In Tune With the Times? When Neo-Peasants Choose Animal Traction to be Part of a More Sustainable Production Model

Maurice Miara, Philippe Boudes, Mohamed Gafsi, Thierry Rabier

Sociologia Ruralis

Sociologia Ruralis Journal of the European Society for Rural Sociology

ESRS

ORIGINAL ARTICLE OPEN ACCESS

In Tune With the Times? When Neo-Peasants Choose Animal Traction to be Part of a More Sustainable Production Model

Maurice Miara[1,2] | Philippe Boudes[3] | Mohamed Gafsi[1] | Thierry Rabier[2]

[1]ENSFEA, Toulouse, France | [2]INET, Bordeaux, France | [3]l'Institut Agro Rennes, ESO, Rennes, France

Correspondence: Maurice Miara (maurice.miara@gmail.com)

Received: 18 June 2024 | **Revised:** 11 December 2024 | **Accepted:** 12 December 2024

Funding: This research project has been funded by ANRT; Fonds Eperon; Conseil Scientifique filière equine.

Keywords: animal traction | life path | motivations | peasants | neo-rurals

ABSTRACT

As regards alternative agricultural practices today, it is worth noticing the increase in the use of animal traction (AT) in France. Yet, the reasons for this reappropriation remain unclear. The life paths and motivations of users are the focus of this article. The study is based on 33 qualitative interviews with French farmers. It uses Gasson's theoretical framework and a life course analysis. Findings show that farmers who have chosen AT first tend to question the agricultural model. They can be described as neo-rurals motivated by their political opinions, a desire for greater autonomy and their passion for horses. These neo-peasants have opted for animal-drawn cultivation because they reject the main agricultural system and wish to create a new connection with nature. This study is also addressed to policymakers and people advocating more sustainable agricultural practices in general.

1 | Introduction

Agricultural systems are overusing resources so that human, animal, geological and environmental resources are being depleted (Benton et al. 2002; IPCC 2014; Willett et al. 2019). In response to these challenges, a growing number of French farmers are making use of more sustainable food systems and agro-ecological production methods (Bellon and Ollivier 2012). Among these farmers, some are moving towards alternative modes of production as opposed to the dominant conventional agricultural models (Beus and Dunlap 1990). In Europe, they call themselves peasants (Deléage 2012) and are part of a broader movement of repeasantisation (Van der Ploeg 2018). It can be considered as a social movement, gathering operators organised in networks and sharing the same values about peasantry. They oppose the agro-industry and defend a more sustainable life project (Hummel and Escribano 2022). The profile of newcomers (Rico and Fuller 2016) and their new methods of production lead them to question the agro-industrial system (Van der Ploeg 2008). Therefore, we can notice a reappropriation of animal traction (AT), an agricultural practice that declined during the last century due to users claiming to be part of alternative movements (Lizet 2020). This decision goes against the actual motorised agriculture. It is important to conduct a thorough analysis to gain a deeper understanding of the factors leading to that alternative agricultural model. This practice is mainly used in vineyards and market gardening, with

All authors have participated in (a) conception and design or analysis and interpretation of the data; (b) drafting the article or revising it critically for important intellectual content; and (c) approval of the final version.

This manuscript has not been submitted to, nor is under review at, another journal or other publishing venue.

The authors have no affiliation with any organisation with a direct or indirect financial interest in the subject matter discussed in the manuscript.

the help of horses or donkeys. It is being developed mostly on small farms. This article, focusing on the users of AT, also sheds light on some alternative and less ecologically damaging approaches to farming.

In France and across Europe, the use of working animals is on the rise (Rodrigues and Schlechter 2022). It is estimated that hundreds of farms and wineries have now added this practice to their usual mode of operating either as a complement to a motorised tool or in its absence (SFET 2020). Additionally, there is a growing interest in bovine traction as we can see from the creation of two associations in 2023 specifically dedicated to this question: *Attelages bovins d'aujourd'hui* and *l'Association française des meneurs de bovins* (Today's cattle drive and the French association of cattle drivers). In the field of academic research, this subject seems to have recently garnered renewed interest, following a period of relative neglect (Miara et al. 2023; Starkey and Mudamburi 2022). AT reduces greenhouse gases (Cerutti, Calvo, and Bruun 2013; Fiorani et al. 2024) while improving the quality of soils (García-Tomillo et al. 2017; Quijano et al. 2017), which makes it play a role in the agro-ecological transition. Besides, these technical performances do not necessarily induce a disproportionate loss of time or lack of productivity. Some farms have the same economic results with AT as farms with motorised traction (Johansson et al. 2013; Holly et al. 2019). It is of significant importance to understand the underlying motivations driving farmers to adopt agro-ecological practices, as it can also facilitate the development of such practices (Mills et al. 2018). Analyzing the motivations and pathways of farmers implementing agroecological practices also enables political authorities to better support these movements.

Nevertheless, the studies conducted on AT are limited to technico-economic approaches and fail to adequately address the social factors influencing this reappropriation of the practice (Mota-Rojas et al. 2021; Miara et al. 2023). Indeed, technical and economic motivations alone may not be sufficient to explain the reasons why farmers adopt green practices (Siebert, Toogood, and Knierim 2006; Preissel, Zander, and Knierim 2017). While the scientific literature has largely explored the motivations for mobilising agro-ecological practices (Garini et al. 2017; Defrancesco et al. 2008; Mills et al. 2017), it has become a real challenge to provide an objective assessment of the enthusiasm surrounding AT, as only one study has been conducted on the factors driving farmers to adopt this practice (Mulier and Müller 2019). Those authors have examined the motivations of 16 winegrowers resorting to AT and the changes of values resulting from that. It has highlighted the technical factors and social-professional networks that can make the spread of the practice easier (Mulier and Müller 2019). Other studies have adopted a secondary approach to explain the motivations for mobilising AT. The latter include the farmers' will to protect the soils, the technical problems they sometimes encounter, the economic valuation of such a practice and the passion for horses which emerged as the most prominent criterium. (Fritsch et al. 2013; Beurrier 2021; IFCE and IFV 2021). In summary, these studies have primarily addressed the technical and economic aspects of the subject, paying little attention to the underlying motivations.

The present paper aims at addressing this gap by analyzing the motivations of producers who have adopted AT. Moreover, such an analysis locates AT and its users within today's broader agricultural context and alternative agricultural context.

To understand the factors that can influence people to adopt AT, we rely on studies that examine the life paths and motivations of farmers (Gasson 1973; Elder and Giele 2009; Van der Ploeg 2008). A qualitative methodology based on 33 semi-structured interviews with users of AT was mobilised in France in 2022 in order to analyse the life paths of these individuals and their motivations.

This article is organised as follows: The theoretical framework and method is first detailed and the findings are then presented in three steps. First, the backgrounds and profiles of AT users can be presented along with an overview of the various reasons leading them to use AT. Finally, comparing these users' motivations and their life path will help identify types of users. We then identify and discuss the characteristics of these neo-peasants and how the choice of AT questions the dominant technical model.

2 | Theoretical Framework

This article comprises two analytical frameworks: the life courses and the motivations as defined by Gasson (1973). We are looking at their primary motivations for using AT. Examining the users' life stories will help to explain the process (path) they have chosen. Studying these elements together is interesting for rural sociology and provides a better understanding of the reasons for choosing alternative practices that fit in with sustainable agriculture.

