

PIG RESEARCH PUBLICATIONS: A SCIENTOMETRIC ANALYSIS ON CAB DIRECT FOR THE PERIOD (1991-2014)

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ABSTRACT

The analysis within the field of pig during the period 1991-2014, obtained from CAB Direct Online database through Scientometric analysis. The analysis revealed that 1,30,873 papers have been published during the period 1991 to 2014 and the greatest quantity of publications was 7,986 papers published during 2012. Journal articles are the preferred kind of publications as 1,83,143 are journals papers (82.18%). Journal of Animal Science is the most effective ranking journal with 5989 papers (4.57%) in the most effective 10 journals are published their research papers. USA could be the leading Country in the global world which contributed 6,283 papers (4.80%) followed by Germany (4.17%) and China (3.86%). Meat producing animals could be the major part of publication as 53,948 papers were using this are which can be about 41.22% of total publication output.

Keywords: *Scientometric analysis, CAB Direct Online, USA, Germany, China.*

1. INTRODUCTION

Wild pigs (referred to as wild hogs, wild boar, or feral swine) are an old world species and are not native to the Americas. The initial wild pigs in the United States originated solely from domestic stock delivered to North America by early European explorers and settlers. Several years later, Eurasian wild boar were introduced into areas of the United States for hunting purposes. In areas where domestic pigs and Eurasian wild boar were found together in the wild, interbreeding occurred. Today, many hybrid populations exist through the wild pigs have now been reported in at the least 45 States in USA. Populations now exist as far north as

Michigan, North Dakota and Oregon. Pigs are extremely social animals that prefer to reside in small groups. Pigs are extremely curious animals, and very adaptable and smart, so that they learn quickly. They like to investigate situations with an extremely sensitive nose and strong neck muscles. The profit produced by the pig farmer depends upon the amount of pigs sold per sow on the farm over an amount of one year. The profit made is therefore influenced by the power of the farmer to handle the farm in this way that the sows create a maximum amount of pigs that may be marketed in the shortest time possible.

2. OBJECTIVES OF THE STUDY

The main objective of this study is to research the analysis output in Pig research, as reflected in its publications output

1. To examine the overall range of publications output on pig analysis supported CAB Direct Online database for the period 1991-2014.

throughout 1991-2014 in CAB Direct Online database. In exacting, the study focuses on the subsequent objectives:

2. To examine the share of foreign contribution within the field of pig analysis.

3. To identify the highest rank-wise countries in pig analysis.
4. To identify the highest 10 authors within the field of pig analysis.
5. To study the highest 10 journals publishing more research papers on pig analysis

3. METHODOLOGY

The CAB Direct Online has been used to retrieve the data for 24 years (1991-2014) by looking out the keyword ‘pig’

within the title field. The whole range of records retrieved by CAB Direct Online database is 1,30,873.

4. RESULTS AND ANALYSIS

The pig data collected through the CAB Direct Online database has been analyzed and presented. For the

presentation of data, different kinds of statistical tools such as tables and diagrams are used.

4.1. GROWTH RATE AND DOUBLING TIME IN PIG RESEARCH OUTPUT

A study of the growth rate of pig research output is an important factor in analyzing the research and development in the field. Table-1 shows that the relative growth rate or research output in the pig. The Relative Growth Rate and Doubling Time of citations are derived and presented in table 1. It can be noticed that relative growth rate of publication decreased from

the rate 0.88 in 2013 to 0.04 in 1991. The mean relative growth for the 24 years (1991-2014) showed a growth rate of 0.13 where as the corresponding doubling time for different year gradually increased from 7.9 in 2013. The mean doubling time for the 24 years (1991-2014) was only 11.30 which was increased to the corresponding doubling time was increased.

