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## Changes in employment pattern of selected households of Wadi programme in Korba district of Chhattisgarh

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**Abstract**

The present study is based on impact assessment of wadi programme with the following objectives: To find out the changes in employment pattern of selected household of wadi programme. One hundred twenty wadi farmers were selected randomly from Korba district for the year 2016-17, which were related to general characteristics of sample households and changes on changes on employment pattern of selected households before and after wadi programme. The major findings of this study revealed that Per capita employment was very low in before wadi programme which is 92.58 days in a year. During *rabi* and summer season, sample households migrated from village in the search of employment and after wadi programme per capita employment was increase in 121.82 days in a year maximum employment was provided by non-farm sector on an average per family employment was increased 33.00 percent.

**Keywords:** employment pattern, wadi programme, migrated, assessment, house holdes

**Introduction**

The “Wadi” model of tribal development is a holistic approach addressing production, processing and marketing of the produce and also other needs. The core of the programme is “Wadi” and other development interventions built around it. The “Wadi” in Gujarati means a ‘small orchard’ covering one acre. The “Wadi” maybe of mango, cashew, litchi or any fruit crop suitable to that area or a combination of these crops, with forestry species on the periphery of the land holding. Two or more fruit crops are selected in the Wadi model to minimize climatic, biological and marketing risks. Wadi programme is introduced as the strategy to improve horticulture development. Tribal families having less than 5 acres of title deed land are given one acre Wadi each for raising 60-75 fruit plants suitable to that area and 200-300 forestry plants on the boundary. The project aims at income generation for the landless and over 1100 tribal families to benefit from it.

The Wadi project also aims at utilization of border of the orchard by plantations with different forest species to meet the timber fodder and firewood needs of the family. Agragamee, in association with NABARD, supplies the inputs to the beneficiaries, ie, fruit grafts, neem cakes for natural pesticides, trichoderma, azetobactor, etc. Inter cropping is taken up in the Wadi area for select vegetables and pulses like brinjal, tomato, chilly, cow pea, and pumpkin. A committee of representatives of farmers, Udyan Vikas Samiti, is trained to to facilitate the linkages.

The main activity was establishment of fruit orchards on 0.4 ha of degraded land by each family. The steps involved were shaping of hilly terrains into small plots through contour bunds to facilitate soil and moisture conservation, establishment of drought tolerant fruit crops like mango, cashew, Indian gooseberry, custard apple, etc. as main crops, cultivation of seasonal food crops in the interspace between fruit plants and fencing of orchards by establishing saplings of various plant species useful for food, fodder, timber, fuel and herbal medicines, on the boundary. Programme Agri-horti-forestry: As these crops promoted under the agri-horti-forestry system needed water for ensuring higher growth and yield, water resources were developed from various sources such as revival of natural springs, open wells and borewells, lift irrigation, farm ponds, etc

Generally, development of 0.4 ha of land under agri-horti-forestry requires an investment of Rs.20,000- Rs.25,000 over a period of 4-5 years, which has come as development assistance from donors such as the Government of India, German Development Bank (KfW), NABARD

and the respective State Government. Additional investments were made in the form of labour and local agricultural inputs by the participating families. Many families availed of micro-finance to intensify crop production or to pursue other income generation activities. While they earned about Rs.8,000 to Rs.10,000 from intercrops right from the first year, the major income of Rs.30,000 to Rs.40,000 per annum came after 6-7 years, when the orchards started bearing regularly.

## Materials and Methods

### Sampling procedure

The detailed sampling procedure of selection of the district, block, and villages Wadi development programme are presented under following sub-section.

### Selection of District

Out of 27 Districts of Chhattisgarh state, Korba district has been selected purposively for the study.

### Selection of study area

Out of 27 districts of Chhattisgarh, Korba district was selected purposively for the study. Korba district having 5 blocks Korba, Kartala, Katghora, Pali and Pondiuproda. Out of 5 blocks of Korba district, Pali block was selected purposively for the study.

### Selection of Villages

In Pali block, Wadi programme was undertaken in 23 villages out of these five villages namely Ganeshpur, Kapot, Damiya, Kartali, and Banbandha was purposively selected for the study.

### Selection of households

In five selected villages the number of beneficiaries was 240 out of these fifty percent beneficiaries of Wadi programme was selected randomly, Thus the total number of selected households was 120 in number, Sample households was selected to adopt probability proportionate to size sampling techniques.

### Method of enquiry and Data collection

The study required primary data as well as secondary data. The primary data from the farmers was collected through personal interview method Interview-schedule, Semi-participant Observation, Case study, Focused Group Discussion, Photography and Video recording with the help of well-prepared pretested schedule and questionnaire for the year 2010-11 to 2015-16. The secondary data was collected through different Government offices such as Department of Agriculture, Government of Chhattisgarh, Documents of Raigarh Sahyog Samiti, Wadi and NABARD; Journals e-resources, Magazines, Census data and scan through various sources.

### Period of Enquiry

The enquiry conducted during the year 2016- 2017 in Pali block of Korba district.

