

FARM TYPOLOGIES THAT EMPLOY FOREIGN WORKERS IN ITALY: AN ANALYSIS
THROUGH CENSUS MICRO-DATA

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SUMMARY

The contribution of foreign workers is very important for Italian agriculture. Despite their relevance, few analysis have been undertaken to understand which types of farms rely more on foreign workforce. The objective of the present paper is to analyze the features of Italian farms which employ foreign workers and then grouping them on the basis of their structural features. Micro data from the 6th Italian Agricultural Census are used to better capture farm heterogeneity. After describing the incidence of foreign workers employed according to farms' characteristics, a cluster analysis is performed to understand to what extent different farm typologies can depend on different level of foreign workers. Results, though preliminary, are informative as they give a detailed representation of farms that employ salaried workers in the whole Italian agriculture. The cluster analysis allows the definition of six farm typologies and within this aggregation, two of the groups observed can be considered non-professional because of their very low contribution to holder income, whilst the other four can be considered professional. Among them, foreign workers are especially involved in livestock farms and in intensive farms specialized in permanent crops.

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1. Introduction

According to official statistics on 1st January 2016, foreign residents in Italy are more than 5 million of people and they represent the 8,3% of the total population and 10.5% of employed (ISTAT, 2015). Looking at agricultural sector their contribution appears even more important: in fact, the quota of foreign workers is 15.8% of the total employment (ISTAT, 2015).

Despite the relevance of this phenomenon in political and academic debate in Italy, about economic and social consequences of foreign labour influx, to our knowledge scarce empirical evidence is found. Research on migration into rural areas and the agricultural sector has a long tradition in the US (e.g. Friedland and Nelkin, 1971; Goldfarb, 1981; Mize, 2006). A rich literature exists also about migrant labour work and their vulnerable position in the labour market on the US agricultural sector (e.g. Wells, 1996; Rogaly, 2006) and Australia agricultural sector (see Hanson and Bell, 2007).

According to Tomasz and Aldona (2016) and Rye and Andrzejewska (2010) the majority of studies on rural migration in the EU have tended to focus rather on the scale and implications of exodus from rural societies than on rural areas as receivers of migrants, especially foreign ones. Moreover, concerning the European literature has mainly focused on immigrants' impact on metropolitan areas rather than their impact on agriculture (see Anderson et al. 2006).

Kasimis et al. (2003) examine the effects of the labour immigration into Greek agriculture and the way in which the immigrants have incorporated themselves into local communities. The authors analysed that migrants usually receive poor wages for long working days. This appalling conditions of foreign workers is often registered in many Mediterranean European countries, as reported in the press (e.g. in Italy see Morcellini, 2009) and international organizations (e.g. about Italy see Human Right Watch (2011) and Amnesty International (2012). In particular, Amnesty International (2012) reported that the extensive recruitment of low-paid foreigners generates series of challenges also for the Italian agricultural sector.

As analysed by Rye and Andrzejewska (2010), we can underline a Southern European model of migration, characterised by heterogeneity of immigrants' nationalities, differentiation of their cultural origins, unemployment and underemployment in the countries of reception (see also Kasimis and Papadopoulos, 2005).

Reflecting the increasing numbers of immigrants, a growing body of literature discussing the implications of this phenomenon on rural communities and the bad working conditions of migrant workers (for a review of migrants in agriculture, see Rye and Andrzejewska 2010).

However, recent literature has not taken into the right account the relevance of these phenomena into Italian agriculture, where the employment of foreign workers has grown even when total employment decreased. This paper tries to fill this gap analysing the characteristics of occupation of foreign workers in Italian agriculture using Italian Agricultural Census data. To carry out this analysis Section 2 describes the incidence of foreign workers in the Italian agriculture; the section 3 briefly introduces the methodology used; and section 4 presents the results of the cluster analysis, while section 5 shows a brief regional focus and section 6 proposes some concluding remarks.

