

type	name
note	welcome_note
start	start
today	today
deviceid	deviceid
note	base_info
begin group	metadata
geopoint	long_left_vertex
text	enumerator
text	district
text	sector
text	cell
text	farmer_name
select_one gender	gender
integer	farmer_age
select_one education or_other	education
integer	phone
integer	holding_size
end group	
select_one yes_no	grow_soybean
select_one duration or_other	duration_of_culti
select_one yes_no	productive_field
select_one yes_no	fertilizer_past_sea
select_multiple inorg_fert	inorg_fert
select_multiple type_inorg_fert or_othe type_inorg_fert	
integer	qty_DAP
integer	cost_DAP
integer	qty_urea
integer	cost_urea

integer	qty_NPK
integer	cost_NPK
integer	qty_TSP
integer	cost_TSP
integer	qty_other
integer	cost_other
select_one yes_no	org_fert
select_multiple no_org_fert or_other	no_org_fert
select_multiple type_org_fert or_other	type_org_fert
integer	qty_fym
integer	cost_fym
integer	rotatn_duration
text	crop_of_twnty_a
integer	yld_of_twnty_a
text	crop_of_twnty_b
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text	crop_of_twntyone

integer	yld_of_twntyone_
text	crop_of_twntytwc
integer	yld_of_twntytwo_
select_multiple cause_rotatn_cropng	cause_of_rotatn
select_multiple manage_resi_crop	manage_residue
select_one yes_no	erosion_measure
select_multiple soil_erosion_control	erosion_control
select_one yes_no	practice_fallow
selected_one fallow_season	fallow_season

label

relevant

appearance

The overall objective of this study is to increase Soybean-Maize productivity in cropping systems through integration of vermicompost, nitrogen and phosphorus in Eastern Savanah and central plateau agroecological zones of Rwanda.

1.0 Basic Information

field-list

Record coordinates of the location

Enumerator's name

District

Sector

Cell

Household head's name

Household head's gender

Age of household head (years)

Household head's level of education

Phone Number

How much total land owned (in ha)?

Have you grown soybean during 2020 season B?

How long time have you been cultivated this land

Is your field productive?

Did you apply inorganic fertilizers in the past growing season?

Why didn't you apply inorganic fertilizer?

What type of inorganic fertilizer did you apply?

How much did you apply for DAP (in kgs)?

What is the cost of DAP in Rwfr per kilogram?

How much did you apply for urea (in kg)?

What is the cost of urea in Rwfr per kilogram?

selected({fert
ilizer_past_se
ason}, 'no')
selected({fert
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'urea')

How much did you apply for NPK (in kg)?

selected({type_inorg_fert},
'NPK')

What is the cost of NPK in Rwfr per kilogram?

selected({type_inorg_fert},
'NPK')

How much did you apply for TSP (in kgs)?

selected({type_inorg_fert},
'TSP')

What is the cost of TSP in Rwfr?

selected({type_inorg_fert},
'TSP')

How much of other fertilizer did you apply (in kgs)?

selected({type_inorg_fert},
'other')

What is the cost of other fertilizer in Rwfr?

Did you apply organic fertilizer?

Why didn't you apply organic fertilizer?

selected({org_fert}, 'no')

What type of organic fertilizers did you apply?

selected({org_fert}, 'yes')

How much did you apply for Farm yard Manure

selected({type_org_fert},
'fym')

what is the cost of Farm Yard Manure in Rwfr per kilogram?

selected({type_org_fert}, 'fym')

For how long have you practiced crop rotation?

selected({rotation}, 'yes')

In the past three growing seasons which crops did you grow during 2020 season A?

selected({rotation}, 'yes')

How much yield did you harvest (in kgs) during 2020 season A?

selected({rotation}, 'yes')

In the past three growing seasons which crops did you grow during 2020 season B?

selected({rotation}, 'yes')

How much yield did you harvest (in kgs) during 2020 season B?

selected({rotation}, 'yes')

In the past three growing seasons which crops did you grow during 2021 season A?

selected({rotation}, 'yes')

How much yield did you harvest (in kgs) during 2021 season A?

selected({sequence}, 'yes')

In the past three growing seasons which crops did you grow during 2021 season B?

selected({rotation}, 'yes')

How much yield did you harvest (in kgs) during 2021 season B?	selected({rot
In the past three growing seasons which crops did you grow during 2022 season A?	ation},'yes')
	selected({rot
How much yield did you harvest (in kgs) during 2022 season A?	ation},'yes')
	selected({rot
Why do you practice cropping rotation?	atiuon},'yes')
How do you manage crop residues after harvesting crops?	selected({rot
Do you face the problem of soil erosion?	ation},'yes')
What are the soil control measure do you use?	selected({ero
	sion_
Do you practice fallowing?	contrl},'yes')
How many seasons do fallowing last?	

hint **constraint** constrain choice_fil required

Please explain that the information solicited is for research purposes only. Remember; let the farmer answer

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the questions. There is no right or wrong answer.

Supplementary Table 1: Summary of descriptive statistics of soybean and maize yield, land size, fertilizers and soil physical-chemical properties in Nyagatare district

Variables	Min	Max	Mean	SD	SE
Land holding size (ha)	0.09	4	1.1	0.81	0.12
Area occupied soybean (ha)	0.01	2	0.29	0.35	0.05
P fertilizer applied (kg ha ⁻¹)	0	38.3	5.64	6.67	0.96
N fertilizer applied (kg ha ⁻¹)	0	50	15.33	2.22	0.32
Quantity of FYM (kg ha ⁻¹)	0	7333.4	1870.8	2213.7	319.5
Yield of soybean (kg ha ⁻¹) 2020B	249.9	1423.7	607.1	309.5	44.7
Yield of maize (kg ha ⁻¹) 2021A	480.9	2956.4	1383.5	595.0	85.9
Yield of soybean (kg ha ⁻¹) 2021B	270.2	4503.6	678.4	640.7	92.5
Yield of maize (kg ha ⁻¹) 2022A	507.1	3004	1371.3	558.5	80.6
Yield of soybean (kg ha ⁻¹) 2022B	250.2	2106.0	648.7	414.1	59.8
Bulk density (g cm ⁻³)	1.24	1.49	1.4	0.04	0.01
pH water	5.09	6.4	5.65	0.28	0.04
Aggregate stability (%)	43.3	67.8	57.2	5.49	0.79
Soil OC (%)	1.08	2.63	1.84	0.41	0.06
Soil OM (%)	1.85	4.52	3.16	0.7	0.10
Available P (mg kg ⁻¹)	4.85	13.05	7.53	2.03	0.29
Exchangeable K (cmol _c kg ⁻¹)	0.10	0.23	0.16	0.04	0.01
Soil TN (%)	0.07	0.25	0.13	0.05	0.01
CEC (cmol _c kg ⁻¹)	4.86	6.2	5.35	0.33	0.05

SOC: Soil organic carbon, SOM: Soil organic matter, TN: Total nitrogen, P: phosphorus; “P₂O₅”, pH: Hydrogen potential, CEC: Cation exchange capacity, Soil aggregation: Aggregate stability, 2020 B: (March 2020 - June 2020), 2021 A: (September 2020 -January 2021), 2021 B: (March 2021- June 2021), 2022 A: (September 2021 – January 2022), 2022 B (March 2022 – June 2022)

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Laboratory Districts	Sectorscod	Sector	gendercod	Gender	farmersage	Groupingo	Education
1 Nyagatare	1	Tabagwe	1	male	43	1	Primary
2 Nyagatare	1	Tabagwe	2	female	29	2	Olevel
3 Nyagatare	1	Tabagwe	1	male	35	0	Noformale
4 Nyagatare	1	Tabagwe	1	male	56	1	Primary
6 Nyagatare	1	Tabagwe	1	male	54	3	Advanced
7 Nyagatare	1	Tabagwe	1	male	44	1	Primary
8 Nyagatare	1	Tabagwe	1	male	62	1	Primary
9 Nyagatare	1	Tabagwe	1	male	60	1	Primary
10 Nyagatare	1	Tabagwe	1	male	31	1	Primary
11 Nyagatare	1	Tabagwe	1	male	69	1	Primary
14 Nyagatare	1	Tabagwe	1	male	55	1	Primary
15 Nyagatare	1	Tabagwe	1	male	45	1	Primary
16 Nyagatare	1	Tabagwe	1	male	60	0	Noformale
17 Nyagatare	1	Tabagwe	1	male	56	1	Primary
18 Nyagatare	1	Tabagwe	1	male	45	1	Primary
19 Nyagatare	2	Mukama	1	male	33	0	Noformale
20 Nyagatare	2	Mukama	2	female	52	1	Primary
21 Nyagatare	2	Mukama	2	female	50	0	Noformale
22 Nyagatare	2	Mukama	2	female	52	1	Primary
23 Nyagatare	2	Mukama	1	male	37	1	Primary
24 Nyagatare	2	Mukama	2	female	62	0	Noformale
25 Nyagatare	2	Mukama	2	female	59	0	Noformale
26 Nyagatare	2	Mukama	1	male	63	1	Primary
27 Nyagatare	2	Mukama	2	female	53	1	Primary
28 Nyagatare	2	Mukama	2	female	56	0	Noformale
29 Nyagatare	2	Mukama	1	male	52	1	Primary
30 Nyagatare	2	Mukama	2	female	31	3	Advanced
31 Nyagatare	2	Mukama	1	male	68	0	Noformale
33 Nyagatare	2	Mukama	1	male	44	1	Primary
34 Nyagatare	2	Mukama	1	male	51	1	Primary
35 Nyagatare	2	Mukama	1	male	61	1	Primary
36 Nyagatare	2	Mukama	2	female	41	1	Primary
37 Nyagatare	2	Mukama	2	female	46	1	Primary
38 Nyagatare	2	Mukama	1	male	31	3	Advanced
39 Nyagatare	2	Mukama	1	male	70	1	Primary
40 Nyagatare	2	Mukama	1	male	64	1	Primary
41 Nyagatare	2	Mukama	1	male	65	1	Primary
42 Nyagatare	2	Mukama	2	female	65	0	Noformale
43 Nyagatare	3	Katabagem	1	male	70	1	Primary
44 Nyagatare	3	Katabagem	1	male	58	0	Noformale
45 Nyagatare	3	Katabagem	2	female	35	1	Primary
46 Nyagatare	3	Katabagem	2	female	58	1	Primary
47 Nyagatare	3	Katabagem	1	male	43	1	Primary
48 Nyagatare	3	Katabagem	1	male	30	2	Olevel
49 Nyagatare	3	Katabagem	1	male	35	1	Primary
50 Nyagatare	3	Katabagem	1	male	46	2	Olevel

