Increased vegetative growth through talled plants, production of more number of leaves and subsequent increase in photosynthetic source were the multiple reasons for high biomass and dry matter production (Table 1) under high density conditions (1, 11, 111 plants ha⁻¹). Though the growth parameters were higher, the seed yield was less. The seed yield under 60 x 15 cm spacing was 595 kg ha⁻¹ and 620 kg ha⁻¹ under 90 x 15 cm and the highest seed yield under wider spacing (120 x 15 cm) was 782 kg ha⁻¹. It could be primarily due to the production of lesser number of secondary (or) fruit bearing branches and further severe competition among plants resulted in mutual shading led to abortion of reproductive structures. Akinola and Whiteman (1976) reported that greater competition among plants due to high population in legumes resulted in reduced seed yield.

Green manure responded well to phosphorus application. Among the various levels of phosphorus, 50 kg ha⁻¹ promoted better growth and utilization of applied phosphorus. It helped the plant to produce higher values of all the morphometric paramters studied. Higher levels of phosphorus application (50 kg ha⁻¹) increased the seed yield by 24.48 per cent in SWM season and 24.2 per cent in summer in *Sesbania* species (Table 3). The yield increase with the application of phosphorus was due to marked increase in the fruit

bearing branches. The result was in concsonance with Singh (1971).

In conclusion it may be stated that raising of *S. rostrata* or *S. aculeata* during summer at 120 x 15 cm spacing with 50 kg phosphorus ha⁻¹ can be considered as suitable agrotechniques for increased seed production.

REFERENCES

AKINOLA, J.O. and WHITEMAN, P.C. (1976). Agronomic studies on pigeonpea (*Cajanus cajan* (L.) Mill Sp.). 2. Responses to sowing density. Aust. J. agric. Res., 26(1) : 57-66.

DREYFUS, B.L.G., RINAUDO, and DOMMERGUES, Y. (1983). Use of *Sesbania rostrata* as green manure in paddy fields. ORSTROM. Dakel, Senegal, pp. 18-19.

PALANIAPPAN, SP. and REDDY, D.S. (1990) Biological nitrogen production potential of *Sesbania rostrata* and its utilisation for rice. 14th Congress of Soil Science, 3: 323-4. Int. Soc. Soil Sci., 12-18 Aug.

SINGH, R.S. (1971). Effect of phosphate and Molybdenum on growth, nodulation and seed yield of daincha. Indian J. agric. Sci., 41(3) : 231-238.

VISPERAS, R.M., FURROC, R. VERGARA, B.S. and PATENA, G. MORRIS, R.A. (1987). Flowering response of *S. rostrata* to photoperiod. Philipp. J. Crop. Sci., 12(3) : 147-149.

WEERAKOON, W.L. (1992). Flowering, seed production, and germination of *S. speciosa* used as green manure for lowland rice in Sri Lanka. IRRN. 17(6) : 21.

CONTENT ANALYSIS OF FARM INFORMATION IN TAMIL DAILIES

P.VANNIARAJAN, V.RAVICHANDRAN and R.VELUSAMY

Department of Agricultural Extension and Rural Sociology
Agricultural College and Research Institute
Tamil Nadu Agricultural University
Madurai- 625 104.

ABSTRACT

A study was conducted to know the extent of coverage of different subject matters, modes of presentation, contributors of farm information in two Tamil dailies. The results showed that, the subject matters agriculture and horticulture were predominantly covered. Press correspondents and university scientists were the major contributors of farm information. Popular article as mode, more number of articles without illustrations and mostly black and white photographs are also observed.

KEY WORDS: Farm information, Newspapers, Content analysis

Even though electronics media conquer major mass media channel, the importance of two century old print media in disseminating the technologies

has not declined. The advanced farm technologies, developed in the country, are to be communicated to the real consumer-farmers effectively. At present

only 20 to 30 per cent findings of agricultural research are passed through the media in India as against 80 to 85 per cent in advanced countries. A knowledge about the extent, the dailies help in disseminating new agricultural technologies will be of greater use to the extension workers as well as to administrators in charge of agricultural development in planning their communication strategies. With this in view an attempt was made to analyse the contents of farm information published in Tamil dailies in the dimensions of extent of coverage of subject matter, contributors of farm information, modes of presentation, format and illustration components.

