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The introduction of group organic certification in the Venice organic district: the case of vegetable gardens in the Venice lagoon

(draft version)

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Abstract

The paper refers to organic districts and group certification, which it is supposed to encourage the conversion from traditional to organic agriculture as well as to improve the profitability of organic farms while maintaining the traditional landscape.

The group certification has been investigated and its application has been tested on the case study represented by the area of vegetable gardens of Cavallino-Treporti municipality within the Bio-Venezia organic district, located in the Venice lagoon.

Results show that farmers meet group certification requirements only partially. Further work has to done to reinforce results by a survey extension.

Key words: Organic farming, group organic certification, organic districts, organic attitudes.

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Introduction and objectives

Pushed by positive market trends, the number of organic districts in Italy have been dramatically growing in the last decade: currently, Italy counts 26 *biodistretti* spread in different regions, which represent a remarkable share of the total (regional) organic land and local economy[3]. Their diffusion confirms the effectiveness of this tool that is getting increasing attention from both private and public actors who are willing to apply the model of the organic district to promote a context-specific local development (Pugliese and Antonelli, 2015).

A organic district is composed of two terms: organic (or Bio) and district. The latter is well-known in the economics literature, going back to Marshall industrial districts in the 19th century, and in the agriculture economics one where the district approach has been applied to agriculture and/or food production within a specific area or territory (eg. rural district, agrifood or agri-industry district, supply chain district, etc.). The district in approach in agriculture is aimed at evaluating the territorial dimension of farming, i.e., its contribute to rural development.

A organic district is a bottom-up organization where farmers, citizens, tourism operators, associations and public institutions make an agreement for a sustainable management of local resources, based on organic production and consumption (Taccacelli, 2015; Rete Rurale Nazionale, 2017; Schermer et al., 2015).

Despite success, organic districts have not been legally identified and regulated at a national level yet. Existing Italian organic districts have been created according to the criteria set by the Italian Association for Organic Agriculture (AIAB, 2014), that defines the field of application, conditions of use of the brand "organic district" and provides guidelines to establish and manage it (Figure 1). In fact, the first organic-district was created in in 2009 according to AIAB guidelines by the same Association and is located in Campania Region, inside the National Park of Cilento.

Figure 1 - The AIAB brand "Bio-distretto" (organic district).

Source: AIAB, 2014.

So far, in the Veneto Region three bio-districts have been established. Among them, the bio-district Bio-Venezia has a long historical agricultural and environmental tradition; it includes protected areas as the Venice lagoon and many tourist-rural activities because of rivers and beaches, food and wine routes. Morevoer, the Bio-Venezia is extended to an area where farms have adopted sustainable production practices or organic farming since decades.

The certification of organic producers represents a tangible and intangible cost for farmers because of expenses reducing farm profitability and time spending bureaucracy. These costs are burdensome for small organic farms. The collective or group certification is an alternative way to certificate small organic farms.

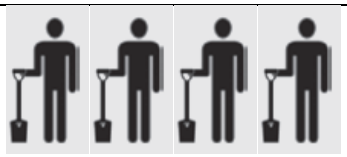
The literature on group certification is scarce even going back to the last decade (Barret et al., 2001). The group certification was originally to other certification systems such as environmental management systems (Iso 14001) (Zobel, 2007), GlobalGAP standards (Dorr and Grote, 2009; Holzapfel and Wollni, 2014; Subervie and Vagneron, 2013) and forest certification (Nussbaum,

[3] http://biodistretto.net/tag/inner/

2001). Research works and reports are mostly focused on smallholder farmers and emerging countries (Preissel and Reckling, 2010).

The idea under group certification is that small farmers are not encouraged to enter a certification because they do have access to information, they do want to get the risk of changing their management or to face the income uncertainty or, more easily, they are not willing to make further efforts in managing their farm (Nussbaum, 2001). In other words, small farmers are more likely to be excluded from the value of certified food supply chains.
The group certification reports some advantages respect to the individual one (Will, 2011). For instance, auditing costs can be shared among group members; exchange of information can be delivered more straightforward through the groups; the motivation to comply is boosted by the groups' peer pressure on members since failure of one member would affect the entire group.
The main difference between individual and group certification is the internal inspection, which is monitored by the Internal Control System (ICS). The ICS controls all members of the producer group while ICS is controlled by an external inspector (Figure 2).

