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### Content analysis of fisheries related information in newspaper and magazine

<sup>1</sup>SV Jadhav, <sup>2</sup>AS Kulkarni, <sup>3</sup>AT Markad, <sup>4</sup>VB Sutar and <sup>5</sup>SD Meshre

<sup>1</sup>B.F.Sc. Graduate, College of Fishery Science, Udgir, Latur, Maharashtra, India

<sup>2</sup>Assistant Professor, Department of Fisheries Extension, Economics and Statistics, College of Fishery Science, Udgir, Latur, Maharashtra, India

<sup>3</sup>Assistant Professor, Department of Fisheries Engineering, College of Fishery Science, Udgir, Udgir, Latur, Maharashtra, India

<sup>4</sup>Assistant Professor, Department of Aquatic Environment Management, College of Fishery Science, Udgir, Latur, Maharashtra, India

<sup>5</sup>Assistant Professor (CHB), Department of Fish Processing Technology, College of Fishery Science, Udgir, Latur, Maharashtra, India

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Corresponding Author: AS Kulkarni

#### Abstract

Content analysis is a method widely used to analyze the content and its features. A study was carried out to analyze the content of agriculture and allied sector and area wise fisheries information in newspaper and magazine during December, 2022 to December, 2023. The study was conducted to collect the information of articles of agricultural and allied sectors published in leading newspaper and online magazine. In addition to this, specific area wise information of fisheries sector were also studied. Data was collected from hard copies of newspaper and soft copies of online magazine. For study purpose *Agrowon* and *Krishi Panan Mitra* Magazine were selected as leading media and were analyzed by using frequency method. Findings were revealed that majority of information was published in *Agrowon* newspaper on agriculture (30.33%) followed by veterinary (27.21%), horticulture (28.77%), fisheries (10.02%), dairy (5.98%) and floriculture (2.86%). Among fisheries sector, majority of information was published on aquaculture area (63.63%) followed by Ornamental (18.18%), Fish processing (5.19%), Aquatic Animal Health Management (5.19%) and Aquatic Environment Management (3.89%). It is revealed that less coverage was given on fisheries sector as compared to other sectors. More number of articles of fisheries sector to be increased to improve overall knowledge of farmers.

**Keywords:** Content analysis, fisheries, newspaper, magazine

#### Introduction

India is the third largest fish producing country and second largest aquaculture producer. India is also top in inland capture fish producing nation in the world after china. India accounts 16% inland and 5% in marine fish in total global fish production respectively. The blue revolution in India demonstrated the importance of the fisheries and aquaculture sector. The fish production in India has been increased from 56.56 lakh tones in 2000-01 to 162 Lakh tons during in 2021-22. In 2021-2022, India has produced total fish production of 162 Lakh tonnes which includes 121.21 Lakh tonnes and 41.27 Lakh tones from Inland and marine sector respectively (Handbook on Fisheries Statistics (2022)). Fisheries and aquaculture is considered as a sunrise sector and is envisaged that this sector will play a significant role in the Indian economy in near future too. For development of any sector, the adoption of technology is essential and ultimately transfer of technology is further more important component. Dissemination is very important process in extension services, especially the mass media is powerful and effective tool in agricultural and allied sector

in information services in rural areas. Majority of rural population in India depends on agriculture and allied activities for their livelihoods (Mohanty, 2011) [6]. The mass media includes print as well as electronic media. Print media in the form of newspaper and magazines are widely used in rural areas as the printed materials are more convenient to use and maintained as a document in long term. Information on agriculture and allied sector enhances the knowledge and performance of farmers and other stakeholders. Technical information can only be beneficial until they are properly and timely transferred to the end users. Further, method of Content analysis is used to analyze the content and its features for understanding the extent of information coverage in social media for proper dissemination point of view. Print media like newspaper and magazines are very useful in reaching a large number of end user in a faster way. According to Patrika (2007) [7] print media including newspapers, farm magazines, bulletins, pamphlets, leaflets etc have been found as an effective dissemination of agricultural information in India. Chidera and Vajrathan (1973) [4] opined that the mass media especially print media are extremely important in

