

19 – Definitive data regarding the 6th General Agricultural Census in Sicily

The 6th General Agricultural Census, which was carried out between December 7th and February 28th, 2011, amassed information regarding the activity and structure of agricultural holdings (or farms) on the date of October 24th, 2010 (during the agricultural year of 2009-2010), and was characterized by numerous innovations that affected organizational and technical-methodological aspects. On the organizational level the main innovations regarded the collaboration between Istat, the Regions and autonomous Provinces in planning all the phases of the Census activity, with the aim of achieving genuine flexibility and effective adhesion, on the part of the data-collection structures, to the needs of the Region. In the General Plan of the Census this led to the definition of two different organizational models, one being “high-participation” and the other “integrative participation”, the adoption of which on the part of the Region comprised various levels of responsibility and involvement, as well as differentiated functions and duties¹. The Regione Siciliana chose the “high-participation” model, taking on the role of direct interlocutor for Istat and co-ordinating all operations throughout the Region. It was the largest of the Regions to opt for this model and the guidelines were marked out in the Regional Plan for the Census (Piano Regionale di Censimento - PRC), approved formally on June 23, 2010 (Delibera di Giunta n. 211). Arrangements for the territorial survey network were laid down, along with the distribution of the functions among the various Census bodies and the modalities for registration of the questionnaires.

Organizational activities were then initiated in July 2010. Thanks to a dedicated agreement protocol, the Regional Census Office (URC - constituted at Statistical Services and Economic Analysis of the Regional Department for the Economy), was able to co-ordinate, together with Istat head-office in Sicily, the Territorial Census Offices (UTC). These were set up in the peripheral offices of the Dipartimento Interventi Infrastrutturali dell'Assessorato Regionale delle Risorse Agricole ed Alimentari (Dept. for Infrastructural Intervention) with 65 operative sections of technical assistance (Sezioni Operative di Assistenza Tecnica - SOAT), which supervised the same number of inter-municipal aggregations with the task of divulgation and promotion of productive innovations; the UTC were in their turn grouped into the same 14 Districts as the SOAT. Once the average Regional parameter had been

¹DPR 23 July 2010, n. 154 – Regulation for execution of overall Census set-up for agriculture, in line with the norm for art. 17, comma 2, of the decree 25 September 2009, n. 135. (10G0168) (GU n. 214 of 13-9-2010. Q.v. art. 8.)

established, of about 200 enterprises from the pre-Census list² for every data-collector, and 1,550 businesses for each one of their inter-municipal coordinators (CIC), a total of 1,309 data-collectors and 168 CIC were nominated.

Then, among the latter, 14 persons responsible (RpCIC) were singled out, based at SOAT, district head-office, creating a pyramid structure to cover the whole territory. Survey management operations, registration of questionnaires and transmission of data to Istat, via a computer platform called SGR, occupied this structure until June 15th, 2011 and the following July 20th; after the national presentation-day of provisional data in Rome (July 5th) an analogous presentation was organized in Palermo, under the guidance of URC and the Regional central office of Istat. Three further initiatives of publication were arranged for November 23rd, and December 2nd and 12th, in the municipalities of Alcamo, Bronte and Vittoria respectively, locations deemed to be representative of agricultural activity.

On July 12th, 2012, about a year after the presentation of provisional results, ISTAT began releasing definitive data for the 6th General Agricultural Census, via specifically predisposed publication on datawarehouse (DWH). This is accessible directly from both the Istat site (www.istat.it, clicking on the I.Stat icon), and the dedicated site (<http://censimentoagricoltura.istat.it/>) and enables one to download information regarding the many variables contained in the questionnaire (structure of the agricultural enterprises, cultivation, livestock rearing, workforce etc.), with reference to various territorial levels, down to the level of the Municipality; it is also possible to carry out comparisons with the three previous agricultural censuses.

