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# **Land consumption and farming concentration in mature economies: the Veneto region**

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# **Land consumption and farming concentration in mature economies: the Veneto region**

## **Abstract**

In this paper, we will discuss how soil consumption in mature economies is increasingly affecting farmland with measurable effects on the loss of eco-systemic services of agriculture. Different sets of indicators interconnect multiple phenomena: this fact restates the centrality of rural areas through the concept of multi-functionality. Using the information gathered from the VI General Agricultural Census, the study offers a realistic snapshot of the evolution of structural elements in the agricultural sector in the Veneto region. Modifications are intense, which imply the damage of multiple relationships between artificial space and agricultural systems. The search is performed through the analysis of census microdata. The observed trends suggest a concentration model of farm structures. This allows the testing of the effectiveness of agricultural policies. The tendency of relevant indicators shows the intensification of the restructuring process.

## **Keywords**

Farms, land consumption, microdata

## **JEL Codes**

Q10 Q12 Q15

## **Introduction**

In its periodic performance, the Agriculture Census allows the monitoring of changes which take place in the structural elements of the sector.

The dynamic of the sampling variables not only highlights the variations that occur at the local level but it also gives rise to the particular evolutionary model which seems to conform to Veneto farming. In addition to the methods of use of the productive factors like land and labor, this also relates to the structural dynamics of farms and to the reorganization and concentration of the production process.

The intention of setting the transformations, which have occurred, goes together with the possibility of testing the capacity of the agricultural policy in the Regional and European context, to develop the many specificities of the local agricultural system. For example, urban planning, in their role of governance, becomes co-responsible for the structural reorganization process characterized by the gradual exclusion of agricultural land. Moreover, evident variations in the structural components seem to accentuate the acceleration of the sectorial dynamics.

The comparison of the final data of the 2010 Census with the preceding one focuses especially on the main evolutionary variables related to land use, the structure of the farms, production specialization, and system of ownership and employment trends.

The understanding of the evolutionary model followed by the regional agricultural system could suggest specific agrarian policies aimed at increasing its competitiveness. The progressive erosion of farmland and the loss of the constitutive elements of the agricultural landscape should stimulate the attention of anyone who wishes to sustain the development of the sector. It would be fitting to change the current approach to the agricultural heritage, which is a primary growth factor.

## **1. Consumption of farmland in new spatial models**

The use of agricultural land through several forms of degradation: erosion, compaction, and waterproofing affects all primary sectors with increasing costs.

The Italian landscape is 30 million hectares, 17 of it is the total farmland (SAT), but only 12 are actually productive. The utilized agricultural area (SAU), in the past 30 years has decreased by 20% and its incidence has contracted from 52.4%, to 42.6% [Arzeni, 2012]. The majority of the loss is due to urban expansion and soil consumption. An appropriate indicator of damage includes private roads, irrigation systems, uncultivated lands and uncontrolled events affecting the rural area (SAT). On the other hand, the utilized farmland (SAU) is more suited to a planning that is guided by qualitative dimensions that considers the specific agricultural acreage and its productivity. Its decrease is due to several factors: in addition to the loss of SAT, it is also related to the reforms of the Common Agricultural Policy, to the many agricultural subsidies and to the dynamics of international trade. The abandonment of farming is the result. Often, the outcome is wild re-naturalization inside many forms of urban development. This factor contributes only partially to the return of lost biodiversity, serving several forms of degradation and disorder, while natural forces regain land control.

Soil consumption is increasingly affecting the farmland, with measurable effects in the loss of many ecosystem services of agriculture: the ability to absorb carbon, biodiversity and the restoration of natural capital.