The life courses of individuals have been extensively studied in social science (Elder 1985). The course of an individual's life is influenced by a number of factors, including the individual's trajectory, their transitions and their turning points. Trajectories include a person's professional or familial background but also the relationships and commitments they have. Individuals advance in these trajectories and play different roles (Ghergel and Saint-Jacques 2013). Transitions represent the changes in status that induce modifications in an individual's life (Elder, Johnson, and Crosnoe 2003). Finally, turning points are all the events or major changes that modify the individuals in the long run (Wheaton and Gotlib 1997). These three elements defining people's life courses will be methodologically examined together (Elder and Giele, 2009). Life-course frameworks are required to analyse someone's life path through their trajectories, transitions and turning points. In practical terms, our interview guide aims at addressing these elements.

As early as the 1970s, Gasson (1973) highlighted the fact that farmer' choices were not based solely on economic considerations (Defrancesco et al. 2008). This work highlights the importance of other motivational factors that explain, among other things, the reasons for adopting sustainable farming practices (Mills et al. 2017). Recently, social and psychosocial sciences have also focused on these new forms of sustainable agriculture, notably to better understand farmers' behaviours (Burton 2004; Burton and Wilson 2006). Numerous authors have used Gasson's theory to highlight the non-economic factors behind the adoption of more sustainable practices (Garforth and Rehman 2006), as well as to create farm typologies (Sutherland, Barlagne, and Barnes 2019).

This paper is part of this approach to better understand why some farmers choose to mobilise alternative and sustainable agricultural practices—in our case AT (Rodrigues and Schlechter 2022). In order to identify and, above all, analyse the adoption of an agroecological practice, numerous authors have emphasised the necessity of understanding the attitudes, values and backgrounds of respondents (Willock et al. 1999).

Gasson (1973) identified the diversity of motivations and classified them into four categories: *instrumental, social, expressive* or *intrinsic*.

Instrumental motivations are connected to the practice of farming itself, which is perceived as a means of generating income and material security. These are technical motivations including the ability of AT to improve soil health (García-Tomillo et al. 2017). *Social motivations* emphasise the importance of interpersonal relationships. For instance, professional dialogue networks play a significant role in the dynamics of changing practices (Compagnone 2019). *Expressive motivations* are linked to the means of self-expression or personal fulfilment. It involves health and well-being which are key considerations for turning to organic farming (Saint-Ges and Bélis-Bergouignan 2009). Finally, *intrinsic motivations* relate to any aspirations that are closely connected to the individual farmer. It is widely accepted that the concern for nature, particularly for newcomers, has a positive influence on the implementation of agroecological practices on farms (Kaltoft 1999; Mills et al. 2018).

Those two methodologies contribute to defining types of users as aligned to their motivations and their life path.

3 | Material and Methods

The survey included 33 interviews. The initial objective was to examine the diversity of farms and contexts in order to list the full range of practices when it comes to AT. We identified the main productions of AT in France: market gardening and viticulture. Then, we identified the main areas: winegrowing regions, mountain regions and market gardening basins (Lizet et al. 2015; Le Clanche 2011). Therefore, meeting farmers who use AT throughout France was needed (Figure 1). Most of the farms were selected at random, while some were recommended by respondents. Sixteen were market gardeners, 10 were winegrowers, three were nursery/tree growers and four were mixed farmers. We interviewed 25 men, four women and four couples. We conducted on-site visits to meet with farmers who utilise animal-drawn implements.

The characteristics of the farms using AT help us better understand the population studied and the type of farms on which the interviewees have settled. Informations about those farms are sorted by type of production in Table 1.

In most cases, respondents established their farms aged around 30 (Table 1). There are some differences between the production sites when it comes to the use of service providers. Although the structures are relatively small, some wineries are very large. The use of AT is most often accompanied by motorisation, and the animals are often two or three in number. In most projects, the practice has been introduced in the farm from the very beginning, thus associating the farmer's plan to take up a farm with their desire to use the practice.

As a result, animal-drawn systems are used in small-scale structures with small work units. Finally, AT is used differently according to the farms that shows that each individual's motivations and pathways are completely different.

From a methodological point of view, a sociological approach based on life stories was used (Dhunpath 2000; Goodson 2001). It is focused on the motivations behind the adoption of AT and the farmer's life path prior to the adoption of AT. Close attention was paid to Gasson's categories, and if any was missing, the reason was identified. First, the respondents' backgrounds were examined in order to identify some indicators such as their initial training, family background, their view on the agricultural world and their possible link to the equestrian world. The second part of the study focuses more precisely on the moment when they made their decision to use AT. This method enables us to show how users decide to use this practice or not and the reason why. At the end of the interview, the subject of AT and their users' objectives are developed in greater detail.

Following the transcription of the interviews, the motivations of the interviewees were identified manually. Their two or three main motivations were kept without weighting to avoid bias. Once done, the motivations were precisely classified according to Gasson's (1973) method. For instance, the motivation for owning a horse is not precise enough as the objectives can be varied. It can be to perpetuate a family tradition (social motivation), to contribute to produce manure in an agroecological perspective (instrumental motivation) or to pursue the passion for the animal (intrinsic motivation). We then cross-referenced these motivations with life paths to define the typology of users. These types were defined by the aforementioned indicators, including origins, social and professional characteristics, age, type of production site, values, interest in horses and AT and training.

Words from the interviews with farmers will be used anonymously: FM refers to market gardeners, DV to winegrowers, FPE to mixed farms growers and PEP to tree growers.

4 | Findings

First, the backgrounds of farmers using AT will be presented along with the characteristics of these neo-rurals and how they discovered this practice. Second, their motivations for introducing the practice will be highlighted, and once identified, the types of farmers will end the findings.

4.1 | Farmers Using AT: Trained Users Undergoing Retraining

4.1.1 | Neo-Rurals in Search of Meaning

Most of the sample people interviewed have come to farming after a professional retraining. Consequently, only five farmers have a farming background, while 28 have a non-agricultural

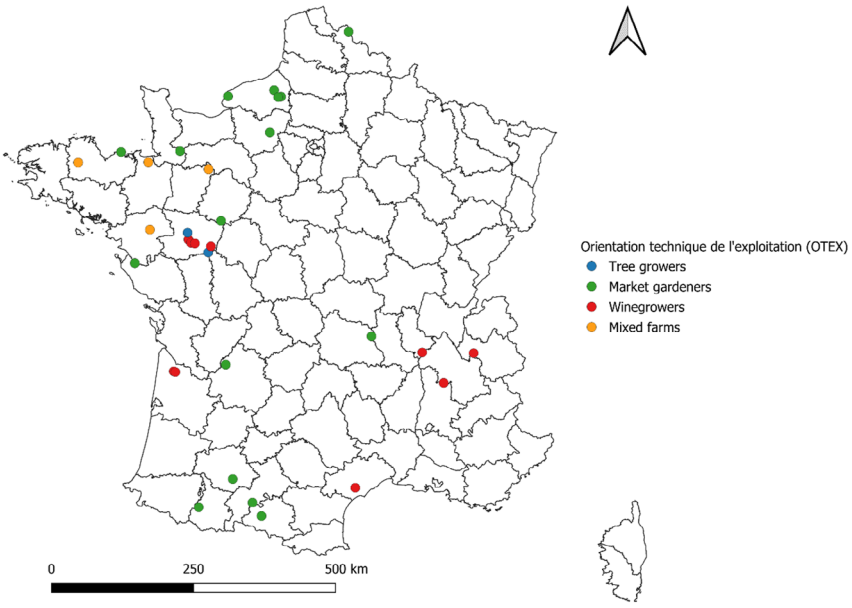

FIGURE 1 | Location and type of production (*Orientation technique de l'exploitation*) of the farmers interviewed ($n = 33$).

