

# INDIAN JOURNAL OF ENTOMOLOGY: A BIBLIOMETRIC STUDY (2007-2011)

Shweta Joshi<sup>1</sup>, Dr. Mamta Malik<sup>2</sup>

<sup>1</sup>Research Scholar (Library and Information Science), Faculty of Social Science and Humanities Pacific Academy of Higher Education and Research University, Udaipur

<sup>2</sup>Supervisor (Library and Information Science), Faculty of Social Science and Humanities Pacific Academy of Higher Education and Research University, Udaipur

\*\*\*

**Abstract** - The present paper deals with a bibliometric study of five volumes which contained 20 issues and a total number of 422 articles during the year 2007 to 2011 of the "Indian Journal of Entomology". The bibliographic details with regard to each article such as number of articles in each issue, authorship patterns, publication date and the name of the journals were collected and taken into consideration for studying and analyzing. Findings showed that the highest numbers of articles (92) were published in the year 2008 and 2010. The average length of articles published in Indian Journal of Entomology is 5 pages per article. Also the four authors have made major contribution followed by two and three authors.

**Key Words:** Bibliometrics, Indian Journal of Entomology, Year wise, Authorship pattern and lengthwise pattern.

## 1. INTRODUCTION

Bibliometrics is an important area of research in the library and information science. The word "Bibliometrics" has been derived from two Greek words "Biblio" means books and "metric" means measure which refers to the application of mathematics to the study of bibliography. In 1969, Alien Prichard First coined the term bibliometrics stating that the definition and purpose of bibliometrics is "to shed light on the process of written communication and of the nature and course of discipline (in so far as this is displayed through written communication counting and analyzing the various facts of written communications"<sup>1</sup>.

It is the analytical study of the literature using bibliometric techniques. It means analysis done based on the bibliographic phenomena (growth of literature, citation pattern etc.) coming under bibliometric.

Indian journal of Entomology is a quarterly Journal. Its Impact Factor is 0.287 (2015) and ISSN is : 0974-8172 (Online); 0367-8288 (Print). It is edited by V.V. Ramamurthy and published by The Entomological Society of India, New delhi.

The prime objective of the Society is to encourage and promote the dissemination of entomological knowledge. It arranges meetings of Entomologists at the headquarters and at various places where the branches of the Society are located. The annual general body meetings are held along with the meetings of the Indian Science Congress. These meetings provide opportunities to the members and others interested in the subject to keep in touch with the entomological activities, both in India and abroad.

## Comments:

- Indexed/Abstracted:
- Indian Citation Index – Research Impact Indicator: 0.045
- NAAS Rating for 2013-4.3

## 2. USES OF BIBLIOMETRICS

- Evaluate the journal's quality.
- Follow up on the evolution of a research subject.
- To have an idea of the principal actors of one theme.
- Identify the article's impact.
- Evaluate one researcher, their work, their research unit and their institute...

## 3. OBJECTIVE OF THE PRESENT STUDY

Following are the objectives of the present investigation:-

1. To study yearwise distribution of articles.
2. To study the authorship pattern of papers in the field of Agricultural Science.
3. To identify the Length of papers of different articles of issues of the Journal.
4. To find out the number of Illustrations of different articles of various volumes of the Journal.
5. To study the research publication growth in selected journals of agriculture.

#### 4.METHODOLOGY

For this study data collected from the "Indian Journal of Entomology", which is the agricultural Journal. Each Five volumes which contained total 20 issues and a total number of 422 articles published during the year 2007 to 2011 has been taken up for the analysis. The bibliographic details with regard to each article such as number of articles in each issue, authorship patterns, Illustrations, length and country wise articles were collected and taken into consideration for studying and analyzing. In order to achieve precise result, tabulation work has done and Graphs are prepared in MS Excel. This study is mainly of theoretical and analytical type.

