Agriculture being a key sector of the Indian economy needs immediate attention by the media always. It cannot be ignored at any price. The agriculture related developments, issues and demands are to be reported instantly. Of all the media available, newspapers are low cost medium of communication and have the tendency to spread the information quickly to the masses. The language dailies are the most powerful channels of information dissemination among the masses. The language press has significant role to play in information dissemination in the rural areas where
predominance of agriculture is clear and issues of agriculture and allied areas form an important base for the news coverage. From time to time many surveys/content studies have been conducted by various people from the academic, media and agricultural sector to analyse the content in various media from development communication point of view. Some of the similar studies are given below:

According to Singh (2003) Newspapers, especially the language papers can play a vital role in transferring agricultural technology to the rural masses. He further suggested that for the success of this medium, suitable and interesting material along with illustrations and photographs must be published. Press can help in creating a link between the policy makers, bureaucracy and farmer’s; it is the second line of conversion of scientific knowledge into information for farmer development programs.

Das and Mishra (2002) found that health and nutrition accounted for nearly two percent of the news items, while sensational stories made up for 50 percent of the news items. It has also been noticed that coverage of developmental news is less as compare to the other news. At the same time it is also true that printed matter can facilitate the transfer of knowledge and its retention for later use. Newspapers can quickly spread any piece of information to a large number of people. Research’s conducted regarding diffusion of innovations have clearly established that press plays very significant role in creating awareness and interest regarding innovations among the people. Printed matter can be preserved for life. Surveillance of the environment is one of the main functions of the press. It helps in quick transmission of the news to near and far off places. But surveillance through press can also work as dysfunctional sometimes which can further harm the welfare of the society. Printed matter can generate discussion and interest among the masses. Due to improvement of communication facilities, almost all the villages have regular supply of newspapers.

Newspapers provide timely information to the farmers about their various problems along with the solutions. The adoption of new technology, use of fertilizers, pesticides, crop rotation etc. are taught to the farmers from time to time. This in result helps in increasing the agricultural production which further leads to the growth and
development of agricultural sector. The reporting about agriculture and allied activities falls under the category of Development Communication.

3.1 Studies related to Content Analysis of Agricultural Content

According to Ahuja and Chabbra (1992) “Development Communication is that branch of Journalism which deals with the dissemination of information on the economic, social and political developments taking place in society from time to time. ‘Agriculture’ being the major occupation of the people and greatest contributor to the economic growth of our country, falls in the dimension of development communication.”

“In all of these activities, the media have an opportunity to set a good example of civility. If the media are direct and clear and forceful without being shrill or strident or petty, they not only have higher promise of effectiveness in their own endeavours, but they provide a pattern through which other elements in the society will perhaps be more inclined to be relatively more rational in demands, statements and actions.”

H. Zinche (1964) in his work reported that the press and radio were amongst the forces which mostly influenced the public opinion.

S.M Patel and M.N Patel (1972) indicated that when the content was printed with 18 point font size, 94.87 percent farmers were able to read 16-17 words more per minute as compared to the content printed with 12 point font size where only 53.84 percent farmers were able to read.

D. S Shahpuri (1972) in his thesis analysed the content of farm news by Punjabi Press and found that dailies like Punjabi Tribune and Ajit gave 5.52 percent and 5.97 percent of its total space to farm coverage respectively. He found out that ‘Punjabi Tribune’ did not publish any editorial on agriculture and majority of its space was covered by advertisements, news and articles.

Ernst and William (1972) selected three newspapers on the basis of ‘level of interest’ a national paper, a metropolitan paper and a small town paper. It was found that
proportionally, the farm coverage in the national paper was four times as much as the small town paper and almost three and half times as much as in the metropolitan paper.

John V. Vilanilam (1975) conducted study on two newspapers viz. *Times of India* and *Malayala Manorama* and found that two leading newspapers considered parliament and State Legislature, strikes, personal news of ministers, inaugurations, inter-party political affairs etc. as more newsworthy and significant than what is not happening in the fields of family planning, labour welfare, agriculture, land reforms, health, hygiene, education and literacy.

B. S Sidharthamaiah et al (1976) in his study observed that 61.54 percent of farmers had radio sets and nearly one fifth of them subscribed daily newspapers. As many as 58.33 percent of newspaper subscribers were below the age of 30. A higher percentage of newspaper subscribers (79.17%) read agricultural information daily in contrast to non-subscribers. About 54.10 percent read the agricultural news occasionally.

Bhupinder Dhillon (1982) in his thesis reported that *Ajit, Jagbani* and *Punjabi Tribune* devoted 1.05, 1.20, 2.74 % of their total news space to agricultural news respectively. The agricultural news items appeared 87 times in daily *Ajit*, 116 times in *Jagbani* and 146 times in *Punjabi Tribune* in 120 issues each.

