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# Introduction and methodology

## General

This is the Monitoring Survey Report 2010 on the land settlement programme in CDSP-I and CDSP-II areas. This is a routine survey carried out nearly every year, generally in the months of January and February. The survey collects data over the preceding year. The present survey is the fifth survey and was carried out in August-September 2009. The first survey was carried out in 2000, which was a census survey; it covered all the land allotment beneficiaries (*khatian* holders) of the land settlement programme. The census survey covered the issues related to land possession. From the second year a sample survey was undertaken. The same sample was followed in later surveys, as a cohort.

## Sample design

For CDSP-I areas, the first sample survey selected a total sample of 453 *khatian* holders (households) from a total of about 4,458 *khatian* holders, representing about 10% of the households that received a *khatian* under CDSP. A systematic random sampling procedure was followed for the sample selection.

For CDSP-II areas, a total of 78 households were selected as a sample from Char Mora Dona (MD), out of a total number of *khatian* holders of 1,067 in this area (7,3%).

In CDSP I areas, the survey of 2009 interviewed only those sample households that were found residing inside the polders and in the villages nearby the polders. They constitute about 7.3% of the total population (*khatian* holders) of CDSP-I areas. Out of 511 households, 86 (16.8%) households were from clustered villages (CV), established under CDSP (see Table-1.1).[[1]](#footnote-2)

Table-1.1: Distribution of sample settlers by CV status

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Polders | CV status | | | | Both CV and Non-CV | |
| CV | | Non-CV | |
| Number | % | Number | % | Number | % |
| CM | 36 | 32.4 | 75 | 67.6 | 111 | 100 |
| CBD-II | 24 | 28.9 | 59 | 71.1 | 83 | 100 |
| CBT | 26 | 10.3 | 226 | 89.7 | 252 | 100 |
| MD | 0 |  | 65 | 100 | 65 | 100 |
| Total | 86 | 16.8 | 425 | 83.2 | 511 | 100 |

CM=Char Majid CBD-II=Char Baggar Dona-II CBT=Char BhatirTtek MD=Mora Dona

## Sample size and household analysis

The monitoring survey had two objectives -first, land retention status of the settlers and second, the present socio-economic condition of the settlers. For the first objective data was collected from all 511 sample households. The data on land retention of households which were not present in the area during the survey because of out-migration from the settlement areas or any other reasons, were collected from the local knowledgeable people, mostly the community leaders who were involved in the process of official land settlement and from the *khatian.*

For socioeconomic analysis a total 375 sample households were interviewed based on availability of the households in the settlement areas. They constitute 73.4 % (ref: Table-1.2).

Table-1.2: Distribution of households by availability for interview

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Polders | Availability of Household for interview | | | | Total | |
| Available | | Non-available | |
| Number | %age | Number | %age | Number | %age |
| CM | 74 | 66.7 | 37 | 33.3 | 111 | 100 |
| CBD-II | 73 | 88.0 | 10 | 12.0 | 83 | 100 |
| CBT | 180 | 71.4 | 72 | 28.6 | 252 | 100 |
| MD | 48 | 73.8 | 17 | 26.2 | 65 | 100 |
| Total | 375 | 73.4 | 136 | 26.6 | 511 | 100 |

# Household characteristics

## Characteristics of the surveyed households

In this section some characteristics of the surveyed households are presented. The household characteristics include clustered village (CV) status and the types of household head (female headed and male-headed), average household size, family types, and main occupation and land-ownership size groups.

## CV status

Table-2.1 shows the distribution of the surveyed/interviewed households by CV status. Out of 375 available households for interview, 69 households (18.4%) belong to the CV category. If they are considered with respect to the total surveyed households of only CDSP-I areas (that is excluding MD) the interviewed CV sample stands at 21%.

Table-2.1: Distribution of Household by CV Status in Four Survey Areas

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Polders | CV status of the household | | | | Total | |
| CV | | Non-CV | |
| Number | % | Number | % | Number | % |
| CM | 27 | 36.5 | 47 | 63.5 | 74 | 100 |
| CBD-II | 22 | 30.1 | 51 | 69.9 | 73 | 100 |
| CBT | 20 | 11.1 | 159 | 88.9 | 180 | 100 |
| MD |  |  | 48 | 100 | 48 | 100 |
| Total | 69 | 18.4 | 303 | 81.6 | 375 | 100 |

## Sex of household-heads

In Table-2.2 it can be seen that at present only 9 % of the total surveyed households are female-headed households, though at the time of land settlement female-headed households made up 13 %. During settlement time most of the then female-headed households did not have eligible male members (sons) for getting land allotment and they were widows. In some cases widows were used as instruments for getting land title over the surplus land of the households. Now (2009), many of those erstwhile female headed households have adult male members as their household heads. So, in this survey those erstwhile female headed households have been considered as male headed households. This has reduced the prevalence of female headed households compared with the time of settlement.

Table-2.2: Distribution of households by sex of household-heads

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Polders | sex of households | | | | Total | |
| male | | female | |
| number | % | number | % | number | % |
| CM | 68 | 91.9 | 6 | 8.1 | 74 | 100 |
| CBD-II | 67 | 91.8 | 6 | 8.2 | 73 | 100 |
| CBT | 160 | 88.9 | 20 | 11.1 | 180 | 100 |
| MD | 46 | 95.8 | 2 | 4.2 | 48 | 100 |
| Total | 341 | 90.8 | 34 | 9.1 | 375 | 100 |

## Household size

Table-2.3 shows the average household size in different project areas. The average household size is 7.0, which is higher than the national average. The average household size is highest in MD with 7.2 and lowest in CBD-II (6.7).

The high average household size is explained by the existence of more extended and joint families. In a previous survey it was found that about 59 % of the households are of single-family type. The remaining 40 % are either in extended or joint family groups. The existence of the nuclear households seems very low compared with the national figure.

Table-2.3: Average household size

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Areas | Number of households | Total members | Sex of members | |
| Male | Female |
| CM | 74 | 6.8 | 3.5 | 3.3 |
| CBD-II | 73 | 6.7 | 3.2 | 3.5 |
| CBT | 180 | 7.1 | 3.6 | 3.4 |
| MD | 48 | 7.2 | 3.6 | 3.6 |
| Total | 375 | 7.0 | 3.5 | 3.4 |

Table-2.4 shows the average household size by CV and non-CV households. The average household size is higher for Non-CV category with 7.1 members per household as against 6.5 members in CV households. The average number of male members is higher in Non-CV category with 3.6 as against 3.5 female members. In CV the average male household members is 3.1 while it is 3.3 for female members.

Table-2.4: Average Household Size by CV Status in Four Survey Areas

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Areas | Number of households | Total members | Sex of members | |
| Male | Female |
| CV | 69 | 6.5 | 3.1 | 3.3 |
| Non-CV | 304 | 7.1 | 3.6 | 3.5 |
| Total | 375 | 7.0 | 3.5 | 3.4 |

## Occupation pattern of the sample household-heads

Table-2.5 shows the distribution of the household heads by main occupation per project area. It appears that 32 % of the households is dependent on agriculture and 26 % is dependent on wage labour (that includes both agricultural wage and non-agricultural wage labour, like earth cutting and work in brickfields). Wage labour is very low (23.3%) in CBD-II and very high in MD (37.5%) compared with other areas.

Table-2.5: Distribution of households by main occupation of household-heads

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Occupation category | Polders (%) | | | | Total |
| CM | CBD-II | CBT | MD |
| N=74 | N=73 | N=180 | N=48 | N=375 |
| Farming | 37.8 | 27.4 | 32.8 | 22.9 | 31.5 |
| Wage labourer | 24.3 | 23.3 | 24.4 | 37.5 | 25.9 |
| Business | 8.1 | 17.8 | 14.4 | 10.4 | 13.3 |
| Transport workers | 5.4 | 11.0 | 3.3 | 2.1 | 5.1 |
| Fishermen | 6.8 | 2.7 | 1.1 | 10.4 | 3.7 |
| Service-holders | 5.4 | 2.7 | 3.9 | 6.3 | 4.3 |
| Others | 12.2 | 15.1 | 20.0 | 10.4 | 16.3 |
| Total | 100 | 100 | 100 | 100 | 100 |

## **Average landholding**

Table-2.6 shows the average size of different types of land. The average total land is 1.94 acres in CM followed by CBT with 1.88 acres. It is lowest in MD with 1.08 acres and in CBD-II it is 1.37. It should be noted that the present average holding does not reflect the average holding of land that the settlers got at the time of settlement because many settlers have bought land and others have sold land. Some of them have both bought and sold land.

Table-2.6: Average amount of different types of land

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Areas | N= | Land types (land in acres) | | | | Total |
| Arable | Homestead | Pond | Other land |
| CM | 74 | 1.31 | 0.31 | 0.18 | 0.14 | 1.94 |
| CBD-II | 73 | 0.94 | 0.26 | 0.15 | 0.02 | 1.37 |
| CBT | 180 | 1.37 | 0.27 | 0.18 | 0.07 | 1.88 |
| MD | 48 | 0.72 | 0.20 | 0.15 | 0 | 1.08 |
| Total | 375 | 1.19 | 0.26 | 0.17 | 0.06 | 1.69 |

The average arable landholding is 1.37 acres in CBT, which is the highest among the four regions. It is lowest in MD (0.72 acres).

