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ORAL THERAPY EXTENSION PROGRAMME  
HALF-YEARLY REPORT  
JANUARY - JUNE 1985

PHASE-II

JULY, 1985

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BANGLADESH RURAL ADVANCEMENT COMMITTEE  
66, MOHAKHALI COMMERCIAL AREA  
DHAKA-12

## C O N T E N T S

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## 1. INTRODUCTION:

The Oral Therapy Extension Programme (OTEP), a uni-purpose project to promote oral rehydration therapy in diarrhoeal disease, was set up by Bangladesh Rural Advancement Committee (BRAC) in July 1980. With the completion of the 1st phase in September 1983, and on the recommendation of the External Evaluation Team, phase II was started in October, 1983.

A progress report of six-months activities for the period January 1985 - June 1985 follows.

## 2. WORKING STRATEGY AND METHODOLOGY:

In principle, the methodology and working strategy remained the same as reported in the annual report 1983-84. No basic changes or additions were made except the points mentioned below. These are the outcome of feed-back, field supervision and evaluation.

2.1 In certain areas, molasses is rarely available and people use sugar. Moreover, they know that oral saline can be prepared using sugar, but they lack knowledge of the proper measure. In such cases imparting education only on Lobon-Gur Saline (LGS) may not inspire people to use sugar when necessary. As an alternative 1(one) scoop of sugar can be used (confirmed by test). Since sugar contains no potassium, this has to be compensated by eating <sup>banana</sup>/or papaya with the saline. Field personnel have therefore given education not only on LGS, but also on the alternative where necessary.

2.2 To prevent disease, people are advised to drink Tubewell or boiled water. Boiling is a problem to rural people, due to the inavailability of fuel. Tubewells are also not always in the reach of all, or if available, are sometimes out of order. Under such circumstances, white vitriol can serve the purpose, as it kills the germs and purifies the water. Rural people are acquainted with white vitriol, as in many places they use it for cleaning.

1(one) pinch of powdered vitriol is enough to make approx. 14 litres (15 seers) of water germ-free if kept for 4-6 hours. For preserving drinking water, villagers use earthen jars, which generally hold 15 litres. Accordingly, people are advised to use this alternative.

2.3 Under the Concentrated Reinforcement Programme (CRF) women health cadres (village shobika) promote health education as their main task. The strategy is to select 1(one) woman out of 20(twenty) households and to give her intensive training for 7(seven) days. It was found after monitoring, that most of the cadres took little initiative to promote what they had learnt, although they retained the knowledge and practised it in their own homes. The practise could be extended if more were trained, and so training of 10(ten) households was started, which necessitated the redesigning of the training module.

2.4 Until December 1984, only professional Traditional Birth Attendants (TBA) were given training. Only 1-2 could be trained in a village, actually, deliveries are mostly attended by near relatives who have certain traditional skills, so a decision was taken to train non-professionals as well.

2.5 Programme Organisers (P.Os) in the Concentrated Reinforcement Programme were jointly responsible for over-all performance. To obtain quality work and proper and constant follow-up each ward's responsibility was given to an individual P.O. (a union comprises 3 wards).

### 3. PROGRAMME PERFORMANCE:

3.1 The activities in Comilla Sadar (North) Narsingdi, Mymensingh Sadar (South), Gazipur and Barisal Sadar (North) areas have been completed. New areas Pirojpur, Manikganj, Dhaka Sadar and Jhalokati have been brought under the programme. A total of 2,393,737 and 121,642 households were visited and monitored respectively during the reported period. 29(twenty Nine) unions were covered under CRF where 2,592 TBAs and

6,775 village shebikas were trained. OTEP personnel have been taking an active role in treating 57,113 diarrhoeal patients. Detailed information on the achievements of all field activities, evaluation and also the results of laboratory analysis during this six month period are appended.