51 Nyagatare	3 Katabagem	1 male	49	1 Primary
52 Nyagatare	3 Katabagem	2 female	45	1 Primary

Landholding	grouping o	Duration o	areaofsoyi	Grouping a	Does the fertilzofPp	GroupingQ	Does the fertilzofNp
0.45	4	Twentyyrs	0.3	3 no	0	1 no	0
0.9	3	Tenyrs	0.4	3 no	0	1 no	0
0.5	3	Tenyrs	0.36	3 no	0	1 no	0
2	4	Twentyyrs	0.62	4 yes	6.67	2 yes	29.03
1	3	Tenyrs	1	5 yes	4.14	2 yes	9
0.54	5	Thirthyys	0.22	3 no	0	1 no	0
2	4	Twentyyrs	0.5	4 yes	4.11	2 yes	10.8
4	1	Threeyrs	0.75	4 yes	5.09	2 yes	6.85
0.5	3	Tenyrs	0.25	3 yes	8.28	2 yes	28.8
0.8	6	Oversixty	0.18	3 no	0	1 no	0
0.75	2	Fiveyrs	0.54	4 yes	4.06	2 yes	8.57
1	2	Fiveyrs	0.5	4 yes	4.96	2 yes	10.8
1	4	Twentyyrs	0.3	3 yes	5.9	2 yes	7.03
1.09	2	Fiveyrs	0.09	2 yes	7.55	2 yes	9.15
3	2	Fiveyrs	2	5 yes	4.14	2 yes	18
0.18	4	Twentyyrs	0.18	3 no	0	1 no	0
0.48	4	Twentyyrs	0.03	1 no	0	1 no	0
1	5	Thirthyys	0.09	2 no	0	1 no	0
0.8	5	Thirthyys	0.2	3 no	0	1 no	0
1.88	2	Fiveyrs	0.47	4 yes	8.8	2 yes	32.55
0.09	5	Thirthyys	0.03	1 no	0	1 no	0
2.5	4	Twentyyrs	1	5 yes	4.14	2 yes	13.5
1	6	Oversixty	0.48	4 yes	4.3	2 yes	15
2	4	Twentyyrs	0.2	3 yes	4.96	2 yes	16.2
0.6	4	Twentyyrs	0.04	1 yes	10.3	3 yes	31.5
0.22	4	Twentyyrs	0.1	2 yes	16.56	3 yes	25
1	1	Threeyrs	0.15	3 yes	9.38	2 yes	20.4
1	4	Twentyyrs	0.1	2 yes	16.56	3 yes	31.02
0.5	5	Thirthyys	0.03	1 yes	8.28	2 yes	36
0.5	4	Twentyyrs	0.25	3 yes	8.28	2 yes	36
1.5	6	Oversixty	0.02	1 no	0	1 no	0
0.5	4	Twentyyrs	0.13	3 yes	6.36	2 yes	13.84
2.5	4	Twentyyrs	0.75	4 yes	2.76	2 yes	18
0.65	1	Threeyrs	0.15	3 yes	8.83	2 yes	19.2
2	3	Tenyrs	0.05	1 yes	38.3	4 yes	45.31
1.7	3	Tenyrs	0.36	3 yes	11.5	3 yes	50
1	6	Oversixty	0.23	3 yes	10.8	3 yes	39.13
0.92	4	Twentyyrs	0.09	2 yes	13.68	3 yes	49.45
2	4	Twentyyrs	0.03	1 no	0	1 no	0
0.9	3	Tenyrs	0.05	1 no	0	1 no	0
0.5	4	Twentyyrs	0.45	4 yes	5.11	2 yes	8.24
0.5	4	Twentyyrs	0.06	2 yes	4.14	2 yes	18
1.5	3	Tenyrs	0.33	3 yes	5.01	2 yes	10.9
0.15	2	Fiveyrs	0.03	1 no	0	1 no	0
0.5	3	Tenyrs	0.03	1 no	0	1 no	0
0.25	4	Twentyyrs	0.05	1 no	0	1 no	0

1.5	5 Thirthyys	0.02	1 yes	12.42	3 yes	45
1	4 Twentyys	0.01	1 yes	5.52	2 yes	24

GroupingQ Does the f: QtityofFYN GroupingQ yldtwntyB: yldtwntyor yldtwntyor yldtwntyv yldtwntyv

1 yes	7333.42	6	1366.83	2533.17	1030	2266.9	973.52
1 yes	1750	3	875	1400	800	1450	550
1 yes	2166.41	4	555.58	1388.38	597.32	1400.67	488.85
4 yes	1532.58	3	343.54	1290.32	451.61	1354.83	351.61
2 yes	150	2	300.2	809.36	280.61	925.8	550
1 yes	6363.55	6	1423.65	2956.38	1399.18	2650.76	1450.6
3 yes	1200	3	600	1000	500	1400	600
2 yes	4321.69	5	1200	2400	990.83	2300.75	1023.97
4 yes	2096	4	1123.64	2884	1752	3004	1708
1 no	0	1	250	1111.5	320.64	888.15	280.75
2 yes	1851.76	3	485.18	1296.29	430.19	1481.48	450.37
3 yes	1200	3	400	1200	390.5	1170.51	420.9
2 yes	833.53	2	333.12	1253.61	365.99	1500	350.46
2 yes	6666.22	6	1056.32	2222.7	998.67	2455.69	1104.21
3 yes	3766	4	720.53	1700.53	700.16	1604.83	720.5
1 no	0	1	366.02	722.25	300.97	670.95	320.41
1 no	0	1	330.1	833.56	270.16	829.34	300.71
1 no	0	1	450.21	1007.36	566.45	1036.52	522.74
1 yes	4000	4	835.67	2100.63	825.34	1825.31	861.03
4 yes	659.57	2	526.31	1205.15	463.92	1263.15	505.36
1 no	0	1	268.93	701.23	315.46	1050.43	259.61
3 yes	1530	3	470.69	880.75	460.97	1055.85	490.64
3 yes	479.16	2	510.31	1004.66	677.08	1293.75	625
3 yes	700	2	490.65	1116.92	425.71	1450.93	460.53
4 no	0	1	450.35	1369.16	435.61	1240.56	375
4 yes	7000	6	1134.65	2486.27	925.36	1980.64	2105.96
4 yes	6666.24	6	1250.8	2193.33	1069.73	2320.85	1180.15
4 yes	2500	4	650.18	1305.33	605.87	1203.69	1400.32
5 no	0	1	560.93	1350.36	520.94	1250.64	493.75
5 yes	800	2	345.61	1215.55	320.98	695.37	280.17
1 yes	5000	5	990.15	2190.86	955.84	2009.93	1450
3 yes	4615.38	5	850.15	1706.95	790.37	1800.9	1105.77
3 yes	2666.52	4	627.16	1333.32	585.75	1124.96	605.65
3 yes	333.42	2	390.88	709.65	420.81	790.55	400.15
5 no	0	1	701.53	1913.84	656.15	1920.76	620.07
5 no	0	1	581.42	1236.9	573.95	1020.31	550.25
5 yes	869.56	2	600.39	1217.39	650.21	1230.43	580.16
5 no	0	1	420.57	1142.05	480.5	1201.97	448.27
1 yes	1000	2	390.45	900.84	379.14	889.34	380.17
1 yes	1200	3	414.26	902.23	402.49	891.27	416.78
2 no	0	1	320.62	883.69	295.16	850.64	312.66
3 no	0	1	249.92	480.88	290.13	507.12	250.16
3 yes	4545.16	5	703.65	1697.24	697.37	1679.05	688.13
1 no	0	1	330	950.45	305.92	870.65	290.37
1 yes	2000	3	520.34	1100.33	513.94	1014.76	501.24
1 yes	2000	3	481.28	994.02	450.17	1020.13	476.34

5 no	0	1	523.17	1072.44	510.72	997.86	498.71
4 no	0	1	370.25	1034.72	391.08	980.51	359.12

BulkDensit	pHwater	Aggregatst	soilOC	SoilOM	AvailPmgp	TotalNperc	AvailCacm	AvailMgcm
1.31	6.01	57.92	2.03	3.49	8.25	0.15	3.89	0.97
1.47	5.45	64.52	1.08	1.85	5.77	0.09	3.56	0.89
1.38	5.66	55.52	1.16	1.99	6.15	0.13	3.52	0.86
1.37	5.84	58.9	1.68	2.88	5.06	0.11	3.11	0.85
1.49	5.6	59.6	1.08	1.85	6.81	0.08	3.43	1.01
1.33	5.91	63.14	2.31	3.97	12.3	0.12	3.53	0.89
1.44	5.77	58.94	1.33	2.28	7.11	0.09	3.28	0.85
1.36	5.93	54.95	1.89	3.25	8.46	0.2	3.04	0.86
1.41	5.97	63.72	1.23	2.11	11.03	0.14	3.55	0.98
1.44	5.78	47.69	1.16	1.99	5.95	0.11	3.56	0.95
1.41	5.81	55.65	1.53	2.63	6.43	0.17	3.12	0.81
1.37	5.76	56.5	1.61	2.76	6.14	0.11	3.29	0.79
1.43	5.84	47.52	1.76	3.02	5.03	0.19	3.57	0.83
1.39	6.08	61.47	2.62	4.5	9.89	0.25	3.31	0.8
1.45	5.89	61.8	2.35	4.04	10.15	0.22	3.26	0.85
1.44	5.47	43.52	1.38	2.37	5.29	0.11	3.24	0.86
1.47	5.51	54.2	1.68	2.88	6.11	0.13	3.59	1.12
1.43	5.76	67.82	1.87	3.21	6.25	0.11	3.72	0.89
1.4	5.92	54.57	2.51	4.31	8.91	0.24	3.69	0.92
1.43	6.04	59.34	1.25	2.15	6.72	0.13	3.12	0.79
1.46	5.55	49.21	1.62	2.78	4.85	0.09	3.59	0.86
1.24	5.74	55.89	1.59	2.73	5.26	0.11	3.72	0.82
1.31	5.69	63.65	1.75	3.01	7.13	0.09	3.59	0.85
1.36	5.56	58	1.92	3.3	8.52	0.11	3.52	0.88
1.46	5.19	66.27	1.48	2.54	11.65	0.08	3.42	0.81
1.48	5.82	56.89	2.63	4.52	9.12	0.19	3.86	0.94
1.38	5.57	52.3	2.58	4.43	13.05	0.21	3.97	0.91
1.37	5.44	59.45	2.01	3.45	6.17	0.17	3.59	0.83
1.45	6.4	53.75	1.78	3.06	7.9	0.11	3.71	1.12
1.41	5.83	59.72	1.92	3.3	5.16	0.12	3.27	1.04
1.36	5.67	56.07	2.25	3.87	10.12	0.21	3.23	0.85
1.41	5.4	56.08	2.45	4.21	8.76	0.23	3.59	0.98
1.4	5.3	51.67	2.03	3.49	8.67	0.2	3.57	0.91
1.43	5.26	64.97	1.75	3.01	6.38	0.09	3.19	0.79
1.41	5.52	61.35	2.01	3.45	6.44	0.07	3.23	0.94
1.39	5.19	59.86	2.15	3.69	7.26	0.13	3.39	0.78
1.38	5.29	57.1	2.06	3.54	9.81	0.14	3.24	0.8
1.42	5.45	62.39	2.12	3.64	7.14	0.11	3.39	0.86
1.39	5.09	57.55	1.77	3.04	5.31	0.08	3.72	0.91
1.41	5.39	61.92	2.01	3.45	6.49	0.12	3.29	0.79
1.44	5.25	58.05	1.52	2.61	6.43	0.09	3.21	0.89
1.43	6.08	62.37	1.73	2.97	7.16	0.11	3.17	0.8
1.39	5.83	51.27	2.24	3.85	10.27	0.21	3.21	0.78
1.41	5.35	43.25	1.95	3.35	7.26	0.12	3.6	0.79
1.39	5.69	53.62	2.02	3.47	7.81	0.13	3.73	0.8
1.35	5.94	51.02	1.73	2.97	7.66	0.16	3.22	0.85