Harleen Sodhi (1982) observed that *Indian Express* and *The Tribune* devoted 2.60 and 2.30 % of their total news space to agricultural news items. She concluded that maximum agricultural information was covered in terms of agricultural marketing area. She further reported that 4.35 to 6.29 % of the news items appeared in the first page of the two newspapers.

Sidhu *et al* (1983) studied the coverage and contents of the agriculture in relation to other fields of development to assess the role and effectiveness of newspapers in the advancement of India. They reported that total space provided to agricultural content in general was much less than the coverage of political activities and advertisements.
It was also found that coverage of agricultural content was higher in regional than the national newspapers.

B. D Rai and C. L Choubey (1985) conducted a study on credibility, usefulness and utilization of communication sources and channels as perceived by farmers and farm women and found that the respondents considered printed literature to be more authentic than verbal messages.

N. Kumar (1992) in his article reported that printed material helped to provide information quickly and economically and therefore these materials were useful as teaching aid. It was further revealed that higher proportion of respondents (45.61%) perceived printed farm advertisements to be moderately readable and 26.32% perceived them as highly desirable.

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Nupur Kurkretty and B.B Singh (1994) studied the pattern of utilization of mass media for obtaining agricultural information. They found radio as the most popular mass media among 73.72 percent respondents, followed by TV, cinema, newspapers and films. Agriculture based magazines were not used to gain information in the village. Radio, TV and newspapers were found to be the most preferred sources of getting information related to agriculture. At the same time, agricultural magazines or pamphlets were not preferred by the villagers.

L Preetha and R. S Karippai (1996) in their article found that total coverage of the agricultural news items published by Mathrubhumi and Malayala Manorama dailies with respect to total item coverage was merely 1.33 percent and 0.84 percent respectively.
Singh (1996) in his study on the content analysis of coverage of agricultural and rural development issues in four English Dailies namely *The Hindu, The Times of India, Hindustan Times and Indian Express* concluded that small coverage given to these issues was due to the fact that these newspapers do not have substantial circulation in the rural areas and professional interests of the newspapers are not served in any way by giving such news. Further it was also found that most of the content of agricultural and rural reporting was related to economic aspects rather than to the agricultural research and problems. The Hindu was the only paper which regularly gave weekly page on various aspects of agriculture including the latest information in the field of research.

Rodriguez et al (1997) in their survey showed that farm operators relied heavily on local media and 95 percent of the respondents obtained safety information from newspapers and magazines.

O.P Mishra and O.S Verma (1998) analysed the contents of agricultural information covered by Indian Dailies and found that maximum coverage was given by *Amar Ujala* (3.39%) followed by *Dainik Jagran* (2.91%), *National Herald* (1.41%), *Indian Express* (1.24%), *The Statesman* (0.85%), *Punjab Kesari* (0.70%), *Times of India* (0.66%) and *Hindustan Times* (0.54%). They concluded that agricultural information coverage in local dailies is more as compared to national and regional dailies.

P. Pawar and S. Gunjal (1999) in their work have analysed the communication media utilization by the grape growers of Nasik district of Maharashtra and found that 81.45 percent growers used the print media followed by the electronic media 77.26%.

L. Das and S.K Mishra (2002) in their work have come up with the fact that health and nutrition accounted for just two percent of the news items, sensational and crime stories are getting prominence over any kind of developmental news.

Singh *et al* (2003) studied the media use habit of farmers in Haryana and found that all of them had access to radio, T.V, folk songs, folk theatre and fairs followed by newspapers (82%), puppet show (58.5%) and farm magazines (36.5%). The findings
of the study indicated that majority of the respondents had an access to media combination i.e. Radio and T.V followed by those who had four media combinations i.e. Radio, T.V, farm magazines and newspapers at home.

R. Singh (2003) has opined “Newspapers, especially the vernacular press can play a very significant role in transfer of agricultural technology.” Reader’s responses received and the results of the surveys have confirmed that agricultural information provided by regional press is playing a successful role in the transfer of useful technology in a timely and effective manner. He further suggested that for the success of this medium, suitable and interesting material along with illustrations and photographs must be published. This can bring about the desired impact on the farmers.

Singh and Chandra (2004) in their study have revealed that agricultural socio-political news, agro-climatic conditions, agricultural marketing and prices were so far given maximum coverage than the news of horticulture & vegetables, animal husbandry, crop production innovative new technological informations etc, while liking and interest of the farmers differed from the policies adopted by newspapers. Farmers really enjoyed and benefited in reading news of horticulture, vegetable and animal husbandry which concerned to increase the production and net income. But such news was extremely spares in all newspaper during study period. Hence the need based agricultural information should be incorporated with more space than other news items in newspaper to accentuate intensive agriculture on sustainable basis and welfare of the farmers.

