

Mapping the Research Productivity of Agriculture Faculty of Vasantao Naik Marathwada Krishi Vidyapeeth, Parbhani: A Study Based on Indian Citation Index

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Abstract - *Indian Citation Index (ICI) is a home grown abstracts and citation database, with multidisciplinary objective information/knowledge contents from about 1000 top Indian scholarly journals. ICI database is a powerful tool to turn raw data/information into the knowledge you need. Present paper is discussed on the annual growth and distribution of documents, year wise citation analysis of documents published by faculty of Vasantao Naik Marathwada Krishi Vidyapeeth (VNMKV), Parbhani. It also highlights the most preferred journals for publication by the faculty of VNMKV, Parbhani which are indexed with Indian Citation index (ICI) database.*

Keywords: - Indian citation Index, Citation Analysis, Research productivity

Introduction

At international level there are few databases available for evaluation and measurement of scientific publication but coverage of Indian scientific publication particularly published in local national journals are negligible. Therefore, these databases are not adequate to evaluate/analyze India's research productivity. There are few countries like China, Korea, Japan etc. have already brought out their own citation indexes for measurement of their scientific productivity. In India to address this long felt need Mr. Prakash Chand, Ex Scientist NISCAIR, CSIR and M/s DIVA ENTERPRISES Pvt. Ltd have developed and brought out multidisciplinary Indian Citation Index (ICI) by scanning 1000 journals of Indian origin. This study is made an attempt to analyse the year wise growth and distribution of publication, year wise citation analysis and also to know the most preferred journals for publication by faculty of VNMKV, Parbhani which are indexed with Indian Citation index (ICI) database.

Review of Literature

Poornima et al. (2011) have analysed of 1060 publications published by Indian scientists during 1998 to 2010 which indexed by Web of Science online Database indicates that the publication output in the Indian Research Publication. Centre Food Technology Research Institute, BARC, Indian Institute of Technology, Defence Food Research Lab and institutes are the major producers of research output. Most of the prolific authors are from the highly productive institutions. This work is 29 to provide a profile of research in Indian Research Publication in India. This includes tracking the number of papers, scatter of papers over journals, and its effect on publication output, authors' institutional affiliations and authorship patterns.

Surulinathi et al. (2011) analysed the Indian literature output scanned in Web of Science during 1999–2011 on solar energy research indicates that the growth of the literature. The area of solar fuels and Material sciences multidisciplinary has received maximum attention. Publication output of literature by different countries collaboration follows the trend in basic sciences with USA and South Korea being the major producers with India. The contribution of Indian Institutions and Global Citation Scores, h-index, g-index and gh-index has been analysed.

Veer D.K. and Khiste, G. P.(2017) analysed the Intellectual assets of Agriculture scientists during the year 2004 to 2016 in the state of Maharashtra with the help of Indian Citation Index. They observed that among the 3615 documents maximum 1298 (35.90 %) documents published from Dr. Panjabrao Deshmukh Krishi Vidyapeeth, (PDKV) Akola, followed by 1250 (34.58%) documents from Mahatma Phule Krishi Vidyapeeth (MPKV), Rahuri , 647(17.90 %) documents from Vasanttrao Naik Marathwada Krishi Vidyapeeth (VNMKV), and 420 (11.62 %) documents from Dr. Balasaheb Sawant konkan Krishi Vidyapeeth , Dapoli.

Growth pattern of Nano science and Nanotechnology literature in India during 1990-2009 was analysed by karpagam *et.al.* The SCOPUS international multi-disciplinary bibliographic database has been used to identify the Indian contributions on the field of Nano science and Nanotechnology (Karpagam *et.al.*2011).

Objectives of study :

1. To identify the annual growth and distribution of documents published by faculty of VNMKV, Parbhani which are Indexed with Indian Citation index database.
2. To study the year wise Citation Analysis of documents published .
3. To identify most highly preferred journals for publication by faculty of VNMKV, Parbhani which are Indexed with Indian Citation index (ICI) database .

Limitations:

The following are the limitations to the study:

1. This study is confined to the Indian Citation Index database only.
2. Only Publications of faculty of VNMKV , Parbhani during the period 2004 to 2016 which indexed with Indian citation Index database are taken up for the study.

