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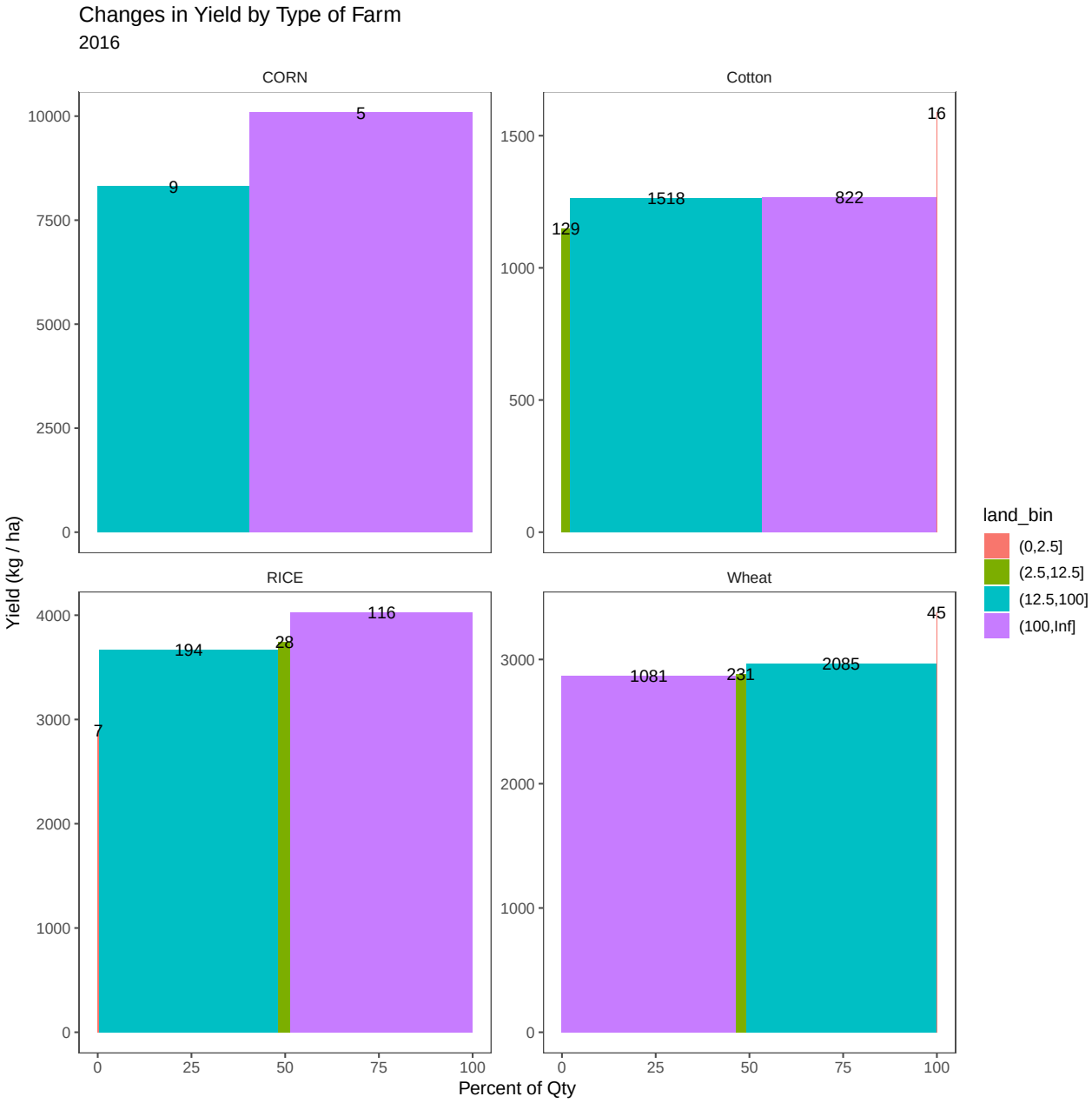
title: “PEOP Data”

output: pdf_document: includes: in_header: “preamble.tex” html_document: default —

