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**Wage labour: modes of territorial adjustment of work groups and livestock farming activities. Illustration in Brazilian Amazonia and comparison with other regions of the world**

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**Abstract**

Wage labour is important in livestock farming in Amazonia, as in other regions. It is increasing, and agricultural production systems that were hitherto family-based are increasingly turning to it. Few studies have been carried out on wage labour in livestock farming. Yet it impacts on both the operation and reproduction of livestock farms, and the territorial dynamics in which they interfered. The issue we address here is that of the place of different patterns of wage labour (the term covers indeed several distinct situations) in the sustainability of livestock farming and territorial dynamics. To this end we analysed the different types of wage labour in Brazilian Amazonia and compared them with those found in other regions of the world. These patterns refer to different forms of mobility that underpin territorial adjustments of work groups and livestock farming activities.

**Introduction**

In the pioneer society that has resulted from the colonisation of Brazilian Amazonia, the theme of agricultural labour is a subject of much debate and controversy. This is especially the case in livestock farming, because of a history deeply marked by slavery and the emergence of the region on the international markets, due to its very low production costs linked to low labour costs and wage levels. The literature focuses on gender, contracts, labour control (Collins, 1993; Chase, 1998), work conditions and migrations linked to seasonal wage labour essentially in the fruit and vegetable sector (*e.g.* Jarvis and Vera-Toscano, 2002; Korovkin, 2003). Little has been published on wage labour in livestock farming. In South America and elsewhere, the historical shortfall of work on this question is striking. Hubscher and Farcy (1996) consider that farm labourers have in general been put aside by rural studies, which were more interested in emphasizing the family-based farm model. These forgotten men of rural studies are also often absent from agricultural statistics, as in Brazil.

Yet this hidden population is sizeable. According to the 2000 working population census of the IBGE (Instituto Brasileiro de Geografia e Estatística), agricultural wage-earners make up 62% of the agricultural population, and so make a large contribution to labour in rural areas. In Brazilian Amazonia, a classical distinction is drawn between two major modes of cattle farming: the ranch and the family farm. Wage labour is present in both and is clearly vital for their operation, in the first the work is based on wage labour and in the second to compensate for reducing family labour.

What is the role of wage labour in the management of livestock farms? How does it contribute to livestock farming sustainability and territorial dynamics at a local scale?

A research operation offered us the opportunity to study wage labour in livestock farms in Brazil and in other regions of the world (Europe, Africa and Asia). An assessment chart was drawn up to account for the different types of wage labour in Brazilian Amazonia. It enabled us to compare them with those obtained in other regions of the study. These types of wage labour refer to different career paths, which refer themselves to different forms of mobility. These patterns support our hypothesis that they contribute to the territorial adjustment of work groups and livestock activities through the adjustment of farm labour in a given area according to the possibilities for some wage workers to set up independently in that area or elsewhere.

## **1- Wage labour in Amazonian livestock farming: uncertain size and boundaries**

### **Weight of wage labour?**

In Brazilian Amazonia, wage labour is present on both ranches and family farms. When the owner does not run his ranch or ranches directly, which is the most frequent situation, he delegates the operation to a manager, who has the trust of the owner and reports to him through various procedures. One full-time worker is needed for 250-300 head of cattle for suckling herds (production of calves) and for 800-1000 head for raising and fattening of young cattle. Putting in place and maintaining pasture is usually done by casual jobbing labour. Family farming relies on members of the family to provide labour, although casual or even permanent wage workers are sometimes hired for specific tasks such as pasture upkeep and milking. The permanent wage workers are found in the largest structures to face a reduction in family labour, or the absence of the farmer who has also a non-agricultural activity or lives in town.