Different sets of indicators interconnect multiple phenomena, this fact restates the centrality of rural areas through the concept of multi-functionality [Casini, 2009]. Modifications are intense, which imply the damage of multiple relationships between artificial space and agricultural systems. In the last decade, approximately 1,500,000 hectares of farmland (SAT) and 300,000 hectares of good land (SAU) were pulverized, rising progressively, to 55 ha per day [ISTAT, 2013]. The damage diversifies regions,

for morphological peculiarities, but especially for the variability of the economic development rate. The North shows the most rapid trend. In the Veneto and Lombardy, the proportion between soils consumed and regional surface in the decade exceeds 10% [ISPRA, 2015]. On the other hand, the internal dynamics connects us to the mode of Community economic development, where the situation is also very widespread. If residential buildings represent 30% of the loss, infrastructures constitute more than 40%, the remainder is attributable to different methods of urbanization (excavation, compaction, construction sites, areas for exhibitions, car parks, etc.).

What is attributable to a disorderly land planning translates into urban expansion: the proliferation of roads, interconnecting infrastructures and widespread urbanization. Increasing costs materialize the phenomenon of deterioration. Human impact results in emergent negative externalities [Movia, 2015]. Oversized, articulated, inhabited towns produce cumulative diseconomies, rising costs of land, housing, and transportation prices. Flight to the suburbs is the basis of the repolarization process. The additional impact on the area generates spatial dynamics, dilating land consumption [Chang, 2011]. The uncontrolled growth of cities affects the outlying regions, and failing planning results in a degradation that feeds upon itself. Thus, "urban sprawl" explodes, with low population density, high land consumption and widespread urbanity [EEA, 2006]. This leads to devastation with territorial metastasis, with the gradual marginalization of farmland, the loss of the original biological characteristics and the segregation of the natural elements. Also, the concept of "empty landscape" arises for rural territory. The extinction of indigenous species, due to pesticides, cultivation methods, and hunting brings us back to a scenery deprived of its characteristic elements, a clear demonstration of biological decline [Ripple, 2015]. The housing dispersion expands the artificial surface: construction of new roads, bridges, links, and refueling systems. Paradoxically, the rate of consumption of the

ground becomes inversely proportional to the increase in population. Small municipalities elevate the level of per capita consumption.

Waterproofing becomes relatively independent of demographic growth, related to the stage of economic development, the marginal rate of consumption rises for new residents. The diffused conurbation appears to be the natural evolution of human processes. A strong component of "moral hazard" of the local policies guides the logic of building and the real estate speculation of municipalities. Specific interests and the common good are often difficult to merge. The relevance of the income generated by the taxes from building plots is directly related to the justification of the increase in building spaces. The situation is even more intense in the weakest and mountain areas, where the most fertile land and the valley floor will all soon be urbanized. It only due to the economic crisis that thus far, real environmental and landscape damage has been prevented. We can cite the whole unsustainability of winter sports facilities, for significant effects on the environment.

In Veneto, human impact is intensified by regional peculiarities. Historically, the territory is dotted with small to mid sized towns, characterized by a high degree of autonomy. The fulfillment of housing needs is associated with the rejection of moving house. We must note rural origins where a strong sense of private property and of the small community prevail [Soriani, 2015]. The new structure spatial model "agropolitian" confuses high urbanization characteristics with pre-existing rural structures, at the risk of breaking up the environmental, landscaping, socio-cultural distinctive features of the traditional Veneto. Formed by local cultivation methods anchored to morphological prerogatives, indigenous vegetation peculiarities, pre-existing structures, and tree-lined and inter-property roads, this is the unavoidable heritage anchored in the history of Veneto [Scarpa, 1963]. This provides a pertinent identity to distinguish and diversify the Veneto Region, which includes its landscape

and local culture with habits, customs and traditions. It is characterized by its particular use of the land, the combination of natural and modified characters is evident in the specificity of the vegetation and fauna and in the housing and socioeconomic patterns. The traditional Veneto agricultural landscape is now threatened by the phenomenon of abandoning marginal and mountain areas. Examples are the modifications in production systems with the elimination of its essential features in the intensive areas of the plain, and by the gradual process of subtraction by extra-agricultural activities [Scarpelli, 1996]. In such a manner, the grassland surrounded by hedges, the riparian small woods and wetlands, gradually disappear for the application of agricultural techniques with high mechanization and the consolidation of cultivated areas. The contraction of trees and hedges and the general demise of aesthetic elements are functional to productivity. In the plains, the objective of maximizing production results in the simplification of landscape elements. In the hills and mountains, a more inertial evolution connotes the consequences of the abandonment [De Pin, 2006].