Table-2.7 shows the average size of land of different types. The average total land per household is 1.92 acres for Non-CV households and 0.69 acres for CV households.

Table-2.7: Average amount of different types of land by CV Status

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CV status | Land types (land in acres) | | | | Total land |
| Arable | homestead | pond | Other land |
| CV | 0.45 | 0.17 | 0.08 | 0.00 | 0.69 |
| Non-CV | 1.36 | 0.29 | 0.20 | 0.08 | 1.92 |
| Total | 1.19 | 0.26 | 0.17 | 0.06 | 1.69 |

## Landownership size: all land

Table-2.8 presents the distribution of households by all land ownership size. It is seen that 1.9 % of households is landless, meaning that they do not have any land, including homestead. These settlers have either sold or lost their allotted land (either failed to get possession or evicted by jotedar). It is also seen that more than 21 % of the households belong to the landownership size of 0.01-0.50 acres in the four areas. Almost 18 % of households belong to the landownership size group of 0.51-1.00 acres in the four areas. This means that 41.1 % of the settlers in the total project areas has land below 1.01 acres. In MD these types of settlers constitute 58.8 %. In MD the average land allotment was lower compared with other regions. In both CM and CBT they constitute about 38% and in CBD-II they constitute 41.1 %.

On the other hand, 26.4 % of households has land more than 2.00 acres, though at the time of allotment no settler got more than 2.00 acres of land. This means that the settlers either manipulated at the time of land distribution/official land title distribution or they have bought/acquired land somehow. The land retention section will discuss this issue in details.

Table-2.8: % Distribution of households by land ownership size (all land)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Land Ownership Size (acres) | Polders | | | | | | | | Total | |
| CM | | CBD-II | | CBT | | MD | |
| No. | % | No. | % | No. | % | No. | % | No. | % |
| Landless | 2 | 2.7 | 1 | 1.4 | 4 | 2.2 | 0 | 0 | 7 | 1.9 |
| 0.01-0.50 | 18 | 24.3 | 13 | 17.8 | 35 | 19.4 | 14 | 29.2 | 80 | 21.3 |
| 0.51-1.00 | 8 | 10.8 | 16 | 21.9 | 29 | 16.1 | 14 | 29.2 | 67 | 17.9 |
| **Sub-total** | **28** | **37.8** | **30** | **41.1** | **68** | **37.7** | **28** | **58.4** | **154** | **41.1** |
| 1.01-1.50 | 9 | 12.2 | 11 | 15.1 | 32 | 17.8 | 7 | 14.6 | 59 | 15.7 |
| 1.51-2.00 | 7 | 9.5 | 21 | 28.8 | 27 | 15.0 | 8 | 16.7 | 63 | 16.8 |
| 2.00+ | 30 | 40.5 | 11 | 15.0 | 53 | 29.4 | 5 | 10.4 | 99 | 26.4 |
| Total | 74 | 100 | 73 | 100 | 180 | 100 | 48 | 100 | 375 | 100 |

# Land retention

## Land settlement quality

**3.1.1. Land settlement and settlers**

The land settlement quality means how far the settlement operation is done in compliance with the government policy for *khas* land distribution. The Agricultural Khas Land Management and Settlement Policy of 1997 has stipulated that the settlers for *khas* land should be local landless people.

The survey has found that, in all four areas combined, 480 out of a total of 511 settlers were local settlers. This means that 94.0 % of the settlers were in compliance with the Agricultural *Khas* Land Management and Settlement Policy of 1997 (*ref:* Table-3.1).

Table-3.1: Distribution of settlers by location status

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Settler Types | Polders | | | | | | | | Total | |
| CM | | CBD-II | | CBT | | MD | |
|  | No. | % | No. | % | No. | % | No. | % | No. | % |
| Local settlers | 107 | 96.4 | 83 | 100 | 228 | 90.5 | 62 | 95.4 | 480 | 94.0 |
| Non-local settlers | 4 | 3.6 |  |  | 24 | 9.6 | 3 | 4.6 | 31 | 6.1 |
| Total | 111 | 100 | 83 | 100 | 252 | 100 | 65 | 100 | 511 | 100 |

**3.1.2 Land settlement and land**

As Table-3.1 shows that the selection of 94 % of the settlers was in compliance with the Agricultural Khas Land Management and Settlement Policy of 1997. In terms of actual amount of land, the compliance is almost similar. Table-3.2 shows that about 93.8 % of allotted land was allotted to the residential allotment-holders who lived in the project areas. The remaining 6 % land was allotted to non-residential allotters or to fake allotters. The land allotment among the local settlers was the highest in CBD-II where all settlers were from the locality.

Table-3.2: Distribution of land by location status of the settlers

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Settler Types by Location | Polder/area (in %) | | | | Total |
| CM | CBD-II | CBT | MD |
| Local settlers | 95.9 | 100 | 91.9 | 91.9 | 93.8 |
| Non-local settlers | 4.1 |  | 8.2 | 8.1 | 6.1 |
| Total | 100 | 100 | 100 | 100 | 100 |

In both CBT and MD 91.9 per cent land was distributed among the local settlers. The remaining 8.1 per cent land was distributed among non-residential allotters or fake settlers. In CM about 96 per cent of the land was distributed among the local settlers.

**3.2 Average allotment and possession land: local settlers**

Table-3.3 shows that the total average land allotment was 1.26 acres for three polders and MD together; it was 1.03 acres in CM, 1.31 acres in CBD-II, 1.52 acres in CBT and 0.61 acres in MD.

However, the settlers did not get possession of all their allotted land because some *jotedar/* occupiers denied the possession to the landless settlers despite the fact that these settlers had an official title. It is seen in Table-3.3 that the total average possession was 1.19 acres for all four areas together, 0.98 acres in CM, 1.25 acres in CBD-II, 1.42 acres in CBT and 0.60 acres in MD. The rate of possession was 94.5 per cent for four areas together varying from 93.4 per cent in CBT, 95.1 per cent in CM and 95.4 per cent in CBD-II. The possession rate is highest in CBD-II.

Table-3.3: Average allotted and possessed land by local settlers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Polders/area | N= | Average Land (acres) | | % of possession |
| Allotted | Possessed |
| CM | 107 | 1.03 | 0.98 | 94.6 |
| CBD-II | 83 | 1.31 | 1.25 | 95.5 |
| CBT | 228 | 1.52 | 1.42 | 93.7 |
| MD | 62 | 0.61 | 0.60 | 98.8 |
| Overall | 480 | 1.26 | 1.19 | 94.5 |

CDSP gave the land title to the settlers on the basis of land occupancy by the settlers and most of the settlers had their land prior to the CDSP programme. They occupied their land when the char emerged or bought possession. However, in some cases, CDSP gave additional land occupied by illegal occupiers, mostly the *jotedars* who are not eligible for a land title. In many cases, the settlers got an official land title over the unoccupied land, were later denied the access by the previously occupying *jotedars*. That was why about 6 % land was not under the possession of the settlers. The *jotedar*/coterie groups were active in CBT. In MD most of the settlers bought the possession of the land from the first occupiers who left the area, realizing the fact that CDSP would not give them land. In MD most of the settlers came from Hatiya being victims of river erosion.

## Retention status: all local settlers

Retention has been considered here from two points of views -- first the settlers and then the land.

**3.3.1 Retention of the settlers**

It is seen that 79 % of the local official settlers (see Table-3.4) in four areas are still living in the polders/project areas. This means another 21% of the allotment-holders have already left the settlement areas, though 4.4 % of them have kept (not sold) their land there.

Table-3.4: Distribution of local settlers by present location status

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Areas | | | | | | | | Total | |
| CM | | CBD-II | | CBT | | MD | |
| No. | % | No. | % | No. | % | No. | % | No. | % |
| Living inside | 74 | 69.2 | 74 | 89.2 | 183 | 80.3 | 48 | 77.4 | 379 | 79.0 |
| Left polder but hold land | 6 | 5.6 | 3 | 3.6 | 10 | 4.4 | 2 | 3.2 | 21 | 4.4 |
| Left polder selling land | 27 | 25.2 | 6 | 7.2 | 34 | 14.9 | 12 | 19.4 | 79 | 16.5 |
| Others\* | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 0 | 0.0 | 1 | 0.2 |
| Total | 107 | 100 | 83 | 100 | 228 | 100 | 62 | 100 | 480 | 100 |

\*Left polder failed to get possession

In CM 30.8 % of the local official settlers has left the polder while from MD 22.6 % of the local official settlers have left MD. The lowest migration is observed in CBD-II, where only 10.8 % of the local official settlers have left the polder after land settlement. It should be noted that CM is very close to Char Nangulia, a newly habited char.

In terms of land the local official settlers who have left the polders/area selling land, owned 12.3 % of total possessed land. This means that the land sold by the local official settlers who have left the settlement places constitutes 12.3 % of the total possessed land (see Table-3.5). It is as high as 21 %in MD and as low as 3.2 % in CBD-II. In the other two polders, it is 19% in CM and 12% in CBT.

