

How can Research & Development effectively support the French agroforestry practitioners?



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All French types of agroforestry are considered



Fruit trees + vegetables



Timber trees + sheep



Timber trees + arable crops



Fruit trees + vineyard



Hedged farmland



traditional pollard trees
from Brittany



Sylvopasture



Free-range poultry with trees



Truffle oaks + lavender



Vanilla in the forest



Creole Home garden

etc.

Current challenge for R&D



What do we know on tree impacts and benefits?

What is the scientific knowledge applying in my context?



Practitioners

What do we already know?



What are the red-hot questions to be targeted in priority?

How to avoid failures from top-down approaches?



Researchers



Current challenge for R&D



What do we know on tree impacts and benefits?

How can Research & Development effectively support the French agroforestry practitioners?

What do we already know?



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Practitioners



Researchers



Material and methods



Material and methods



1/ Analysis of 7 former surveys

| Survey | Year | Type | Respondents |
|-----------------------------|------|-------------------|--|
| RMT | 2015 | online survey | 43 respondents from R&D&F |
| RMT workshop | 2015 | workshop | 22 respondents from R&D |
| Fondation de France | 2015 | farmer interviews | 10 AF farmers |
| Fondation de France meeting | 2015 | meeting | 10 participants from R&D |
| Afac-Agroforesteries | 2015 | online survey | 77 respondents from D |
| AFAF | 2018 | online survey | 62 respondents (farmers and private individuals) |
| EIP-Agri Focus Group on AF | 2017 | meta-analysis | 20 experts from 15 european countries |

→What are the main questions from farmers?

→What are the gaps of knowledge?



Material and methods

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- What are the gaps of knowledge?



2/ Interviews of 13 technical advisors

Department (district)

- Not surveyed
- 1 interview



- What are the main questions of the AF practitioners ?
- What are the expected methods for generating knowledge?
- What are favorite media for sharing knowledge?



