



**Appendix-E**  
**VOICE OF CUSTOMERS**

Contents:

Executive Summary.....	4
Overview.....	5
Objectives of the Study.....	5
Methodology.....	5
Main Findings.....	8
1.1 Respondents Profile.....	8
2.1 Type of Products Used.....	11
2.2 Purchase of KB.....	11
2.3 KB Product Delivery, Installation & Satisfaction of Purchase Experience...13	
2.4 KB Warranty Card and Problem status.....	20
2.5 Customer Satisfaction.....	26
3.0 Conclusion.....	27

<b>Abbreviation</b>	<b>Expanded Form</b>
IDEI	International Development Enterprises (India)
KB	<i>Krishak Bandhu</i>
UP	Uttar Pradesh
OR	Orissa
KAR	Karnataka
GJ	Gujarat
BH	Bihar
JH	Jharkhand
CG	Chhattisgarh
WB	West Bengal
UK	Uttarkhand
MP	Madhya Pradesh
MH	Maharashtra
AP	Andhra Pradesh
STP	Surface Treadle Pump
SAS	Service after Sales
BPP	Bamboo Pedal Pump
TP	Treadle Pump
SC	Schedule Caste
ST	Schedule Tribe
OBC	Other Backward Caste

## Executive Summary:

International Development Enterprises (IDE), India has been implementing a programme on promoting mass marketing of Treadle Pumps (TP) and Low Cost Drip irrigation in India since 1991, covering 16 states of India. IDE (India) has been developing micro irrigation products targeting the small and marginal farmers who have limited disposable income to afford to the conventional high cost irrigation system. The products are being promoted and marketed under the brand named Krishak Bandhu (KB) –farmer’s friend, because of its low cost, simple and user friendly operation.

The present study was conducted to assess the view of the KB customers who had purchased KB products in the period **November 07 to October 08 and Nov 08 to October 09**. The primary objective of the study was to assess the customer satisfaction in buying and using the product.

The salient findings of the study are:

- Demographic profile of the respondents’ shows that majority of the farmers belonged to the backward caste, scheduled tribes & scheduled caste hence the product was reaching to the most marginalized & needy sections of the society and lived in backward & poor districts of the country.
- The majority of the customers purchased between Nov & May of the respective years.
- The product was delivered to the customer on the same day (47%), within two days (33%).
- **More than 90%** of the respondents expressed satisfaction with purchase experience.
- **Majority (93%)** of the customers reported that they were satisfied with the KB product which they had purchased & were using. Significant majority (**97%**) reported that they would recommend the product to other farmers.

## **Overview:**

International Development Enterprises (IDE), India has been implementing a programme on promoting mass marketing of Treadle Pumps (TP) and Low Cost Drip irrigation in India since 1991. IDEI commissioned the present study Voice of Customer among its customers who had purchased the products in the period November 07 to October 09.

## **Objectives of the Study:**

The primary objectives of the study are:

- a) Understand the customer satisfaction with product use across the years
- b) Understand the customer satisfaction with product buying experience

## **Methodology:**

The study adopted quantitative research design using a structured questionnaire. The **VoC sampling framework** is based on acceptance sampling based on sales achieved across the years, spread across four years.

The acceptance sampling is a statistical procedure which is used for accepting or rejecting a batch of product. The aim of acceptance sampling unit inspection is to ensure that the producer submits lots at a quality level that will be acceptable to the consumer. It provides the auditors with information on the size of sample to be selected and a set of rules and procedures, related to the AQL (acceptable quality limit), which enables the auditors, having examined the sample, to decide on the acceptance or rejection of the lot.

The sampling design adopted for the KB products adheres to Bureau Indian Standards(BIS) specified sampling procedures and tables for Inspection by Attributes method of acceptance sampling system on a continuing stream of lots for Acceptance Quality Limit (AQL) specified. The procedure provides tightened, normal, and reduced plans to be applied for attributes inspection for percent nonconforming or nonconformities per 100 units. The requisite sample size comes out to be 1105.

### **Sample distribution:**

**The requisite sample size of 1105 for first year (*last year*)** was proportionally distributed to respective TP sales figures of the state. The sample size thus selected for each state in a year shall serve as the sample frame/panel for the selection lot in subsequent years. At next stage, within the state, requisite sample size was selected randomly from the list of TP.

**In order to draw sample size for second year (*present survey year*)**, at first stage sample size of 1105 was proportionally distributed to respective sales figure of first year and second year to decide on the requisite sample size for first year and second year. Further while selecting sample for first year, the requisite sample size for a state was selected randomly from the panel of TP selected for the first year. Second year sample size was also proportionally distributed to respective TP sales figures of the state and serve as the sample frame/panel for the selection lot in subsequent years. The requisite sample within state was selected randomly from the list of TP.

**In order to draw sample size for third year**, at first stage sample size of 1105 shall be proportionally distributed to respective sales figure of first year, second year and third year to decide on the requisite sample size for first, second and third year. Further while selecting sample for first year and second year, the requisite sample size for a state shall be selected randomly from the panel of TP selected for the first and second year. Third year sample size shall also be proportionally distributed to respective TP sales figures of the state and serve as the sample frame/panel for the selection lot in subsequent years. The requisite sample within state shall be selected randomly from the list of TP.

**In order to draw sample size for fourth year**, at first stage sample size of 1105 shall be proportionally distributed to respective sales figure of first year, second year, third year and fourth year to decide on the requisite sample size for first, second, third and fourth year. Further while selecting sample for first, second and third year, the requisite sample size for a state shall be selected randomly from the panel of TP selected for the first second and third year. Fourth year sample size shall also be proportionally distributed to respective TP sales figures of the state and serve as the sample frame/panel for the selection lot in subsequent years. The requisite sample within state shall be selected randomly from the list of TP.

The total number of respondents was 1105 KB users spread across 13 states & 223 districts. The questionnaire was developed and field tested. The respondents/samples were derived randomly from the universe of the farmers who had purchased KB technology between the periods Nov 07 to Oct 09. The achieved sample spread indicates the robustness in the sample & the representativeness of the universe.

### **Quality Assurance:**

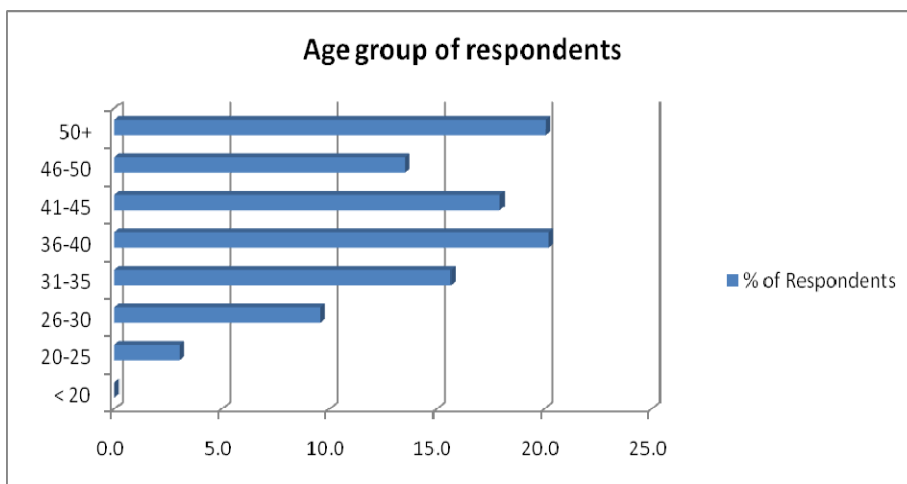
The field investigators were oriented with the survey instruments and mock exercises conducted to equip them with rigors of the data collection, sampling, and replacement of sample in case in case of the non-availability of the respondents. The collected data was scrutinized and coded for data entry purposes.

## Main Findings:

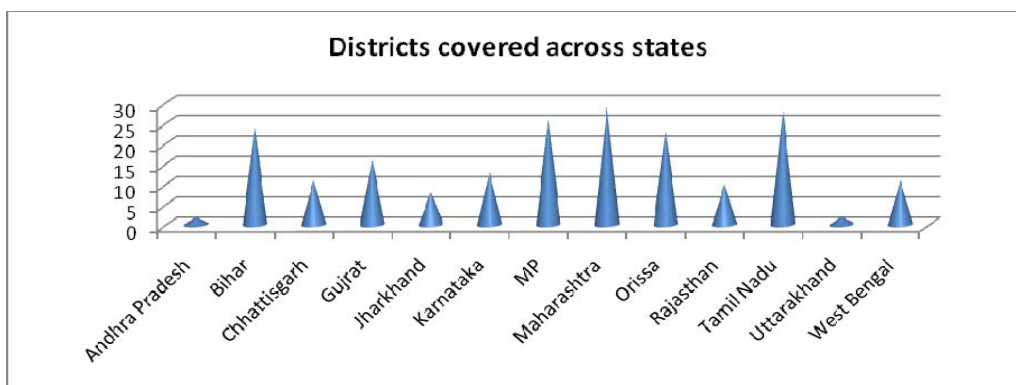
### 1 Respondent's Profile

The total number of sample size for the study was 1105 which was spread across 223 districts of the country. (Refer **figure 2** for details). Overall the age range of respondents was between 20- 60 years. Majority of the farmers were in the age group of 36-50. **Figure 1** reveals age range of respondents in the study.