Table-3.5: Land loss by the Migrated out settlers

|  |  |
| --- | --- |
| Areas | %age of land sold |
| CM | 18.9 |
| CBD-II | 3.2 |
| CBT | 12.1 |
| MD | 20.6 |
| Overall | 12.3 |

**3.3.2 Retention of land**

Table-3.5 shows the land loss of the local official settlers who have left the settlement locality. Table-3.6 shows the land loss/sale by *all* the local official settlers (settlers who are still in the settlement areas and who have left the areas) after receiving the official land title.

It is seen in Table-3.6 that all local official settlers have retained 74 % of their officially allotted land. In other words, they have lost 26.0 % of their possessed land after they had received the official land title of their land/allocation of land from CDSP.

Some of the settlers have sold their allotted land because they were forced to do so by the *jotedars o*r powerful rich who once illegally occupied the land and denied the access of the settlers to the land. Through village *salish* (mediation) they sold the land. Some faced criminal cases before surrendering to the *jotedars*. However, the sale of this land is not shown in this table.

Table-3.6: Land lost/sold by all local official settlers

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Areas | Total HH | Average land  possessed (acre) | %age of | | Total |
| Land retention | Land loss (sold) |
| CM | 107 | 0.98 | 69.5 | 30.5 | 100 |
| CBD-II | 83 | 1.25 | 81.7 | 18.3 | 100 |
| CBT | 228 | 1.42 | 72.8 | 27.2 | 100 |
| MD | 62 | 0.60 | 75.1 | 24.9 | 100 |
| Overall | 480 | 1.19 | 74.0 | 26.0 | 100 |

## 3.4 Local settlers still living in the settlement areas

In the previous section, all the local settlers and their retention status were discussed. In this section only those settlers who are still living in the area will be discussed.

1. **Average allotment and possession of the settlers still living in the settlement areas**

All the settlers (379 households) who are still living in their respective polders/area received on average 1.34 acres of land from CDSP, though it varies from polder/area to polder/areas. In CBT the average allotment is 1.60 acres, which is the highest among the four polders/ areas. In MD it is only 0.60 acres, the lowest. In CBD-II the average allotment was 1.40 acres which is relatively high compared with the other two areas namely, CM (1.13) and MD (0.60). The detailed findings are presented in Table-3.7.

It should be noted that the survey interviewed 375 households for socioeconomic data and information on land allotment and land possession was collected from their neighbors.

Table-3.7: Average Land Allotment and Possession: Settlers Still Living in the Locality

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Area | Total HH | Average land (acres) of | | % of land possessed |
| Allotted land | Possessed land |
| CM | 74 | 1.13 | 1.05 | 93.1 |
| CBD-II | 74 | 1.40 | 1.34 | 95.7 |
| CBT | 183 | 1.60 | 1.49 | 93.1 |
| MD | 48 | 0.60 | 0.59 | 98.4 |
| Overall | 379 | 1.34 | 1.26 | 93.9 |

1. **Land retention of the settlers still living in the settlement areas**

The average land retention status of the settlers who are still in the locality is shown in Table-3.8. In all four areas combined, the average retention of land possessed by the settlers is 1.05 acres as against 1.26 acres of officially allotted and possessed land. In percentage terms, the retention rate of the land is about 85 %.

Individually, MD has the highest retention with 94 % of land. The retention rate in the three polders was almost similar, varying from 82% to 84%. It should be noted that land settlement operation took place in three polders simultaneously in the 1990’s.

It has been mention in section 3.2 that in some cases the settlers have not got possession over all their allotted land because jotedars/occupiers denied their access to the allotted land.

Table-3.8: Land Retention Status of the Settlers Still Living in the Locality

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Areas | No. of HH | Average land (acres) | | | % of land retention and lost/sold | |
| Possessed land | Retained land | Sold land |
| Retained | Lost/sold |
| CM | 74 | 1.05 | 0.89 | 0.16 | 84.4 | 15.6 |
| CBD-II | 74 | 1.34 | 1.13 | 0.21 | 84.1 | 15.9 |
| CBT | 183 | 1.49 | 1.22 | 0.27 | 82.1 | 17.9 |
| MD | 48 | 0.59 | 0.55 | 0.03 | 94.2 | 5.8 |
| Overall | 379 | 1.26 | 1.05 | 0.21 | 84.6 | 16.4 |

1. **Present land holding status of the settlers living in the settlement areas**

Present land-holding status has included retained land (see Table-3.8), newly purchased land, inherited land and occupied *khas* land, particularly in new chars. The land of the first three categories is legal land with official title, while the last category of land is illegal without an official title. In the table, retained land includes only land for which the settlers got an official title.It should be noted that almost all the settlers had to buy the possession of their occupied *khas* land in new char from the *jotedars*/musclemen at the time of in-migration, before official settlement.

In Table-3.9 and Table-3.11 current land holding status has been presented, considering these two aspects. Table-3.9 has presented the findings based on first three (legal) categories of land and Table-3.10 has presented the findings including all four categories of land (including the illegal category).

In all four areas combined, the settlers (379 households) who are still living in the locality have increased their average landholding from 1.26 acres that they got possession after allotment to 1.44 acres (ref: Table-3.9). The increase is the highest in CM, where it has rose from 1.05 acres to 1.41 acres. It is also high in MD, where it rose from 0.59 acres to 0.74 acres. It should be noted that the retention rate in MD is also considerably high (ref: Table-3.8)

Table-3.9: Present legal land holding status of the local settlers

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | No. of HH | Possessed land (acre) | Present legal land holding by sources (acres) | | | |
| Retained allotted land | Purchased land with title | Inherited | Total |
| CM | 74 | 1.05 | 0.89 | 0.48 | 0.04 | 1.41 |
| CBD-II | 74 | 1.34 | 1.13 | 0.17 | 0.01 | 1.31 |
| CBT | 183 | 1.49 | 1.22 | 0.40 | 0.07 | 1.70 |
| MD | 48 | 0.59 | 0.55 | 0.12 | 0.07 | 0.74 |
| Total | 379 | 1.26 | 1.05 | 0.34 | 0.05 | 1.44 |

Table-3.10 shows that land purchased with land title is 0.34 acres in four regions together. It also shows that 0.31 acres of such land is located inside the polders/area.

Table-3.10: Average amount of purchased land with land title by land location

|  |  |  |  |
| --- | --- | --- | --- |
| Areas | Total land (acres) | Land location (acres) | |
| Inside polder | Outside polder |
| CM | 0.48 | 0.40 | 0.08 |
| CBD-II | 0.17 | 0.15 | 0.03 |
| CBT | 0.40 | 0.39 | 0.01 |
| MD | 0.12 | 0.11 | 0.01 |
| Total | 0.34 | 0.31 | 0.03 |

As said earlier, the total present landholding includes four categories of land as presented in Table-3.11. It is seen in Table-3.11 that the settlers in four areas on average have bought the possession of 0.24 acres of *khas* land, particularly in new chars. The occupancy rate is very high for settlers in CM and MD. In CM, the average occupied *khas* land size is 0.54 acres and in MD it is 0.33 acres. It is very low in CBD-II (0.01 acre). In CBT it is 0.17 acres. The occupied *khas* land in new chars has pushed the present landholding size up.

Table-3.11: Present landholding status of the settlers living in the locality

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | number of HH | initial land possession | total legal land\* | occupied *khas* land | Total |
| CM | 74 | 1.05 | 1.41 | 0.54 | 1.95 |
| CBD-II | 74 | 1.34 | 1.31 | 0.04 | 1.35 |
| CBT | 183 | 1.49 | 1.70 | 0.17 | 1.87 |
| MD | 48 | 0.59 | 0.74 | 0.33 | 1.07 |
| Total | 379 | 1.26 | 1.44 | 0.24 | 1.68 |

\*ref: Table-3.9

From Table-3.11 it is also seen that the average present landholding size is 1.68 acres in four areas together, rising from 1.26 acres that they got possession after official settlement. In CM it rose from 1.05 acres to 1.95 acres and in MD it rose from 0.59 acres to 1.07 acres. The settlers in CM have more opportunity to occupy khas land in its adjacent new chars like Nagulia and Noler char. MD has also such scopes in its nearby chars such as Ziar char.

It should be noted that total legal land includes retained allotted land, land purchased with land title and inherited land (ref:Table-3.9).

## Occupation of *khas* land in new chars

About 20 % of the settlers found in the locality (see Table-3.12) have occupied khas land through buying land, mostly from the armed cadres, popularly known as *Bahini* who control the new chars. They did that probably with the expectation that they would get an official title for their occupied land at some future date. It should be noted that CM and MD are very close to Char Nangulia and Ziar Char respectively, and many settlers from CM and MD have bought the occupation right of land in those two areas. From the table given below it is seen about 34% of the settlers from CM and 35% from MD have purchased khas land from the so-called *Bahini.*

Table-3.12: %age of khas land occupiers in new chars

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Areas | Total HH | Households occupied khas land | | Average land (acre) |
| Number | % |
| CM | 74 | 25 | 33.8 | 1.60 |
| CBD-II | 74 | 7 | 9.5 | 0.45 |
| CBT | 183 | 25 | 13.7 | 1.24 |
| MD | 48 | 17 | 35.4 | 0.94 |
| Total | 379 | 74 | 19.5 | 1.22 |

# Agricultural land operation status of the sample households

Land operation means the management pattern of agricultural land of an agricultural land- owning household. From land operation point of view, the agricultural landowning households have been categorized into three groups: non-operating landowning households, partially operating landowning households and fully operating landowning households.