### 3.2 PUBLICITY:

Publicity activities continued and included:

- a) Radio : Apart from 2 regular spots on diarrhoea and ORS, 2 new messages on water use and handwashing were broadcast daily.
- b) Television : Similar messages were repeated on TV. 3 messages were screened everyday 7:00 P.M. - 10:30 P.M.
- c) Posters : Approximately 60,000 posters were distributed and pasted at different institutions, schools, shops, market places etc. Over 2,000 copies were supplied to other organisations on request.
- d) Folders : About 8,000 folders were distributed to local influentials and officials.
- e) Leaflets : Over 108,000 copies of the leaflet on 7 points to remember were distributed to the literate population and to schools. Nearly 3,000 copies were taken by other organisations engaged in similar activities.
- f) Poster/Calendar/  
Class Routine. : Some 18,000 copies were given to students who had been involved with OTEP.
- g) Bill Boards : 6 Bill Boards were erected at different conspicuous road junctions.
- h) Paper Ads : OTEP placed advertisements in newspapers/magazines/periodicals to disseminate information and knowledge on ORS.



It has been observed that OTEP advertisements have reached a large section of the target audience and made them familiar with ORS and other relevant information. But a study is required to measure the impact in terms of retention of knowledge and use of ORS. The Research and Evaluation Division has been requested to conduct a mini study on this.

Here are some problems we faced:

- a) The media authority raised questions about some words whose use we feel essential to make the message easy to understand for rural listeners.
- b) They also objected about the timing of the announcements if they coincided with dinner time.
- c) Sometimes it is quite difficult to convince the vating authority in the media about the need for supplementary messages related to control of diarrhoea.

#### 4. IMPACT EVALUATION:

The Research and Evaluation Division (RED), an independent unit within BRAC, has been continuously looking into the various aspects of OTEP relating to diarrhoeal mortality and morbidity. In addition, the RED has also been active in undertaking other adhoc studies relevant to the programme. The activities of evaluation from January to June 1985 have been summarised here.

##### PHASE-I:

The impact of OTEP will be studied in three phase - of which the data of the first phase (one base line and four follow-up studies in eight Upazilas 5 X 8 = 40 studies) have already been processed. The draft reports of four Upazilas (Goshairhat, Jajira, Morrelganj and Salikha) have been prepared. The draft report for the remaining four Upazilas (Batiaghata, Mirpur, Bahubal and Rajnagar) and an integrated report for all four programme upazilas and the four comparison upazilas are in progress. It is expected that the draft reports can be finalized by October, 1985.

PHASE-II:

Data collection in the second phase started in mid November, 1985. In this phase data are also being collected on eight upazilas of which two are Concentrated Reinforcement Programme (CRP) areas. By June 1985, data had been collected from a total of 80,000 households. The present data collection position in these areas is shown in Table-1.

Table-1  
MORTALITY IMPACT STUDY PHASE-II  
DATA COLLECTION POSITION UPTO 30/6/85.

Stratum	Name of Upazila	Baseline	Follow up-1	Follow up-2	Follow up-3
I	Kotwali (Barisal)	Complete	Complete	Complete	Complete
I	Kotwali (Chandpur)	do	do	do	do
II	Melandah (Jamalpur)	do	do	do	**
II	Kasba (Brahmanbaria)	do	do	do	**
III	Madhupur (Tangail)	do	do	do	**
III	araihazar (Dhaka)	do	do	do	**
II	Dabidwar* (Comilla)	do	do	do	**
II	Islampur* (Jamalpur)	do	do	do	**

\* CRP areas

\*\* Data collection will continue as per schedule.

Data processing at the Head Office is going on as per schedule. As BRAC installed a CompuPro Micro Processor System, data are now being processed here. The entry of data for the baseline study of eight upazilas has already been completed, and computer editing has been done for one of these upazilas. The rest of the collected data is in the process of manual editing and coding.

OTHER STUDIES:

During January - June 1985, the following studies were conducted and their reports published.

1. An Investigation and motivation and essential qualities of Oral Rehydration Workers of OTEP.

2. Programme Organisers of BRAC's Oral Therapy Extension Programme - A study on their performance.
3. A comparative study of Diarrhoeal Morbidity and LGS use pattern in BRAC's CRP and non-CRP Areas.