TABLE 1 | Characteristics of farms and animal traction (AT) users surveyed ($n = 33$).

Characteristics		Market gardeners ($n = 16$)	Winegrowers ($n = 10$)	Mixed farms ($n = 4$)	Tree growers ($n = 3$)	Total ($n = 33$)
Utilised agriculture area (UAA)	Minimum	0.65	1.7	10	2	0.65
	Median	4.5	5.5	13.5	7	7
	Maximum	25	98	25	7	98
UAA with AT (ha)	Min.	02	1.5	1	0.35	0.2
	Med.	0.7	4	2	1	1,5
	Max.	3.5	47	4	1	47
Service providers	Yes	1	6	0	0	7
	No	15	4	4	3	26
Number of animals	Min.	0	0	2	1	0
	Med.	2	1	2	2	2
	Max.	12	9	4	3	12
Tractor on farm	Yes	10	8	4	1	23
	No	6	2	0	2	10
Moment of implementation of AT	Since the beginning	14	3	4	2	23
	After	2	7	0	1	10
Age of installation	Min.	25	23	30	21	21
	Med.	31	29	36	32	31
	Max.	46	39	42	42	46

background (in France they are called NIMA's, *non-issues du milieu agricole*, referring to a person whose parents are not themselves farmers). NIMAs professional establishment has been a significant phenomenon in French agriculture in recent years. Indeed, it represents 60% of those wishing to set up their farm (Coly 2020). However, this phenomenon is particularly true among AT users. It includes farmers who have previously worked in various lines of business (such as pharmacy, bricklaying, landscaping, automotive technology, music, education or agricultural engineering). They have transitioned to entrepreneurship following a change in career direction. Eight farmers have worked in agricultural structures (consultancy, farm workers, etc.) or have

set up an agricultural business at the end of their studies. Nine of the respondents have worked in fields related to agricultural or rural life, including landscape gardener, botanical conservationist, riding instructor and so forth. Half of the respondents have worked in fields that are far removed from agriculture, notably in the medical-social sector. Furthermore, AT farmers tend to possess a higher level of initial training than the average of farmers. Consequently, 27 (of 33) farmers have a further education degree at least equivalent to Bac +2 (2 years after their final secondary school exam), in contrast to the 26.4% of all farmers who have such qualifications in France (Insee 2019). Conversely, 19 farmers do not have any initial training in agriculture.

This retraining phenomenon is particularly high among non-winegrowing farms, as only seven of the 23 users interviewed for this type of farm have received initial training in agriculture. Among the seven farmers who have received agricultural training with the intention of establishing themselves in agriculture, only two reached the level of Bac +2. The remainder of the respondents attended engineering schools or similar institutions. Consequently, only three of the 33 farmers interviewed started their careers as farmers. In contrast, for winegrowing estates, six out of the 10 respondents have completed an initial training course directly linked to viticulture, with a view to set up or work as a vineyard manager, technician or wine waiter.

Considering the profiles, it is possible to identify three distinct cases of life paths that precede installation. The first is planned installation. The respondents in that case often come from an agricultural background and studied with the intention of establishing a business from an early age. This is a relatively uncommon occurrence among all the data gathered in this corpus. The second case concerns individuals who established their own businesses after having experienced other professional situations regardless of their educational level. After graduating, these people worked in the specialised fields they had studied for several years. During this period, they often realised that their professional choice lacked intrinsic meaning, leading them to change careers. This is exemplified by the FM12 market gardener and the DV10 winegrower:

> I have a degree in computer engineering. I worked in Paris for 2 years and didn't really like it, so I realised that it wasn't for me. (FM12)

> After 6 or 7 years, I started to get a bit fed up with the seasons, because you're doing jobs that aren't great, aren't qualified, you know, you're stocking shelves, you're making pizzas… And so, I felt like settling down and building something a bit more permanent. (DV10)

The final group is composed of people who joined the agricultural field of activity later in life, mainly over 40 years old, having previously worked in another line of business. Often in a secure position (permanent contract, salary, housing), these people did no longer find any meaning in their work and thus opted for agriculture as exemplified by the FM15 market gardener:

> I'm a former salesman, I'd been doing this for 15 years with a little burn-out at the end, one morning I couldn't go. I had a beautiful villa with two nice cars, the whole package, my wife is a teacher, we had a good income, I decided to stop everything, we sold the villa, we put all the credits to 0, we moved here in July 2014. (FM15)

4.1.2 | Different Ways of Discovering the Practice and Users Who Are Training in Agriculture and AT

In our sample, the timing of discovering AT varies widely among individuals. Some individuals have been aware and engaged in the practice of AT from an early age, with their parents serving as their primary source of knowledge. In contrast, others only became aware of this practice once they had settled into farming. In total, five distinct ways users acquired knowledge of the practice were identified. These included the agricultural career (11/33), media (9/33), family (7/33), other equestrian practices (4/33) and chance encounters (2/33). The agricultural career is the moments in the installation process where AT may have been approached. The following educational pathways were identified: *Brevet professionnel responsable d'entreprise agricole* (BPREA. A translation can be: Professional diploma in farm management), continuing education and worldwide opportunities on organic farms (Wwoofing). The term 'media' encompasses both the Internet and other available resources, such as the *Association pour la promotion de la traction animale agricole moderne* (Prommata), newspapers and movies which highlighted this practice (Miara et al. 2023).

> There's a great documentary to watch called *Cheval de Terre une Energie Renouvelable* (soil horse, a renewable energy). It's not a well-known documentary. It's really worth seeing, it's cool, and it was seeing it that made me think it was possible. (FPE2)

Furthermore, family can play a decisive role in the discovery of AT and even at the beginning of the settlement.

> Animal traction didn't necessarily appeal to me, but once you'd been through the thing for a week, I was immediately hooked. I was a bit depressed, so my mother suggested I take a course in animal traction, like my father used to do. Anyway, I liked it, so I went to my father's place and started working on the vines. Dad started working with horses in 2010. (DV9)

Other equestrian practices, such as carriage driving or horse riding, can also lead to the discovery of AT. Finally, certain encounters can contribute to the discovery of AT:

> A local market gardener came to see me and saw my potato harvest. He told me I couldn't do it by hand, I'd be dead. The next day, he came over with his two donkeys and his potato harvester. We started at 9:00

> AM, and by 11.30 AM it was all over, drinking a beer by the poplars. (FM15)

In many cases, this discovery is accompanied by or subsequently followed by training.

Training is a fundamental aspect of the professionalisation of AT, particularly in order to enhance the reliability of the practice.

> The problem is that I don't have enough help to train, I want to do lots of things but I don't have the money, it's a real brake. (FM12)

This may even have led to difficulties for some, as stated by a farmer who now provides training:

> There are plenty of young people who want to set up in animal traction, and there are plenty of motivated young people, except that if they're poorly trained they'll end up in a mess. (FM1)

In order to optimise their chances to establish themselves successfully or to gain access to subsidies such as the young farmer's grant, the majority of AT users have received training. While few (7) farmers have not received any formal agricultural or AT training, these users have nevertheless benefited from the support of other farmers, advice from service providers and the assistance from neighbors. They have acquired their knowledge through 'on-the-job training' (PEP1).

5 | Mainly Expressive Motivations

The motivations and occurrences of AT users are detailed in Table 2.