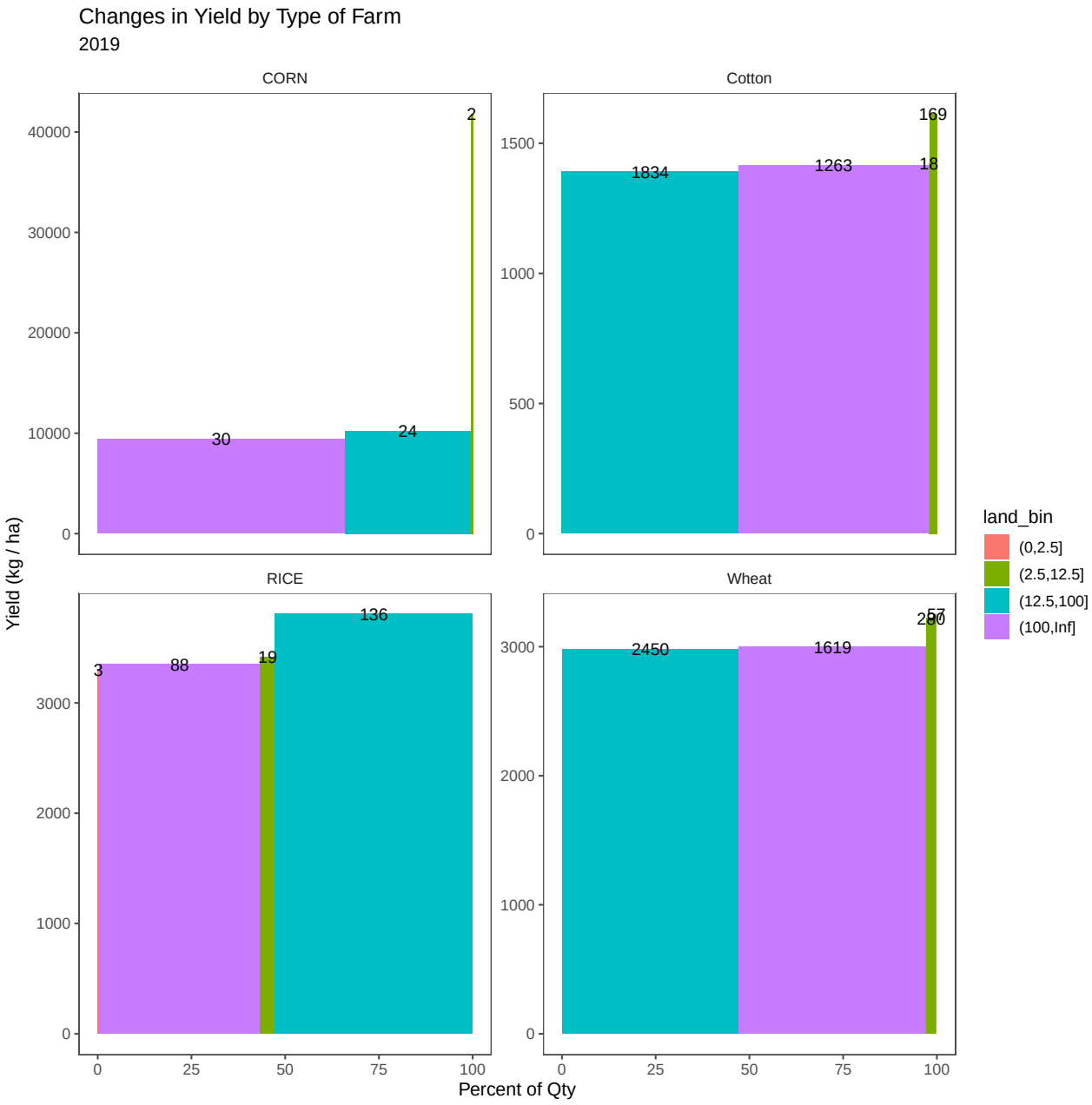
We have a questionaire and are looking at basic info (district, tehsil, psu, settlement name, neighborhod and hh id), as well as their assets, consumption, and crop sales.