## 4.1 Land Operation: agricultural Land

Table-4.1 shows the agricultural land owning households by land operating status. It is seen that out of 296 agricultural landowning households about 17 % (49 agricultural landowning households) are non-operating households. This means that they do not cultivate their agricultural land under their own management. They either share out or mortgage out or both their all agricultural land. Besides them, another 14% households (42 households) operate their land partially. This means that they have either share cropped out or mortgaged out a part of their owned land and the remaining land they cultivate under their own management. It is also seen in Table-4.1 that out of 296 agricultural landowning households 205 households (69.3%) cultivate their all own agricultural land under their own management. Full operating landowning households constitute 76% in MD followed by CBD-II with 75%. In CM they comprise only 61% and in CBT they are 68% of total agricultural land owning households.

Table-4.1: % Distribution of landowning households by land operating status

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Area | Operational category of agricultural landowning households | | | | | | Total | |
| Non-operating | | Partial operating | | Full operating | |
| Number | % | Number | % | Number | % | Number | % |
| CM | 10 | 18.5 | 11 | 20.4 | 33 | 61.1 | 54 | 100 |
| CBD-II | 7 | 11.5 | 8 | 13.1 | 46 | 75.4 | 61 | 100 |
| CBT | 25 | 17.4 | 21 | 14.6 | 98 | 68.1 | 144 | 100 |
| MD | 7 | 18.9 | 2 | 5.4 | 28 | 75.7 | 37 | 100 |
| Total | 49 | 16.6 | 42 | 14.2 | 205 | 69.3 | 296 | 100 |

### **4.1.1 Landownership size: agricultural land**

Table-4.2 presents the distribution of the surveyed sample households/interviewed 375 households by agricultural landownership size groups.[[2]](#footnote-3) It is seen that about 21 % households are absolute landless households as they do not have any agricultural land. The absolute landless households are more prevalent in CM, with a little more than 28 % of the total households. This group is less prevalent in CBD-II with 16.4 %. The household with less than 1.01 acres of land constitute 54.7 % of the total interviewed 375 households in project areas. It is the highest in MD with 68.8 % and the lowest in CM with 54.1 %. It should be noted that many households got only homestead land and pond, especially in the clustered villages. On the other hand, 13.6 % of the households have more than 2.00 acres of agricultural land. The reasons of having more than 2.00 acres of land (the highest ceiling of allotment) have been explained in a previous section.

Table-4.2: % Distribution of households by agricultural ownership size

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Land ownership size (acres) | Polders | | | | | | | | Total | |
| CM | | CBD-II | | CBT | | MD | |
| No. | % | No. | % | No. | % | No. | % | No. | % |
| Landless | 21 | 28.4 | 12 | 16.4 | 36 | 20.0 | 10 | 20.8 | 79 | 21.1 |
| 0.01-0.50 | 4 | 5.4 | 12 | 16.4 | 20 | 11.1 | 14 | 29.2 | 50 | 13.3 |
| 0.51-1.00 | 15 | 20.3 | 16 | 21.9 | 36 | 20.0 | 9 | 18.8 | 76 | 20.3 |
| **Sub-total** | **40** | **54.1** | **40** | **54.7** | **92** | **51.1** | **33** | **68.8** | **205** | **54.7** |
| 1.01-1.50 | 10 | 13.5 | 19 | 26.0 | 34 | 18.9 | 9 | 18.8 | 72 | 19.2 |
| 1.51-2.00 | 7 | 9.5 | 8 | 11.0 | 27 | 15.0 | 5 | 10.4 | 47 | 12.5 |
| 2.00+ | 17 | 23.0 | 6 | 8.2 | 27 | 15.0 | 1 | 2.1 | 51 | 13.6 |
| Total | 74 | 100 | 73 | 100 | 180 | 100 | 48 | 100 | 375 | 100 |

### **4.1.2 Tenure of own agricultural land**

Table-4.3 shows the %age distribution of households by tenure arrangement of their land. It is seen that in the four surveyed areas, nearly 15 % of the total landowning households have reported that they were sharecropping out their land. Besides, another 18 % of the surveyed households were mortgaging out their land. It should be noted that many of the households have both share cropped out and mortgaged out.

Table-4.3: % distribution of landowning households by tenure types

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Polders | Tenure types (%) | | | Total (%) |
| Own cultivation | Share cropped out | Mortgage out |
| CM | 81.5 | 20.4 | 22.2 | 124.1 |
| CBD-II | 88.5 | 4.9 | 19.7 | 113.1 |
| CBT | 82.6 | 18.1 | 16.0 | 116.7 |
| MD | 81.1 | 10.8 | 18.9 | 110.8 |
| Total | 83.4 | 14.9 | 18.2 | 116.6 |

Table-4.4 shows the percentage distribution of own arable land of the landowning interviewed households by tenure types. It is seen that in the four study areas, 14 % of own land is share cropped out and another 11 % of land is mortgaged out. This means that more than one-fourth of total own land is under the tenure systems of share cropping and mortgaging out. The sharecropping out is more dominant in MD where 20 % of land is under share cropping out. The CBT follows MD with 16 %. Relatively it is very low in CBD-II with 6 %. The land under mortgaging out is also more dominant in MD with 12.6 % followed by CM with about 13 %.

Table-4.4: % distribution of own agricultural land by tenure types

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Polders | Tenure types (land in %) | | | Total |
| own land | sharecropped out | mortgage out |
| CM | 75.1 | 12.3 | 12.6 | 100 |
| CBD-II | 84.7 | 6.1 | 9.2 | 100 |
| CBT | 72.9 | 15.9 | 11.1 | 100 |
| MD | 66.6 | 20.1 | 13.2 | 100 |
| Total | 74.7 | 14.0 | 11.3 | 100 |

Table-4.5 shows the average size of land of the landowning interviewed households under different tenure types. The average amount of land under own cultivation stands at 0.91 acres for the four areas together, as against 1.22 acres of total owned agricultural land. However, it stands at 1.01 acres in CBT followed by CM with 0.99 acres. It MD it is very low compared with other regions, as it is 0.52 acres. The average land under own cultivation is 0.82 acres in CBD-II.

Table-4.5: Average own agricultural land by tenancy types

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Areas | # of landowners | Tenancy types (land in acre) | | | Total land\* |
| own | sharecropped out | Mortgage out |
| CM | 54 | 0.99 | 0.16 | 0.17 | 1.32 |
| CBD-II | 61 | 0.82 | 0.06 | 0.09 | 0.97 |
| CBT | 144 | 1.01 | 0.22 | 0.15 | 1.39 |
| MD | 37 | 0.54 | 0.16 | 0.11 | 0.80 |
| Total | 296 | 0.91 | 0.17 | 0.14 | 1.22 |

Note: Some settlers have mortgaged in land and share cropped out those mortgaged in land.

## 4.2 Farm operation

Farm operation means the status of land cultivation by a household. A household with land may have farm or no farm. Contrary, a landless household may have a farm which by hiring land from others.

So, all the interviewed 375 households, irrespective of the fact if they own or do not own agricultural land, have been categorized into farm and non-farm households. Non-farm households include all landowning non-operating land owning households (ref: Table-4.1) and the landless households which run no farm. Landless households have been considered because as said above a landless household might run a farm by mortgaging/renting or share cropping in land.[[3]](#footnote-4)

### **Farm operating status of the interviewed sample households**

Table-4.6 shows the distribution of the interviewed 375 households by farm status. About 30% (111 households) of the total interviewed households (375 households) is non-farm households and 70% is farm households. Compared with the previous survey (2007), the percentage of the non-farm households has increased relatively.

CBD-II has relatively more farm households (77%) than the other polders, while CM has less farm households with 65 %. It should be noted that households without any agricultural land might still be farm households through leasing in land.

Table-4.6: Distribution of interviewed households by farm status

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Polders | Farm status of households | | | | Total | |
| Non-farm household | | Farm households | |
| Number | % | Number | % | Number | % |
| CM | 26 | 35.1 | 48 | 64.9 | 74 | 100 |
| CBD-II | 17 | 23.3 | 56 | 76.7 | 73 | 100 |
| CBT | 53 | 29.4 | 127 | 70.6 | 180 | 100 |
| MD | 15 | 31.3 | 33 | 68.8 | 48 | 100 |
| Total | 111 | 29.6 | 264 | 70.4 | 375 | 100 |

### **Land tenure pattern of farmland**

A farm has three sources of land; own land, share cropped in and mortgage in land. The farmland has been divided into these three tenure categories accordingly. Table-4.7 shows the distribution of the farmland by tenure pattern in 2009. The share cropping in is more predominant in MD with 45% of total farmland. In CM share cropped in land stands at more than 38 %, while it is very low in CBD-II with 14.6 %. The prevalence of sharecropping in is also high in CBT with about 32 %.