Methodology:

The investigator has adopted the following methodology in this study:

Selection of Database : At international level few databases like Scopus and web of Science are available for evaluation and measurement of scientific publication but coverage of Indian scientific publication particularly published in local national journals are negligible. Therefore, these databases are not adequate to evaluate/ analyze India's research productivity. The aim of author is to know the year wise growth and distribution , citation analysis of publications of faculty of VNMKV, Parbhani which are published in local National journals. Indian Citation Index (ICI) empowers scholarly community to map the knowledge published in local national journals/periodicals etc. Therefore author selected the Indian Citation Index Database to study the growth and distribution of research articles in local national journals this study.

Collection of Data: For this study author uses 13 years publication data from 2004 to 2016 collected from Indian Citation Index Database. Total 706 records of published articles with 484 citation was observed in Indian Citation Index (ICI) Database and same was analysed with different parameter for this study.

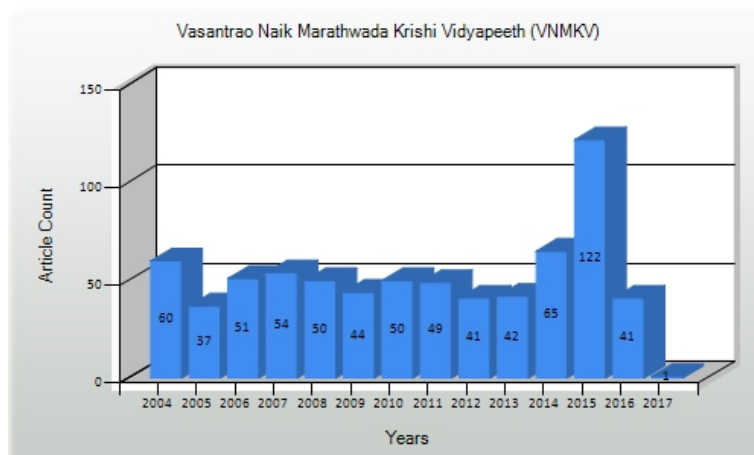
1. Year wise growth of Documents Published:-

The data regarding research productivity and contribution of faculty of Vasantrya Naik Marathwada University , parbhani are collected with special reference to Indian Citation Index (ICI) database and the same was analysed and presented in Table No.1

Table No. 1: Year wise published document

Sr.No.	Year	No. of documents published	Percentage
1	2004	60	8.50
2	2005	37	5.24
3	2006	51	7.22
4	2007	54	7.65
5	2008	50	7.08
6	2009	44	6.23
7	2010	50	7.08
8	2011	49	6.94
9	2012	41	5.81
10	2013	42	5.95
11	2014	65	9.21
12	2015	122	17.28
13	2016	41	5.81
	Total	706	100

It was observed from the above table that total 706 articles published by faculty of VNMKV during the year 2004 to 2016 in various documents which are indexed with Indian Citation Index (ICI) Database. The highest number of documents 122 (17.28%) followed by 65 (9.21%) and 60 (8.50%) were published in the year 2016 , 2015 and 2004 respectively.



2. Year wise Distribution of Citations

The year wise data regarding citations to various documents published by faculty of VNMKV , Parbhani are collected with special reference to Indian Citation Index (ICI) database. The same data was analysed and presented in Table No.2

Table No. 2: Year-wise Distribution of citations

Sr. No	Year	Articles	Citation	Citation density
1	2004	60	119	1.983
2	2005	37	58	1.568
3	2006	51	34	0.667
4	2007	54	61	1.130
5	2008	50	72	1.440
6	2009	44	35	0.795
7	2010	50	33	0.660
8	2011	49	32	0.653
9	2012	41	20	0.488
10	2013	42	11	0.262
11	2014	65	6	0.092
12	2015	122	3	0.025
13	2016	41	0	0.000
	Total	706	484	

It was observed from the above table that total 706 articles published by faculty of VNMKV during the year 2004 to 2016 in various documents which are indexed with Indian Citation Index (ICI) Database. Total 484 citations were received to these 706 articles .The highest 119 number of citations were received to articles in the year 2004. While decreasing trend from 35 citations to 0 citations was observed from the year 2009 to 2016.