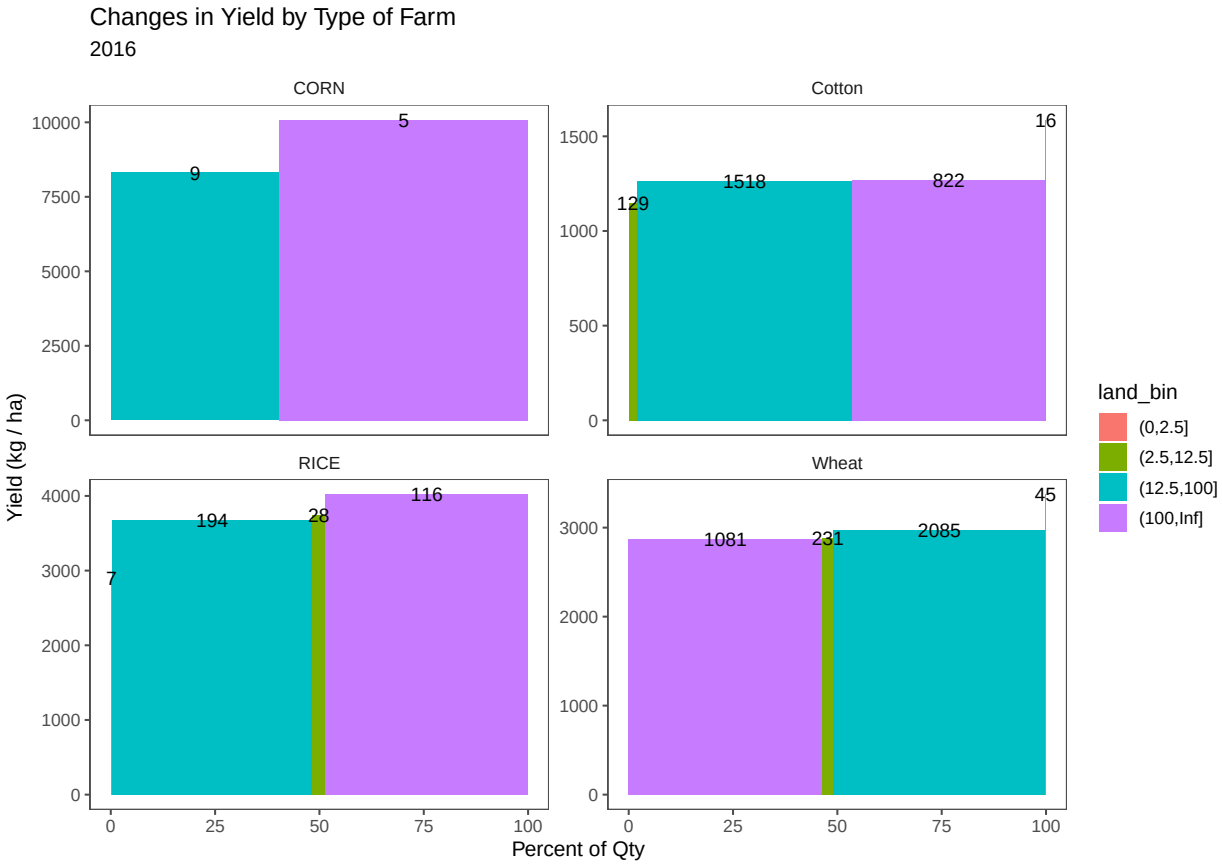
Resisting the other datasets for now.