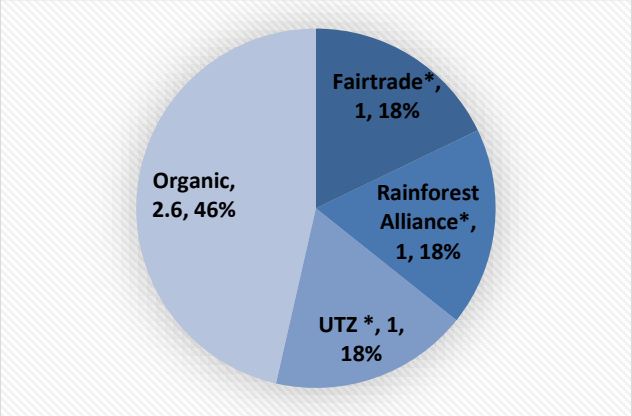
Figure 2 – Individual vs. group certification

Individual certification	**Group certification**
	
1) No legal groups 2) no special farm requirements about size, geographic proximity, productions or marketing channel 3) Individual farmers own their certificate. 2) Verification of compliance and standards is done through an external inspection	1) Group is constituted with a legal structure and central management as Internal Control System 3) Group members are small farmers, they are close each other, they have similar productions, they sell similar products through the same marketing channel 4) The group owns the certificate. 5) Verification of organic standards is done through ICS plus one external inspection

Source: Will, 2011

The group certification in organic farming has mostly been adopted in South America, Africa and Asia following the rules fixed two decades ago by the Organics International (IFOAM) and Fair Trade (Meinshausen et al., 2019). Recently, a survey of FIBL institute over group certification reports about worldwide 5.6 million producers grouped in four certifications (Figure 3): organic, fairtrade, rainforest alliance and UTZ (Meinshausen et al., 2019). Focusing on organic, FIBL reports 2.6 million producers and 4.5 million hectares managed by 5.900 ICS. Organic producers working within ICS accounts around 8% of the land and about the 96% of units, which are reported in Latin America, Africa and Asia. The number of ICS producers is high because they are small as size while organic certification probably overlaps other certifications

Figure 3 –Group certification by typology (million producers, percentage in 2017)



Source: Willer and Lernoud, 2018. FIBL

Table 1 – Comparison between organic and group certification farms

	All	Group certification	ICS/all (%)
Land (million hectares)			
World	57.8	4.5	7.8
North America	3.1	0.0	0.0
Latin America	7.1	0.9	12.7
Europe	13.5	0.0	0.0
Africa	1.8	1.4	77.8
Asia	4.9	2.2	44.9
Oceania	4.9	0.0	0.0
Producers (numbers)			
World	2.7	2.6	96.3
North America	18.4	0.0	0.0
Latin America	458.5	350.0	76.3
Europe	373.2	0.0	0.0
Africa	741.4	850	114.6
Asia	1108	1400	126.4
Oceania	27.3	0.0	0.0

Source: Meinshausen et al., 2019. Willer and Lernoud, 2018. FIBL

The current European Union (EU) Regulation for organic products (n. 834/2007) does not mention group certification, as the regulation only applies to production in the EU, where farms of all sizes are required to undergo individual certification by an approved organic certification body if they wish to market their products as "organic". However, the EU Commission has established The Guidelines for the Evaluation of the Equivalence of Organic Producer Group Certification Schemes Applied in Developing Countries (European Commission, 2008). The Guidelines are part of the EU's guidelines for imports of organic products and they are the normative basis for EU certification of organic producer groups worldwide.