RED is planning to undertake small studies on the following topics:

- i) Evaluation of the Reinforcement Team of OTEP.
- ii) LGS use and non-use by differential economic status.
- iii) Seasonal variation and pattern of LGS usage.

#### 5. CHLORIDE CONCENTRATION:

The samples of the LGS prepared in the programme areas by the rural women using the BRAC method were analysed to assess the concentration of sodium, and glucose. The safe and effective range of sodium chloride (common table salt) in LGS is about 30-99 mmol/L. Potassium chloride, another salt lost in the stool during diarrhoea, is present in small amounts in gur. The best range for potassium in LGS is about 15 in 25 mmol/L. Glucose is a component of sugar. The optimum concentration of glucose is 110 mmol/L, but the range between 60 and 160 mmol/L is still effective.

The analyses of the LGS samples collected by the Reinforcement Team were done to ensure the safety and effectiveness of the solution.

The result of the chloride analysis for the period of January 1985 - May 1985, showed that about 94 per cent of the samples were within the safe and effective range of chloride concentrations. The proportion of different concentration groups are shown in Annexure. In addition, for quality control, 9 per cent (2617 samples) of the analysed samples were randomly selected for re-analysis at the International Centre for Diarrhoeal Disease Research Bangladesh (ICDDR,B). It was found that 95.34 percent of the samples were within 10 per cent variation.



In addition, 260 samples were analysed for sodium and potassium concentration and 50 samples for glucose ( $C_6H_{12}O_6$ ) concentration. The results showed that about 65 per cent of the samples were within the range of 15-25 mmol/l of potassium, and about 76 per cent within the range of 60 to 160 mmol/l of glucose.

Another quality control measure was also adopted in order to ensure the efficiency of the field laboratory assistants in analysing the samples. 357 samples were analysed for chloride concentration and the results were noted. Then the field laboratory assistants were also asked to do the same. Then both sets of results were compared and found satisfactory.

#### 6. LGS USAGE SURVEY:

The LGS usage survey has been undertaken to monitor the pattern of usage rates. The programme areas are visited by the OTEP Reinforcement Team after one month of their teaching of how to prepare LGS. About 300 households in one union were randomly selected to assess the extent of LGS use during the preceding 15 days prior to the survey. The average pattern of LGS use in the fourteen study areas during January to June 1985 is shown in Annexure. The highest rate of LGS use observed was 40.4% in April 1985. In Bangladesh, the months of April and November are the worst for various epidemic diseases, especially diarrhoea. The lowest rate, 33.3% was found during the month of June.

Coverage by Area, Thana, Union, Village and household from October '83 to June '85.

Area	No. of Upazila	No. of Upazila covered	No. of Unions	No. of Unions covered	No. of Villages covered	No. of rural households	No. of rural households visited	% of rural households visited	Remarks
Comilla (N)	5	5	81	81	1,333	2,57,191	1,00,165	70.05	Completed
Narsingdi	5	6	74	70	1,061	2,28,068	1,97,273	86.49	"
Tangail	11	5	107	65	1,530	4,01,780	2,52,916	62.95	
Mymensingh (S)	6	3	86	53	719	3,00,964	2,01,530	66.98	
Barisal (S)	4	4	49	39	475	1,50,741	1,16,346	77.18	Completed
Bhola	7	6	61	55	320	2,04,370	1,65,789	81.12	"
Fatuakhali	6	6	62	60	813	1,87,949	1,54,232	82.06	"
Kishoreganj	12	9	117	78	840	3,32,790	2,08,903	62.74	"
Brahmanbaria	7	5	101	84	1,064	2,82,716	2,15,696	76.29	
Gazipur'	5	5	43	44	1,010	1,83,667	1,58,877	86.50	Completed
Barisal (N)	4	5	38	38	497	1,52,450	1,13,052	74.15	"
Barguna	5	3	43	35	402	1,22,477	94,786	77.39	
Iirojpur	8	3	62	35	401	1,94,985	91,021	47.09	
Manikganj	7	1	68	28	601	1,80,813	55,681	33.00	
Dhaka	5	-	61	19	391	1,77,609	54,466	30.66	
Comilla (S)	6	1	97	20	372	3,02,530	60,780	20.09	
Mymensingh (N)	6	-	75	6	110	2,61,492	25,230	9.65	
Jhalokati	4	-	33	11	134	94,816	34,355	36.23	
Chandpur	7	-	95	1	47	3,13,330	7,876	2.51	
<b>Total</b>	<b>120</b>	<b>67</b>	<b>1,353</b>	<b>822</b>	<b>12,120</b>	<b>43,30,738</b>	<b>23,93,737</b>		