In the wake of this information the URC, together with the Istat central office, proceeded to analyze the main Regional results, carefully carrying out the required comparisons with the results predicted previously in the 2011 provisional results. The principal conclusions are reported here as follows:

- *A decades-long process of concentration of land for agriculture and animal husbandry in a considerably reduced number of farms.*

On October 24th, 2010, in Sicily there were 219,677 active agricultural and zoo-technical enterprises (the second Region after Puglia), with 15,308 of these rearing livestock for sale. The historic comparison with past Censuses

² The pre-census list, created by Istat utilizing information contained in the Sistema Informativo Agricolo Nazionale and in other archives of the public administration (AGEA, Revenue Agency, Zoo-technical registry office, etc.), constituted the starting informational basis for the Census operations, totaling in Sicily 261,793 enterprises, a clear drop (-29.8%) over the Census in 2000, above all as a result of the exclusion of micro-businesses (in Sicily, those $\leq 0,2$ hectares, not belonging to the flower and plant nursery, viticulture, fruit and zoo-technical sectors).

shows that both in Sicily and the rest of the country there has been a gradual decline in agricultural land and the number of farms (especially the latter), which has resulted in larger average farms (Tab. 19. 1). This has been particularly true over the last decade in Sicily, with size increasing from 3.67 to 6.32 hectares per farm.

Table 19. 1 – Farms (no.), SAU, SAT and average size (hectares). Sicily and Italy 1982-2010

	<i>Absolute values</i>				<i>Index numbers</i>			
	1982	1990	2000	2010	1982	1990	2000	2010
ITALY								
Farms	3.133.118	2.848.136	2.396.274	1.620.884	100,0	90,9	76,5	51,7
SAU	15.972.746	15.025.954	13.181.859	12.856.048	100,0	94,1	82,5	80,5
SAT	22.397.833	21.628.355	18.766.895	17.081.099	100,0	96,6	83,8	76,3
SAU / farm	5,10	5,28	5,50	7,93	100,0	103,5	107,9	155,6
SAT / farm	7,15	7,59	7,83	10,54	100,0	106,2	109,6	147,4
SICILY								
Farms	428.263	393.188	349.036	219.677	100,0	91,8	81,5	51,3
SAU	1.696.528	1.597.638	1.279.707	1.387.521	100,0	94,2	75,4	81,8
SAT	1.891.155	1.808.324	1.455.438	1.549.417	100,0	95,6	77,0	81,9
SAU / farm	3,96	4,06	3,67	6,32	100,0	102,6	92,6	159,4
SAT / farm	4,42	4,60	4,17	7,05	100,0	104,2	94,4	159,7

Source: Istat data-processing

Overall, the total farmland (Superficie Aziendale Totale - SAT) amounts to 1,549,417.34 hectares and the utilized agricultural land (Superficie Agricola Utilizzata - SAU) amounts to 1,387,520.77 hectares (the largest among the Regions). The livestock reared numbered 336,000 cattle, 850,000 sheep and goats, 46,000 pig and 4.5 million wildfowl. The comparison with 2000 shows a drop in the number of farms (-37.1%) and an increase in SAU (+8.4%) and SAT (+6.5%, in Tab. 19. 2).

The figures for the farms are in line with national trends (-32.2%); as for land surface, the variation for Sicily is moving in the opposite direction from Italy, and determining a more emphatic role for medium-sized enterprises. The reduction in the number of farms needs to be seen in relation to the greater accuracy and the various criteria for compilation of administrative archives from which the pre-census list was drawn. The increase in land-surfaces can be explained by the measures of the Community Agricultural Policy (PAC), which, in Sicily, has inspired the emergence of a more authentic scenario for the economic organization of farms³. Palermo is first among the Provinces, with regard to the number of farms and farmland. Compared to 2000, Enna, Palermo and Catania have undergone the greatest percentage growth in SAU and SAT.

³Since 2000 there have been three successive reforms (Agenda 2000, the Fischer Reform and Health Check) which have profoundly renewed the PAC with instruments such as the single farm payment (pagamento unico aziendale - PUA) regardless of production and imposition of obligations geared towards agronomic conditions.

