

Quality of work of vegetable growers, in conventional and agroecological systems, in the Walloon Region (Belgium)

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Abstract

The present study explores the quality of work of vegetable growers for the fresh markets, in a diversity of conventional and agroecological systems. In the literature, we identified nine *dimensions* determining the quality of work : autonomy and control level, income and social benefits, work (in)security, political experience at work, time at work, job intrinsic benefits, job painfulness, health safety and competence. The production of vegetables in the Walloon Region (Belgium) may be categorized in four main types, ranging from market gardeners on a few hectares to cereal farmers who include some vegetables to their crop rotation. Each type was studied in both agroecological and conventional agriculture. We conducted 41 semi-directed interviews with vegetable producers. In addition to the evaluation of the nine dimensions, production and commercialisation systems, professional path, history, orientation to work and perception of the future were addressed. The first five dimensions appeared to be very central to understand, in our specific context, what distinguishes the different types of production from each other. In the present paper and for each group of producers, we will focus on these five dimensions from a qualitative point of view in order to illustrate our general conclusions to the study on the quality of work. Each group of producers is confronted with the necessary trade-offs between the various dimensions. For each dimension indeed, the quality of work is not systematically better for producers in agroecological agriculture. This appears particularly true for market gardeners on small areas.

Keywords: Quality of work, agroecology, vegetable, market gardening, work insecurity, producers' autonomy, time at work, recognition

1. Introduction

Europe has been facing a significant socio-economic and environmental crisis since 2008. In this context, the question of whether « green jobs » could be a trail to develop more and better jobs is a great concern for governments. In agriculture, some scientists and associations defend that organic and/or agroecological agriculture could simultaneously offer better jobs and avoid some negative externalities on environment, compared to conventional agriculture (Gliessman, 2007; Maynard & Green, 2006; Ollivier & Guyomard, 2013; Timmermann & Félix, 2015)

Nevertheless, concerning vegetable production, the quality of work in agroecological systems remains quite unexplored. Many articles on the subject focus on organic agriculture or are more normative than based on empirical studies (Gliessman, 2007; Timmermann & Félix, 2015). The present study explores the quality of work of vegetable growers in the Walloon Region (Belgium), in a diversity of farming orientations (agroecological or conventional) and farming models.

We identified four main models for producing vegetables in the Walloon Region, from market gardeners on a few hectares to cereal farmers who include some vegetables to their crop rotation. They are referred to as: market gardeners on small area (MSA), mechanised market gardeners (MMG), highly mechanised market gardeners (VMM) and vegetable growers in field crops (VFC). Each of these four models of production was examined and studied in both agroecological and conventional agriculture.

The goal of this study is to answer the following two questions, in our specific context: (1) to what extent do agroecological types of production systems offer or not better jobs than conventional types ? (2) more generally, to what extent are the types of production systems different in terms of quality of work ?

No definition on the quality of work has so far been unanimously accepted. To address our research question, we looked at the sociological, economic and agronomic literature. We identified nine *dimensions* determining the quality of work : autonomy and control level, income and social benefits, work (in)security, political experience at work, time at work, job intrinsic benefits, job painfulness, health safety and competence. The first five dimensions appeared to be very central to understand, in the specific context of the Walloon Region, what distinguishes the different types of production from each other, (*Section 2*). In the following sections we use the term *well-being* to refer to the state of being happy resulting from the satisfaction of a whole series of needs as regards physical and moral health.

We conducted 41 semi-directed interviews with vegetable producers. In addition to the evaluation of the dimensions, production and commercialisation systems, professional path, history, orientation to work and perception of the future were addressed (*Section 3*).

Our results are structured in two parts. Firstly, we briefly present the production and commercialisation systems as well as the main socio-cultural characteristics of each type of production systems (*Section 4*). Secondly, we show particularities and trade-offs, relatively to the first five studied dimensions, which impact the quality of work of each group of vegetable growers, both in agroecological and in conventional systems (*Section 5*).