2. Foreign workers in the Italian Agricultural Census

Data used in this analysis are micro level information collected by the 6th Italian Agricultural Census (ISTAT, 2010), that can provide a deeper description of the role of workforce in Italian agriculture and allow a better understanding of the sectorial internal dynamics of the farms: the macro level of analysis, can in fact hide significant differences in the real contribution of immigrant workforce in Italian agriculture. The survey field of observation comprises 1.620.884 farms but for the purposes of the paper we analyzed only the farms that employ hired workforce. Therefore, we utilized a dataset of 221.671 farms distinguished among farms which employ salaried workers, both permanent and seasonal. These data probably underestimate the importance of migrant workforce, because of the difficult to assess irregular presences of workers (Macri,

2013)⁵. This issue affects especially seasonal activities, which are less attractive for national workers (MAC, 2013). However, ISTAT Official statistics can help providing an accurate representation of the phenomenon at Italian level. The first part of the analysis concerns a descriptive of distribution of workers among farm typologies, economic size, type of farming and region. Data on the presence of foreign workforce in Italian agriculture are very interesting and give a quite clear picture of the high dependence of Italian farms on not Italian workers, whatever their nationality. Total foreign workforces in 2010 are 233,055 units (on a total occupation of 938,103) which represents almost the 25% of agricultural workforce in Italy (calculated as the percentage on total workforce at regional level). Regions differ quite a lot on their dependence of foreign workforce (table 1). We can distinguish a group of regions that employ a percentage of less or equal than the national average (25%), which are mostly southern regions and one of the centre (namely, Sardinia, Sicily, Apulia, Calabria, Campania, Basilicata, Molise and Marche); a group of regions that employ a percentage from 27 to 42% (Toscana, Friuli-Venezia Giulia, Umbria, Abruzzo, Liguria, Veneto, Emilia-Romagna, Lombardy and Lazio); and regions whose workforce is more than an half foreign (Valle d'Aosta, Piedmont, Trento and Bolzano).

Among these 11% of Italian farms employ only foreign workforce, while 13% both Italian and immigrant. In particular, more than 30% of Liguria, Valle d'Aosta, Trento, Bolzano and Piedmont's farms occupy only immigrants.

At regional level, the issue of reliability of this data becomes much more important. Indeed, it is likely that low incidence of foreign workers in Southern regions, is influenced by the higher presence of not regularly employed workforce (Ievoli and Macrì, 2008, Coderoni et al. 2015).

Table 1. Distribution workforce and farms by nationality and by Region

Region	Foreign workers		% of farms that employ:		
	Number	%	Only Italian	Italian and immigrant	Only immigrant
Piedmont	17,694	53.57	44.50	21.97	33.53
V.d'Aosta	470	53.05	29.67	16.00	54.33
Lombardy	16,527	42.06	53.21	25.56	21.23
Veneto	19,781	40.20	62.72	17.86	19.43
F.V.Giulia	3,543	28.95	61.80	24.87	13.33
Liguria	1,892	39.30	51.63	16.36	32.01
E-Romagna	28,686	40.37	53.37	27.19	19.44
Tuscany	11,064	27.33	64.09	21.81	14.11
Umbria	3,645	29.38	66.39	21.05	12.56
Marche	2,353	20.65	73.55	16.11	10.35
Lazio	12,810	42.42	57.02	15.97	27.02
Abruzzi	5,514	33.67	73.06	12.32	14.62
Molise	1,409	25.21	79.16	10.27	10.57
Campania	14,349	19.19	81.53	10.22	8.25
Apulia	26,126	12.00	88.40	8.63	2.97
Basilicata	5,185	21.56	75.01	18.34	6.66
Calabria	13,606	13.70	87.75	9.65	2.60
Sicily	14,407	11.40	88.15	7.43	4.42
Sardinia	1,109	6.85	91.22	3.53	5.25
Bolzano	19,979	68.95	43.18	15.04	41.78
Trento	12,906	54.46	51.03	8.76	40.21
Italy	233,055	24.84	75.56	12.99	11.45

⁵ Some study estimate irregular presences in 2014 around 6% of regular ones (Fondazione ISMU, 2017) even if it seems to be decreasing, probably as a consequence of the persistence of the economic crisis, which is negatively affecting the whole immigration flow in Italy (OCDE, 2016).

Source: Agricultural Census

Despite the issue of data reliability, disentangling figures by regions and farms characteristics (e.g. farm type and size), still gives some interesting information on the distribution of foreign workforce in Italian agriculture.