**Figure 1: Respondents: age profile**



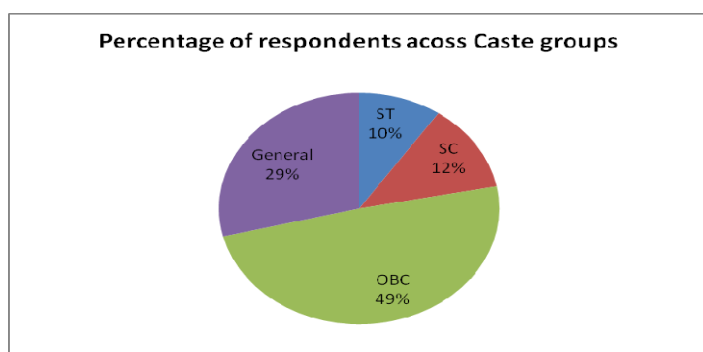
**Figure 2: Sample spread across districts**





Nearly half (49%) of the respondents were in OBC category and a significant portion (22 %) belonged to the Scheduled Caste & Scheduled Tribe communities. Across the states using Treadle Pump & Drip, majority of the owners belonged to the OBC community (refer table 1 & 2). The representation from SC and ST was almost 24% at TP & 11% Drip programme Level. Refer Figure 3,4 & 5 for details.

**Figure 3: Respondents Caste profile in %:**



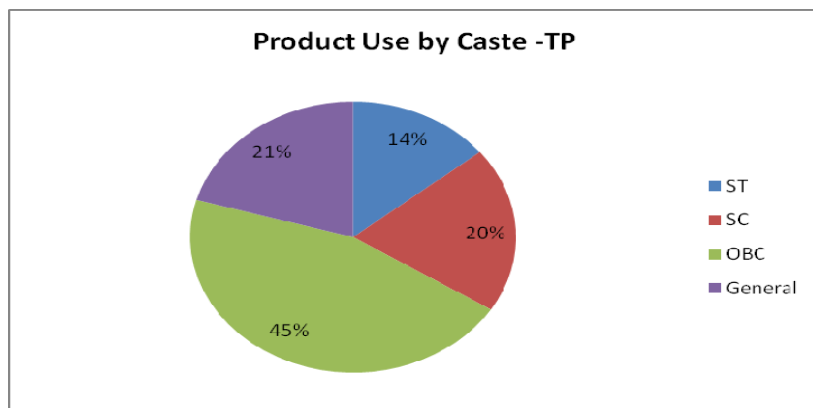
**Respondents Profile with respect to Product Use across states:**

**Table 1: Treadle Pump:**

	Orissa	Bihar	Chhattisgarh	WB	UP	Uttarakhand	Jharkhand	MP
<b>Caste</b>								
ST	41 (33.1)	1 (0.6)	24 (47.1)	6 (8)	3 (1)		14 (31)	16 (9)
SC	12 (9.7)	29 (18)	8 (15.7)	33 (41)	52 (22)	1 (14)	5 (11)	6 (3)
<b>OBC</b>	<b>44 (35.5)</b>	<b>77 (47.8)</b>	<b>16 (31.4)</b>	<b>4 (5)</b>	<b>153 (65)</b>	<b>2 (29)</b>	<b>20 (44)</b>	<b>20 (11)</b>
General	27 (21.8)	54 (33.3)	3 (5.9)	27 (46)	27 (11)	4 (57)	6 (14)	4 (2)

(% in parenthesis)

**Figure 4: Product Use by Caste -Treadle Pump**

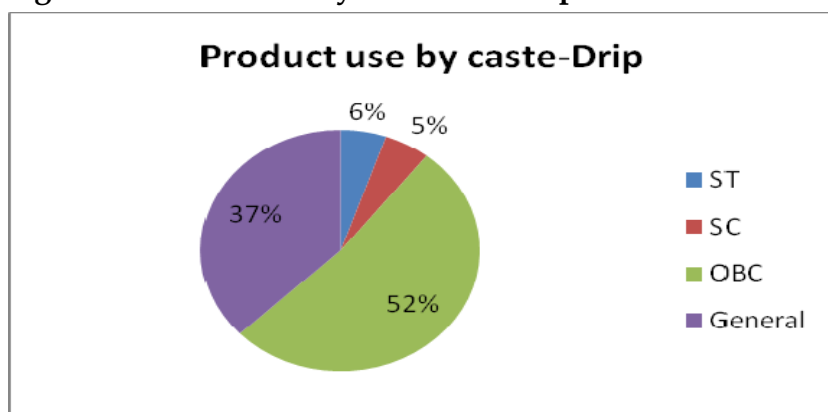


**Table 2: KB Drip:**

	AP	GJ	KAR	MH	MP	TN
<b>Caste</b>						
SC		8 (11)	2 (4)	19 (8)	5 (3)	1 (1)
ST	1 (10)	4 (6)	3 (6)	17 (7)	3 (2.2)	7 (4)
<b>OBC</b>	<b>4 (40)</b>	<b>16 (23)</b>	<b>21 (42)</b>	<b>80 (34)</b>	<b>104 (77.6)</b>	<b>120 (73)</b>
Gener al	5 (50)	42 (60)	24 (48)	117 (50)	22 (16.4)	35 (22)

(% in parenthesis)

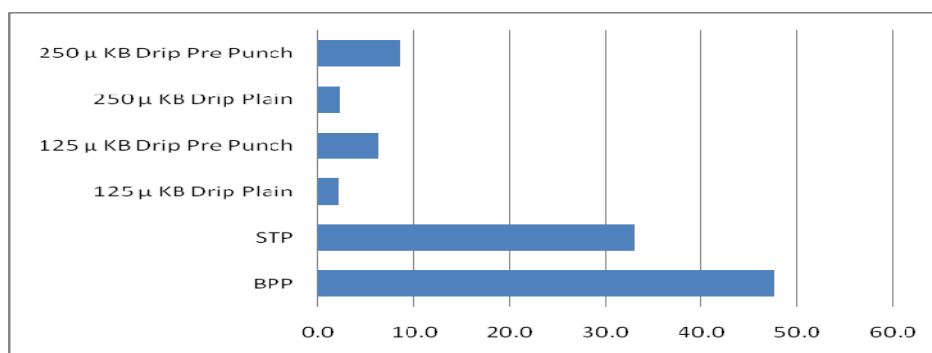
**Figure 5: Product Use by Caste- KB Drip**



In the above Tables(1&2), across the states the communities which have benefited most or have adopted KB products are the marginalized communities of Other Backward Caste (OBC), Scheduled Tribes (ST) & Scheduled Castes(SC).

**2.1 Type of Product Used**

The respondents across the states reported use of KB products like the drip & treadle pumps. **Figure 6** illustrates the respondents’ adoption of various KB products.



**2.2 Purchase of KB**

The respondents purchasing trend reveals that of the total KB’s purchased, most of purchases occurred between November - June of the respective years. Of these the highest numbers were purchased in the months of January & April months across both the years. The purchases reflect a lower trend between the periods of June - October which validates to the seasonal agriculture practice in the country. This period of significant sales is co-terminus for the crops grown by majority of the KB farmers and the rise in purchase can be attributed to it. Refer **Figure 7,8, 9,10,11** for details.