2. A theoretical framework at the crossroads of sociology, economy and agronomy

Our theoretical framework is mainly based on sociological as well as economic literature on the subject (Dahl, Nesheim, & Karen, 2009; Méda & Vendramin, 2013). Then we crossed this literature with the agronomic literature reviewing a total of 38 articles and two books (Béguin, Dedieu, & Sabourin, Eric, 2011; Dufour & Herault-Fournier, 2010; Fiorelli, Dedieu, & Porcher, 2010; Galt, 2013; Guthman, 2004; Shreck, Getz, & Feenstra, 2006; Timmermann & Félix, 2015). We also looked at a study commissioned by the European Parliament (Muñoz de Bustillo, Fernández-Macías, Ignacio Antón, & Esteve, 2009), and, finally, at some publications which specifically study the case of self-employed workers (Baudelot et al., 2003; Bessièrè & Gollac, 2015; Gollac & Serge Volkoff, 2000).

We identified in the literature examined nine dimensions that determine the quality of work.

In this article we present five of these dimensions with a qualitative approach in order to illustrate our main conclusions on the quality of work. We hereunder briefly specify them and provide their interpretation within the context of producers.

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| <i>(1) income and social benefits</i> | For self-employed workers income depends on profit or corresponds to salaries paid by the company. Social benefits are diverse: premiums, personal and health insurance or even productive capital. In this paper we will mainly develop producers' perception with respect to their income and standard of living. Productive capital is, by definition, increasing from MSA to VFC types of production systems. |
| <i>(2) work (in)security</i> | This is the well-being loss coming from an uncertainty as to its ability to keep its job |
| <i>(3) time at work</i> | This one takes into account all working hours (production, commercialisation, administrative tasks). |
| <i>(4) autonomy and control level</i> | A producer's degree of freedom can be limited by climate, State, markets or even previous technical choices. |
| <i>(5) political experience at work</i> | This one assesses (1) to what extent producers feel considered as equal to other individuals (authorities, customers, neighbours, State, Union, etc.) and (2) to what extent they consider influencing decision-making concerning them. In this study, we will essentially develop the first item which rather differentiates the various groups of producers from each other. This dimension has been initially developed in the case of workers (Ferrerias, 2007). |

3. Methodology

We conducted 41 semi-directed interviews with vegetable producers. The types of production were initially chosen as strategic clusters¹, that is a group of people who developed the same behaviour when facing a specific situation. These groups were established so as to respect the principle of complex triangulation². Triangulation imposes crossing data collected during the interviews. Complex triangulation suggests to vary informers according to their relationship to the issue the interviewer is dealing with. The objective is to include the heterogeneity of opinions as an element of the analysis. Interviews were stopped for a particular type of production when the last interviews did not bring any new information (Olivier de Sardan, 2008).

The interviews were structured with a guide and conducted according to the requirements set by Kaufmann (Kaufmann, 2011) and Blanchet and Gotman (Blanchet & Gotman, 2007). In addition to the evaluation of the nine dimensions, production and commercialisation systems, professional path, history, orientation to work and perception of the future were addressed.

The producers were selected, first because (1) they are considered as key players in their type of production by the experts in vegetable production in the Walloon Region, then because (2) they have special features that distinguish them from the other producers of their group. As no consensual definition of an agroecological system is available, we assigned a producer *a posteriori* to the agroecological orientation when he/she met two conditions: compliance with the organic farming regulations (alternative regulation as *Nature & Progrès* or conventional regulation) and embeddedness in the socio-economic principles of agroecology, as defined in Dumont et al. (Dumont, Vanloqueren, Stassart, & Baret, 2016). In this article and from a socio-economic point of view agroecology is considered as a Weberian *ideal-type* described with thirteen principles. The following principles have been evaluated for the present study : environmental equity, social equity, financial independence, market access and autonomy, sustainability and adaptability, partnership between producers and consumers, geographic proximity, rural development and preservation of the rural fabric, shared organization, joint implementation of the various principles in actual practice.

The final step was to consider each producer as agroecological when he was in organic agriculture and when he included at least eight agroecology socio-economic principles in his work. For each model of production we found several producers we could consider as agroecological, except for VFC. Few organic VFC producers give priority to agroecological issues and all of them use conventional practices for some of their fields. Consequently we could not consider anyone as agroecological.

¹ *Strategic clusters* is a translation of the French concept of '*groupes stratégiques*', introduced by Olivier de Sardan (2008, 81). The word 'strategic' does not refer to the power of actors. *Strategic cluster* is an empirical notion. Clusters have to be modified along with the field survey in order to stay relevant with the evolution of the studied problematic.

² *Complex triangulation* is a translation of the French concept '*triangulation complexe*', a concept introduced by Olivier de Sardan (2008, 80).