Looking also at data on type of contract by region makes emerge difference (table 2). While at national level 79% of the permanent workers are Italians and 21% are immigrants (9% of which from EU), at regional level, percentages of foreign permanent workers range from 7% of Apulia and Sardinia to 39% of Liguria and 35% of Piedmont. The same olds for the temporary workers, which at national average level are 74% Italians and 26% immigrants (of which 16% EU), while at more disaggregated level range from lowest levels of Apulia and Sardinia to highest values of Valle d'Aosta (62%), Bolzano and Trento (75% and 57% respectively). Of course, those data reflect also farms specific characteristics, among which farm specialization plays a crucial role.

Table 2. Distribution of foreign workforce by Region and type of contract

Region	Permanent workers			Temporary workers			Other contracts		
	Italian	Immigrant	Of which	Italian	Immigrant	Of which	Italian	Immigrant	Of which
Piemonte	64.94	35.06	15.98	45.64	54.36	23.48	20.16	79.84	32.24
V.d'Aosta	72.08	27.92	16.24	38.27	61.73	23.30	63.41	36.59	0.00
Lombardia	70.71	29.29	6.30	52.78	47.22	28.22	24.31	75.69	37.18
Veneto	70.62	29.38	13.66	56.91	43.09	28.68	55.83	44.17	18.24
F.V.Giulia	80.07	19.93	11.12	67.98	32.02	23.39	59.80	40.20	10.69
Liguria	61.36	38.64	6.45	58.09	41.91	9.06	81.60	18.40	2.00
E-Romagna	68.90	31.10	9.15	56.22	43.78	23.81	79.47	20.53	8.76
Toscana	78.67	21.33	8.51	71.44	28.56	13.49	51.27	48.73	13.73
Umbria	78.72	21.28	9.26	67.50	32.50	13.89	60.91	39.09	14.66
Marche	81.28	18.72	7.35	78.25	21.75	8.67	85.06	14.94	7.79
Lazio	66.85	33.15	14.11	54.25	45.75	23.94	58.09	41.91	34.00
Abruzzo	75.96	24.04	13.65	64.33	35.67	10.46	69.62	30.38	17.32
Molise	79.47	20.53	4.78	74.30	25.70	18.56	70.85	29.15	19.56
Campania	85.53	14.47	6.54	79.00	21.00	9.90	90.59	9.41	5.54
Puglia	92.75	7.25	3.62	87.87	12.13	7.42	84.58	15.42	12.92
Basilicata	81.31	18.69	8.89	77.31	22.69	14.10	88.02	11.98	10.57
Calabria	91.80	8.20	5.24	89.13	10.87	7.33	75.03	24.97	19.33
Sicilia	84.58	15.42	8.29	87.59	12.41	5.74	97.17	2.83	1.68
Sardegna	92.94	7.06	4.08	92.96	7.04	3.37	96.96	3.04	1.77
Bolzano	88.38	11.62	10.05	25.10	74.90	71.56	43.66	56.34	53.00
Trento	74.44	25.56	17.23	42.91	57.09	46.59	54.44	45.56	40.35
Italy	79.04	20.96	8.55	74.40	25.60	15.55	73.79	26.21	15.54

Source: Agricultural Census

Table 3. Incidence of foreign workforce by Region and farm specialization (%)