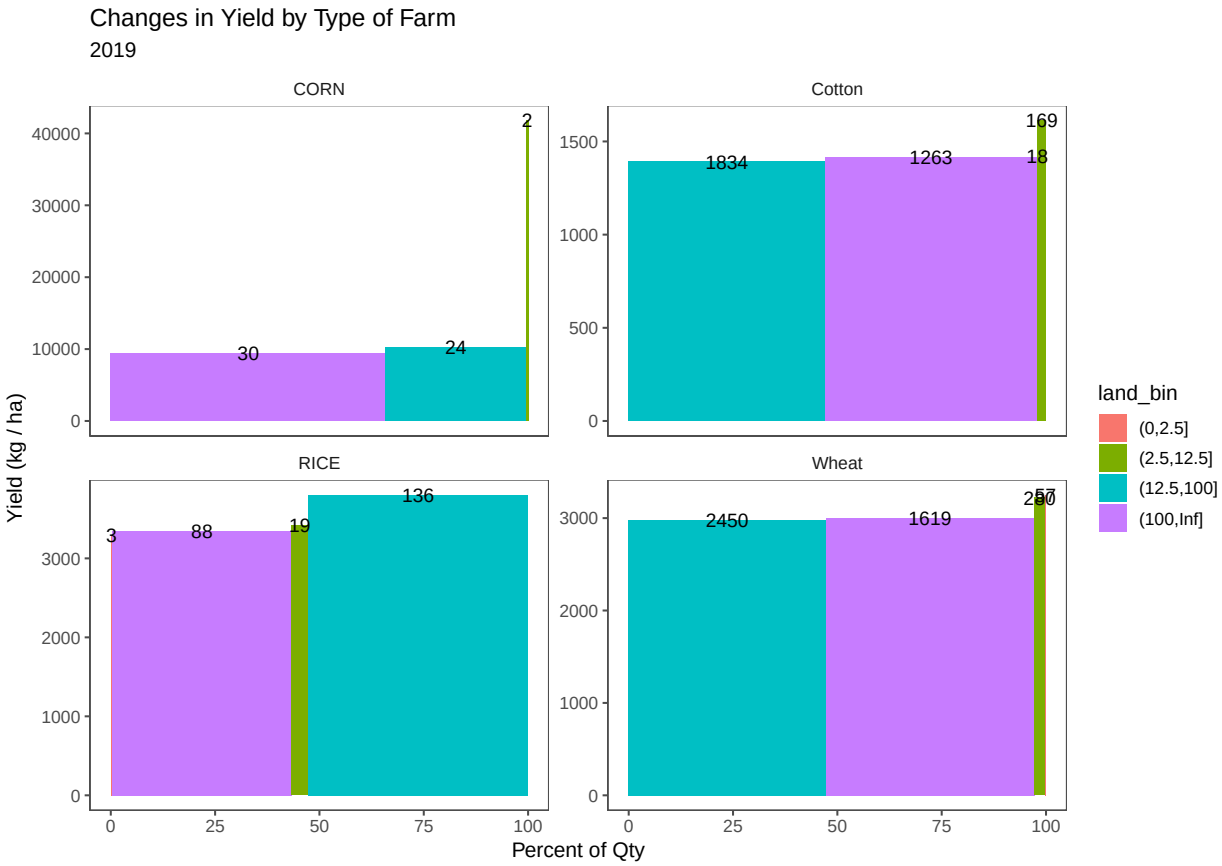


Lets recreate for vegetables

Lets look at 2019 data


Changes in Yield by Type of Farm
2019
CORN
Cotton
RICE
Wheat
Yield (kg / ha)
Percent of Qty
land_bin
(0,2.5]
(2.5,12.5]
(12.5,100]
(100,Inf]
30
24
2
1834
1263
18
169
3
88
19
136
2450
1619
57


Changes in Yield by Type of Farm
2016
CORN
Cotton
RICE
Wheat
Yield (kg / ha)
Percent of Qty
land_bin
(0,2.5]
(2.5,12.5]
(12.5,100]
(100,Inf]


Changes in Yield by Type of Farm
2019
CORN
Cotton
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Wheat
Yield (kg / ha)
Percent of Qty
land_bin
(0,2.5]
(2.5,12.5]
(12.5,100]
(100,Inf]

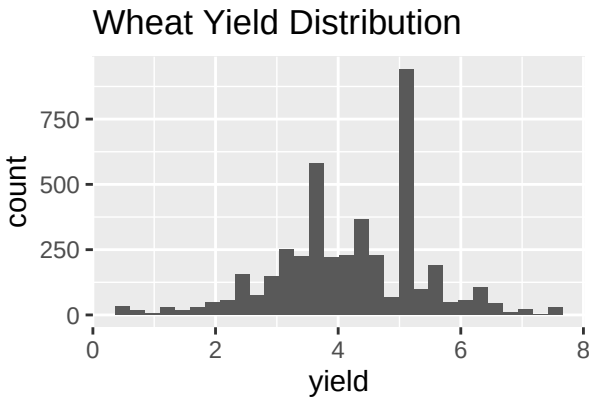
Lets focus on 2019 and things that can tell us about where productivity differences come from.

