

SCIENTOMETRICS STUDY OF THE RESEARCH PUBLICATION ON ORGANIC FARMING

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Abstract

The research work attempts to analyze quantitatively the growth and development of organic farming research in global in terms of publication output as reflected in web of science database (SCI) for the period of 2014-2018. The research has published a total of 5692 articles on organic farming during this period.

Keywords: Scientometrics, Organic farming.

INTRODUCTION

The term Scientometrics was introduced and came into prominent with findings of journal named Scientometrics by T. Braunin in 1977. Originally published in Hungy and currently form Amesterdom scope of journal is to publish all those studies of quantities aspect of science as discipline or economic activity. According to Bankaput, M.B. (1993) “Scientometrics is more general the bibliometrics. It is interesting to know, that both disciplines have a large overlap. It is surprised to learn certain comments stating that Scientometrics, using bibliometric techniques is a part of bibliometrics”

Scientometrics

Scientometrics is a part of the sociology of science and has application to science policy making. It involve quantitative studies activates among other publication and so overlap a bibliometric to some extent scientometric is a branch to science.

Objective

1. To identify the Year wise distribution of publication.
2. To find out the Document wise distribution of publication.
3. To analyze the ranking of Author wise distribution of publication.
4. To indentify the Institution wise distribution of publication.
5. To analyze the Language wise distribution of publication.
6. To assess the Country wise distribution of publication
7. To find out Journal wise distribution of publication.

METHODOLOGY

A scientometric study is a case study encompassing records output of Web of Science Database. The growth rate of output in terms of both at absolute level and relative level are analyzed from 2014-2018.

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The authorship pattern and author productivity are examined to identify the pattern of research contribution in the field of organic farming. Further, an attempt is made to measure the performance of researchers and their research concentration in the field of organic farming. The study is mainly exploratory in nature in identifying research output on organic farming.

Data collection

The basic publication data used in this study is derived from the expanded version of Science Citation Index (SCI) database, available in Web of Science. The raw publications data along with their citations has been downloaded from the Web of Science. Publications data for 5 year from 2014-2018 were used for analyzing the growth and impact of organic farming;

Data analysis

Table 1 Shows that distribution of research articles published in organic farming during the period of 2014-2018. The total of 5692 articles was published. The highest number of articles were published in the year 2018 with 1284 articles followed by the 2017 (1231) articles, the lowest number of articles were published in the year of 2014 with 932 articles.

Table 1. Year wise distribution of publication and citation scores

S.NO	Year	Recs	Percent	TLCS	TGCS
1	2014	932	16.4	1080	12734
2	2015	1092	19.2	834	11855
3	2016	1153	20.3	506	4242
4	2017	1231	21.6	250	4949
5	2018	1284	22.6	67	1925
	Total	5692	100.1	2737	35705

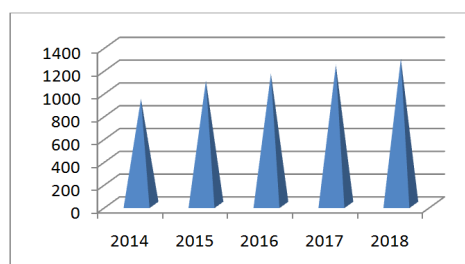
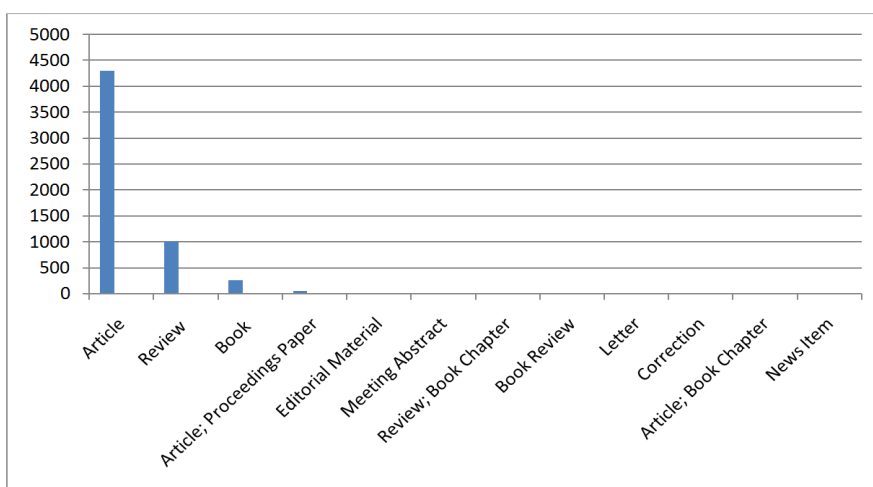


Fig. 1. Year wise output in organic farming research

Table 2 indicates the document wise distribution of research output in organic farming. This study has observed a total of 5692 publication in organic farming during the period of five years form 2014-2018. Out of various sources of publication in organic farming Journal article has fist position with 4300 records and it's followed by review comes second in order 1000 records.