Given Gasson's (1973) typology, the majority of the motivations for practising AT are expressive (42 occurrences in total) and intrinsic (20 occurrences). Instrumental motivations are also present, although they are not the most frequently quoted (17 occurrences). Finally, social motivations appear to be a relatively uncommon factor. This typology shows the significance of expressive motivations in the adoption of AT, which is linked to a political vision of agriculture and criticism of the conventional agricultural model. The practice is then presented as an alternative practice, a political choice (14 occurrences) for autonomy (13) and for the greening of agricultural practices (8). The passion for horses illustrates the intrinsic motivation, which is the second most prevalent one mentioned (17 occurrences) (Table 2). The third most prevalent motivation is the instrumental one. Although AT has numerous technical and economic advantages (Mulder and Dube 2014; García-Tomillo et al. 2017), these motivations alone are not sufficient to explain that people adopt such a practice. This is exemplified by FM9:

> Telling yourself that animal traction is better for the health of the soil, that it gives you mixed farming… That's all well and good, but it's not enough to get started. You have to love the animals you're going to be working with. (FM9)

Expressive and intrinsic motivations are linked to the farmer's own personality, tastes, values and history. A passion for horses is a significant motivating factor for many users. In many cases, the presence of a horse on the farm was a fundamental criterion for initiating an agricultural career, and the question of its utilisation then arose, as in the case of PEP2:

> I love horses, and honestly, if I wasn't interested in horses I wouldn't have done animal traction, it was to keep the dynamic of having horses in my life. (PEP2)

This motivation stems from activities currently or previously pursued by the farmers, such as horse riding, carriage driving or horse training. However, if 20 respondents had links with the equestrian world before setting up, 13 had never had any links before starting their AT farming project. In that case, they chose it for political reasons. That advocates for a societal paradigm shift rooted in peasant values. This shift is embodied by the complete or partial rejection of motorisation in farming practices, as expressed by FM10:

> For me, animal traction is part of a societal paradigm shift. Here, we're imagining a different type of market gardening. It's not possible to continue farming the fields this way, we need to find alternative ways of doing things. (FM10)

Consequently, the implementation of AT in agricultural practices primarily results from values rather than instrumental rationales. Nevertheless, it is obvious that the respondents' motivations are multiple. Consequently, while the majority of respondents indicated that they were motivated by intrinsic and expressive or even social factors, a significant proportion (12 out of 33) indicated that they were encouraged by instrumental considerations in using AT. Two respondents (from winegrowing estates) were motivated solely by instrumental motives.

The users of this practice are not coming from a farming background and seek to find a meaningful project. Still, the challenge is to make this project both credible and sustainable. To this end, users of AT either receive specialised training in this practice or in agriculture in general, or both.

5.1 | Three Types of AT Adopters: 'The Equicentric', 'the Existential Militant' and 'the Pragmatist'

The sample of AT users interviewed has been categorised according to each individual's motivations and life path. Three types of profiles can be identified, the first two are the majority: the equicentric, the existential militant and the pragmatist.

The equicentric ones mainly use AT to keep equines in their life. They have had strong ties with horses in their past, often as former riders, and cannot consider a farming project without equines. They are aware of the time they will spend on their

TABLE 2 | Definitions and dimensions of the motivations expressed by users of this practice for mobilising AT.

Type of motivations	Occurrences of type of motivations	Name of motivation	Definition	Occurrences motivation	Verbatim
Expressive	42	Political	AT is perceived as a peasant and eminently political practice	14	*We have a political relationship when we work with horses.* (FPE4)
		Autonomy	The desire to free from global markets and non-local energy sources	13	*There's one leitmotiv in my life, and that's autonomy.* (DV10)
		Ecological	Overall greening of the farm's agricultural practices	8	*It's consistent with the ecological issues we're going through*
		Rejection of the tractor	Choice to take the land from the machines or lack of machinery skills	7	*The first step is that it bores me to have a tractor.* (PEP1)
Intrinsic	20	Passion for horses	Maintain existing links with equines linked to the person's history	17	*Horses were an obvious choice.* (FM4)
		Beauty	Having a horse working in the fields makes the farm more attractive	3	*It would be nice to reintegrate them into the landscape.* (FM10)
Instrumental	17	Having animals	With a view to diversified farming, desire to have large animals on the farm	8	*For me, it was essential to have large animals.* (FM9)
		Agronomy	Regarding the effects of AT on soils, mobilisation of the practice	6	*We wanted to try and reduce compaction with horses.* (DV3)
		Economical	Adding value to products by working with AT	3	
Social	10	Life project	Living with animals is an essential part of these life projects	6	*A farm isn't just about production, it's also about life.* (FPE3)
		Transmission of knowledge	The desire to preserve knowledge deemed useful for preserving the future	2	
		Familial	One member of the family used AT	2	

farm and thus combine business and pleasure. These users' education is relatively similar to the level of the sample as a whole. The primary motivations for adopting this practice are intrinsic (passion for horses, beauty) but can also be expressive (autonomy) or instrumental (economy). In order to adopt a peasant vision, the horse must find its place on the farm. Once the decision has been made to use equine traction, the equicentric will often start an AT formal training (certificate of specialisation, training courses) or informal one (with their neighbours or friends).

The existential militant uses AT as a political and ecological choice. For them, AT on a farm is a marker for rejecting the dominant agricultural system while adopting peasant values. They develop an existential militancy as defined by Arnsperger (2009), tackling the major current paradigms and attempting to overturn them through their actions and values. These users have not had any connection with equines before and the presence of animals on the farm comes out of agro-ecological needs more than out of a personal choice. The existential militants mobilise both horses or donkeys and even mules and cattle. Their motivations are mostly expressive (autonomy, rejection of the tractor, political reasons) but also intrinsic (passion for horses) and social (life project, transmission of knowledge). Instrumental motivations are uncommon, with the exception of the desire to have animals to complete the nutrient cycle in an agro-ecological perspective. These users have the same level of education as the sample as a whole. Existential militants usually train by themselves in AT, thanks to the information given by their peers or informal vocational trainings they attend. Yet, these means enable them to acquire the knowledge they need to start the practice.

Pragmatists use AT mainly for technical and economic reasons. These environment-conscious farmers are eager to find sustainable solutions like AT to solve some issues they face in their farm. They have often not been in contact with horses before implementing the practice on their farm or estate and the presence of the equine is mostly for utilitarian reasons. After completing relatively long studies, often in engineering schools, they join the agricultural sector straight away. The primary motivations of pragmatists are instrumental (economics, agronomy), with a lesser emphasis on expressive (ecology) considerations. Those who choose a pragmatic approach do not traditionally attend AT training. Instead, they often rely on a service provider, to implement the practice and be in charge of the horses. AT is used as a complement to motorised traction.

6 | Discussion

The advent of alternative practices such as AT occurs within the context of the greening of agriculture and the growing

significance of sustainability and agroecology. These issues have an important impact on a significant proportion of citizens who wish to adopt lifestyles in accordance with their ecological values. It particularly entails significant life changes, such as establishing oneself in farming and the implementation of alternative practices. It is a political and committed act that demonstrates how producing differently challenges the dominant agricultural model. This article explores how farmers who oppose the agro-industrial system have chosen to adopt an alternative agricultural practice, specifically AT. This choice involves a thorough reevaluation of societal structures aimed at promoting sustainability. The development of a professional activity in accordance with these values occurs on a farm within a context that may be described as neo-peasantry. Furthermore, the central role of the working animal strengthens the cooperation between the farmer and nature, serving as a significant marker of identity with strong symbolic value. It is important to note that these general characteristics should not overshadow the diversity of backgrounds and motivations of AT users as illustrated by the three types of adopters defined above.