3. Subject wise distribution of documents published:

Total 706 articles published by faculty of VNMKV during the year 2004 to 2016 in various documents which are indexed with Indian Citation Index (ICI) Database . The author analysed the distribution of these published documents in various broad categories of subject as per ICI database and same was presented in table No.3

Table No.3 :- Subject wise distribution of documents published by faculty of VNMKV

Sr. No.	Subject Category	Articles	Citation
01	Agriculture	466	353
02	Botany	118	99
03	Biological Science	107	65
04	Zoology	62	65
05	Toxicology	34	34
06	Environmental Science	32	2
07	Veterinary Science	29	24
08	Dairying ,Dairy, Animals & Animal Produce	28	25
09	Social Science	16	0
10	Engineering Science and Technology	13	0
11	Food and Beverage Science	12	13
12	Forestry	9	2
13	Education	8	0
14	Biotechnology	7	1
15	Health Science	7	0
	Total	948	683

It was observed from the table 3 that scientific faculty of VNMKV, Parbhani publish their publications under 15 different broad categories of discipline however maximum documents i.e.466 were published in Agriculture domain followed by Agriculture Botany (118) and Biological science (107) respectively. While there are very less i.e. less than ten are in the subject like forestry , education, Biotechnology and Health . It was observed that some of the articles are categorised and incorporated in more than one broad subject domain by ICI database because of its multidisciplinary nature there fore total no of documents in table No 1 and table No.3 are vary.

4. Classification of Documents :-

Documents published by faculty of VNMKV is classified by ICI in various categories such as research article, short communication, research note case study review article and research method. These document data was analysed and presented in following table

Table No.4 Classification documents published by faculty of VNMKV

Sr.No.	Document Type	Articles
1	Research Article	619 (86.68%)
2	Short Communication	58(8.22%)
3	Research Note	12(2.00%)
4	Case Study	9(1.30%)
5	Review Article	4(1.00%)
6	Editorial	3(0.43%)
7	Research Method	1(0.14%)
	Total	706

Indian Citation Index classified all documents in seven different classes. Table No.4 indicates that among these seven classes which type of class was preferred by faculty of VNMKV for publication of their documents. From above table it was observed that 86.68 percentage of document published by faculty of VNMKV in research article categories followed by 8.22

percent short communication type of class. Review articles and case study are very less and about 1percentage of total document published.

5. Ranking of Journals based on preference given for publication :-

During the year 2004 to 2016 there are total 706 articles published by faculty of VNMKV in various journals which are indexed with Indian Citation Index (ICI) Database. The author analysed the data and ranking of top 15 journals worked out based on the preference given for publication by the faculty of VNMKV , parbhani and same was presented in table No.5

Table No.5 :- Ranking of Journals

Sr. No.	Name of Journal	Articles	Citation
1	Journal of soils & Crops	116	85
2	International Journal of Tropical Agriculture	52	10
3	International Journal of Agriculture Sciences	36	22
4	Pestology	32	33
5	Trends In Biosciences	31	0
6	Annals of Plant Physiology	29	9
7	Asian Journal of Horticulture	22	5
8	International Journal of Plant Protection	22	6
9	Indian Journal of Entomology	19	34
10	Journal of Entomological Research	18	1
11	Ecology Environment & Conservation	17	0
12	Indian Journal of Social Research	16	0
13	International Journal of Plant Sciences	16	10
14	Journal of Oilseed Research	16	18
15	Indian Journal of Animal Research	12	12
	Total	454	245

From the above Table No.5 it was observed that the “ Journal of Soils & Crops” has preferred by the faculty of VNMKV , parbhani for publication and published 116 research articles and got first rank followed by 52 reearch articles published in“International Journal of Tropical Agriculture” and secured second rank . However “International Journal of Agriculture Sciences” has published 36 research articles and got third rank. It is observed that in top 15 journals total 454 articles published out of 706 research articles published in the journals which are Indexed with Indian citation index during 2004-2016 by the faculty of VNMKV, Parbhani.

Conclusion

Agriculture development of state depends on scientific and technological research of agricultural universities . The present study reflects the growth of scientific research of faculty of Vasanttrao Naik Marathwada Krishi Vidyapeeth , Parbhani . It is seen that there is a positive growth of research papers published and citations to articles from 2004 to 2016 by faculty of VNMKV, Parbhani. It was observed that faculty of VNMKV is very much aware to publish their research articles in journals which are indexed with Indian Citation Index Database having better impact factor and there is still scope to publish the research articles in the journals which are indexed with standard National & International Indexing databases having higher impact factor . It was found that majority of research articles published under broad agricultural category and contribution of research articles is more than any other type

of document published, it reflects that faculty of VNMKV contribute for the growth of scientific research in Marathwada region of Maharashtra State.

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