The breakdown of the regional identity profile declares the progressive cultural detachment from the places of origin and the loss of the value of their preservation. New lifestyles indulge standardization and social homogenization; shopping centers and major connector roads are part of active life. New spatial patterns overwhelm the environment and social relations [Bernardi, 1990]. They deprive value from the landscape, even the ones that can be used for tourism development.

## 2. Farming transformations

In Veneto 7.4% of Italian farms are present and occupy 5.9% of SAT. Their numbers, in 2010, was more than 119,000, with a total area of about one million hectares and 800,000 of SAU (Tab. 1).

Since 2000, farms have decreased by one third (-32.4%), less notable however, is the reduction of the area: -13.7% of the total, -4.6% of SAU.

**Tab. 1 – Farms, SAU and SAT. Years 2010 and 2000**

	Farms				SAU				SAT			
	2.010	2.000	V. ass.	V. %	2.010	2.000	V. ass.	V. %	2.010	2.000	V. ass.	V. %
Verona	19.687	25.159	-5.472	-21,7	173.161,8	177.334,4	-4.172,6	-2,4	203.830,0	218.043,6	-14.213,6	-6,5
Vicenza	15.701	30.270	-14.569	-48,1	94.528,6	113.730,6	-19.201,9	-16,9	119.787,1	171.619,5	-51.832,4	-30,2
Belluno	2.381	6.476	-4.095	-63,2	46.942,1	52.776,6	-5.834,6	-11,1	105.255,1	176.003,8	-70.748,6	-40,2
Treviso	28.345	41.282	-12.937	-31,3	128.581,0	138.081,9	-9.500,9	-6,9	159.831,5	172.148,0	-12.316,5	-7,2
Venezia	16.199	23.647	-7.448	-31,5	111.812,9	119.792,5	-7.979,6	-6,7	128.919,0	144.451,4	-15.532,4	-10,8
Padova	29.581	39.424	-9.843	-25,0	138.498,6	135.308,9	3.189,7	2,4	160.888,6	157.461,9	3.426,7	2,2
Rovigo	7.490	10.428	-2.938	-28,2	117.915,0	113.954,4	3.960,5	3,5	129.667,6	128.002,0	1.665,5	1,3
VENETO	119.384	176.686	-57.302	-32,4	811.440,0	850.979,2	-39.539,3	-4,6	1.008.178,9	1.167.730,2	-159.551,3	-13,7
	average SAU				average SAT							
	2010	2000	V. %	2010	2000	V. %						
Verona	8,8	7,0	24,8	10,4	8,7	19,5						
Vicenza	6,0	3,8	60,2	7,6	5,7	34,6						
Belluno	19,7	8,1	141,9	44,2	27,2	62,7						
Treviso	4,5	3,3	35,6	5,6	4,2	35,2						
Venezia	6,9	5,1	36,3	8,0	6,1	30,3						
Padova	4,7	3,4	36,4	5,4	4,0	36,2						
Rovigo	15,7	10,9	44,1	17,3	12,3	41,0						
VENETO	6,8	4,8	41,1	8,4	6,6	27,8						

Source: Istat data processing

Among the provinces, the most affected by restructuring are Vicenza and Belluno, with a reduction of 48.1% and 63.2% of companies, of 16.9% and 11.1% respectively for SAU.