stimulating a sense of environment. Print media provides an excellent opportunity to communicator to convey precise and timely messages, Shirke and Sawant (2006) [9]. Newspapers are very important in inducing the public to change attitudes, become more aware, increase knowledge and skills, and learn about different topics including those in agriculture. Kuldip Kumar et al. (2007) [5] opined about the need to spare more space and more number of agricultural news in paper. These newspaper plays pivotal role of providing information on latest technology on local, state, national and global level. Atoma (2008) [1] conducted a study about the agricultural news in the print media available. Agricultural education news creates awareness among educators, students, and farmers, and therefore the quality of the news must always be reviewed (Balarubini, M. and Karthikeyan, C. 2014) [2]. Specific content analysis of fisheries articles in print as well as electronic media is not hence, the present study on content analysis of fisheries related information in newspapers and magazines were carried out in order to gain insight over frequency and analyze specific area wise coverage in the print media and electronic media. The objective of the study is as follows

**Objectives**

1. To assess the frequency of articles of fisheries sector in comparison with agricultural and allied sector.
2. To analyze the area wise information among the fisheries sector.

**Materials and Methods**

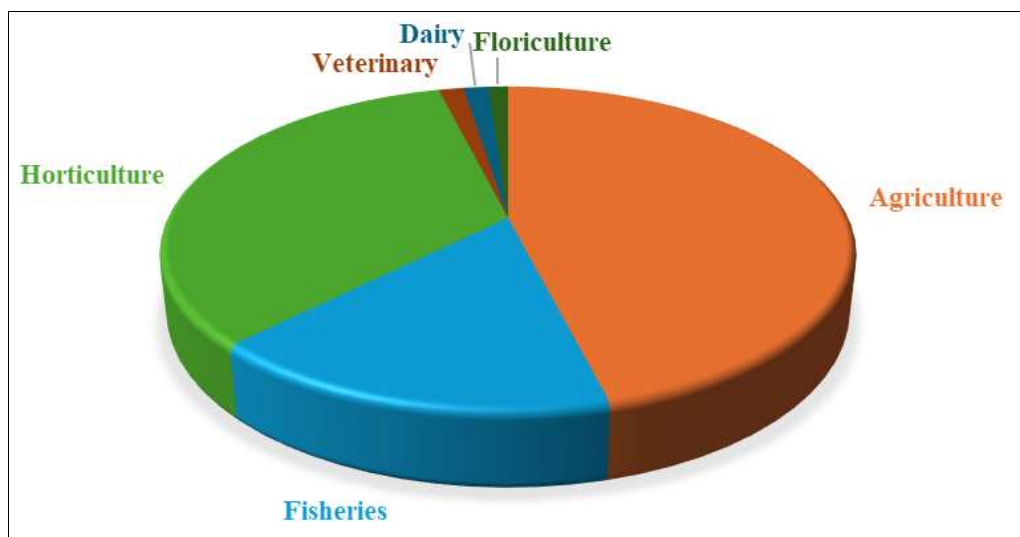
Berelson (1952) [3] mentioned about the Content analysis, as a research technique for the objective, systematic and quantitative description of manifest content of communication. The content analysis of one newspaper i.e. *Agrowon* and one online magazine i.e. *krishi panan* were selected as they are more popular among the farmers in the entire Maharashtra state. Content analysis was carried out by analyzing the contents of issues December, 2022 to December, 2023. The content in the articles were broadly categorized in sector wise i.e. agriculture, fisheries, horticulture, floriculture, veterinary and dairy. Further the fisheries articles were categorized into Aquaculture, Ornamental fisheries, Fish Processing Technology, Aquatic Environment Management, Aquatic Animal Health Management. Data were collected from selected newspaper through hard copies as well as soft copies of online magazine. Then data was analyzed by using frequency method.

**Results and Discussion**

The content analysis of newspaper and online magazine were carried out by using frequency method. Analysis of sector wise distribution was carried out. Further, analysis of area wise information of fisheries sector was carried out.