Table-4.7: % of land of farmland by tenure types

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project areas | Tenure Types (%) | | | Total (%) |
| Own | Share in | Rent in |
| CM | 57.0 | 38.4 | 4.6 | 100.0 |
| CBD-II | 72.9 | 14.6 | 14.5 | 102.0 |
| CBT | 60.9 | 31.7 | 8.8 | 101.4 |
| MD | 48.4 | 45.2 | 13.8 | 107.4 |
| Total | 60.5 | 32.0 | 9.2 | 101.7 |

Note: Some of the farm households have mortgaged their own agricultural land and have share- cropped in that land from the lessees. As a result, the total has exceeded 100%.

### **Farm size distribution**

Table-4.8 shows the distribution of farm households by farm size. It appears that the 1.51-2.50 farm size group constitutes about 23 % of the total surveyed farms in the study areas. The next farm size group is the 2.51-5.00 acres group with 20% of the total farms. The three lower farm groups altogether constitute about 49.3 % of the total farms. In 2005 the lower three farm categories constituted 48%, the largest farm group (5.01 and above) 8%.

Table-4.8: Distribution farms by farm size

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Farm Size (in acres) | Project Areas | | | | | | | | Total | |
| CM | | CBD-II | | CBT | | MD | |
| No. | % | No. | % | No. | % | No. | % | No. | % |
| 0.01-0.50 | 3 | 6.3 | 10 | 17.9 | 11 | 8.7 | 5 | 15.2 | 29 | 11.0 |
| 0.51-1.00 | 6 | 12.5 | 13 | 23.2 | 24 | 18.9 | 6 | 18.2 | 49 | 18.6 |
| 1.01-1.50 | 7 | 14.6 | 14 | 25.0 | 23 | 18.1 | 8 | 24.2 | 52 | 19.7 |
| 1.51-2.50 | 11 | 22.9 | 12 | 21.4 | 30 | 23.6 | 7 | 21.2 | 60 | 22.7 |
| 2.51-5.00 | 13 | 27.1 | 5 | 8.9 | 28 | 22.0 | 7 | 21.2 | 53 | 20.1 |
| 5.01 & + | 8 | 16.7 | 2 | 3.6 | 11 | 8.7 | 0 | 0 | 21 | 8.0 |
| Total | 48 | 100 | 56 | 100 | 127 | 100 | 33 | 100 | 264 | 100 |

### **Average farmland: inside and outside polder/settlement areas**

The farmland has been divided into two groups: the first group refers to the land inside the project and the second group refers to the land outside the project area (which is mostly illegally occupied land). Inside the project area, except in MD, embankments protect the land. In case of MD, inside means the area where CDSP-II worked, particularly where CDSP settled land among the landless.

Table-4.8 shows the average farmland by land location. The average farm land is 2.22 acres in four areas together. The average farmland is the highest in CM (2.82 acres) and lowest in CBD-II with 1.48 acres. In MD the average farmland is 1.66 acres. In CBT it is 2.46 acres, which is the second highest average farmland among the four areas.

Location wise farm size shows that CBT has the biggest farms with 2.13 acres and CM has the lowest farm size with 1.13 acres. On the other hand, CM has the biggest farms outside the project with 1.02 acres, followed by MD with 0.74 acres.

Table-4.8: Average farm land inside and outside project area (in acres)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Polders | No. of Farms | Location | | Total land |
| Inside | Outside |
| CM | 48 | 1.79 | 1.02 | 2.82 |
| CBD-II | 56 | 1.31 | 0.16 | 1.48 |
| CBT | 127 | 2.13 | 0.33 | 2.46 |
| MD | 33 | 0.93 | 0.74 | 1.66 |
| Total | 264 | 1.75 | 0.47 | 2.22 |

Table-4.9 shows the percentage wise distribution of farmland by location i.e. by inside and outside the polders/settlement area. It appears that MD has the lowest percentage of (55.7%) farmland inside the settlement area.

Table-4.9: Average farm land inside and outside project area

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Polders | No. of Farms | Location (%) | | Total |
| Inside | Outside |
| CM | 48 | 63.7 | 36.3 | 100 |
| CBD-II | 56 | 89.0 | 11.0 | 100 |
| CBT | 127 | 86.6 | 13.4 | 100 |
| MD | 33 | 55.7 | 44.3 | 100 |
| Total | 264 | 78.8 | 21.2 | 100 |

Table-4.7: Average land per farm by tenancy types

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Areas | No. of Farms | Tenancy types (land in acres) | | | Total land |
| Own land | Sharecropped in | Mortgage in |
| CM | 48 | 1.53 | 1.03 | 0.12 | 2.68 |
| CBD-II | 56 | 1.07 | 0.21 | 0.18 | 1.46 |
| CBT | 127 | 1.44 | 0.75 | 0.21 | 2.37 |
| MD | 33 | 0.78 | 0.73 | 0.16 | 1.61 |
| Total | 264 | 1.29 | 0.68 | 0.18 | 2.13 |

# Cropping intensity

Many of the interviewed households have land inside the polders which are protected from the intrusion of saline water and have also land outside the polders. Land outside the polders, particularly of CM and CBT is unprotected while in case of MD, land outside the area (MD itself is not empoldered) is semi-protected like MD even some cases more protected than that of MD. In case of CDD-II it has been observed that land outside the polder is protected or semi-protected. So, the soil salinity of outside polder/areas differs from region to region. Moreover, cropping pattern and cropping intensity inside and outside varies depending on the soil salinity. Considering all these factors findings have been presented first for the total farm land (inside and outside) and then inside. The cropping pattern and cropping intensity by inside and outside also show the soil salinity level of the polders.

## Cropping intensity: inside and outside polder/settlement area

Table-5.1 presents the cropping intensity of the surveyed households. Many of the surveyed households have own land both inside and/or outside the polders/area. Some of the households have mortgaged or share cropped in land in areas outside the polders/area. The cropping intensity that almost all land of the surveyed households come under *aman* cultivation, while during the *aus* season about 68 % land comes under cultivation. In *rabi* season about 54 % land comes under cultivation. The cropping intensity in inside and outside is 220.8% for four surveyed areas together.

For the individual polders, it is the highest in CBD-II with 273 %. In the other polders and MD, it is very close to each other varying from 211 % to 217 %.

Table-5.1: Cropping intensity: inside and outside polder/settlement area

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Polder | % of land by seasons | | | Cropping intensity |
| aman | aus | rabi |
| CM | 99.4 | 62.1 | 50.6 | 212.1 |
| CBD-II | 99.6 | 89.8 | 83.8 | 273.2 |
| CBT | 98.6 | 64.3 | 48.6 | 211.4 |
| MD | 98.5 | 70.8 | 47.6 | 216.9 |
| Total | 98.9 | 68.0 | 53.9 | 220.8 |

Table-5.2 shows the cropping intensity of land under all tenure systems inside the polder. The copping intensity inside the polders/area is 231 % in all four regions together. Individually it is the highest in CBD-II with a little more than 278 %. This is very high in comparison with other regions. A comparison between inside, and inside and outside together, the cropping intensity is higher in inside polders/areas. Table-5.1 shows cropping intensity for two areas: inside the polder and outside the polders, while Table-5.2 shows the cropping intensity inside the polder. The cropping pattern inside the area is higher than the total figure of inside and outside, as outside areas are unprotected and have a lower cropping intensity.

Table-5.2: Cropping intensity of land: inside the polder

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Polder | % of land by seasons | | | Cropping intensity |
| aman | aus | rabi |
| CM | 99.0 | 77.86 | 59.3 | 236.2 |
| CBD-II | 99.6 | 90.66 | 88.2 | 278.4 |
| CBT | 99.1 | 69.98 | 49.7 | 218.8 |
| MD | 100.0 | 70.47 | 46.6 | 217.1 |
| Total | 99.2 | 74.78 | 57.4 | 231.4 |

Table-5.3 shows a cropping intensity of 181% outside the polders/area, which is very low compared with inside polders. Here again, the cropping intensity is the highest outside area of CBD-II with about 231 %. It should be noted that the adjacent area of CBD-II is almost protected (semi-protected). The area outside of MD has both semi-protected and unprotected land.

Table-5.3: Cropping Intensity: outside polder/area

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Polders | % of land by seasons | | | Cropping intensity |
| aman | aus | rabi |
| CM | 100 | 34.4 | 35.3 | 169.7 |
| CBD-II | 100 | 82.3 | 48.1 | 230.5 |
| CBT | 95.1 | 27.2 | 41.4 | 163.6 |
| MD | 96.7 | 71.3 | 48.8 | 216.8 |
| Total | 97.7 | 42.7 | 40.9 | 181.3 |

## Land tenure and cropping intensity

Table-5.4 presents the findings on the cropping intensity of total own land; both inside and outside of the polders. The total cropping intensity (both inside and outside together) of own land is about 231 %. The cropping intensity of own land shows that it is the highest in CBD-II with 284 %, followed by MD with 242 %.

