Chapter 13

Research Output on Maize (Zea Mays):
A Scientometric Study

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ABSTRACT

This chapter attempts to analyse quantitatively the growth and trend of Maize (Zea Mays) Cereal Crop research in terms of publication output as reflected in web of science database. During the period 2008-2017, a total of 16,217 papers were published by the scientists respectively on Maize Crop. The study reveals that the growth of literature follows the exponential growth pattern. USA is the top country in Maize research with its contribution of 4,797 papers, which is (29.6%) of the global research output of Maize research followed by Peoples Republic China with 2,912 papers (18%); India was the fifth position in the Maize research with 1,560 papers (5.3%) and has liner growth pattern. The most preferred journals were the Agronomy Journal with 658 papers (4.06%) followed by the Crop Science with 427 papers (2.63%). The authorship pattern reveals that co-authored papers accounted for 97% of total output.

INTRODUCTION

Maize (Zea mays L) is one of the most versatile emerging crops having wider adaptability under varied agro-climatic conditions. Globally, maize is known as queen of cereals because it has the highest genetic yield potential among the cereals. It is cultivated on nearly 150 m ha in about 160 countries having wider diversity of soil, climate, biodiversity and management practices that contributes 36% (782 m t) in the global grain production. Scientometrics deals with the output qualities in terms of organizational research structure, resource inputs and outputs. It is describe the discipline using the growth pattern and

other characteristics and also investigated the particularly in measuring and computing the emerging trust areas. In the present study, this is the first study in the field of Maize research taking scientometric.

REVIEW OF LITERATURE

Teli and Maity (2015) have analyzed the growth pattern of Higgs Boson literature during 2005-2014. The Scopus database has used to retrieve relevant data. Identified 4359 records contributed worldwide. The distribution of publications based on the year of production, country wise productivity, document type of the publications, Major subject categories, authors whose contribution is in the maximum level were studied. In India, the research in this field is infantile stage. The lacking on the contribution may be due to non- availability of international collaboration.

Bagalkoti (2015) have analyzed the study of academic rankings of the National Assessment and Accreditation Council (NAAC) accredited 50 Indian Universities output of publications in India extracted from Scopus database. This study explores that, 108666 papers during the study period 2001-2010. The average output is 2173 papers, in comparison the largest Number of papers 6533 (6.01%) was published by Jadavapur University, followed by Banaras Hindu University 6249 (5.75%). A total 336027 citations received, with an average citation per paper as 3.09. Utkal University scored highest average (9.23). According to collaboration, Anna University (7.22%) stands in the top place. This study provides the reader with a comprehensive understanding of a university, ranking schemes based on its methodological issues, and impacts on society. The rankings are used in policy and academic discussions.

Tripathi, Sharmaand Garg (2015)have focused analyzes publication output of India on cereal crops reflected by its coverage in Indian Science Abstracts (ISA) and CAB Abstracts during 1965-2010. This paper indicates that highest number of papers (43.80%) published on rice, followed by wheat (24.28%). The highest numbers of papers published in Indian Journal of Agricultural Science. Indian Agricultural Research Institute, New Delhi, Tamil Nadu Agricultural University, Coimbatore and Punjab Agricultural University, Ludhiana contributed about 7% of papers each. The major research was focused on 'genetic and plant breeding' (28.2%)followed by 'agronomic aspects' (27.9%). The authorship pattern reveals that Co-authored papers accounted for 90% of total output. The findings of the study will be beneficial for the scholars and scientists who are engaged in research of various disciplines of crop science as well as policy makers in the field of agricultural sciences.

Kumari, Amsaveni and Surulinathi (2015) have examined the global level perspective of Occupational Therapy research output during the period of 1989 to 2015, and the data extracted from the Web of Science database. 8095 publications were retrieved. This study explores, the highest number of records has found to be at 2013. Author's productivity dominates and there is a need of promoting single author productivity in this field. It found that in the year 2007,386 records have published with highest Global Citation Score of 6525. University of Queensland tops first in the ranking followed by the University of Toronto with high Global Citation Scores. In the country wise, distribution of publications the United States of America stood in first rank position and India holds the 25th position in the global ranking. India has to improve in the field of Occupational Therapy in future.

Rajneesh and Rana (2015) have examined research output of Computer Science Literature, articles published in the Source "Journal of the ACM", for 10 years in between 1999 and 2008. The study stated that a total number of 336 papers comprise of 10799 citations. The highest average citations per article were 37.25 the overall average of the citations per article is 32.14. Journals and conference proceedings

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