**Table 1:** Sector wise distribution of information in Agrowon (N=768)

Month	Agriculture	Fisheries	Horticulture	Veterinary	Dairy	Floriculture
January	26	07	21	15	07	02
February	22	08	23	26	06	01
March	37	10	32	18	05	00
April	35	07	27	27	08	04
May	28	05	18	14	03	03
June	22	10	16	18	04	03
July	09	12	17	10	02	00
August	16	05	21	18	03	02
September	05	01	16	17	04	02
October	09	04	13	14	00	03
November	12	00	05	14	00	01
December	12	08	12	18	04	01
Total	233	77	221	209	46	22
Total%	30.33%	10.02%	28.77%	27.21%	5.98%	2.86%



**Fig 1:** Sector-wise news contribution in Agrowon

**Table 2:** Area wise distribution of information about fisheries in Agrowon (N=77)

Month	Aquaculture	Fish Processing Technology	Ornamental	Aquatic Environment Management	Fish Engineering	Aquatic Animal Health Management
January	06	00	01	00	00	00
February	01	02	05	00	00	00
March	04	01	05	00	00	00
April	04	00	03	00	00	00
May	04	00	00	00	01	00
June	08	00	00	01	01	00
July	10	00	00	01	01	00
August	02	01	00	01	00	01
September	01	00	00	00	00	00
October	01	00	00	00	00	03
November	00	00	00	00	00	00
December	08	00	00	00	00	00
Total	49	4	14	3	3	4
Total%	63.63%	5.19%	18.18%	3.89%	3.89%	5.19%

Different categories of articles in Agrowon newspaper were classified and presented in Table 1. It is revealed that majority of articles were published on Agriculture sector (30.33%) followed by horticulture (28.72%), veterinary (27.21%), fisheries (10.02%), dairy (5.98%) and floriculture (2.86%). Further, area wise distribution of information of fisheries sector is classified and depicted in Table 2.

Majority of articles were published in Agrowon newspaper on Aquaculture (63.63%) followed by Ornamental fisheries (18.18%), Fish Processing Technology (5.19%), Aquatic Animal Health Management (5.19%) and Aquatic Environment Management (3.89%) and Fish Engineering (3.89%).

**Table 3:** Sector wise distribution of information in *Krishi Panan Mitra* Magazine (N=274)

Month	Agriculture	Fishery	Horticulture	Veterinary	Dairy	Floriculture
January	11	06	13	02	01	00
February	12	01	10	01	00	00
March	13	08	10	00	00	02
April	11	03	14	00	02	00
May	16	07	10	01	00	00
June	13	03	09	00	01	00
July	07	02	05	00	00	01
August	07	03	03	00	00	00
September	09	03	04	00	00	00
October	09	06	05	00	00	00
November	08	01	06	00	00	00
December	08	02	03	00	00	00
Total	126	45	92	4	4	3
Total%	45.98%	16.42%	33.57%	1.4%	1.4%	1.09%

**Table 4:** Area wise distribution of information about fisheries in *Krishi Panan Mitra* Magazine (N=45)

Month	Aquaculture	Fish Processing Technology	Ornamental	Aquatic Environment Management	Fish Engineering	Aquatic Animal Health Management
January	04	02	00	00	00	00
February	00	00	01	00	00	00
March	03	00	00	04	00	01
April	02	01	00	00	00	00
May	05	01	00	00	00	01
June	01	00	00	02	00	00
July	00	01	01	00	00	00
August	02	00	00	01	00	00
September	01	01	00	00	01	00
October	04	02	00	00	00	00
November	00	00	00	00	00	01
December	02	00	00	00	00	00
Total	24	08	02	07	01	03
Total%	53.33%	17.77%	4.44%	15.55%	2.22%	6.66%