**Figure 7: Frequency % of KB purchases across months (TP & Drip) among Sample Surveyed:**

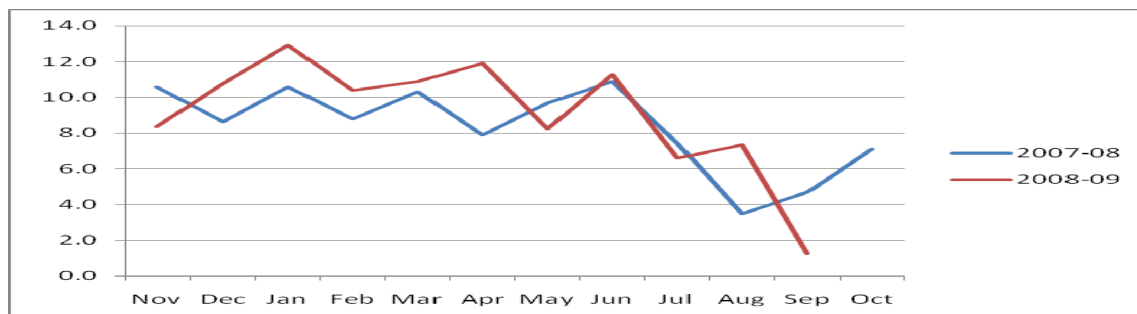


Figure 8: Purchase across the months of Treadle pumps across States across years

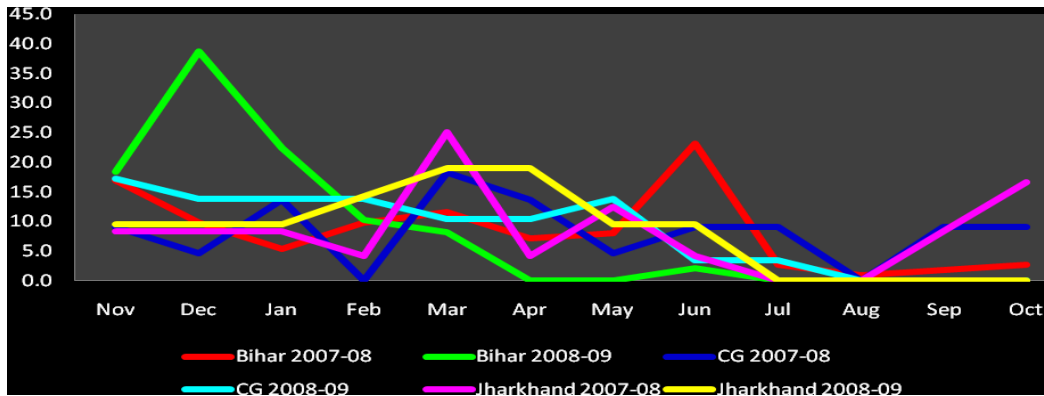
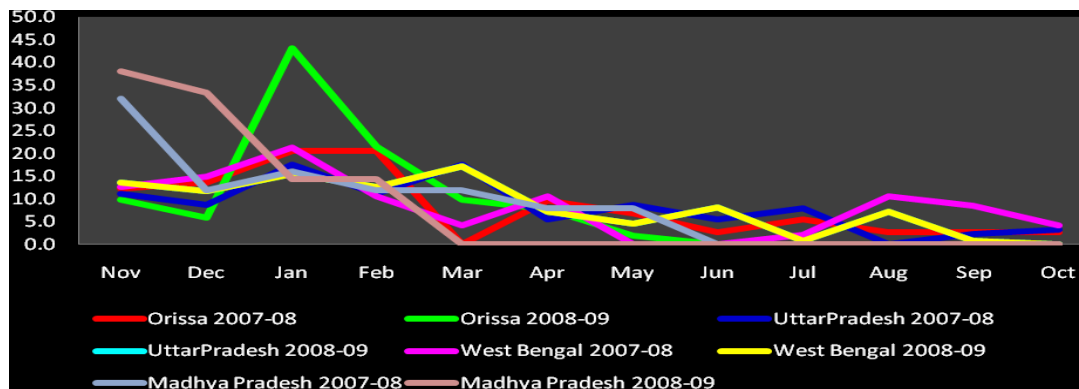
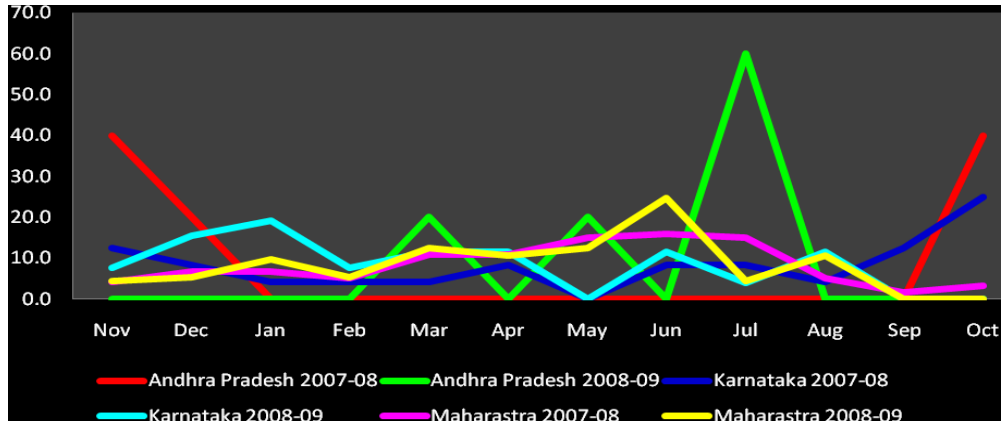


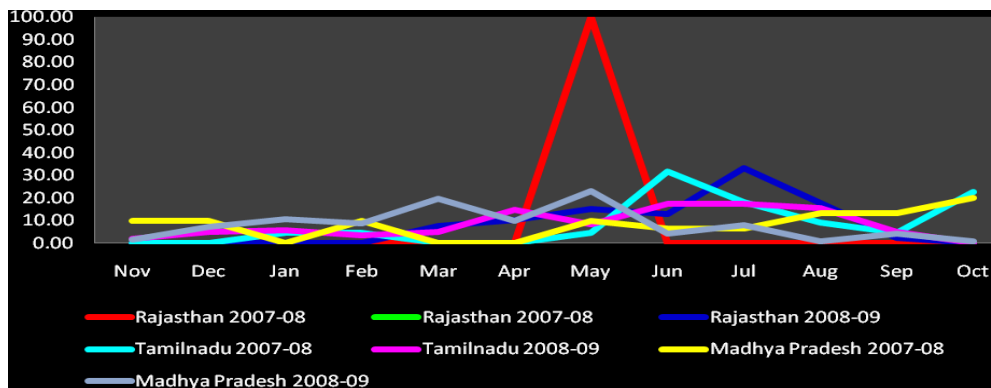
Figure 9: Purchase across the months of Treadle pumps across States across years



**Figure 10: Purchase across the months of Drip across States across years**



**Figure 11: Purchase across the months of Drip across States across years**



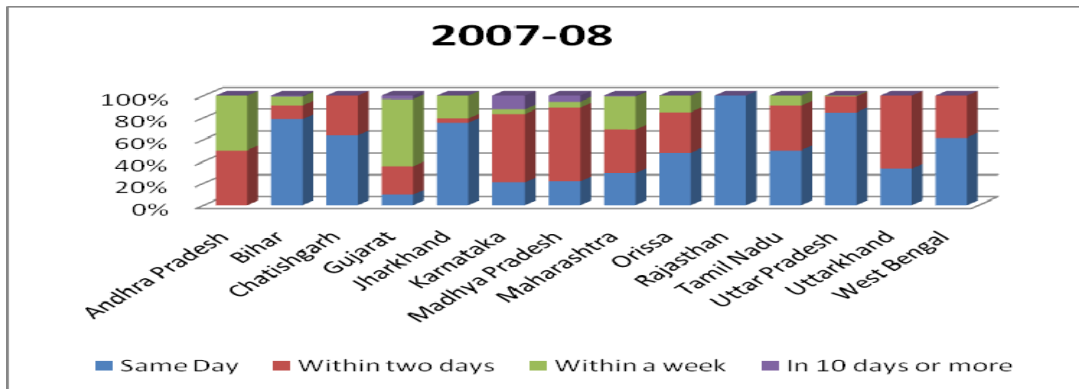
**2.3 KB Product Delivery, Installation and Satisfaction of Purchase Experience**

Table 3 represents the status of *delivery, installation and satisfaction* of KB products. Most of the respondents (47.7%) reported that the product was delivered on the same day of purchase. Majority(33.1%) the ones not delivered on the same day were delivered within the period of *two days*. Almost 93% of the respondents were satisfied with the purchase experience. Few respondents also reported that they were somewhat unsatisfied with the purchase, but again the numbers were insignificant. (Refer Figures 10,11,12,13,14,15,16,17 for details)

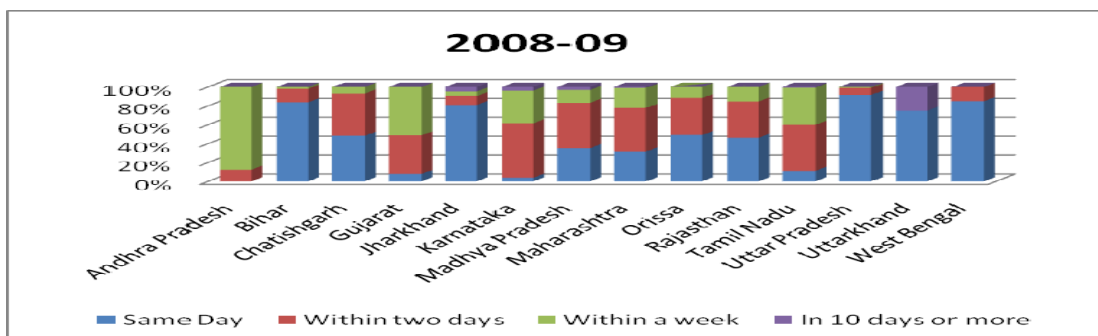
**Table 3. Status of Delivery, installation and satisfaction all KB Products**

