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CONTENT ANALYSIS OF 'HORTICULTURAL SCIENCES'

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ABSTRACT:

This paper attempted to highlights the quantitative assessment of status of the Journal by way of analyzing the various features in 'Horticultural Sciences'. During 2010 - 2016, a total of 178 articles were published in the journal 'Horticultural Sciences' by researchers in various countries.

KEYWORDS: Horticulture, Libraries, Agriculture, Prague (Czech Academy of Agricultural Sciences).



1. INTRODUCTION

Content analysis is rapidly becoming less of a tool to be used in the experimental manipulation of the communication process. In these instances of experimental studies, systematic changes in contents are made and documented through content analysis, and the audiences are observed for the effects of these changes.

The specific role to be played by content analysis is to organize for recall the world's store of recorded knowledge. Content analysis appears to have two general and major functions. The first is to provide the descriptive abstract of any documents at a level and of such a nature as will indicate what information may be found in it. The second is to provide guidelines in transforming document content for ease of bibliographic access.

The 'Horticultural Sciences' open access journal is an international peer-reviewed journal published quarterly under the auspices of the Czech Academy of Agricultural Sciences and financed by the Ministry of Agriculture of the Czech Republic. Published since 1976 (by 1999 under the Title 2 *ahradnictvi*).

2. OBJECTIVES OF THE STUDY

The main objective of the study is to analyze the contents of the journal of 'Horticultural Sciences' and make the quantitative assessment of status of the journal by way of analyzing the following features of journal.

1. To the find out year -wise growth of publication ,
2. To find out the authorship and collaborative trend,
3. To find out geographical distribution of research output

4. To find out organization wise distribution of publication

3. SCOPE & LIMITATION OF THE STUDY

The scope of study is restricted to the Horticultural Science published during 2010 to 2016. The papers presented in the journal are analyzed using content analysis technique. The present study is limited numbers of 178 papers published during 2010 to 2016.

4. HYPOTHESIS OF THE STUDY

The study consists of following hypothesis:

1. Authorship trend is towards multiple authored papers,
2. Czech Republic is the high productive country,
3. Majority of the affiliated institutions are from Czech Republic.

5. ANALYSIS OF “HORTICULTURAL SCIENCE”

In view of the Objectives of the present study, analysis of “Horticultural Science” is presented further (Horticultural Science, 2016).

5.1 Year-wise Publication Productivity and Collaboration Rate

The word publication means the act of publishing. Productivity refers to measures of output from production processes, per unit of input. Collaboration is recursive process, where two or more people or organizations work together towards an intersection of common goals.

Table No.1: Year-wise Publication Productivity and Collaboration Rate

Year	Single Authored Publication	Multi Authored Publication	Total No. of Publication	Collaboration Rate
2010	04	17	21	0.80
2011	01	20	21	0.95
2012	01	30	31	0.96
2013	02	27	29	0.93
2014	03	19	22	0.86
2015	01	26	27	0.96
2016	01	26	27	0.96
Total	13	165	178	0.92

It can be observed from Table No.1, that during 2010-2016 a total of 178 articles were published in the International Journal of the Horticultural Science by researchers in various countries.

5.2 Authorship and Collaboration Trend:

Authorship is an observable phenomenon reflecting the contemporary scholarly practices clearly showing the communication, productivity and collaborative patterns and influences among researchers even though their quantities and qualities are not well understood. Collaboration in researches said to have taken place when 2 or more persons work together on a scientific problem of project and effort, both physical and intellectual.(Gupta,1986)

Table No.2: Authorship and Collaboration Trend

Year	Single Author	Number of papers with various authorship										Total Publication
		1	2	3	4	5	6	7	8	9	10	
2010	04	03	05	05	02	01	01	-	-	-	-	21
2011	01	06	03	08	02	01	-	-	-	-	-	21
2012	01	10	06	06	04	01	01	01	01	-	-	31
2013	02	05	05	02	06	08	01	-	-	-	-	29
2014	03	05	03	03	03	04	01	-	-	-	-	22
2015	01	03	09	05	06	01	-	01	-	-	01	27
2016	01	05	04	05	05	04	01	01	-	01	-	27
Total	13	37	35	34	28	20	05	03	01	01	01	178
%	7.30	20.78	19.66	19.10	15.73	11.23	2.80	1.68	0.561	0.561	0.561	100

It can be observed from Table No.2 that, year wise authorship and collaboration trend is towards two–authored papers. Two authored papers account for 20.78%. Therefore, the hypothesis, “Authorship trend is towards multi authored papers.”(Hypothesis No.1) is valid.

