

## Saptari outline

file name	File number
LAND	4
AGRICULTURE	5
WEM	6.2
PROCUREMENT	7

Table 1: Total Own Land Cultivated SUMMER season [4.4]

SAPTARI	Control		Treatment	
year	N	Mean	N	Mean
2017	91	0.32	22	0.61
2018	91	0.30	22	0.62
2019	84	0.16	23	0.25

  

RBS				
2018	105	3.74	24	5.36
2019	95	3.59	22	7.05

Table 2: Total Land Cultivated [4.8]

SAPTARI	Control		Treatment	
year	N	Mean	N	Mean
2017	91	2.53	22	4.08
2018	91	2.50	22	3.88
2019	84	2.11	23	3.02

Crop Intensity

```
## 'summarise()' regrouping output by 'year', 'TreatmentControl' (override with '.groups' argument)
```

```
## 'summarise()' regrouping output by 'TreatmentControl' (override with '.groups' argument)
```

year	Control		Treatment	
	N	Mean	N	Mean
2017	91	175	22	196
2018	91	168	22	188
2019	84	144	23	152

## Irrigation

irrigated\_out\_of\_tot\_land\_cult [4.9]

year	Control		Treatment	
	N	Mean	N	Mean
2017	91	2.25	22	3.25
2018	91	1.98	22	3.06
2019	84	1.87	23	2.73

Table : Time to irrigate 1 ha [6.21]

```
## 'summarise()' regrouping output by 'TreatmentControl' (override with '.groups' argument)
```

```
## # A tibble: 6 x 4
## # Groups:   TreatmentControl [2]
##   TreatmentControl year    N Mean
##   <chr>             <int> <int> <dbl>
## 1 Control          2017    94  94.9
## 2 Control          2018    94  93.2
## 3 Control          2019    92 103.
## 4 Treatment        2017    22 124.
## 5 Treatment        2018    22 127.
## 6 Treatment        2019    23 180.
```

TreatmentControl year N Mean 1 Control 2017 94 94.9 2 Control 2018 94 93.2 3 Control 2019 92 103. 4 Treatment 2017 22 124. 5 Treatment 2018 22 127. 6 Treatment 2019 23 180.

Table 4.1: By year [5.0]

Year	Control			Treatment		
	N	mean 1 ha	Mean Total	N	mean 1 ha	Mean Total
2017	94	37.30	203.26	22	41.44	405.05
2018	94	37.30	188.38	22	40.66	342.12
2019	92	40.53	211.51	23	61.15	380.30

Table 4.2: By seasons [5.0]

MONSOON	Control			Treatment		
	N	mean 1 ha	Total	N	mean 1 ha	Total
2017	89	33	73	20	40	137
2018	90	34	53	22	39	109
2019	83	37	92	22	57	189

SUMMER						
2017	70	35	58	18	50	140
2018	62	41	66	16	46	118
2019	48	43	45	17	72	87
WINTER						
2017	88	41	91	22	41	167
2018	87	42	102	22	43	135
2019	81	44	99	22	60	141

Season	Year	Control			Treatment		
		N	mean 1 ha	Total	N	mean 1 ha	Total
Monsoon	2018	105	30.95	208.12	25	20.84	117.09
	2019	94	32.32	252.80	21	30.90	316.19
Summer	2018	33	35.09	143.55	7	22.12	111.21
	2019	38	16.50	50.61	11	13.41	84.91
Winter	2018	105	24.39	80.95	25	19.01	53.67
	2019	94	25.29	91.94	21	20.49	89.43

## Irrigation Intensity

by year[4.0]

```
## # A tibble: 6 x 3
## # Groups:   TreatmentControl [2]
##   TreatmentControl year 'mean(irrigation_intens)'
##   <chr>           <dbl>           <dbl>
## 1 Control         2017             85.6
## 2 Control         2018             81.7
## 3 Control         2019             89.4
## 4 Treatment       2017             76.8
## 5 Treatment       2018             77.8
## 6 Treatment       2019             89.1
```

by season [4.0]

```
## # A tibble: 18 x 4
## # Groups:   TreatmentControl, season [6]
##   TreatmentControl season year 'mean(irrigation_intens)'
##   <chr>           <chr> <dbl>           <dbl>
## 1 Control         Monsoon 2017             90.9
## 2 Control         Monsoon 2018             84.3
## 3 Control         Monsoon 2019             90.1
## 4 Control         Summer 2017             79.3
## 5 Control         Summer 2018             75.5
## 6 Control         Summer 2019             89.7
```

```
## 7 Control Winter 2017 85.0
## 8 Control Winter 2018 83.6
## 9 Control Winter 2019 88.5
## 10 Treatment Monsoon 2017 81.8
## 11 Treatment Monsoon 2018 77.3
## 12 Treatment Monsoon 2019 93.6
## 13 Treatment Summer 2017 72.2
## 14 Treatment Summer 2018 79.8
## 15 Treatment Summer 2019 86.9
## 16 Treatment Winter 2017 76.2
## 17 Treatment Winter 2018 76.5
## 18 Treatment Winter 2019 86.2
```

## Frequency of households who irrigate [4.9]

```
df <- Land_18_19 %>% filter(irrigated_out_of_tot_land_cult>0,season!="Annual") %>% group_by(TreatmentControl,season) %>% count()
```

## fuel use

Table :Total litres of diesel/kerosene consumed for agriculture pumps in a YEAR [7.16]

```
## # A tibble: 6 x 4
## # Groups:   TreatmentControl [2]
##   TreatmentControl year      N liters_yearly
##   <chr>           <dbl> <dbl>         <dbl>
## 1 Control        2017    94         129.
## 2 Control        2018    94          87.4
## 3 Control        2019    92          86.7
## 4 Treatment      2017    22         202.
## 5 Treatment      2018    22          134
## 6 Treatment      2019    23          108
```

Table :# fuel use by the 'Water\_extraction\_mechanism'files- [6.2]

```
## 'summarise()' regrouping output by 'TreatmentControl' (override with '.groups' argument)
```

```
## # A tibble: 6 x 6
## # Groups:   TreatmentControl [2]
##   TreatmentControl year Monsoon Summer Winter Year
##   <chr>           <int>   <dbl> <dbl> <dbl> <dbl>
## 1 Control        2017   48.5  29.8  26.4  95.8
## 2 Control        2018   41.5  19.0  28.7  74.6
## 3 Control        2019   44.8  29.3  67.9  98.4
## 4 Treatment      2017   36.1  42.3  49.6  116.
## 5 Treatment      2018  100.   78.6  10.7  184.
## 6 Treatment      2019   82.5  48.5  51.5  182.
```

```
TreatmentControl year Monsoon Summer Winter Year
1 Control 2017 48.5 29.8 26.4 95.8
2 Control 2018 41.5 19.0 28.7 74.6
3 Control 2019 44.8 29.3 67.9 98.4
4 Treatment 2017 36.1 42.3 49.6 116.
5 Treatment 2018 100. 78.6 10.7 184.
6 Treatment 2019 82.5 48.5 51.5 182.
```

## aquaculture

```
## # A tibble: 6 x 4
## # Groups:   TreatmentControl [2]
##   TreatmentControl year      N Mean
##   <chr>           <int> <int> <dbl>
## 1 Control         2017     13 0.432
## 2 Control         2018     14 0.473
## 3 Control         2019     17 0.507
## 4 Treatment       2017     12 0.394
## 5 Treatment       2018     12 0.394
## 6 Treatment       2019     15 0.397
```