Areawise Household Monitored and percentage of monitored  
Household/grade from 1st October '83 to 30th June 1985.

Area	Households visited	Households monitored	Percentage of Households monitored/ grade				Percent- age of Households monitored
			A	B	C	D	
Comilla (N)	1,80,165	9,274	53.33	44.82	1.49	0.36	5.15
Narsingdi	1,97,278	9,579	54.32	43.21	2.03	0.44	4.85
Tangail	2,52,916	12,548	55.50	42.13	2.02	0.35	4.96
Mymensingh (S)	2,01,580	10,940	50.65	47.27	2.01	0.07	5.43
Barisal (S)	1,16,346	5,995	49.56	48.17	1.79	0.48	5.15
Bhola	1,65,789	8,454	51.06	46.49	2.27	0.18	5.10
Patuakhali	1,54,232	7,946	53.12	45.19	1.32	0.37	5.15
Kishoreganj	2,08,803	10,575	53.69	45.18	0.92	0.21	5.06
Brahmanbaria	2,15,696	11,376	53.88	44.16	1.76	0.20	5.27
Gazipur	1,58,877	7,936	56.73	42.53	0.57	0.17	4.99
Barisal (N)	1,13,052	5,809	50.92	47.81	1.15	0.12	5.14
Barguna	94,786	4,829	53.72	44.15	1.78	0.35	5.09
Pirojpur	91,821	4,511	51.39	47.13	1.44	0.04	4.91
Manikganj	59,681	3,408	56.34	42.02	1.44	0.20	5.71
Dhaka	54,466	2,527	62.80	36.25	0.79	0.16	4.64
Comilla (S)	60,780	3,146	55.79	41.26	2.64	0.31	5.18
Mymensingh (N)	25,238	789	53.61	42.97	3.29	0.13	3.13
Jhalokati	34,355	1,782	52.41	46.97	0.62	-	5.19
Chandpur	7,876	218	61.93	37.61	0.46	-	2.78
<b>Total</b>	<b>23,93,737</b>	<b>1,21,642</b>	<b>53.50</b>	<b>44.63</b>	<b>1.61</b>	<b>0.26</b>	<b>5.08</b>

Statistical Report on CRP from 1st Jan.'85 to 30th June'85

Area	Dai Trained	Shobika trained	Colostrum feeding	Patient treated with LGS	Health Meeting No.	Participants	Unnata Chula installed	Children under supplementary diet
Tangail	158	848	273	1,509	1,488	15,564	417	923
Kishoreganj	149	552	231	862	315	4,473	777	250
Brahmanbaria	171	781	481	4,702	4,649	33,943	502	844
Gazipur	100	271	144	394	236	2,907	446	284
Barisal (N)	381	949	595	1,699	1,103	40,146	546	572
Barguna	503	651	267	2,487	625	9,308	1,027	529
Firojpur	260	577	363	1,837	166	2,413	638	256
Manikganj	187	523	305	3,586	412	6,990	923	548
Dhaka	51	187	56	428	541	5,366	288	295
Comilla (S)	366	528	362	3,031	2,083	14,933	573	408
Mymensingh	266	908	514	480	234	2,848	859	590
Total	2,592	6,775	3,591	21,015	11,852	1,38,891	6,996	5,499