## Analytical Procedure

To analyse the primary data simple averages and percentages method will be used looking to the quantity quality of total data.

### Cropping Intensity

Ratio of Gross cropped area and total cropped area.

$$\text{Cropping Intensity} = \frac{\text{Gross Cropped Area}}{\text{Net Cropped Area}} \times 100$$

## Result and Discussion

### Changes on employment pattern of selected households in wadi development programm.

Employment pattern of sample households have been given in table 4.17 before wadi. Different components of on -farm, off-farm and non-farm income, presented in Table 4.17, revealed that Employment from farm was maximum under all farm size categories (34.18 per cent), while employment from non-farm was maximum under large farm-size and showed a positive relationship with farm-size. Under non-farm sector, employment (69.50 human days) was generated as non-farm agricultural labour, followed by services activities. Within farm households, employment provided by service activities showed a positive relationship with farm-size and an inverse relationship between employments generated as non-agricultural labour and farm-size. Livestock enterprise provided more employment to farm than non-farm households because the farmers reared more livestock than the latter.

The employment in on farm, off-farm and non-farm activities, presented in Table 4.15, revealed that for a majority of households, employment was generated through farm activities. The contribution of farm activities to overall total employment (288.4 human-days) was 34.18 per cent (98.58 man days) followed by non farm income 24.09 per cent (69.50 man days). This corroborated the Vaidyanathan's (1986) assertion that the labour absorptive capacity of agriculture was limited and the rural population was migrating from farm to non-farm activities. The larger farmers were generating enough income from agriculture and were investing it in the non-farm sectors. This could be one of reasons of generating higher employment in the non-farm sector. The overall annual employment generated per person was 92.58 man days. This is indicative of the seasonality of employment in the agriculture sector (Badatya, 2003) <sup>[4]</sup> and shows that the rural population has to face un-employment and under-employment due to seasonal work in crop production.

The employment in farm, off-farm and non-farm activities, presented in Table 4.17 after wadi programme, revealed that for a majority of households, employment was generated through non-farm activities. The contribution of farm activities to overall total employment (138.93 human-days) was 36.41 per cent, off- farm activity (75.5 human days) was 19.78 per cent, non-farm activity (177.57 human days) was 46.54 per cent. Total employment per family increase 25 per cent (381.54 man days) after wadi programme and per capita employment increase by 25 per cent (121.82).

**Table 1:** Sources of employment per family per year

| Particulars                  | Employment |          |          | Total Employment | Per Capita Employment |
|------------------------------|------------|----------|----------|------------------|-----------------------|
|                              | On farm    | Off Farm | Non-farm |                  |                       |
| <b>Before Wadi Programme</b> |            |          |          |                  |                       |
| Marginal                     | 51         | 73       | 196      | 320              | 105                   |
| Small                        | 124        | 51       | 65       | 240              | 74                    |
| Medium                       | 130        | 0        | 173      | 304              | 95                    |

|                             |        |       |        |        |        |
|-----------------------------|--------|-------|--------|--------|--------|
| Large                       | 134    | 0     | 204    | 337    | 115    |
| Overall                     | 98.58  | 35.40 | 69.50  | 288.4  | 92.58  |
| <b>After Wadi Programme</b> |        |       |        |        |        |
| Marginal                    | 105    | 78    | 181    | 364    | 119    |
| Small                       | 132    | 79    | 180    | 384    | 118    |
| Medium                      | 193    | 59    | 152    | 403    | 127    |
| Large                       | 218    | 0     | 190    | 408    | 140    |
| Overall                     | 138.93 | 75.5  | 177.57 | 381.54 | 121.82 |

**Table 2:** Percent change in employment per capita over the year  
Man days

| Particular | Before | After | Difference | % Change |
|------------|--------|-------|------------|----------|
| Marginal   | 105    | 119   | 14         | 13.33    |
| Small      | 74     | 118   | 44         | 59.45    |
| Medium     | 95     | 127   | 32         | 33.69    |
| Large      | 115    | 140   | 25         | 21.73    |
| overall    | 121.82 | 92.58 | 29.24      | 24.00    |

**Table 3:** Percent change in employment on-farm, off-farm and non-farm over the year Man days

| Particular | Before | After  | Difference | % Change |
|------------|--------|--------|------------|----------|
| On farm    | 98.58  | 138.93 | 40.35      | 40.93    |
| off farm   | 35.4   | 75.5   | 40.1       | 113.28   |
| Non farm   | 69.5   | 177.57 | 108.07     | 155.50   |
| Total      | 288.4  | 381.54 | 93.14      | 33.00    |

Percent change in employment per capita over the year is presented in Table 1: The percent change in per capita employment was highest in small farmer (59.45%) followed by medium (33.69%), marginal (13.33%) and large (21.33%). Percent change in employment over the year is presented in Table 2: the total Percent change in employment pattern was highest in non-farm (155.50%), followed by off-farm (113.28%) and on-farm (40.93%) and percent change in total employment was (33%).

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