Region	Field crops	Horticulture	Permanent crop	Grazing livestock	Granivores	Mixed cropping	Mixed livestock	Mixed crops and livestock	Not classified	Total
Piemonte	35.78	30.94	59.90	44.11	45.03	45.39	23.64	45.67	16.67	53.57
V.d'Aosta	41.03	13.41	26.97	77.51	-	20.00	0.00	4.08		53.05
Lombardia	25.72	34.95	53.23	40.03	38.93	50.87	37.60	35.68	27.06	42.06
Veneto	40.48	68.04	30.88	32.34	51.20	45.70	30.25	38.84	1.47	40.20
F.V.Giulia	13.14	52.56	28.41	35.25	25.10	13.35	9.68	12.07	8.51	28.95
Liguria	28.13	49.26	25.31	35.64	50.00	39.19	40.00	31.58	25.00	39.30
E-Romagna	31.79	45.10	42.24	45.65	48.15	38.00	32.87	35.97	24.26	40.37
Toscana	31.39	34.62	25.45	30.11	36.00	26.25	20.36	30.69	9.33	27.33
Umbria	39.02	25.55	21.72	39.78	32.21	25.81	50.00	28.27	7.41	29.38
Marche	19.05	30.66	15.61	44.75	37.24	17.50	20.63	23.71	5.17	20.65
Lazio	39.65	62.98	35.47	40.20	33.81	49.48	32.29	40.45	6.06	42.42
Abruzzo	43.19	35.12	29.95	53.44	23.80	30.29	20.00	32.19	30.16	33.67
Molise	32.56	17.83	17.93	41.39	28.46	24.88	11.11	20.99	3.45	25.21
Campania	34.27	26.58	9.75	34.16	11.39	17.12	10.32	10.83	0.00	19.19
Puglia	30.62	20.02	6.00	21.91	22.30	13.37	10.29	19.09	4.27	12.00
Basilicata	28.45	19.05	18.24	32.77	24.61	23.06	35.06	22.08	0.00	21.56
Calabria	17.09	22.42	13.73	8.16	11.35	12.63	5.70	7.28	2.50	13.70
Sicilia	9.62	35.12	5.34	12.95	8.17	15.50	6.22	12.23	2.34	11.40
Sardegna	3.14	7.43	2.43	12.90	5.90	6.11	41.87	5.45	0.00	6.85
Bolzano	16.99	40.79	75.15	34.87	18.18	82.24	0.00	73.08	-	68.95
Trento	3.73	64.24	55.88	48.63	52.86	52.71	16.67	58.77	0.00	54.46
Italy	29.01	37.20	21.37	31.01	38.15	23.86	26.90	25.04	6.66	24.84

Source: Agricultural Census

Table 3 shows the incidence of foreign workforce by Region and farm specialization. At national level, differences in concentration of immigrants in specific types of farming are rather small. In fact, data range from 21% in permanent crops to 38% in granivores. However, again the disentangling data at regional level, specializations matters, as data are highly differentiated. For example, in Bolzano, we find maximum values of 82% in mixed cropping or permanent crops (75%) farms and 0% in mixed livestock farms.

Data show interesting and quite well known patterns of distribution of immigrants in Italian regional agriculture. Of course, data are highly affected by regions' specialization, however, some territorial patterns clearly emerge: Veneto, Friuli, Lazio and Trento's horticulture farms are highly dependent on foreign workforce, as well as Piedmont, Lombardy and Bolzano and Trento's permanent crops (60%, 53%, 75% and 55% respectively). Also, the livestock specialists show high relevance of foreign workers, mostly in the North for granivores and in the Centre for grazing livestock.

Table 4 show data on the presence of immigrants in relation to farm size in terms of standard output (SO) for each region. Results are quite clear. Farms are grouped in three big categories: small farms (with a SO less than 25,000 euros), medium farms (with a SO between 25,000 and 100,000 euros) and big farms (with a SO higher than 100,000 euros). At national level, the bigger the farm, the highest the presence of immigrants, from 3% in small ones, to 7% in medium and 15% in big. Again, the presence of foreign is highly influenced by the structure of farms at regional level, but while the small farms do not show very differentiated patterns (with few exceptions), medium one behave quite differently. Big farms with immigrants are highly polarized in the North and in the Centre of Italy (with an average value of 28% and 25%, respectively); while in the South only 8% of workforce of big farms is immigrant.

Table 4. Incidence of foreign workforce by Region and class of SO (%)

Region	Small	Medium	Big
Piemonte	2.58	11.94	39.05
V.d'Aosta	2.60	25.28	25.17
Lombardia	2.45	6.82	32.79
Veneto	1.37	6.26	32.57
F.V.Giulia	1.01	3.42	24.52
Liguria	9.37	10.32	19.61
E-Romagna	1.22	7.00	32.15
Toscana	3.64	5.34	18.35
Umbria	3.27	6.01	20.09
Marche	2.11	4.41	14.14
Lazio	5.71	12.91	23.79
Abruzzo	1.83	4.77	27.08
Molise	3.42	5.94	15.85
Campania	2.86	5.61	10.72
Puglia	1.89	3.14	6.97
Basilicata	1.25	6.36	13.95
Calabria	4.18	4.35	5.16
Sicilia	1.45	3.35	6.60
Sardegna	0.61	1.50	4.74
Bolzano	7.71	45.34	15.90
Trento	11.87	32.36	10.24
Italy	2.77	7.08	15.00

