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ORGANIC LIVESTOCK RESEARCH BIBLIOMETRIC

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INTRODUCTION

Organic farming has become an increasingly popular topic worldwide but, do we have enough research to support this "new" farming approach in livestock? When did it start? Which countries have worked most on organic farming research?

To obtain an overview of the research developed on organic livestock farming, a bibliometric review has been carried out.

The aim was to summarize the research developed on organic livestock farming in terms of productivity and relevance

METHODOLOGY

A literature search was conducted in April 2019 using Web of Science and the following keywords combination:

Clarivate Analytics
WEB OF SCIENCE™

Organic + Livestock + Farming and Organic + Husbandry + Animal. The analysis was carried out with the package "bibliometrix" v. 2.2.0 for R v. 3.6 software (www.R-project.org).

RESULTS AND DISCUSSION

Worldwide, from 1993 to 2018, 320 research outputs were published in English focusing on organic livestock farming, with a clear upward trend (**Figure 1**), which seems to follow the increasing interest on this topic by consumers and markets. Among the 320 documents, 268 papers were published in 111 journals, and 62.3% of them appeared in journals in the 1st and 2nd quartile of the relevant subject area.

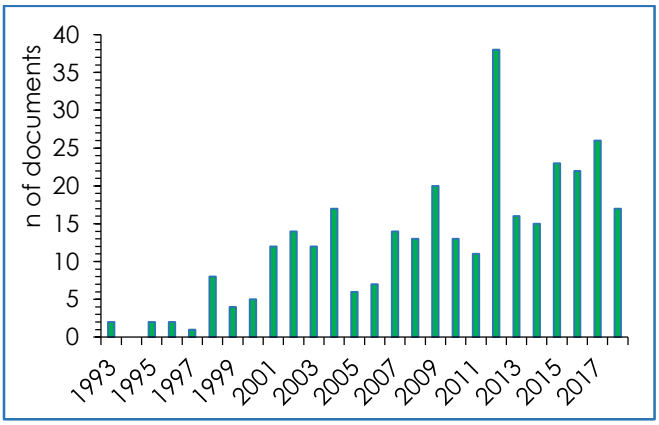

Figure 1. Annual scientific publication output in organic livestock farming from 1993 to 2008 retrieved from Web of Science.

Germany (DE) is the country with most papers published on organic livestock farming (56 documents), followed by France (31), Denmark (30), and the United Kingdom (20; **Figure 2**).

Authors' top 10 keywords were: organic farming (89 times), animal welfare (29), organic, animal health, organic agriculture, cattle, livestock, organic livestock production, grazing, and

organic production (**Figure 3**). Even if meat poultry is the most frequent livestock reared organically in Europe, only the terms 'cattle' and 'sheep' appeared as an indicator of the species studied within those 10 keywords.

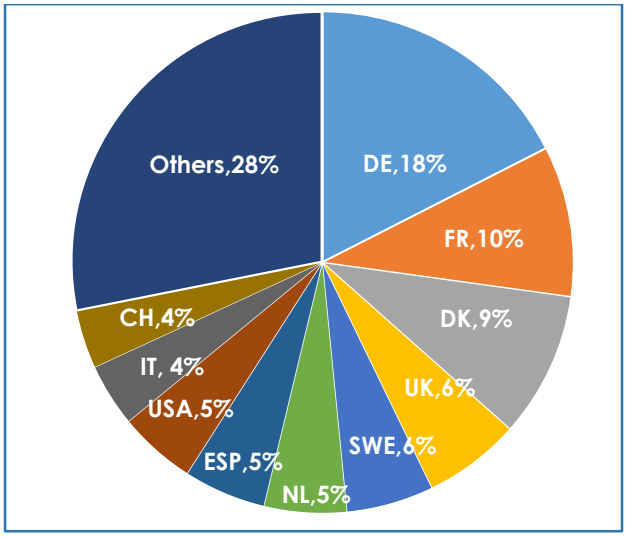

Figure 2. Percentage of papers published based on the country of the corresponding author from a total of 320 papers. The group 'Others' includes 34 other countries.

CONCLUSIONS

The bibliometric analysis revealed that:
1) Countries focused the research on the product most relevant to them.
2) Most of the organic livestock research has been done in Europe.
3) More research on organic livestock production in species other than cattle is needed.
4) More research in high-ranking journals on organic livestock farming is needed.
5) Research related to contentious inputs (Organic-PLUS) were not in the top 10 keyword list.

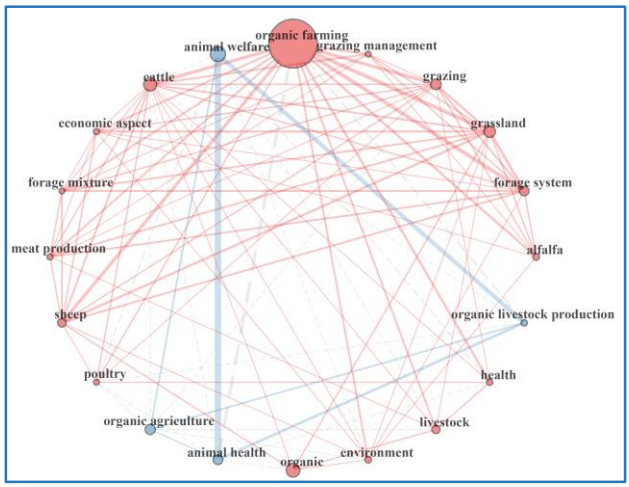

Figure 3. Network plot of the top 20 Authors' keywords co-occurrence. Each node size is proportional to the number of direct connections. The bigger the node, the more connections they have. Lines between nodes represent direct connections and thickness is proportional to the number of studies involved in each direct connection. Node colours identify clusters of words using the Walktrap algorithm. Dash lines link nodes of different communities.

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PROJECT WEBSITE

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