## Personnel and Staff Position as on 30th Dec.'85

Area	A.M./ P.O. In- char- ge	No. of Staff				Total	Accoun- tant	CW Lab Asstt.	Service staff	Total
		CW Team	Reinfo- rcement Team/ SRP	P.O. CRF/P.O based at area office	Total					
Comilla	1	18	11	9	38	1	75	1	16	132
Tangail	1	18	12	10	40	1	34	1	16	143
Mymensingh	1	17	7	10	34	1	79	-	16	131
Kishoreganj	1	17	9	10	36	1	78	1	16	133
Brahmanbaria	1	18	11	10	39	1	77	2	16	134
Barguna	1	18	10	10	38	1	33	-	16	139
Ferojpur	1	18	10	10	38	1	83	-	16	139
Manikganj	1	17	9	9	35	1	79	-	15	131
Dhaka	1	17	9	6	32	1	76	1	16	127
Jhalokati	1	17	10	9	36	1	81	2	16	137
Total	10	175	98	93	366	10	795	6	159	1,346



Tentative Schedule for Mortality Study (Phase-II)

Study	Team-1				Team-2			
	Thana Stratum-1 Program	Stratum-2 Program	Stratum-3 Program	Stratum(2) Program (CRP)	Stratum-1 Compari- son	Stratum-2 Compari- son	Stratum-3 Compari- son	Stratum(2) Comparison
	Barisal	Kasba	Madhupur	Dabidwar	Ghandpur	Melendah	Araihazar	Islampur
Baseline	16.11.83	1.1.84	16.2.84	1.4.84	16.11.83	1.1.84	16.2.84	1.4.84
	31.12.83	15.2.84	31.3.84	15.5.84	31.12.83	15.2.84	31.3.84	15.5.84
F.U.-1	16.5.84	1.7.84	16.8.84	1.10.84	16.5.84	1.7.84	16.8.84	1.10.84
	30.6.84	15.8.84	30.9.84	15.11.84	30.6.84	15.8.84	30.9.84	15.11.84
F.U.-2	16.11.85	1.1.85	16.2.85	1.4.85	16.11.84	1.1.85	16.2.85	1.4.85
	31.12.85	15.2.85	31.3.85	15.5.85	31.12.84	15.2.85	31.3.85	15.5.85
F.U.-3	16.5.85	1.7.85	16.8.85	1.10.85	16.5.85	1.7.85	16.8.85	1.10.85
	30.6.85	15.8.85	30.9.85	15.11.85	30.6.85	15.8.85	30.9.85	15.11.85
F.U.-4	16.11.85	1.1.86	16.2.86	1.4.86	16.11.85	1.1.86	16.2.86	1.4.86
	31.12.85	15.2.86	31.3.86	15.5.86	15.12.85	15.2.86	31.3.86	15.5.86

TOTAL SAMPLE ANALYSED  
January 1985 to May 1985

<u>Chloride (cl)</u>	<u>Samples</u>
Analysed in field	= 29,218
Re-analysed at ICDDR,B	= 2,617
Sodium (Na <sup>+</sup> )	= 260
Potassium (K <sup>+</sup> )	= 260
Glucose (C <sub>6</sub> H <sub>12</sub> O <sub>6</sub> )	= 50

Distribution of chloride concentration as observed in the programme alongwith sample statistics. January 1985 to May 1985.

<u>Chloride concentrations (in mmol/l)</u>	<u>Safety and effectiveness</u>	<u>Samples (N=29218) (in percentages)</u>
30	Safe but less effective	1.84
30 - 99	Safe and effective	93.84
100 - 119	Effective but potentially dangerous.	3.21
120 and over	Dangerous	1.11