In 2018, the new organic agriculture Regulation (EU) 2018/848, which will come into force in 2021, introduced the group certification. So far, the guidelines for EU group certification have been defined according to IFOAM-FIBL work. Generally, the EU group certification can be adopted by small farmers having similar agricultural productions and being located close each other while

sharing a marketing system for sullying their products (Meinshausen et al., 2019). More specifically, the term small farm is defined as: i) the certification cost is over 2% of organic turnover; ii) the farm turnover is less than 25,000 euros / year or, alternatively, the farm land is maximum 5 hectares (or 0.5 hectares in the case of greenhouses, or 15 hectares, in case of permanent pastures). Furthermore, the ICS has to have a legal personality, ICS members have to share the same productions, to be close each other and to market through the same marketing channel.

The case study of this study is the area of vegetable gardens within the Bio-Venezia organic district, located in the Venice lagoon. This area, known as Venetian vegetable gardens or "gardens of the Doges", has a special historical and cultural interest that comes from the co-adaptation of the anthropic community with the surrounding environment.
These areas are unique and characterized by a strong biodiversity, which includes the traditional crops and a lagoon landscape. The local culture and the sustainable development of rural areas is driven by the governance of Bio-Venezia district, which is aimed at enhancing the traditional products, (re) discovering of collective knowledge, managing the supply chain through the creation of cross-sectoral agreements.
In this paper the area of Venetian vegetable gardens, which is included in the Venice lagoon, is analysed as case study in order to evaluated the introduction of group organic certification on a sample of small horticultural organic farms which sustainability play a key role in maintaining the landscape of vegetable gardens in the Venice lagoon.

Methods
The introduction of group certification is evaluated through a focus group analysis and a farm survey. The focus group analysis is aimed at measuring the willingness of farmers to enter the organic production method while the survey is restricted to farms that may satisfy requirements to adhere to group certification.
The vegetable gardens of Venice lagoon represent the case study where a new way of farm is figured out by evaluating the following activities:

- the group organic certification, that it is supped to facilitate the access of small farms to organic certification;
- the promotion and enhancement of small traditional local production through organic farming;
- the development of marketing systems for small farms in the lagoon area also in connection with local tourist facilities.

The sample is composed by farms with similar productions and located close each other.

Data/Case study
The case study "Gardens of the Doges" is located in ther northern part of the Venice lagoon while encompassing the municipalities of Venice and Cavallino-Treporti. The case study area is a scenario of significant dynamics of the local economy linked to agricultural production. This reality of the "Orti veneti or Orti dei Dogi" is in fact of particular historical-cultural interest, which derives from the co-adaptation of the anthropic community with the surrounding environment.

This area has a rich biodiversity, which includes agricultural productions, manly horticultural ones.

This lagoon landscape of the area has a high cultural value. The composite features of the landscape reflect the numerous transformations - natural and otherwise - that the area has undergone over time (Figure 4).
In the North we can find the valley sections because of large river beds connecting main waterways of the lagoon traffic. Going to the south the landscape is pictured by agricultural activates strongly oriented to horticulture because of sandy soils having alluvial and marine origin. Approaching the cost landscape is shaped by the marine environment. The most recent history of the Cavallino coastline is marked by touristic activities oriented to camping. The first camping site was opened in 1955 and, so fare, there are about thirty campsites (including some of the largest villages in Europe), while the number of tourists recorded in Cavallino - Treporti coastline exceeds 5 million per year.
The Cavallino Treporti area has there are three protected areas: i) the costal biotopes in the Cavallino Peninsula (Special Areas of Conservation and Special Protection Area IT3250003), which is composed of 5 subareas; ii) The upper Lagoon of Venice" (Special Areas of Conservation IT3250031); "Venice Lagoon" (Special Protection Area IT3250046).
The map of the ecological network, reported within the Provincial Territorial Coordination Plan (Figure 5), shows the backbone of the ecological network along the coastline of the Venice lagoon as well as the protected natural areas, the naturalistic connections and the ecological corridors.