The substantial reduction in the number of farms results in the increase of their average size, the total has increased from 6.6 to 8.4 hectares, the SAU from 4.8 to 6.8 hectares.

The farm size in the Veneto is still small and appears lower than the national average



(7.9 h. of SAU) in spite of the accelerated reduction of farms compared to surfaces, while SAU impacts for 80.5% on SAT, five points above the Italian average (75.3%). SAU is concentrated in Verona (21.3%) and Padua (17.1%), with Belluno now representing only 5.8%. In Verona and Padua, the incidence of SAU on the total area reaches 84.9% and 86.1%; in the province of Belluno which is characterized by forests (37.4% of SAT), it is 44.6%. The increased incidence of SAU confirms the definitive loss of rural land not strictly used for production. In addition, although significant, the contraction of farms is still far removed from leading to a satisfactory size for them. Despite the growth, there is a great presence of small and very small farms. Those with less than 2 hectares of SAU are over 55,000, almost half of the total (46.4%), for an incidence of the surface, however, it is lower, at 7%. Those with less than 10 hectares are 85.7%, occupying 32.3% of SAU. The reduction is not uniform, particularly notable in those up to one hectare (-56.2%); in contrast +15.7% are the farms over 20 hectares. SAU shows an almost specular variation, decreasing for classes up to 20 hectares (-18.6%), growing up to higher classes (+13.6%).

The selective consolidation process involves a significant expansion of the major farms and the departure of smaller, increasingly marginalized ones. The path to competitiveness does not appear to be concluded. The high presence of micro-companies, with their social and environmental relevance, makes for a difficult approach towards the objectives of economic efficiency. The importance of maintaining a living presence in rural areas is at risk of being overwhelmed.

The disintegration of farms justifying their existence in their multifunctional specificity progresses.

Production is focusing on the plains, with 77.8% of SAU (70.7% of SAT), showing a lower decrease (-1%), compared to the hills and mountains (-15.5%). This has only

9.9% of SAU and 15.8% of SAT reduced compared to 43.1% in 2000. This is also true for farms, located in the plains for 76.8% and quite marginal in the mountains (4.5%). The main form of land use is arable land (70.2% of SAU), involving 76.9% of companies (Table 2). Their area remains almost constant (-1.7%) but the same cannot be said for farms (-28.3%), whose SAU invested in arable land increased from 4.5 to 6.2 hectares.

Woody plantations are practiced by 39.5% of farms, with SAU incidence of 13.5%, specializing in wine and fruits. Areas under vines represent 71.1% of the total, the vineyards have increased by over 4,100 hectares (+5.6%). In clear decline, however, are the farms (-47.1%) whose average planted area is still low, from 1.21, it reaches 2.32 hectares.

Finally, the downsizing of permanent meadows and pasture surfaces (-18.9%) are still present in 18.3% of the farms but more than halved (-55.8%); this shows the gradual departure of what is no longer competitive agriculture, but of high environmental value.

On the arable land, grains play the preeminent role, covering 65.8% of its surface; almost half of SAU (46.2%), they have a good increase (+6.8%): about 24,000 hectares. Industrial plants, with 15.8% of shares, result in a modest decline (-4.1%). This is evident for the sugar beet and tobacco. Because of the noted agricultural policy measures, the surface of beets has contracted by as much as 61.8%, and now occupies only 2.4% of arable land.