METHODOLOGY

Two popular dailies *viz.*, Dinamalar and Dinamani were selected for the study. The newspaper edition of Dinamalar and Dinamani published from 1-7-94 to 31-6-95 were considered. The farm information was published as "Vivasayamalar" in 55 issues of Dinamalar and as "Velanmani" in 53 issues of Dinamani. All these issues of "Vivasayamalar" in Dinamalar and "Velanmani". in Dinamani were taken up for th study. The following dimensions of the content of the tamil dailies were analysed.

Subject Matter Coverage

The subject matter was studied as number o articles published in the major subject matter area *viz.*, agriculture, horticulture, animal husbandry fisheries, agricultural engineering, forestry agricultural economics, sericulture, social science products of input agencies and general topics.

Contributors of information

This was operationalised as the writers, authors of articles/information and persons anc organisations giving information to the newspaper (Natataju, 1991).

Modes of Presentation

Modes of presentation were studied as the treatment given to a subject matter or method of presentation used by the contributors.

Table 1. Extent of coverage of major subject matter

S.No. Major subject matter	Dinamalar				Dinamani				Total			
	No. of article	Cover-age sq.cm	Cover-age per cent	Rank	No. of article	Cover age sq.cm	Cover age per cent	Rank	No. of article	Cover-age sq.cm	Cover-age per cent	Rank
1. Agriculture	87	25387.5	57:31	I	73	37892.5	51.17	I	160	63280	53.47	I
2. Horticulture	32	7727.5	17.45	II	24	15842.5	21.40	II	56	23570	19.92	II
3. Animal husbandry	13	3167.5	7.15	III	-	-	-	-	13	3167.5	2.68	VII
4. Fisheries	5	1890	4.27	V	3	453.50	0.61	IX	8	2343.5	1.98	VIII
5. Agricultural engineering	3	675	1.52	VIII	-	-	-	-	3	675	0.57	XI
6. Forestry	8	18235	4.12	VI	6	2257.75	3.05	VI	14	4082.75	3.45	V
7. Agricultural economics	3	722.5	1.63	VII	4	2762.5	3.73	V	7	3485	2.94	VI
8. Sericulture	1	320	0.72	IX	-	-	-	-	1	320	0.27	XII
9. Social science	-	-	-	-	2	1058	1.43	VII	2	1058	0.89	IX
10. Food science	-	-	-	-	2	858	1.16	VIII	2	858	0.73	X
11. Products of input agencies	-	-	-	-	15	6115	8.26	IV	15	6115	5.17	IV
12. General	5	2582.5	5.83	IV	10	6806.75	9.19	III	-	9389.25	7.93	III
Total	157	44297.5	100.00		139	74046.5	100.00		296	118344	100.00	

Table 2. Extent of coverage of specific topics in agriculture

S.No.	Major subject matter	Dinamalar				Dinamani				Total			
		No. of article	Coverage sq.cm	Coverage per cent	Rank	No. of article	Cover age sq.cm	Cover age per cent	Rank	No. of article	Cover age sq.cm	Cover age per cent	Rank
1.	Crop cultivation	28	8577.50	33.79	I	39	23359.00	61.65	I	67	31936.5	50.47	I
2.	Manures and manuring	22	6292.50	24.78	II	8	3631.00	9.58	III	30	9923.5	15.68	III
3.	Plant protection	20	5620.00	22.14	III	15	5963.25	15.74	II	35	11583.25	18.30	II
4.	Water management	5	1462.50	5.76	IV	2	1345.50	3.55	V	7	2808.00	4.44	IV
5.	Seed technology	5	1440.00	5.67	V	1	458.25	1.21	VIII	6	1898.25	3.00	V
6.	Dry farming	5	1195.00	4.71	VI	-	-	-	-	5	1195.00	1.89	VIII
7.	Mushroom cultivation	2	800.00	3.15	VII	2	838.25	2.21	VI	4	1638.25	2.59	VI
8.	Land reclamation	-	-	-	-	2	767.00	2.02	VII	2	767.00	1.21	IX
9.	Agricultural chemistry and oil extraction	-	-	-	-	4	1530.25	4.04	IV	4	1530.25	2.42	VII
	Total	87	25387.50	100.00		73	37892.50	100.00		160	63280.00	100.00	