1.43	5.45	56.32	1.85	3.18	5.49	0.09	3.34	0.82
1.41	5.37	59.59	1.79	3.07	6.18	0.08	3.31	0.8

AvailKcmolCECcmolckg

0.22	5.99
0.17	5.42
0.16	5.34
0.12	4.88
0.1	5.34
0.19	5.41
0.11	5.04
0.23	4.93
0.19	5.52
0.16	5.47
0.13	4.86
0.12	5
0.11	5.31
0.23	5.14
0.21	5.12
0.14	5.04
0.11	5.62
0.13	5.54
0.21	5.62
0.23	4.94
0.14	5.39
0.16	5.5
0.12	5.36
0.11	5.31
0.13	5.16
0.2	6.2
0.23	5.91
0.19	5.41
0.14	5.77
0.11	5.22
0.21	5.49
0.22	5.59
0.17	5.85
0.14	4.92
0.13	5.1
0.12	5.09
0.11	4.95
0.13	5.18
0.14	5.89
0.11	5.39
0.13	5.36
0.13	4.9
0.2	4.99
0.18	5.67
0.16	5.89
0.21	5.48

0.17	5.13
0.19	5.1

Laboratory Districts	Sectors	Sectorscod	gender	grouping g	farmersage	education	Landholdin
1 Huye	4 Tumba	1	male	34	1	1.5	
2 Huye	4 Tumba	1	male	71	1	1.14	
3 Huye	4 Tumba	1	male	41	1	1.2	
4 Huye	4 Tumba	2	female	57	1	1	
5 Huye	4 Tumba	2	female	42	2	0.3	
6 Huye	4 Tumba	2	female	63	1	0.06	
7 Huye	4 Tumba	2	female	78	1	1	
8 Huye	4 Tumba	1	male	68	1	0.5	
9 Huye	4 Tumba	2	female	57	1	1.2	
10 Huye	4 Tumba	2	female	65	0	0.3	
11 Huye	4 Tumba	2	female	52	1	0.8	
12 Huye	4 Tumba	2	female	64	0	1	
13 Huye	4 Tumba	2	female	26	2	1.5	
14 Huye	4 Tumba	1	male	63	1	2	
15 Huye	4 Tumba	2	female	44	1	4	
16 Huye	4 Tumba	2	female	71	1	1	
17 Huye	4 Tumba	1	male	61	1	1.4	
18 Huye	4 Tumba	2	female	37	1	0.5	
19 Huye	4 Tumba	2	female	53	1	0.7	
20 Huye	4 Tumba	2	female	45	1	0.9	
21 Huye	4 Tumba	2	female	50	4	0.2	
22 Huye	4 Tumba	1	male	53	1	0.15	
23 Huye	4 Tumba	2	female	53	1	0.7	
24 Huye	4 Tumba	1	male	59	1	0.5	
25 Huye	4 Tumba	2	female	67	3	0.8	
26 Huye	4 Tumba	1	male	58	2	1	
27 Huye	5 Mukura	1	male	27	1	0.6	
28 Huye	5 Mukura	2	female	52	1	0.7	
29 Huye	5 Mukura	1	male	60	0	0.8	
30 Huye	5 Mukura	1	male	36	2	0.5	
31 Huye	5 Mukura	2	female	62	1	0.3	
32 Huye	5 Mukura	2	female	65	1	0.4	
33 Huye	5 Mukura	2	female	55	2	0.8	
34 Huye	6 Huye	2	female	48	1	0.5	
35 Huye	6 Huye	1	male	67	1	0.04	
36 Huye	6 Huye	1	male	80	1	1.5	
37 Huye	6 Huye	2	female	62	4	0.8	
38 Huye	6 Huye	1	male	64	1	1.03	
39 Huye	6 Huye	1	male	64	1	1	
40 Huye	6 Huye	1	male	66	1	1	
41 Huye	6 Huye	2	female	29	1	0.72	
42 Huye	4 Tumba	2	female	73	0	1	
43 Huye	4 Tumba	2	female	50	1	1.7	
44 Huye	4 Tumba	1	male	42	1	0.12	
45 Huye	4 Tumba	1	male	60	1	1.5	
46 Huye	4 Tumba	1	male	53	1	0.8	

47 Huye	4 Tumba	1 male	32	3	0.2
48 Huye	4 Tumba	1 male	74	1	0.4

Grouping of Duration of area of soy	Grouping of fertilization of P	Grouping of fertilization of N	Grouping of N	Quantity of FYM			
5 Thirtieths	0.03	1	0	1	6666.66		
6 Over sixty	0.8	4	6.8	2	10.7	3	0
1 Thirtieths	0.18	3	10.25	3	15	3	2333.33
4 Twentieths	0.07	2	0	1	0	1	0
4 Twentieths	0.06	2	8.28	2	18	3	6500
6 Over sixty	0.04	1	0	1	0	1	0
6 Over sixty	0.07	2	0	1	0	1	0
6 Over sixty	0.12	3	6.5	2	15	3	0
5 Thirtieths	0.02	1	0	1	0	1	3809.52
5 Thirtieths	0.02	1	0	1	0	1	7000.85
6 Over sixty	0.06	2	7.05	2	6	2	0
4 Twentieths	0.21	3	0	1	0	1	0
3 Tenth	0.02	1	0	1	18	3	3500
6 Over sixty	0.04	1	6.21	2	22.5	4	4500
3 Tenth	0.08	2	9.46	2	41.14	5	4000
6 Over sixty	0.6	4	6.25	2	3	2	0
4 Twentieths	0.03	1	5.52	2	24	4	5333.33
6 Over sixty	0.02	1	0	1	0	1	0
6 Over sixty	0.03	1	0	1	0	1	1200
4 Twentieths	0.01	1	0	1	0	1	1466.66
2 Fifth	0.05	1	0	1	0	1	3000
3 Tenth	0.01	1	24.84	3	54	5	0
6 Over sixty	0.03	1	0	1	0	1	2000
6 Over sixty	0.05	1	4.96	2	10.8	3	2540.82
5 Thirtieths	0.08	2	5.5	2	9	2	1250
6 Over sixty	0.03	1	5.52	2	12	3	1300
3 Tenth	0.03	1	11.04	3	24	4	0
6 Over sixty	0.04	1	0	1	0	1	4522.19
6 Over sixty	0.07	2	0	1	0	1	5260.85
3 Tenth	0.02	1	8.28	2	18	3	0
6 Over sixty	0.02	1	0	1	0	1	0
6 Over sixty	0.02	1	0	1	0	1	1200.43
6 Over sixty	0.05	1	0	1	0	1	600
6 Over sixty	0.1	2	4.14	2	9	2	1000
6 Over sixty	0.01	1	8.28	2	36	4	1400.38
6 Over sixty	0.01	1	23	3	50	5	0
4 Twentieths	0.03	1	0	1	0	1	5000
6 Over sixty	0.03	1	0	1	0	1	8571.42
6 Over sixty	0.08	2	0	1	0	1	5000
6 Over sixty	0.06	2	0	1	0	1	5000
4 Twentieths	0.03	1	0	1	0	1	4500.79
6 Over sixty	0.08	2	6.58	2	9	2	2500
4 Twentieths	0.08	2	0	1	0	1	2976.19
3 Tenth	0.01	1	8.28	2	18	3	0
5 Thirtieths	0.08	2	0	1	0	1	6250
6 Over sixty	0.02	1	8.28	2	18	3	4500

2 Fiveyrs	0.01	1	0	1	0	1	0
5 Thirthyys	0.07	2	0	1	0	1	2000

Grouping	F ¹ yld	twntyB ¹ yld	twntyor yld	twntyor yld	twnty ¹ tv yld	twnty ¹ tv Bulk	Densit	pH	water	Aggregatst
7	702.35	1056.57	750.18	1096.14	730.14	1.39	5.09	55.02		
1	260.91	790.24	280.5	805.16	250.49	1.48	5.33	52.6		
4	389.01	708.49	410.27	751.21	422.37	1.33	5.43	47.22		
1	280.16	680.73	310.84	720.44	290.63	1.45	5.68	50.16		
7	720.33	1100.58	741.25	1503.52	701.45	1.34	5.52	50.15		
1	288.86	622.35	271.1	607.13	259.37	1.49	5.45	51.2		
1	246	580.36	255.37	568.96	270.39	1.46	5.67	55.39		
1	386.67	650.22	301.67	710.44	351.17	1.48	5.51	48.31		
5	529.17	830.77	505.79	901.34	497.38	1.37	5.46	58.39		
7	905.21	1500.28	970.22	1580.11	940.28	1.31	5.63	62.35		
1	270.58	546.32	245.6	510.37	220.61	1.46	5.25	41.62		
1	290.15	475.25	320	423.61	270.64	1.46	5.11	45.62		
5	650.2	1200.77	620.79	1280.34	630.25	1.42	5.61	53.67		
6	700.75	1390.17	670.61	1210.77	688.42	1.39	5.41	58.77		
5	923.18	1320.76	805.14	1290.18	707.38	1.36	5.44	60.39		
1	166.67	393.31	190.83	440.24	180.75	1.47	4.68	47.12		
6	850.11	1456.09	800.17	1500.96	770.28	1.44	5.56	56.96		
1	180.22	401.24	197.88	422.04	220.07	1.48	4.77	50.27		
3	290.15	584.55	320.26	537.41	350.44	1.45	5.34	50.42		
4	313.24	670.39	290.35	690.06	330.47	1.41	5.45	54.31		
5	570.83	1205.97	535.22	780.67	1107.13	1.42	5.64	67.09		
1	210.75	495.66	243.87	450.29	227.11	1.47	5.11	48.36		
4	403.51	700.62	433.72	785.61	411.03	1.43	5.48	53.44		
5	460.22	902.46	413.03	928.18	911.28	1.35	5.82	61.22		
3	302.56	690.75	311.04	711.2	337	1.47	5.48	58.09		
3	360.56	754.19	320.27	788.03	310.9	1.44	5.24	59.22		
1	260.82	462.25	277.92	480.63	255.53	1.49	5.49	50.35		
6	710.45	1205.34	698.72	740.62	700.25	1.37	5.54	58.16		
6	802.41	1300.63	771.71	1240.62	750.39	1.41	5.43	59.6		
1	260.35	490.12	245.69	505.74	260.66	1.48	4.95	50.4		
1	240.83	440.76	270.61	420.36	255.29	1.46	5.49	56.44		
3	228.61	460.9	255.62	420.77	230.64	1.41	5.25	54.05		
2	202.04	590.31	250.64	511.02	232.29	1.42	4.99	54.89		
3	380.6	799.44	450.32	823.12	450.18	1.39	5.61	60.25		
4	406.99	805.82	430.66	841.75	411.07	1.44	5.42	55.62		
1	395.23	744.55	345.38	701.04	320.11	1.39	5.66	55.27		
6	690.17	1402.12	553.27	1450.82	606.35	1.47	4.75	59.2		
7	915.67	1603.78	885.34	1560.17	810.22	1.36	5.88	60.13		
6	730.61	1450.12	779.33	1308.19	755.24	1.39	5.61	50.12		
6	760.83	1450.8	460.18	891.46	420.73	1.46	5.01	54.41		
6	560.5	1260.22	601.27	1050.54	580.19	1.34	5.79	60.52		
4	387.26	785.27	322.44	804.25	305.28	1.46	5.36	55.29		
5	300.5	870.52	320.8	850.14	288.93	1.42	5.77	47.3		
1	270.85	600.87	250	656.22	236.29	1.43	4.82	52.22		
7	715.76	1350.75	697.31	1280.11	720.46	1.38	5.62	57.72		
6	622.04	1230.42	786.44	1301.78	745.89	1.35	5.48	50.15		