Inquiry Area	Year 1(2007-08) %	Year 2(2008-09) %	Overall %
<b>Product Delivery</b>			
Same day	52.04	43.98	47.7
Within two day	29.80	35.87	33.1
Within a week	16.79	19.01	18.0
In 10 days or more	1.36	1.14	1.2
<b>Satisfaction level on the purchase experience</b>			
Unsatisfactory	1.8	1.4	1.5
Some what unsatisfactory	5.1	6.2	5.7
Satisfactory	90.3	92.4	92.8
<b>How many days after purchase, the product was installed</b>			
Same day	51.6	45.0	48.0
Within two day	35.7	41.4	39.0
Within a week	11.0	12.7	12.0
In 10 days or more	1.7	0.9	1.0
<b>The Installation was done by</b>			
Self	19.4	15.0	17.0
Involved IDEI Staff	45.5	42.6	44.0
Dealer	8.8	12.5	11.0
Village Mechanic	26.3	29.9	28.0

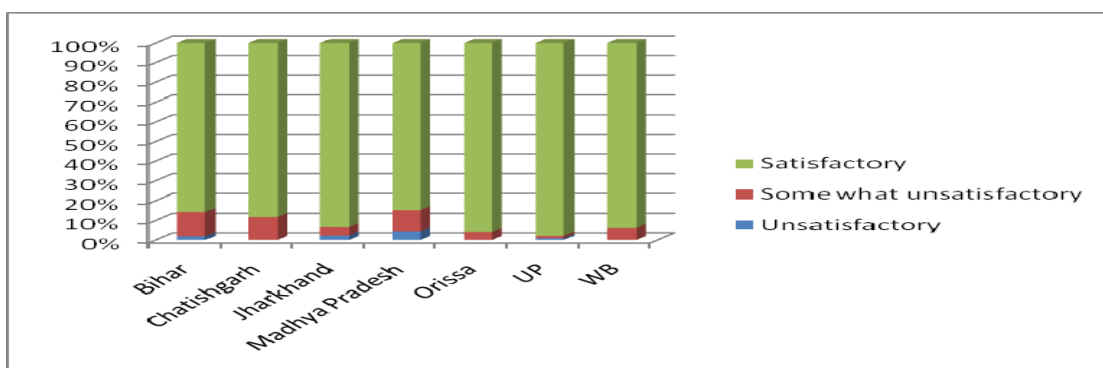
**Figure 10: Product Delivery to Customers across states:**



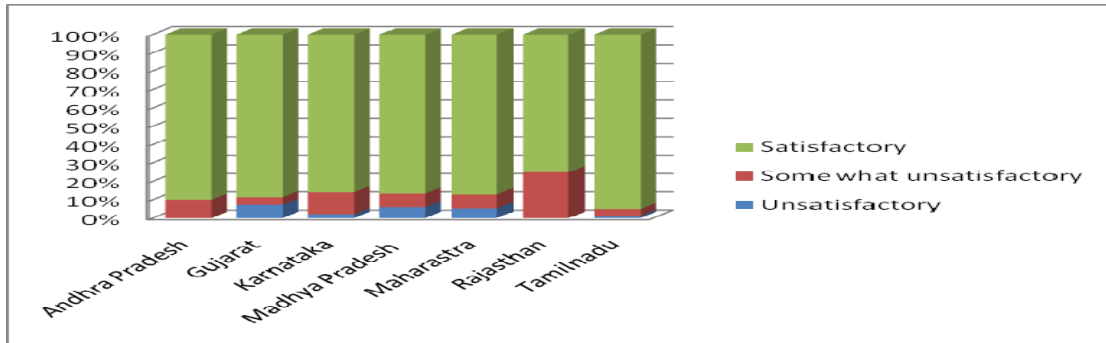
**Figure 11: Product Delivery to Customers across states:**



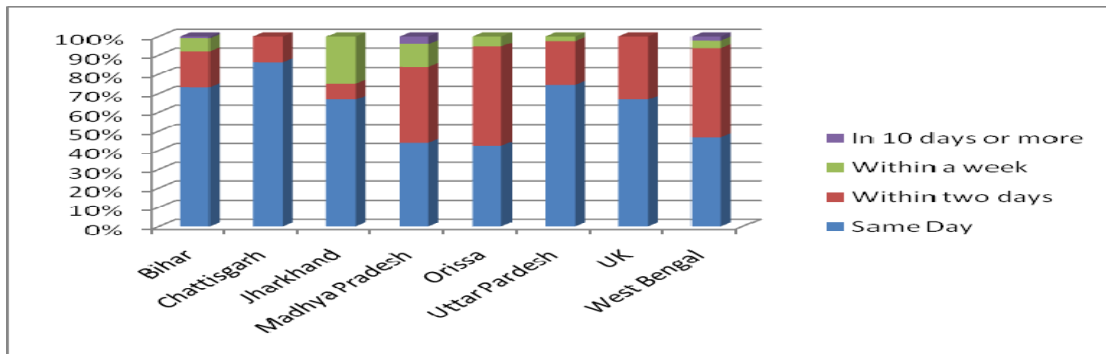
**Figure 12: Satisfaction on Purchase Experience across Treadle Pumps states:**



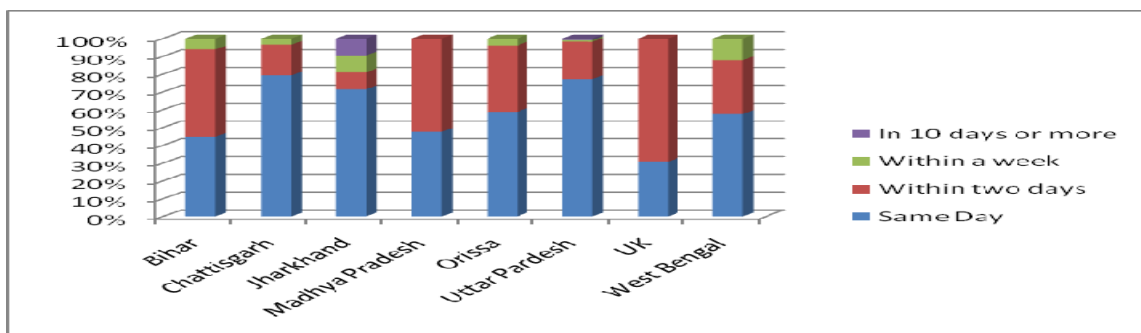
**Figure13: Satisfaction on Purchase Experience across Drip states:**



**Figure 14: Installation of Treadle Pumps after purchase across states across years (2007-08):**

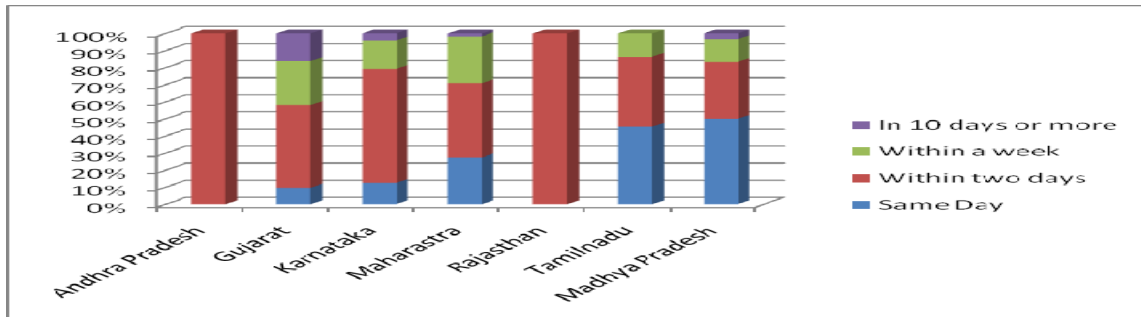


**Figure 15: Installation of Treadle Pumps after purchase across states across years (2008-09):**

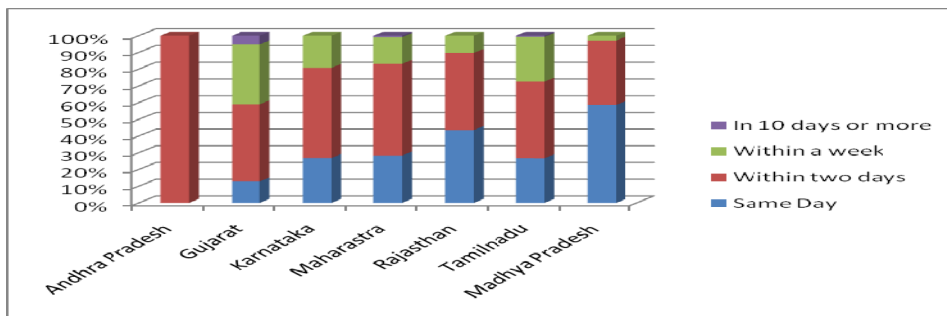




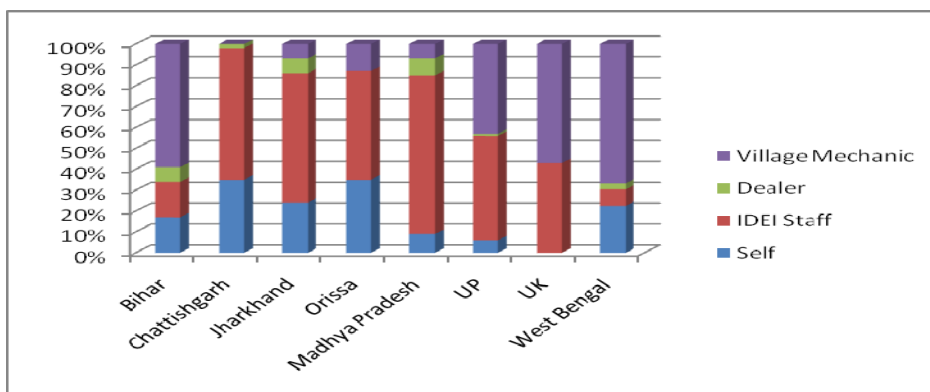
**Figure 16: Installation of Drip systems after purchase across states across year (2007-08):**