5.3 Geographical Distribution of Research output

Geographical distribution of research output means the articles published from different countries. In political geography and international politics, a country is political division of a geographical entity. Frequently, but not exclusively, a sovereign territory, the term is most commonly associated with the notions of both state and nation, and also with government.

Table No.3 Country -wise Distribution of Articles

S.No.	Name of the Country	Publication	Percentage
01	Czech Republic	224	34.51
02	Poland	90	13.86
03	Serbia	77	11.86
04	China	38	5.85
05	Greece	36	5.54
06	Turkey	30	4.62
07	Spain	26	4.00
08	Italy	23	3.54
09	Denmark	17	2.61
10	USA	10	1.54
11	Hungary	09	1.38
12	Canada	07	1.07
13	Belgium	05	0.77
14	Japan	05	0.77
15	Slovenia	05	0.77
16	Portugal	04	0.61
17	Romania	04	0.61
18	Slovenia	04	0.61
19	Cyprus	04	0.61
20	Korea	02	0.30
21	India	02	0.30
22	Lithuania	02	0.30
23	Slovic Republic	02	0.30
24	Latvia	02	0.30
25	Croatia	02	0.30
26	Bosnia & Herzegovina	02	0.30
27	Egypt	02	0.30
28	Russian Federation	02	0.30
29	France	02	0.30
30	Sweden	02	0.30
31	Australia	01	0.15
32	Germany	01	0.15
33	United Kingdom	01	0.15
34	Austria	01	0.15
35	Estonia	01	0.15
36	New Zealand	01	0.15
37	Sierra Leone	01	0.15
38	Iran	01	0.15
39	Murcia	01	0.15
Total		649	100

It can be observed from Table No.3 that, there were as many as 39 countries carrying out research and produced 178 articles. Table No.3 provides ranked list of countries contributing to this field, the number of publication of each country and their share in percentages .Czech Republic is the top producing country with 224 publications (34.51) of the total output.

5.4 Institute wise Distribution of Articles Published

Institution is a society or organization for the promotion of science, education etc. An institute is a permanent organizational body created for a certain purpose. Often it is a research organization (research institution) created to do research on specific topics. An institute can also be a professional body. In some countries institutes can be part of a university or other institutions of higher education, either as a group of departments or an autonomous educational institution without a classic full university status, such as a University Institute.

Table No.4 Institute wise Distribution of Articles

S.No.	Name of the Institutions	No. of Publication	Rank
01	Faculty of Horticulture, Mendel University in Brno, Lednice, Czech Republic	55	1
02	Department of Vegetable Crops, Faculty of Horticulture and Landscape Architecture, Poznań University of Life Sciences, Poznań, Poland	37	2
03	Faculty of Agriculture, University of Novi Sad, Novi Sad, Serbia	35	3
04	Research and Breeding Institute of Pomology Holovously, Ltd., Hořice, Czech Republic	30	4
05	Crop Research Institute, Praha-Ruzyně, Czech Republic	24	5
06	Fruit Research Institute Čačak, Čačak, Republic of Serbia	24	6
07	Department of Horticulture, Faculty of Agriculture, University of Gaziosmanpasa, Tokat, Turkey	16	7
08	College of Landscape Architecture Beijing Forestry University, Beijing, China	14	8
09	School of Agriculture and Biology, Shanghai Jiao Tong University, Shanghai, China	12	9
10	State Key Laboratory of Crop Genetics and Germplasm Enhancement, Nanjing Agricultural University, Nanjing, China	12	9
11	Faculty of Agronomy, Mendel University in Brno, Brno, Czech Republic	12	9
12	Research Institute of Agricultural Engineering Prague, Prague, Czech Republic	12	9
13	Department of Plant Protection, Faculty of Agrobiolgy, Food and Natural Resources, Czech University of Life Sciences Prague, Prague, Czech Republic	12	9
14	Department of Vegetable Growing and Floriculture, Faculty of Horticulture, Mendel University in Brno, Lednice, Czech Republic	12	9
15	Department of Plant Biology, Faculty of Agronomy, Mendel University in Brno, Brno, Czech Republic	12	9
16	Faculty of Science, Palacký University in Olomouc, Olomouc, Czech Republic	11	10