#### 5.LITERATURE REVIEW

**Bansal Alka, *DESIDOC Journal of Library & Information Technology: A Bibliometric Analysis, DESIDOC Journal of Library & Information Technology, Vol. 33, (5), 2013, pp. 412-417.***<sup>2</sup>

The author in her article *DESIDOC Journal of Library & Information Technology: A Bibliometrics Analysis* collected data from the DJLIT during 2001 to 2012. The purpose of the study is to know the number of articles and growth pattern of articles during the study period, to know the authorship pattern, to know the authorship pattern, to find out Indian and foreign author contribution etc. The author finds that during the study period 69 issues were publish which consist of 391 articles. Out of 391 articles 148 article i.e. 38% are from single and reaming 62% articles are from co-authors. The authors identify prolific authors, geographical distribution, length of article and type of documents. **Deshmukh P. P. and Dhuldhule R. R, *2nd National Conference on Scientometrics and Knowledge***

***Management, Dharwad, India, 2013.***<sup>3</sup> The authors in their paper entitle "Citation Analysis of Doctoral Dissertation Submitted to Dr. Panjabrao Deshmukh Krishi Vidhyapeeth (DPDKV), Akola in Agriculture Chemistry" collected a data from Doctoral Dissertation Submitted to DPDKV, Akola during 2006 to 2011. The aim of the present studies are To know the various forms of information sources used by the research scholars, number of citations, rank list of core journal, obsolescence of literature, half life period of journal and book citations, To know the authorship pattern. The author analysed that the highest no of citations are from Journal, out of 1360 total citations, 1096 are from the journal i.e. 80.51% followed by Books 10.59%, Conference proceedings 2.94%, Corporate bodies 3.53%, Thesis 2.43%. First 46 journals score 884 citations, out of 1096. Joint authorship is the most favored pattern in authorship. **Bajad**

**Rajabhau V, Citation Analysis of Articles Publish in University News during 2004-05 to 2005-06, *Indian Journal of Innovative Research in Arts, Vol. 3 , 2012,pp. 39-45.***<sup>4</sup> The author in his article "Citation Analysis of Articles Publish in University News during 2004-05 to 2005-06" carried out citation analysis of 1714 citations from 2004-05 to 2005-06 published in university news and objective of the study are find out the characteristics of the sources of literature used, to determine the distribution of citations among the books and journals with a view to identify a suitable model to describe the citation phenomenon, to ascertain whether the distribution of citations among the periodicals and other documents confirm to the Bradford's law of distribution and to indentify parameters to be considered in the acquisition policy based on the citation analysis. The present study has been devoted to University News during 2004, 2005. Books are the most favored category of researcher. The study concluded that the source journals 34.59% are from University News. Half life period of journal citations is 3 years. Indian authors are favored category of the researcher in journal citation. Foreign author's books are the most favored category of the researcher. Single authored books are most favored category of books. **Kumbhar Rajendra,**

**Trends in Classification Literature: Analysis of Literature Published during 2000 to 2009, *DESIDOC Journal of Library & Information Technology, Vol. 32, (2), 2012, pp. 179-185.***<sup>5</sup>

The author in his article " Trends in Classification Literature: Analysis of Literature Published during 2000 to 2009" discuss in detail about, to know the recent trends in publication of classification 2000 to 2009 the author collected data from LISA abstract 2000 to 2009. To know the trends in classification the author decided the objective to find out year wise publication trends, to identify the journals which publish more articles of classification, to identify the authorship pattern and to know the main authors in classification, the year wise analysis shows that on average 250 to 300 articles were published annually on classification. It is observed from the authorship pattern study that single author is the most prominent category of authors in classification from the authors ranking list it is found that Goler Inan is the prominent author in classification he stood rank first. **Sinha Bikramjit and Joshi Kirti, Analysis of India's Solar Photovoltaic's Research Output, *Annals of Library and Information Studies, 2012, Vol. 59, pp.106-121.***<sup>6</sup>

The author in his article entitled of article “Analysis of India’s Solar Photovoltaic’s Research Output” collected a data Scopus database on solar from 2000 to 2009. The purposes of the study are to find out the solar research output in India during the study period, to know the authorship pattern. The authors give ranking of journal and it is found that solar energy materials and solar cells journal is the most favored Journal in Solar Energy. The author analyzed Indian PV output, India solar PV output impact factor, institutewise distribution and ranking of authors.