Source: Agricultural Census

3. Methodology

A cluster analysis is performed using the main variables that can describe farms which employ salaried workers, and to group farms with respect to these variables, including the nationality of workers. The exploratory approach adopted applies a multivariate analysis, in order to identify uniform types and a small number of easily interpretable categories. The procedure allows the management of a large amount of data and reduces the complexity existing within the set of examined variables. Among the available techniques for this kind of analysis, we have carried out the multiple correspondence analysis and cluster analysis. The qualitative and quantitative information collected by the Agricultural Census have been re-processed using a consolidated methodology already adopted in numerous agricultural economic researches (Giovannini et al. 1999; Russo and Sabbatini 2002; Sabbatini, Cardillo, Spigola, 2004, Adinolfi, Cardillo, De Rosa, 2005) and based on extensive statistical literature (Jambu e Lebeaux 1983; Romesburg 1984). A set of variables and related modalities were then extracted and broken down into active and descriptive, based on the contribution they provide to explain the surveyed phenomenon. The quantitative continuous variables present in the dataset have been transformed into nominal or discrete variables, grouping the data into modalities or classes. Then the new dataset obtained was re-processed using the cluster analysis and allowed the grouping of the examined farms into type-based classes according to common characteristics.

In particular, we utilized variables that allow an analysis of the following aspects of the farming activities: (i) the production structure, including information on the utilized area, the economic size, the farm type, etc.; (ii) the social aspects, as age, education, IT etc.; (iii) the market orientation, analysing the data relating to, the farm's capacity to sell its products and the types of selling arrangements; (iv) the work force, in terms of working days/hours, citizenship, out of farm activities, presence of hired workers etc.

Through the multiple correspondence analysis (MCA), it was possible to identify three differentiation factors that synthesize some of the features of the surveyed phenomenon. First factorial axis is related to farm size, both in physical and economic terms, indeed the variables accounted for the aggregation of clusters are the class of Utilised agricultural area (UAA) and the class of SO, and along the axis it is possible to notice holdings characterized by large economic size in contrast with farms with small size. The second factor of aggregation is the type of hired work, in terms of different available contract, fixed, hired or not direct. Finally, third factor of aggregation is represented by the market orientation of farms, which can be derived from the presence of self-consumption opposed to sales activities and different sales methods. Through the cluster analysis, the combination of these aspects allows the identification of six groups of farms.

4. Results and discussion

The six groups of farms resulting from the cluster analysis have homogeneous characteristics but different numerosity (table 5). Most of the farms are in the group labeled “Integrative”, which basically are individual holdings, managed directly by the owner. They are small both in physical and economic terms. In fact, most of them have less than 5 ha of UAA and a standard output lower than 25,000 euro; income is often integrated with other activities (19,3% of the holder spend more time working out than within farm). Prevalent specialization is permanent crops and, despite the small size, they produce for the market. Employment is mainly seasonal, this is coherent with prevalent specialization which implies a higher demand for labour during the harvest period, and workers are largely Italians citizens.

Second group is labeled as “Self-consumption” which identifies very small farms, mostly less than 1 ha, especially located in the South of Italy, whose standard output is very low and produce for self-consumption. Almost exclusively, they are specialised in permanent crops and they employ seasonal workers who are prevalently Italian citizens. Together with “Integrative”, the farms of this second group can be considered as marginal farms (Fanfani and Montresor, 2000). The remaining 88,000, broken down in 4 different groups, can be considered professional entities because they are large enough, both in physical and in economic terms, to guarantee a sufficient income at least to the holder. They share the market orientation, but differ for productive specialisation or more or less intensive management strategies.