**Table 2. Document Wise Distribution of Publication**

S. No.	Document Type	Recs	Percent	TLCS	TGCS
1	Article	4300	75.5	2070	29914
2	Review	1000	17.6	294	
3	Book	260	4.6	323	5031
4	Article; Proceedings Paper	57	1	16	338
5	Editorial Material	19	0.3	2	105
6	Meeting Abstract	17	0.3	0	1
7	Review; Book Chapter	17	0.3	29	303
8	Book Review	8	0.1	0	0
9	Letter	8	0.1	1	9
10	Correction	4	0.1	0	2
11	Article; Book Chapter	1	0	2	3
12	News Item	1	0	0	0
	Total	5692	100	2737	35706



**Fig. 2. Sources wise output in organic farming research**

**Table 3. Language Wise Distribution of Publication**

S.NO	Language	Recs	Percent	TLCS	TGCS
1	English	4530	79.6	2428	35513
2	Hungarian	1000	17.6	294	
3	French	50	0.9	8	49
4	German	46	0.8	3	23
5	Portuguese	38	0.7	1	83
6	Spanish	10	0.2	3	25
7	Polish	6	0.1	0	3
8	Chinese	3	0.1	0	7
9	Czech	3	0.1	0	0
10	Italian	3	0.1	0	3
11	Japanese	1	0	0	0
12	Russian	1	0	0	0
13	Turkish	1	0	0	0
	Total	5692	100.2	2737	35706

Table 3 shows that language wise distribution of publication. Out of 5692 total publication 4530 of them English language and 1000 records comes under the second position in Hungarian language.

**Table 4. Institution Wise Distribution of Publication (Top 10)**

S. No	Institution	Recs	Percent	TLCS	TGCS
1	University of Illinois	1016	17.8	294	10
2	INRA	142	2.5	215	1898
3	Chinese Acad Sci	116	2	43	996
4	Wageningen Univ	90	1.6	98	1466
5	Aarhus Univ	80	1.4	60	813
6	Swedish Univ Agr Sci	71	1.2	52	709
7	Ohio State Univ	60	1.1	76	792
8	USDA ARS	60	1.1	61	740
9	China Agr Univ	56	1	44	627
10	Univ Copenhagen	52	0.9	36	538

Table 4 shows that institution wise distribution of publication. It is noted that university of Illinois contributed the highest number of research publication 1016 and its followed by INRA institution contributed the second position 142 records.

**Table 5. Country wise Distribution of Publication**

S.No	Country	Recs	Percent	TLCS	TGCS
1	USA	1025	18	317	254
2	Australia	830	14.6	540	7720
3	China	448	7.9	137	3868
4	Germany	425	7.5	245	3791
5	Italy	420	7.4	328	4125
6	France	314	5.5	299	3102
7	Spain	309	5.4	130	2557
8	UK	288	5.1	273	3443
9	Brazil	274	4.8	83	1539
10	India	264	4.6	112	2003

Table 5 indicates that the country wise number of publications. Highest number of records has published in USA 1025 and its followed by 830 records has published in Australia

**Table 6. Ranking of Author Productivity**

S.No	Author	Recs	Percent	TLCS	TLCS/t	TLCSx	TGCS	TGCS/t	TLCR	TLCsb	TLCSe
1	Lal R	42	0.7	67	13	37	666	135.12	81	24	
2	Mader P	22	0.4	79	16.78	54	487	108.58	38	8	
3	Olesen JE	18	0.3	20	5.97	10	187	38.82	15	1	
4	Canali S	17	0.3	20	4.62	5	57	14.72	31	3	
5	Sanchez-Jerez P	17	0.3	4	1.17	1	97	21.25	13	0	
6	Cerda A	15	0.3	8	3.2	2	115	43.97	29		
7	Kumar A	15	0.3	10	2.73	5	159	37	7	0	
8	Campanelli G	14	0.2	12	2.93	1	41	10.53	17	0	
9	Gattinger A	14	0.2	37	7.42	25	167	42.08	40	8	4
10	Meng FQ	14	0.2	14	3.78	2	88	22.27	21	0	

Table 6 indicates ranking of authors by number of publication. Author "Lal R" published highest number of publication for the study period with 42 records ; next consecutive authors Mader P are published next highest number of articles for the study period with 22 records and its followed by author Olesen JE published 18 records in the research period

**Table – 7 Journal wise distribution of publication (Top 10)**

S.No	Journal	Recs	Percent	TLCS	TLCS/t	TGCS	TGCS/t	TLCR
1	Agriculture Ecosystems & Environment	178	3.1	252	54.57	1993	427.42	146
2	Science of the total Environment	113	2	81	18.43	1147	282.28	57
3	Sustainability	113	2	21	4.1	448	118.87	199
4	Journal of Cleaner Production	105	1.8	86	21.38	970	274.55	102
5	Agricultural Systems	81	1.4	84	18.4	646	139.5	60
6	Geoderma	75	1.3	53	11.55	711	158.43	32
7	Plos one	69	1.2	0	0	610	128.12	35
8	Agronomy for Sustainable Development	67	1.2	79	14.63	863	181.42	63
9	Applied Soil Ecology	63	1.1	41	8.37	560	121.32	39
10	Renewable Agriculture and Food Systems	62	1.1	48	10.47	236	53.17	43

Table 7 shows that journal wise distribution of publication. Out 5692 total records majority of 178 articles published in the journal of "Agriculture Ecosystems & Environment" and its followed by 113 records published in the journal of "Science of the Total Environment".

## Conclusion

The major conclusion are the highest number of document were published in the year 2018 i.e., 1284 and lowest number of document 932 was published in the year 2014. Document wise analysis of record shows that journal article appeared in the first position. Majority of the records published in English language and University of Illinois in the first position of institution wise distribution of publication, USA published more number of records for the study period with 1025 records. Recording to author publication Lal R published highest number of articles for the study period with 42 records and Journal wise distribution of articles Agriculture Ecosystems & Environment in the first position.

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