Table-5.4: Cropping intensity of own land: inside and outside polders

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Polders | No of farms | % of own land by seasons | | | Cropping intensity |
| aman | aus | rabi |
| CM | 48 | 99.5 | 60.7 | 54.2 | 214.4 |
| CBD-II | 56 | 100.0 | 91.6 | 92.5 | 284.1 |
| CBT | 127 | 98.9 | 63.7 | 56.8 | 219.4 |
| MD | 33 | 96.9 | 83.6 | 61.5 | 242.0 |
| Total | 264 | 99.1 | 69.1 | 62.6 | 230.8 |

Table-5.5 shows the cropping intensity of own land inside the polders. Inside the polder the cropping intensity of own land is about 245% in all four regions together. It is higher than that of the inside and outside polders/area combined (230.8%, see Table-5.4). CBD-II records the highest cropping intensity inside with about 284% and it is very close to that of the total inside and outside of the polder. This means the cropping intensity in outside of CBD-II is the same like inside CBD-II. It is to be noted that the land outside CBD-II is old land mass and is also protected.

Table-5.5: Copping intensity of own land: inside polders

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Polders | % of land by seasons | | | Cropping intensity |
| aman | aus | rabi |
| CM | 99.3 | 81.1 | 67.8 | 248.1 |
| CBD-II | 100.0 | 91.3 | 92.2 | 283.5 |
| CBT | 99.2 | 70.2 | 59.9 | 229.3 |
| MD | 100.0 | 90.4 | 66.0 | 256.4 |
| Total | 99.4 | 77.2 | 68.0 | 244.7 |

Table-5.6: Cropping intensity of leased in land: inside and outside polders

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | % of total leased in land in | | | Cropping intensity |
| aman | aus | rabi |
| CM | 99.1 | 64.1 | 45.4 | 208.6 |
| CBD-II | 98.5 | 84.7 | 59.8 | 243.0 |
| CBT | 98.1 | 65.2 | 34.8 | 198.0 |
| MD | 100.0 | 59.4 | 35.2 | 194.6 |
| Total | 98.6 | 66.1 | 39.9 | 204.6 |

The cropping intensity of ***leased*** in land (sharecropped in and mortgaged in) is about 205% in the four regions together (see Table-5.6). It is highest in CBD-II with 243 %. CM has about 209% cropping intensity for leased in land while CBT and MD have less than 200% cropping intensity for leased in land.

A comparison between Table-5.4 and table-5.6 shows that the cropping intensity of own land inside and outside polders/area is higher (231%) than that of the outside polders (205%).

## Changing Cropping Intensity: Inside the Project Area

Previous surveys have shown that the cropping intensity inside the project areas has increased from 190% in 2005 to 213% in 2007. According to Table-5.7, the cropping acreage has increased in *aus* and *rabi* seasons in all three polders of CDSP-I compared with the coverage of 2005. Since the soil salinity has decreased the coverage under *aus* and *rabi* is increasing gradually.

The cropping intensity in CBD-II has increased spectacularly both in *aus* and *rabi* seasons. The water logging had always been a problem in CBD-II and the HYV coverage has not increased. But the water logging has created beneficial effects for *aus* and *rabi* crop by reducing capillary rise of salinity. The cropping intensity inside the polder has increased with some new crops like watermelon and soybean, newly emerging commercial crops.

Table-5.7: Cropping Intensity inside the Project Areas

**(%age)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Area | % of crop acreage in three seasons | | | | | | | | Cropping intensity | |
| aman | | | aus | | | rabi | |
| **2005** | | **2007** | **2005** | | **2007** | **2005** | **2007** | **2005** | **2007** |
| CM | 98.8 | 98.1 | | 1.4 | 24.5 | | 30.1 | 51.1 | 130 | 174 |
| CBD-II | 98.5 | 99.0 | | 36.5 | 64.2 | | 64.0 | 80.9 | 199 | 244 |
| CBT | 99.0 | 98.1 | | 45.0 | 58.6 | | 60.4 | 70.9 | 204 | 228 |
| MD | n.a | 98.4 | | n.a | 12.9 | | n.a | 35.3 | n.a | 147 |
| Total | 98.9 | 98.3 | | 35.6 | 49.1 | | 55.6 | 65.4 | 190 | 213 |

In 2005 MD was not included and total is for only CDSP-I areas. Source: Land Monitoring Survey

Table-5.8 presents the changing cropping intensity inside the four areas. The cropping intensity inside the project areas has increased from 213% in 2007 to 231% in 2009 in four regions together. Only CBT has experienced a declining trend in cropping intensity from 228% in 2007 to 218% in 2009. CM and MD have had a tremendous increase in cropping intensity in between 2007 and 2009 with the first region from 174% to 236% and the second region from 147% to 217%.

According to Table-5.8 the cropping intensity has increased in aus season from 49% to 75% in four regions together in the period between 2007 and 2009 but the rabi coverage has declined from 65% to 58% in the same period, solely due to a decline in CBT (other areas showed an increase) In CBT the acreage of *khesari* has declined with a negative bearing on cropping acreage and hence cropping intensity. The declining acreage of *khesari* indicates the desalinization of soil in CBT. *Khesari* is planted to lower the soil salinity.

In CM, inside the project area the *aus* coverage has increased by more than three times from 25% in 2007 to 78% in 2009.

The cropping intensity in CBD-II has increased spectacularly both in the *aus* (from 58.6% in 2007 to 70% in 2009). There was also an increase in the coverage of *rabi* crops, although much slower. In CBT there is rise in *aus* coverage from 59% to 70%, but a decline in *rabi* coverage from 71% to 50%. Such decline is caused by low acreage of *khesari* compared with the previous year.

Table-5.8: Cropping Intensity inside the Project Areas

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Area | % of crop acreage in three seasons | | | | | | | Cropping intensity (%) | |
| aman | | | aus | | Rabi | |
| **2007** | | **2009** | **2007** | **2009** | **2007** | **2009** | **2007** | **2009** |
| CM | 98.1 | 99.0 | | 24.5 | 77.9 | 51.1 | 59.3 | 174 | 236 |
| CBD-II | 99.0 | 99.6 | | 64.2 | 90.7 | 80.9 | 88.2 | 244 | 278 |
| CBT | 98.1 | 99.1 | | 58.6 | 70.0 | 70.9 | 49.7 | 228 | 218 |
| MD | 98.4 | 100.0 | | 12.9 | 70.5 | 35.3 | 46.6 | 147 | 217 |
| Total | 98.3 | 99.2 | | 49.1 | 74.9 | 65.4 | 57.6 | 213 | 231 |

# HYV coverage

**6.1 HYV: aman season**

The HYV *aman* coverage inside and outside the polders/area for the interviewed farm households is 19.4 % in the four regions together. The HYV *aman* coverage both inside and outside the area together, is highest for CBT (27.3%), followed by MD (20.7%). It is much lower in CM (8.4% and CBD II (6.5%).

Table-6.1: HYV aman coverage: inside and outside polder

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | % of Aman varieties | | | Total |
| HYV | LV | Fish-culture |
| CM | 8.4 | 90.4 | 1.1 | 100 |
| CBD-II | 6.5 | 93.5 | 0.0 | 100 |
| CBT | 27.3 | 72.4 | 0.3 | 100 |
| MD | 20.7 | 79.3 | 0.0 | 100 |
| Total | 19.4 | 80.2 | 0.4 | 100 |

Table-6.2 shows the HYV *aman* coverage inside the polder. The HYV coverage in the *aman* season is 22.1 % in four regions together and it is as high as 30.3 % in CBT and as low as 7.3 % in CBD-II. In MD the HYV coverage in the area (semi-protected) is almost 18 %.

Table-6.2: % HYV aman coverage: inside the polder

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Polders | Aman varieties | | | Total |
| HYV | LV | Fish-culture |
| CM | 10.7 | 87.5 | 1.8 | 100 |
| CBD-II | 7.3 | 92.7 | 0.0 | 100 |
| CBT | 30.3 | 69.4 | 0.3 | 100 |
| MD | 17.6 | 82.4 | 0.0 | 100 |
| Total | 22.1 | 77.4 | 0.5 | 100 |

A comparison between the Table-6.1 and Table-6.2 shows that the HYV coverage in the *aman* season is higher in polder areas than outside the polders. Farmers hardly practiced the rice-cum-fish cultivation method.

**6.2 HYV coverage: aus season**

It is seen in Table-6.3 that the local variety (LV) dominated the *aus* season with 82 % for the four areas combined.. This means that HYV *aus* coverage is about 18 % in four regions together. CBT and MD have a HYV *aus* coverage of 18% and 24% respectively.

It should be noted that the survey has divided HYV *aus* into two categories; HYV-1 and HYV-2. The first category (HYV-1) includes those varities which are well known as BR varieties. HYV-2, locally known as irri like Doyal irri, china irri, etc. are not that well known as the BR varieties.

Table-6.3: HYV aus coverage: inside and outside polder

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Polders | Varieties | | | | | Total |
| HYV | | | LV | Fish-culture |
| HYV-1 | HYV-2 | Total |
| CM | 5.2 | 1.5 | 6.7 | 91.5 | 1.8 | 100 |
| CBD-II | 1.9 | 0.0 | 1.9 | 98.1 | 0.0 | 100 |
| CBT | 14.3 | 12.4 | 16.7 | 73.3 | 0.0 | 100 |
| MD | 13.8 | 10.1 | 23.9 | 76.1 | 0.0 | 100 |
| Total | 10.0 | 7.6 | 17.6 | 82.0 | 0.4 | 100 |

Table-6.4 shows the HYV *aus* coverage of all land (own, sharecropped and mortgage in) inside the polder. The HYV coverage in the *aus* season is 19 % in the four regions together. It is 1.5 % higher than the HYV coverage of total area (inside and outside). The HYV coverage inside the polder/area is higher in all polders than that of outside the respective areas.