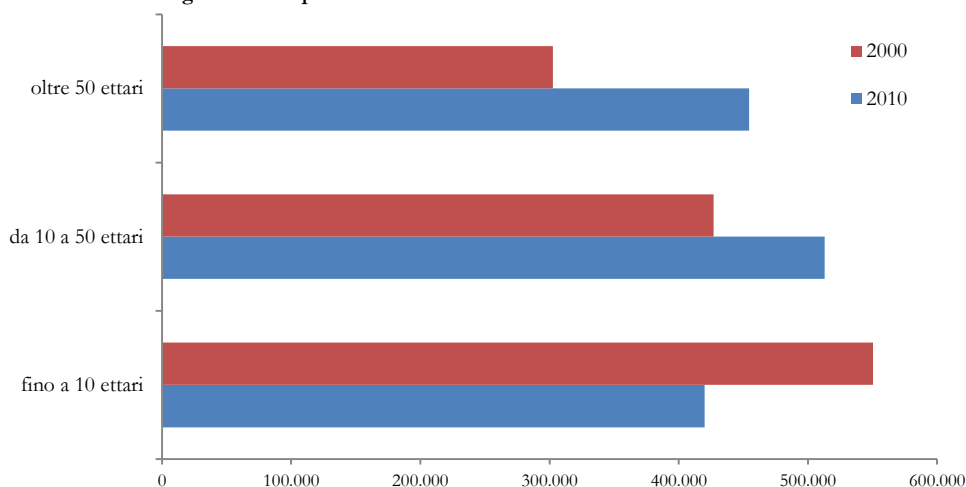
Table 19. 2 - Farms overall. SAU and SAT per Province. 2000 and 2010

Province	Farms			SAU			SAT		
	2010	2000	% var.	2010	2000	% var.	2010	2000	% var.
Trapani	29.310	35.209	-16,8	137.447	130.440	5,4	147.297	140.751	4,7
Palermo	38.887	52.158	-25,4	266.362	236.764	12,5	294.427	259.845	13,3
Messina	26.166	57.936	-54,8	162.118	144.514	12,2	192.360	183.241	5,0
Agrigento	33.828	52.415	-35,5	150.866	163.806	-7,9	169.936	182.358	-6,8
Caltanissetta	18.117	28.202	-35,8	117.072	108.947	7,5	130.354	119.160	9,4
Enna	17.336	25.837	-32,9	182.519	150.659	21,2	196.504	159.595	23,1
Catania	28.590	48.468	-41,0	169.274	146.213	15,8	195.737	178.738	9,5
Ragusa	12.770	24.084	-47,0	90.702	98.685	-8,1	101.586	115.520	-12,1
Siracusa	14.673	24.833	-40,9	111.161	99.690	11,5	121.217	116.249	4,3
SICILY	219.677	349.142	-37,1	1.387.521	1.279.719	8,4	1.549.417	1.455.458	6,5

Source: Istat data-processing

In Sicily, the average size in terms of SAU registered a greater increase than the national average (44.2%) and there was a diverging trend from the above-mentioned in the way of a falling number of agricultural and livestock farms and an increase in cultivate land. The effect of Community policy and market trends has, in fact, determined the disappearance of small businesses, in favour of a concentration of agricultural and livestock farming in larger-sized units. This becomes even more evident from the distribution of farms per class of SAU, revealing a reduction in farms smaller than 10 hectares and an increase in those larger than 10 hectares-