It is difficult to find statistics on agricultural wage labour in Brazil and especially for livestock farming. We have seen that waged workers are estimated to make up 62% of the Brazilian farming population (IBGE). The International Labour Organization (yearbook of labour statistics) gives a figure of 37% for 1990. These estimates are not comparable because they are not produced by the same methods. However, they illustrate the same overall global tendency: the proportion of wage labour in agriculture, which has never been so high, is still rising. In addition, non-permanent wage labour is often underestimated or imprecise, as most of the waged work is done on a daily, casual or seasonal basis (ILO, 1996). For example, in Brazil in 1990 the ILO (*ibid.*) estimates that of the 37% of wage workers, 77% were casual. And, the average number of days worked by non-permanent workers in Brazil in 1993 was 175 days in the high season and 100 in the low season. The proportion of wage labour in agriculture has increased in all regions, and is now an essential feature of jobs and income in rural areas.

### **The visible part of wage labour: herd workers and pasture workers**

In Brazilian Amazonia, apart from the special case of the ranch manager, there are two types of wage worker: the permanent worker or *vaqueiro*, who looks after the herd on horseback, and the temporary worker or *peão*, who is on foot and puts in place and maintains the pasture. The *vaqueiro* takes care of the animals. His daily job is to inspect the herd, care for animals when necessary, make sure they have everything they need (water, salt, pasture, etc.), and look that fences are in good order. *Vaqueiros* often work in pairs to make the work easier, one lassoing the animal while the other cares for it. They also take part in all the tasks involving the cattle (vaccinations and other healthcare treatment, changing plots, arrivals and departures

of cattle, etc.). On dairy farms, wage workers in charge of milking have a status close to that of the *vaqueiro*. The *vaqueiro* earns one and a half times to twice the minimum wage (about 150-250 €) according to his tasks, his seniority, and his relations with the manager and owner. In addition, he more and more often enjoys social health and retirement benefit provision. The *peão* looks after the upkeep of the pasture and fences. Generally he receives the minimum wage (about 100 €), sometimes a little more if he works regularly on the farm. The *peão* enjoys no social security provision but seems nevertheless to be able to rely on the support of the manager or owner when in need (according to the relations built up between them).

### **The invisible part of wage labour: career paths, mobility and territorial adjustments**

Although lack of statistical data prevents us from accurately measuring wage labour on livestock farms, ranches clearly cannot operate without it, and it is also present in family livestock farming. Le Borgne (1996) has shown that wage labour can be viewed as a new migratory process, when the strategy of family reproduction uses wage labour rather than the occupation of new fertile land.

Following Rosental (1999), we can hypothesise that wage labour refers to a dynamic that is foremost a family one with a 'migration project'. This approach led us to reach beyond the individual, family and farm scales to address the territory and networks through which persons develop their relations, interact and move around.

The issue we examine here is the place of different sorts of wage labour (this term describes several situations) in the sustainability of livestock farming and territorial dynamics. From this exploratory study and this viewpoint on wage labour patterns, we raise reflections about territorial and social dynamics.

## **2- Methods to identify wage labour patterns**

### **Constitution of the material for analysis**

In addressing this issue, our study was supported by several research projects on the Amazonian pioneering fronts conducted over the last two decades and by a specific research action in the TRANS project (for "transformation of livestock systems and spatial dynamics", French Agriculture and Sustainable Development Program) on wage labour in contrasting situations: South America (Brazilian Amazonia), Europe (France), Africa (Senegal) and Asia (Vietnam). In Amazonia, the study material was based on:

- surveys of about ten wage workers to piece together their career paths up to their present jobs and assess their involvement in the livestock farms where they are currently working;
- interviews with labour leaders, stakeholders and institutional officers in Amazonia, on the results of the previous surveys.

This enabled us to cover a wide range of wage labour forms in both ranches and family farms, although we were unable to meet representatives of each categories. In particular, we met no overexploited or subsistence workers because surveys are difficult or even impossible to carry out *in situ* with such persons.

Surveys were also carried out with wage workers in the other three regions of the TRANS project. To be able to compare data from one region to another, types of wage labour were defined. These types refer to the career paths culminating in the current agricultural job. The concept of career path includes family preparation for productive activity, schooling and identity implications of the occupation (Allaire, 1991).