**Tab. 2 – Used area in Veneto. Year 2010**

	Verona		Vicenza		Belluno		Treviso		
	2010	v.% '00	2010	v.% '00	2010	v.% '00	2010	v.% '00	
<b>ARABLE</b>	97.067,7	-0,7	52.846,2	-5,8	4.431,1	-14,0	79.840,9	-6,6	
Cereals	57.796,9	19,4	35.881,5	1,3	3.115,7	15,1	51.112,4	-8,2	
Beet	1.029,2	-83,7	389,3	-74,5	2,2	742,3	184,4	-86,1	
Industrial plants	15.862,2	-19,3	5.101,7	-24,2	24,8	-69,1	13.363,2	-14,1	
Vegetables	5.642,0	2,7	1.107,9	11,5	50,4	-21,5	1.244,8	37,8	
<b>WOODY CROPS</b>	48.212,3	-66,0	10.149,1	50,5	285,8	513,7	30.784,5	-25,8	
Vine	27.812,8	15,7	8.491,0	2,0	56,6	-28,0	28.626,1	9,7	
Fruit-bearing	16.029,4	-15,5	731,2	-21,7	190,8	63,1	1.038,2	-27,3	
<b>FAM. GARDENS</b>	195,4	11,7	380,3	-21,6	52,6	-15,1	456,2	-2,8	
<b>PASTURES</b>	27.686,3	-16,6	31.153,1	-33,9	42.172,6	-10,9	17.499,3	-26,5	
<b>TOTAL SAU</b>	173.161,8	-2,4	94.528,6	-16,9	46.942,1	-11,1	128.581,0	-6,9	
Arboriculture	714,5	-20,2	158,8	-40,3	32,3	-92,9	675,2	-49,1	
Woods	14.253,8	-33,9	15.171,2	-64,4	39.401,4	-58,5	11.741,3	-20,8	
Unusable land	4.886,8	6,8	1.703,8	-72,2	13.581,3	-44,1	7.294,1	136,2	
Other area	10.316,8	-24,2	8.152,6	-8,4	5.295,8	52,0	11.503,4	-22,2	
<b>COLTIVATED SAU</b>	203.333,8	-6,7	119.715,0	-30,2	105.252,9	-40,2	159.795,0	-7,2	
Other Sat	496,2		72,1		2,3		36,4		
<b>TOTAL SAT</b>	203.830,0	-6,5	119.787,1	-30,2	105.255,1	-40,2	159.831,5	-7,2	
	Venezia		Padova		Rovigo		VENETO		
	2010	v.% '00	2010	v.% '00	2010	v.% '00	2010	v.% '00	%
<b>ARABLE</b>	101.633,7	-6,3	119.578,9	2,6	113.860,8	3,6	569.259,3	-1,8	56,5
Cereals	59.821,6	5,9	87.313,6	4,8	79.475,9	15,6	374.517,5	6,8	37,1
Beet	4.260,0	-62,3	3.962,6	-47,8	3.994,1	-50,6	13.821,8	-61,8	1,4
Industrial plants	26.696,4	3,4	12.229,1	24,5	16.534,5	3,6	89.811,8	-4,1	8,9
Vegetables	2.782,1	-16,5	2.595,7	-7,6	3.686,9	15,2	17.109,9	1,9	1,7
<b>WOODY CROPS</b>	8.224,5	33,2	9.038,3	97,3	2.888,9	40,9	109.583,5	-18,7	10,9
Vine	6.631,3	-2,9	5.902,0	-23,5	365,7	-47,6	77.885,5	5,6	7,7
Fruit-bearing	1.014,2	-39,7	1.311,7	-32,0	2.194,1	-17,0	22.509,5	-18,7	2,2
<b>FAM. GARDENS</b>	319,3	-31,9	529,8	-11,2	127,1	-10,4	2.060,8	-14,1	0,2
<b>PASTURES</b>	1.635,4	-14,2	9.351,6	29,1	1.038,2	215,1	130.536,5	-18,9	12,9
<b>TOTAL SAU</b>	111.812,9	-6,7	138.498,6	-2,4	117.915,0	3,5	811.440,0	-4,7	80,5
Arboriculture	805,5	-20,5	1.214,5	9,3	815,8	-34,3	4.416,6	-30,0	0,4
Woods	1.196,2	-32,3	5.642,6	81,0	461,8	-27,8	87.868,4	-51,0	8,7
Unusable land	1.605,3	19,1	1.545,3	36,4	834,2	51,2	31.450,8	-23,5	3,1
Other area	13.489,0	-34,2	13.947,4	-16,7	9.604,7	-17,2	72.309,8	-19,3	7,2
<b>COLTIVATED SAU</b>	128.908,8	-10,8	160.848,4	2,2	129.631,5	1,3	1.007.485,5	-13,7	99,9
Other Sat	10,2		40,2		36,0		693,4		0,1
<b>TOTAL SAT</b>	128.919,0	-10,8	160.888,6	2,2	129.667,6	1,3	1.008.178,9	-13,7	100,0