4. Nine types of production systems in vegetable farming for the fresh market

4.1. Context of the Walloon Region and number of producers interviewed

Vegetable farming is little developed in Walloon Region and little supervised by research centers. Producers are fewer than 300. Most of them are agroecological MSA producers with few experiences. Farms are managed by one producer or by a family. In general, there is little sharing between producers and between farms, except for some commercial activities.

We interviewed a total of 41 producers (Table1).

Table 1 Number of producers interviewed

Type of production	Agroecological	Organic	Conventional
MSA	10	0	4
MMG	5	0	4
VMM	2	2	6
VFC	0	5	3
Total	17	7	17

As a producer could only be considered as agroecological *a posteriori*, some of them should have been excluded from the agroecological category and considered only as organic. The more mechanized and larger the production system is, the more difficult it appeared to find agroecological producers.

For MSA and MMG groups, all producers could be assigned to agroecological or conventional systems. For organic VMM producers, two of them could not be considered as agroecological; for VFC producers none could be included in the agroecological category. These producers do not give any agroecological priority to at least eight socio-economic principles. Moreover, most of them keep some agricultural parcels of land in the conventional type of production.

4.2. Production and associated commercial systems

Table 2 briefly presents the main characteristics of each type of production systems. These have been established according to technico-economic appraisals of 32 producers out of the 41 interviewed.

Table 2 Main characteristics of the types of production

Main characteristics				
Type of production	Vegetable gross area (hectares)	Full-time equivalent by exploitation	Level of mechanization	Commercialisation pathways
MSA	< 2,5	2 – 4	Almost absent to low	<i>Agroecological</i> : Vegetable box, community supported agriculture, cooperative <i>Conventional</i> : Small farm store
MMG	2,5 – 10	<i>Agroecological</i> : 7 – 10 <i>Conventional</i> : 2 – 6	Low	<i>Agroecological</i> : Farm store and markets <i>Conventional</i> : Farm store and retailer
VMG	12 – 38	<i>Agroecological</i> : 5 – 15 <i>Conventional</i> : 5 – 10	Important	<i>Agroecological</i> : Farm store and market <i>Conventional and organic</i> : Supermarket, wholesaler or, more recently, farm store
VFC	<i>Biological</i> : > 25 <i>Conventional</i> : > 18	<i>Biological</i> : 3 – 5 <i>Conventional</i> : 1 – 4	Very important	<i>Organic</i> : Supermarket, wholesaler, processing company <i>Conventional</i> : Auction, processing company

4.3. Main socio-cultural and personal characteristics

The following personal and socio-cultural characteristics are presented for each group of producers (Tables 3.1 and 3.2): age, agricultural family origin, education, professional experience other than production, agricultural field experience. These characteristics appear crucial to understand the analysis on the quality of work.

Table 3.1. Main socio-cultural and personal characteristics

Types of production	Orientation	Total number of producers	Number of producers from an agricultural family	Number of producers by age range [years]				
				[20, 30[[30, 40[[40, 50[[50, 60[[60, 70[
MSA	Agroeco.	10	1			5	1	1
	Conv.	4	3	2	3	2		
MMG	Agroeco.	5	2		1	4		1
	Conv.	4	4	1	1	1	1	
VMG	Agroeco.	2	1			1	1	
	Organic	2	2			1		1
VFC	Conv.	6	6			1	3	2
	Organic	5	4			3	1	1
	Conv.	3	3			1	1	1

MSA and MMG producers include younger producers than in other groups. Agroecological producers, especially in MSA and MMG systems, come less frequently from an agricultural family than conventional ones.

Table 3.2. Main socio-cultural and personal characteristics

Type of prod.	Orientation	Total number of producers	Number of producers with education after college	Number of producers with other professional experiences	Number of producers with field experience [years]				
					[3 ; 5]]5 ; 10]]10 ; 20]]20 ; 30]]30 ;40]
MSA	Agroeco.	10	7	8	4	1	3	1	1
	Conv.	4	2	3	1	1	2		
MMG	Agroeco.	5	5	4	1	1	1	1	1
	Conv.	4	2	2		2	1		1
VMG	Agroeco.	2	2	2			1	1	
	Organic	2	1	1				1	1
VFC	Conv.	6	2	1				5	1
	Organic	5	3	3			1	2	2
	Conv.	3	2	1		1	1		1

Conventional VMG and MMG producers are two groups in which less producers studied after college. With conventional VFC producers, there are also groups in which fewer producers had other job experience. MSA and MMG types of production systems include more producers with less than 10 years of experience. This is due to the recent attractiveness of this type of production.