1	193.5	378.46	220.17	350.04	203.02	1.45	4.78	54.59
4	320.85	780.9	350.66	800.47	306.71	1.41	5.26	49.28

soilOC	SoilOM	AvailPmgp	TN (%)	Ca(cmol/kg)	Mg(cmol/kg)	k(cmol/kg)	CEC(cmol(+)/kg)
1.52	2.61	7.91	0.09	2.23	0.71	0.16	4.25
0.9	1.54	5.65	0.07	2.34	0.6	0.19	3.93
1.27	2.18	7.12	0.12	2.32	0.71	0.17	4
1.15	1.97	6.22	0.08	2.19	0.75	0.15	4.29
2.1	3.61	8.97	0.11	2.14	0.72	0.14	3.8
1.59	2.73	5.67	0.11	2.35	0.7	0.19	4.44
1.45	2.49	4.73	0.09	2.41	0.65	0.21	4.07
1.59	2.73	6.85	0.14	2.32	0.63	0.2	3.95
1.43	2.45	5.74	0.12	2.31	0.7	0.13	3.94
1.64	2.82	4.25	0.1	2.34	0.71	0.17	4.02
1.04	1.78	7.39	0.09	2.37	0.6	0.15	4.6
0.87	1.49	6.13	0.09	2.42	0.71	0.21	4.54
1.62	2.78	7.13	0.11	2.22	0.6	0.16	3.78
1.83	3.14	6.97	0.1	2.44	0.65	0.18	4.59
1.91	3.28	7.11	0.13	2.3	0.63	0.21	4.31
0.76	1.3	4.61	0.08	2.06	0.65	0.13	4.21
1.95	3.35	7.42	0.11	2.36	0.67	0.14	4.37
0.9	1.54	5.25	0.07	2.21	0.71	0.11	4.23
1.37	2.35	5.27	0.11	2.56	0.67	0.16	4.59
1.32	2.27	6.88	0.08	1.97	0.65	0.15	4.37
1.34	2.3	7.85	0.12	2.17	0.75	0.11	3.83
0.91	1.56	5.49	0.07	2.36	0.83	0.21	4.2
1.36	2.33	7.15	0.09	2.35	0.71	0.18	4.04
1.41	2.42	8.17	0.12	2.21	0.65	0.21	4.27
1.45	2.49	4.92	0.08	2.32	0.63	0.22	4.37
1.48	2.54	8.09	0.11	2.22	0.63	0.19	4.24
1.28	2.2	7.55	0.07	2.34	0.64	0.21	3.99
1.59	2.73	6.59	0.09	2.37	0.65	0.18	4
1.37	2.35	8.26	0.12	2.32	0.64	0.17	4.33
1.16	1.99	4.71	0.08	2.22	0.63	0.17	5.87
1.02	1.75	4.78	0.09	1.57	0.64	0.21	3.22
0.98	1.68	5.02	0.11	2.22	0.61	0.18	5.2
1.01	1.73	7.75	0.11	2.06	0.63	0.12	4.66
1.23	2.11	7.08	0.13	2.34	0.66	0.16	3.96
0.97	1.66	6.47	0.12	2.31	0.6	0.1	4.21
1.13	1.94	7.18	0.08	2.52	0.72	0.22	4.26
1.08	1.85	6.82	0.13	2.49	0.87	0.21	6.41
1.67	2.87	8.9	0.12	2.36	0.75	0.23	4.14
1.75	3.01	7.05	0.11	2.34	0.64	0.15	4.33
1.58	2.71	6.89	0.12	1.88	0.6	0.18	4.79
2.01	3.45	8.21	0.11	2.39	0.67	0.21	6.08
1.01	1.73	6.02	0.09	2.34	0.65	0.23	4.42
1.23	2.11	8.55	0.11	2.35	0.61	0.23	3.99
1.08	1.85	7.16	0.07	2.34	0.61	0.21	4.36
1.16	1.99	6.75	0.11	2.3	0.65	0.15	3.9
1.82	3.13	8.04	0.09	2.29	0.65	0.13	4.27

1.27	2.18	5.92	0.06	2.04	0.63	0.12	4.34
1.01	1.73	6.71	0.09	1.98	0.6	0.15	4.62

Serial num	Districts	Sectors	gender	farmer age	education	holding_size	duration_c	area_soy	ir	Does the
1	1	1	1	43	1	0.45	4	0.3	no	
2	1	1	2	29	2	0.9	3	0.4	no	
3	1	1	1	35	0	0.5	3	0.36	no	
4	1	1	1	56	1	2	4	0.62	yes	
5	1	1	1	54	3	1	3	1	yes	
6	1	1	1	44	1	0.54	5	0.22	no	
7	1	1	1	62	1	2	4	0.5	yes	
8	1	1	1	60	1	4	1	0.75	yes	
9	1	1	1	31	1	0.5	3	0.25	yes	
10	1	1	1	69	1	0.8	6	0.18	no	
11	1	1	1	55	1	0.75	2	0.54	yes	
12	1	1	1	45	1	1	2	0.5	yes	
13	1	1	1	60	0	1	4	0.3	yes	
14	1	1	1	56	1	1.09	2	0.09	yes	
15	1	1	1	45	1	3	2	2	yes	
16	1	2	1	33	0	0.18	4	0.18	no	
17	1	2	2	52	1	0.48	4	0.03	no	
18	1	2	2	50	0	1	5	0.09	no	
19	1	2	2	52	1	0.8	5	0.2	no	
20	1	2	1	37	1	1.88	2	0.47	yes	
21	1	2	2	62	0	0.09	5	0.03	no	
22	1	2	2	59	0	2.5	4	1	yes	
23	1	2	1	63	1	1	6	0.48	yes	
24	1	2	2	53	1	2	4	0.2	yes	
25	1	2	2	56	0	0.6	4	0.04	yes	
26	1	2	1	52	1	0.22	4	0.1	yes	
27	1	2	2	31	3	1	1	0.15	yes	
28	1	2	1	68	0	1	4	0.1	yes	
29	1	2	1	44	1	0.5	5	0.03	yes	
30	1	2	1	51	1	0.5	4	0.25	yes	
31	1	2	1	61	1	1.5	6	0.02	no	
32	1	2	2	41	1	0.5	4	0.13	yes	
33	1	2	2	46	1	2.5	4	0.75	yes	
34	1	2	1	31	3	0.65	1	0.15	yes	
35	1	2	1	70	1	2	3	0.05	yes	
36	1	2	1	64	1	1.7	3	0.36	yes	
37	1	2	1	65	1	1	6	0.23	yes	
38	1	2	2	65	0	0.92	4	0.09	yes	
39	1	3	1	70	1	2	4	0.03	no	
40	1	3	1	58	0	0.9	3	0.05	no	
41	1	3	2	35	1	0.5	4	0.45	yes	
42	1	3	2	58	1	0.5	4	0.06	yes	
43	1	3	1	43	1	1.5	3	0.33	yes	
44	1	3	1	30	2	0.15	2	0.03	no	
45	1	3	1	35	1	0.5	3	0.03	no	
46	1	3	1	46	2	0.25	4	0.05	no	

47	1	3	1	49	1	1.5	5	0.02 yes
48	1	3	2	45	1	1	4	0.01 yes
49	1	1	1	31	1	0.5	3	0.25 yes
50	1	1	1	69	1	0.8	6	0.18 no
51	1	1	1	55	1	0.75	2	0.54 yes
52	1	1	1	45	1	1	2	0.5 yes
53	1	1	1	60	0	1	4	0.3 yes
54	1	1	1	56	1	1.09	2	0.09 yes
55	1	1	1	45	1	3	2	2 yes
56	1	2	1	33	0	0.18	4	0.18 no
57	1	2	2	52	1	0.48	4	0.03 no
58	1	2	2	50	0	1	5	0.09 no
59	1	2	2	52	1	0.8	5	0.2 no
60	1	2	1	37	1	1.88	2	0.47 yes
61	1	2	2	62	0	0.09	5	0.03 no
62	1	2	2	59	0	2.5	4	1 yes
63	1	2	1	63	1	1	6	0.48 yes
64	1	2	2	53	1	2	4	0.2 yes
65	1	2	2	56	0	0.6	4	0.04 yes
66	1	2	1	52	1	0.22	4	0.1 yes
67	1	2	2	31	3	1	1	0.15 yes
68	1	2	1	68	0	1	4	0.1 yes
69	1	2	2	46	1	2.5	4	0.75 yes
70	1	2	1	31	3	0.65	1	0.15 yes
71	1	2	1	70	1	2	3	0.05 yes
72	1	2	1	64	1	1.7	3	0.36 yes
73	1	2	1	65	1	1	6	0.23 yes
74	1	2	2	65	0	0.92	4	0.09 yes
75	1	3	1	70	1	2	4	0.03 no
76	1	3	1	58	0	0.9	3	0.05 no
77	1	3	2	35	1	0.5	4	0.45 yes
78	1	3	2	58	1	0.5	4	0.06 yes
79	1	3	1	43	1	1.5	3	0.33 yes
80	1	3	1	30	2	0.15	2	0.03 no
81	1	3	1	35	1	0.5	3	0.03 no
82	1	3	1	46	2	0.25	4	0.05 no
83	1	3	1	49	1	1.5	5	0.02 yes
84	1	1	2	29	2	0.9	3	0.4 no
85	1	1	1	35	0	0.5	3	0.36 no
86	1	1	1	56	1	2	4	0.62 yes
87	1	1	1	54	3	1	3	1 yes
88	1	1	1	44	1	0.54	5	0.22 no
89	1	1	1	62	1	2	4	0.5 yes
90	1	1	1	60	1	4	1	0.75 yes
91	1	1	1	31	1	0.5	3	0.25 yes
92	1	1	1	69	1	0.8	6	0.18 no
93	1	1	1	55	1	0.75	2	0.54 yes

94	1	1	1	45	1	1	2	0.5 yes
95	1	1	1	60	0	1	4	0.3 yes
96	1	1	1	56	1	1.09	2	0.09 yes
97	1	1	1	45	1	3	2	2 yes
98	1	2	1	33	0	0.18	4	0.18 no
99	1	2	2	52	1	0.48	4	0.03 no
100	1	2	2	50	0	1	5	0.09 no
101	1	2	2	52	1	0.8	5	0.2 no
102	1	2	1	37	1	1.88	2	0.47 yes
103	1	2	2	62	0	0.09	5	0.03 no
104	1	2	2	59	0	2.5	4	1 yes
105	1	2	1	63	1	1	6	0.48 yes
106	1	2	2	53	1	2	4	0.2 yes
107	1	2	2	56	0	0.6	4	0.04 yes
108	1	2	1	52	1	0.22	4	0.1 yes
109	1	2	2	31	3	1	1	0.15 yes
110	1	2	1	68	0	1	4	0.1 yes
111	1	2	1	44	1	0.5	5	0.03 yes
112	1	2	1	51	1	0.5	4	0.25 yes
113	1	2	1	61	1	1.5	6	0.02 no
114	1	2	2	41	1	0.5	4	0.13 yes
115	1	2	2	46	1	2.5	4	0.75 yes
116	1	2	1	31	3	0.65	1	0.15 yes
117	1	2	1	70	1	2	3	0.05 yes
118	1	2	1	64	1	1.7	3	0.36 yes
119	1	2	1	65	1	1	6	0.23 yes
120	1	2	2	65	0	0.92	4	0.09 yes
121	1	3	1	70	1	2	4	0.03 no
122	1	3	1	58	0	0.9	3	0.05 no
123	1	3	2	35	1	0.5	4	0.45 yes
124	1	3	2	58	1	0.5	4	0.06 yes
125	1	3	1	43	1	1.5	3	0.33 yes
126	1	3	1	30	2	0.15	2	0.03 no
127	1	3	1	35	1	0.5	3	0.03 no
128	1	3	1	46	2	0.25	4	0.05 no
129	1	3	1	49	1	1.5	5	0.02 yes
130	1	3	2	45	1	1	4	0.01 yes
131	1	1	1	31	1	0.5	3	0.25 yes
132	1	1	1	69	1	0.8	6	0.18 no
133	1	1	1	55	1	0.75	2	0.54 yes
134	1	1	1	45	1	1	2	0.5 yes
135	1	1	1	60	0	1	4	0.3 yes
136	1	1	1	56	1	1.09	2	0.09 yes
137	1	1	1	45	1	3	2	2 yes
138	1	2	1	33	0	0.18	4	0.18 no
139	1	2	2	52	1	0.48	4	0.03 no
140	1	2	2	50	0	1	5	0.09 no