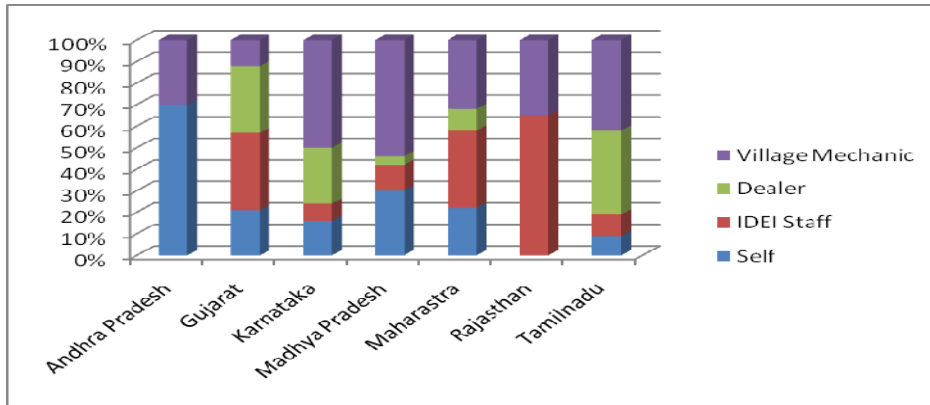
**Figure 17: Installation of Drip systems after purchase across states across year (2008-09):**



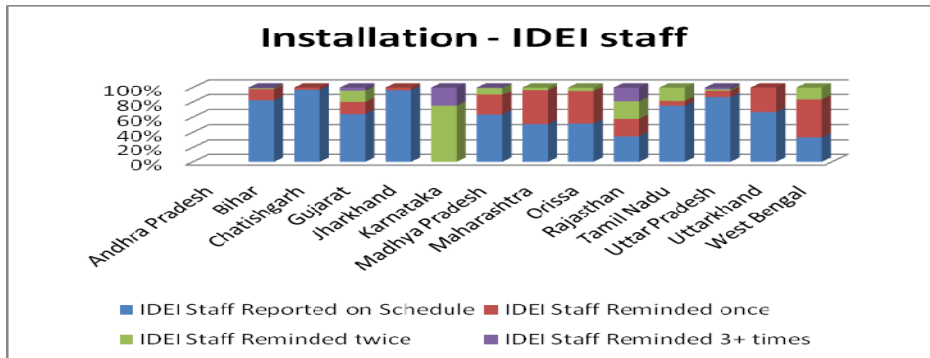
**Figure 18: Facilitation of installation of Treadle Pumps across states:**



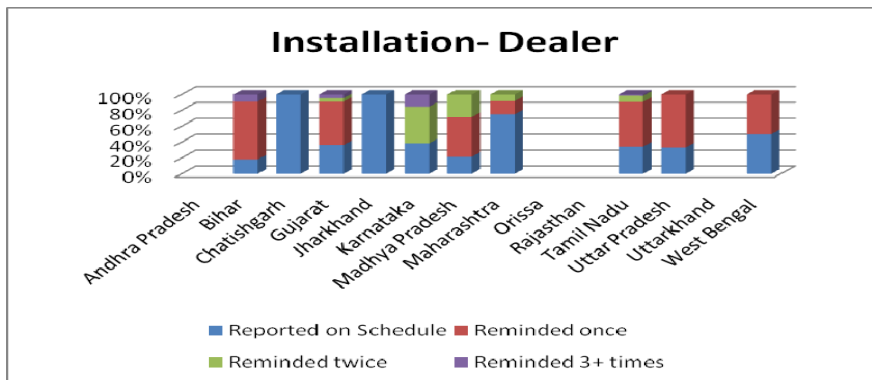
**Figure 19: Facilitation of installation of Drip across states:**



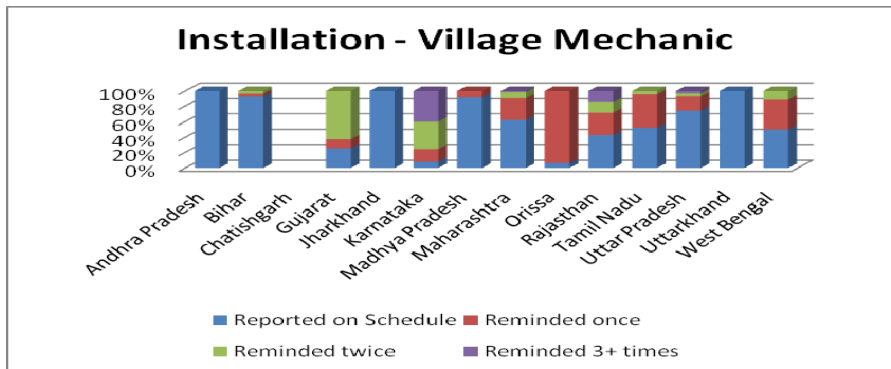
**Figure 20: Reporting by IDEI Staff for installation across Treadle Pump & Drip:**



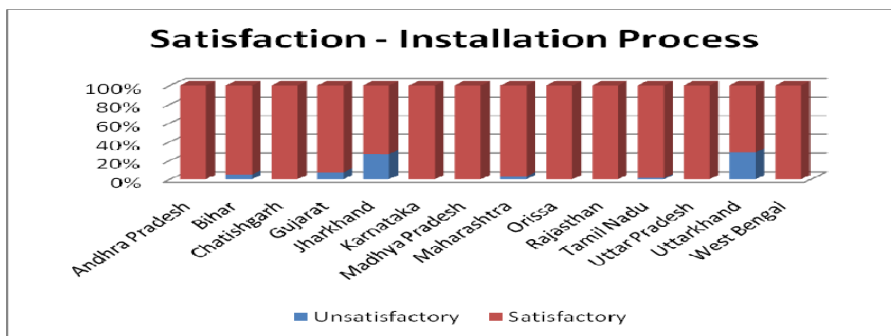
**Figure 21: Reporting by Dealer for installation across Treadle Pump & Drip:**



**Figure 22: Reporting by Village Based Mechanics for installation across Treadle Pump & Drip:**



**Figure 23: Satisfaction on Installation Process across states:**



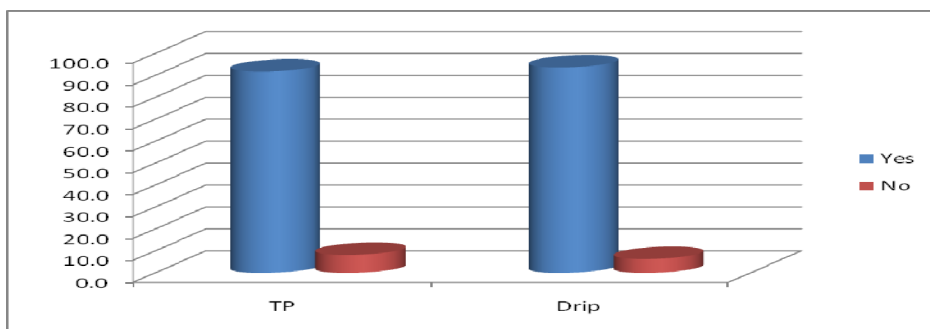
In terms of product installation majority of the time (87%) the product was installed within two days of the purchase. Overall a few number of respondents (1.2%) also reported that it took 10 or more days for the process of installation to be completed. As reported most of the time (44%) the installation was done by the involvement of IDEI Staff across the years. This was followed by the village mechanic and farmers themselves (**Figure 18, 19**). A few number of times it was done by the dealer also. In cases when the installation was done by others the installer mostly (**Figure 20, 21, 22**) reported on schedule and in rest of the cases they had to be reminded once. Two times and three times reminder were responded minimally across the years of inquiry. Majority of the respondents were satisfied with the installation experience across the programme states (**Figure 23**).

Throughout the process of installation a high satisfactory level (96 %) emerged and very few of the total consumers expressed their unsatisfactory (3.28%) status. In summary one can conclude that the customer satisfaction is dependent on the swift services of delivery and installation. Also across responses the **village mechanic** has emerged as an important person that has contributed as support towards the installation of the KB products.