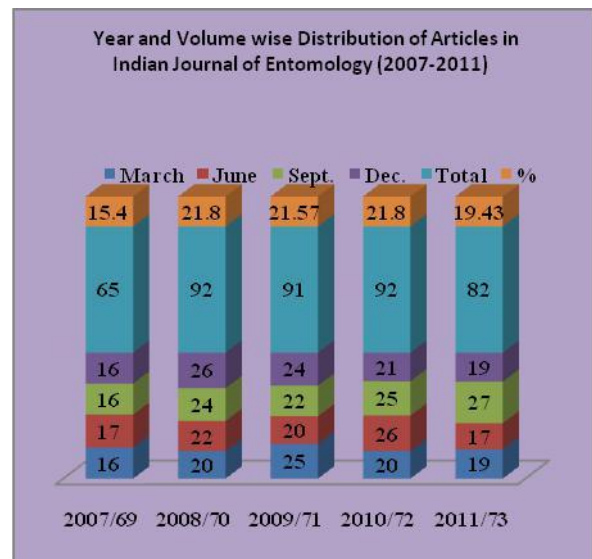
**Kumar Manoj and Moorthy A.L., Bibliometric Analysis of DESIDOC Journal of Library and Information Technology during 2001-2010, *DESIDOC Journal of Library & Information Technology*, 2011,Vol. 31,(3), pp. 203-208.** <sup>7</sup> The author in his article entitled “Bibliometric Analysis of DESIDOC Journal of Library and Information Technology during 2001-2010” set up the aim and objectives of the study are to know the year wise distribution, authorship pattern, length of paper, subject wise distribution, data is collected was the source journal DJLIT during 2001 to 2010. The authors find that during the study period 271 papers are publish, types of document study shows that journal scored 40.31% citations followed by books 20.68%. The authors conclude that maximum papers are in the range of 6 to 10 pages form the ranking of author. The authors observed that B. M. Gupta is the prominent author in library and information science in India.  
**Ramkrishanan J and Babu Ramesh, Literature on**

**Hepatitis (1984– 2003): A Bibliometric Analysis, *Annals of Library and Information Studies*, Vol. 54, 2007, p.p. 195-200.** <sup>8</sup> The author in his article “Literature on Hepatitis (1984 – 2003): A Bibliometric Analysis” collected a data on Hepatitis published in three CD-ROM databases i.e. MEDLINE, CINAHL and IPA during 1984 to 2003. The purpose of the study are to find out growth rate of Hepatitis literature in selected database and to know the authorship pattern during the study period in all three databases 82617 records are available out of which 75700 records are from MEDLINE. The author compared total records in each database, publication type authorship pattern and year wise distribution of collaboration.

**6.RESULTS AND DISCUSSION**

**Table 1 -Year and Volume Wise Distribution of Articles of Indian Journal of Entomology (2007-2011)**

Year (Volume No.)	2007 (69)	2008 (70)	2009 (71)	2010 (72)	2011 (73)	Total No. of Articles
Issues (Month)						
1(March)	16	20	25	20	19	100
2(June)	17	22	20	26	17	102
3(Sep)	16	24	22	25	27	114
4(Dec)	16	26	24	21	19	106
Total	65	92	91	92	82	422
%	15.40	21.80	21.57	21.80	19.43	100

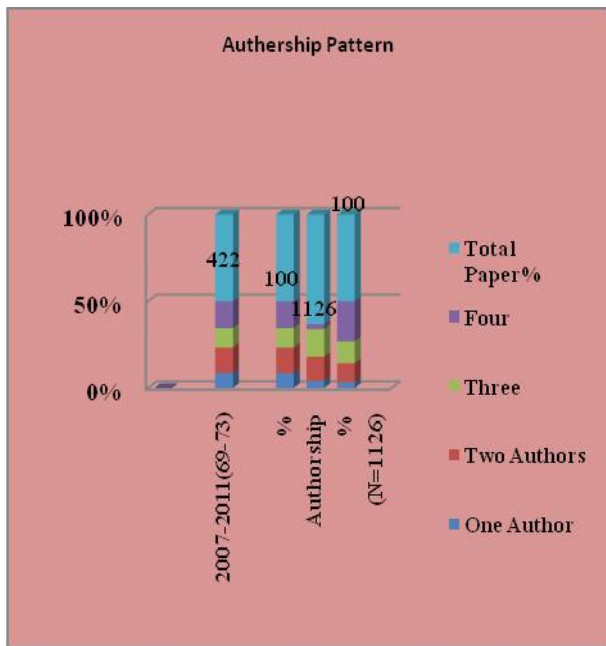


**Graph 1**

**Year and Volume Wise Distribution of Articles** Table 1 depicts the year and Volume wise distribution of papers in Indian Journal of Entomology. The number of papers published varied from 16 to 27 during the period from 2007 to 2011. The highest number of papers, i.e. 27, was published in Third issue of 2011 and the lowest number i.e., 16 in first, third and fourth issues of 2007. A total of 422 papers were published during the period spread over 04 issues of the journal. Result shows that good papers were published per year.