141	1	2	2	52	1	0.8	5	0.2 no
142	1	2	1	37	1	1.88	2	0.47 yes
143	1	2	2	62	0	0.09	5	0.03 no
144	1	2	2	59	0	2.5	4	1 yes
145	1	2	1	63	1	1	6	0.48 yes
146	1	2	2	53	1	2	4	0.2 yes
147	1	2	2	56	0	0.6	4	0.04 yes
148	1	2	1	52	1	0.22	4	0.1 yes
149	1	2	2	31	3	1	1	0.15 yes
150	1	2	1	68	0	1	4	0.1 yes
151	1	2	2	46	1	2.5	4	0.75 yes
152	1	2	1	31	3	0.65	1	0.15 yes
153	1	2	1	70	1	2	3	0.05 yes
154	1	2	1	64	1	1.7	3	0.36 yes
155	1	2	1	65	1	1	6	0.23 yes
156	1	2	2	65	0	0.92	4	0.09 yes
157	1	3	1	70	1	2	4	0.03 no
158	1	3	1	58	0	0.9	3	0.05 no
159	1	3	2	35	1	0.5	4	0.45 yes
160	1	3	2	58	1	0.5	4	0.06 yes
161	1	3	2	35	1	0.5	4	0.45 yes
162	1	3	2	58	1	0.5	4	0.06 yes
163	1	3	1	43	1	1.5	3	0.33 yes
164	1	3	1	30	2	0.15	2	0.03 no
165	1	3	1	35	1	0.5	3	0.03 no
166	1	3	1	46	2	0.25	4	0.05 no
167	1	3	1	49	1	1.5	5	0.02 yes
168	1	1	2	29	2	0.9	3	0.4 no
169	1	1	1	35	0	0.5	3	0.36 no
170	1	1	1	56	1	2	4	0.62 yes
171	1	1	1	54	3	1	3	1 yes
172	1	1	1	44	1	0.54	5	0.22 no
173	1	1	1	62	1	2	4	0.5 yes
174	1	1	1	60	1	4	1	0.75 yes
175	1	1	1	31	1	0.5	3	0.25 yes
176	1	1	1	69	1	0.8	6	0.18 no
177	1	1	1	55	1	0.75	2	0.54 yes
178	1	1	1	45	1	1	2	0.5 yes
179	1	1	1	60	0	1	4	0.3 yes
180	1	1	1	56	1	1.09	2	0.09 yes
181	1	1	1	45	1	3	2	2 yes
182	1	2	1	33	0	0.18	4	0.18 no
183	1	2	2	52	1	0.48	4	0.03 no
184	1	2	2	50	0	1	5	0.09 no
185	1	2	2	52	1	0.8	5	0.2 no
186	1	2	1	37	1	1.88	2	0.47 yes
187	1	2	2	62	0	0.09	5	0.03 no

188	1	2	2	59	0	2.5	4	1 yes
189	1	2	1	63	1	1	6	0.48 yes
190	1	2	2	53	1	2	4	0.2 yes
191	1	2	2	56	0	0.6	4	0.04 yes
192	1	2	1	52	1	0.22	4	0.1 yes



Amount	Does the Total N a	Does the f	Quantity o	yld_twnty_	yld_twnty_	yld_twnty_	yld_twnty_	yld_twnty_
0 no	0 yes	7333.42	1366.83	2533.17	1030	2266.9	973.52	
0 no	0 yes	1750	875	1400	800	1450	550	
0 no	0 yes	2166.41	555.58	1388.38	597.32	1400.67	488.85	
6.67 yes	29.03 yes	1532.58	343.54	1290.32	451.61	1354.83	351.61	
4.14 yes	9 yes	150	300.2	809.36	280.61	925.8	550	
0 no	0 yes	6363.55	1423.65	2956.38	1399.18	2650.76	1450.6	
4.11 yes	10.8 yes	1200	600	1000	500	1400	600	
5.09 yes	6.85 yes	4321.69	1200	2400	990.83	2300.75	1023.97	
8.28 yes	28.8 yes	2096	1123.64	2884	1752	3004	1708	
0 no	0 no	0	250	1111.5	320.64	888.15	280.75	
4.06 yes	8.57 yes	1851.76	485.18	1296.29	430.19	1481.48	450.37	
4.96 yes	10.8 yes	1200	400	1200	390.5	1170.51	420.9	
5.9 yes	7.03 yes	833.53	333.12	1253.61	365.99	1500	350.46	
7.55 yes	9.15 yes	6666.22	1056.32	2222.7	998.67	2455.69	1104.21	
4.14 yes	18 yes	3766	720.53	1700.53	700.16	1604.83	720.5	
0 no	0 no	0	366.02	722.25	300.97	670.95	320.41	
0 no	0 no	0	330.1	833.56	270.16	829.34	300.71	
0 no	0 no	0	450.21	1007.36	566.45	1036.52	522.74	
0 no	0 yes	4000	835.67	2100.63	825.34	1825.31	861.03	
8.8 yes	32.55 yes	659.57	526.31	1205.15	463.92	1263.15	505.36	
0 no	0 no	0	268.93	701.23	315.46	1050.43	259.61	
4.14 yes	13.5 yes	1530	470.69	880.75	460.97	1055.85	490.64	
4.3 yes	15 yes	479.16	510.31	1004.66	677.08	1293.75	625	
4.96 yes	16.2 yes	700	490.65	1116.92	425.71	1450.93	460.53	
10.3 yes	31.5 no	0	450.35	1369.16	435.61	1240.56	375	
16.56 yes	25 yes	7000	1134.65	2486.27	925.36	1980.64	2105.96	
9.38 yes	20.4 yes	6666.24	1250.8	2193.33	1069.73	2320.85	1180.15	
16.56 yes	31.02 yes	2500	650.18	1305.33	605.87	1203.69	1400.32	
8.28 yes	36 no	0	560.93	1350.36	520.94	1250.64	493.75	
8.28 yes	36 yes	800	345.61	1215.55	320.98	695.37	280.17	
0 no	0 yes	5000	990.15	2190.86	955.84	2009.93	1450	
6.36 yes	13.84 yes	4615.38	850.15	1706.95	790.37	1800.9	1105.77	
2.76 yes	18 yes	2666.52	627.16	1333.32	585.75	1124.96	605.65	
8.83 yes	19.2 yes	333.42	390.88	709.65	420.81	790.55	400.15	
38.3 yes	45.31 no	0	701.53	1913.84	656.15	1920.76	620.07	
11.5 yes	50 no	0	581.42	1236.9	573.95	1020.31	550.25	
10.8 yes	39.13 yes	869.56	600.39	1217.39	650.21	1230.43	580.16	
13.68 yes	49.45 no	0	420.57	1142.05	4503.62	1201.97	448.27	
0 no	0 yes	1000	390.45	900.84	379.14	889.34	380.17	
0 no	0 yes	1200	414.26	902.23	402.49	891.27	416.78	
5.11 yes	8.24 no	0	320.62	883.69	295.16	850.64	312.66	
4.14 yes	18 no	0	249.92	480.88	290.13	507.12	250.16	
5.01 yes	10.9 yes	4545.16	703.65	1697.24	697.37	1679.05	688.13	
0 no	0 no	0	330	950.45	305.92	870.65	290.37	
0 no	0 yes	2000	520.34	1100.33	513.94	1014.76	501.24	
0 no	0 yes	2000	481.28	994.02	450.17	1020.13	476.34	

12.42 yes	45 no	0	523.17	1072.44	510.72	997.86	498.71
5.52 yes	24 no	0	370.25	1034.72	391.08	980.51	359.12
8.28 yes	28.8 yes	2096	1123.64	2884	1752	3004	1708
0 no	0 no	0	250	1111.5	320.64	888.15	280.75
4.06 yes	8.57 yes	1851.76	485.18	1296.29	430.19	1481.48	450.37
4.96 yes	10.8 yes	1200	400	1200	390.5	1170.51	420.9
5.9 yes	7.03 yes	833.53	333.12	1253.61	365.99	1500	350.46
7.55 yes	9.15 yes	6666.22	1056.32	2222.7	998.67	2455.69	1104.21
4.14 yes	18 yes	3766	720.53	1700.53	700.16	1604.83	720.5
0 no	0 no	0	366.02	722.25	300.97	670.95	320.41
0 no	0 no	0	330.1	833.56	270.16	829.34	300.71
0 no	0 no	0	450.21	1007.36	566.45	1036.52	522.74
0 no	0 yes	4000	835.67	2100.63	825.34	1825.31	861.03
8.8 yes	32.55 yes	659.57	526.31	1205.15	463.92	1263.15	505.36
0 no	0 no	0	268.93	701.23	315.46	1050.43	259.61
4.14 yes	13.5 yes	1530	470.69	880.75	460.97	1055.85	490.64
4.3 yes	15 yes	479.16	510.31	1004.66	677.08	1293.75	625
4.96 yes	16.2 yes	700	490.65	1116.92	425.71	1450.93	460.53
10.3 yes	31.5 no	0	450.35	1369.16	435.61	1240.56	375
16.56 yes	25 yes	7000	1134.65	2486.27	925.36	1980.64	2105.96
9.38 yes	20.4 yes	6666.24	1250.8	2193.33	1069.73	2320.85	1180.15
16.56 yes	31.02 yes	2500	650.18	1305.33	605.87	1203.69	1400.32
2.76 yes	18 yes	2666.52	627.16	1333.32	585.75	1124.96	605.65
8.83 yes	19.2 yes	333.42	390.88	709.65	420.81	790.55	400.15
38.3 yes	45.31 no	0	701.53	1913.84	656.15	1920.76	620.07
11.5 yes	50 no	0	581.42	1236.9	573.95	1020.31	550.25
10.8 yes	39.13 yes	869.56	600.39	1217.39	650.21	1230.43	580.16
13.68 yes	49.45 no	0	420.57	1142.05	4503.62	1201.97	448.27
0 no	0 yes	1000	390.45	900.84	379.14	889.34	380.17
0 no	0 yes	1200	414.26	902.23	402.49	891.27	416.78
5.11 yes	8.24 no	0	320.62	883.69	295.16	850.64	312.66
4.14 yes	18 no	0	249.92	480.88	290.13	507.12	250.16
5.01 yes	10.9 yes	4545.16	703.65	1697.24	697.37	1679.05	688.13
0 no	0 no	0	330	950.45	305.92	870.65	290.37
0 no	0 yes	2000	520.34	1100.33	513.94	1014.76	501.24
0 no	0 yes	2000	481.28	994.02	450.17	1020.13	476.34
12.42 yes	45 no	0	523.17	1072.44	510.72	997.86	498.71
0 no	0 yes	1750	875	1400	800	1450	550
0 no	0 yes	2166.41	555.58	1388.38	597.32	1400.67	488.85
6.67 yes	29.03 yes	1532.58	343.54	1290.32	451.61	1354.83	351.61
4.14 yes	9 yes	150	300.2	809.36	280.61	925.8	550
0 no	0 yes	6363.55	1423.65	2956.38	1399.18	2650.76	1450.6
4.11 yes	10.8 yes	1200	600	1000	500	1400	600
5.09 yes	6.85 yes	4321.69	1200	2400	990.83	2300.75	1023.97
8.28 yes	28.8 yes	2096	1123.64	2884	1752	3004	1708
0 no	0 no	0	250	1111.5	320.64	888.15	280.75
4.06 yes	8.57 yes	1851.76	485.18	1296.29	430.19	1481.48	450.37