5. Quality of work in vegetable farming

The present section shows particularities and trade-offs, relatively to five main dimensions impacting the quality of work of each group of vegetable growers : level of autonomy and control, income and social benefits, work (in)security, time and political experience at work.

For each model of production we developed the situation for agroecological and conventional groups of producers. According to its own importance each dimension is more or less developed concerning the well-being at work of each group of producers. For VMG and VFC producers, we briefly summarize the situation of organic producers relatively to the situation of groups of the same model but with other orientations.

Market gardeners on Small Areas (MSA)

Agroecological agriculture

Most agroecological MSA producers have chosen to work in this type of production systems because it corresponds to their social and ecological values. For the same reason, they have chosen to commercialize their products through short food channels only and have less links with conventional markets. It is considered as a guarantee of their autonomy and viability. Having a highly diversified agriculture, based as less as possible on fossil fuel and chemical inputs is important to them. They consider the human factor as central in this system mainly because possibilities of mechanization are extremely limited, their products are directly sold to consumers, areas are small and leave room to other producers. They have an expressive orientation to work. This indicates that such a system is a way to exercise a profession that makes sense and is useful to the society. Given such initial motivations, they actually feel limited on the following points. At commercialization level, they need to find a sufficient number of customers but not too far from their farm to be profitable. Moreover, following the supply increase of vegetable boxes that characterized these past few years, many of them had difficulties to create customer loyalty. Over the years, some of them question the importance of limiting mechanization in favour of the environment and the human well-being. They usually use tools with a lower fuel efficiency (for instance, rototiller instead of tractor) but there is no scientific proof that these tools consume less fuel. A low level of mechanization sometimes appears more painful for them and their workers. Manual work is particularly hard for producers who do not have any associates or workers. And finally, the majority of agroecological MSA producers feel financially limited. They can only offer precarious employments (seasonal contracts) or work with volunteers. Most of them consider not earning enough money and half of them do not have any leeway for increasing their current income.

If agroecological MSA producers appear to suffer more than other groups of producers having similar income³, it is due to the low level of security of work. The investment capacity generated by the system is low. Most of them are unable to invest and hire workers easily. It is a real challenge that they have to overcome due to low levels of personal capital and consequently with a limited ability to gain the confidence of the banks. Some of them do not want to borrow money in order to safeguard their autonomy. The vegetable box system to which customers can subscribe was a good way for most of them to generate their own funds. But this target is becoming difficult to reach as competition in the supply of vegetable boxes has increased. They are also faced with three other barriers to reach a good level of profitability. First, most of them had to acquire more land because they do not come from an agricultural family. When they do not own their land some investments are impossible to do. Secondly, the investment aids are only granted for a minimum amount of equipment (such as machinery). They have many investments to make but most of the unitary equipment is not expensive

³ We did not investigate on the accounting of producers but they provided us with their profit before tax and their turnover. As accounting obligations for farmers are very light in the Walloon Region, these amounts are still sensitive and are not disclosed in the present study.

enough to benefit from grants. Thirdly, it is not beneficial for them to get an outside contractor for some production tasks. Moreover contractors prefer not to work for this kind of system due to expensive transition costs for few hectares. Despite all these difficulties, agroecological MSA producers take advantage of a high level of autonomy. Except when their lands are rented under precarious contracts, they have a more stable financial situation than other categories of producers, even if this situation is not as good as they would like it to be, relatively to the other types of production systems.

Agroecological MSA producers work 2000 to 3000 hours per year (2300 on average) for all the tasks linked to the farm (production, commercialization and administrative tasks). They take between 0 and 5 weeks of holidays per year (2 weeks on average). This is a very attractive situation compared to the other types of production. Nevertheless, because they wish to develop further their social and family life, half of them would like to have more free time.

Agroecological MSA producers feel they benefit from an important support from society. However, most of them consider that this support exists in debates and talks but is still not apparent enough in vegetable prices. The absence of investment aids for their kind of farming, the lack of legal status adapted to part of their situation, and sometimes the negative appreciation from conventional producers on producers not coming from an agricultural family reinforced a feeling of lack of recognition.

Conventional agriculture

In conventional agriculture, most MSA producers developed their system because it was the only possibility for them to develop their passion – vegetable farming. Most of them developed an MSA system in parallel to another professional activity because they consider it is quite impossible to live only from their vegetable production. They appreciate in this system a low financial risk as well as a high level of autonomy. But as in the agroecological system, producers struggle at commercial level to find enough customers not too far from their farm.

