

# Unraveling collective experimentation in diversified systems: constructing idealtypes

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Wednesday, August 28, 2024

18<sup>th</sup> Congress of the European Society for Agronomy in Rennes, France

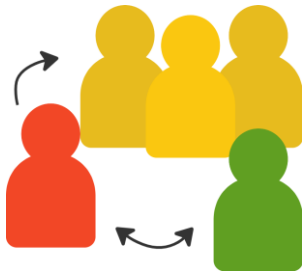
# Renewal of knowledge production

Agroecological transition confronts agriculture and research to plenty of **new or unknown objects and subjects**.



→ Many **knowledge gaps**  
*Eg. Morel et al. 2020*

New stakeholders involve themselves in the process of knowledge production, for example by implementing **experimentations** of different types, which are often **collective**. *Eg. Navarrete et al. 2018, Trubert et al. 2022*



→ Few literature on these collective experiments and the knowledge they produce.

→ Getting to know them better would enable to provide better support and use of their outputs.

***Objective of this presentation : Unravelling the diversity of collective experimentations.***

# Material and Methods

31 semi-structured interviews with stakeholders of different French institutions



+ Participation in events such as final project presentation or trial visits

+ Documentary analysis

DÉMARCHE  
FORCES



Researchers



Farmers



Advisors -  
facilitators

→ Identification of 26 collective experimentations to analyse

# Results

First results of these interviews:

→ large **diversity** of collective experimentations



Experimental setup

Collective  
organization  
and animation

Topics and analyses

*Photo: Q. Toffolini*

# Results

→ **Idealtypes** (*Weber, 1949*) of collective experimentations

« Why? »

*Briefly described in the idealtypes' titles*

« How? »

*Represented by the diagram of each idealtype*



*Experimental  
setup*

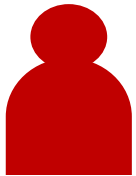


*Stakeholders  
involved*



# Legend

## Stakeholders



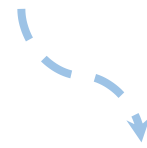
Researchers



Advisors or groups  
facilitators



Farmers

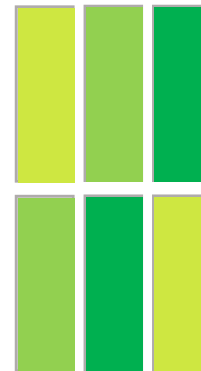


One-off, short-  
lived relationship



Long-term, frequent  
relationship

## Experimental setup



Shape: type of setup  
(ex: Micro-plots)

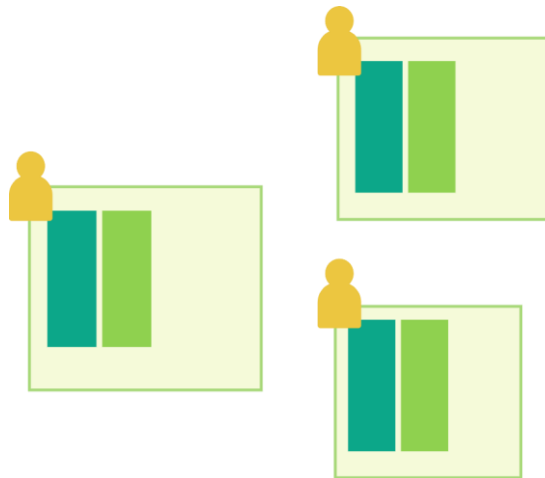
Colors: Tested modalities  
(ex: sowing depth)



# Results

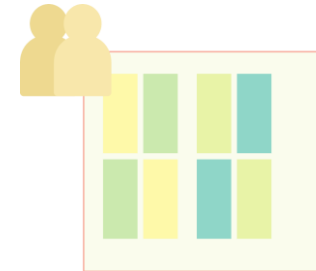
## 6 idealtypes of collective experimentations

**Distribution in several  
experimental sites**



**4 Idealtypes**

**Gathering in a single  
experimental site**



**2 Idealtypes**

*→ See supplementary material  
at the end of the presentation*

# Idealtype A: Replicating identical set-ups for better analysis

Experimentation  
manager



Set-ups replication



For the need of the  
**analysis** (ex:  
*statistical analysis  
on mean values*)