Source: Istat data processing

Soft and hard wheat, equivalent to 7.2% of SAU, that grows over approximately 60,000 hectares (+104.9% and +351.6%, respectively). This has been disadvantageous to corn, leading to a decrease of over 37thousand hectares (-12.7%). It remains, however, the most common grain, with 45% of the arable land.

### 3. Concentration of livestock

In Veneto there are over twenty thousand farms engaged in livestock, 16.7% of the total, higher than the national average (13.4%). Are concentrated in Treviso (25.9%), Padua (20.8%) and Vicenza (19.4%). In Belluno, however, their impact reaches 52.9% of farms (Tab. 3).

Tab.3 - Livestocks

		Verona		Vicenza		Belluno		Treviso	
		2010 v.% '00		2010 v.% '00		2010 v.% '00		2010 v.% '00	
cattle	fams	1.983	-36,4	2.625	-40,5	717	-36,9	3.807	-42,2
	heads	217.463	-11,2	137.947	-17,1	18.293	-11,2	163.878	-23,7
	average	109,7	39,8	55,6	39,5	25,5	40,8	43,1	32,1
dairy cow	fams	851	-44,6	1.534	-47,9	444	-45,0	1.115	-57,9
	heads	36.600	-21,2	44.919	-20,4	7.686	-14,9	23.106	-30,5
	average	43,0	42,3	29,3	52,8	17,3	54,6	20,7	65,1
pigs	fams	283	-46,6	297	-72,1	70	-80,6	419	-77,6
	heads	337.245	49,9	52.473	7,4	47.473	36,5	122.003	-14,2
	average	1.191,7	180,8	176,7	284,5	678,2	603,8	291,2	283,3
poultry	fams	884	-25,8	506	-76,8	93	-87,6	532	-85,5
	heads	24.736.672	20,5	7.103.212	-17,4	16.346	-81,9	5.056.554	-26,3
	average	27.982,7	62,5	14.038,0	256,4	175,8	45,8	9.504,8	407,5
		Venezia		Padova		Rovigo		VENETO	
		2010 v.% '00		2010 v.% '00		2010 v.% '00		2010 v.% '00	
cattle	fams	784	-52,5	2.683	-35,6	297	-40,1	12.896	-40,2
	heads	37.722	-39,7	145.192	-14,6	35.703	-31,6	756.198	-18,8
	average	48,1	26,8	54,1	32,6	120,2	14,3	58,6	35,8
dairy cow	fams	241	-61,3	905	-52,8	65	-50,4	5.155	-51,4
	heads	7.509	-31,2	29.234	-16,2	2.809	-37,7	151.863	-22,3
	average	31,2	77,7	32,3	77,3	43,2	25,6	29,5	59,9
pigs	fams	145	-91,7	455	-77,6	124	-84,8	1.793	-78,7
	heads	35.394	-20,2	131.572	12,2	72.082	-17,2	798.242	14,1
	average	244,1	866,1	289,2	402,0	581,3	443,8	445,2	436,7
poultry	fams	156	-95,4	679	-82,3	98	-92,7	2.948	-82,0
	heads	1.157.408	-41,8	5.116.412	-32,1	3.000.805	90,0	46.187.409	-2,1
	average	7.419,3	1.162,5	7.535,2	283,3	30.620,5	2.497,3	15.667,4	442,7

Source: Istat data processing

The significant contraction (-45%) shows a massive cessation of livestock, particularly evident in Venice (-71.8%), Rovigo (-66%) and Treviso (-46.4%), as well as a process

of concentration of farms. Their dimensional increase is joint with an adjustment of the surface, also to favor the demands of disposal of the effluent. The contraction, in fact, interests farms that have up to 50 hectares, more evident for those under 10 (-52.8%). On the contrary, there is a number of increasing farms with over 100 hectares of SAU (24.3%).