Table-6.4 % HYV aus coverage: inside the polder

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Polders | Varieties (land in %) | | | | | Total |
| HYV | | | LV | Fish-culture |
| HYV-1 | HYV-2 | Total |
| CM | 5.4 | 1.8 | 7.2 | 90.5 | 2.3 | 100 |
| CBD-II | 2.1 | 0.0 | 2.1 | 97.9 | 0.0 | 100 |
| CBT | 14.6 | 12.9 | 27.5 | 72.5 | 0.0 | 100 |
| MD | 15.7 | 18.3 | 34.0 | 66.1 | 0.0 | 100 |
| Total | 10.5 | 8.6 | 19.1 | 80.5 | 0.4 | 100 |

## 6.3 HYV coverage and tenure system

The tenure system has an influence on the HYV adoption. Table-6.5 shows the HYV coverage of own *aman* land inside the polders. It is seen that the HYV coverage of own *aman* lands inside the polder is 24 % for the four regions together. This is higher than the total land (own land, sharecropped in and mortgage in land) of inside the polder, which is 22% (see Table-6.2). It applies for all four regions, except for CBD-II where it 7.3 % for all land inside the polder (ref: Table-6.2).

Table-6.5: HYV aman coverage of own land inside the polder

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Polders | % of land in aman season | | | Total |
| Aman variety | | Fish culture |
| HYV | LV |
| CM | 12.5 | 84.4 | 3.1 | 100 |
| CBD-II | 4.7 | 95.3 | 0.0 | 100 |
| CBT | 33.9 | 65.6 | 0.5 | 100 |
| MD | 32.5 | 67.5 | 0.0 | 100 |
| Total | 24.3 | 74.9 | 0.8 | 100 |

Table-6.6 shows the HYV *aus* coverage of own land inside the polders/area. The HYV *aus* coverage of own land inside the polders/area is higher than that of the total land inside the polder (see Table-6.4). The HYV coverage of total land inside the polder is 19%, but it is about 21% for own land. This difference prevails for individual polders as well (see Table-6.4).

Table-6.6: HYV aus coverage of own land inside the polder

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Polders | % of Aus varieties | | | | | Total |
| % of HYV Aus by types | | | LV | Fish culture |
| HYV-1 | HYV-2 | Total |
| CM | 9.0 | 2.1 | 11.1 | 85.1 | 3.8 | 100.0 |
| CBD-II | 2.6 | 0.0 | 2.6 | 97.4 | 0.0 | 100.0 |
| CBT | 16.0 | 14.4 | 30.5 | 69.5 | 0.0 | 100.0 |
| MD | 15.2 | 23.4 | 38.6 | 61.4 | 0.0 | 100.0 |
| Total | 11.6 | 9.3 | 20.8 | 78.5 | 0.7 | 100.0 |

**6.4** Rabi coverage: percentage distribution of land under rabi

Table-6.7 shows the percentage distribution of *rabi* crop inside and outside of the project areas together, while Table-6.8 shows the distribution of *rabi* inside the project areas.

In both cases areas *keshari* is the dominant crop. In inside and outside the areas together, it comprises 29%, while inside project it constitutes 29%. The *khesari* is most dominant in CBT with 41% and in CM with 30% for inside and outside project together. It is very low in CBD-II (5%).

It has been observed in Table-5.8 that the inside *rabi* coverage has declined from 2007 to 2009 (due to CBT). This is mainly caused by the sharp decline in the acreage of *khesari* which people grow for reducing the soil salinity. As the soil salinity has decreased, so has the acreage of *khesari.*

A comparison between the *khesari* coverage of 2007 and 2009 inside polder shows that it has declined as it has become almost half of the coverage of 2007. In 2007 it covered almost 57% in CM and almost 74% in CBT, while in 2009 it has come to 32% in CM and 41% in CBT.

Table-6.7: % distribution of total land under rabi by crops: inside and out side polders

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rabi crops | Polders | | | | Total Areas |
| CM | CBD-II | CBT | MD |
| Chillies | 12.6 | 13.6 | 12.5 | 20.9 | 13.5 |
| Sweet potato | 9.7 | 4.5 | 7.8 | 10.5 | 7.7 |
| Khesari | 30.3 | 5.1 | 40.9 | 17.9 | 28.9 |
| Pulse (mugbean, musori, felon) | 6.1 | 9.3 | 12.5 | 5.1 | 9.8 |
| Tishi | 10.9 | 0.0 | 8.0 | 0.0 | 6.2 |
| Soyabean/oil seed/okra | 3.7 | 37.0 | 3.1 | 14.6 | 11.6 |
| Groundnut | 11.6 | 27.9 | 8.0 | 8.0 | 13.1 |
| Water melon/khirai | 1.5 | 0.0 | 0.6 | 10.7 | 1.5 |
| Vegetables | 3.2 | 0.7 | 2.5 | 5.7 | 2.5 |
| Other spices | 10.4 | 2.0 | 4.2 | 6.6 | 5.3 |
| Total | 100 | 100 | 100 | 100 | 100 |

The second dominant crop in all regions inside the project areas is chillies. A regional comparison shows that it is most dominant in MD with 28%, while in the remaining three regions it is below 14%. The coverage of soybean/mustered/okra, newly emerging commercial crops, and groundnut, another cash crop, is responsible for almost 64% of the *rabi* coverage inside CBD-II. This polder has comparatively less soil salinity, and once suffered from severe water-logging.

In a previous survey (2007), watermelon was relatively high in MD and at the time it seemed that it would be an emerging crop in future. But the Monitoring Survey in 2009 has found that it has declined in all regions. Inside CM, groundnut coverage has increased from 2007 when it was 4.4% to 10.6% in 2009. There is a slight increase in groundnut coverage inside CBT from 7.7% in 2007 to 9% in 2009. However, there is a trend of decline in the coverage of groundnut in MD, where it was 14.4% in 2007 and has come to 8.4% in 2009.

Table-6.8: Percentage distribution of total land under different rabi crops inside polders

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rabi crops | Polders | | | | Total Areas |
| CM | CBD-II | CBT | MD |
| Chillies | 12.3 | 13.7 | 13.5 | 28.2 | 14.1 |
| Sweet potato | 9.0 | 4.8 | 8.3 | 14.1 | 7.9 |
| Khesari | 32.1 | 5.4 | 40.6 | 17.4 | 29.1 |
| Pulse | 7.4 | 10.0 | 12.4 | 7.0 | 10.5 |
| Tishi | 10.7 | 0.0 | 4.9 | 0.0 | 4.5 |
| Soybean/oil seed/okra | 2.5 | 36.5 | 3.5 | 9.8 | 11.7 |
| Groundnut | 10.6 | 27.3 | 9.0 | 8.4 | 13.8 |
| Water melon/khirai | 0.8 | 0.0 | 0.6 | 0.7 | 0.5 |
| Vegetables | 2.9 | 0.7 | 2.7 | 7.0 | 2.5 |
| Other spices | 11.8 | 1.5 | 4.5 | 7.4 | 5.4 |
| Total | 100 | 100 | 100 | 100 | 100 |

Table-6.9: Percentage distribution of own land under rabi crops inside the polders

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rabi crops | Polder | | | | Total Areas |
| CM | CBD-II | CBT | MD |
| Chillies | 12.1 | 15.4 | 15.9 | 35.0 | 16.0 |
| Sweet potato | 9.6 | 4.0 | 9.9 | 20.0 | 8.7 |
| Khesari | 30.0 | 6.5 | 41.5 | 1.6 | 28.3 |
| Pulse | 4.3 | 8.1 | 8.7 | 7.9 | 7.7 |
| Tishi | 15.7 | 0.0 | 4.7 | 0.0 | 5.1 |
| Soybean/oil seed/okra | 3.8 | 37.1 | 2.0 | 9.4 | 12.3 |
| Groundnut | 6.1 | 27.5 | 8.8 | 3.4 | 13.2 |
| Water melon/khirai | 0.0 | 0.0 | 0.9 | 0.0 | 0.4 |
| Vegetables | 3.1 | 0.9 | 3.0 | 10.6 | 2.8 |
| Other spices | 15.4 | 0.6 | 4.5 | 12.2 | 5.6 |
| Total | 100 | 100 | 100 | 100 | 100 |

## 6.5 Average land *rabi* crops: Farm

Table-6.10 shows the average of total land under different crops inside and outside the polders/area by farm. The average land under *rabi* crops is 1.20 acres in four regions together. It is 1.42 acres in CM, followed by CBD-II with 1.24 acres. The average of *rabi* is 0.79 acres in MD. It should be noted that the average farm land is the lowest in MD (see Table-4.9).