Fig. 19. 1. SAU per class of SAU. 2000 and 2010

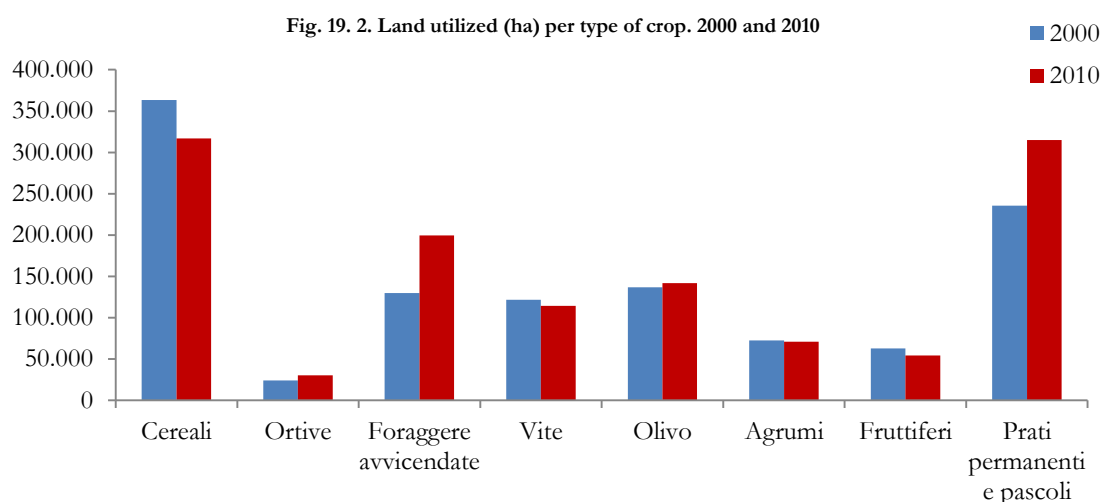


I. Source: Istat data-processing

- *Changes in the composition of the SAU and in animal husbandry in response to PAC measures.*

The distribution of the SAU among the main farms (as surveyed by the 2010 census in Sicily) differs from that of 2000 in certain aspects, presenting contrasting trends. The 5.4% increase in arable land (SAU) is the result of a

noticeable reduction in cereals (-12.7%) and an increase in alternated fodder (53.6%). As regards agrarian woody plants (-3.1%), there is a reduction in vineyards (-6.6%) and an increase in land for olive-trees (+3.6%), whereas the SAU for citrus groves decreased by -1.8%, along with that for fruit (-13.7%). The considerable increase in “permanent meadows and pasture” (+33.6% over 2000) is concentrated in the Provinces of Caltanissetta (+43%), Siracusa (+37.5) and Enna (+37%), and is due to specific PAC measures, which have encouraged more sustainable livestock breeding farms.

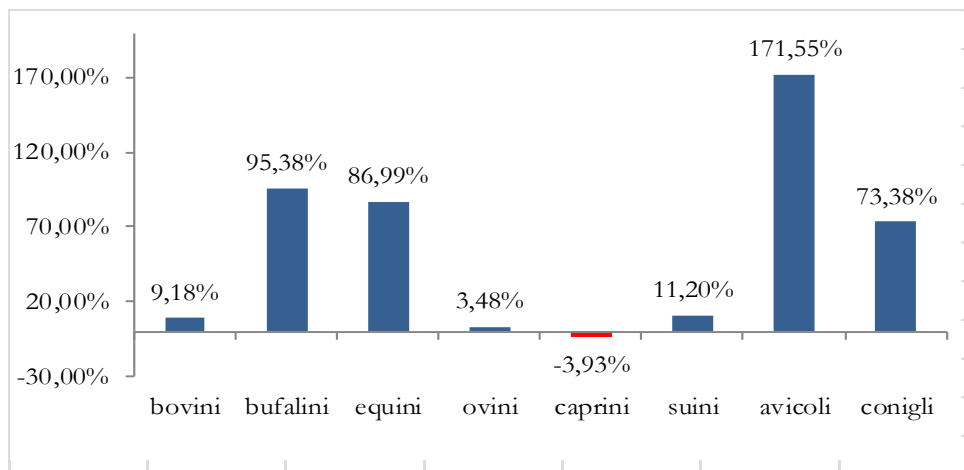


Source: Istat data-processing

The number of farms raising livestock in Sicily fell from 18,306 to 15,308, but with the number of head of livestock generally on the rise (Q.v. fig. 19. 3). The data shows particularly striking growth in wildfowl rearing (from 1.6 to 4.5 million animals). The comparison with data from the previous Census also shows a greater number of head of cattle (from 308,000 to 336,000), sheep (from 707,000 to 738,000) and horse (from 8,453 to 15,806). The Province with the largest average size of farms raising cattle is Ragusa, with about 50 (an increase over the 40 in 2000).

The zoo-technical sector underwent profound transformations over the last decade; in response to norms and policy in this sector, this led to important procedural innovations, in terms of hygienic and sanitary requirements and registration of animal numbers.