Table 5: The six groups resulting from the cluster analysis

	Label	Number	Physical Size UAA	Economic size SO (euro)	Labour demand
Marginal farms	Income integrative	91.880	Under 10ha= 76,9% Over 50 ha= 2,3%	Under 15.000= 42,7% Over 250.000= 1,8%	Seasonal workers mainly Italian citizens
	Self consumption	41.785	Under 3ha= 92,4%	Under 15.000=97,9% Over 250.000=0,1%	Seasonal workers mainly Italian citizens
Professional farms	Intensive with seasonal workers requirement	37.904	Under 10ha= 58,5% Over 50ha= 5%	Between 50.000 and 250.000=50,2% Over 250.000=12,6%	Seasonal Workers Mainly non Italian citizens
	Diversified	26.608	Under 10ha= 47,3% Over 50ha= 22,1%	Between 50.000 and 250.000=35,6% Over 250.000=13,7%	Permanent workers Mainly Italian citizens
	Extensive grassland farming	16.216	Over 50ha =35,9% Over 100ha=15,3%	Between 50.000 and 250.000=53,2% Over 250.000=15,1%	Permanent workers Only Italians 64,4% Both Italian and other citizenship 13,1% Only other citizenship 22,3%
	Intensive indoor livestock	7.278	Over 50ha =52,3% Over 100ha=29,7%	Over 750.000=55%	Permanent workers Only Italians 27,7% Both Italian and other citizenship 49,7% Only other citizenship 22,5%

The largest group is the “Intensive with seasonal worker’s” which includes mainly individual holding (87%), managed directly by the holder (90%). Prevalent specialization is permanent crops (60,4%), followed by arable and horticulture. Most of the farms in this group are distributed in the classes of SO over 50,000 euro, almost 40% over 100,000. Even the physical size is medium (60% between 5 and 50 ha), their endowment can reach consistent level because they are often located in areas (such as Bolzano and Trento) where the value of land may be very high (till 600,000 euro/ha) (CREA, 2017). The employment is prevalently seasonal and foreign workers play an important role, since more than half of the farms employ only non-Italian citizens.

“Diversified” group gathers 26.608 medium-large farms, more than half are over 10ha of UAA, and 13% over 100ha. More than 50% are between 25 and 250,000 of Standard Output and 20% over 250,000. Prevalent farms specialization is field crops (42,3%), followed by permanent crops (28,3) and horticulture (16,7%). Other gainful activities are quite frequent, especially agro tourism, contractor’s work, gardening. Legal form is individual holding (34,7%), body corporate (24%) and partnership (11%). Workers are mainly permanent and usually Italians, whilst foreign ones have not a high incidence.

The latest two groups match with two different Italian models of livestock systems: the “extensive grassland farming”, especially sheep farming located in Sardinia, and the “intensive indoor livestock”, in the North of Italy, especially the dairy and beef farms located in the Pianura Padana.

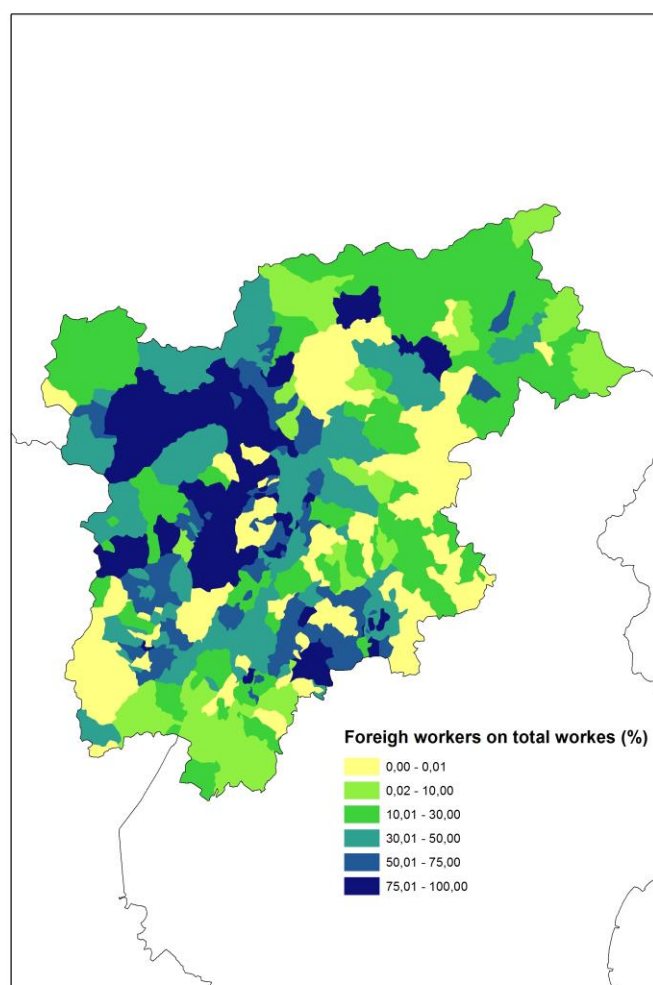
About the extensive livestock farms, they are mainly individuals holding (78%), managed directly from the holder (82,7%). The land endowment is consistent, more than 66% of the farms are over 20ha (15,3% more than 100 ha). Besides livestock there are other gainful activities (31,4%), especially processing of animal production and agro-tourism. The employment is mostly permanent and workers are both Italian and not. Farms employing only Italian citizens are 64,6%, whilst 22,3% of the farms employees only not Italian citizens.