Total sample = 29,218  
Mean (in mmol/l) = 63.74  
S.D. = 20.17

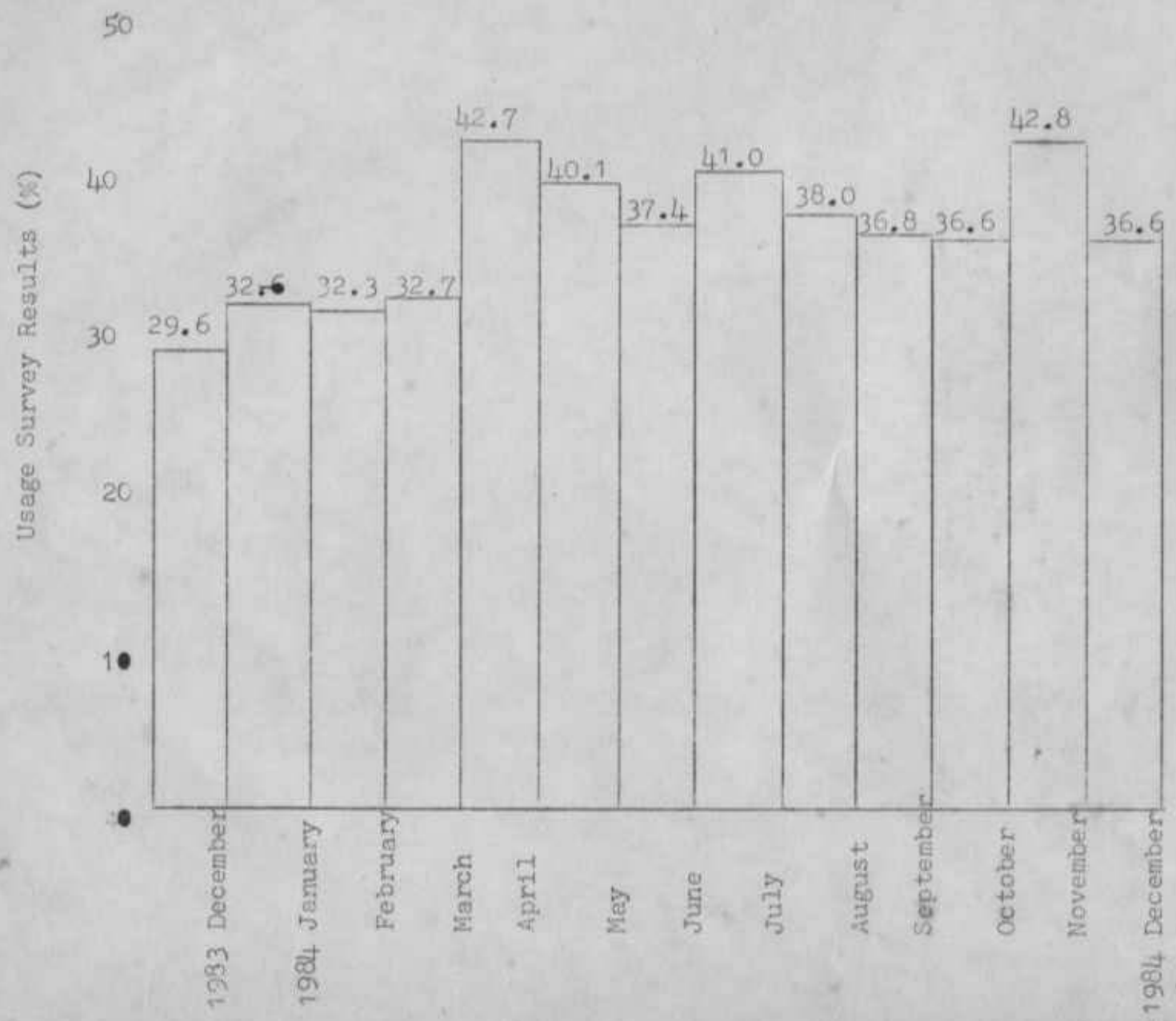
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TYPE LOGS

- (I) BANJAL
- (II) BANGAL
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- (XII) BANGAL
- (XIII) BANGAL
- (XIV) BANGAL

## THE PATTERN OF LBS USAGE RATES FOR THE PERIOD OF OCT. '83-DEC. 1984.



- i) NARSINGDI
- ii) GAZIPUR
- iii) COMILLA
- iv) B. BARIA
- v) PATUAKHALI
- vi) TANGAIL
- vii) BARISAL
- viii) MYMENSINGH
- ix) KISHOREGANJ
- x) BHOLA