Practitioners  
following a protocol



Researchers



Advisors or groups  
facilitators

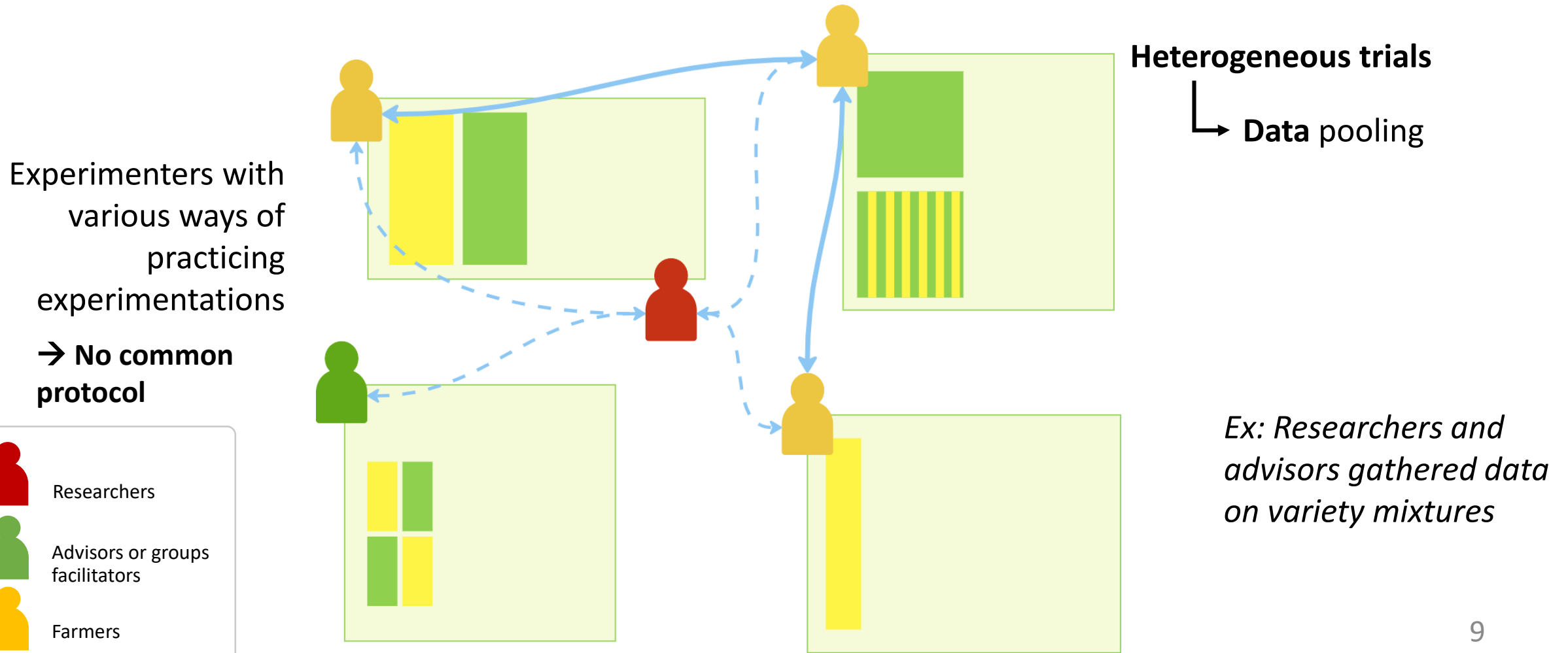


Farmers

*Ex: a researcher  
collected data on soil  
health with intercrops in  
farmer's fields*