Figure 4 – Map of the case study and zoom of the site

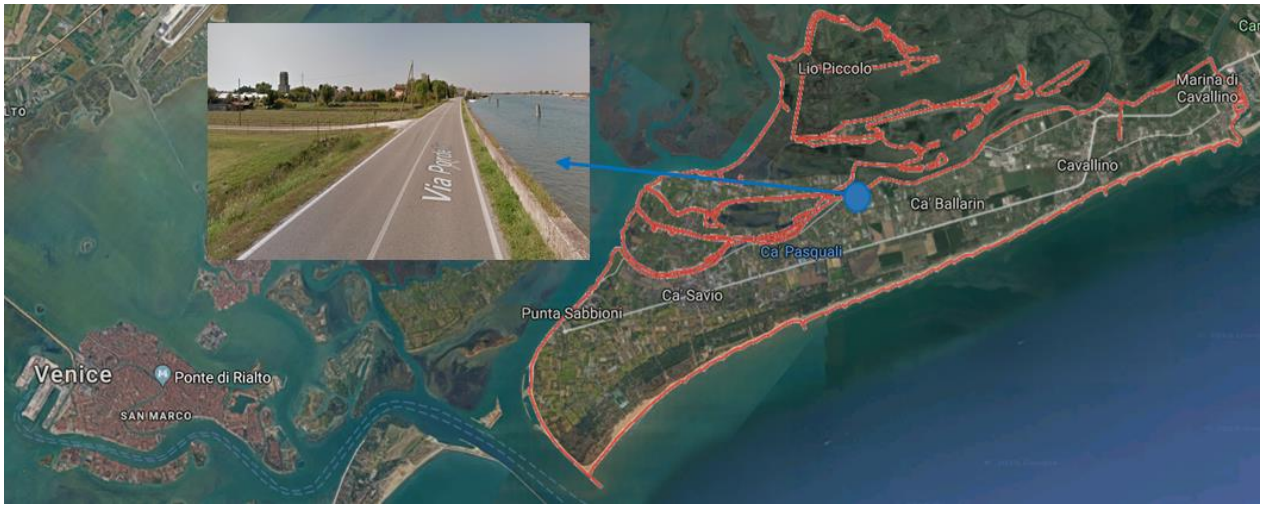
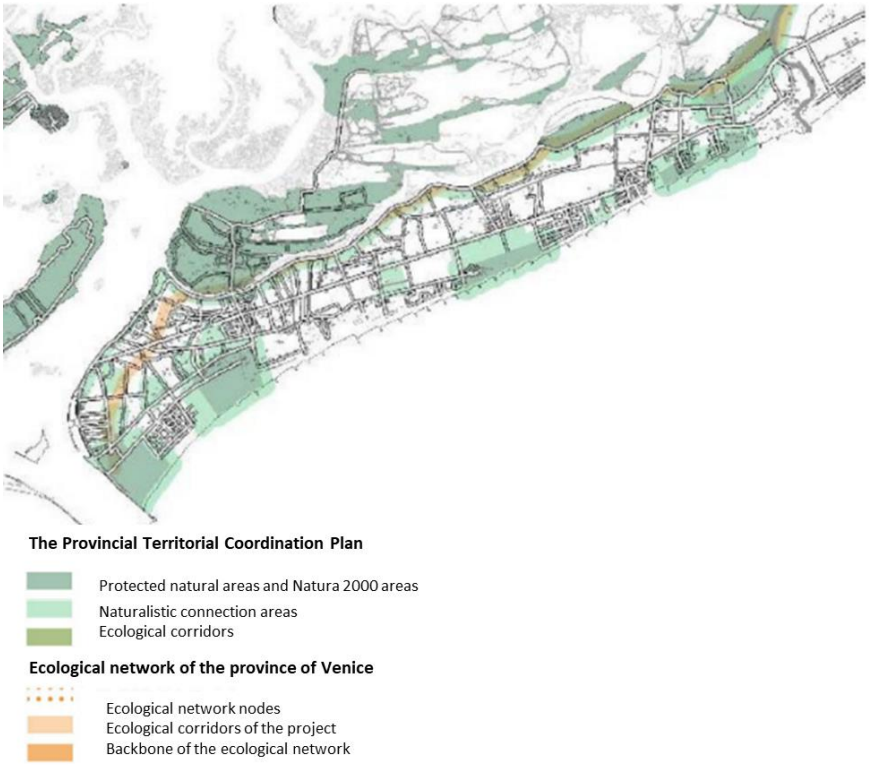


