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**Will carrots and lettuces thrive in peri-urban wheat fields? Strategies, and needs to support horticultural diversification for large-scale cereal farmers Knowledge needed to support vegetable diversification of peri-urban cereal farmers**

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## Knowledge needed to support vegetable diversification of peri-urban cereal farmers

Increasing **urban demand for local vegetables**: diversification of cereal farmers could be key for **large-scale production**

**Lack of literature** on diversification of cereal crops with vegetables

### Research questions:

Drivers for cereal farmers to diversify ?

Diversification strategies ?

Challenges faced and supporting options ?

## An exploratory qualitative study in the Paris City-Region

Semi-structured interviews with a diversity of stakeholders:

- 11 farmers
- 5 agricultural advisors
- 3 local development associations
- 4 value chain actors (wholesalers, cooperatives, intermediaries)

Qualitative analysis with thematic coding to highlight strategic ideal-types

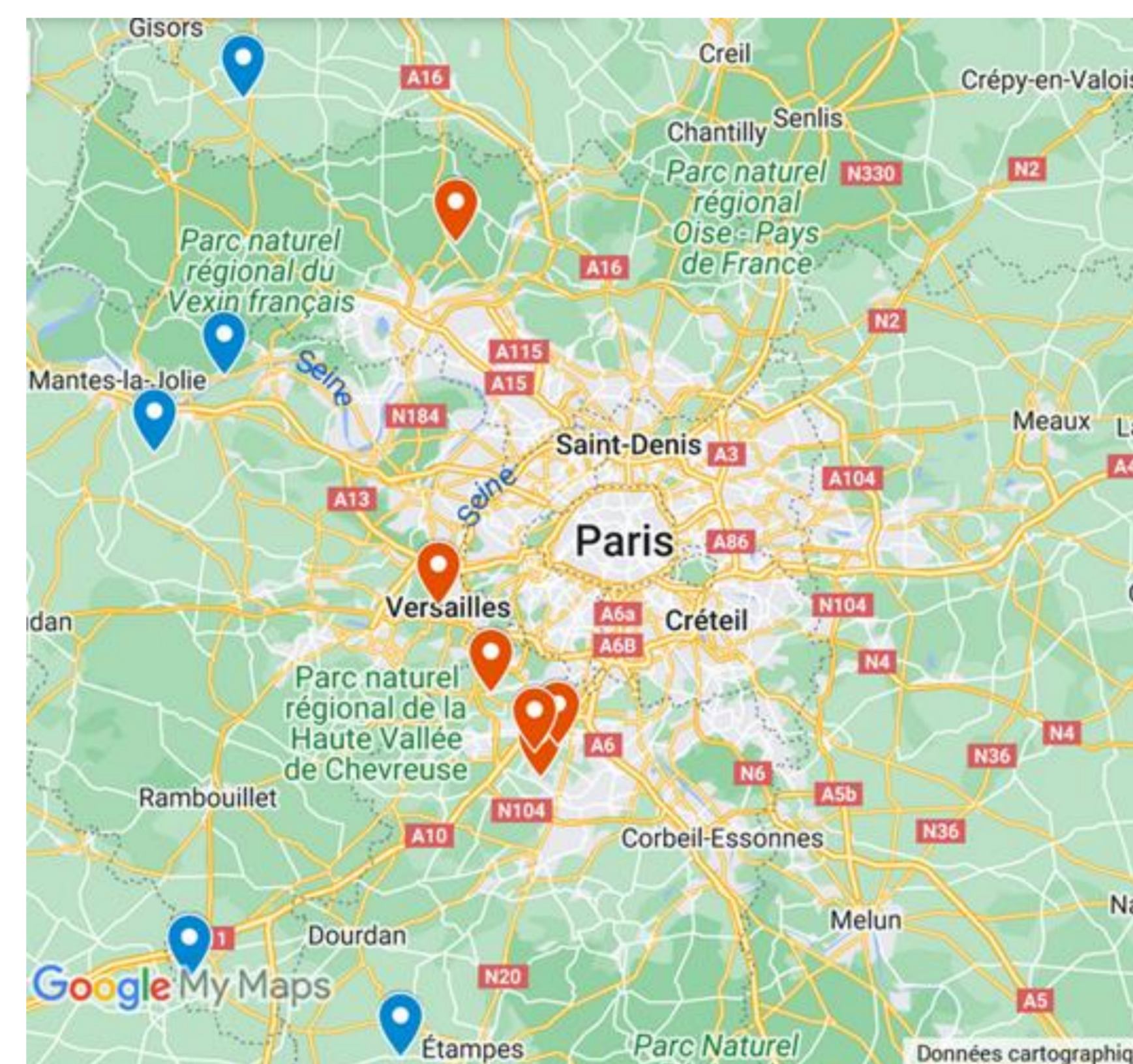


Fig. 1 studied farmers (blue: “field vegetable” strategy; red: “market-garden strategy”)

Tab. 1 Characteristics of the farms (except 2)

Farm	Distance to Paris (km)	UAA (ha)	Including vegetables (ha)	Vegetables
A	35	210	20	Diversified (up to 70)
B	26	70	9	Diversified (up to 70)
C	30	264	1,5	Diversified (up to 70)
D	40	27	0	Planned "diversified"
E	55	400	15	Carrots
F	63	315	15	Carrots, Turnips
G	53	360	8	Carrots, onions, leeks, squashes
H	71	100	0	Stopped courgettes
I	64	172	90	French beans, onions

## 2 vegetable diversification strategies

Strategy	Market-garden	Field vegetables
<b>Drivers</b>	Creating added-value; Resilience to economic hazards; Looking for new job experience	
<b>Situation</b>	Close to city; Familial heritage; Strong local demand	Further to city; Pioneers; Link to mass-market retailing bringing opportunities; Already used to grow potatoes
<b>Range of vegetables</b>	Diversified (up to 70) apart from cereal rotation	Limited (1 to 4) including in cereal rotation
<b>Marketing</b>	Open-air markets; specialised shops; on farm	Wholesalers; Purchasing organisation for mass-market retailing
<b>Investment</b>	Planting/sowing; Harvesting; Weeding	Same + storage and conditioning
<b>Labour organisation</b>	Hiring labour for frequent operations all over the year	Hiring labour for packaging vegetables during periods with low cereal activity (winter)
<b>Knowledge</b>	Familial knowledge	Empirical (trial and error) ; Seed breeders and agricultural extension

## Main barriers.....ways to overcome them

<b>Labour</b> Difficulty to find and keep on long-term skilled labour (hard work, high living cost in urban areas)	➔	Favouring access to housing attractivity, image
<b>Marketing</b> Finding a diversity of appropriate and stable marketing channels	➔	Support to link offer and demand
<b>Phytopathological issues</b> Lack of efficient solutions against pests and weeds, especially for conventional farmers	➔	Alternative practices, (re)design, organic
<b>Investment</b> Large investment required (tunnels, irrigation, storage and packaging)	➔	Public subsidies

## Perspectives

Which complementarities, tensions, spatial organization and logistics for different vegetable systems including cereal-based systems to locally feed cities ?