with particular difficulties. So that set aside has also been used to optimise holdings. As territory is very homogeneous in region this second situation is less usual.

To evaluate the agronomic effect of set aside of land, we have analysed the information taken from the surveys according to the degree of fulfilment of the following criteria:

Table 19 Main criteria to evaluate the agronomic effect of set aside of land

Positive agronomic effects	Negative agronomic effects
- Increase of average yield of holding. - Benefits for cultivation of next crop.	- Abandonment of rich soils. - Fragmentation of crop units

Source: Self made criteria regarding main regional features

The classification obtained according to the degree of fulfilment of the criteria reveals a positive effect of set aside according to agronomic practices and in a third part of the cases it is considered as neutral:

Table 20 Agronomic effects of set aside on surveyed holdings

Type of effect taken into account	Positive agronomic effect	Neutral agronomic effect	Negative agronomic effect
Classification of holdings according to agronomic effect of set aside	33 %	67 %	0 %

Source: Data taken from surveys to producers.

Also, we consider as positive the effect of rotation of set aside. At Table 17 can be seen that a significant percentage of it is rotated regularly:

There is a double trend: on one side the trend is to maximise the agronomic benefit of rotation of set aside, but on the other, it is used in a fixed way, as to optimise the surface of holdings.

It is noted how set aside is rotated if this does not mean a complication of cultural labours of holding.

To evaluate the economic effect of set aside of land, we have analysed the information taken from the surveys according to the degree of fulfilment of the following criteria:

A limit to this answer is that in the region selected to apply the survey, land is concentrated and holdings with many little plots are not usual. In this context the agronomical use of set aside is easier because of the structure of holdings, then there have been a high use of rotational set aside. In other areas of region, where land is more divided, fixed set aside is more important, because little, far or difficult to reach plots are more usual.

To evaluate the economic effect of set aside of land, we have analysed the information taken from the surveys according to the degree of fulfilment of the following criteria:

Table 21 Main criteria to evaluate the economic effect of set aside of land

Positive economic effects	Negative economic effects
- Increase of productiveness of the next crop - Increase of average yield of holding.	- Abandonment of rich agronomic soils. - Fragmentation of crop management units.

Source: Self made criteria regarding main regional features

The classification obtained according to the degree of fulfilment of the criteria by surveyed farmers, reveals a not negative effect of set aside according to economic results of holdings.

Table 22 Economic effects of set aside on surveyed holdings

Type of effect taken into account	Positive economic effect	Neutral economic effect	Negative economic effect
Classification of holdings according to economic effect of set aside	33 %	67 %	0 %

Source: Data taken from surveys to producers.

4.4. Question 4.3.3:

Did the existence of the remunerated compulsory set-aside cause production intensification in the other plots?

- **Synthetic answer**

The existence of remunerated set-aside hasn't cause intensification in the other plots in Castilla la Mancha.

Seeing the evolution of yields in a 40 years' period, (in which according to the recommendations of the World Meteorological Organisation, the climate effects are corrected) we deduce that the augmentation of yields is under what expected if the condition of the previous year were maintained.

The decrease of yields is due to the fact that compensatory payments linked to area do not incentivate production. Experts have estimated that the cost of cultivation is covered by a yield rate of 2t/ha. In more arid areas where most years this yield is not reached, as is the case of numerous areas in Castilla la Mancha, higher profits are not obtained through increased production but through cost reductions.

- **Detail of answer**

The observation of the evolution of average yields make us possible to infer if they vary differently within the period 93-99 than during the period 85-92. The surveys to farmers and managers were used to estimate how this difference is influenced by the set aside of land implementation or other causes.

Figure 17 shows that, along the period 85 99 , the yields of cereals have slightly decreased whereas oilseeds and protein seeds have increased.

Figure 17 The evolution of yields of the three types of COP crops during the period 85-99.

Fuente: Elaboración propia. Datos MAPA.

The opinion of managers is that this decrease of yields is due to climatic reasons, mainly the drought in 1995, the drop of prices and other CAP measures (aids not linked to production).