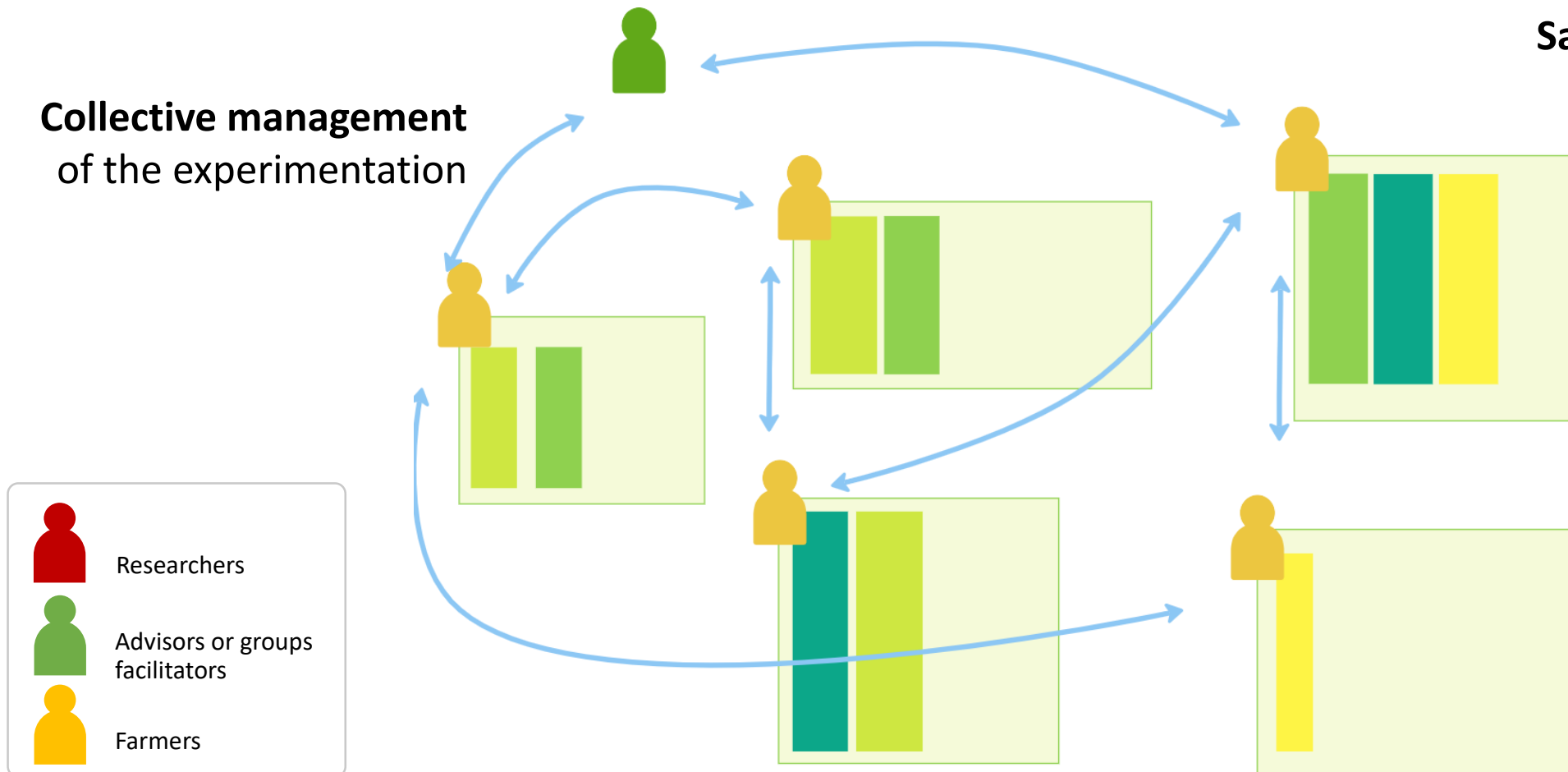


# Idealtype B: Compiling data to address a common question



# Idealtype C: Sharing modalities to collectively tame a new object

**Collective management**  
of the experimentation

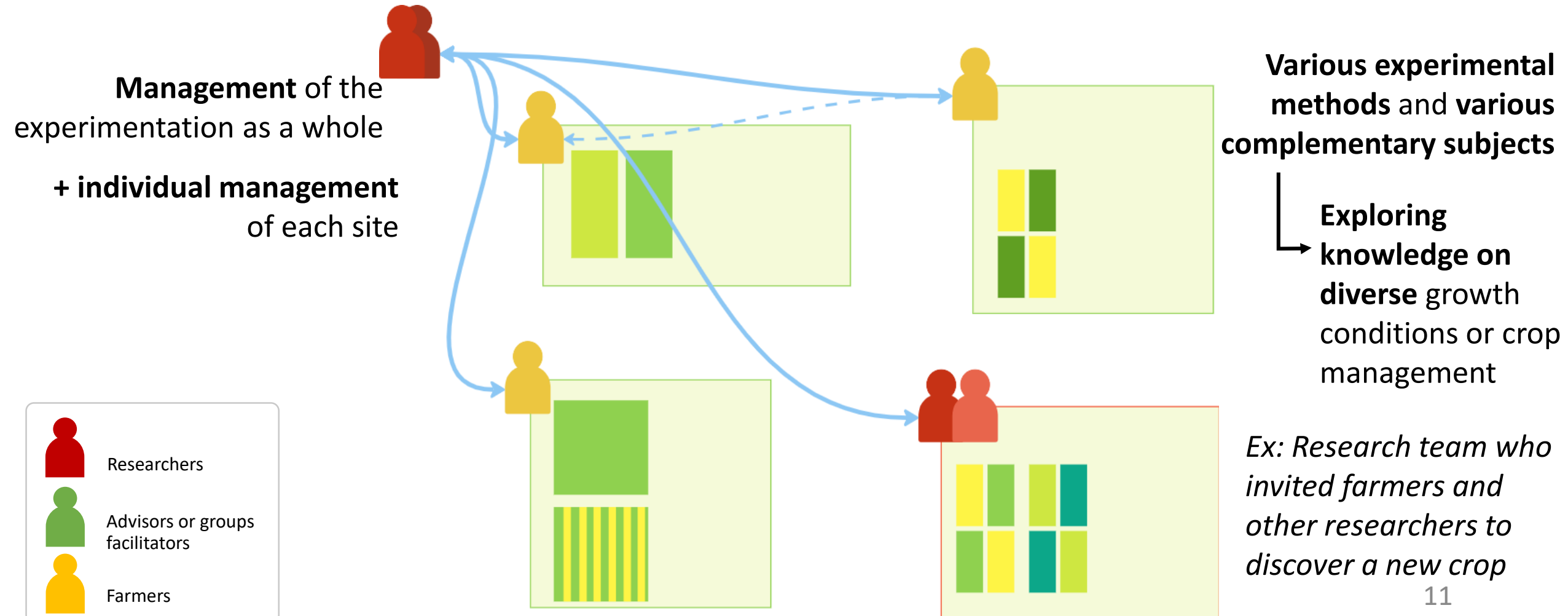


**Same experimental methods**  
but on various  
complementary subjects

↳ **Learning by**  
sharing results  
**throughout** the  
process

*Ex: Farmers group who  
collectively decided to  
grow a new crop*

# Idealtype D: Encouraging diversity to explore the realm of possibility



# Discussion

- Diversity of existing collective experimentations: 6 idealtypes
- Reflexive tool to step back, for researchers and all the stakeholders involved in experimentations
  - Give visibility and legitimacy to all this diversity. *Eg. Sumberg et al. 2003*
  - Fuel the development of renewed experimentations to address the challenges of agroecological transition. *Eg. Rossing et al. 2021*

*"We really had to cross-reference all the information and all the ways of experimenting and producing empirical, scientific, traditional knowledge, etc." [translated from French]*

*An experimenter, about previous work on novel crop.*

Thank you for your attention!

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# Bibliography

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# Supplementary material

6 idealtypes (*Weber, 1949*) of collective experimentations

**Distribution in several  
experimental sites**

- A. Replicating identical set-ups for better analysis,
- B. Compiling data to address a common question,
- C. Sharing modalities to collectively tame a new object,
- D. Encouraging diversity to explore the field of possibilities,

**Gathering in a single  
experimental site**

- E. Sharing roles within a single set-up to delve deeper into a common question,
- F. Gathering skills for joint experiments

# Ideatype E: Sharing roles within a single set-up to delve deeper into a common question

**Collective management  
of the experimentation**



**Different roles within the  
group of experimenters**



*Ex: a farmers' group who implemented a experimentation to study organic cropping systems.*



# Idealtype F: Gathering skills and trials for joint experimentations