The “intensive indoor livestock” may have different legal organization: mainly they are partnership (42,5%), individuals holding (39%) or body corporate (10%). Most frequent specialisations are granivores (38,7%), grazing livestock, field crops (11,2%). They are large size farms, both in physical (more than a half over 50ha) and in economic terms (90% over 250,000 euro, 44% over 1 million). 23% of them carry out other gainful activities which are related to livestock: production of feed; service to livestock, renewable energy, processing of animal production. Employment is mainly permanent and foreign workers seem to be very relevant: 22,5% employ only non-Italian citizens and 49,7% both Italian and non-Italian citizens.

5. Regional aspects

In order to deepening the results of the clustering procedure, we focalized our attention on main characteristics of regions representative of each group of farms relying more on foreigners.

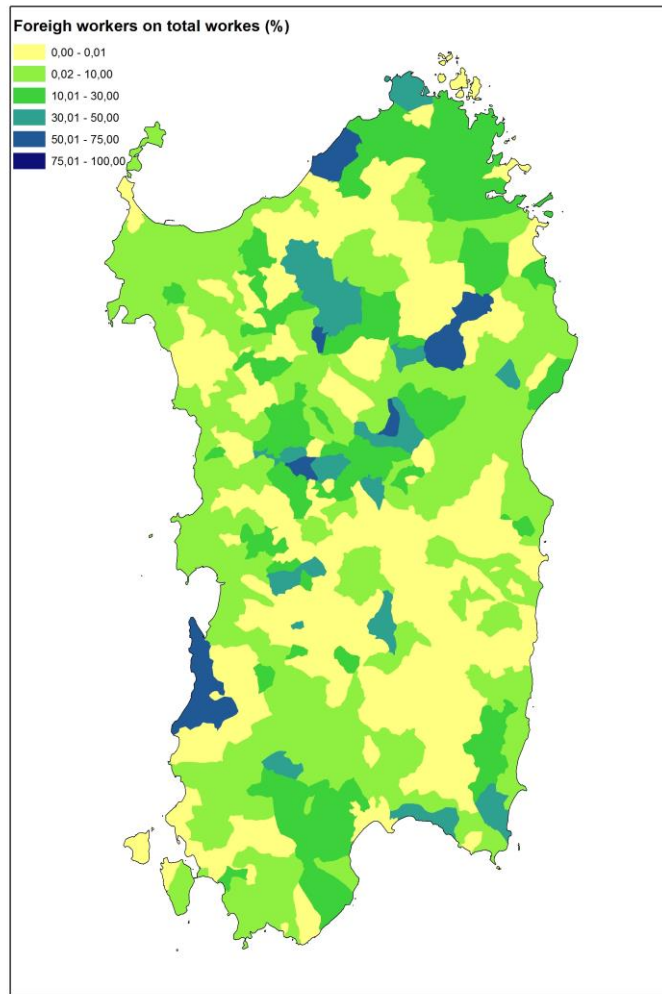
Figure 1: Incidence of foreign workers on total in Trento and Bolzano Provinces



Source: our elaboration on Agricultural Census ISTAT

For the group of “Intensive with seasonal worker’s” we considered Trento and Bolzano Provinces (figure1), where it emerges a higher incidence of foreign on total workers (respectively 68.9% and 54.5%) compared to national average value (24.8%). Although the widespread presence, the contribute of foreign workers seems to be necessary for orchards and other permanent crops. Furthermore, looking at type of employment contract and nationality we can observe a prevalence of temporary workers, especially coming from EU countries, coherently with the evidence of the cluster.