Climate influences yield, that depend on quantity and quality of rain, temperatures, etc. The main influence of climate is seen crossing spring rain (April and May) with yields, as has been confirmed by agronomic engineers experts at climatology[4]. Figure 18 shows a great parallelism between spring rain and yields. Although relation between rain and yields is not clear every year.

Figure 18 Relation between yields and spring rain. 1985-1999

Source: Data taken from MAPA e INE

Cereals, being the major crop, indicate the global trend of Cop crops. The evolution of yield in winter cereals is compared using a reference period. To analyse if the yields are influenced by reasons different from technological development and climate, the reference period must be long enough to correct climate effects. Table 23 details the optimum period of years that the data series to perform climate studios must have, according to the World Meteorological Organisation. Following the W.M.O. guidelines, and to correct climatic effects affecting the evolution of yield, a reference period of forty years is taken. Within this period happened drought years, and years of much water, due to the fact that climatic incidences are cyclic.

Table 23 Optimum period of years to perform climate studios (W.M.O)

[4] VID Annexe 4 People met.

ELEMENT	ISLANDS	COASTS	PLAINS	MOUNTAINS
Temperatures	10	15	**15**	25
Humidity	3	6	**5**	10
Cloudiness	4	4	**8**	12
Rainfall	25	30	**40**	50

Source: Landsberg and Jacobs, 1951

Figure 19 shows the evolution of cereal yields and its trend. Looking at the historical evolution of yields, 40 years series (53-92), extrapolating the trend of this period to the period of implementation of set aside of land (red line) and comparing it with the trend line of the whole period (53-99) (green line), we deduced that the increase of yield is lower than what expected if the condition of the previous year were maintained.

The opinion of experts is that this is because compensation payments linked to area do not incentivate production. It is estimated that the cost of cultivation is covered by a yield rate of 2t/ha. In areas where this rate is guaranteed, farmers will try to increase productivity in search of higher profits. In more arid areas where most years this yield is not reached, as is the case of numerous areas in Castilla La Mancha, higher profits are not obtained through increased production but through cost reductions.

Figure 19 Cereal yield evolution.

Source: Data taken from MAPA

Yields decrease is not only influenced by set aside but also by compensatory payments and the drop of the product price which do not incentivate production.

Furthermore during the period of set-aside implementation irrigated land decreases as a result of an environmental policy which aims to preserve the amount of water in marsh extra exploited[5]. This produces a decrease in irrigation lands.

This analysis is discordant with the outcomes of surveys as 37 % of farmers say that they have tried to increase yields.

- **Limits**

The sample size for the area where surveys were performed is very small and is not representative enough. Also the farmers can give their opinions with the intention of giving the image of being good producers. Furthermore yields during the last years (which are more clear in farmer's memory) are over 93-99 average.

[5] This policy is described in question 452

4.5. Question 4.3.4:

To what extent has the existence of the compulsory set-aside modified the farm competitiveness by an adaptation of the productive structures? (e.g. farm size, farming prices, land prices, etc.)

- **Synthetic answer**

Set aside and payments joined to surface area have influenced in many ways the competitiveness of cultivation holdings. Among these we may note: Price of leaseholds, size and number of holdings and land price.

The possibility of a 50 % of voluntary set-aside existing in Castilla la Mancha influences in leaseholds increasing the price and decreasing the amount. This is because many small partial time farmers may obtain profit from their lands working very little. This fact has made difficult the access to the land to professional full time producers limiting their holdings competitiveness.

The size of holdings increases during the period 87-92 similar than during the period 93-97 (0'6-0'7 ha/year). In 93-97 this increase is due to a recovery of surface area while in the previous period the main reason is a decrease in the number of holdings. We see that, from implementation of direct payments linked to land, the cultivation of last period abandoned lands was again profitable. How ever this is not due to set-aside implementation but to the compensatory payments.

The land prices evolution survey published by MAPA. shows that the price of land that decreases during the previous years is increasing from 1993 until reaching in 1999 a value equivalent to the historical top price. This increase in the price of land is a result of the compensatory payments policy, and not only of set aside of land policy. So it impedes the competitiveness of medium holdings wanting to enlarge their sizes.