Table 2-Authorship Pattern of Articles in Indian Journal of Entomology (2007-2011)

S.NO	YEAR & VOLUME	ONE AUTHOR	TWO AUTHORS	THREE AUTHORS	FOUR AUTHORS	TOTAL PAPER%	% TOTAL N=422	TOTAL AUTHORSHIP
01	2007/69	10 (15.38)	30 (46.16)	15 (23.08)	10 (15.38)	65 (100)	15.40	155
02	2008/70	19 (20.66)	44 (47.83)	18 (19.56)	11 (11.95)	92 (100)	21.80	205
03	2009/71	22 (24.18)	15 (16.48)	25 (27.48)	29 (31.86)	91 (100)	21.56	243
04	2010/72	10 (10.86)	17 (18.48)	15 (16.31)	50 (54.35)	92 (100)	21.80	289
05	2011/73	12 (14.63)	18 (21.96)	22 (26.83)	30 (36.58)	82 (100)	19.44	234
	<b>TOTAL</b>	<b>73</b>	<b>124</b>	<b>95</b>	<b>130</b>	<b>422</b>	<b>100</b>	<b>73</b>
	<b>%</b>	<b>17.29</b>	<b>29.38</b>	<b>22.52</b>	<b>30.81</b>	<b>100</b>		<b>17.29</b>
	<b>AUTHORSHIP</b>	<b>73</b>	<b>248</b>	<b>285</b>	<b>52</b>	<b>1126</b>		
	<b>% (N=1126)</b>	<b>6.48</b>	<b>22.03</b>	<b>25.31</b>	<b>46.18</b>	<b>100</b>		



Graph 2

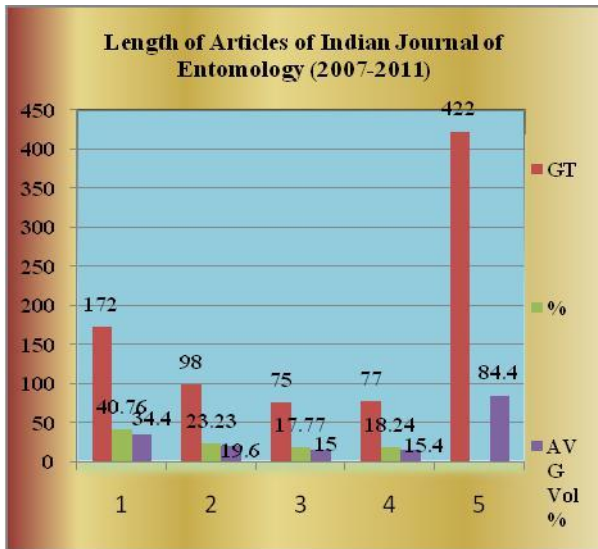
**Authorship Pattern**

It is seen from Table-2 that the highest number of papers, i.e. 130 (30.81%) are by four authors. two and three authored contributions count are 124 (29.38%) and 95 (22.52%) respectively. It is evident that, over the years level of collaboration is very high in the case of publications in Indian Journal of Entomology.

**Table 3- Length of Articles in Indian Journal of Entomology (2007-2011)**

S.No.	Year/Vol. No.	1-5	6-10	11-15	16-20	Total	%
1	2007/69 I	15	02	03	04	24	
	II	02	04	04	05	15	
	III	03	03	02	03	11	
	IV	03	03	05	04	15	
		23	12	14	16	65	15.40
2	2008/70 I	07	04	02	03	16	
	II	08	06	03	05	22	
	III	10	10	10	08	38	

		IV	08	04	02	02	16	
			33	24	17	18	92	21.80
3	2009/71	I	11	05	03	02	21	
		II	10	08	03	04	25	
		III	12	01	04	06	23	
		IV	09	06	06	01	22	
			42	20	16	13	91	21.57
4	2010/72	I	05	14	03	05	27	
		II	08	01	03	08	20	
		III	12	03	06	02	23	
		IV	13	03	04	02	22	
			38	21	16	17	92	21.80
5	2011/73	I	09	03	02	02	16	
		II	08	05	03	05	21	
		III	10	10	04	03	27	
		IV	09	03	03	03	18	
			36	21	12	13	82	19.43
	G.T		172	98	75	77	422	
	%		40.76	23.23	17.77	18.24		100
	Avg. Vol.		34.4	19.6	15	15.4	84.4	