### Design of an assessment chart

Comparison of the wage worker types in the different areas led us to elaborate an assessment chart (Table 1) to extract wage labour patterns. Two fundamental variables seemed to be common to all areas, work patterns and situations of wage labour:

- (i) occupational and (or) social (and so economic) integration (or exclusion) of wage workers;
- (ii) the set of complex relations between (wo)men, between (wo)men and machinery, animals, areas and places, common to all forms of agriculture and agricultural activities.

**Table 1: Assessment chart for wage labour**

<b>Relation</b> <b>Integration</b>	<b>Social</b>	<b>Geographic and temporal</b>	<b>Occupational</b>
<b>in families / production units</b>	Family link Degree of familiarity Relation of attachment / mobility	Attachment to place Temporal features of work	Attachment to animals, land, machinery, administration Relations among workers
<b>in occupational communities (local, wider)</b>	Reproduction of groups: wage workers, farmers and mobility		Recognition Occupational integration
<b>in the rural community</b>	Social integration of wage worker and his family	History of the relation	Recognition

NB: The content of the boxes at the intersections of rows and columns is indicative and based on the material we collected.

The rows of this assessment chart concern the dynamics of social and (or) occupational inclusion and exclusion affecting wage labour or associated with agricultural wage labour in terms of nested reference units: family or production units; local or nonlocal occupational communities<sup>1</sup>, and rural community. To what degree and along what gradient does agricultural wage labour allow or entail the integration and insertion of the wage worker (whatever his job and status) into these different units of reference; social, occupational and geographical? We start on the assumption that there is a nonlinear gradient from low integration in the domestic production unit (home, farming household, camp, etc.) to maximum integration opening onto insertion into farming as a professional occupation and access to the status of farmer, with situations in which wage labour is simply a way to remain integrated within a rural community, independently of any occupational recognition. Addressing the issue in terms of agricultural and rural jobs implies also to take into account the economic and territorial dimensions of the wage labour. This brings out an essential feature: the link between farming, land and rural employment. Migration and mobility of agricultural wage workers must be examined in this framework. This reality, which cannot be ignored, is part of the wider relationship between town and country and the dynamics underlying the re-composition of rural areas.

The columns of the chart refer to all the relations that underpin farming and agricultural occupations. Irrespective of study areas, forms and modes of livestock farming, this trade can be considered as a set of complex relations, which form a specific occupational culture. These relations can be broken down into: relations with animals, relations with machinery; relations with land and place, relations with persons (employer-worker or within a team of workers). The intersection of rows and columns gives a fairly complete picture of wage labour with its different forms and dynamics at several reference scales (production unit, occupational and rural communities).

<sup>1</sup> These cover different communities of farmers and possibly different communities of farm wage workers.

In what follows we focus the presentation on the different wage labour patterns that we have identified, the forms of mobility they include, and the contributions they make to the territorial adjustment of livestock farming.

### 3- Wage labour patterns

#### 3.1- Diversity of farm labourer career paths in Amazonia

Wage labour is taken to include a plurality of different patterns. Here we describe and assess them in terms of career paths followed by the wage workers.