- **Detail of answer**

Size of holdings

Figure 20. shows that the CAP reform influences the allocation of cereal surface area. During the period 87-93 there is a decrease in cereal surface area in all types of holdings so the total surface area decreases in a 17 %. From 1993 the surface included in holdings with less than 100 ha (that had a decreasing trend in the previous period), is maintained. The lost surface area in small holdings during the period 87-93 is being incorporated from 1993 in holdings bigger than 100 has. whose area increases along the period 93-99

The **average size** of cereal holdings increases in a similar rate of growth during the period 93-97, than in the period 87-93 (0'6- 0'7 ha./year)

- Although the surface area decreases during the period 87-93, the average size of holdings increase due to a bigger decrease of their number.

- During the period 93-99, the increase of the average size of holdings is due to an increase of surface areas, because the number of holdings remains constant.

We see that, from implementation of direct payments linked to land, the cultivation of last period abandoned lands was again profitable

Figure 20 Cereals surface evolution by type of holding and holding medium size evolution.

Source: Data taken from INE

Eligible lands market

The **data from the survey** to farmers are the following:

- A 53 % have increased their holding during the period 87-92 , in an average rate of 30'5 has.
- A 70 % have increased their holding during the period 92-99, in an average rate of 28'7 has.
- A 60 % said that they have difficulties when purchasing or renting cultivable land from 1992, and a 72 % think that set aside of land may be one of the reasons.
- A 77 % think that there is a land market susceptible of subvention as a result of CAP reform.

A majority of surveyed say that they have had difficulties to increase the size of their holdings, and that one of the reasons is set aside policy. Despite their holdings' augmentation has been higher during the period 93-99 than during the period 87-92. According to what we have observed this increase of holdings is not due to a transfer of lands from some holdings to others but to a recover of abandoned surface.

In relation with the price of land manager's opinion is that it has increased not only because of the set-aside but also because of the direct payments linked to surface.

The data from the *survey of land prices of MAPA* (Figure 21) shows that, in fact, payments policy clearly influences the evolution of land prices. From 1993 the downward trend is broken beginning a lineal upward trend which is increasingly more noticeable from 1997, reaching a value equivalent to the historical top price in 1999.

Figure 21 Labour land prices evolution at Castilla la Mancha.

Source: Data taken from MAPA and INE

We may ask ourselves about the reasons of the inflexion point which appears in the line of prices land evolution .in 1997. If we try to connect the price of land with direct payments, we observe that this payments increase in 1994 and 1995 and are received by the farmers in 1996. So they may have

repercussions on the price of land the following year. Following this reasoning we have to conclude that it is compensatory payments and not set-aside what influences in the price of land because set-aside lands receive the same aid along the whole period. As mentioned above 77 % of farmers think that there is a land market susceptible of subvention as a result of CAP reform. How ever, the reasons for these increase in land prices might be different from compensatory payments. Farmers and managers have pointed the Euro effect as one of these reasons.

Regarding the **leaseholds prices** there are no statistical data. The references we have (managers and farmers) are that prices have go up while the amount of them have go down due to compensatory payments which guarantee profitability with little work. In this sense set-aside may have an influence more direct because in Castilla la Mancha a 50 % of voluntary set-aside has been allowed and has been performed by many small farmers. This is concordant with the data regarding number of holdings which were decreasing in the period the period 87-93 and from 1993 keep constant (Figure 20.)

Adaptation to set aside

The data regarding the adaptation to set aside are the following:

- Farmer's purchase or lease to recover the previous surface area: 50 %
- Increase of yield of other lands in the holding: 37 %
- Decrease of inputs and/or cultural labours to decrease expenses: 40 %
- Rebalance or change to other more profitable crops: 53 %

- **Limits**

Survey area selected is located within a bigger area which is declared extra exploited water reservoirs area. So that farmers take part in an agro environmental program which aims to preserve water and which is linked to an increase of voluntary set aside rate.[6]. The adaptations mentioned above mainly respond to water limitations to irrigate and not to set-aside.

[6] This policy is described in question 4.5.2.