6.1 | A Quest for Meaning in Reaction to the Dominant Technical Model

Behind the desire to establish themselves in agriculture, there is a strong emphasis on the meaning it holds. This meaning resonates with the values and ideas that farmers hold. These elements define the practices and strategies of their farms. It goes against productivist agriculture: farmers enhancing sustainable agriculture endorse a different rationality. Their work is based on expressive and intrinsic motivations rather than instrumental and technical rationality (Deléage 2012). The decision to adopt AT corresponded to these values as the respondents pointed out. For many, their initial experience of the world of work was a traumatic one and led them to reject the dominant system and the dogma of growth. Therefore, the respondents sought to give meaning in their lives by developing a farming project marked by strong and existential values. Conversely, those respondents who have not undergone a reconversion are driven by strong ecological principles.

As for equicentric farmers and existential activists, animal-drawn farming challenges their connection to modernity and the progress imposed by technocratic and productivist agriculture within food systems. The 'megamachine' represents an essential component of the global organisation, driven by a pursuit of profit, power and the exploitation of resources (Scheidler 2020). The promise of social and material progress, made to post-war peasant societies, as expected of modernity, has led to a crisis of dignity, as experienced by institutions (Fleury 2023). This criticism of modernity is at the center of many farmers' concern for AT. It can then be seen as a peasant practice as opposed to the very symbol of progress: the machine. They have adopted a low-tech (Calame and Mouchet 2020; Clerc and Jarrige 2020) and convivial (Illich 1973) perspective. Animal-drawn cultivation does not only offer an alternative way to produce foodstuffs, but it also provides a means to reach a different kind of society.

However, it should be noted that these characteristics do not represent all AT users. The pragmatists, for instance, mobilise the practice because they wish to implement sustainable agricultural practices without necessarily following a specific political or life project. Besides, these profiles have recently been found in viticulture, and the practice is likely to develop in this line of business over the next few years adding value to the final product and the quality of the work carried out by these pioneers.

Mobilising AT thus stands as a way to add some meaning to one's work and one's life. *'I wouldn't go back in time without animal traction. I've rediscovered my values, I'm happy when I'm with the mare and I'm enjoying my job again'* (FM16). This choice is hard for neo-rurals because this return to the land cannot be done without difficulty in many cases (Deléage 2018).

This aspiration to alter one's occupational circumstances is inextricably linked with a profound transformation in one's living arrangements. Farmers set up their own business (29 out of 33 farmers) as they yearn for more autonomy and materialisation of their values (Mazaud 2012). This quest for autonomy is frequently presented as a rationale for the utilisation of AT. The reclamation of time is tantamount to the reclamation of the self, which can be understood as a quest for autonomy (Rosa 2010). In this sense, AT represents a genuine social deceleration, enabling us to regain control over our choices and our existence while working in harmony with Nature: *'Animal traction is a completely different way of life. You're in a very different physical and temporal space, but everything is more intensive in terms of pleasure'* (FPE3).

The farmers' desire to work at a pace and on a scale that aligns with the rhythms of nature is based on the fact that their farm is primarily a collaborative ecosystem comprising different agro-ecosystems.

Furthermore, the current ecological and social issues have intensified the desire to act, compelling us to take a step that would not have been taken without these internal injunctions. *'I had the impression that my kids wouldn't have a future, so I asked myself what I could do to contribute to the issue'* (FM14).

Unlike solastalgia, this installation dynamic of alternative farming is driven by individuals who are motivated to act in response to the current global environmental situation. They believe that getting involved in a specific farming process is a tangible solution (Moriceau, Alberio, and Van de Velde 2021). The meaning of work is thus linked to a broader mission, which is useful for oneself and others (Loriol 2011). Using AT enables these neo-rurals to achieve personal, familial and collective objectives in a quest for meaning oriented towards an *'epicurean presentism that has the appearance of revolution'* (Sallustio 2018).

6.2 | AT, an Illustration of a Broader Neo-Peasantry Movement

Most AT users have started farms outside their families and don't have farming backgrounds. They are typically neo-rurals, often better educated than the average. This trend involves waves of younger people moving from urban to rural areas, with motivations that differ according to economic and political changes. These individuals often aim at creating alternative

agricultural and social models, distancing themselves from the mainstream society (Rouvière 2015). This movement has led to the creation of AT organisations like Prommata and the association HIPPOmobile de Technologie et d'Expérimentation du Sud-Est (Hippotèse), which still offer training. Prommata is the most common training organisation for these users, followed by the European Centre for Animal Traction Resources and Research (Cerrta). Since the 2010s, the number of neo-rurals has grown significantly. They see farming as a vital part of society, which enables them to match their values with a meaningful life project (Gazo 2023). Using AT helps farmers maintain a close bond with their animals and support their personal goals as they are often driven by their love for horses, which is actually one of the most common reasons for choosing this path. The industrialisation of agriculture has weakened the connection between humans and animals, leading to a breakdown in interspecies communication (Porcher 2002). Today, adopting AT provides a meaningful alternative, allowing farmers to foster a unique relationship with animals (Deneux-Le Barh 2021), reconnect with nature (Pineau 2020; Mouret and Lainé 2023) and redefine their approach to work (Mulier and Müller 2019; Bénézet et al. 2021; Lizet 2020). This collaboration establishes an ecological contract between the farmer and the agroecosystem. The aesthetic and subjective dimensions of farming practices are equally significant. Horses and AT contribute to a visually pleasing farming environment—a bell'azienda, as Benvenuti et al. (1988) describe it. It generates a social and cultural symbolism around AT (Burton 2004). Through these practices, distinct identities take shape. Farmers using animal-drawn methods see themselves as more than just farmers. This approach marks them as neo-peasants, embracing a unique, peasant-based identity. These neo-peasants are actively challenging mainstream agricultural models, striving to make farming more environmentally sustainable. At the same time, they emphasise professionalism and economic pragmatism. Neo-peasantry is a complex movement that mixes rural traditions with modern agroecological practices (Van der Ploeg 2008). The adoption of AT is part of a broader trend of 'repeasantisation' (Van der Ploeg 2008) marked by a shift towards alternative farming models and practices. At the core of peasant farming lies the concept of co-production: the dynamic and evolving interaction between people and their natural environment (Van der Ploeg 2008). Farmers who see agriculture as a rural and sustainable practice rather than an agro-industrial one regard nature as an essential part of their work. AT exemplifies this principle by using animals directly in production, fully integrating co-production into farming. This sets it apart from other sustainable methods, where the use of machinery is criticised but not fundamentally questioned. For example, soil conservation and no-tillage farming contribute to sustainability (Karayel and Šarauskis 2019) but do not directly challenge mechanisation.

AT, through the values of its practitioners, represents a more radical ecological stance on mechanisation. Like soil conservation, it offers a new relationship with nature but also a fundamentally different approach to production itself (Goulet 2011). Analyzing AT sheds light on the broader processes of adopting sustainable agricultural practices. For those who strongly oppose mainstream agriculture, AT has become a form of political and personal expression. In contrast, those who are less radical may adopt AT without letting it define their identity—the latter characterising the pragmatists.