Fig. 19.3 % variations in numbers of head reared - 2000-2010



Source: Istat data-processing

This has meant the disappearance of inadequate enterprises; domestic cheese-making has almost entirely gone and municipal slaughter-houses are much reduced in number; all these concentration factors have favoured the growth of the medium-sized farms registered in the census.

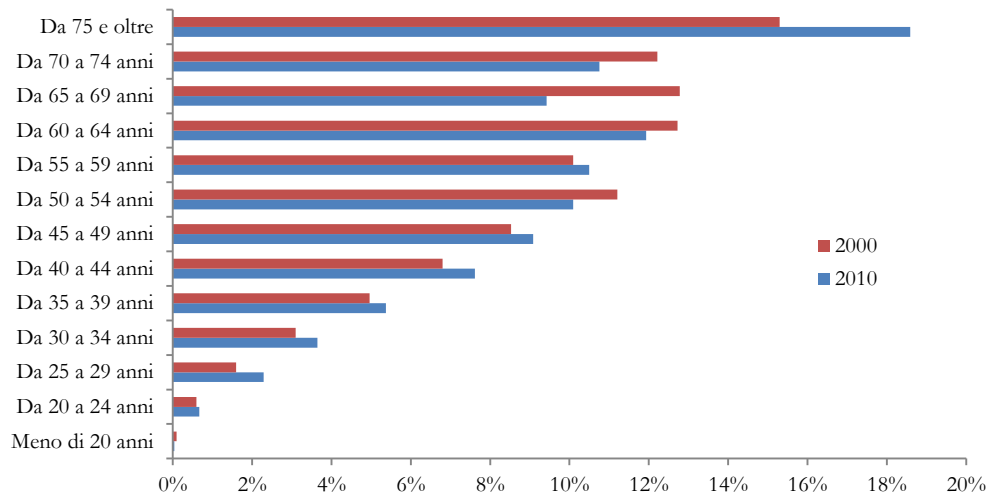
- *A more flexible structure for agricultural property, a distribution of managers by age-group that is difficult to interpret.*

The agricultural and zoo-technical structure continues to be based mainly on individually-run or family-run farms, in which the manager handles agricultural activity directly (in 94.3% of enterprises). On the other hand, the structure of agricultural property is more flexible than in the past, thanks to greater recourse to diversified forms of possession that are geared more and more frequently to the renting or free utilization of land. Rented SAU increased from 115,000 to 342,000 (+199%) compared to 2000; free utilization increased from 57,000 to about 134,000 (+135%). These increases are far higher than the national averages (52.4% and 76.6% respectively) and can be explained by the creation of new enterprises in the wake of the PAC's specific incentivizing measures.

The distribution of farm-managers by age shows that between the two Censuses of 2000 and 2010 several conflicting changes were effected. In fact the incidence of all age-groups up to 49 increased (from 25.7% to 28.7% of managers) and for those of 50 years and over it decreased (from 74.3% to 71.3%), lowering the age-level of operators in this sector; in particular, managers aged under 34 went from an incidence of 5.4% to 6.6%. In contrast to this slight alteration there was an increase as regards managers aged over 75;

this was probably due to fictitious claims of ownership, in relation to more favourable fiscal systems, and renders the overall picture less reliable (Q.v. fig. 19. 4).

Fig. 19. 4. Farms per age-group of managers (% values) 2000 and 2010



Source: Istat data-processing

- *Shrinking manpower but with a greater relative incidence of salaried workers and the SAU they manage.*

The employment of manpower definitely fell between the two Censuses (-53.2% for personnel and -24.4% for days worked). In this framework non-family manpower underwent a relatively slight drop with a resulting increase in its influence on the total (from 22.7% to 28.6%).