Format components

The format components were studied as number of farm information issues per year, extent of coverage of farm information, extent of coverage of agricultural advertisement, average coverage of farm information per issue, number of articles per issue, size of letters for headings and text, number

Table 3. Extent of coverage of specific topics in horticulture

S.No.	Major subject matter	Dinamalar				Dinamani				Total			
		No. of article	Cover age sq.cm	Cover age per cent	Rank	No. of article	Cover age sq.cm	Cover age per cent	Rank	No. of article	Cover age sq.cm	Cover age per cent	Rank
1.	Fruits	6	1637.50	21.19	II	6	3957.75	24.98	ii	12	5595.25	23.74	II
2.	Vegetable	7	1505.00	19.48	III	11	7408.25	46.75	I	18	8911.25	37.81	I
3.	Floriculture	4	1430.00	18.50	IV	3	2953.25	18.64	III	7	4383.25	18.59	III
4.	Spice and condiments	7	1727.50	22.36	I	3	861.25	5.44	IV	10	2588.75	10.98	IV
5.	Plantation crops	2	400.00	5.18	VII	-	-	-	-	2	400.00	1.70	VIII
6.	Betelvine	4	620.00	8.02	V	-	-	-	-	4	620.00	2.63	VI
7.	Tuber crops	-	-	-	-	1	664.00	4.19	V	1	664.00	2.82	V
8.	Senna and palmarosa	2	407.50	5.27	VI	-	-	-	-	2	407.50	1.73	VII
	Total	32	7727.50	100.00		24	15842.50	100.00		56	23570.00	100.00	

Table 4. Extent of coverage of specific topics in animal husbandry.

S.No.	Major subject matter	Dinamalar				Dinamani				Total			
		No. of article	Coverage sq.cm	Coverage per cent	Rank	No. of article	Coverage sq.cm	Coverage per cent	Rank	No. of article	Coverage sq.cm	Coverage per cent	Rank
1.	Dairy	10	2530.00	79.88	I	-	-	-	-	10	2530.00	79.88	I
2.	Sheep rearing	2	480.00	15.15	II	-	-	-	-	2	480.00	15.15	II
3.	Rabbit rearing	1	157.50	4.97	III	-	-	-	-	1	157.50	4.97	III
4.	Poultry	-	-	-	-	-	-	-	-	-	-	-	-
	Total	13	3167.50	100.00	-	-	-	-	-	13	3167.50	100.00	

of columns per page and types of captions on articles and news.

Illustration Components

The illustration components were studied as number of photos, graphs and drawings published with articles.

FINDINGS AND DISCUSSION

A. Extent of Coverage of Subject matter

The finding emerged out on extent of coverage of major subject matter are presented in Table 1.

More than half of the articles (57.31 percent in Dinamalar and around half of the articles (51.1 percent) in Dinamani were related to agriculture followed by horticulture (17.44 percent in Dinamalar and 21.40 percent in Dinamani). Sericulture in Dinamalar and Fisheries in "Dinamani" were the least covered subjects. There were on coverage on social sciences, food science and products of input agencies in 'Dinamalar' whereas in Dinamani there was no information coverage on animal husbandry, agricultural engineering and sericulture. In total 53.47 per cent of articles were related to agriculture followed by horticulture (19.92%).

Table 5. Content analysis of information presented by contributors of farm information

S.No.	Major subject matter	Dinamalar			Dinamani			Total		
		Coverage sq.cm	Coverage per cent	Rank	Coverage sq.cm	Coverage per cent	Rank	Coverage sq.cm	Coverage per cent	Rank
1.	University scientists	24995.00	42.72	I	18688.00	19.25	II	43683.00	28.07	II
2.	Extension personnel	9515.00	16.26	III	8475.75	8.73	V	17990.75	11.56	III
3.	Press correspondents (Agri)	12222.50	20.89	II	42346.50	43.61	I	54569.00	35.07	I
4.	Press correspondents (General)	-	-	VI	12450.75	12.82	III	12450.75	8.00	V
5.	Input agencies	2762.50	4.72	V	10116.50	10.42	IV	12879.00	8.28	IV
6.	Farmers	3647.50	6.23		782.00	0.81	VIII	4429.50	2.85	VII
7.	Other media personnels	-	-		2394.00	2.47	VI	2394.00	1.54	VIII
8.	Administrators	-	-		877.50	0.90	VII	877.50	0.56	IX
9.	Others	5365.00	9.17	VI	968.50	0.99	XI	6333.50	4.07	VI
	Total	58507.50	100.00		97099.50	100.00		155607.00	100.00	