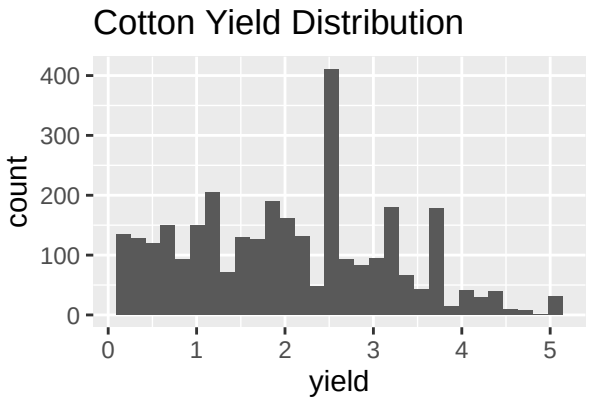
```
## # A tibble: 6 x 2
##   soil_qual           c
##   <fct>           <int>
## 1 Sandy             596
## 2 Moderate         1781
## 3 Loam              539
## 4 Clay loam         624
## 5 Clay              725
## 6 Other (Specify)    51
```

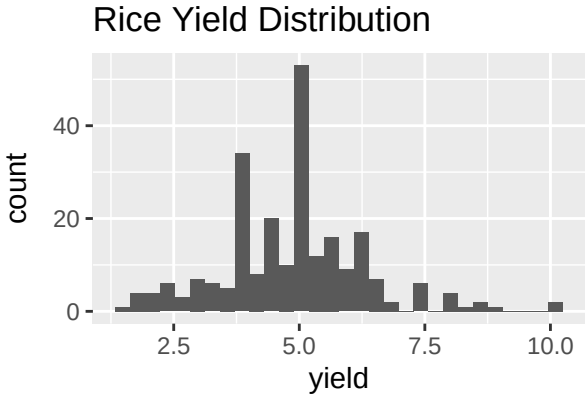
Table 1:

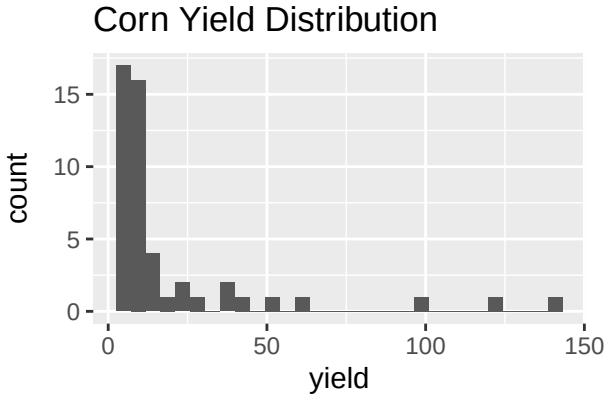
	Dependent variable:			
	yield			
	Wheat	Cotton	Rice	Corn
	(1)	(2)	(3)	(4)
land_worked_acre	0.00002 (0.0003)	−0.001* (0.0003)	0.001 (0.002)	−0.005 (0.112)
land_cultvd	−0.003*** (0.0004)	−0.001*** (0.0004)	−0.015** (0.007)	−0.388 (0.493)
fmly_wrkr_numb	0.043*** (0.013)	0.018 (0.013)	−0.104 (0.089)	−4.534 (3.717)
hired_wrkr_numb	0.011*** (0.002)	0.001 (0.002)	0.012 (0.011)	0.531 (0.527)
seed_acreB	−0.002 (0.002)	0.021*** (0.005)	−0.006 (0.013)	
seed_acreC	−0.004** (0.002)	−0.002 (0.005)	0.004 (0.005)	−0.848 (0.553)
kg_fert_acrea	0.001 (0.001)	0.003*** (0.001)	−0.007* (0.004)	−0.302 (0.200)
kg_fert_acreb	−0.0004 (0.0005)	0.003*** (0.0004)	−0.002 (0.002)	−0.051 (0.098)
kg_fert_acrec	0.0003 (0.001)	0.001 (0.001)	0.008** (0.004)	−0.057 (0.249)
rel_area_tractor	0.018 (0.085)	0.060 (0.058)	0.157 (2.798)	6.135 (52.303)
rel_area_landlevel	−0.066 (0.045)	−0.343*** (0.049)	0.170 (0.268)	−20.231 (13.922)
rel_area_harvester	0.396** (0.159)	0.370 (0.255)	0.385 (0.250)	−28.373 (34.801)
D_orgnc_mnreNo	0.030 (0.038)	0.093** (0.042)	−0.513** (0.233)	−7.879 (13.981)
D_micro_ntrntsNo	−0.172** (0.076)	−0.045 (0.072)	−0.326 (0.253)	0.201 (14.078)
irr_methdFurrow	0.177 (0.229)	0.246*** (0.044)	−0.429 (0.651)	−5.341 (13.874)
irr_methdBed and furrow	0.184 (0.126)	0.295*** (0.062)	0.030 (0.647)	−34.534* (18.144)
irr_methdOther (Specify)	−1.827 (1.130)			
soil_qualModerate	0.224*** (0.055)	0.231*** (0.063)	0.353 (0.497)	5.243 (17.036)
soil_qualLoam	0.249*** (0.068)	0.250*** (0.078)	0.276 (0.558)	−4.141 (19.054)
soil_qualClay loam	0.238*** (0.067)	0.350*** (0.077)	0.663 (0.516)	31.023 (21.291)
soil_qualClay	0.446*** (0.065)	0.452*** (0.074)	0.819 (0.533)	15.700 (19.935)
soil_qualOther (Specify)	0.049 (0.171)	0.250 (0.192)	−0.955 (0.989)	
soil_fert_rank	0.059*** (0.013)	0.075*** (0.014)	0.077 (0.076)	2.532 (4.352)
land_steep_typeSlight slope	−0.002 (0.061)	0.038 (0.067)	0.380 (0.406)	−24.432 (16.134)
land_steep_typeModerate slop	−0.227** (0.089)	−0.120 (0.092)	0.827 (0.711)	−30.521 (39.395)
land_steep_typeSteep Slope	0.196 (0.192)	0.056 (0.233)	−0.199 (1.465)	−16.714 (28.351)
access_canal_waterNo	0.172*** (0.041)	0.436*** (0.047)	0.400 (0.304)	27.397** (12.454)
access_tubewellDo not own a tubewell but have access to tubewell water	−0.139*** (0.039)	0.085* (0.044)	−0.034 (0.222)	8.366 (12.555)
access_tubewellNeither own nor have access to a tubewell water	−0.177* (0.105)	0.077 (0.106)	−0.761 (0.590)	
land_suffer_waterlogNo	−0.023 (0.062)	0.175** (0.075)	−0.117 (0.284)	−15.003 (37.360)
land_suffer_salinityNo	0.213*** (0.060)	0.107 (0.072)	−0.497* (0.295)	14.345 (37.960)
land_suffer_erosionMild Erosion	0.037 (0.045)	0.135*** (0.049)	0.356 (0.313)	−11.232 (15.041)
land_suffer_erosionSevere Erosion	−0.018 (0.114)	−0.089 (0.156)	−0.607 (0.710)	15.343 (37.494)
D_more_fert_qtyNo	0.116*** (0.039)	0.150*** (0.043)	−0.070 (0.218)	−5.356 (11.811)
soil_cmprd_othersSame	−0.229*** (0.064)	−0.277*** (0.069)	0.319 (0.373)	−15.569 (34.388)
soil_cmprd_othersWorse	−0.532*** (0.099)	−0.401*** (0.113)	0.128 (0.669)	−8.605 (39.587)
Constant	3.428*** (0.234)	0.520*** (0.181)	5.040* (2.873)	72.132 (77.538)
Observations	4,314	3,150	227	49
R^2	0.076	0.173	0.211	0.731
Adjusted R^2	0.068	0.164	0.067	0.193
Residual Std. Error	1.127 (df = 4277)	1.041 (df = 3114)	1.416 (df = 191)	26.010 (df = 16)

Note: *p<0.1; **p<0.05; ***p<0.01


Wheat Yield Distribution
count
yield
0
250
500
750
0
2
4
6
8


Cotton Yield Distribution
count
yield
0
100
200
300
400
0
1
2
3
4
5


Rice Yield Distribution
count
yield
0
20
40
2.5
5.0
7.5
10.0


Corn Yield Distribution
count
yield
0
5
10
15
0
50
100
150