5. ANSWER TO QUESTIONS 4.4.1. TO 4.4.4. REGARDING ENVIRONMENTAL IMPACT.

To answer these questions we have used a qualitative focus, due to the fact that environmental impacts are very difficult to quantify without making mistakes or vagueness. So, the behaviour of farmers surveyed is analysed, and the criteria for this analysis are supported by interviews with experts and managers[7], as well as in the existing bibliography[8].

In Castilla La Mancha it does exist a special programme focus on saving water where deep pools are overexploited[9]. The set on of this programme which is complemented with specific variety of set aside (increase of the voluntary set aside ratio) has a positive influence over the preservation of the water in deep pools and also over the soil management, the landscape and biodiversity.

This surveyed area is considered as one of those where the deep pools are overexploited[10].

5.1. Question 4.4.1.

Did the adoption of the set-aside have a significant impact on the improvement of the soil management (erosion, fertility, structure, etc)?

- **Synthetic answer**

In dry land, the implementation of set aside has a double effect: negative regarding erosion and positive regarding fertility and soil structure in the long term.

In irrigation land, the implementation of set aside is also positive regarding erosion, as the soil is not irrigated there are no loses of soil because of the run-off.

In the surveyed area the impact of set aside is principally neutral, 77% of cases and positive in 13%.

At regional level the impact is principally neutral as well. There are no differences in the soil management with regard to the previous period.

- **Detail of answer**

Erosion, fertility and structure.

The 87% of surveyed farmers perform bare set aside. In managers opinion this is the most common practice in Castilla La Mancha. The bare set aside has influence on erosion, fertility and soil structure.

The impact of bare set aside on erosion is negative as the land is naked, the soil can be lost because of the wind and the rain.

Agricultural engineers and experts in environment agree that excessive labour and specially in areas of maximum slope are considered bad practices as they accelerate the erosion (Almorox, Díaz Alvarez, Manteiga López, Sunyer Lachiondo among others).

[7] VID Annex 4 Managers and experts consulted
[8] VID National Report Annex 7
[9] La legislación se detalla en la pregunta 452
[10] VID Anexo 5 Selección del área de las encuestas

Many research studies of Professor T. Lasanta[11] and others authors say that in semiarid environment cereal crops mixed with fallow or set aside produces important losses of soil by run-off. As a matter of fact these losses are much bigger in laboured plots than in others non laboured in such conditions.

So that, we can say that the maintenance of soils in bare set aside has not contributed to improve the soil management but to consolidate cereal crop mixed with fallow or set aside with a negative impact on the conservation of the land in semiarid environmental.

Table 24 shows the percentage of land affected by the erosion.

Table 24 Percentage of land afected by the erosion.

	Grave	Moderate	Light	Unapreciable
Castilla-La Mancha	30%	32%	12%	26%

Source: MOPU, 1989

On the other hand, the maintenance of soils in bare set aside has positive effects on the structure as well as long term fertility. Leaving the soil rest, giving it air, allow it to recharge water are traditional agricultural practices that as a whole are considered positive to the management of land.

A good labour enhances soil structure and facilitates permeability. Also, adventitious vegetation is a consumer of soil humidity. Keeping the land clean of vegetation means great benefits in this aspect (R. Dihel, J.M. Mateo Box (1989)).

Moreover three quarters of the area is classified as semiarid so that the bare fallow is useful to get some benefits.

A bare set aside, well laboured and with no vegetation on it means a good management of the set aside. Farmers whose lands have spontaneous vegetation are not considered good farmers between then (Almorox, J.; Diaz Alvarez M.C. (1997).

It must be said that from the regional Administration it has been fomented the bare set aside arguing two main reasons: On the one hand regulation bans the exploitation of the vegetal covering with agricultural aims before 31st of august including its use as fodder. So that, in this region green cover set-aside is only allowed under special conditions, given the difficulty for the Administration of verifying that vegetable cover in set-aside land has not been used for pasture. On the other hand a vegetal covering may produce *solsolacali*, a weed that should be controlled.

The survey data are the following:

- Four of the surveyed farmers declare to have problems in the maintenance of their fallows.
    - One of then refers to the erosion.
    - Two of then because of weed .
    - The third one does not specify.
- None of then declares to locate the fallow in lands with slope.
- Only a 10% practise fixed set aside.