17	Department of Post-Harvest Technology of Horticultural Products, Faculty of Horticulture, Mendel University in Brno, Lednice, Czech Republic	11	10
18	Department of Food Preservation and Meat Technology, Institute of Chemical Technology Prague, Prague, Czech Republic	11	10
19	Department of Virology, Crop Research Institute, Prague-Ruzyně, Czech Republic	11	10
20	Department of Plant Production, Technical University of Cartagena, Cartagena, Spain	11	10
21	Sustainable Horticulture in Arid Zone Group, CEBAS-Technical University of Cartagena, Cartagena, Spain	10	11
22	Department of Food Technology and Microbiology, Faculty of Technology, Tomas Bata University in Zlin, Zlin, Czech Republic	10	11
23	Department of Breeding and Propagation of Horticultural Plants, Faculty of Horticulture, Mendel University in Brno, Lednice, Czech Republic	10	11
24	Department of Food Biochemistry and Analysis, Faculty of Technology, Tomas Bata University in Zlin, Zlin, Czech Republic	10	11
25	Food Research Institute Prague, Prague, Czech Republic	10	11
26	Department of Horticulture, Faculty of Agrobiology, Food and Natural Resources, Czech University of Life Sciences Prague, Prague, Czech Republic	10	11
27	Department of Entomology, Crop Research Institute, Prague, Czech Republic	10	11
28	Viticulture Research Station, Karlštejn, Crop Research Institute Prague, Prague, Czech Republic	09	12
29	Department of Botany and Plant Physiology, Faculty of Agro biology, Food and Natural Resources, Czech University of Life Sciences Prague, Prague, Czech Republic	09	12
30	Department of Fruit and Vegetables Storage and Processing, Research Institute of Horticulture, Skierniewice, Poland	09	12
31	Department of Agronomy, Forest and Land Management, Faculty of Agriculture, university of Turin, Turin, Italy	08	13
32	Department of Horticulture, Faculty of Agricultural Sciences, Aarhus University, Aarslev, Denmark	08	13
33	Department of Ornamental Plants, Faculty of Horticulture and Landscape Architecture, Poznań University of Life Sciences, Poznań, Poland	07	14
34	Department of Hydroponic's and Aromatic Plants, Institute for Olive Tree and Subtropical Plants of Chania, National Agriculture Research Foundation of Greece, Chania, Greece	07	14
35	Advanced Drug Development Services, Brno, Czech Republic	06	15

36	Department of Vegetable Science and Floriculture, Faculty of Horticulture, Mendel University in Brno, Lednice, Czech Republic	06	15
37	Department of Zoology, Fisheries, Hydrobiology and Apiculture, Faculty of Agriculture, Mendel University in Brno, Brno, Czech Republic	06	15
38	Department of Cell Biology and Genetics, Faculty of Science, Palacky University Olomouc, Olomouc, Czech Republic	05	15
39	Department of Phytopathology, Faculty of Horticulture and Landscape Architecture, Poznan University of Life Sciences, Poland	04	16
40	Department of Plant Nutrition, Faculty of Horticulture and Landscape Architecture, Poznan University of Life Sciences, Poland	04	16
41	Department of Plant Breeding, Research Institute of Horticulture, Skierniewice, Poland	04	16
42	Open University of Cyprus, Nicosia, Cyprus	04	16
43	Department of Horticulture, University of Georgia, Athens GA),USA	04	16
44	Institutions Publishing 2 Publication 2x10	20	17
45	Institutions Publishing 2 Publication 1x 85	85	18
Total		649	

It can be observed from Table No. 4 that, there were 148 organizations involved in research activity. The organizations that have contributed in the publication during 2010-2016 include. **Faculty of Horticulture, Mendel University in Brno, Lednice, Czech Republic** topped the list with **55** publications followed by one institution with **37** publications. One institution with 35 publications, one institution with 30 publications, two institutions with 24 publications, one institution with 16 publications, one institution with 14 publications, seven institutions with 12 publications, five institutions with 11 publications, seven institutions with 10 publications, three institutions with 09 publications, two institutions with 08 publications, two institutions with 07 publications, three institutions with 06 publications, one institution with 05 publications, five institutions with 04 publications, 20 institutions with 2 publications and 85 institutions with single publication. Therefore the hypothesis **“Majority of the affiliated institution are from Czech Republic” (Hypothesis No.3) is valid.**

6 CONCLUSION

The 'Horticultural Sciences' open access journal is an international peer-reviewed journal published quarterly under the auspices of the Czech Academy of Agricultural Sciences and financed by the Ministry of Agriculture of the Czech Republic. Published since 1976 (by 1999 under the Title 2 ahradnictvi).

The highest numbers of articles 31 each were produced in 2012 respectively. Czech Republic is the top producing country with 224 publications (34.51%) of the total output. Authorship trend is towards multi-authored papers. Multi authored papers accounted for 92.69%. There were 148 organizations involved in research activity.

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