Graph 3

**Length of Articles**

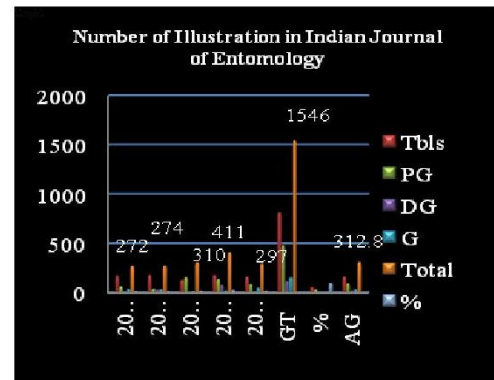
From Table 3 it is revealed that highest number of papers comes under the page group 1-5 in each year. From 2007 to 2011 (total 23,33,42,38 and 36 articles covered under the page group 1-5 in the year 2007 to 2011 respectively ) followed with page group 6-10 in each year from 2007 to 2011 and so on.

**Table 4 Number of Illustrations in Indian Journal of Entomology (2007-2011)**

Year / Vol	Number	TbIs	PG	DG	G	Total	%
2007/69	I	30	02	-	12	44	
	II	73	51	01	10	135	
	III	25	06	-	04	35	
	IV	45	06	-	10	58	
		173	62	01	36	272	17.39
2008/70	I	35	03	02	03	43	
	II	66	18	12	07	103	
	III	50	06	10	19	85	
	IV	25	11	05	02	43	
		176	38	29	31	274	17.52
2009/71	I	03	21	04	03	31	
	II	88	55	-	09	152	
	III	29	49	02	02	82	
	IV	09	30	04	02	45	
		129	155	10	16	310	19.83
2010/72	I	40	17	12	14	83	
	II	79	49	39	02	169	

	III	30	50	05	03	88	
	IV	27	20	20	04	71	
		176	136	76	23	411	26.83
2011/73	I	06	45	-	21	72	
	II	94	22	-	19	135	
	III	50	18	-	03	71	
	IV	10	03	-	06	19	
Total		160	88	-	49	297	18.98
GT		814	479	116	155	1546	
%		52.04	30.62	7.42	9.92		100
AG		162.8	95.8	23.2	31	312.8	

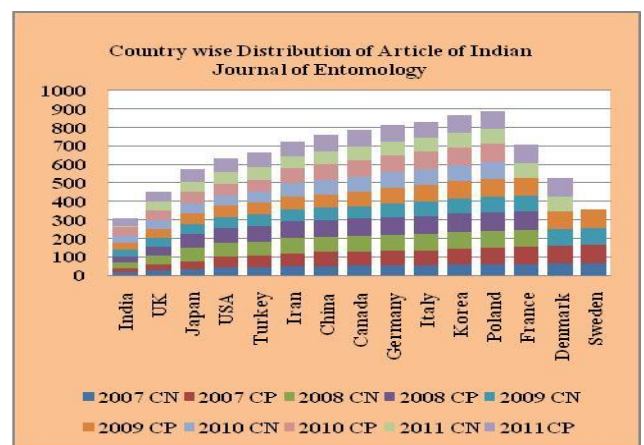
\*TbIs-Tables, PG-Photographs, DG- Diagrams and G-Graphs



Graph 4

Table 4 shows that out of total 1546 illustrations most of the articles have highest number of Tables as bibliographical form followed by Photographs in all the issues of the years 2007-2011.

Grand total shows that out of 1546 illustrations 814 tables, 479 photographs, 155 Graphs and 116 are diagrams in the year 2007-2011 of Indian Journal of Entomology.



