

# MAPPING AVAILABLE EQUIPMENT TO ENABLE FARMERS' AND MANUFACTURERS' INTERACTIONS FOR AN AGROECOLOGICAL TRANSITION



The case of forrage legumes in Hauts-de-France region

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# Introduction

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**PhD Thesis:** Design of an analytic framework to adapt equipments to agroecological transition  
(case of forage legumes/ mixed farming)

Chair: agromachinery and new technologies  
Regional (Hauts-de-France) allocations

Today's focus:

- Equipement dealers
- Equipement availability in the region
- Agricultural & equipement advisers



# Introduction

## Localisation Hauts-de-France region

- Administrative region  
Fusion of Picardie and Nord-Pas-de-Calais
- Area 31814km<sup>2</sup>
- Known for field crops but also 2/3 of national potato production and 10% of milk national production (French ministry of agriculture, 2019)



(1) How are agricultural dealers distributed in HDF? What are the equipment proposed for forage legumes?

(2) Is the supply of equipment in the Hauts-de-France a limit on the development of forage legumes ?

(3) What is the place of advisers considering the equipment in the Hauts-de-France region? And how do advisers position themselves concerning agroecology ?

**But first** : Who are the actors of the agricultural sector in Hauts-de-France?

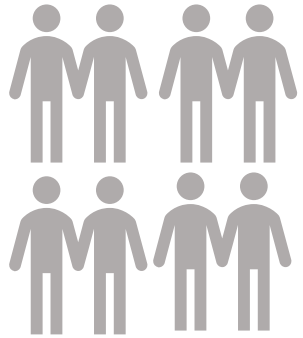
# Methods



# Methods

## 1/ Inventory of the agricultural sector's actors

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Group of 8 students

Organisation & professional training

Farms & peripheral services

Constructors & cooperatives

### Collected data:

- Institution name
- Adress/head office
- Adress
- GPS coordonates
- Contact information



# Methods

## 2/ Dealers of the Hauts-de-France region



Jean-Baptiste Havet & Clément Postic  
Apprentices




**Aim:** An exhaustive list of equipment dealers in the region

### Existing list of dealers:

Sirene® database managed by the NISES (National Institut of Statistics and economical studies)

NAF code: 46.61Z - Wholesale of agricultural equipment

### Completing the list with missing information:

Adding GPS coordinates and other missing informations using online cartography services. 