6.3 | Implications

Gasson's framework (1973) allows us to differentiate the motivations, which lead farmers to adopt a particular practice and to categorise the types of users. This model is widely used in social science research as well as in qualitative methods (Hill and Bradley 2024). However, using this framework alone is not enough to fully capture users' life path or the range of practices on farms (Duesberg, O'Connor, and Ní Dhubháin 2013). To address this, the users' backgrounds and profiles were examined to help contextualise their motivations. Methodologically, combining these two approaches gives more comprehensible insights, offering promises for future studies, especially on lesser-known agricultural practices. Applying this methodology alongside other frameworks, like the theory of planned behaviour (Ajzen and Fishbein 1977) or the theory of self-determination (Deci and Ryan 1985), could also be valuable.

The decision to adopt alternative farming practices is shaped by multiple factors and diverse motivations. As for the research on sustainable practices, developing a typology of AT adopters has been helpful to qualify the findings and raise new questions. Studying the strategic management of animal-drawn cultivation in farms could deepen our understanding of this practice. Methodologically, this typology was created by cross-referencing motivations and life paths, highlighting the need to link these elements for a clearer understanding of the practice.

Farming, and especially AT, enables people to build life projects that align with their values. Agricultural guidance organisations could better support these goals by more fully incorporating AT, which remains in accordance with the aspirations of many people transitioning into farming.

This research opens valuable perspectives on the renewal of peasants and sustainable farming, providing important insights for AT associations and agricultural professionals. Since most users are new farmers, long-term training in both AT and agriculture in general is essential to support a successful integration. The typology also reveals the diversity of AT practitioners, emphasising the need for flexible approaches—some users may focus on tools, others on animals and still others on integrating AT across their farms.

7 | Conclusion

This study sheds light on why farmers adopt AT and the steps they take to fulfil their choice. Guided by Gasson's (1973) motivational classification, this research includes a detailed categorisation of motives but also examines the life paths of AT users at the same time. This article therefore offers an analytical model that combines these two approaches to explain both how and why farmers have opted for alternative farming methods.

Most AT farmers are new entrants who have set up their farms outside the family. Seeking meaningful work that aligns with their personal values, they have chosen peasant farming with AT as a way to pursue a life project grounded on sustainability. These neo-peasants have drawn their methods from the legacy of the peasant movements of the 1980s, answering traditional

criticism with practical, tangible solutions. While AT can carry a folkloric or niche image, which may pose challenges during the setup phase, most farmers undergo training to ensure a smooth transition. Their choice to replace the tractor with horses reflects a deliberate rejection of industrial norms, embodying a broader vision of modernity grounded on ecological values. Beyond the ethical motivations that politicise farming practices, the choice to adopt AT is also deeply personal and social. The presence of an animal as a working companion is central to most AT projects. This intense form of co-production not only shapes the farmer's work but also shifts its primary purpose, from one based on instrumental efficiency to one rooted in relationship. Compared to conventional farming, alternative practices provide a closer connection with nature, prompting a deeper transformation and not just a mere technical change. AT farmers are more motivated by values than by economic goals as seen in the notable absence of technical-economic motivations in the survey carried out. While these motivations are necessary to conceptualise a farming project, they are not enough to drive the adoption of AT. Based on motivations and backgrounds, three types of AT users have emerged: the equicentric, the existential activist and the pragmatist.

Generally, alternative farming practitioners advocate an ecological approach to agriculture, countering productivist methods. These farmers pursue lifestyles that align with their values, setting themselves apart from the dominant model by developing a strong identity and using symbolic markers. They take unconventional paths, exploring new ways of being and farming. This vision is realised on multiple levels, from individual plots to entire food systems, working towards the formation of a new peasant societies.

Our study highlights the political dimension of alternative agricultural practices, particularly AT, as it redefines the entire agricultural system. Practising AT has become an emancipatory act, shaping a distinct peasant identity. AT users are actively contributing to the 'repeasantisation' of Europe, advancing both the agroecological transition and a renewed vision of peasant-based farming.

Acknowledgements

Thanks to Pascale Caillaud and John Sutherby for their careful proof-reading and suggestions for improvement. We would like to thank the reviewers for their comments and their help in improving this article.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author, Maurice Miara. The data are not publicly available due to their containing information that could compromise the privacy of research participants.

References

Ajzen, I., and M. Fishbein. 1977. "Attitude-Behavior Relations: A Theoretical Analysis and Review of Empirical Research." *Psychological Bulletin* 84, no. 5: 888–918.

Arnsperger, C. 2009. "Éthique de L'existence Post-capitaliste: Pour un Militantisme Existentiel (Édition du Cerf)." 314p.

Bellon, S., and G. Ollivier. 2012. "L'agroécologie en France: L'institutionnalisation d'Utopies." In L'agroécologie en Argentine et en France*:* Regards Croisés, edited by G. Frédéric, M. Danièle, G. Nathalie, and H. Valeria, 55–90. Paris: L'Harmattan.

Bénézet, C., L. Hossard, S. Leblancand, and M. Navarrete. 2021. "The Use of Work Horses on Vineyard Estates: Linking Traditional Methods to Innovative and Collaborative Forms of Work." Paper presented at the International Symposium on Work in Agriculture (ISWA 2021), Clermont-Ferrand, France, March 29–April 1, 2021.

Benton, T. G., D. M. Bryant, L. Cole, and H. Crick. 2002. "Linking Agricultural Practice to Insect and Bird Populations: A Historical Study Over Three Decades." *Journal of Applied Ecology* 39: 673–687.

Benvenuti, B., S. Antonello, C. de Roest, E. Saudaand, and J. van der Ploeg. 1988. *Produttore Agricolo e Potere: Modernizzazione Delle Relazioni Sociali Ed Economiche e Fattori Determinanti dell'imprenditorialita agricola*. CNR/IPRA, Rome.

Beurrier, M. 2021. *Traction Animale Moderne en Agriculture: Quatre cas D'étude Français et Suisses*. Unpublished master's thesis, Université de Liège.

Beus, C. E., and R. E. Dunlap. 1990. "Conventional Versus Alternative Agriculture: The Paradigmatic Roots of the Debate." *Rural Sociology* 55, no. 4: 590–616.

Burton, R. J. F. 2004. "Reconceptualising the 'Behavioural Approach' in Agricultural Studies: A Socio-Psychological Perspective." *Journal of Rural Studies* 20, no. 3: 359–371. https://doi.org/10.1016/j.jrurstud.2003.12.001.

Burton, R. J. F., and G. A. Wilson. 2006. "Injecting Social Psychology Theory Into Conceptualisations of Agricultural Agency: Towards a Post-productivist Farmer Self-Identity?" *Journal of Rural Studies* 22, no. 1: 95–115. https://doi.org/10.1016/j.jrurstud.2005.07.004.

Calame, M., and C. Mouchet. 2020. "Quelles Techniques Pour L'agriculture Écologique ?" *La Pensée écologique* 5. p.2. https://doi.org/10.3917/lpe.005.0002.

Cerutti, A. K., A. Calvo, and S. Bruun. 2013. "Comparison of the Environmental Performance of Light Mechanization and Animal Traction Using a Modular LCA Approach." *Journal of Cleaner Production* 64: 396–403.

Clerc, F., and F. Jarrige. 2020. "L'Atelier Paysan ou les Low-Tech au Service de la Souveraineté Technologique Des Paysans." *La Pensée écologique* 5. p.3 https://doi.org/10.3917/lpe.005.0003.

Coly, B. 2020. "Entre Transmettre et s'nstaller, L'avenir De L'agriculture." Rapport au CESE. https://www.lecese.fr/sites/default/files/pdf/Avis/2020/2020_10_avenir_agriculture.pdf.