Graph 5

**Table 5 Country-Wise Distribution of Articles of Indian journal of Entomology (2007-2011)**

S.no.	Country	2007 CN	2007 CP	2008 CN	2008 CP	2009 CN	2009 CP	2010 CN	2010 CP	2011 CN	2011 CP
1	India	15	23.8	30	32.61	35	38.47	40	43.48	9	40
2	UK	24	36.93	45	48.92	45	49.46	50	54.35	45	54.89
3	Japan	30	46.17	71	77.19	53	58.26	55	59.79	55	67.09
4	USA	40	61.55	73	79.37	58	63.75	56	60.87	64	78.07
5	Turkey	42	64.63	76	82.63	62	68.15	58	63.05	66	80.5
6	Iran	47	72.32	82	89.16	64	70.35	73	79.35	67	81.72
7	China	50	76.94	83	90.24	65	71.44	79	85.88	71	86.6
8	Canada	51	78.47	85	92.42	68	74.74	83	90.22	74	90.26
9	Germany	52	80	88	95.68	74	81.33	85	92.4	75	91.48
10	Italy	53	81.53	89	96.76	81	89.02	86	93.48	77	83.91
11	Korea	57	87.69	90	97.84	84	92.32	88	95.66	78	95.31
12	Poland	59	90.77	91	98.92	86	94.52	92	100	80	97.56
13	France	60	92.3	92	100	87	95.61			81	98.78
14	Denmark	63	96.92			88	96.7			82	100
15	Sweden	65	100			91	100				

\*CN-Cumulative Number, CN-Cumulative Percentage

Table 5 shows that highest number of papers is from country India in all the years from 2007 to 2011 (i.e. 15, 30, 35, 40 and 40 papers respectively). In the year 2007, the countries which contribute next to India are USA and UK with 10 and 9 papers. In the year 2008, the country which contributes after India is Japan with 26 papers. UK and Japan are the countries contributing in the journal after India in 2009 with 10 and 8 papers respectively.

In the year 2010 contribution of papers from India is 40 and after it Iran comes at second place with 15 papers, on the other hand 40 papers are contributed from India in the year 2011 with 10 papers from Japan. Table shows that the countries which are contributing more in this journal are India, UK, Japan, USA and Iran. It is suggested that more countries will participate in it with large number of articles

## 7.CONCLUSION

The journal has published 422 articles during the period of study. The maximum number of contributions are four authors with 130 (30.81%). The present study reveals that the highest number of articles have appeared in the area of agriculture and entomology. Similarly most of the contributions are from India i.e. 160 while foreign contribution is very less. Majority of the authors preferred journals as the source of information. This Journal is the highly preferred journal for communication by the agriculture science professionals.

The findings of the study confirm that the (IJE) is a national journal in its true sense as the papers are mostly contributed by Indian authors. In order to be a national journal in the areas of agriculture in its true sense, the journal should incorporate contributions from across the nation. The latest developments in biotech-industry are covered under Notes and News. The journal should be included with the indexing services in order to enhance its visibility, usability and impact.

## REFERENCES

- [1] Broadus, R.N. Definition of bibliometrics. *Scientometrics*. 12; 1987; 373- 398. In Maheswarappa, B.S. *Bibliometrics: An overview*. Quoted in Devarajan (G), Ed. *Bibliometric Studies*. 1997. Ess-Ess Publications, New Delhi, P1-10.
- [2] Bansal, Alka. *DESIDOC Journal of Library & Information Technology: A Bibliometric Analysis*, *DESIDOC Journal of Library & Information Technology*, Vol. 33, (5), 2013, pp. 412-417.
- [3] Deshmukh, P. P. and Dhuldhule, R. R, 2nd National Conference on Scientometrics and Knowledge Management, Dharwad, India, 2013.
- [4] Bajad Rajabhau V, *Citation Analysis of Articles Publish in University News during 2004-05 to 2005-06*, *Indian Journal of Innovative Research in Arts*, Vol. 3 , 2012, pp. 39-45.

- [5] Kumbhar, Rajendra. *Trends in Classification Literature: Analysis of Literature Published during 2000 to 2009*, *DESIDOC Journal of Library & Information Technology*, Vol. 32, (2), 2012, pp. 179-185.
- [6] Sinha, Bikramjit and Joshi, Kirti, *Analysis of India's Solar Photovoltaic's Research Output*, *Annals of Library and Information Studies*, 2012, Vol. 59, pp.106-121.
- [7] Kumar, Manoj and Moorthy, A.L. *Bibliometric Analysis of DESIDOC Journal of Library and Information Technology during 2001-2010*, *DESIDOC Journal of Library & Information Technology*, 2011, Vol. 31, (3), pp. 203-208.
- [8] Ramkrishanan, J and Babu, Ramesh, *Literature on Hepatitis (1984 -2003): A Bibliometric Analysis*, *Annals of Library and Information Studies*, Vol. 54, 2007, p.p. 195-200.
- [9] <http://www.indianjournals.com/ijor.aspx?target=ije&type=home>