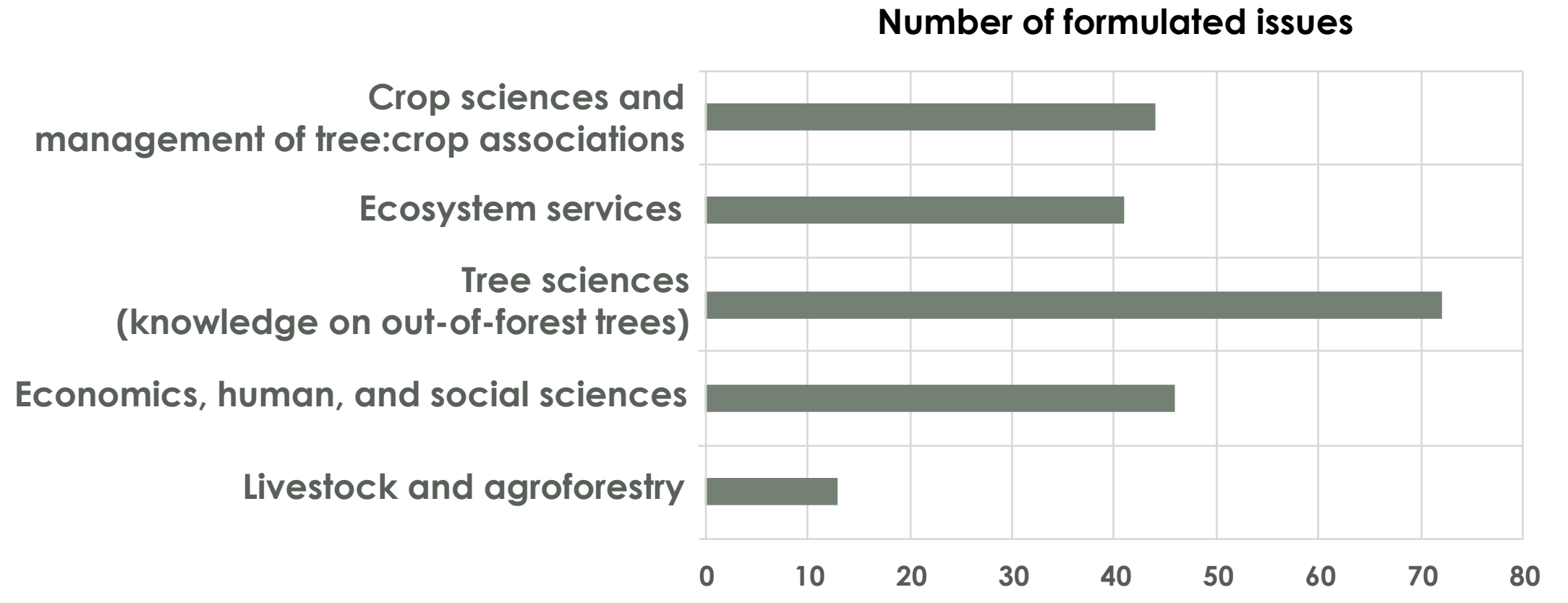
RESULTS: five red-hot topics

- Already **227 issues** identified (to be completed)
- Each issue was characterized by a list of key-words



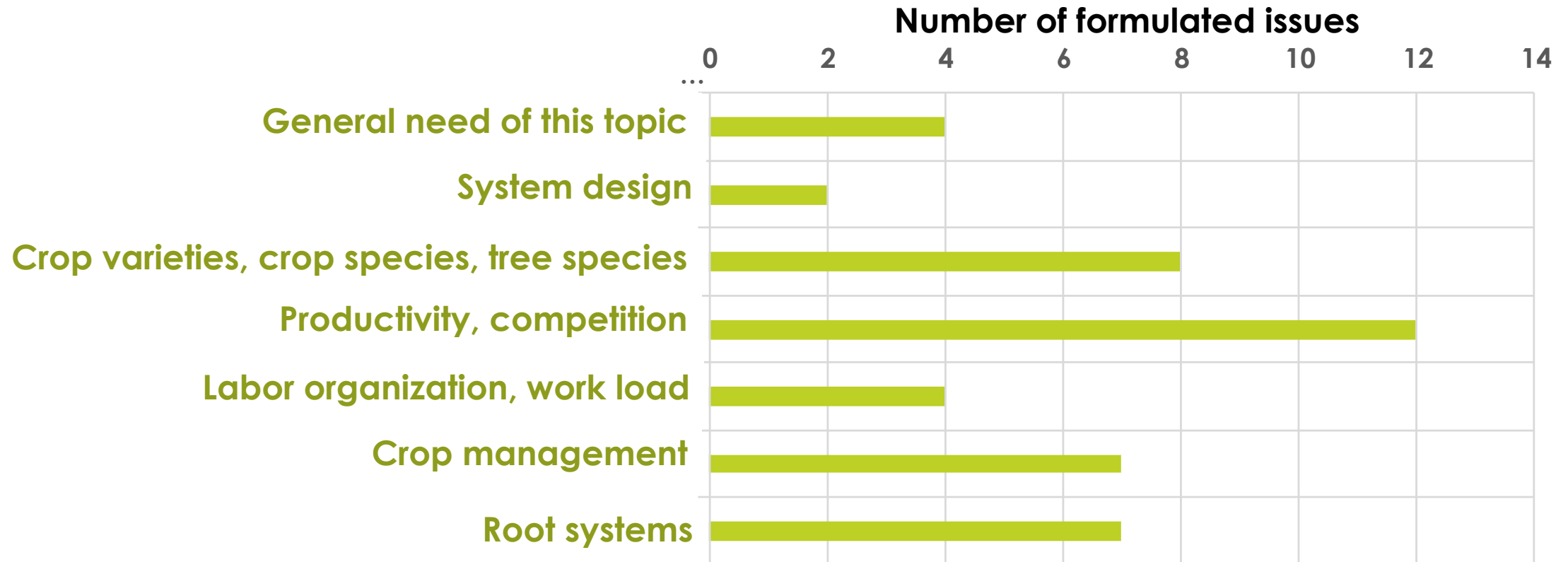
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RESULTS: Sub-topic **Crop Sciences and management of tree:crop interactions**

How to minimize competitions between tree and crops?