4.96 yes	10.8 yes	1200	400	1200	390.5	1170.51	420.9
5.9 yes	7.03 yes	833.53	333.12	1253.61	365.99	1500	350.46
7.55 yes	9.15 yes	6666.22	1056.32	2222.7	998.67	2455.69	1104.21
4.14 yes	18 yes	3766	720.53	1700.53	700.16	1604.83	720.5
0 no	0 no	0	366.02	722.25	300.97	670.95	320.41
0 no	0 no	0	330.1	833.56	270.16	829.34	300.71
0 no	0 no	0	450.21	1007.36	566.45	1036.52	522.74
0 no	0 yes	4000	835.67	2100.63	825.34	1825.31	861.03
8.8 yes	32.55 yes	659.57	526.31	1205.15	463.92	1263.15	505.36
0 no	0 no	0	268.93	701.23	315.46	1050.43	259.61
4.14 yes	13.5 yes	1530	470.69	880.75	460.97	1055.85	490.64
4.3 yes	15 yes	479.16	510.31	1004.66	677.08	1293.75	625
4.96 yes	16.2 yes	700	490.65	1116.92	425.71	1450.93	460.53
10.3 yes	31.5 no	0	450.35	1369.16	435.61	1240.56	375
16.56 yes	25 yes	7000	1134.65	2486.27	925.36	1980.64	2105.96
9.38 yes	20.4 yes	6666.24	1250.8	2193.33	1069.73	2320.85	1180.15
16.56 yes	31.02 yes	2500	650.18	1305.33	605.87	1203.69	1400.32
8.28 yes	36 no	0	560.93	1350.36	520.94	1250.64	493.75
8.28 yes	36 yes	800	345.61	1215.55	320.98	695.37	280.17
0 no	0 yes	5000	990.15	2190.86	955.84	2009.93	1450
6.36 yes	13.84 yes	4615.38	850.15	1706.95	790.37	1800.9	1105.77
2.76 yes	18 yes	2666.52	627.16	1333.32	585.75	1124.96	605.65
8.83 yes	19.2 yes	333.42	390.88	709.65	420.81	790.55	400.15
38.3 yes	45.31 no	0	701.53	1913.84	656.15	1920.76	620.07
11.5 yes	50 no	0	581.42	1236.9	573.95	1020.31	550.25
10.8 yes	39.13 yes	869.56	600.39	1217.39	650.21	1230.43	580.16
13.68 yes	49.45 no	0	420.57	1142.05	4503.62	1201.97	448.27
0 no	0 yes	1000	390.45	900.84	379.14	889.34	380.17
0 no	0 yes	1200	414.26	902.23	402.49	891.27	416.78
5.11 yes	8.24 no	0	320.62	883.69	295.16	850.64	312.66
4.14 yes	18 no	0	249.92	480.88	290.13	507.12	250.16
5.01 yes	10.9 yes	4545.16	703.65	1697.24	697.37	1679.05	688.13
0 no	0 no	0	330	950.45	305.92	870.65	290.37
0 no	0 yes	2000	520.34	1100.33	513.94	1014.76	501.24
0 no	0 yes	2000	481.28	994.02	450.17	1020.13	476.34
12.42 yes	45 no	0	523.17	1072.44	510.72	997.86	498.71
5.52 yes	24 no	0	370.25	1034.72	391.08	980.51	359.12
8.28 yes	28.8 yes	2096	1123.64	2884	1752	3004	1708
0 no	0 no	0	250	1111.5	320.64	888.15	280.75
4.06 yes	8.57 yes	1851.76	485.18	1296.29	430.19	1481.48	450.37
4.96 yes	10.8 yes	1200	400	1200	390.5	1170.51	420.9
5.9 yes	7.03 yes	833.53	333.12	1253.61	365.99	1500	350.46
7.55 yes	9.15 yes	6666.22	1056.32	2222.7	998.67	2455.69	1104.21
4.14 yes	18 yes	3766	720.53	1700.53	700.16	1604.83	720.5
0 no	0 no	0	366.02	722.25	300.97	670.95	320.41
0 no	0 no	0	330.1	833.56	270.16	829.34	300.71
0 no	0 no	0	450.21	1007.36	566.45	1036.52	522.74

0 no	0 yes	4000	835.67	2100.63	825.34	1825.31	861.03
8.8 yes	32.55 yes	659.57	526.31	1205.15	463.92	1263.15	505.36
0 no	0 no	0	268.93	701.23	315.46	1050.43	259.61
4.14 yes	13.5 yes	1530	470.69	880.75	460.97	1055.85	490.64
4.3 yes	15 yes	479.16	510.31	1004.66	677.08	1293.75	625
4.96 yes	16.2 yes	700	490.65	1116.92	425.71	1450.93	460.53
10.3 yes	31.5 no	0	450.35	1369.16	435.61	1240.56	375
16.56 yes	25 yes	7000	1134.65	2486.27	925.36	1980.64	2105.96
9.38 yes	20.4 yes	6666.24	1250.8	2193.33	1069.73	2320.85	1180.15
16.56 yes	31.02 yes	2500	650.18	1305.33	605.87	1203.69	1400.32
2.76 yes	18 yes	2666.52	627.16	1333.32	585.75	1124.96	605.65
8.83 yes	19.2 yes	333.42	390.88	709.65	420.81	790.55	400.15
38.3 yes	45.31 no	0	701.53	1913.84	656.15	1920.76	620.07
11.5 yes	50 no	0	581.42	1236.9	573.95	1020.31	550.25
10.8 yes	39.13 yes	869.56	600.39	1217.39	650.21	1230.43	580.16
13.68 yes	49.45 no	0	420.57	1142.05	4503.62	1201.97	448.27
0 no	0 yes	1000	390.45	900.84	379.14	889.34	380.17
0 no	0 yes	1200	414.26	902.23	402.49	891.27	416.78
5.11 yes	8.24 no	0	320.62	883.69	295.16	850.64	312.66
4.14 yes	18 no	0	249.92	480.88	290.13	507.12	250.16
5.11 yes	8.24 no	0	320.62	883.69	295.16	850.64	312.66
4.14 yes	18 no	0	249.92	480.88	290.13	507.12	250.16
5.01 yes	10.9 yes	4545.16	703.65	1697.24	697.37	1679.05	688.13
0 no	0 no	0	330	950.45	305.92	870.65	290.37
0 no	0 yes	2000	520.34	1100.33	513.94	1014.76	501.24
0 no	0 yes	2000	481.28	994.02	450.17	1020.13	476.34
12.42 yes	45 no	0	523.17	1072.44	510.72	997.86	498.71
0 no	0 yes	1750	875	1400	800	1450	550
0 no	0 yes	2166.41	555.58	1388.38	597.32	1400.67	488.85
6.67 yes	29.03 yes	1532.58	343.54	1290.32	451.61	1354.83	351.61
4.14 yes	9 yes	150	300.2	809.36	280.61	925.8	550
0 no	0 yes	6363.55	1423.65	2956.38	1399.18	2650.76	1450.6
4.11 yes	10.8 yes	1200	600	1000	500	1400	600
5.09 yes	6.85 yes	4321.69	1200	2400	990.83	2300.75	1023.97
8.28 yes	28.8 yes	2096	1123.64	2884	1752	3004	1708
0 no	0 no	0	250	1111.5	320.64	888.15	280.75
4.06 yes	8.57 yes	1851.76	485.18	1296.29	430.19	1481.48	450.37
4.96 yes	10.8 yes	1200	400	1200	390.5	1170.51	420.9
5.9 yes	7.03 yes	833.53	333.12	1253.61	365.99	1500	350.46
7.55 yes	9.15 yes	6666.22	1056.32	2222.7	998.67	2455.69	1104.21
4.14 yes	18 yes	3766	720.53	1700.53	700.16	1604.83	720.5
0 no	0 no	0	366.02	722.25	300.97	670.95	320.41
0 no	0 no	0	330.1	833.56	270.16	829.34	300.71
0 no	0 no	0	450.21	1007.36	566.45	1036.52	522.74
0 no	0 yes	4000	835.67	2100.63	825.34	1825.31	861.03
8.8 yes	32.55 yes	659.57	526.31	1205.15	463.92	1263.15	505.36
0 no	0 no	0	268.93	701.23	315.46	1050.43	259.61

4.14 yes	13.5 yes	1530	470.69	880.75	460.97	1055.85	490.64
4.3 yes	15 yes	479.16	510.31	1004.66	677.08	1293.75	625
4.96 yes	16.2 yes	700	490.65	1116.92	425.71	1450.93	460.53
10.3 yes	31.5 no	0	450.35	1369.16	435.61	1240.56	375
16.56 yes	25 yes	7000	1134.65	2486.27	925.36	1980.64	2105.96