(1) Available data

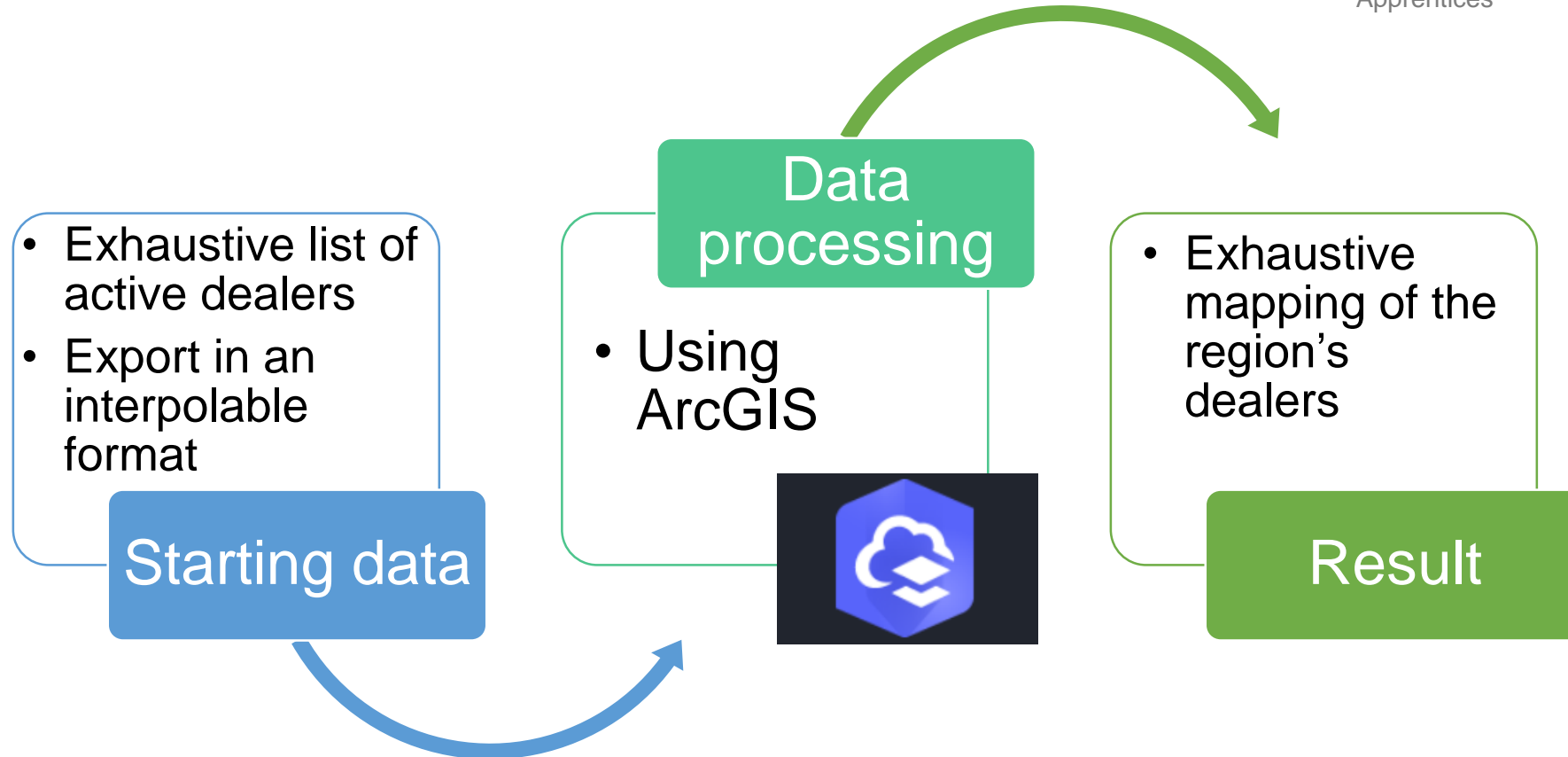
(2) Missing data

# Methods

## 2/ Dealers of the Hauts-de-France region



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# Methods

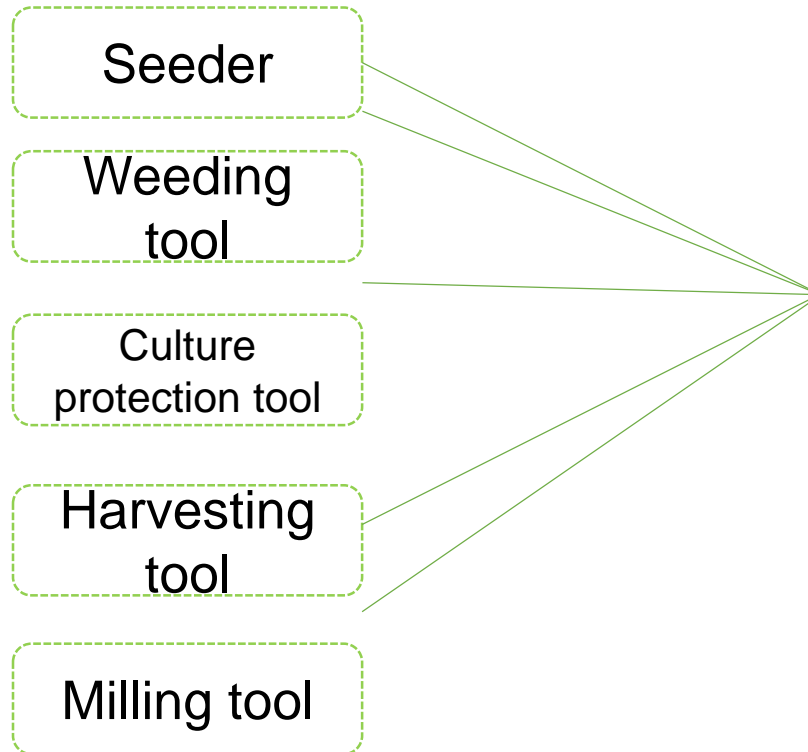
## 3/ List of available equipment in the region



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Interviews with 6 dealers:



### Data collected:

- Brand and model
- Width/ number of rows
- Inter-row adaptability
- Use (which cultures)
- Available options
- Already been sold (if yes which width)
- Available in the material parc

# Methods

## 4/ study of the region's advisers



Ryma  
Benayache  
Trainee



**Aim:** Understanding the place of the equipment in the agricultural advice in the Hauts-de-France region

### Step 1

Using the list of the region's actors to extract the list of advisers



### Step 2

Completing the list with missing data (other advisers, localisation...)