Table 6. Analysis of modes of presentation

S.No. Major subject matter	Dinamalar				Dinamani				Total			
	No. of article	Cover-age sq.cm	Cover-age per cent	Rank	No. of article	Cover age sq.cm	Cover age per cent	Rank	No. of article	Cover-age sq.cm	Cover-age per cent	Rank
1. Popular articles	149	40437.5	69.13	I	101	57278	58.99	I	230	97715.5	62.80	I
2. Review articles	1	1040	1.78	VI	6	3765.5	3.88	IV	7	4805.5	3.09	V
3. News and announcements	4	1330	2.27	V	20	3132.25	3.23	V	24	4462.25	2.87	III
4. Experience	3	1490	2.54	IV	12	13003	13.39	III	15	14493	9.31	II
5. Question-Answers	122	5950	10.17	III	227	18611	19.17	II	349	24561	15.78	VI
6. Titbits	211	8260	14.12	II	30	1309.75	1.35	VI	241	9569.75	6.15	IV
Total		58507.5	100.00			97099.5	100.00			155607	100.00	

These findings are in line with the findings of Muthazhagan (1990) and Nataraju (1991).

Agriculture

The information appeared on the major subject matter agriculture was further categorised to specific topics. The related findings are given in the following Table 2.

Crop cultivation occupied about one third of the articles (33.79 percent) in agriculture in Dinamalar and nearly two-third of the articles (61.65 percent) in Dinamani. Next to this, coverage was more on plant protection in Dinamani whereas manures and manuring in Dinamalar. Mushroom cultivation and seed technological aspects were the subject matter areas allotted with less articles in Dinamalar and Dinamani respectively. In total cultivation aspects occupied more articles followed by plant protection and manures and manuring.

Horticulture

The findings on the content analysis of information on horticulture are presented in Table 3.

In Dinamalar, less than one fourth of the total articles in horticulture was allotted to spice and condiments (22.36 percent) followed by fruits (21.19%) and vegetables cultivation (19.48 percent). In Dinamani, less than the articles in horticulture were related to vegetable cultivation

(46.75 percent) followed by fruit cultivation (24.98%) and floriculture topics (18.64 per cent). In total, information regarding vegetable cultivation had been covered more followed by fruits cultivation and floriculture. The topics on betelvine, senna and palm rosa and plantation crops were found less covered.

Animal Husbandry

The results on extent of coverage of information on animal husbandry are given in Table 4.

No articles on animal husbandry was published in Dinamani for the period from 1-7-94 to 30-6-95. In the case of Dinamalar most of the articles under animal husbandry (79.89 percent) was covered with articles on dairy followed by sheep rearing (15.15 percent) and no coverage was seen on poultry.

B. Contribution of farm information

The findings on contributors of farm information are presented in Table 5.

More than two-fifth of the information was contributed by university scientists (42.42 percent) followed by Press Correspondent (Agriculture) (20.89 percent) in Dinamalar. Press Correspondent (Agriculture) contributed more than two fifth of the information (43.61 percent) followed by University scientist (19.25%) in Dinamani.

Table 7. Analysis of format components

	Dinamalar		Dinamani	
1. No.of issues in one year	55		53	
2. Coverage of farm information page	75765 sq.cm		112837 sq.cm	
3. Coverage of agricultural advertisements	16657.5 sq.cm		15737.5 sq.cm	
4. Coverage of agricultural information only	58507.5 sq.cm		97099.5 sq.cm	
5. (a) Average coverage of farm information per issue	0.71 page		1.11 page	
(b) Average coverage of farm information per issue (excluding advertisement)	0.55 page		0.95 page	
6. No. of articles published	157		139	
7. Average No.of Articles	2.85		2.62	
8. Size of letters Headings (points)	24/36		24/36	
Text (points)	8		10/12	
9. No. of columns per page	8		6	
10. Types of captions on articles and news				
i) Narrative/descriptive	122	77.71	109	78.42
ii) Suggestive	14	8.92	13	9.35
iii) Economic	17	10.83	14	10.07
iv) Questioning	4	12.55	3	2.16
Total articles	157	100.00	139	100.00

In general, Press Correspondents (Agriculture) had emerged as the major contributors of farm information. Next to them, University scientists were found to have acted as major contributors. However in the case of Dinamalar, contribution of articles from University scientists was more than that of Dinamani.