All these facts said above lead us to adapt the criteria of the matrix to analyse relation between agricultural practices at fallow lands (Table 25), and to consider bare set-aside as a correct management of set aside, because it is also a traditional behaviour in soil management in fallow. 0nly its effects are negative when the labour is excessive or when it is practised en fixed set aside

[11] Researcher from CSIC, Instituto Pirenaico de Ecología , Campus Aula Dei.

Table 25 Matrix for analysing the relationship between agricultural practices on fallow land and soil management

Type of behaviour	Negative changes: behaviour that does not drive to a better management of soil in set aside	Invariable behaviour in the management of land with respect to the preceding situation	Mainly positive change: behaviour that drives to an enhancement in the management of soil in set aside lands
Types of practices linked to soil management that allow for a classification:	• Bare set aside or with a poor cubierta in areas of erosion risk • Usage of weedkiller (non-innocuous) in non-cultivated set aside lands • Fixed set aside in areas with erosion risk	• Cultivation of set aside land to non-food use • Proper management of set aside • Fixed set aside in areas without erosion risks	• Sowing of plants that will enrich set aside lands • Non-usage of pesticides • Long duration Plantations (forestation) • Farmer takes part in any type of agroenvironmental measure to protect soils
Classification of holding according to prevalent practices.	10 %	77 %	13 %

Source: Self made criteria regarding main regional features

Environmental practices to conserve the land

The 67 % of the farmers declare that they participate in environmental programmes, 50 % out of them refers to the protection of soil.

The fact that we have personally done the survey it allows us to interpret this data: the surveyed area is within a bigger area where the deep pools[12] are overexploited. So that the farmers participate in a programme to save water in different ways. This forces the farmers not to consume water or just a minimum water. As a consequence lands that were irrigated flood irrigation, which produces heavy erosion, now are not irrigated or irrigated by drip irrigation. Some farmers understand that to participate in this programme of saving water means to participate in a programme to protect the soil. This programme allow to set aside in this irrigation lands the same ratio as in dry lands

5.2. Question 4.4.2.

Did the adoption of the set-aside of land have a significant impact on the improvement of the water management (pollution, water resources maintenance including ground waters, floods etc)?

Owing to the fact is that water is a scarce resource in Castilla La Mancha, we pay attention in the influence of the set aside over the preservation of the water in deep pools as well as in its reasonable use.

- **Synthetic answer**

The 67% of the surveyed farmers participate in a programme of saving water that exist in the surveyed area which is complemented with set aside. The result of the surveys shows that the impact of set aside in the management of the water is positive in a 83% of the cases and neutral in a 17%.

At regional level the impact of set aside in the management of water is more positive in irrigation land and neutral en dry land.

[12] See annexe 5 Survey area selection

At national level, the higher consumption of nitrogenous fertilisers might have a negative impact when increasing the nitrogen content in superficial and underground waters. We can not say that this behaviour in the usage of fertilisers is a result of the set aside of land policy.

- **Detail of answer**

Management of a scarce source

The opinion of surveyed managers is that the impact of set aside in management of water is positive: the exploitation of the water in dry land is better, and it is possible a more reasonable use of the water from overexploited aquiferous

The surveyed area is declared zone of overexploited aquiferous where there is a programme focus on conserving the deep pool water by conceding aids to decrease the consumption of water in 100%, 75%, or 50%. Besides, it is allowed a voluntary set aside which is charged with the irrigation land output which makes it more attractive to the farmers.

The 67% of surveyed farmers participate in the saving water programme. Just one of the surveyed farmers irrigate the set aside because he grow a non food crop in the land. The set aside plots are not fertilized and only the 10% of surveyed farmers make a chemical control of the weed.

That is why the impact of the fallow land on the water management is positive in a 83% of the cases and neutral in a 17%.