Usharani Narayana & Suresh Kumar (2009) in their study of Kannada language Dailies revealed that Prajavani tops the list with highest coverage of agricultural news (4.61%) followed by Vijaya Karnataka (4.58%), Samyukta Karnataka (2.62%), Udayavani (1.53%) and Kannada Prabha (1.48%). Thus Prajavani and Vijaya Karnataka comparatively devoted more space than other three newspapers. By and large the agricultural content in all the Kannada newspapers is very low when one
compares with the coverage that political news, sports news and crime news received in the same newspapers during the same period.

Murthy et al (2010) in their study on first page priorities of Indian print media reporting revealed that the Indian print media too had acquired the contours of market driven journalism. Whereas the *Times of India* with its strong market orientation reflected all the important characteristics of market driven journalism, *The Hindustan Times, The Indian Express* and *The Hindu* remained in a transition phase showing signs of already acquired contours of market driven journalism in the descending order. The first page priority was given to political followed by the crime and legal stories in all the selected papers variedly. Agriculture was not an area of utmost priority for any of the papers.

Patil and Nirban (2013) in their study of a Marathi magazine ‘Krishi Panan Mitra’ have concluded that space devoted to articles in the magazine was adequate, but the space for articles on agricultural marketing was comparatively low. Further, space devoted to news was adequate, but variety of news needs to be published. Space covered by news about agricultural marketing was adequate which shows that the magazine gives due weightage to agricultural marketing news. Further proper emphasis seemed to be given to advertisements about various governmental schemes meant for agricultural development. Since the magazine was devoted to agricultural marketing, more emphasis needs to be given on market prices to benefit the farmers to take the right decision about marketing of their produce.

A. Tajuddin and S. Mohan (1989) studied the transfer of technology to the farmers through method demonstrations, publication of articles and write ups in various magazines, journals and newspapers both in English and in regional language (Tamil) and also through official correspondence. The results revealed that majority of enquiries (67.74%) were in response to the publications or write ups in magazines/journals and newspapers. Among the publications, 77.78% enquiries were due to publications in English. Among the publications in the regional language, the daily newspapers had better responses as compared to monthly magazines.
One can use these publications along with other methods and media to reinforce the message. Rural Press refers to those newspapers and periodicals operating in and for country side covering rural themes and satisfying the tastes of rural readers. Content of such a paper focuses mostly on rural community, their socio-economic and cultural, educational problems, their thinking and aspirations. Such newspapers use spoken language or idioms of the rural readers. It is press of, for and by the rural people in their own languages and themes of interest.

3.2 Studies related to Farm Journals/Periodicals

Farm Journals are considered to be important tool to disseminate relevant development messages to the rural audience. The first farm magazine in Hindi Krishi Sudhar was brought out from Agra (1914) followed by Krishi (1918). Agriculture and Livestock was started by Imperial Council of Agricultural Research by 1930, which was later renamed and published as Indian Farming. Bihar Government had initiated Gaon in 1938. State Agricultural Universities publish farm journals for the benefit of farmers within the region. Changi Kheti, Haryana Kheti and Shetkari are some examples. There are many studies conducted on the impact of periodicals/journals on the farmers. As J.S Dhillon (1968) in his thesis concluded that the farmers of Punjab ranked PAU periodicals at first place, followed by extension workers and newspapers in terms of relative use made by them.

N Shyian (1985) studied the comparison of Progressive Farming with Changi Kheti farm journals and observed that the readers of Changi Kheti had high level of self-participation in farming, highly mechanized their farms, and took more part in social activities, highly exposed to mass media and more innovative than the readers of Progressive Farming.

G.S Saha (1989) revealed that number wise illustrations had highest share (42.30%) followed by articles (41.22%) in Indian Farmer’s digest. The space distribution was maximum (76.79%) on articles followed by advertisements (12.79%). Among articles, agriculture had highest frequency (49.56%) followed by agricultural engineering (21.74%).
N Joshi and S N Laharia (1990) analysed the contents of Krishi Darshan programme of Doordarshan Kendra, Delhi. They selected 40 telecasts and found that photographs, charts, field specimens and posters were used as visuals in the programme. In terms of quality most of the visuals (72.77%) were good. However, only 52 percent of the photographs were rated good.

M.S Nataraju (1991) found that agricultural articles enjoyed the largest share in both the farm magazines viz. Krishivignana (60.3%) and Krishiloka (53.5%). In both the magazines maximum space was allotted to agricultural articles followed by animal husbandry.

Ton (1991) reported that the technology transfer can be achieved through publications, newspapers, radio and television networks and communication through the printed media can be tailored to specific clientele needs by understanding the physiological response and real information demands of farmers. The approach brings to the farmers new information quickly and is not only more cost effective but also faster.