Table – 1. Relative Growth Rate [R(c)] and Doubling Time [Dt(C)] of Overall Research Output

Sl. No.	Year	No. of Publications	Cumulative No. of Output	Log _e 1 ^P	Log _e 2 ^P	[R(c)]	Mean [R(c)]	[Dt(C)]	Mean [Dt(C)]
1.	2014	5427	5427	-	8.59	-		-	
2.	2013	7557	12984	8.59	9.47	0.88		7.9	
3.	2012	7986	20970	9.47	9.95	0.48		1.44	
4.	2011	7941	28911	9.95	10.27	0.32		2.16	
5.	2010	6874	35785	10.27	10.48	0.21		3.30	
6.	2009	6770	42555	10.48	10.65	0.17		4.08	
7.	2008	6251	48806	10.65	10.79	0.14		4.95	
8.	2007	6361	55167	10.79	10.91	0.12		5.77	
9.	2006	5681	60848	10.91	11.01	0.10		6.93	
10.	2005	5485	66333	11.01	11.10	0.09		7.70	
11.	2004	5344	71677	11.10	11.17	0.07		9.90	

12.	2003	5057	76734	11.17	11.24	0.07	0.13	9.90	11.30	
13.	2002	4946	81690	11.24	11.31	0.07		9.90		
14.	2001	4756	86446	11.31	11.36	0.05		13.86		
15.	2000	4819	91265	11.36	11.42	0.06		11.55		
16.	1999	4630	95895	11.42	11.47	0.05		13.86		
17.	1998	4400	100295	11.47	11.51	0.04		17.33		
18.	1997	4614	104909	11.51	11.56	0.05		13.86		
19.	1996	4303	109212	11.56	11.60	0.04		17.33		
20.	1995	4011	113223	11.60	11.63	0.03		23.10		
21.	1994	4594	117817	11.63	11.67	0.04		17.33		
22.	1993	4371	122188	11.67	11.71	0.04		17.33		
23.	1992	4121	126309	11.71	11.74	0.03		23.10		
24.	1991	4574	130873	11.74	11.78	0.04		17.33		
Total		130873								

4.2. SUBJECT-WISE CATEGORY IN CABI CODE ANALYSIS

CABICODES are applied to records to point the broad subject areas at intervals that they fall, and comprise five characters: two identical alphabetic characters and three digits. CABICODES modify searchers to find general subject classes that are not simple to retrieve mistreatment descriptors

alone, and save time and cash by serving to them to exclude irrelevant information from their searches. The lists of prime 10 CABICODES lined by this study are square measure furnished with in Table – 2 that clearly indicates the chosen areas of analysis by the scientists.

Table – 2. Subject Wise Category in CABI Code

Sl. No.	Key Words	CABI Code	Nos.
1.	Meat Producing Animals	LL120	53948
2.	Parasites, Vectors, Pathogens and Biogenic Diseases of Animals, (Discontinued March 2000)	LL820	39310
3.	Prion, Viral, Bacterial and Fungal Pathogens of Animals, (New March 2000)	LL821	25272
4.	Animal Nutrition (Production Responses)	LL520	23509
5.	Animal Physiology and Biochemistry (Excluding Nutrition)	LL600	20160
6.	Animal Nutrition (General)	LL500	18497
7.	Animal Husbandry (General), (Discontinued March 2000)	LL100	18284
8.	Animal Nutrition (Physiology)	LL510	18116
9.	Non-communicable Diseases and Injuries of Animals	LL860	17895
10.	Meat Produce	QQ030	17895

4.3. PREFERRED KINDS OF PUBLICATIONS

Table – 3. Top 8 Kinds of Publications

Sl. No.	Kinds of Document	No. of Papers	Percentage
1.	Journal article	183143	82.18
2.	Conference paper	17321	7.77
3.	Miscellaneous	9239	4.14
4.	Book chapter	6670	2.99
5.	Thesis	2910	1.30
6.	Abstract only	1562	0.70
7.	Annual	1090	0.48
8.	Bulletin	917	0.41

The study reveals that the main source of publications coated by CAB Direct Online database on pig analysis is journal articles with 1,83,143 papers (82.18%) followed by conference papers with 17,321 papers (7.77%). Miscellaneous third

position with 9239 (4.14%), Book Chapter and Thesis are within the fourth and fifth places with 6670 (2.99%) and 2910 (1.30%) various. The highest 8 varieties of publications are furnished in Table -3.