### Step 3

Semi-directive interviews with 10 advisers (different profiles: independent, CUMA, organic farming)

# Results



# Results

## 1/ Inventory of the Hauts-de-France region actors



Group of 8  
students



Type of structure	Exhaustivity	Number of structures
Ag.machinery industries	Yes	45
Peripheral services	Yes	53
Professional organizations	No	12
Education/Training	Yes	66
Advisers	No	20
Cooperatives	No	106

# Results

## 2/ Exhaustive list of the region's dealers

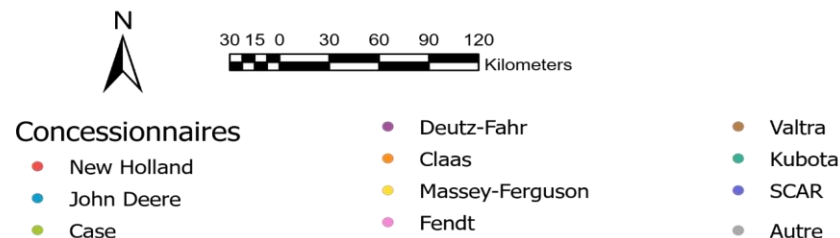
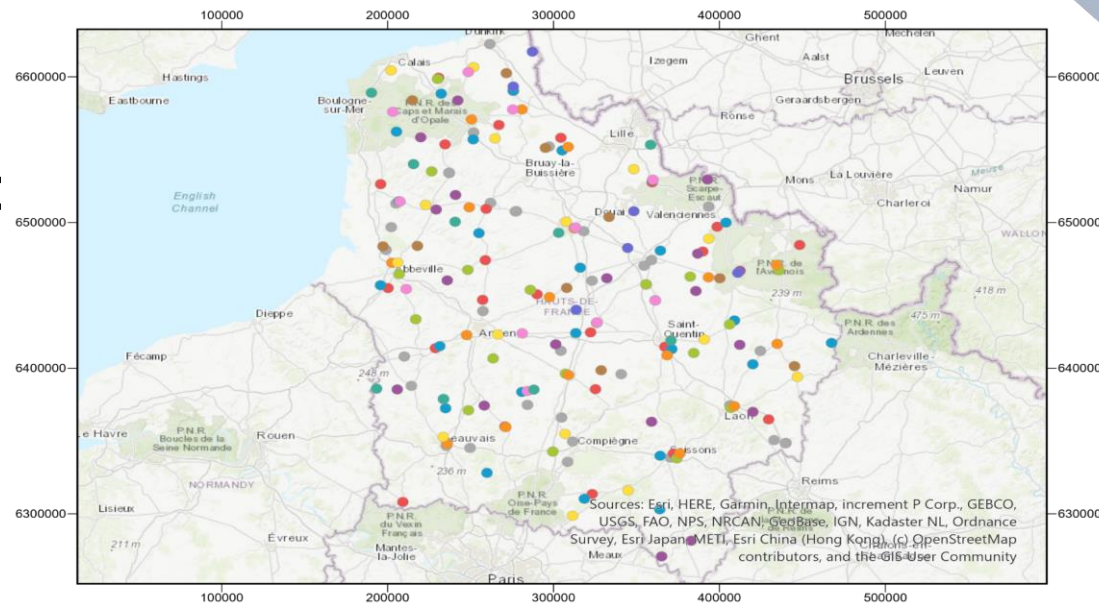


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Apprentices



### ➤ 157 equipment distribution structures:

- Legal unit denomination
- Date of the legal unit's creation
- Date of the structure's creation
- Full address
- GPS coordinates
- Distributed **tractor brand**



Système de coordonnées : WGS 1984

Sources : Institut polytechnique UniLaSalle Beauvais, IGN

Auteurs : J.B. HAVET, C. POSTIC - Décembre 2020 - Institut polytechnique UniLaSalle Beauvais



## 3/ List of available equipment



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Interviewed dealers: 6 (representing about 50 sites) :

Example of equipment form for dealers:

BEDNAR RowMaster		
Description	Bineuse	
Largeur(s)	5,4m	8,1m
Largeur inter-rangs	45	
Options disponibles :	Guidage par caméras	
Concessions disponibles	PM-PRO	
		
TREFFLER TH		
Description	Bineuse	
Largeur(s)	2,1-9,3m	
Largeur inter-rangs	12,5 / 15 / 25 / 45 / 50 / 55 / 75	
Options disponibles :	Guidage par caméras	
Concessions disponibles	PM-PRO	
		



# Results

## 4/ study of the region's advisers



Ryma  
Benayache  
Trainee

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Climate change

encourages farmers to change investment strategies. Particularly, for farmers adopting new practices to face its effects.

indirectly impacts agricultural equipment advice

Farmers are more focused on climate change than on agroecological practices when asking for advice, and so the advisors.

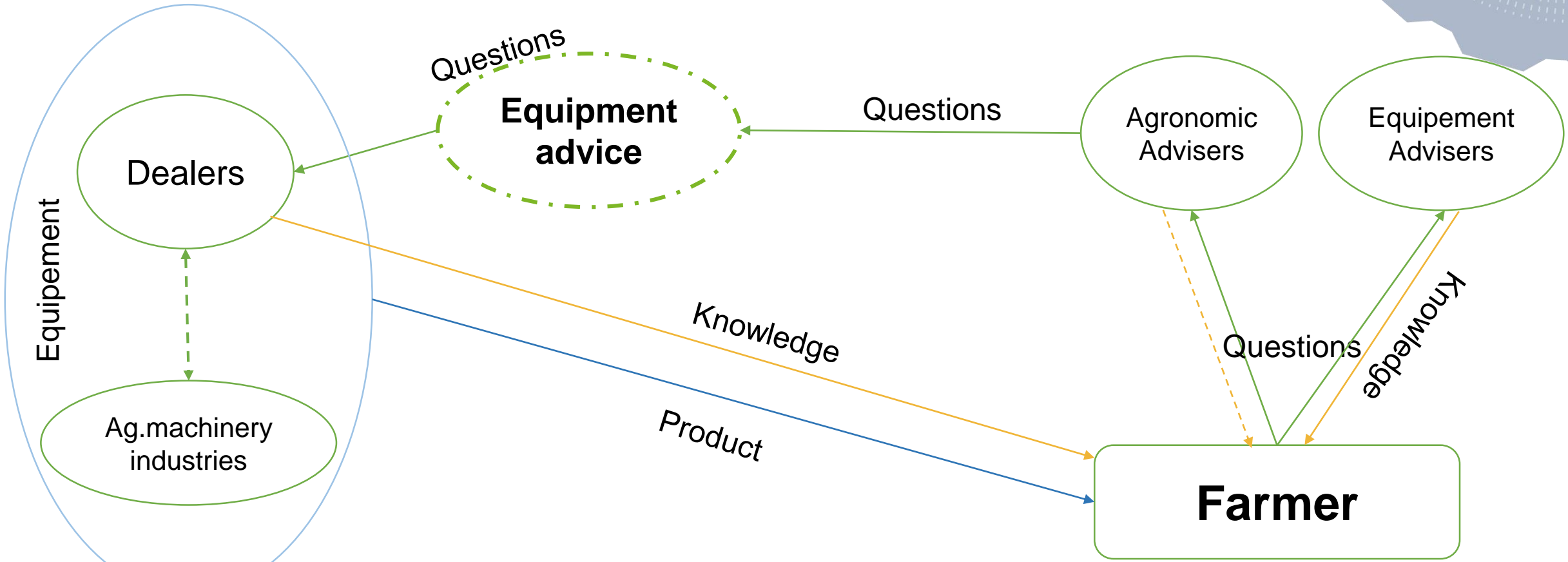
The place of equipment into advice depends upon the adviser's professional background:

- Agronomic → The equipment advice is delegated
- mechanical/ equipment → The equipment advice is handled

- Dealerships are evenly distributed in the region.
- The offer of available equipment seems to meet the farmer's demand concerning forage legumes.
- We noticed agronomic shortcomings concerning knowledge about legumes while speaking with dealers (rather commercial and mechanical oriented profiles)
- Farmers modify their equipment for specific needs (that may be agroecological).

# Conclusions

## About advisers



The centrality of the equipment advice

Adapted from Rizzo et al.2019





Thank you for your attention

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