Bulk Density	pH water	Aggregate % OC	% OM	Available P	Total Nitro	Na(cmol(+)	Ca(cmol/kg
1.31	6.01	57.92	2.03	3.49	8.25	0.15	3.89
1.47	5.45	64.52	1.08	1.85	5.77	0.09	3.56
1.38	5.66	55.52	1.16	1.99	6.15	0.13	3.52
1.37	5.84	58.9	1.68	2.88	5.06	0.11	3.11
1.49	5.6	59.6	1.08	1.85	6.81	0.08	3.43
1.33	5.91	63.14	2.31	3.97	12.3	0.12	3.53
1.44	5.77	58.94	1.33	2.28	7.11	0.09	3.28
1.36	5.93	54.95	1.89	3.25	8.46	0.2	3.04
1.41	5.97	63.72	1.23	2.11	11.03	0.14	3.55
1.44	5.78	47.69	1.16	1.99	5.95	0.11	3.56
1.41	5.81	55.65	1.53	2.63	6.43	0.17	3.12
1.37	5.76	56.5	1.61	2.76	6.14	0.11	3.29
1.43	5.84	47.52	1.76	3.02	5.03	0.19	3.57
1.39	6.08	61.47	2.62	4.5	9.89	0.25	3.31
1.45	5.89	61.8	2.35	4.04	10.15	0.22	3.26
1.44	5.47	43.52	1.38	2.37	5.29	0.11	3.24
1.47	5.51	54.2	1.68	2.88	6.11	0.13	3.59
1.43	5.76	67.82	1.87	3.21	6.25	0.11	3.72
1.4	5.92	54.57	2.51	4.31	8.91	0.24	3.69
1.43	6.04	59.34	1.25	2.15	6.72	0.13	3.12
1.46	5.55	49.21	1.62	2.78	4.85	0.09	3.59
1.24	5.74	55.89	1.59	2.73	5.26	0.11	3.72
1.31	5.69	63.65	1.75	3.01	7.13	0.09	3.59
1.36	5.56	58	1.92	3.3	8.52	0.11	3.52
1.46	5.19	66.27	1.48	2.54	11.65	0.08	3.42
1.48	5.82	56.89	2.63	4.52	9.12	0.19	3.86
1.38	5.57	52.3	2.58	4.43	13.05	0.21	3.97
1.37	5.44	59.45	2.01	3.45	6.17	0.17	3.59
1.45	6.4	53.75	1.78	3.06	7.9	0.11	3.71
1.41	5.83	59.72	1.92	3.3	5.16	0.12	3.27
1.36	5.67	56.07	2.25	3.87	10.12	0.21	3.23
1.41	5.4	56.08	2.45	4.21	8.76	0.23	3.59
1.4	5.3	51.67	2.03	3.49	8.67	0.2	3.57
1.43	5.26	64.97	1.75	3.01	6.38	0.09	3.19
1.41	5.52	61.35	2.01	3.45	6.44	0.07	3.23
1.39	5.19	59.86	2.15	3.69	7.26	0.13	3.39
1.38	5.29	57.1	2.06	3.54	9.81	0.14	3.24
1.42	5.45	62.39	2.12	3.64	7.14	0.11	3.39
1.39	5.09	57.55	1.77	3.04	5.31	0.08	3.72
1.41	5.39	61.92	2.01	3.45	6.49	0.12	3.29
1.44	5.25	58.05	1.52	2.61	6.43	0.09	3.21
1.43	6.08	62.37	1.73	2.97	7.16	0.11	3.17
1.39	5.83	51.27	2.24	3.85	10.27	0.21	3.21
1.41	5.35	43.25	1.95	3.35	7.26	0.12	3.6
1.39	5.69	53.62	2.02	3.47	7.81	0.13	3.73
1.35	5.94	51.02	1.73	2.97	7.66	0.16	3.22

1.43	5.45	56.32	1.85	3.18	5.49	0.09	0	3.34
1.41	5.37	59.59	1.79	3.07	6.18	0.08	0	3.31
1.41	5.97	63.72	1.23	2.11	11.03	0.14	0	3.55
1.44	5.78	47.69	1.16	1.99	5.95	0.11	0	3.56
1.41	5.81	55.65	1.53	2.63	6.43	0.17	0	3.12
1.37	5.76	56.5	1.61	2.76	6.14	0.11	0.01	3.29
1.43	5.84	47.52	1.76	3.02	5.03	0.19	0	3.57
1.39	6.08	61.47	2.62	4.5	9.89	0.25	0	3.31
1.45	5.89	61.8	2.35	4.04	10.15	0.22	0	3.26
1.44	5.47	43.52	1.38	2.37	5.29	0.11	0	3.24
1.47	5.51	54.2	1.68	2.88	6.11	0.13	0	3.59
1.43	5.76	67.82	1.87	3.21	6.25	0.11	0	3.72
1.4	5.92	54.57	2.51	4.31	8.91	0.24	0.02	3.69
1.43	6.04	59.34	1.25	2.15	6.72	0.13	0	3.12
1.46	5.55	49.21	1.62	2.78	4.85	0.09	0	3.59
1.24	5.74	55.89	1.59	2.73	5.26	0.11	0	3.72
1.31	5.69	63.65	1.75	3.01	7.13	0.09	0	3.59
1.36	5.56	58	1.92	3.3	8.52	0.11	0	3.52
1.46	5.19	66.27	1.48	2.54	11.65	0.08	0	3.42
1.48	5.82	56.89	2.63	4.52	9.12	0.19	0	3.86
1.38	5.57	52.3	2.58	4.43	13.05	0.21	0.03	3.97
1.37	5.44	59.45	2.01	3.45	6.17	0.17	0	3.59
1.4	5.3	51.67	2.03	3.49	8.67	0.2	0.01	3.57
1.43	5.26	64.97	1.75	3.01	6.38	0.09	0	3.19
1.41	5.52	61.35	2.01	3.45	6.44	0.07	0.03	3.23
1.39	5.19	59.86	2.15	3.69	7.26	0.13	0.01	3.39
1.38	5.29	57.1	2.06	3.54	9.81	0.14	0	3.24
1.42	5.45	62.39	2.12	3.64	7.14	0.11	0	3.39
1.39	5.09	57.55	1.77	3.04	5.31	0.08	0	3.72
1.41	5.39	61.92	2.01	3.45	6.49	0.12	0.01	3.29
1.44	5.25	58.05	1.52	2.61	6.43	0.09	0	3.21
1.43	6.08	62.37	1.73	2.97	7.16	0.11	0	3.17
1.39	5.83	51.27	2.24	3.85	10.27	0.21	0	3.21
1.41	5.35	43.25	1.95	3.35	7.26	0.12	0	3.6
1.39	5.69	53.62	2.02	3.47	7.81	0.13	0	3.73
1.35	5.94	51.02	1.73	2.97	7.66	0.16	0	3.22
1.43	5.45	56.32	1.85	3.18	5.49	0.09	0	3.34
1.47	5.45	64.52	1.08	1.85	5.77	0.09	0	3.56
1.38	5.66	55.52	1.16	1.99	6.15	0.13	0	3.52
1.37	5.84	58.9	1.68	2.88	5.06	0.11	0.02	3.11
1.49	5.6	59.6	1.08	1.85	6.81	0.08	0	3.43
1.33	5.91	63.14	2.31	3.97	12.3	0.12	0	3.53
1.44	5.77	58.94	1.33	2.28	7.11	0.09	0.02	3.28
1.36	5.93	54.95	1.89	3.25	8.46	0.2	0.01	3.04
1.41	5.97	63.72	1.23	2.11	11.03	0.14	0	3.55
1.44	5.78	47.69	1.16	1.99	5.95	0.11	0	3.56
1.41	5.81	55.65	1.53	2.63	6.43	0.17	0	3.12

1.37	5.76	56.5	1.61	2.76	6.14	0.11	0.01	3.29
1.43	5.84	47.52	1.76	3.02	5.03	0.19	0	3.57
1.39	6.08	61.47	2.62	4.5	9.89	0.25	0	3.31
1.45	5.89	61.8	2.35	4.04	10.15	0.22	0	3.26
1.44	5.47	43.52	1.38	2.37	5.29	0.11	0	3.24
1.47	5.51	54.2	1.68	2.88	6.11	0.13	0	3.59
1.43	5.76	67.82	1.87	3.21	6.25	0.11	0	3.72
1.4	5.92	54.57	2.51	4.31	8.91	0.24	0.02	3.69
1.43	6.04	59.34	1.25	2.15	6.72	0.13	0	3.12
1.46	5.55	49.21	1.62	2.78	4.85	0.09	0	3.59
1.24	5.74	55.89	1.59	2.73	5.26	0.11	0	3.72
1.31	5.69	63.65	1.75	3.01	7.13	0.09	0	3.59
1.36	5.56	58	1.92	3.3	8.52	0.11	0	3.52
1.46	5.19	66.27	1.48	2.54	11.65	0.08	0	3.42
1.48	5.82	56.89	2.63	4.52	9.12	0.19	0	3.86
1.38	5.57	52.3	2.58	4.43	13.05	0.21	0.03	3.97
1.37	5.44	59.45	2.01	3.45	6.17	0.17	0	3.59
1.45	6.4	53.75	1.78	3.06	7.9	0.11	0	3.71
1.41	5.83	59.72	1.92	3.3	5.16	0.12	0.01	3.27
1.36	5.67	56.07	2.25	3.87	10.12	0.21	0	3.23
1.41	5.4	56.08	2.45	4.21	8.76	0.23	0	3.59
1.4	5.3	51.67	2.03	3.49	8.67	0.2	0.01	3.57
1.43	5.26	64.97	1.75	3.01	6.38	0.09	0	3.19
1.41	5.52	61.35	2.01	3.45	6.44	0.07	0.03	3.23
1.39	5.19	59.86	2.15	3.69	7.26	0.13	0.01	3.39
1.38	5.29	57.1	2.06	3.54	9.81	0.14	0	3.24
1.42	5.45	62.39	2.12	3.64	7.14	0.11	0	3.39
1.39	5.09	57.55	1.77	3.04	5.31	0.08	0	3.72
1.41	5.39	61.92	2.01	3.45	6.49	0.12	0.01	3.29
1.44	5.25	58.05	1.52	2.61	6.43	0.09	0	3.21
1.43	6.08	62.37	1.73	2.97	7.16	0.11	0	3.17
1.39	5.83	51.27	2.24	3.85	10.27	0.21	0	3.21
1.41	5.35	43.25	1.95	3.35	7.26	0.12	0	3.6
1.39	5.69	53.62	2.02	3.47	7.81	13	0	3.73
1.35	5.94	51.02	1.73	2.97	7.66	0.16	0	3.22
1.43	5.45	56.32	1.85	3.18	5.49	0.09	0	3.34
1.41	5.37	59.59	1.79	3.07	6.18	0.08	0	3.31
1.41	5.97	63.72	1.23	2.11	11.03	0.14	0	3.55
1.44	5.78	47.69	1.16	1.99	5.95	0.11	0	3.56
1.41	5.81	55.65	1.53	2.63	6.43	0.17	0	3.12
1.37	5.76	56.5	1.61	2.76	6.14	0.11	0.01	3.29
1.43	5.84	47.52	1.76	3.02	5.03	0.19	0	3.57
1.39	6.08	61.47	2.62	4.5	9.89	0.25	0	3.31
1.45	5.89	61.8	2.35	4.04	10.15	0.22	0	3.26
1.44	5.47	43.52	1.38	2.37	5.29	0.11	0	3.24
1.47	5.51	54.2	1.68	2.88	6.11	0.13	0	3.59
1.43	5.76	67.82	1.87	3.21	6.25	0.11	0	3.72