Example :

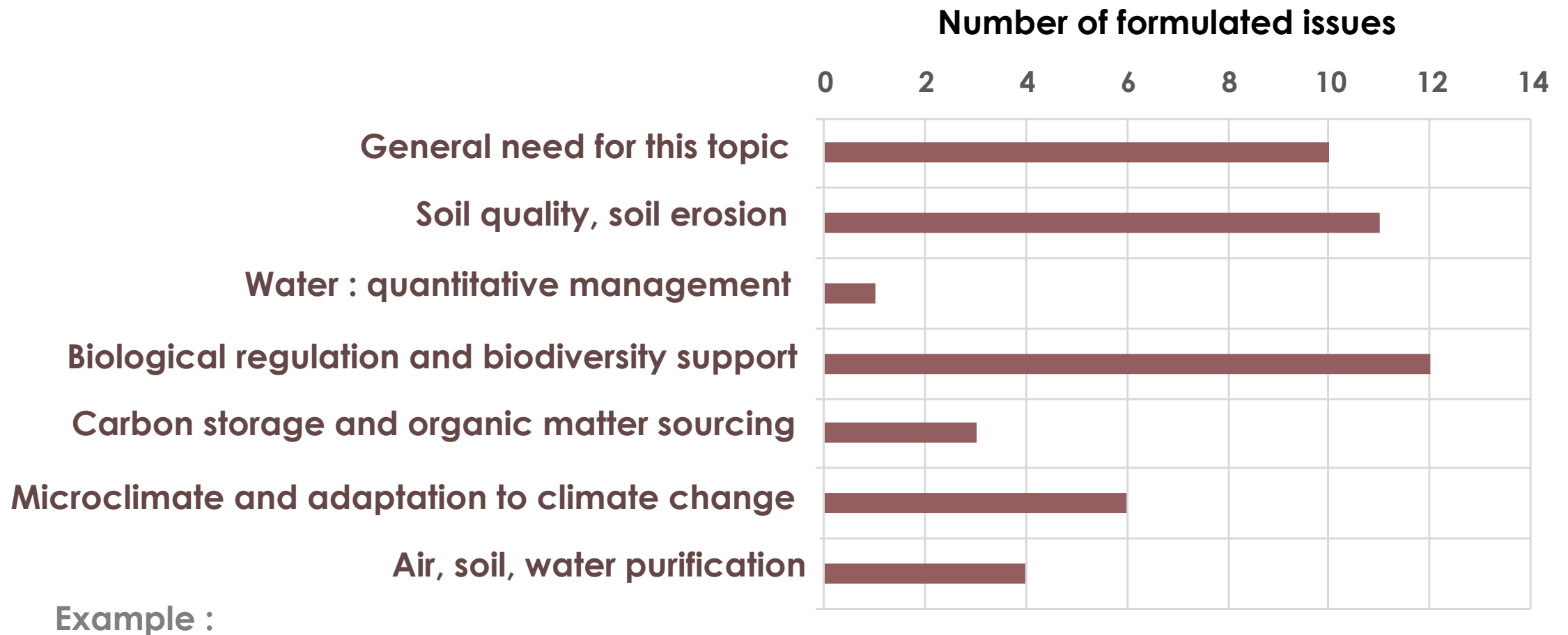
At what distances and in what arrangements can trees be planted?

How to fertilize crops and trees ?



RESULTS: Sub-topic **Ecosystem services**

- What are the impacts of agroforestry for territories and society?