C. Analysis of modes of presentation

The findings on various modes used to present farm information dailies are given in Table 6.

Popular article was the widely used mode in both the dailies (69.12 percent in Dinamalar and 58.99 percent in Dinamani).

In total 62.80 per cent of articles were presented as popular articles followed by Question-Answer mode with 15.78 per cent. Review, articles in Dinamalar and titbits in Dinamani were less used modes.

D. Analysis of format components

The data collected on various aspects of format components for both dailies are furnished in Table 7.

Average coverage of farm information (excluding advertisements) was more in Dinamani (0.95 page per issue), where it was 0.55 page per issue in Dinamalar. But the average number of articles published per issue was more in Dinamalar (2.85 numbers) than in Dinamani (2.62 numbers). This was due to presentation of lengthy articles in Dinamani and small articles in Dinamalar.

In both the dailies, similar letter size was used for captions(24/36 points). For text "8 point" letter was used in Dinamalar and "10 point" type was used in Dinamani.

The number of columns per page were eight in Dinamalar whereas there were six per page in Dinamani.

In both the dailies narrative type captions were mostly used for more than three-fourth of articles (77.71 percent in Dinamalar and 78.42 percent in Dinamani).

Table 8. Analysis of illustration components

Components	Dinamalar		Dinamani	
	No.	Per cent	No.	Per cent
Articles with 3 illustrations	-	-	2	1.44
Articles with 2 illustrations	-	-	15	10.79
Articles with 1 illustrations	43	27.39	54	38.85
Articles without illustrations	115	72.61	68	48.92
	157	100.00	139	100.00
Types of illustrations				
Black and white photographs	41	95.35	75	83.33
Drawings	2	4.65	15	16.67
	43	100.00	90	100.00
Size of illustrations				
Small size (1 column breadth)	7	16.28	19	21.11
Medium size (2 column breadth)	33	76.74	58	64.44
Big size (3 column breadth)	3	69.80	13	14.45
	43	100.00	90	100.00
Mode of illustrations				
Action pictures	3	6.98	27	30.00
Still pictures	40	93.02	63	70.00
	43	100.00	90	100.00

E. Analysis of illustration components

The findings on illustration components in both the dailies are presented in Table 8.

Nearly three fourth (72.26 percent) and half (48.92 percent) of the number of articles were found without any illustrations in Dinamalar and Dinamani respectively. Articles with one illustration were observed more in the case of Dinamani. In respect of type black and white photographs were seen more in both the dailies (95.35 percent in Dinamalar and 83.33 percent in Dinamani) and other illustration were found in more (76.74 percent in Dinamalar and 64.44 percent in Dinamani). More still pictures were observed in both the dailies (93.02 percent in Dinamalar and 70.00 percent in Dinamani).

CONCLUSION

The study shows that the subject matters agriculture and horiculture were predominantly covered. Press correspondents (agriculture) and university scientists were the major contributors of farm information. The popular article was the most abundantly used mode. The analysis of format components revealed that less than one page was allotted for farm information. Bigger letters and lesser number of columns were used in Dinamani when compared to Dinamalar.

Narrative type captions were mostly used in both the dailies, more number of articles without illustrations black and white photographs, medium sized illustration and still picture were the illustration components found more in both the newspapers.

REFERENCE

INDIA. (1994). A Reference Manual. (1995) Govt of India Publication. New Delhi.

MUTHAZHAGAN, P (1990) Content Analysis and Readers Perception on Valarum Velanmai and Seithi Madal Publications. M.Sc.(Ag.) Thesis. Tamil Nadu Agricultural University. Coimbatore.

NATARAJU, M.S.(1991) Effectiveness of Farm Magazines - A Component Analysis Ph.D. Thesis. Tamil Nadu Agricultural University. Coimbatore.