Table 26 Matrix to analyse relationship between management of fallow land and water management13 (excluding water issues associated with erosion discussed above)

Type of behaviour	**Negative changes: behaviour that does not drive to a better management of water in set aside**	**Changes: Invariable behaviour in the management of land with respect to the preceding situation**	**Mainly positive change: behaviour that drives to an enhancement in the management of water in set aside lands**
Types of practices linked to water management that allow for a classification (to be validated by the surveyor according to the agricultural characteristics prevalent in the region)	Usage of pesticides or nitrates in non-cultivated set aside lands. Irrigation of set aside land	Cultivation of set aside land for non-food use Proper management of set aside land	Fixed set aside in humid areas along water courses Sowing of plants that will enrich soil in set aside lands Non-irrigation in set aside lands Non-usage of pesticides Farmer takes part in any type of agroenvironmental measure to protect water.
Classification of holding according to prevalent practices (only one category)	0 %	17 %	83 %

Source: Self made criteria regarding main regional features

In the whole region Castilla La Mancha the impact is different depending on if it is on irrigation land or dry land. There are two kinds of irrigation lands: some that are situated in zones of deep pools overexploited and others where does not exist the saving water programme and they do not charge for not irrigating. but in dry years the ratio of voluntary set aside has been enlarged in order to save water.

[13] This matrix examines the impacts of set aside in comparison to the impacts if the land had been cultivated

In conclusion the impact of the set aside on the water management is more positive in irrigation lands and neutral in dry lands.

Water contamination due to the usage of nitrogenous fertilisers

The main environmental problem generated by the use of fertilisers in agriculture is water contamination by nitrates. Regarding the use of nitrogenous fertilisers there are no data available at regional level. National data show that from 1993 the downward consumption trend is reverted (Figure 22).

Spain does not stand out by an extreme use of chemical fertilisers, according to data of 1988, as shown in the following table (Table 27).

Table 27 Units of macronutrients used by hectares

	N	P_2O_5	K_2O	TOTAL
España	56,2	26,3	16,4	98,9
Europe (mean)	111,7	55,7	59,9	227,3

Source: FAO 1988

Figure 22 Use of nitrogenous fertilizers (t of N) Spain

Source INE

With respect to 1988 the consumption at national level have increased, but we can not say that this trend is a result of the implementation of set aside of land policy.

5.3. Question 4.4.3.

Did the adoption of the set-aside of land have a significant impact on the improvement of the landscape management ?

Due to the fact that the evaluation of landscape has a subjective object, to estimate the impact of set aside the traditional regional landscape is described and the change produced as a result of the implementation of the set aside of land is observed.

- **Synthetic answer**

Set aside plots does not influence in the landscape. In the cereal producing areas set-aside is incorporated by the color full mosaics with a great chromatic variety, ranges of browns and reds (bare set-aside and fallow) and green (crops) taking part of the traditional landscape.
However it contributes to consolidate all agrarian productive habitat according to the plurifunctional task referred by European Commission at the CAP reform.

While it means a save of water and contribute to keep the water of aquiferous it has a positive influence on the landscape where those aquiferous are located.

- **Detail of answer**

The traditional landscape

In Castilla La Mancha the landscape that predominate is due to the cereal crops. The poverty of the land makes the crop rotation compulsory, that is why the traditional landscape is formed by colourful mosaics of cereal, leguminous, pasture and fallow land. The total area with cereal crops in Castilla La Mancha is more or less 2.700.000 ha. One million ha out of then are fallow land. Cereal crops need low quantities of fertilizer and agrochemical products offering habitat and nourishment to species of high interest and scarce in the rest of Europe. Thus it is an agricultural producer ecosystem according to the plurifunctional task referred by European Commission at the CAP

Threats to the landscape

The most important threat this landscape suffer from are rural abandonment and intensifying farming. The dryness of natural humid zones constitutes a threat to the landscape as well. To conserve the landscape and biodiversity it is necessary to maintain the extensive farming system and so that the maintenance of the cultural landscape. (Dolores Manteiga López (1997))

Influence of the set aside on the landscape

The application of the set aside has low impact on the landscape, as the traditional landscape does not change .The proportion between cereal crops and fallow nearly does not change in dry land.