From an economic point of view, they seem to be in a less precarious system than agroecological MSA producers but most of them consider that prices are too low for them to live only from their vegetable production.

Comparatively to agroecological MSA producers they benefit from a better security of work. It is due to their pluriactivity and/or their free and easy access to the family land which they are settled in, as most of them are from an agricultural family. Because of these situations, they take advantage on the following points: less borrowing, contracting work executed by a member of the family, own funds generated by their service company, access to workers employed thanks to their service company, etc.

If their quality of life is better from an economic point of view it is much more problematic in the social sphere. Producers in this system work more than 2500 hours and more than 4000 hours when they are in pluriactivity. For the latter time spent at work and the very low compatibility between their work and their family life is considered as an unbearable situation. Moreover they suffer from a very hard pace of work.

Mechanised Market gardeners (MMG)

Agroecological agriculture

Agroecological MMG producers chose their production system for quite the same reasons than agroecological MSA producers. Most of them begun with an MSA system. Nevertheless, they prefer MMG to MSA systems because it is considered more in adequacy with the current socio-economic context and less painful.

From an economic point of view, they seem to benefit from more financial flexibility and work security but they do not seem to earn a higher income. Purchase/resale operations appeared necessary to ensure a living in this system. Except for one of them, their turnover is generated by 50 to 85% of purchase/resale operations. These purchases are essentially made from a wholesaler providing vegetable products from VMG and VFC producers. These producers are sometimes criticised – even by MMG producers themselves – for practicing a less agroecological organic agriculture. This is a paradox specific to agroecological MMG producers related to their economic, social and ecological values. But this important level of purchase/resale operations is necessary for the economic viability of their type of production systems. It contributes to generate a higher investment capacity. This allows them to offer better contracts to their workers (fixed-term or permanent contracts) and sometimes to be more mechanised.

In terms of security of work, they take advantage of the two following points. Because they do not sell their products via vegetable boxes, they enjoy a better protection against competition than agroecological MSA producers have had in recent years. They benefit from satisfying commercial situations such as good places on markets and/or well-situated farm store.

MMG producers prefer their kind of system as it allows them to work more comfortably during mechanised operations. For instance, they use a tractor instead of a rototiller. This leads to less suffering from vibrations. They can also get a farming contractor more easily. Being more mechanised and working on a larger area, give them better recognition from conventional producers as well.

A major constraint in this system is the important time spent at work. This is a problem as agroecological MMG producers have strong expectations in terms of compatibility between family and work lives. They work between 2500 and 4500 hours per year (3500 hours in average). It appears that it is due to the time spent on management and supervision of their numerous workers. Both tasks cannot be devolved in this type of production systems.

Conventional agriculture

Half of the conventional MMG producers would prefer being a VMG or a VFC producer because they do not appreciate manual tasks. However, they practice MMG production because they do not have enough land and nevertheless want to live from agriculture. Moreover, they consider the VMG and VFC systems as too risky.

From an economic point of view, producers consider that they earn enough money as they accept to have a simple life. Nevertheless, they estimate that their income per hour worked is too low.

For the same reason as the agroecological MMG producers, the security of work is high in this type of production. Moreover, in this case, most of them inherited of (a part of) their land.

They work between 2200 and 4300 hours per year. Producers can be divided in two groups. One group works more than 4000 hours per year. They almost do not take any holidays. Producers from these farms do not claim to suffer from a too intensive schedule. Nevertheless, their situation is considered as hardly compatible with a family life. It is a hard life for their wives who also work full time on the farm store and take care of children and domestic duties. In the second group producers work less than 3000 hours per year. They generate half of their turnover thanks to two or three vegetables. Because of this, they work a lot for these crops and accept to neglect some of the other crops when the pace of work is too intensive. This second group does not seem worse off in terms of income.

Very Mechanised Market gardeners (VMG)

Agroecological agriculture

Agroecological VMG producers chose the highly mechanised type of system for economic reasons.

This group includes only two producers and is consequently too small to draw any conclusions on its profitability. Moreover the producers we met were in two very different situations.

Both of them appear to benefit from a high security of work. They sell their products only by short food channels that ensure them a secure income. They also benefit from a quasi-monopoly situation as they are quite the only ones in their region to sell such an important level of vegetables at such a low price (thanks to the high level of mechanisation). The main issue for them is to have a sustainable and easy way to sell important quantities in short channels only.