Table 19. 3. Personnel and relative days worked - 2000 and 2010

Farm manpower	2000			2010			% var.	
	Persons	Days worked	Days (%)	Persons	Days worked	Days (%)	Persons	Days worked
Family manpower	865.266	22.302.705	77,3	363.693	15.565.445	71,4	-58,0%	-30,2%
Non-family manpower	181.357	6.537.012	22,7	126.419	6.247.102	28,6	-30,3%	-4,4%
Total manpower	1.046.623	28.839.717	100,0	490.112	21.812.547	100,0	-53,2%	-24,4%

Fonte: Elaborazione su dati ISTAT

A sign of improved entrepreneurial activity in agricultural also emerged from the growth of the Regional SAU carried out employing salaried workers; the figure went from 156,000 to 182,000 hectares, equivalent to an increase of 16.3%, in countertendency when compared to the national variation (-39.3%). Foreigner workers (15,000 in number) account for 11.4% of non-family manpower in Sicily (compared with a national figure of 24.8%); half of these come from outside the EU.

- *Greater recourse to passive sub-contracting for farms and more efficient irrigation systems.*

Between the two Censuses, the fall in the number of farms in Sicily has meant less mechanized production, which is then entrusted to external agents (passive sub-contracting). However, the reduction in this activity is not so drastic, relatively speaking, actually highlighting increased recourse to these forms of sub-contracting (in terms of days worked per enterprise).

Table 19. 4. Days worked by third parties - Sicily and Italy - 2000 and 2010 - (days per farm)

	2000	2010	% Var.
Italy	3,7	7,4	100,9%
Sicily	3,8	8,4	119,8%

Source: Istat data-processing

Although there was an overall increase in irrigated land (+24%), there was a considerable reduction in utilization of obsolete equipment and methods (surface flow: -22,000 hectares), in favour of rain-based systems (+27.8%) and micro-irrigation (+58.5%), which have become the norm in providing a more rational and cheaper utilization of the resource.

Table 19. 5. Irrigated land in Sicily per type of irrigation - 2000 and 2010 (hectares)

	2000	2010	% Var.
Surface flow and lateral infiltration	35.314	13.517	-161,3%
Submersion	640	1.780	64,0%
Sprinkling (rain)	47.647	65.993	27,8%
Micro-irrigation	25.052	60.399	58,5%
Other	3.199	5.474	41,6%
TOTAL	111.852	147.163	24,0%

Source: Istat data-processing

○ *Main ways used by farming enterprises of selling produce*

The 6° census devoted a section of the questionnaire for the first time to marketing of produce. Of course, there is no way of comparing with the past, but the results do however depict the Regional situation as compared to other contexts, highlighting backward conditions and the relatively greater reliance of farms on commercial distribution (56% against 43% nationally). Direct sale to the consumer, which usually ensures higher profits, also assumes minimal importance when compared to other Regions in the south and the number of enterprises that provide to associated bodies is also lower (22.8% against 31.3% in Italy).

Table 19. 6. Sale of farm produce per distribution channel - Sicily and Italy - 2010 (number of farms)

	direct to consumer		other sales channels				All items
	direct sale to consumer on farm	direct sale to consumer outside farm	sale to other farms	sale to industrial enterprises	sale to commercial enterprises	sale or provision to associated bodies	
Sicily	17.531	17.733	16.102	12.557	80.351	32.759	143.406
%	12,2	12,4	11,2	8,8	56,0	22,8	100,0
Italy	210.625	89.668	164.464	132.095	446.457	326.918	1.037.211
%	20,3	8,6	15,9	12,7	43,0	31,5	100,0
North-west	25.617	11.592	31.718	18.620	56.666	28.879	115.526
%	22,2	10,0	27,5	16,1	49,1	25,0	100,0
North-east	23.260	8.651	43.075	22.613	84.023	120.646	223.561
%	10,4	3,9	19,3	10,1	37,6	54,0	100,0
Centre	37.442	13.053	21.924	11.766	48.023	45.685	131.579
%	28,5	9,9	16,7	8,9	36,5	34,7	100,0
South	98.667	34.845	47.015	56.962	163.641	88.444	389.165
%	25,4	9,0	12,1	14,6	42,0	22,7	100,0
Islands	25.639	21.527	20.732	22.134	94.104	43.264	177.380
%	14,5	12,1	11,7	12,5	53,1	24,4	100,0

Source: Istat data-processing

- *Uncultivated countryside is complemented by a high incidence of land treated with organic methods and a scarce presence of multi-functional activities*