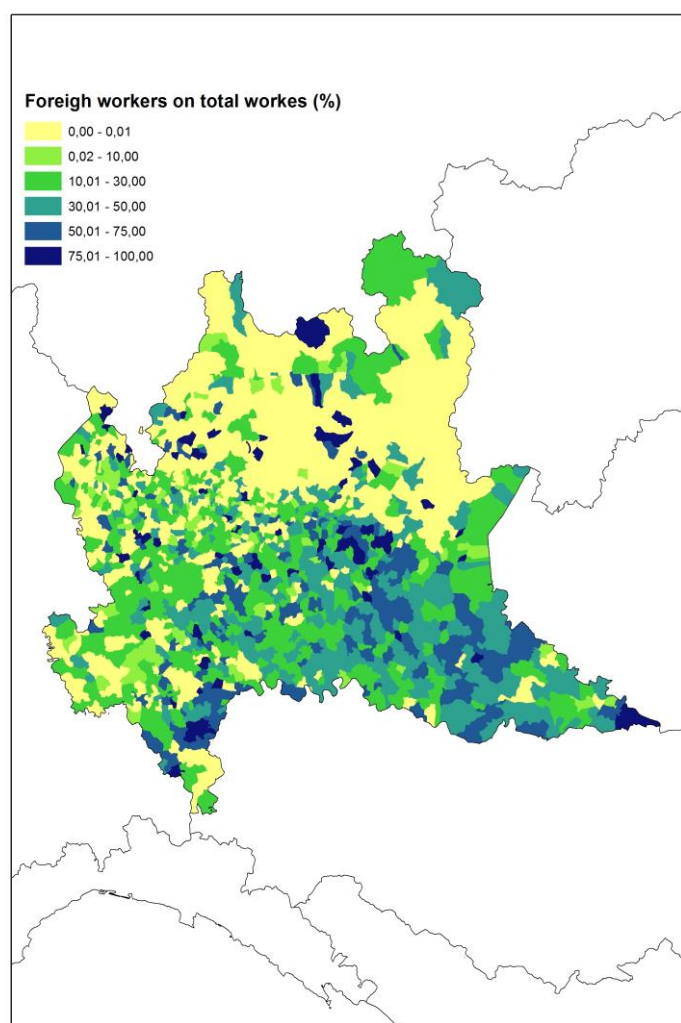
Figure 2: Incidence of foreign workers on total in Sardinia



Source: our elaboration on Agricultural Census ISTAT

In the case of “extensive grassland farming” group, we considered Sardinia (figure 2), where the relative presence of foreign workers is quite scarce generally speaking (6.9%), but in livestock (27.3% for mixed bovines and 14.2% for sheep and goats). In addition, the largest farms (100 hectare or more) show a presence of foreigners more than double compared to regional average value.

Figure 3: Incidence of foreign workers on total in Lombardy



Source: our elaboration on Agricultural Census ISTAT

Finally, for “intensive indoor livestock” group of farms, in Lombardy there is a relevant presence of foreign employment (42.1%), as well as in Trento and Bolzano, but in this case, it is essentially widespread in all production sectors (figure 3). The type of employment contract is both fixed and temporary, but it’s interesting that in first case the higher share of foreign workers comes from non-EU countries, while the temporary contracts affect more the European workers.

6. Concluding remarks

The weight of foreign workers represents a relevant issue in Italian agriculture and the paper aimed to analyse if their contribute is particularly significant for specific farm types or regional areas. To this scope, a cluster analysis method was applied on Census data of 2010 and it allowed the definition of six farm typologies. Within this aggregation, two of the groups can be considered non-professional because of their very low contribution to holder income and foreign workers contribute does not seem to be essential for them.

Among the other four groups identified, diversified farms seems to not rely on foreign workers. On the contrary, they are mainly involved in livestock farming both extensive and intensive and in intensive farm specialized in permanent crops for seasonal activities. These three groups represent 28% of total amount of farms employing salaried workers (61.398 farms). Matching territorial aspects and productive specialization,

Regions more affected by the analysed phenomenon seems to be Sardinia because of its specialisation in extensive grazing livestock, Pianura Padana for intensive livestock and, finally, northern regions characterised by high quality permanent crops (such as Bolzano, Trento and Emilia Romagna).

7. References

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