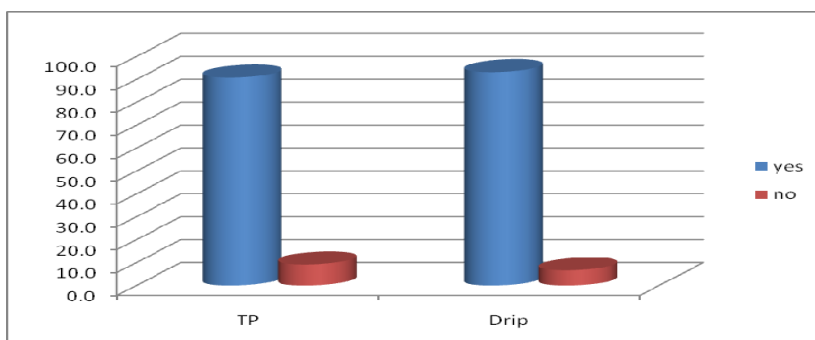
**2.4 KB Warranty Card and Problem status**

Of the total consumers almost all had the warranty card across TP (91%) & Drip (94%) **Figure 24, 24a, 24b**. When asked for problems, post installation, in drip areas around 5% of the respondents reported problems similarly across TP areas around 3 % of the consumers faced problems with the KB products ( Drip: 31 ; Treadle Pump: 22) (**Figure 25**).

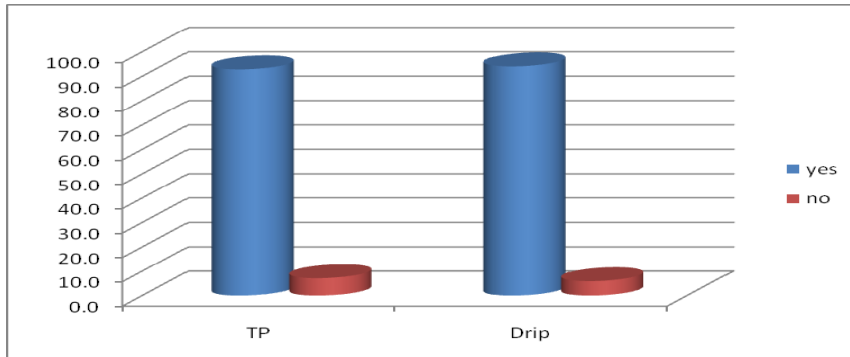
**Figure 24: KB Customers having Warranty Cards:**



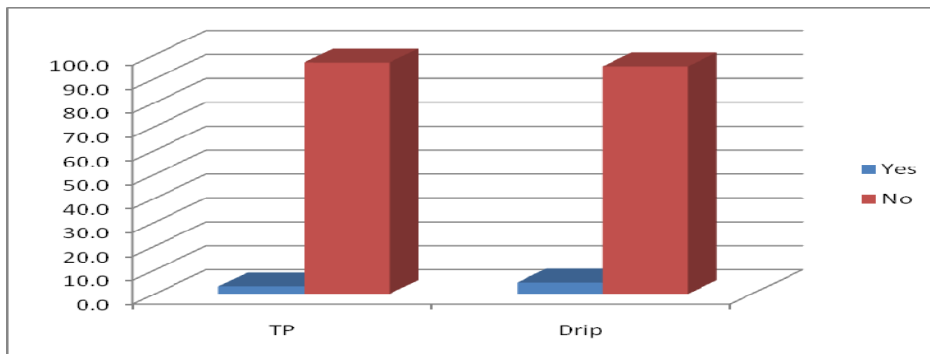
**Figure 24 a: KB Customers having Warranty Cards (2007-08)**



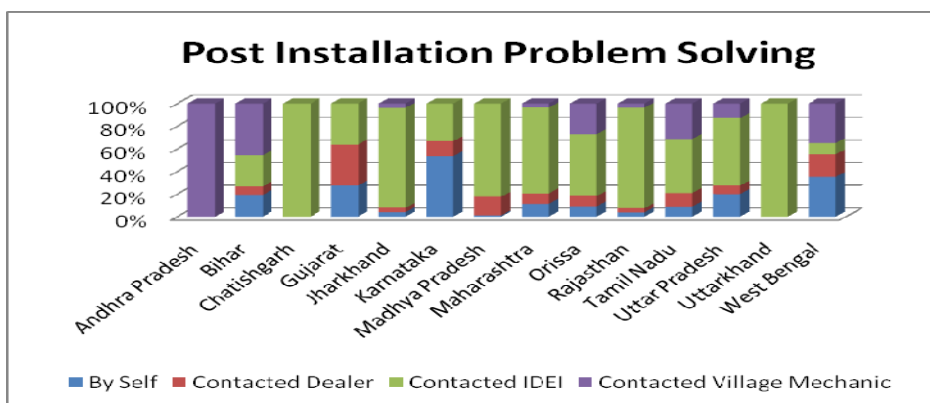
**Figure 24 b: KB Customers having Warranty Cards (2008-09)**



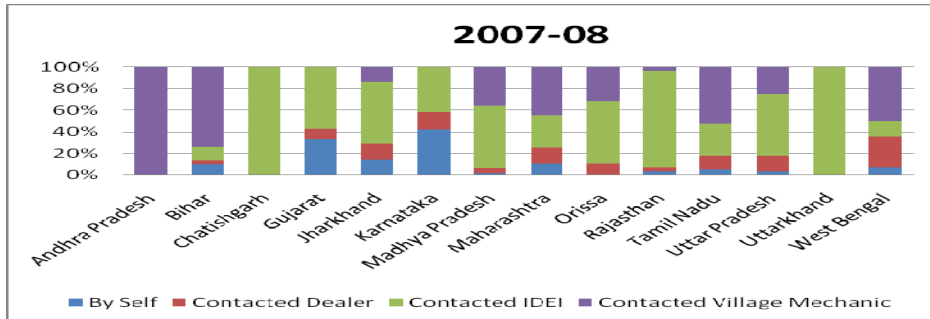
**Figure 25: Post Installation Problems across KB products:**



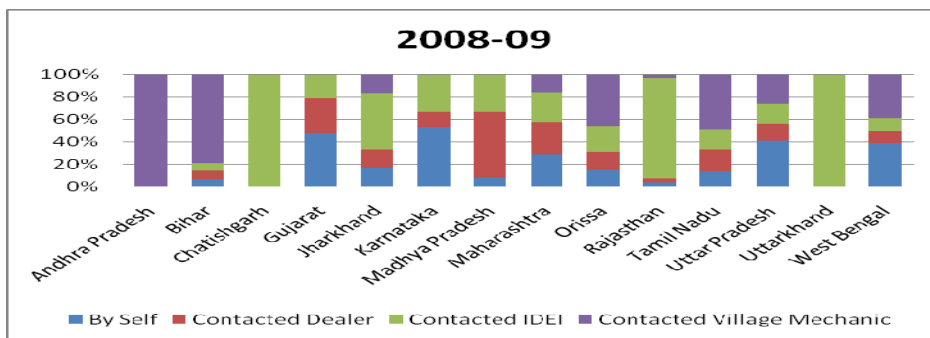
**Figure 26: Post Installation Problems resolved by, across KB products:**



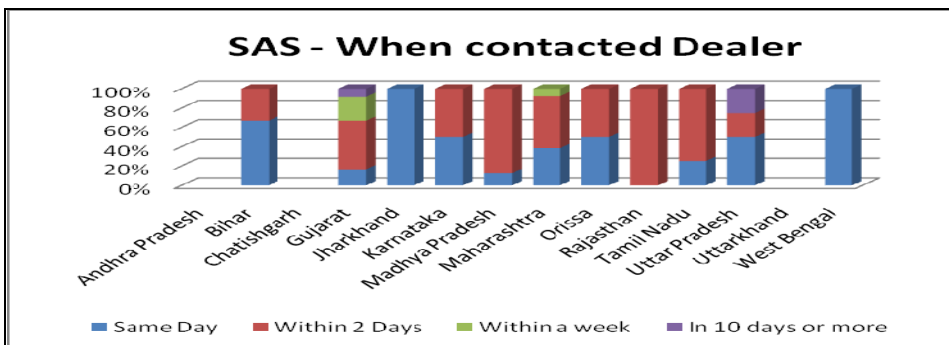
**Figure 26a: Post Installation Problems resolved by, across KB products (2007-08)**