B. L Hamblen (1992) identified information regarding the perceptions of Colorado farmers and found that magazines, newspapers, mass media and Cooperative Extension Service were top ranked methods of receiving information for both the present and the future.

S. M Badran and M.H Esmat (1996) reported that agricultural extension magazines and daily newspapers were used by the majority of extension workers for data presentation and analysis.

H. Sarma and B. Sarma (1996) reported that the respondents usually read the whole newspaper and 70 percent of them felt that the information as important for them. A majority of the respondents (79%) expressed that the newspaper was easy to understand and liked its present size and format. About one third of the respondents wanted that the number of pages be increased. They further suggested that the newspaper should include the slogans on current topics, news items, related
advertisements, price list of agricultural commodities, use of illustrations etc. which could form basis for its further improvement.

C.S Arneja and D. P Singh (1998) reported that 69.64 % respondents considered the contents of farm information, given in Indian Farming (monthly magazine) as fully practicable, 19.64 % as partially practicable and 10.72 % considered them little practicable.

Mc Henry (1996) studied the depictions of environmental issues in a German farming newspaper and the main aim was to consider the argument to which the individual farmers are exposed when they read the paper. He reported many interwoven arguments which included traditional and agricultural discussions as well as the environmental ones.

3.3 Studies related to the effects of Green Revolution

Green Revolution Randhawa et al (1974) reported that the Green Revolution in Punjab benefited all farmers, big, medium and small. It had not only benefited the farmers but also farm labourers who command high wages in cash and are also fed by the farmers. The phenomenal increase in production of food grains has not only saved the country from a grave political crisis but also provided stimulus to the economy. The price support policy for wheat adopted by the Government of India is a key factor which has assured the success of the Wheat Revolution.

Chaudhary and Aneja (1991) concluded that the green revolution led to breakthrough in food grains production in Haryana. But the unscientific use of modern technology resulted in a number of problems. Over exploitation of land and water resources led to deterioration of soil health, created nutritional imbalances and distributed the natural hydrology, particularly in intensively irrigated areas.

Singh and Sankhayan (1991) found that crop pattern in the Punjab has been shifting towards wheat-paddy and wheat-cotton rotations depending upon the suitability of the area for paddy and cotton. The requirements for irrigation water are increasing there also but not the supply and therefore shortages are being felt over time.
Khatkar, Chamola and Manocha (1991) while examining the post green revolution scenario in Haryana agriculture and concluded that the existing crop pattern is mainly rice-wheat rotation and indiscriminate use of water had created large scale ecological imbalances.

Joshi and Tyagi (1991) have examined the sustainability of existing farming system in the Punjab and Haryana and calculated that the rate of changes in production and crop yields of important crops (wheat and rice) has slowed down in these states. Sharma, Bhatti and Singh (1991) have highlighted that the post-green revolution changes in Himachal Pradesh have led to non-sustainable use of land resources.

Deepak Pental in an article has stated that India today requires another green revolution, which is based on a low input-high output model, is sustainable and resilient to climate change. The country will have to use the best of science, technology and innovation to meet these.

There have been many communication projects undertaken in the past to provide support to agriculture in one form or the other.

3.4 Case Studies of Communication Support to Agriculture

**Project Village Chhatera:** The project popularly known as Chhatera project focused its attention on a small village ‘Chhatera’ near New Delhi. The Hindustan Times started a fortnightly column describing life in village Chhatera. A team of enterprising reporters wrote about the village with rare sensitivity and perception, giving detailed story of rural situation. They wrote about the village activities and even reported the problems of the village. The problems of erratic power supply, rainfall, village disputes etc. were reported with good photographs. Even the view points on controversial topics were taken. This proved helpful in bringing about the required development in the village and making the project a successful venture.

**Batabaran-A wall newspaper:** The Nepal Forum of Environmental Journalist with assistance from the World Conservation Union has been publishing a wall newspaper, ‘Batabaran’ with the objective of providing news to rural areas and to create environmental awareness. The major focus is on simple text, real life stories and lot
of pictures and graphics so that the readers in rural areas can understand easily. It caters to the needs of large majority of new-literates and influential ones. The newspaper also publishes issues of national and international events related with environment. Villager’s opinion about the content and presentation of the paper are taken regularly by members of NFEJ. The wall newspaper has been successful in providing villagers with relevant information and support for literacy in Nepal.

**Agricultural Reporting in Kerala:** ‘Mathrubhoomi’ one of the leading dailies threw open one page every week for reporting agriculture and allied topics, with the help of scientists of the state department and Agricultural University. It is usual in Kerala that newspapers publish articles on agriculture once every week. Kerala Agricultural University has taken steps to avail of the opportunities offered by the newspapers. They provide regular features and exclusive materials to newspapers. The University has also taken steps to appoint scientists for this purpose.

### 3.5 REFERENCES