#### Description of career paths

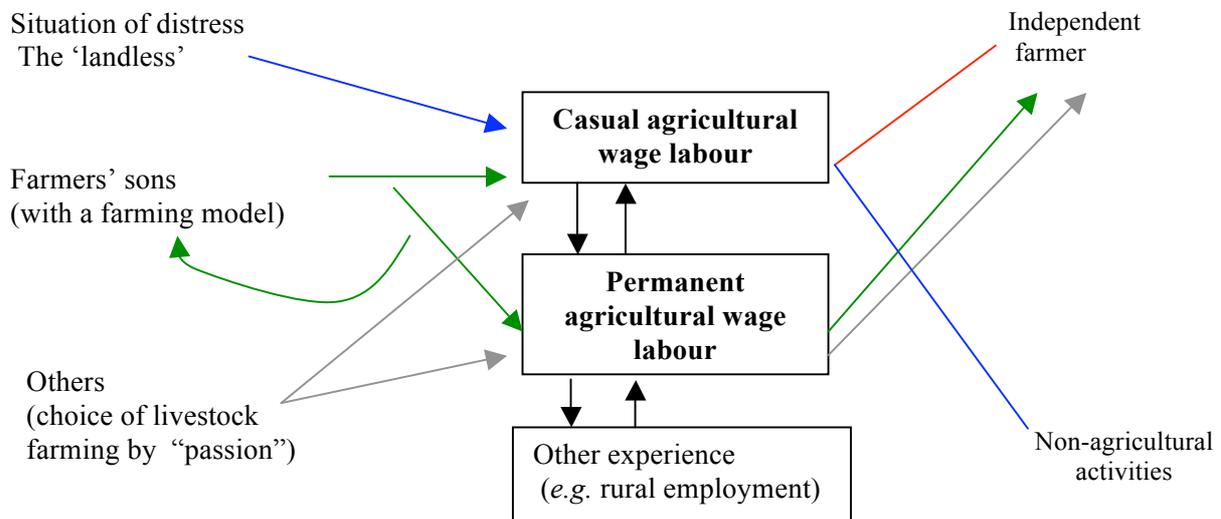
Career paths can be analysed by distinguishing the initial situation, the successive phases of work, the project life, and the relations linking these items (Figure 1).

#### Initial situations

The initial situations encountered fall into three categories:

- situations of distress experienced by a deprived rural workforce, often landless, which sells its labour to make a living;
- farming situations in which a farmer's son works for wages because he is unable or unwilling to establish straight on the family farm;
- other situations in which individuals engage in livestock farming by "passion", with a wage work phase as a first stage in this occupation.

**Figure 1: Wage labour patterns**



#### Life project

On all the cases encountered in Amazonia, the initial aim of the workers was to become independent farmers, acquire their own property or take over the family farm. Wage work is thus a stage in a process made necessary by the impossibility of setting up as a farmer in the worker's region of origin or elsewhere, for lack of land or resources, or because of a generational conflict between father and son in the management of the family farm (temporary departure of the son). This wage working phase should enable the worker to acquire experience, technical skills and practice, and to build up savings with a view to future

establishment as opportunities will arise. For a young man, wage labour can thus be viewed as a preliminary stage before he becomes a full-time farmer with possibly his own piece of land. Some will become independent farmers on the farm they would have been able to buy, or on the family farm. Others will never become independent farmers, either because they will fail to fulfil the required conditions, or because they will be satisfied with being wage workers. In this last case the wage worker (generally permanent wage workers in *fazendas*) finds that his status offers him a certain degree of security that he feels is not or no longer offered by the status of independent farmer. He gets a fixed monthly wage, holidays, retirement and healthcare benefits, and feels that he belongs to a group that will look after his family in case of accident, illness or other adversity. Others again will become farmers but will need to supplement their earnings by casual seasonal work to make a living.

For others (not encountered), the aim is to survive: they sell their labour in livestock farms, lacking any other better possibilities. Or, farm work is part of a combination of rural activities, and offers a way to support family, with no expectancy of one day becoming a farmer. The aim may even be to cease wage work in livestock farming as soon as better opportunities arise or the family project evolve (*e.g.* move to town).

### ***Phases of wage labour***

Career paths include in all cases several different experiences either in livestock farming but then in different *fazendas*, or more generally in agriculture (jobs in horticulture, arboriculture, market gardening, etc.). Wage labour also sometimes includes phases outside agricultural work when a period in agriculture finishes, when the worker does not find farm work straight or when he voluntarily interrupts it. Wage labour can be permanent or casual during the year, as described above, according to the function on the farm.

### **Assessment of wage work patterns**

These career paths can be identified and assessed in terms of:

- their relation to the status of independent farmer (in the qualification we use the term ‘farmer’) in several ways: wage labour can be a temporary situation, either before becoming an independent and full-time farmer (‘farmer-to-be’ and ‘farmer-but-not-only’), or as a substitute for the status of farmer for the sake of security (‘substitute farmer’);
- their becoming outside agriculture (‘rural with farm labour’, ‘no-choice’).