Companies with cattle are at approximately 13,000, with a greater presence in Treviso (29.5%), Padua (20.8%) and Vicenza (20.4%), but the leaders are concentrated in Verona (28.8%). Since 2000, cattle farming has been reduced by 40.2%, against a national average of -27.8%. Even the head of cattle have a higher contraction than the national average, -18.8% in Veneto compared to -7.5% in the rest of Italy.

The reorganization shows the shortage of small stalls and the specialization of the remaining ones. Consequently, the average size of cattle farming at 43.2 reaches 58.6 head, while the national average is 45. Verona (109) and Rovigo (120) have the higher average of head.

Dairy farms number at more than 5,150 with approximately 152,000 dairy cows. Vicenza is the capital of milk with 29.8% of the stables and 29.6% of the animals. The restructuring seems more intense than the national average, with companies halved (-51.4%) and cows reduced to 22.3%, against the respective figures of -37% and -9.7% in the rest of Italy. Stalls are small, but have increased in number from 18.4 to 29.4 heads.

Farms with pigs are at around 1,800, making up 8.9% of livestock, one third of the number compared to ten years ago (-78.7%) when the national decline was -83.3%. By contrast, heads, 798,242, are growing (+14.1%) though not in Treviso (-14.2%), Venice (-20.2%) and Rovigo (-17.2%), but in Verona (+49.9%) and Belluno (+7.4%). Thus, if the concentration of farms sees Padua excel (25.4%), followed by Treviso (23.4%),

Verona is the one who ends up holding almost half of the assets (42.3%). The contraction increases the size of livestock holdings from 82.9 to 445.2 average heads. Poultry farming is approximately 3,000, 14.7% of livestock holdings. The inter census contraction (-82%), even if it is lower than the national (-87%) is drastic. Poultry farms are concentrated in Verona (30%), Padua (23%), Treviso (18.1%) and Vicenza (17.2%). Heads, more than 46 million, represent 27.6% of the national net worth. The slight decrease (-2.1%) does not reflect the provincial differentiation, so Verona (+20.5%) and Rovigo (+90%) appear to be in contrast. This trend leads to increasing company size (15,700 average heads), significantly higher than the national ones (8,150).

#### 4. Agriculture social weakness and land rigidity

The farms of the Veneto are still strongly linked to the farming family. Only 1.7% employ non-family labor with permanent contracts (2,075 units), while definite term contracts interests 7.7% of the companies (Tab. 4). The decrease in companies with family labor and non-family laborers with a permanent contract is directly opposing the growth of farms using temporary workers.

**Tab. 4 – Farms and surface by level of possession of the land. Year 2010.**

	Farms					SAU				
	2010	%	2000	%	V. % '00	2010	%	2000	%	V. % '00
Property	82.613	69,1	145.843	82,6	-43,4	338.091,1	41,7	512.134,9	60,2	-34,0
Rent	5.078	4,3	4.882	2,8	4,0	68.528,9	8,4	64.445,8	7,6	6,3
Free use	6.462	5,4	1.777	1,0	263,6	75.252,7	9,3	5.770,1	0,7	1.204,2
Property/rent	15.478	13,0	15.941	9,0	-2,9	245.443,5	30,2	222.315,0	26,1	10,4
Prop./Free u.	6.405	5,4	6.949	3,9	-7,8	29.701,0	3,7	29.429,2	3,5	0,9
Rent/Free u.	523	0,4	221	0,1	136,7	6.768,8	0,8	2.071,1	0,2	226,8
Pr./rent/free u.	2.716	2,3	1.059	0,6	156,5	47.653,9	5,9	14.813,1	1,7	221,7
Without land	109	0,1	14	-	678,6	-	-	-	-	-
<b>TOTAL</b>	<b>119.384</b>	<b>100,0</b>	<b>176.686</b>	<b>100,0</b>	<b>-32,4</b>	<b>811.440,0</b>	<b>100,0</b>	<b>850.979,2</b>	<b>100,0</b>	<b>-4,6</b>