Compagnone, C. 2019. *Sociologie Des Changements de Pratiques en Agriculture*. Versailles Cedex, France: Editions Quae.

IPCC. 2014. "Climate Change 2014: Synthesis Report." In *Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by Core Writing Team, R. K. Pachauri, and L. A. Meyer, 151. Geneva, Switzerland: IPCC.

Deci, E. L., and R. M. Ryan. 1985. "The General Causality Orientations Scale: Self-Determination in Personality." *Journal of Research in Personality* 19, no. 2: 109–134. https://doi.org/10.1016/0092-6566(85)90023-6.

Defrancesco, E. P. Gatto, F. Runge, and S. Trestini. 2008. "Factors Affecting Farmers' Participation in Agri-Environmental Measures: A Northern Italian Perspective." *Journal of Agricultural Economics* 59: 114–131. https://doi.org/10.1111/j.1477-9552.2007.00134.x.

Deléage, E. 2012. "Les Paysans Dans la Modernité." *Revue Française De Socio-Économie* 9: 117–131. https://doi.org/10.3917/rfse.009.0117.

Deléage, E. 2018. "Retour à la Terre: Entre Promesses et Contradictions." *Écologie & Politique* 57: 39–49. https://doi.org/10.3917/ecopo1.057.0039.

Deneux-Le Barh, V. 2021. "La Profession Anthropoéquine: Une Identité Marquée par une Communauté Socialisatrice de Travail Interspécifique." Sociology thesis Université Paul Valéry—Montpellier III, 617p.

Dhunpath, R. 2000. "Life History Methodology:" Narradigm" Regained." *International Journal of Qualitative Studies in Education* 13, no. 5: 543–551.

Duesberg, S., D. O'Connor, and A. Ní Dhubháin. 2013. "To Plant or Not to Plant—Irish Farmers' Goals and Values With Regard to Afforestation." *Land Use Policy* 32: 155–164. https://doi.org/10.1016/j.landusepol.2012.10.021.

Elder, G. H. Jr. 1985. "Perspectives on the Life Course." In *Life Course Dynamics. Trajectories and Transitions, 1968–1980*, 23–49, edited by G. H. J. Elder. London: Cornell University Press.

Elder, G. H. Jr., and J. Giele. 2009. "Life Course Studies: An Evolving Field." In *The Craft of Life Course Research*, 1–24, edited by G. H. J. Elder and J. Z. Giele. New York: The Guilford Press.

Elder, G.H. Jr., M. Johnson, and R. Crosnoe. 2003. "The Emergence and Development of Life Course Theory." In *Handbook of the Life Course*, 3–19, edited by J. T. Mortimer, and M. J. Shanahan. New York: Springer.

Fiorani, L., L. Rocchi, G. Meloni, and C. Castellini. 2024. "Environmental Impact Assessment of Horse and Mechanical Traction for Vineyard Cultivation." *Italian Journal of Animal Science* 23, no. 1: 1153–1168.

Fleury, C. 2023. *La Clinique de la Dignité*. Paris: Seuil.

Fritsch, M., H. Roisilleand, and A. Lecler. 2013. "Recherche et Accompagnement des Agriculteurs Afin de Favoriser les Économies d'Energies à la Ferme, Etude sur la Traction Animale." *Mémoire De M1 Ecologie Humaine Université Bordeaux* 3: CIVAM 29.

García-Tomillo, A., T. de Figueiredo, A. Almeida, et al. 2017. "Comparing Effects of Tillage Treatments Performed With Animal Traction on Soil Physical Properties and Soil Electrical Resistivity: Preliminary Experimental Results." *Open Agriculture*. II: 317–328. https://doi.org/10.1515/opag-2017-0036.

Garforth, C., and T. Rehman. 2006. *Research to Understand and Model the Behaviour and Motivations of Farmers in Responding to Policy Changes (England)*. Final report of project EPES0405-17 commissioned by Defra.

Garini, C., F. Vanwindekens, J. Scholberg, A. Wezel, and J. Groot. 2017. "Drivers of Adoption of Agroecological Practices for Winegrowers and Influence From Policies in the Province of Trento, Italy." *Land Use Policy* no. 68: 200–211.

Gasson, R. 1973. "Goals and Values of Farmers." *Journal of Agricultural Economics* 24, no. 3: 521–542.

Gazo, C. 2023. "Se Reconvertir dans L'agriculture: Du Retour au Recours À la Terre." *Études Rurales* 211: 140–163. https://doi.org/10.4000/etudesrurales.31354.

Gherghel, A., and M. C. Saint-Jacques. 2013. *La Théorie Du Parcours De Vie*. Québec, Canada: Presses de l'Université Laval.

Goodson, I. 2001. "The Story of Life History: Origins of the Life History Method in Sociology." *Identity: An International Journal of Theory and Research* 1, no. 2: 129–142. https://doi.org/10.1207/S1532706XID0102_02.

Goulet, F. 2011. *Les Objets de la Nature, Les Pratiques Agricoles et Leur Mise en Œuvre. Le cas de L'agriculture de Conservation. Le Travail en Agriculture: Son Organisation et Ses Valeurs Face à L'innovation*. Paris, France: L'Harmattan.

Hill, B., and D. Bradley. 2024. "Goals and Values of Farmers Revisited: Gasson Fifty Years On." *Journal of Agricultural Economics* 75, no. 1: 108–113.

Holly, M., K. Gunn, A. Rotz, and P. Kleinman. 2019. "Management Characteristics of Pennsylvania Dairy Farms." *Applied Animal Science* 35, no. 3: 325-338. https://doi.org/10.15232/aas.2018-01833.

Hummel, A., and P. Escribano. 2022. "The Neo-Peasant Movement in Catalonia: An Attempt at Defining It in the Light of the Infrapolitical Strategies of Resistance." *Sociologia Ruralis* 62: 3–23.

IFCE and IFV. 2021. *La Traction Equine En Viticulture En France en 2020, Rapport D'étude*. https://www.ifce.fr/wp-content/uploads/2021/06/DIR-EquiVigne-2020.pdf.

Illich, I. 1973. *La Convivialité*. Paris: Seuil.

Insee. 2019. Enquêtes Emploi, Séries Longues Sur le Marché du Travail. https://www.insee.fr/fr/statistiques/4314980?sommaire=4498692#consulter

Johansson, S., K. Belfrage, and M. Olsson. 2013. "Impact on Food Productivity by Fossil Fuel Independence—A Case Study of a Swedish Small-scale Integrated Organic Farm." *Acta Agriculturae Scandinavica, Section B—Soil & Plant Science* 63, no. 2: 123–135. https://doi.org/10.1080/09064710.2012.733020.

Kaltoft, P. 1999. "Values About Nature in Organic Farming Practice and Knowledge." *Sociologia Ruralis* 39, no. 1: 39–53.

Karayel, D., and E. Šarauskis. 2019. "Environmental Impact of No-Tillage Farming." *Environmental Research, Engineering and Management* 75, no. 1.

Le Clanche, J. 2011. "Redécouverte de la Traction Animale." *Pour* 212: 83–85. https://doi.org/10.3917/pour.212.0083.

Lizet, B. 2020. *Le Cheval Dans la Vie Quotidienne, Réédition*. Paris: CNRS Éditions.

Lizet, B., D. Fady, R. Garcia, and V. Seïté. 2015. "Travailler avec des Chevaux de Trait Aujourd'hui: Héritage, Innovation, Transmission." *In Situ. Revue des patrimoines*, (27).