These different forms of career paths are as many wage labour patterns that remain to be assessed in terms of their importance in Amazonian livestock farming.

### ***Farmers-to-be*** (green or grey in Figure 1)

Wage work appears to be a springboard for people seeking to become farmers on their own land, and to be integrated into a community of professional farmers. Wage labour is clearly viewed as a stage in their career. They do not expect to remain wage workers all their lives and they make a sharp distinction between their status and the one of independent farmer. These are generally farmer’s sons who work for wages for a period of time (permanently or casually). If not, they have chosen this occupation by “passion” and are beginning their career in livestock farming with a wage earning period.

### ***Farmer-but-not-only*** (red)

These are small farmers whose farms are not large enough to earn them a living, and who therefore work in other farms seasonally or full-time to supplement their earnings, until their farm income becomes sufficient. We find in this pattern young workers in the process of setting up their own farms (especially when there had been no family farm transmission), who have to sell their labour to other farmers until their herds are sufficient to live. For example, it

can be families with young children arriving in Amazonia with no capital to buy land with crops and pastures already in place. They have uncleared land, still wooded and so work casually for wages while putting crops in place and saving to buy enough cattle to live off.

We find also this type when, for example, a ranch hires small neighbouring livestock farmers and their families for seasonal work. This goes against a certain stereotypical view of social relations in Brazil, which sees large-scale production directed towards export opposed to small family farming, considered as the rural society base. This restrictive view of reality partly masks the social relations between the two groups, in particular those based on wage labour. For the ranch this labour presents several advantages because of its geographical proximity and its knowledge of the main techniques and practices implemented in the area. For the farming families, being hired by the ranch is an opportunity insofar as they can work there when they have less work to do on their own farms, supplement their income, learn new practices and techniques, and promote local social interactions.

*Substitute farmers (e.g. grey or green but not including setting up as a farmer)*

This pattern concerns those who want to work in livestock farming, but without taking on the responsibilities that come with an independent farm, or who have been unable to do so. The first ones find in permanent wage work a form of stability that enables them to educate their children. They have no wish to go on to become independent farmers, or only after retirement. They are happy with their non-owner status insofar as they enjoy the advantages that come from their wage-earning status, and suffer no particular adverse effects in terms of social recognition. In the other cases, farm labour is a way to satisfy a passion without depending on it for his living. They find in wage work a substitute for fully enjoying livestock farming as an occupation without undergoing the constraints associated with the status of independent farmer.

*Rural with farm labour (blue)*

In these cases, wage work is only one of various occupations in combination of agricultural and non-agricultural activities, to earn a livelihood and achieve a rural integration, without aiming at becoming an independent farmer.

*No-choice (blue not including having non-agricultural activities)*

This pattern is that of wage workers who often have no skills and no land, and who cannot easily find any other work. They do not see other choices and have to look after the survival of the family.

### **3.2- Comparison with wage labour figures in other areas**

These wage labour patterns are found in other areas: in Vietnam (Khan *et al.*, 2007) the ‘no-choice’ seem the most widely represented; in France (Madelrieux *et al.*, 2007) this category is less represented, or at least the most difficult to grasp (*e.g.* the case of immigrant labour or persons on back-to-work schemes, who are difficult to meet); in Senegal, despite difficult conditions, some workers are eager to become independent farmers (Wane *et al.*, 2008), but the full range of patterns is represented.

However, although we find the same patterns, we observe more cases than in Amazonia of wage workers aiming at occupations outside livestock farming and even outside agriculture. This is the case for Vietnamese livestock ‘no-choice’ workers who will leave their jobs as soon as an opportunity arises (but which is far from frequent or easy), and for French ‘substitute farmers’, who work for a time but aim at doing something else later or to cease this

already part-time occupation and engage full-time in other rural activities (depending on time and/or income considerations).