Source: Istat data processing

The number of total working days for all workers reaches nearly 20 million (-26% compared to 2000), 86.1% of which is related to family labor, 5.1% for permanent contracts and 8.7% for part-time workers. The family contribution decreases (-5%), but up to 5 hectares of SAU exceeds 90% of the total workforce. What does prevail, however, is the external labor for companies with more than 100 hectares.

There are a little over 257,000 active workers, with a drastic reduction in this figure (-43.7%) as compared to 2000; 210,000 of which relate to family labor, 137,000 are male (65.2%). External ones, just over 47,000, are represented by 31.4% of females. Only 21.4% of these are recruited for continuous employment. Of the 113,327 farm leaders, 26% are women, slightly less than the national average (31.6%).

The difficulty of generational turnover is highlighted by the advanced age of the employees, 56% of business leaders are over 60 years old; only 7% are under the age of 40. The majority (nearly 76%) holds a primary or secondary school certification. Only just over 15% hold a diploma or degree. The high index of old age and low education discloses the weaknesses of the social structure of farms [Trestini, 2012].

Companies with lands in ownership, 82,613, show a contraction of 43.4%, representing about 70% of the total. There has been an increase in those with only rent land (4%) and land in free use (+4,685 units), as well as joint companies. Even the proportion of land in ownership experiences a significant reduction (-34%), with the incidence reduced from 60.2% to 41.7% of the total. This is offset by the increase in rented areas (+6.3%), but, which is above all, free of charge (+1200%), which from a figure of 0.7% now represents 9.3% of the agricultural land. These are the methods of farm land reorganization with are being used to try and revolve the land rigidity.

## **Conclusions**

The restructuring process of agricultural economy in the Veneto is one of the most intense, the fastest and the most out of control in many ways in a future increasingly full of uncertainties.

The productive reorganization seems to follow the Ricardian model. It is increasingly concentrated on the plains; the particular land regime contrasts the competitive repositioning of farms, whose drop-out rates have gradually accelerated, also aggravating the difficulties of turnover, revealing the weaknesses of the social component.

As in other mature economies, the most destabilizing factor is the progressive consumption of agricultural land: it emphasizes the irreversibility of the loss. Territorial aggression becomes more intense, contributing to an erroneous concept of development. A strong defense of rural heritage seems progressively closer to surrendering. The most pronounced decline in farms, almost halved in number from '90s, most dramatically in mountain areas, reveals a selective restructuring. The failure of those remaining to adapt does show that they have not yet reached a satisfactory structural equilibrium.

The significant contraction of meadows and pastures, but also of woods, encourages the intensification as a favorite kind of land use, when more and more pressing economic commitments require the specialization of farms. The non-agricultural destinations of the land are now predominant. The decreased importance of agriculture in the management of resources makes its function of environmental protection more conflictual and is gradually restricted to unprofitable spaces.

Obstacles to the development of farms are partially circumvented through alternative methods of land consolidation, such as leases and rent-free agreements. In this context,



in the personal budgeting of the farmer, the aids to agriculture contrast with other elements, until the preference for land use changes, with a view to urban rent.

A further question is whether such an evolutionary model of the supply, whose dynamics look to speed up further, is compatible with the requests of an increasingly demanding market.

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