These producers work between 2800 and 3300 hours per year. None of them really suffers from this situation even if one of them considered that it should be improved.

Organic and conventional agriculture

Most producers in this type of system inherited of (a part of) a small cereal farm. They chose to develop vegetable crops with the aim of changing their small cereal farm into a large vegetable farm. They positively lived with this choice except for two of them who would have preferred to work in a VFC system. A high level of mechanization was evidence for them.

Conventional and organic VMG producers sell their products in long market channels and/or directly to supermarkets (except for one producer). Between years 2000 en 2010 some of them switched completely to or developed short channels. It corresponds to a period of low prices and a higher level of competition between supermarkets. Many conventional VMG producers went bankrupt at this time, especially producers focusing on one or a few crops. Today, none of them grow less than three types of vegetable. It is considered too risky.

We identified two groups in terms of well-being at work. A minority used the difficulties of other producers to reach a quasi-monopoly situation on markets. They are proud of the situation they reached. The other part is saddened at the bad sector situation. Generally speaking, conventional VMG producers feel less considered by the society. Conventional agriculture, particularly their highly mechanised system, is sometimes criticized in social debates. They also found many difficulties to transfer their farm to the new generations. Moreover they feel a lack of recognition in diverse confrontational situations. They considered as abusive the increase of standards imposed by supermarkets and their suppliers since the dioxine crisis, a very important health crisis in Belgium. It is seen as a way to evade their responsibility in food security. If there is a health problem, the producer, being the last person of the food chain, has to support all responsibilities. They also feel not to be understood and sometimes insulted by inspectors during controls. Finally, very low prices of auction sales strengthen the feeling of lack of recognition for producers who used to sell their products there.

Conventional as well as organic producers work between 2500 and 3700 hours per year. As for agroecological, none of them suffers from this situation. Most of them just never thought about holidays and working less.

Vegetable growers in field crops

Organic and conventional agriculture

All producers in field crops are originating from an agricultural family in grain production. They wanted to continue to produce but with a higher profitability and less dependence from grain prices and agricultural premiums than their parents. Like VMG producers, having the largest possible area and being highly mechanised is considered necessary in order to live from agriculture.

In organic as well as in conventional agriculture, VMG and VFC producers have a more variable turnover than in other groups. This is due to their commercialisation pathways which are more insecure and to their greater vulnerability to climatic conditions as they produce less vegetables. In

VFC systems, security of work is even more delicate in organic agriculture. Organic producers have to struggle with supermarkets to sell their products while conventional producers are profitable by selling their products by auction only. They also have fewer opportunities to sub-contract and have to invest more in specific and expensive tools for organic agriculture.

Time at work is very variable, depending on the diversity of vegetables (and other productions) they have. They work between 1800 and 3000 hours and take between 0 week and 2,5 months of holidays in conventional and organic agriculture. Except for two organic producers, they do not feel the need of working less. Family and work lives are always interwoven.

Vegetable growers in field crop are quite few in the Walloon Region and are rather proud of their current position. This feeling is even more important for producers in organic agriculture as they developed new technical skills and new commercialisation pathways with supermarkets when they shifted from conventional to organic. Like conventional VMG producers who sell their products to supermarkets, they consider as abusive the increased level of standards imposed by supermarkets.

Conclusions

Our analysis shows that we cannot simply consider that agroecological vegetable production systems offer better jobs to producers than conventional ones.

Firstly, for the five dimensions studied on the quality of work, the results show *specificities* and *trade-offs* which impact the well-being of each group of vegetable growers, both in agroecological and in conventional systems. Depending on the dimension considered, the quality of work is better in a type of production or another. None of the type of production is fulfilling perfectly all dimensions. This is due to technical aspects, differences of socio-cultural heritage and work orientation between producers of different types of production systems as well as the socio-economic and political context.

Secondly, implementation of agroecological principles in vegetable systems is diverse. The quality of work is differently determined in the different agroecological systems.

In the Walloon Region context, divergent trends can be observed for MSA and MMG agroecological types of production. Most MSA producers have difficulties to achieve a satisfactory situation relatively to the different dimensions of quality of work. Most MMG producers achieve a satisfactory situation for the three following dimensions : level of autonomy and control, work security and political experience at work. While their situation is still delicate relatively to their income and the time spent at work.

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