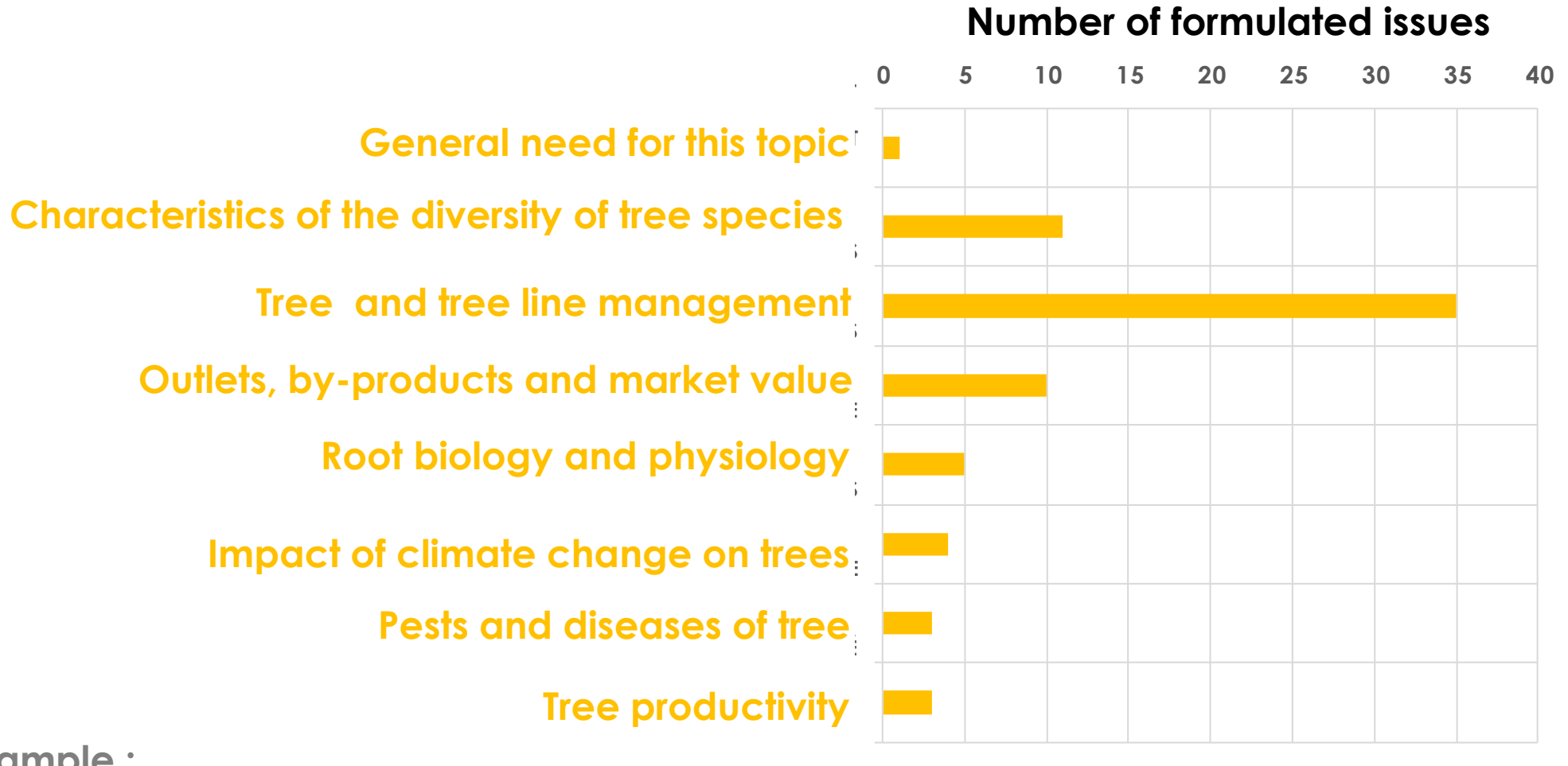
Example :

In meadows under mountain climate (Auvergne), what are the impacts of trees on dew and morning temperatures? What are the consequences on grass growth?



RESULTS: Sub-topic **tree sciences**

How do trees behave out of the forest? How to manage them?



Example :

What are the costs and the productivity of a polard tree?



RESULTS: most popular approaches and media



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Approaches and methods for knowledge production

- Accord key importance to the context of validity
- Launch long-term assessments
- Adopt systemic and multidisciplinary viewpoints
- Accept evolutive research questions
- On-farm observations and **discussions**
- **Co-design** of research questions, of protocoles
- **Participatory** collection of data
- **Collective** analysis and diffusion of results



RESULTS: most popular approaches and media

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Media for knowledge dissemination

- 2-4 pages technical synthesis : paper and electronic versions
- Short videos of experienced farmers
- **Decision support tools** : landscape scale models integrated into GIS
- On farm **meetings** and **trainings**
- **Webinars** on methods and tools for technical advisors



1. IDENTIFICATION OF PRACTITIONERS' RED HOT QUESTIONS

→ **Key challenges:** economics, organic farming, AF and animals, soil fertility and conservation

→ **Three types of knowledge-needs:**

- Scientific knowledge
- Case-studies
- Operational recommendations

→ **Needs to invent new approaches of research :**

multidisciplinary, communication, collaborative research : 1 actor = 1 researcher

→ **Needs for communication tools and meetings**



Perspectives

1. IDENTIFICATION OF PRACTITIONERS' RED HOT QUESTIONS



2. REVIEW OF EXISTING RESULTS



confrontation

3. IDENTIFICATION OF KNOWLEDGE GAPS

Recommendations to funders
for calls of proposals

existing knowledge

missing knowledge

4a. DISSEMINATION OF EXISTING KNOWLEDGE

Building a data basis, editing,
organizing meeting events



4b. COLLECTIVE DESIGN OF PROJECTS

Workshops of researchers and
practitioners



Thank you for your attention!



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