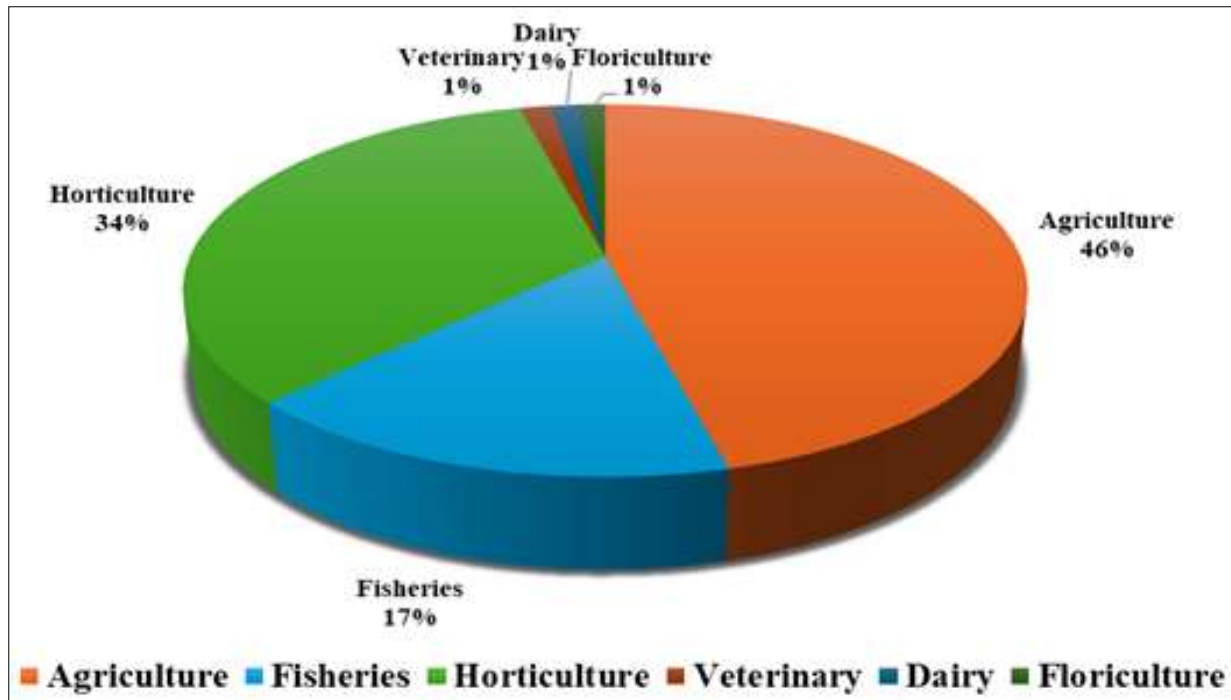


Fig 2: Sector-wise news contribution in *Krishi Panan Mitra Magazine*

Similar categories were made for content analysis of *Krishi Panan Mitra Magazine* which Online Magazine and presented in Table No.3. It was found that majority of articles were published on Agriculture sector (45.98%) followed by horticulture (33.57%), fisheries (16.42%), veterinary (1.4%), dairy (1.4%) and floriculture (1.09%). Further, area wise distribution of information of fisheries sector is classified and depicted in Table. No.4. Majority of articles were published in *Krishi Panan Mitra Magazine* on Aquaculture (53.33%) followed by Fish Processing Technology (17.77%), Aquatic Environment Management (15.55%), Aquatic Animal Health Management (6.66%) Ornamental fisheries (4.44%), and Fish Engineering (2.22%).

The results from newspaper and online magazine indicated that articles of fisheries sectors are less as compared to agriculture, horticulture and veterinary sector but higher than dairy and floriculture. The maximum information on aquaculture area is published as compare to ornamental fisheries, fish processing technology, aquatic environment management, aquatic animal health management, ornamental fisheries, and fish engineering. This is might be due to increasing awareness about aquaculture practices among the farmers. Apart from this, priority can be given to publish success stories and question and answer in the area of fisheries so as to attract the farmer group to update with latest technologies. Suresh (2002) <sup>[10]</sup> also reported that farmers prefers success stories and question & answer format. According to Pathak *et al.* (2022) <sup>[8]</sup>, the most useful form of print media are pamphlets, magazines, newspaper and poster. On the basis of opinions given by several researchers, for proper dissemination of technical information to the farmer community, print media along with digital media can be used widely.

### Conclusion

Print and electronic media plays an important role in

providing information about agriculture and allied sector to the rural communities. The content analysis of Agrowon newspaper and *Krishi Panan Mitra* magazine revealed that majority of articles were published on agriculture and less coverage was given on fisheries sector. More number of articles of fisheries sector to be increased for timely and effectively dissemination of information to the farming community. Further, information of varied subjects of fisheries to be published to fulfill the demand of end users. Articles related to fundamentals of aquaculture is to be incorporated along with latest technologies so that it would be convenient for startups and existing fish farmers to understand and adopt the technology. It is necessary to focus on areas like fish health management and post-harvest technology, marketing management etc. to increase overall knowledge of the farmers.

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