#### **4- Contribution of wage labour to sustainability and territorial dynamics at a local scale**

##### **4.1- Wage labour and mobility**

###### **Forms of mobility**

These wage labour patterns involve mobility, which indeed is a specific feature of this trade (except in the rare cases of family wage labour or the hiring of children in a *fazenda* where their father works). The wage worker comes in from outside: he is the stranger who is called by an organised or non-organised way when hands are needed. The wage worker is also mobile because he is the first to move off when local work is short. However, the term 'mobility' covers different concepts and different gradients in time and space:

- mobility as emigration: geographic mobility with 'settling' in a new area (knowing that wage workers may then hold several different jobs in this area);
- mobility as seasonal and geographical migration: to take specific salaried jobs during part of the year;
- temporary mobility: this mobility is part of the farm job itself (e.g. dry season transhumance in Senegal);
- itinerant mobility: workers follow harvesting and crop work in employment areas, sometimes going from farm to farm to offer their labour. They move according to work opportunities within a particular geographical area;
- daily mobility to get to the farm where they work.

Mobility can also be an occupational mobility if the worker changes his job sector and finds another rural activity when agricultural work is short.

None of the wage labour patterns is attached to a specific form of mobility. For example, the 'farmer-to-be' usually has a permanent full-time job. His mobility may be daily if he works nearby or emigration if he cannot or does not want to work locally. The 'no-choice' worker will often be itinerant owing to his insecure condition. But these forms of mobility refer also to the relations to mobility, which differ from one region to another. For example in France the peasant community is associated with deep roots (with family transmission of property and the attachment to land and buildings) and mobility is viewed as a sign of failure or instability. By contrast, in Brazil, geographical mobility in response to opportunities is a way of life in the agricultural communities that have this culture of mobility and opportunity.

The wage worker is thus mobile, and that raises the question of his integration into the rural community, which will vary according to his plans and how he perceives his status (choice or default, etc.)

###### **Mobility and integration**

These different types of mobility are organised in different ways. This will affect the worker's integration according to whether he joins a pre-existing network or arrives alone in a *terra incognita*. In the different regions we can observe:

- 'mass' phenomenon: massive emigration towards employment areas made attractive by sectorial or territorial policies (development of dairy production in an area and incentives to move there, location of industrial centres in rural areas, etc.) or conversely from areas with public works projects (e.g. the building of a dam) causing local populations to move to new

production areas. This is observed in Vietnam, for example, where government planning tends to be top-down;

- collective phenomenon as in Amazonia, where migration is not at random. Apart from some special cases, the migration is almost always directed towards a region where a family relation, a former neighbour or acquaintance is already settled and will welcome the newcomer. Pocard-Chapuis (2004) talks about 'conquest networks' and highlights the importance of inter-acquaintanceships networks;
- family projects (sometimes spreading over several generations, potentially with social and occupational promotion in the sector);
- individual and isolated projects.

These two last are encountered in France and Senegal.

We can note here the importance of extended occupational groups (*e.g.* in Senegal where much hiring is negotiated at cattle markets with or by the sellers), and extended family relations who can recommend, receive and house workers.

#### **4.2- Patterns of wage labour as modes of territorial adjustment of work groups and livestock farming**

These types of mobility, from one occupational status to another within agriculture (between wage worker and independent farmer) have been studied by historians and demographers (Hajnal, 1965; Lasslet and Wall, 1972; Farcy, 2004; Mc Isaac Cooper, 2005; Viazzo *et al.*, 2005). They invite the hypothesis that these mobilities are at the heart of territorial adjustments concerning work groups and farming activities. Considering all the study areas, it does not appear a real trade called 'farm labourer', and these phases of wage work can be viewed not just as stages in career paths (Allaire, 1991), meeting labour needs expressed by farmers, but as a necessary adjustment of work groups for the purpose of ensuring the reproduction of the social and occupational group (Rémy, 1998). According to Granchamp Florentino (2001), adopting the family group rather than the individual as the relevant level for observation makes it possible to gain a better understanding of attachment strategies to rural localities, either by the permanent residence of a part of the family in the rural area, or by the continuation of a farming activity.