Loriol, M. 2011. "Sens Et Reconnaissance Dans Le Travail." In *Traduction d'un texte de Marc Loriol, 2011 (en grec), publié dans Traité de sociologie du travail*, edited by C. Karakioulafis, 43–67. Athènes.

Mazaud, C. 2012. "Artisan, De L'homme De Métier au Gestionnaire ?" *Travail Et Emploi* 130, no. 2: 9–20. https://doi.org/10.4000/travailemploi.5652.

Miara, M., P. Boudes, T. Rabier, and M. Gafsi. 2023. "Animal Traction in Developed Countries: The Reappropriation of a Past Practice Through Agroecological Transition." *Journal of Rural Studies* 103: 103124. https://doi.org/10.1016/j.jrurstud.2023.103124.

Mills, J., P. Gaskell, J. Ingram, and S. Chaplin. 2018. "Understanding Farmers' Motivations for Providing Unsubsidized Environmental Benefits." *Land Use Policy* 76: 697–707. https://doi.org/10.1016/j.landusepol.2018.02.053.

Mills, J., P. Gaskell, J. Ingram, J. Dwyer, M. Reed, and C. Short. 2017. "Engaging Farmers in Environmental Management Through a Better Understanding of Behaviour." *Agriculture and Human Values* 34: 283–299.

Moriceau, M., M. Alberio, and C. Van de Velde. 2021. "Pratiquer l'Agriculture en Temps de Pandémie: Sens et Reconnaissance au Travail des Néo-Agriculteurs Québécois". *Revue Interventions économiques (66)*. https://doi.org/10.4000/interventionseconomiques.14479.

Mota-Rojas, D., A. Braghieri, A. Álvarez-Macías, et al. 2021. "The Use of Draught Animals in Rural Labour." *Animals* 11, no. 9: 2683. https://doi.org/10.3390/ani11092683.

Mouret, S., and N. Lainé. 2023. Nature(s) au Travail. *Revue d'Anthropologie des Connaissances (17–1)*. https://doi.org/10.4000/rac.29856.

Mulder, K., and B. Dube. 2014. "Long-Term Ecological Assessment of Farming Systems (LEAFS): Comparing Human, Animal, and Small Machine Power for Fresh-Market Horticulture." *Agroecology and Sustainable Food Systems* 38, no. 6: 704–721. https://doi.org/10.1080/21683565.2014.884034.

Mulier, C., and H. Müller. 2019. "Draft Horses in Viticulture: Conditions for the Co-Creation of Value." In *Animal Labor: A New Perspective on Human-Animal Relations*, edited by J. Porcher, and J. Estebanez, 159–180. Bielefeld, Germany: Transcript.

Pineau, C. 2020. "Des Animaux, des Vignes, des Humains: Correspondances Naturelles." In *De la bête au non-humain: Perspectives et controverses autour de la condition animale*, edited by S. Dalla Bernardina. Paris: Editions of the Committee for Historical and Scientific Works. https://books.openedition.org/cths/9741.

Porcher, J. 2002. *Éleveurs et Animaux: Réinventer Le Lien*. Paris: Presses Universitaires de France. https://doi.org/10.3917/puf.porch.2002.01.

Preissel, S., P. Zander, and A. Knierim. 2017. "Sustaining Farming on Marginal Land: Farmers' Convictions, Motivations and Strategies in Northeastern Germany." *Sociologia Ruralis* 57: 682–708. https://doi.org/10.1111/soru.12168.

Quijano, L., K. Van Oost, E. Nadeu, L. Gaspar, and A. Navas. 2017. "Modelling the Effect of Land Management Changes on Soil Organic Caron Stocks in a Mediterranean Cultivated Field." *Land Degradation & Development* 28, no. 2: 515–523.

Rico, N. M., and A. M. Fuller. 2016. "Newcomers to Farming: Towards a New Rurality in Europe." *Documents D'anàlisi Geogràfica* 62, no. 3: 531–551.

Rodrigues, J., and P. Schlechter. 2022. "Animal Traction in Europe in the XXI Century: Challenges, Threats and Opportunities." In *Draft Animals in the Past, Present and Future*, 211–216. ed. C. Kropp and L. Zolle. Heidelberg: Propylaeum.

Rosa, H. 2010. *Accélération. Une Critique Sociale Du Temps*. 474. Paris: La Découverte.

Rouvière, C. 2015. *Retourner à la terre. L'utopie Néo-rurale en Ardèche Depuis les Années 1960*. Rennes: Presses universitaires de Rennes (Histoire). 500 p., ISBN 978-2-7535-4201-3

Saint-Ges, V., and M.-C. Bélis-Bergouignan. 2009. "Quelle Trajectoire Environnementale pour la Viticulture?" *L'exemple Du Vignoble Girondin, Revue D'économie Régionale Et Urbaine Juillet* no. 3: 491–516.

Sallustio, M. 2018. Le "RTetour à la erre": Entre Utopie et Nostalgie. *Conserveries mémorielles* [En ligne], #22 | online since 17 june 2018, accessed the 29 march 2023. URL: http://journals.openedition.org/cm/2910.

Scheidler, F. 2020. *La Fin de la Mégamachine: Sur les Traces d'une Civilisation en Voie d'Effondrement*. Paris: Seuil.

SFET. 2020. "Observatoire Économique et Social De la Filière Des Équidés de Travail." accessed 12 of february 2022. https://www.conseil-cheval-iledefrance.com/wp-content/uploads/2020/07/Catalogue_Livrables_SFET-Version-Finale-compressé.pdf.

Siebert, R., M. Toogood, and A. Knierim. 2006. "Factors Affecting European Farmers' Participation in Biodiversity Policies." *Sociologia Ruralis* 46: 318–340.

Starkey, P., and B. Mudamburi. 2022. "Draft Animals in the World." In *Draft Animals in the Past, Present and Future*, edited by C. Kropp and L. Zolle, 9–28. Heidelberg: Propylaeum. https://doi.org/10.11588/propylaeum.1120.

Sutherland, L.-A., C. Barlagne, and A. P. Barnes. 2019. "Beyond 'Hobby Farming': Towards a Typology of Non-Commercial Farming." *Agriculture and Human Values* 36: 475–493. https://doi.org/10.1007/s10460-019-09930-5.

Van der Ploeg, J. 2008. *The New Peasantries, Struggles for Autonomy and Sustainability in an Era of Empire and Globalization*. London: Earthscan.

Van der Ploeg, J. 2018. "From De-to Repeasantization: The Modernization of Agriculture Revisited." *Journal of Rural Studies* 61: 236–243. https://doi.org/10.1016/j.jrurstud.2017.12.016.

Wheaton, B., and I. H. Gotlib. 1997. "Trajectories and Turning Points Over the Life Course: Concepts and Themes." In *Stress and Adversity Over the Life Course*, edited by I. H. Gotlib, and B. Wheaton, 1–26. Cambridge, UK: Cambridge University Press. https://doi.org/10.1017/CBO9780511527623.001.

Willett, W., J. Rockström, B. Loken, and M. Springmann. 2019. "Food in the Anthropocene: The EAT–Lancet Commission on Healthy Diets From Sustainable Food Systems." *The Lancet* 393: 447–492. https://doi.org/10.1016/S0140-6736(18)31788-4.

Willock, J., I. Deary, M. McGregor, et al. 1999. "Farmers' Attitudes, Objectives, Behaviors, and Personality Traits: The Edinburgh Study of Decision Making on Farms." *Journal of Vocational Behavior* 54, no. 1: 5–36.