4.4. MOST POPULAR JOURNALS

The most popular journals by the scientists concerned in pig analysis were: Journal of Animal Science with 5989 papers (4.57%) followed by Veterinary Microbiology with 1843 papers (1.40%). The study revealed that out of high five most popular journals by the pig researchers, three journals viz., Veterinary Record 1806 papers (1.37%) and Medycyna

Weterynaryjna 1531 papers (1.16%) and American Journal of Veterinary Research 1496 papers (1.14%) are published from USA which clearly indicates that the contribution of USA in pig analysis is major role. The highest 10 most popular journals are listed in Table- 4. with the amount of papers revealed.

Table – 4. Popular Journals

Sl. No.	Journal Name	No. of Papers	Percentage
1.	Journal of Animal Science	5989	4.57
2.	Veterinary Microbiology	1843	1.40
3.	Veterinary Record	1806	1.37
4.	Medycyna Weterynaryjna	1531	1.16
5.	American Journal of Veterinary Research	1496	1.14
6.	Svinovodstvo (Moskva)	1372	1.04

7.	Rivista di Suinicoltura	1341	1.02
8.	Theriogenology	1215	0.92
9.	Canadian Journal of Animal Science	1014	0.77
10.	Biology of Reproduction	970	0.74

4.5. PROLIFIC / RANKING AUTHORS

The study reveals that Goodnamd, R.D. is that the most prolific / Ranking authors in pig analysis who revealed 829 papers (0.64%) followed by Nelssen, J.L. with 827 papers (0.63%). It's observed that out of the highest five authors who contributed a lot of papers in pig analysis,

three are world ranking author contributed a paper level of 750 to 850 viz., Goodnamd, B. 811 papers (0.62%), Tokach, M.D. 807 papers (0.61%) , and Tokach, M. 794 Papers (0.60%) . Table – 5 lists the highest 10 prolific/ranking authors within the field of pig analysis.

Table – 5. Top 10 Prolific / Ranking Authors

Sl. No.	Name of Author	No. of Papers	Percentage
1.	Goodband, R. D.	829	0.64
2.	Nelssen, J. L.	827	0.63
3.	Goodband, B.	811	0.62
4.	Tokach, M. D.	807	0.61
5.	Tokach, M.	794	0.60
6.	Dritz, S. S.	643	0.49
7.	Dritz, S.	592	0.45
8.	Ingkaninun, P.	520	0.39
9.	Verstegen, M. W. A.	483	0.36
10.	Poomvises, P.	447	0.34

4.6. RANK-WISE COUNTRIES DISTRIBUTION OF PUBLICATIONS

The study reveals that USA is the top country in pig research with its contribution of 6283 papers which is nearly (4.80%) of the global research output on pig research followed by Germany with 5465 papers (4.17%). China ranks third position with

5065 papers (3.86%), UK got the fourth position with 3774 (2.88%) and fifth place of Canada with 2682 papers (2.04%) out off the 10 countries USA is a top rank. The top 10 countries based on number of publications are furnished in Table -6.

Table – 6. Rank-wise Countries

Sl. No.	Location	No of Articles	Cumulative Publications	Cumulative Percentage of Articles
1.	USA	6283 (4.80%)	6283	4.80
2.	Germany	5465 (4.17%)	11748	8.97
3.	China	5065 (3.86%)	16813	12.84

4.	UK	3774 (2.88%)	20587	15.73
5.	Canada	2682 (2.04%)	23269	17.77
6.	Brazil	2654 (2.02%)	25923	19.80
7.	Poland	2586 (1.97%)	28509	21.78
8.	France	2513 (1.91%)	31022	23.70
9.	Italy	2440 (1.86%)	33462	25.56
10.	Netherlands	2300 (1.75%)	35762	27.32

4.7. PREDOMINANT LANGUAGES

It is observed that English is the most predominant language used by the researchers for communication of pig research with 1, 41,549 papers (68.13%)

followed by German with 18,083 (8.70) and Russian with 10,856 (5.22%). The top 10 predominant languages are furnished in Table -7.