In this sense, wage labour has at least two functions: one at farm level, which is to supply labour for production, and so ensure reproduction, and the other at the levels of the workers themselves, which is to enable them to set up or restart a farm, or at least to ensure income and social integration. The adjustments then operate according to available income and possibilities of installation, enabling (i) young workers to complete their learning and increase their financial resources until they are able or want to take on a farm, and (ii) employers (the farmers) to meet labour requirements and ensure the reproduction of their farms.

However, according to the regions, the adjustments have different features since the factors that limit the becoming or remaining a farmer are not the same. In Amazonia, wage labour appears to be a regulator of agrarian crises. The need to reduce pressure on land in agrarian Brazil was one of the three major reasons given by the Brazilian public authorities to justify the colonisation of Amazonia. During the second half of the 20th century, a combination of certain factors (mechanisation, land concentration, some severe climatic events, social legislation regulating and therefore restricting the employment of agricultural labour, etc.) accentuated the pauperisation of the most vulnerable fringes of Brazilian rural society and prompted the migration of thousands of families of small farmers and farm workers seeking a plot of land to survive and improve their conditions. The Brazilian policy of colonisation and national integration has oriented migratory flows towards the agricultural frontier of the West and North to exploit new agricultural and mineral resources, under the slogan: 'land without

people for people without land'. At the beginning of the 21st century, *i.e.* three or four decades after the start of the colonisation, we observe that migration is continuing within the colonised area, and that it is still in large part motivated by issues of access to land. Wage labour, in particular in livestock farming, is a real opportunity for young people with little or no land. They are in the same situation as their parents or grandparents one to two generations earlier. This situation is found in France, but unlike Brazil, France has no more wilderness to conquer, and so wage labour offers a solution while waiting for land or farms to become available (family or not) or for an opportunity to form an association with an operating farmer (Madelrieux *et al.*, 2007).

In Senegal, wage labour enables workers, especially Fulani, to build up or re-build a herd. The limiting factor here is not land but the acquisition and maintenance of cattle, made especially difficult by recurrent droughts. This occupational or geographical detour *via* wage work has, for example, enabled certain families of livestock farmers to reconstitute a herd badly affected by drought (Diao, 2001) and become independent again. In Vietnam, by contrast, wage work is more often a way to limit rural emigration and maintain livestock farming in rural areas than a learning experience for future farmers. Farm labourers remain in rural areas even when under-employed, because they are low-skilled. However, mobility remains closely linked to the opportunity to make a better livelihood by leaving this environment which is considered unappealing. And, no migration to rural areas compensates this workforce exodus.

## **Conclusion**

This exploratory study of wage labour in livestock farming gives us a preliminary picture of wage labour patterns and their associated forms of mobility. Being a wage worker in livestock farming in Amazonia lies on individual career paths: 'farmer-to-be', 'farmer-but-not-only', 'substitute farmer', 'rural with farm labour' or 'no-choice', and on a mobility gradient ranging from emigration, seasonal or temporary migration, itinerant labour, to daily mobility. This mobility is central to territorial adjustment processes to manage (i) a rural labour force, (ii) sometimes limited territorial opportunities to settle as independent farmer (due to difficulties in getting together the necessary resources: land, cattle, machinery, finance, labour) and (iii) demand for labour on farms that need it for their production and reproduction. These adjustments can be organised or facilitated by occupational, acquaintanceship, neighbourhood or family networks.

This study, by moving around individual, network and territorial scales invites the hypothesis of a territorial adjustment of work groups (in terms of 'hands', learning and farm reproduction) thanks to wage labour, of a sort of labour market correlated with the one of establishment on livestock farms. The next step would be to estimate the importance of each wage labour patterns in the different study areas, their different relations to mobility, and shed light on them by the agrarian history of each of the regions.

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