In irrigation land the set aside contributes to mitigate the negative effects due to the intensifying farming. In this sense, the application of the saving water programme plus the possibility of increasing the set aside make the humid zones get better so that it has a positive effect on landscape. The National Park of *Tablas de Daimiel* is a notable example of this. Here the channelling of rivers and the deep pools overexploited affected seriously the park. But in 1997 the Park recovered the 100% of its capacity thanks to the favourable weather. Them many rules were adopted to conserve this park and others in the same region.

The survey data are the following:

- A 90 % declare not to have received comments about the abandon state of the land.
- A 30 % declare that the maintenance of the set aside makes this land stand out in the landscape.
- A 30 % declare to concentrate the set aside land in the same area in the farm in order to facilitate the management.

With these data and according to the criteria set in Table 28 set aside has no influence on the landscape in a 93% of cases, and has a negative impact in a 7%.

Table 28 Matrix to analyse the relationship between agricultural practices for fallow land and their impacts on the landscape[14]

Type of behaviour	Uses of set aside land with a change of practices that have negative impact on landscape	Usage of set aside lands with practices that have not effect on the landscape
Types of practices linked to landscape that allow for a classification (to be validated by the surveyor according to the agricultural characteristics prevalent in the region)	Poor management of set aside High concentration of set aside lands in a single area	Good management of set aside Cultivated set aside
Classification of holding according to prevalent practices (only one category)	7 %	93 %

Source: Self made criteria regarding main regional features

[14] This matrix examines the impacts of set aside in comparison to the impacts if the land had been cultivated

The maintenance of set aside of land as ploughed fallow make it be seen from far (to be remarked in landscape) but it is integrated into the alternative of crops and the colour of ploughed land and without vegetable cover presents some ranges of browns and reds that are part of traditional landscape Only the impact can be considered negative if plots were concentrated just in one area.

Estudios científicos regionales

José Sancho Comíns[*], *Javier Martínez Vega*, *Javier García Abad-Alonso*, *Paulino Navalpotro*, *Antonio Santaolalla** carried out a study titled *La tradición e innovación en el Paísaje Agrario: Los efectos de la PAC en la Región Central Española. (1994).* As this study was carried out in 1994 impacts noticed from the implementation 1992 PAC reform with respect to environment are still scarce. Nevertheless it shows optimism considering the introduction of accompaniment measures ant the encouragement of extensive farming.

Other study carried out by José Sancho Comíns*, *Los cultivos herbáceos en la alcarria de Guadalajara: impactos recientes de la PAC* (1995) concludes that the positive impact of set-aside in landscape is less than desired.

5.4. Question 4.4.4

Did the adoption of the set-aside have a significant impact on the bio-diversity maintenance?

Considering that the management of species is closely linked with the preservation of their habitat (María Dolores Fernández Guillén; Rob H. G. Jongman (1994)), the influence set aside has on the preservation of biodiversity is estimated as it contributes to the maintenance of habitats.

- **Synthetic answer**

We can say that set aside land has not a negative impact on the biodiversity maintenance as the set aside lands make up the traditional habitat cereal-fallow.

On the contrary, it contributes to consolidate extensive farming system, with low fertilizer consumption as well as agrochemical products, offering habitat and nourishment to species of high interest and scarce in the rest of Europe. Thus it is an agricultural producer ecosystem according to the multifunctional character promulgated by the European Commission in the reform of Agenda 2000.

It contributes to the maintenance of the water in aquiferous so that it has positive impact on biodiversity.

- **Detail of answer**

Cereal arable crops, with low consumption of fertilisers or agrochemistry, keeping the colourful crop mosaic formed by cereal, leguminous plants, pasture and fallow, offer habitat and food for many interesting, unique or very rare species in Europe (Dolores Manteiga López, Carlos Sunyer Lachiondo 1997). On the other hand if traditional farming systems turns into others more intensifying, the biodiversity value would decrease.

In Castilla La Mancha the set aside land contributes to make it extensive and to configure the habitat so that it does not have a negative impact on biodiversity maintenance.

[*] Departamento de Geografía. Universidad de Alcalá

The implementation of set aside in irrigated lands has favoured the flora and fauna species linked to the habitat as well as the preservation of the deep pools.