Figure 5 – Map of the ecological network in the case study area



The agriculture of Cavallino-Treporti is characterized by many small farms mostly producing vegetables. Going to group certification requirements our attention is focused on maximum hectares restriction because the production value is usually over 25 thousands euros being specialized intensive farms The farms up to 5 hectares represent 95% of total and account half of UAA, 85% of production value and 92% of working days. Even if, this picture has to be updated because of negative trend in farms in the last decade, we can assume that the agricultural system in the Cavallino-Treporti could adopt the group certification. However, the requirement of having similar productions move our attention to horticulture farms only.

Table 2 – farms, UAA*, STG, working days per farmland size**

Land size (UAA)	Farms		UAA		STG		Work	
	number	in %	hectares	in %	euros	in %	days	in %
0.01 - 0.99	144	50.5	87.8	15.6	2815.1	21.2	42518	37.6
1-1.99	82	28.8	106.2	18.8	4676.9	35.2	37959	33.6
2-2.99	28	9.8	64.6	11.5	1750.5	13.2	15075	13.3
3-4.99	16	5.6	56.6	10.0	2188.0	16.4	8808	7.8
5-9.99	7	2.5	47.1	8.3	904.1	6.8	5884	5.2
10-19.99	3	1.1	48.6	8.6	806.4	6.1	1312	1.2
20-29.99	2	0.7	46.0	8.2	149.9	1.1	1000	0.9
30-49.99	3	1.1	107.1	19.0	10.6	0.1	457	0.4
Total	**285**	**100.0**	**564.0**	**100.0**	**13301.5**	**100.0**	**113013**	**100.0**
up to 5 hectares	270	94.7	315.24	55.9	11430.4	85.9	104360.0	92.3

Source, Agriculture Census, 2010. *) Utilized Agricultural Area. **) Standard Gross Margin = value of production (plus subsidies) less variable costs

The segment of horticulture farms up to 5 hectares represents almost all farms specialized in cultivating vegetables. Comparing to the universe, the small horticulture farms account 45% of total farms while accounting one fourths of UAA, 65% of the production value and 55% of working days.

Table 3 –Comparing horticultural farms and the universe

	Universe	Horticulture	Horticulture (up to 5 hectares	Over universe, %
Farms (units)	285	129	127	44.6
UAA (hectares)	564.0	170.9	145.46	25.8
STG (000 euros)	13301.5	9496.0	8606.2	64.7
Work (days)	113013	62760	62010	54.9

Source, Agriculture Census, 2010

One of the main strengths of coastal horticulture that emerge is the high quality of the products. The quality is the result of both the soil and climate characteristics of the territory as well as the expertise of farmers who, in the past, played a pioneering role in horticultural production in Northern Italy.
In fact, in these areas cultivation techniques have been developed that have allowed the inclusion of national products in "windows" (particular periods of the year) of the market previously occupied by foreign production (for instance Dutch and French tomatoes and peppers).

Results

The focus group analysis was focused horticulture farms participating in a cooperative while interviews were encouraged by the municipality of Cavallino-Treporti having a strong interest in organic agriculture. Meetings were organized and promoted by the municipality and the cooperative getting the interest of farms. The group certification was illustrated while many participants showed interest in this project. The survey was done among a restrict group of horticulture farms showing a strong interest in the group certification project. The sample is small and it does not report statistically significant results. However, descriptive stats can give information on features and attitudes of farmers willing to enter organic agriculture through the group certification system.
A comparison between the sample of surveyed farms and the all municipality reports a greater land size and younger age of farmer that would like to enter organic production (Table 4).