One part of the questionnaire was new (compared to 2000) with its questions regarding the effects of maintaining elements of the countryside; it led to the finding that, during the three-year period 2008-2010, there were 27,246 Sicilian enterprises engaged in maintenance (12.4% of enterprises possessing land, against 17.2% in Italy). In addition, 65% of the enterprises had carried out maintenance on stone-walls (in Italy the corresponding total is 37.5%). Another novelty in the 6th Census was the section of the questionnaire devoted to organic farming. In Sicily 164,000 hectares are employed as “organic” land out of 781,000 in Italy as a whole (21%). The incidence of SAU in Sicily devoted to this sector is particularly high with regard to citrus fruits (48.35), alternated fodder (30.9%) and vineyards (27.6%).

Table 19. 7. Utilization of land worked with organic methods - Sicily and Italy - 2010 (land in hectares)

	cereals for grain production	dry pulse	potatoes	vegetables	alternated fodder	vines	olive-trees for oil and table olives	citrus fruits	fruit-trees	permanent pasture and meadows, excluding rough grazing	other crops	all items
Sicily	37.873	4.055	193	3.533	25.618	12.124	15.684	11.187	8.973	43.725	1.452	164.437
Trapani	760	129	0	126	51	6.833	1.321	324	51	139	50	9.784
Palermo	6.876	653	12	373	1914	3.078	3.095	279	599	6.936	355	24.171
Messina	1.048	17	0	20	3.016	103	2.625	829	1.911	14.352	76	23.997
Agrigento	925	25	..	32	520	948	1.938	333	465	659	19	5.863
Caltanissetta	2.559	275	..	33	858	139	988	16	1.128	352	6	6.354
Enna	13.662	1.407	..	106	11.076	84	1.806	359	1.630	12.102	497	42.747
Catania	5.754	972	2	379	2.608	449	1.132	2.617	602	3.818	231	18.564
Ragusa	2.237	128	35	1.319	2.565	298	1.131	564	815	1.404	144	10.640
Siracusa	4.052	448	145	1.145	3.011	190	1.648	5.867	1.773	3.964	75	22.317
Italy	223.542	23.774	1.325	16.216	82.937	43.999	134.294	23.141	45.137	172.517	6.705	781.490
% values (Sicily/Italy)	16.9%	17.1%	14.6%	21.8%	30.9%	27.6%	11.7%	48.3%	19.9%	25.3%	21.7%	21.0%

Source: Istat data-processing

In Sicily the development of organic agriculture assumed a certain importance in the second half of the 1990s, following the activation of measures of financial support emanating from the MC. Sharry Reform (Reg. CEE 2092/91) and continuing under the regulations that are at present in force with regard to European organic farming (Reg. CE 834/07). The characteristics and potential of Sicilian organic agriculture need to set in relation to the diversification and quality of the products grown on the island.

Lastly, with regard to integrative functions (agritourism, transformation of products, etc.), a little over 76,000 enterprises at the national level stated that they had one or more remunerative activities “linked” to agriculture (4.7% of

the total); in Sicily there were 4,007 of these enterprises (only 1.8% of the total).

Conclusions

The analysis carried out with regard to farming enterprises highlights the trend, between the two Censuses, towards an increase in average size of farm, a greater incidence of salaried manpower, larger and better organized livestock farms, the relative growth of sub-contracting and company-run enterprises. As regards agricultural farmland it emerges that there is an increase in rented land, Regional leadership in organic farming, a better ratio of land to head of livestock and improved and more extensive irrigation.

These trends are gradually bringing Sicily into line with the more professional levels of agriculture in other territorial contexts⁴. However, they do seem to reflect specific PAC measures, rather than a spontaneous trend towards improving the productive structure.

In fact, the scarcity of multifunctional activity, the lack of attention to features of the countryside, the advanced age of managers and the inadequate methods of selling produce, continue to place considerable obstacles in the way of creating enterprises that can make a profit and provide employment in agriculture.

⁴ For further details q.v. the journal "Agriregionieuropa", year 8 no. 31, December 2012, entirely devoted to analysis of data from the Census.