A 67% of surveyed farmers declare to participate in saving water programme in zones of deep pools overexploited. A 35% of those think that participating in that means biodiversity conservation

Others environmental measures to preserve the biodiversity

In Castilla La Mancha there are others environmental measures to favour the biodiversity maintenance such as the agricultural practices to preserve the habitat of several birds, but just in few areas[15].

[15] Information from managers survey.

6. ANSWER TO QUESTIONS 451 AND 452 REGARDING REGLULATION COMPLEXITY AN ITS APPLICATION.

To answer these questions we have based in the analysis of implementation guidelines and surveys with managers of national and regional administrations, professional organisations and the surveyed farmers.

6.1. Question 4.5.2

What effect did numerous regulatory adaptations and the existence of numerous individual cases and did possibilities of transfer have cause on the effectiveness of the set-aside instrument?

- **Synthetic answer**

National and Regional guidelines adapt community guidelines to the regional specifications without causing complications of the previous ones.

The majority of complaints from farmers regarding administrative problems refer to: Information on set-aside rates arrives too late: 80%; complexity of administrative procedure: 57%; subsidies received late: 53%

- **Detail of answer**

We will focus in the regional regulation, because the effect of national regulations will be covered in the national report.

Dispositions regarding compensatory payments policy and set aside of land

The Consejería de Agricultura y Comercio publishes for the Comunidad autónoma de Castilla La Mancha in the Diario oficial de la Comunidad two types of dispositions:

- Orders to regulate the procedure for requesting, procedure and concession of subventions to producers of some herbaceous crops
- Orders to establish aids and regulate no food oil seeds growing at set aside plots.
- Orders to allow overcome maximum set aside limits in specifics areas of Comunidad Autónoma Castilla La Mancha.

Dispositions from orders interesting to set aside application

- About fallow indexes
  COP producers in Castilla La Mancha are allowed to fail regional fallow indexes, when fallow was not a traditional practice. Farmers under this measure must attach to their aids applicant forms a justification document of this practice.

- About maximum set aside limits
  In Castilla la Mancha maximum set aside limits are excepted in the following cases:
  In dry lands: "... the addition of compulsory and voluntary set aside is allowed to reach 50% of total COP surface"
  In irrigation lands: "...holdings with irrigation lands inside the area of deep pools overexploited are allowed to reach he 50% of set aside at irrigation lands in addition of voluntary and compulsory set aside .

Other complementary dispositions

- Income compensation program. Water save legislation in overexploited deep pools area:
  In Castilla La Mancha exists a policy called "Income Compensation" paid by UE (75%) and national and regional government (25%). This policy supports the overexploited deep pools regeneration. It is an agro environmental program which aims to regenerate some peculiar spaces:: 23 and 24 acuiferous (*Las tablas de Daimiel y las lagunas de Ruidera*). Farmers who decide restructure their holdings decreasing irrigation crops surface get an income compensation aid. Farmers can choice among three types of irrigated surface reduction: 50%, 75% and 100%. The amount of aids increase as the irrigated surface decreases. This policy started on 1993.

The payment of these aids, plus to the possibility of a 50 % of set aside surface is very attractive for farmers and has really succeed decreasing deep pools overexploiting. The combination of both policies has been very successful and a lot of farmers in this area are under this program.

Survey data referring to regulation effectiveness

The administrative problems associated with implementation and control of set-aside encountered by surveyed farmers are:

- Errors in the area declared : 37%
- Failure to reach the minimum plot size (surface or width): 10%
- Failure or difficulty to reach the minimum yield of non-food crops: 7%
- Opening and closing dates of set-aside difficult to fit in with customary farming practice: 37%
- Information on set-aside rates arrives too late: 80%
- Complexity of administrative procedure: 57%
- Lack of integration of the different aids available under the CAP, especially agro-environmental aids: 37%
- Subsidies received late: 53%
- Other: 23%

53 % of farmers surveyed stated that they were fully aware of regulations governing maintenance and preservation of the environment in fallow land, and 20% stated that they were somewhat aware. 91% apply the regulations, information on which has reached them through:

- Information annexed to CAP documentation: 45 %
- Information send by a professional association to which they belong: 95%
- Information seen in the press: 32%
- Formal notification from their local authority: 0%
- Other: 5%