A comparison of the average land under *rabi* crops of 2007 with that of 2009 shows that it has increased from 0.97 acres to 1.20 acres in the four regions combined. The same trend is seen in individual areas, except for CBT where it was 1.31 acres, but now it is 1.20 acres. The sharp decline in *khesari* coverage is responsible for such decline. Inside CBT the average per farm land under *khesari* was 0.96 acres, which has come down to 0.49 acres in 2009.

Table-6.10: Average of total land under different rabi crops: inside and outside polder

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| (Average per farm) | | | | | |
| Rabi crops | Polders | | | | Total  Areas |
| CM | CBD-II | CBT | MD |
| N=48 | N=56 | N=127 | N=33 | N=264 |
| Chillies | 0.18 | 0.17 | 0.15 | 0.17 | 0.16 |
| Sweet potato | 0.14 | 0.06 | 0.09 | 0.08 | 0.09 |
| Khesari | 0.43 | 0.06 | 0.49 | 0.14 | 0.34 |
| Pulse | 0.09 | 0.12 | 0.15 | 0.04 | 0.12 |
| Tishi | 0.16 | 0.00 | 0.10 | 0.00 | 0.07 |
| Soyabean/oil seed/okra | 0.05 | 0.46 | 0.04 | 0.12 | 0.14 |
| Groundnut | 0.17 | 0.34 | 0.10 | 0.06 | 0.16 |
| Water melon/khirai | 0.02 | 0.00 | 0.01 | 0.08 | 0.02 |
| Vegetables | 0.05 | 0.01 | 0.03 | 0.05 | 0.03 |
| Other spices | 0.15 | 0.03 | 0.05 | 0.05 | 0.06 |
| Total | 1.42 | 1.24 | 1.20 | 0.79 | 1.20 |

Table-6.11 (above) shows the average per farm of total land under different *rabi* crops inside the areas. The total land includes own land, sharecropped in and/or mortgaged in land.

Table-6.11: Average of total land under different rabi crops inside the polder

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| (average by farms) | | | | | |
| Rabi crops | Polder | | | | Total Areas |
| CM | CBD-II | CBT | MD |
| N=48 | N=56 | N=127 | N=33 | N=264 |
| Chillies | 0.13 | 0.16 | 0.14 | 0.12 | 0.14 |
| Sweet potato | 0.10 | 0.06 | 0.09 | 0.06 | 0.08 |
| Khesari | 0.34 | 0.06 | 0.43 | 0.07 | 0.29 |
| Pulse | 0.08 | 0.12 | 0.13 | 0.03 | 0.11 |
| Tishi | 0.11 | 0.00 | 0.05 | 0.00 | 0.05 |
| Soybean/oil seed/okra | 0.03 | 0.42 | 0.04 | 0.04 | 0.12 |
| Groundnut | 0.11 | 0.32 | 0.10 | 0.04 | 0.14 |
| Water melon/khirai | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 |
| Vegetables | 0.03 | 0.01 | 0.03 | 0.03 | 0.02 |
| Other spices | 0.13 | 0.02 | 0.05 | 0.03 | 0.05 |
| Total | 1.06 | 1.16 | 1.06 | 0.43 | 1.00 |

Table-6.12 shows the average per farm of own land under different *rabi* crops inside the polder. The total land includes own land, sharecropped in and/or mortgaged in land.

Table-6.12: Average own land under different crops inside the polders

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| (average per farm) | | | | | |
| Rabi crops | Polders | | | | Total Areas |
| CM | CBD-II | CBT | MD |
| N=48 | N=56 | N=127 | N=33 | N=264 |
| Chillies | 0.08 | 0.15 | 0.13 | 0.09 | 0.12 |
| Sweet potato | 0.07 | 0.04 | 0.08 | 0.05 | 0.07 |
| Khesari | 0.21 | 0.06 | 0.33 | 0.00 | 0.21 |
| Pulse | 0.03 | 0.08 | 0.07 | 0.02 | 0.06 |
| Tishi | 0.11 | 0.00 | 0.04 | 0.00 | 0.04 |
| Soyabean/oil seed/okra | 0.03 | 0.36 | 0.02 | 0.02 | 0.09 |
| Groundnut | 0.04 | 0.27 | 0.07 | 0.01 | 0.10 |
| Water melon/khirai | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| Vegetables | 0.02 | 0.01 | 0.02 | 0.03 | 0.02 |
| Other spices | 0.11 | 0.01 | 0.04 | 0.03 | 0.04 |
| Total | 0.70 | 0.97 | 0.80 | 0.26 | 0.75 |

## 6.6 Average rabi crops: total households

Table-6.13 shows the average per household of total land under different rabi crops inside and outside the areas together. The total land includes own land, sharecropped in and/or mortgaged in land.

Table-6.13: Average of total land under rabi crops: inside and outside polders

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | |  | |  | |  |  |
| (average per household) | | | | | | | | |
| Rabi crops | Polders | | | | | | | Total Areas |
| CM | CBD-II | | CBT | | MD | |
| N=74 | N=73 | | N=180 | | N=48 | | N=375 |
| Chillies | 0.12 | 0.13 | | 0.11 | | 0.11 | | 0.11 |
| Sweet potato | 0.09 | 0.04 | | 0.07 | | 0.06 | | 0.06 |
| Khesari | 0.28 | 0.05 | | 0.35 | | 0.10 | | 0.24 |
| Pulse | 0.06 | 0.09 | | 0.11 | | 0.03 | | 0.08 |
| Tishi | 0.10 | 0.00 | | 0.07 | | 0.00 | | 0.05 |
| Soyabean/oil seed/okra | 0.03 | 0.35 | | 0.03 | | 0.08 | | 0.10 |
| Groundnut | 0.11 | 0.26 | | 0.07 | | 0.04 | | 0.11 |
| Water melon/khirai | 0.01 | 0.00 | | 0.00 | | 0.06 | | 0.01 |
| Vegetables | 0.03 | 0.01 | | 0.02 | | 0.03 | | 0.02 |
| Other spices | 0.10 | 0.02 | | 0.04 | | 0.04 | | 0.04 |
| Total | 0.92 | 0.95 | | 0.84 | | 0.54 | | 0.84 |

Table-6.14 shows the average per household of total land under different rabi crops inside polder. The total land includes own land, sharecropped in and/or mortgaged in land.

Table-6.14: Average of total land under different rabi crops inside the polder

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| (per households) | | | | | |
| Rabi crops | Polders | | | | Total |
| CM | CBD-II | CBT | MD |
| N=74 | N=73 | N=180 | N=48 | N=375 |
| Chillies | 0.08 | 0.12 | 0.10 | 0.08 | 0.10 |
| Sweet potato | 0.06 | 0.04 | 0.06 | 0.04 | 0.06 |
| Khesari | 0.22 | 0.05 | 0.30 | 0.05 | 0.21 |
| Pulse | 0.05 | 0.09 | 0.09 | 0.02 | 0.07 |
| Tishi | 0.07 | 0.00 | 0.04 | 0.00 | 0.03 |
| Soybean/oil seed/okra | 0.02 | 0.32 | 0.03 | 0.03 | 0.08 |
| Groundnut | 0.07 | 0.24 | 0.07 | 0.02 | 0.10 |
| Water melon/khirai | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vegetables | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 |
| Other spices | 0.08 | 0.01 | 0.03 | 0.02 | 0.04 |
| Total | 0.69 | 0.89 | 0.75 | 0.30 | 0.71 |

Table-6.15 shows the average per household of own land under different rabi crops inside the areas. The total land includes own land, sharecropped in and/or mortgaged in land.

Table-6.15: Average own land under different crops inside the polders

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| (per household) | | | | | |
| Rabi crops | Polder | | | | Total Areas |
| CM | CBD-II | CBT | MD |
| N=74 | N=73 | N=180 | N=48 | N=375 |
| Chillies | 0.05 | 0.11 | 0.09 | 0.06 | 0.08 |
| Sweet potato | 0.04 | 0.03 | 0.06 | 0.04 | 0.05 |
| Khesari | 0.14 | 0.05 | 0.24 | 0.00 | 0.15 |
| Pulse | 0.02 | 0.06 | 0.05 | 0.01 | 0.04 |
| Tishi | 0.07 | 0.00 | 0.03 | 0.00 | 0.03 |
| Soybean/oil seed/okra | 0.02 | 0.28 | 0.01 | 0.02 | 0.06 |
| Groundnut | 0.03 | 0.20 | 0.05 | 0.01 | 0.07 |
| Water melon/khirai | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vegetables | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 |
| Other spices | 0.07 | 0.00 | 0.03 | 0.02 | 0.03 |
| Total | 0.45 | 0.74 | 0.57 | 0.18 | 0.53 |

1. The present survey (2009) has a total sample of 511 households, 446 households from CDSP-I areas and 65 households in CDSP-II. The original survey sample was 531. [↑](#footnote-ref-2)
2. In Table-2.8 the distribution of households was based on all types of land i.e. arable land, homestead land and ponds, etc together. [↑](#footnote-ref-3)
3. The non-operating landowning households (ref: Table-4.1) in sub-section 4.1 is also non-farm households. In the mentioned sub-section landless households were considered though they have considered in sub-section 4.2 because a landless household might have a agricultural farm. . [↑](#footnote-ref-4)