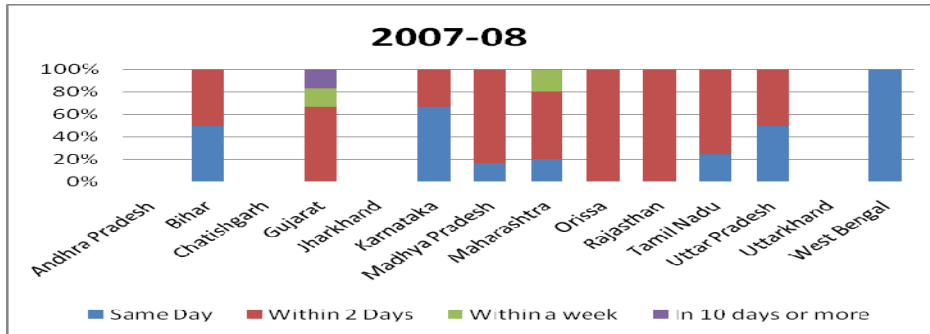
**Figure 26b: Post Installation Problems resolved by, across KB products (2008-09)**



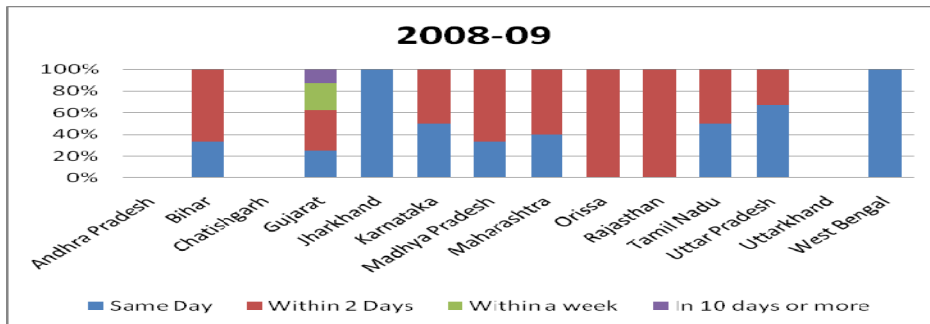
**Figure 27: SAS-Problem resolving by dealer across KB products:**



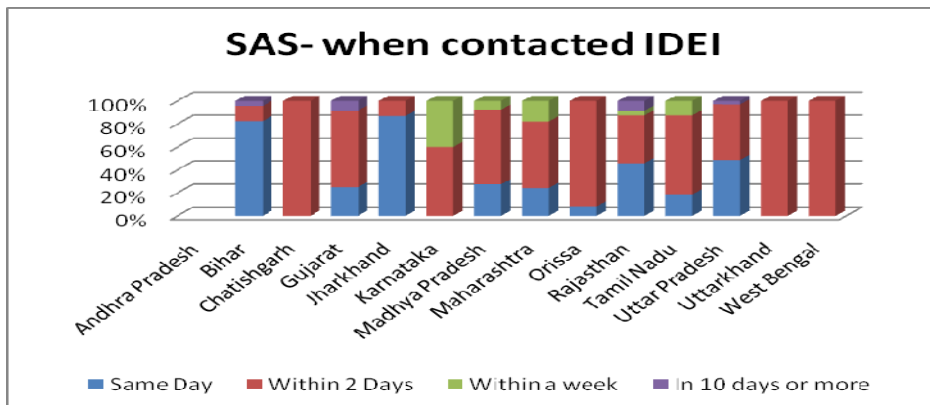
**Figure 27a: SAS-Problem resolving by dealer across KB products (2007-08):**



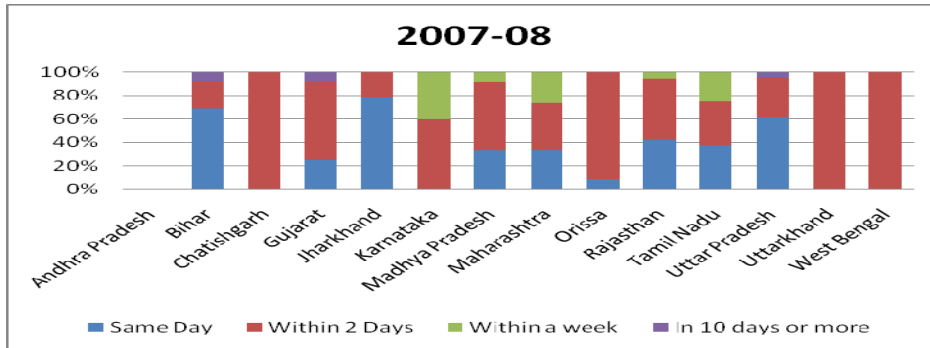
**Figure 27b: SAS-Problem resolving by dealer across KB products (2008-09):**



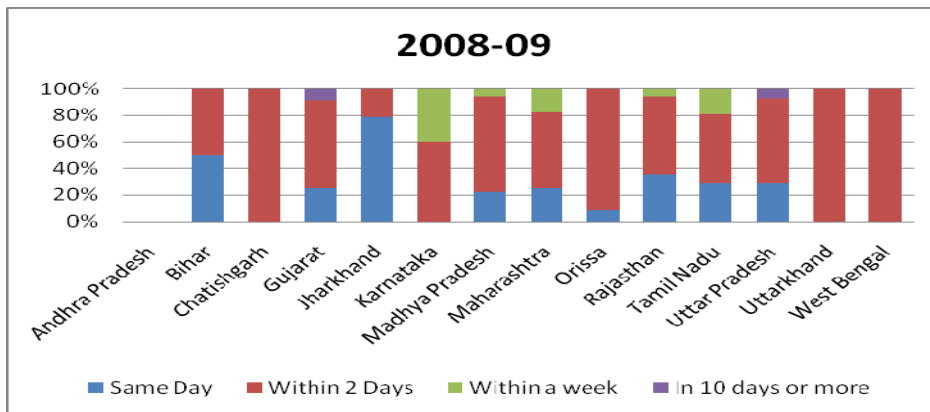
**Figure 28: SAS-Problem resolving by IDEI across KB products:**



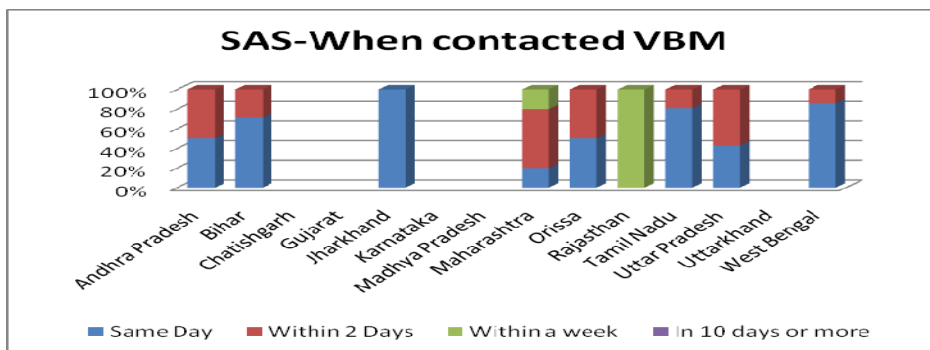
**Figure 28 a: SAS-Problem resolving by IDEI across KB products (2007-08):**