Table – 7. Types of Language

Sl. No.	Language	No. of Papers	Percentage
1.	English	141549	68.13
2.	German	18083	8.70
3.	Russian	10856	5.22
4.	Chinese	9208	4.43
5.	French	6718	3.23
6.	Spanish	5513	2.65
7.	Polish	4798	2.30
8.	Italian	4384	2.11
9.	Portuguese	4116	1.98
10.	Japanese	2518	1.21

5. CONCLUSION

The Scientometric study on pig research based on CAB Direct Online database reveals that USA is the major producer of scientific research output with 6283 publications which is around (4.80%) of the global research output on pig research out off the 10 countries. The other interesting fact is that the most prolific / ranking authors in this field is Goodband, R.

D. with 829 papers (0.64%), followed by Nelssen, J.L. with 827 papers (0.63%). It's observed that out of the highest five authors who contributed a lot of papers in pig analysis, three are world ranking author contributed a paper level of 750 to 850 viz., Goodnamd, B. 811 papers (0.62%), Tokach, M.D. 807 papers (0.61%) , and Tokach, M. 794 Papers (0.60%) . The study revealed

that out of top five most preferred journals by the pig researchers, Journal of Animal Science with 5989 papers (4.57%) followed by Veterinary Microbiology with 1843 papers (1.40%). The study revealed that out of high five most popular journals by the pig researchers, three journals viz., Veterinary

Record 1806 papers (1.37%) and Medycyna Weterynaryjna 1531 papers (1.16%) and American Journal of Veterinary Research 1496 papers (1.14%) are published from USA which clearly indicates that the contribution of USA in pig analysis is major role .

6. REFERENCES

- 1) Rajendran, L., (2015). Indian Contribution to Global Agricultural Research: A Scientometric Profile. Proceedings of the UGC-SAP National Seminar on Advancement of Science through Scientometrics, 233-238.
- 2) Abbas Najari and Masoud Yousefvand (2013). Scientometrics Study of Impact of Journal Indexing on the Growth of Scientific Productions of Iran, Iranian J Publ Health, 42(10), 1134-1138.
- 3) Rathinasabapathy, G.,and Rajendran, L. (2010). A Scientometric study on buffalo research in India and Pakistan: A profile based on CAB Direct Online. Asian Journal of Library and Information Science, 2(1-4), 58-67.
- 4) Eswaran, S., et al., (2014). A Scientometric Study on IEEE Transactions on Fuzzy Systems, International Journal of Scientific Research, 3(5), 319-321.
- 5) Vijayanathan, R., (2014). Scientometric Analysis of Open Software Engineering Journals, International Journal of Library and Information Studies, 4(3), 116-119.
- 6) Pawan Kumar Saini., (2014). Application of Scientometric Analysis in Library Net work: A Comprehensive Study, International Journal of Emerging Research in Management and Technology, 3(9), 11-15.
- 7) Venkatesan, M., (2013). Growth of Literature on Climate change Research: A Scientometric Study, Journal of Advances in Library and Information Science, 2(4), 236-242.
- 8) Jayendra Kumar Singh., (2014). A Scientometric Analysis of Indian Journal of Pure and Applied Physics 2006-2010: A Study based on Web of Science, Research Journal of Library Sciences, 2(1), 7-12.
- 9) Rathinasabapathy, G.,and Rajendran, L. (2013). Mapping of world-wide Camel Research Publications: A Scientometric Analysis, Journal of Library, Information and communication Technology, 5(1-2), 35-40.