French Observation Center of Digital Agriculture Adoption

A collective framework to assess the adoption of precision agriculture in France

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#ObsAgroTIC
Why is it important to know PA adoption?

- Service provider companies
- Academics and farmer's organisations
- Regional or national institutions

To design services that correspond to current needs

Appropriate initial and continuing training courses to support farmers and advisors in adoption and use of PA

Strategies and policies in order to support the profession

A common need:

Reliable information about the adoption of precision agriculture
Why is it important to know PA adoption?

- Lack of national study in France
- Targeted samples of farmers
- Punctual over time

US studies

- USDA ARMS, 2018
- Erickson et al., 2017

European studies

- Lawson et al., 2011
- DEFRA, 2013
- Paustian and Theuvsen, 2017

Australian studies

- Lewellyn and Ousman, 2014
2016: two partnerships to answer these questions
2016: two partnerships to answer these questions

3 teaching and research institutes
2016: two partnerships to answer these questions
2016: two partnerships to answer these questions

Multidisciplinary research
2016: two partnerships to answer these questions

Questions about digital agriculture adoption in France
60k€ per year
over a renewable period of 3 years
A collective framework to assess PA adoption since 2016

French Observation Centre of Digital Agriculture Adoption (FrOCDA)
A collective framework to assess PA adoption since 2016

French Observation Centre of Digital Agriculture Adoption (FrOCDA)

- Productions
2 types of deliverables

Infographics

Thematic brieves

https://agrotic.org/observatoire/
2 types of deliverables
Adoption of remote sensing in France

What is the level of adoption in France?

What is it used for?

Are there specificities between crops?

What are the barriers and factors to adoption?
French Observation Centre of Digital Agriculture Adoption (FrOCDA)

- Productions
- Methodology
Adoption of remote sensing in France

Methodology

- Bibliography
  - Press review
  - Research papers
  - Expert interviews

- Market study
  - Companies websites
  - Social networks
  - Activity report

- Typology of Use
  - Interviews with suppliers, experts and cooperatives

- Level of adoption

- Adoption factors and barriers

- Infographics

Action carried out by the operational team

Deliverable
French Observation Centre of Digital Agriculture Adoption (FrOCDA)

- Productions
- Methodology
- Some results
Adoption of remote sensing in France

Level of adoption

<table>
<thead>
<tr>
<th>Crop type</th>
<th>% of the French surface, by crops, in 2016 (Total area measured)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Field crops</td>
<td>~13% (1,284,238ha)</td>
<td>~10% (925,712ha)</td>
</tr>
<tr>
<td>Viticulture</td>
<td>~1% (7,035ha)</td>
<td>~1.2% (11,200ha)</td>
</tr>
<tr>
<td>Others</td>
<td>Negligible</td>
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</tr>
</tbody>
</table>
Adoption of remote sensing in France

Level of adoption

Presque 1 million d’Ha pilotés par télédétection en 2017

- Satellites: 85%
- Avions: 15%

Adoption of remote sensing in France

Agronomic applications

Fertilisation is the main application

Many diverse applications
- Crop observations
- Fertilisation
- Differential harvest
- ...
Adoption of remote sensing in France

Fertilisation is the main application

Many diverse applications
Crop observations
Fertilisation
Differential harvest

Some explanations
- Regulatory constraints
- Mature commercial offer
- Input management
- Brand image
- Less structured commercial offer
- Personalised services
French Observation Centre of Digital Agriculture Adoption (FrOCDA)

- Productions
- Methodology
- Some results
- Conclusions and next steps
Adoption of digital agriculture in France
An overview after 3 years

<table>
<thead>
<tr>
<th>Infographics</th>
<th>Date of publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote sensing in 2016</td>
<td>Feb. 2017</td>
</tr>
<tr>
<td>Smartphone sensors</td>
<td>April 2017</td>
</tr>
<tr>
<td>Farm management information system</td>
<td>Oct. 2017</td>
</tr>
<tr>
<td>Geophysical measurements and soil mapping</td>
<td>Dec 2017</td>
</tr>
<tr>
<td>Remote sensing in 2017</td>
<td>April 2018</td>
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<tr>
<td>Robotics</td>
<td>Oct. 2018</td>
</tr>
<tr>
<td>Variable rate application technologies</td>
<td>Dec. 2018</td>
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<tr>
<td>GNSS</td>
<td>April 2019</td>
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Conclusion

- **Strong link** to manufacturers, users, media, digital companies, etc.
- Commercial neutrality and **academic legitimacy**
- Public and private funding for a **sustainable project**
Conclusions

- **Strong link** to manufacturers, users, media, digital companies, etc.
- Commercial neutrality and *academic legitimacy*
- Public and private funding for a *sustainable project*

**Assessment and next steps**

- **Many requests**: a response to a real need of professionals
- **Observatoire V2**
- A wish to *share similar experiences*
L’Observatoire des Usages

Thank you

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