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Scaling of Organic Food and Farming: A search strategy to identify relevant literature

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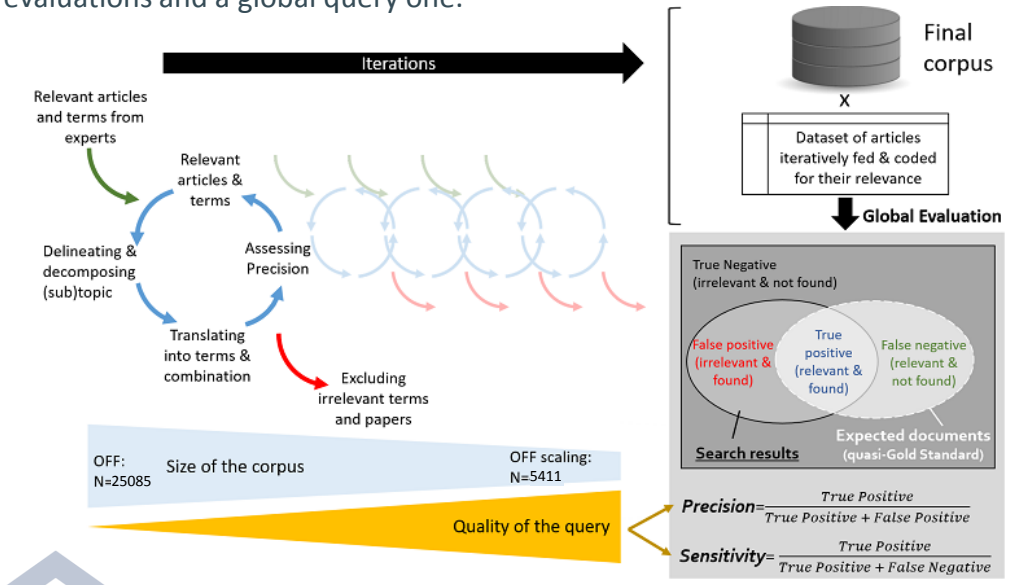
INRAE, through its new program on organic scaling (METABIO), wishes to monitor and analyze the evolution of the scientific literature on the conditions, determinants and consequences of such transition. But as an emergent and fuzzy topic, it requires an elaborated search strategy.

We developed then an iterative method, during which we progressively add and exclude search terms or group of terms thanks to *in itinere* sample-based evaluations and a global query one.

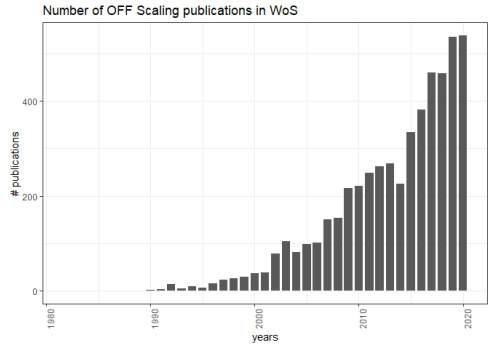


It allows a ***progressive delineation*** of the OFF scaling perimeter and its ***decomposition*** of into sub-topics (see table for examples). Some of them are easy to translate into a lexical query (eg. conventionalization or "feed the world" debates), while others are polysemic or using generic terms (*eg* "change" or "growth"...) which requires ***semantic specification*** (*eg* "technical change", "market growth")

Examples of sub-topics of Scaling composing the query

Sub-topic	Sub-query extract	# publ.	Precision
[scaling]	TS=(scaling-up OR upscaling)	72	100%
[scaling+]: Generic terms related to change applied to organic qualified items, or to economic or behavioral processes	TS=((((upscal* OR "up scal*" OR [...] OR massification OR [...]) NEAR/2 (organic* OR demand OR consumption OR offer OR market* OR [...] determinant* OR barrier* OR lever* [...])) NOT ("vegetative growth" OR "plant growth" [...]))	1948	90%
[Conventionalisation]: Hypothesis on the pattern of evolution of OFF developed after Buck et al. , 1997	TS=(Conventionalization OR [...] "industrialization of organic*" [...])	111	100%
[Prospectives]: considering horizon scanning of OFF development according to different methods	TS=(((scenari* OR projection* [...]) NEAR/4 (development OR change OR growth [...])) OR "Delphi analysis" OR "foreseeable future*" OR "future* of organic*" [...])	260	95%

Compared to a simplistic approach, this query elaboration allows to capture a corpus enlarging the topic coverage (x2,5) while reducing the share of irrelevant publications (n=5411, Precision=89,2%).
Among all the OFF publications in Web of Science, 21% of them deal with organic scaling. This proportion is continuously increasing.



The process is continuous and iterations are still performed with emerging papers and lexicon.
Our approach allows to better define the scope of the corpus. The query is already used to inform the METABIO community, and the corpus will be analyzed in depth for scientometric analysis or focused Systematic Literature Reviews.
We suggest the research community to use standardized lexicon to affiliate their work to the "organic food and farming scaling" topic.

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