Table 4 – Size and farmer's age between sample and all farms

	Cavallino-Treporti municipality*	Restricted sample**
Farm mean size (ha)	1.98	2.50
Farmer's mean age (years)	56.35	44.13

* Source: Istat, 2010. ** Source: survey data

Among the group certification requirements, the farmer's participation to cooperatives or producer organization is a signal for selling products through the same marketing channel. So far, the survey does not show a strong interest in being a member of cooperatives or producer's associations meaning that farmers usually sell their products through differentiated marketing channels (Table 5).
Another important point for entering organic production is the technical assistance. The organic bio-district Bio-Venezia has developed an extension service devoted to organic agriculture aimed at meeting the demand coming from bio-district members.

Table 5 – Sample farmers affiliation

Organisations	Number of interviewed farmers	Percentage of interviewed farmers (%)
Farmers' unions	8	100.0
Producers' organisations	1	12.5
Farmers' cooperatives	2	25.0
Farmers' local groups	2	25.0

Source: survey data

Table 6 – Sample farmers and extension services

	Number of interviewed farmers	Percentage of interviewed farmers (%)
Farmers' unions	8	100.0
Farmers' cooperatives	4	50.0
Private consultants	4	50.0
Other farmers	2	25.0
Their family	3	37.5

Source: survey data

Farmers meeting are considered a way to exchange ideas and experiences in order to increase the farm efficiency or improve the technology as well as to discuss not only about the farm management but also to talk about personal aspects. Meeting other farmers to create relationships and networks is a sort of pre-requisite to create the ICS, which is supposed to check group members in respecting organic standards. The survey confirms that famers like to participate to meetings even they are not officially organized by third parties such as unions, cooperatives or consultants.

Table 7 - Farmers meeting other farmers

	Number of interviewed farmers	Percentage of interviewed farmers (%)
Meetings organised by farmers' unions	6	75.0
Meetings organised by producers' organisations or farmers' cooperatives	7	87.5
Meetings organised by private consultants	3	37.5
Meetings organised by other farmers	8	100.0
Not organised meetings	8	100.0

Source: survey data

Sample farmers show strong attitudes in cultivating traditional crops (Table 8). From one side, traditional crops come from a long heritage and from the other side they are more profitable for farmers selling these products in Venice market or directly to Ho.Re.Ca channel

Table 8 - Traditional crops[*] cultivated by sample farms

Traditional crops	Number of interviewed farmers	Percentage of interviewed farmers (%)
Asparago verde amaro Montine	6	75.0
Carciofo violetto di Sant'Erasmo	5	62.5
Fagiolino meraviglia di Venezia	2	25.0
Giuggiole del Cavallino	5	62.5
Pere del Veneziano	1	12.5
Pesca bianca di Venezia	1	12.5
Pomodoro del Cavallino	3	37.5

[*] Identified by the Atlas of the traditional agri-food products of Veneto region
Source: survey data

The survey measured the farmer's attitude towards environmental protection and to create and to maintain relationships among farmers using a Likert scale (Table 9). Results seems to show a interest in both of these aspects , which may be a good point for starting the organic group certification.

Table 9 - Farmer's attitudes

	Mean (S.D.)
Environmental protection	3.76[*] (1.09)
Cerate networks with other farmers	4.08[**] (0.43)

[*] Average of farmer's rating of a set of 9 statements. Each statement was measured on a 5-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (5).
[**] Average of farmer's rating of a set of 6 statements. Each statement was measured on a 5-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (5).

The results of this survey can be seen as a screening analysis, which to measure the features of farms and farmers as well as the farmer attitude toward organic agriculture.

Conclusions

The organic district governance and the development of group certification can be considered a tool to encourage the organic agriculture while satisfying the need of maintaining local production, traditional crops and the local unique landscape.
The focus group analysis and the survey show an interest of some farmers in undertaking organic agriculture while having attitudes in creating relationships with other farms, to maintain traditions as well as to protect the environment. However, the creation of ICS require to sell products though the same marketing channel. This requirement is partially met by sample farmers.
Anyhow, the sample representativeness is scarce and results have to be reinforced by others farms.

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