**Figure 28 b: SAS-Problem resolving by IDEI across KB products (2008-09):**

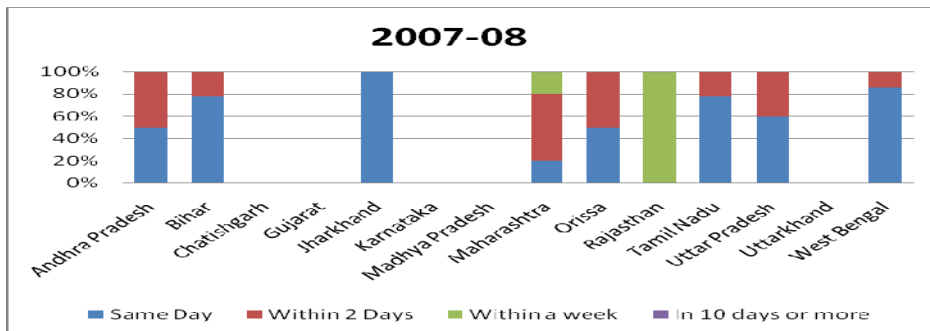


**Figure 29: SAS-Problem resolving by VBM across KB products:**

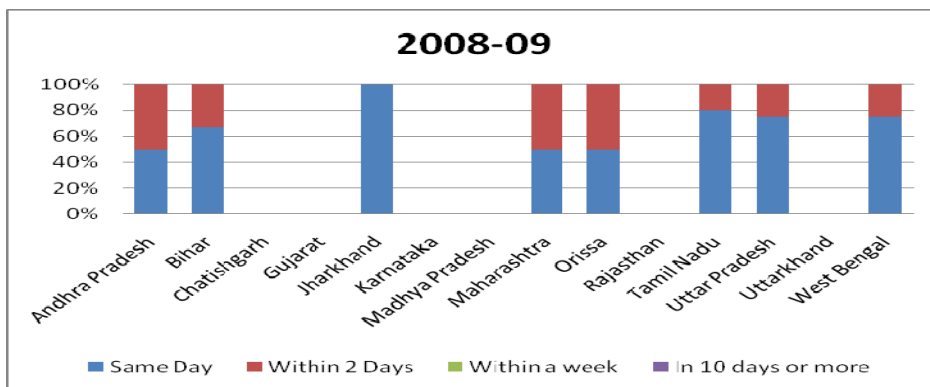




**Figure 29a: SAS-Problem resolving by VBM across KB products (2007-08):**



**Figure 29b: SAS-Problem resolving by VBM across KB products (2008-09):**

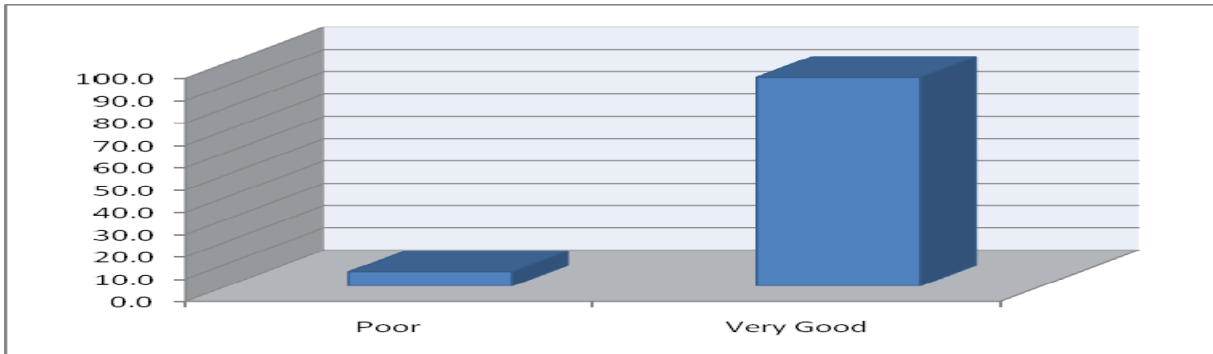


The respondents who had problems were further asked about the contact person other than self in the post installation problem situation. Of the total most of the respondents contacted the village mechanic and IDEI staff & least contacted was the IDEI dealer.(Figure 26, 26a, 26b)

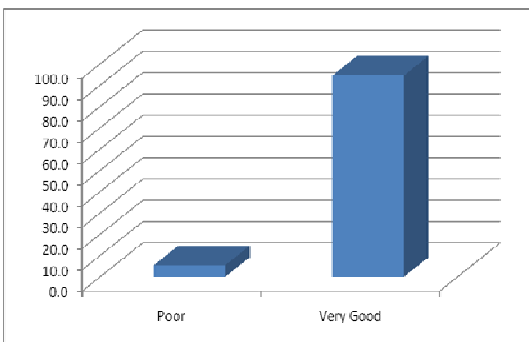
Most respondents responded that the problem was resolved on the same day of reporting. In cases where the consumers were not attended on the same day the problem was resolved in a span of two days (Figure 27,27a,27b, 28,28a,28b, 29, 29a, 29b). Also in such cases all the customers were satisfied (100%) with the services they received in resolving post installation problems.

**2.5 Customer Satisfaction**

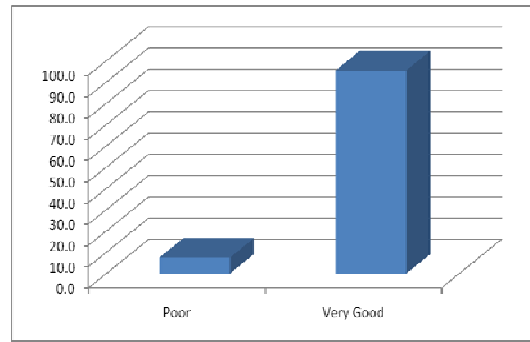
**Figure30: Overall Satisfaction**



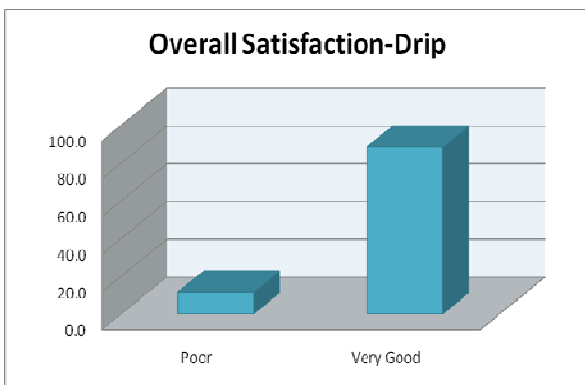
**Figure30a: Overall Satisfaction (2007-08)**



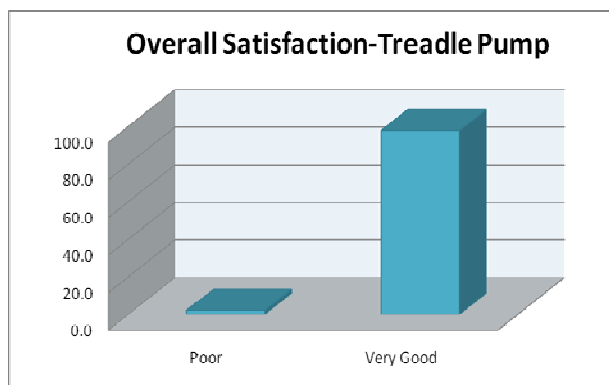
**Figure30b: Overall Satisfaction (2008-09)**



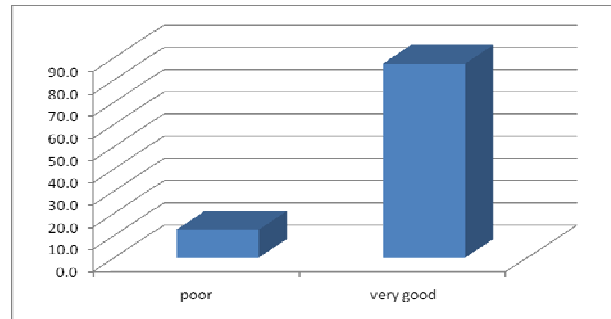
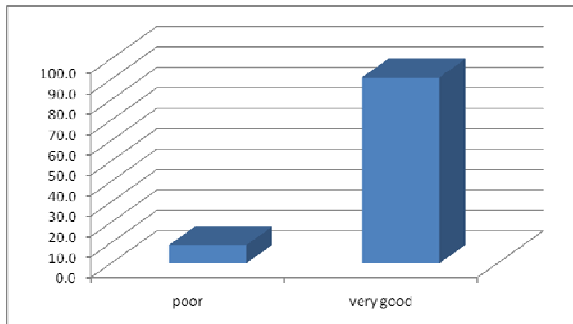
**Figure31: Satisfaction -KB Drip**



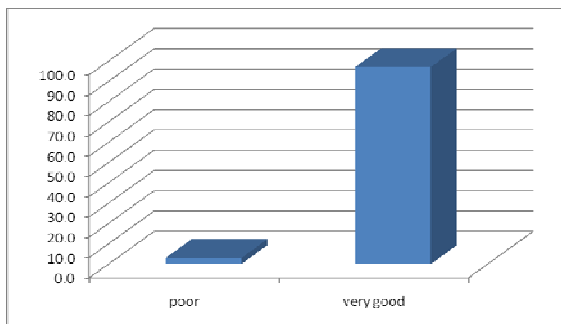
**Figure 32: Satisfaction - TP**



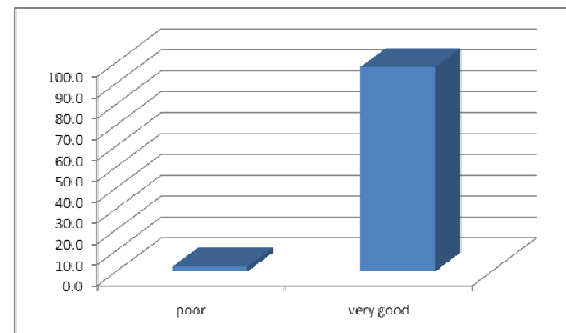
**Figure31a : Satisfaction –KB Drip(2007-08)      Figure31b : Satisfaction –KB Drip(2008-09)**



**Figure 32 a: Satisfaction – TP (2007-08)**



**Figure 32 b: Satisfaction – TP (2008-09)**



Most of the *consumers (98%) found* the product to be extremely useful. Most of the consumers *(97%) responded that they will recommend the product to others* and also rated their *overall experience with KB as very good (93 %)*. Across the years in Treadle Pump 07-08 & 08-09 the satisfaction level was 97% & 97.7% respectively, in the case of the Drip system the satisfaction was 91% & 93% respectively. Overall the data in the present section also reflects on the extensive and critical role of the village mechanic in the maintenance of the KB products.

### **3.0 Concluding Remarks**

Overall the data is representative of the KB product user and has highlighted on the *high customer satisfaction with the product*. This customer satisfaction has emerged with reference to installation, usage, and also *Service after Sales (SAS)*. Most of the customers expressed that they would recommend the product to others, this response also reflects

that the individual customers are also the potential advocates for the product. In the overall responses, the village mechanic has been referred as the key person of contact for installation and also in resolving problems (if any) related to the product.