1.4	5.92	54.57	2.51	4.31	8.91	0.24	0.02	3.69
1.43	6.04	59.34	1.25	2.15	6.72	0.13	0	3.12
1.46	5.55	49.21	1.62	2.78	4.85	0.09	0	3.59
1.24	5.74	55.89	1.59	2.73	5.26	0.11	0	3.72
1.31	5.69	63.65	1.75	3.01	7.13	0.09	0	3.59
1.36	5.56	58	1.92	3.3	8.52	0.11	0	3.52
1.46	5.19	66.27	1.48	2.54	11.65	0.08	0	3.42
1.48	5.82	56.89	2.63	4.52	9.12	0.19	0	3.86
1.38	5.57	52.3	2.58	4.43	13.05	0.21	0.03	3.97
1.37	5.44	59.45	2.01	3.45	6.17	0.17	0	3.59
1.4	5.3	51.67	2.03	3.49	8.67	0.2	0.01	3.57
1.43	5.26	64.97	1.75	3.01	6.38	0.09	0	3.19
1.41	5.52	61.35	2.01	3.45	6.44	0.07	0.03	3.23
1.39	5.19	59.86	2.15	3.69	7.26	0.13	0.01	3.39
1.38	5.29	57.1	2.06	3.54	9.81	0.14	0	3.24
1.42	5.45	62.39	2.12	3.64	7.14	0.11	0	3.39
1.39	5.09	57.55	1.77	3.04	5.31	0.08	0	3.72
1.41	5.39	61.92	2.01	3.45	6.49	0.12	0.01	3.29
1.44	5.25	58.05	1.52	2.61	6.43	0.09	0	3.21
1.43	6.08	62.37	1.73	2.97	7.16	0.11	0	3.17
1.44	5.25	58.05	1.52	2.61	6.43	0.09	0	3.21
1.43	6.08	62.37	1.73	2.97	7.16	0.11	0	3.17
1.39	5.83	51.27	2.24	3.85	10.27	0.21	0	3.21
1.41	5.35	43.25	1.95	3.35	7.26	0.12	0	3.6
1.39	5.69	53.62	2.02	3.47	7.81	13	0	3.73
1.35	5.94	51.02	1.73	2.97	7.66	0.16	0	3.22
1.43	5.45	56.32	1.85	3.18	5.49	0.09	0	3.34
1.47	5.45	64.52	1.08	1.85	5.77	0.09	0	3.56
1.38	5.66	55.52	1.16	1.99	6.15	0.13	0	3.52
1.37	5.84	58.9	1.68	2.88	5.06	0.11	0.02	3.11
1.49	5.6	59.6	1.08	1.85	6.81	0.08	0	3.43
1.33	5.91	63.14	2.31	3.97	12.3	0.12	0	3.53
1.44	5.77	58.94	1.33	2.28	7.11	0.09	0.02	3.28
1.36	5.93	54.95	1.89	3.25	8.46	0.2	0.01	3.04
1.41	5.97	63.72	1.23	2.11	11.03	0.14	0	3.55
1.44	5.78	47.69	1.16	1.99	5.95	0.11	0	3.56
1.41	5.81	55.65	1.53	2.63	6.43	0.17	0	3.12
1.37	5.76	56.5	1.61	2.76	6.14	0.11	0.01	3.29
1.43	5.84	47.52	1.76	3.02	5.03	0.19	0	3.57
1.39	6.08	61.47	2.62	4.5	9.89	0.25	0	3.31
1.45	5.89	61.8	2.35	4.04	10.15	0.22	0	3.26
1.44	5.47	43.52	1.38	2.37	5.29	0.11	0	3.24
1.47	5.51	54.2	1.68	2.88	6.11	0.13	0	3.59
1.43	5.76	67.82	1.87	3.21	6.25	0.11	0	3.72
1.4	5.92	54.57	2.51	4.31	8.91	0.24	0.02	3.69
1.43	6.04	59.34	1.25	2.15	6.72	0.13	0	3.12
1.46	5.55	49.21	1.62	2.78	4.85	0.09	0	3.59

1.24	5.74	55.89	1.59	2.73	5.26	0.11	0	3.72
1.31	5.69	63.65	1.75	3.01	7.13	0.09	0	3.59
1.36	5.56	58	1.92	3.3	8.52	0.11	0	3.52
1.46	5.19	66.27	1.48	2.54	11.65	0.08	0	3.42
1.48	5.82	56.89	2.63	4.52	9.12	0.19	0	3.86

Mg(cmol(+ k(cmol/kg) Al3+(cmol(H+ (cmol(+ CEC(cmol(+ Fe(cmol/kg Amount of Total N ap Quantity of								
0.97	0.22	0.08	0.83	5.99	0.27	0	0	7333.42
0.89	0.17	0.08	0.72	5.42	0.24	0	0	1750
0.86	0.16	0.08	0.72	5.34	0.31	0	0	2166.41
0.85	0.12	0.08	0.72	4.88	0.21	6.67	29.03	1532.58
1.01	0.1	0.08	0.72	5.34	0.25	4.14	9	150
0.89	0.19	0.08	0.72	5.41	0.25	0	0	6363.55
0.85	0.11	0.08	0.72	5.04	0.9	4.11	10.8	1200
0.86	0.23	0.08	0.72	4.93	0.24	5.09	6.85	4321.69
0.98	0.19	0.08	0.72	5.52	0.27	8.28	28.8	2096
0.95	0.16	0.08	0.72	5.47	0.31	0	0	0
0.81	0.13	0.08	0.72	4.86	0.26	4.06	8.57	1851.76
0.79	0.12	0.08	0.72	5	0.28	4.96	10.8	1200
0.83	0.11	0.08	0.72	5.31	0.26	5.9	7.03	833.53
0.8	0.23	0.08	0.72	5.14	0.31	7.55	9.15	6666.22
0.85	0.21	0.08	0.72	5.12	0.29	4.14	18	3766
0.86	0.14	0.08	0.72	5.04	0.27	0	0	0
1.12	0.11	0.08	0.72	5.62	0.31	0	0	0
0.89	0.13	0.08	0.72	5.54	0.32	0	0	0
0.92	0.21	0.08	0.72	5.62	0.29	0	0	4000
0.79	0.23	0.08	0.72	4.94	0.25	8.8	32.55	659.57
0.86	0.14	0.08	0.72	5.39	0.33	0	0	0
0.82	0.16	0.08	0.72	5.5	0.28	4.14	13.5	1530
0.85	0.12	0.08	0.72	5.36	0.32	4.3	15	479.16
0.88	0.11	0.08	0.72	5.31	0.29	4.96	16.2	700
0.81	0.13	0.08	0.72	5.16	0.32	10.3	31.5	0
0.94	0.2	0.08	1.12	6.2	0.27	16.56	25	7000
0.91	0.23	0.08	0.72	5.91	0.31	9.38	20.4	6666.24
0.83	0.19	0.08	0.72	5.41	0.28	16.56	31.02	2500
1.12	0.14	0.08	0.72	5.77	0.25	8.28	36	0
1.04	0.11	0.08	0.72	5.22	0.31	8.28	36	800
0.85	0.21	0.08	1.12	5.49	0.28	0	0	5000
0.98	0.22	0.08	0.72	5.59	0.33	6.36	13.84	4615.38
0.91	0.17	0.08	1.12	5.85	0.29	2.76	18	2666.52
0.79	0.14	0.08	0.72	4.92	0.27	8.83	19.2	333.42
0.94	0.13	0.08	0.72	5.1	0.31	38.3	45.31	0
0.78	0.12	0.08	0.72	5.09	0.32	11.5	50	0
0.8	0.11	0.08	0.72	4.95	0.28	10.8	39.13	869.56
0.86	0.13	0.08	0.72	5.18	0.29	13.68	49.45	0
0.91	0.14	0.08	1.04	5.89	0.31	0	0	1000
0.79	0.11	0.08	1.12	5.39	0.24	0	0	1200
0.89	0.13	0.08	1.05	5.36	0.29	5.11	8.24	0
0.8	0.13	0.08	0.72	4.9	0.25	4.14	18	0
0.78	0.2	0.08	0.72	4.99	0.31	5.01	10.9	4545.16
0.79	0.18	0.08	1.02	5.67	0.24	0	0	0
0.8	0.16	0.08	1.12	5.89	0.24	0	0	2000
0.85	0.21	0.08	1.12	5.48	0.33	0	0	2000

0.82	0.17	0.08	0.72	5.13	0.29	12.42	45	0
0.8	0.19	0.08	0.72	5.1	0.31	5.52	24	0
0.98	0.19	0.08	0.72	5.52	0.27	8.28	28.8	2096
0.95	0.16	0.08	0.72	5.47	0.31	0	0	0
0.81	0.13	0.08	0.72	4.86	0.26	4.06	8.57	1851.76
0.79	0.12	0.08	0.72	5	0.28	4.96	10.8	1200
0.83	0.11	0.08	0.72	5.31	0.26	5.9	7.03	833.53
0.8	0.23	0.08	0.72	5.14	0.31	7.55	9.15	6666.22
0.85	0.21	0.08	0.72	5.12	0.29	4.14	18	3766
0.86	0.14	0.08	0.72	5.04	0.27	0	0	0
1.12	0.11	0.08	0.72	5.62	0.31	0	0	0
0.89	0.13	0.08	0.72	5.54	0.32	0	0	0
0.92	0.21	0.08	0.72	5.62	0.29	0	0	4000
0.79	0.23	0.08	0.72	4.94	0.25	8.8	32.55	659.57
0.86	0.14	0.08	0.72	5.39	0.33	0	0	0
0.82	0.16	0.08	0.72	5.5	0.28	4.14	13.5	1530
0.85	0.12	0.08	0.72	5.36	0.32	4.3	15	479.16
0.88	0.11	0.08	0.72	5.31	0.29	4.96	16.2	700
0.81	0.13	0.08	0.72	5.16	0.32	10.3	31.5	0
0.94	0.2	0.08	1.12	6.2	0.27	16.56	25	7000
0.91	0.23	0.08	0.72	5.91	0.31	9.38	20.4	6666.24
0.83	0.19	0.08	0.72	5.41	0.28	16.56	31.02	2500
0.91	0.17	0.08	1.12	5.85	0.29	2.76	18	2666.52
0.79	0.14	0.08	0.72	4.92	0.27	8.83	19.2	333.42
0.94	0.13	0.08	0.72	5.1	0.31	38.3	45.31	0
0.78	0.12	0.08	0.72	5.09	0.32	11.5	50	0
0.8	0.11	0.08	0.72	4.95	0.28	10.8	39.13	869.56
0.86	0.13	0.08	0.72	5.18	0.29	13.68	49.45	0
0.91	0.14	0.08	1.04	5.89	0.31	0	0	1000
0.79	0.11	0.08	1.12	5.39	0.24	0	0	1200
0.89	0.13	0.08	1.05	5.36	0.29	5.11	8.24	0
0.8	0.13	0.08	0.72	4.9	0.25	4.14	18	0
0.78	0.2	0.08	0.72	4.99	0.31	5.01	10.9	4545.16
0.79	0.18	0.08	1.02	5.67	0.24	0	0	0
0.8	0.16	0.08	1.12	5.89	0.24	0	0	2000
0.85	0.21	0.08	1.12	5.48	0.33	0	0	2000
0.82	0.17	0.08	0.72	5.13	0.29	12.42	45	0
0.89	0.17	0.08	0.72	5.42	0.24	0	0	1750
0.86	0.16	0.08	0.72	5.34	0.31	0	0	2166.41
0.85	0.12	0.08	0.72	4.88	0.21	6.67	29.03	1532.58
1.01	0.1	0.08	0.72	5.34	0.25	4.14	9	150
0.89	0.19	0.08	0.72	5.41	0.25	0	0	6363.55
0.85	0.11	0.08	0.72	5.04	0.9	4.11	10.8	1200
0.86	0.23	0.08	0.72	4.93	0.24	5.09	6.85	4321.69
0.98	0.19	0.08	0.72	5.52	0.27	8.28	28.8	2096
0.95	0.16	0.08	0.72	5.47	0.31	0	0	0
0.81	0.13	0.08	0.72	4.86	0.26	4.06	8.57	1851.76

0.79	0.12	0.08	0.72	5	0.28	4.96	10.8	1200
0.83	0.11	0.08	0.72	5.31	0.26	5.9	7.03	833.53
0.8	0.23	0.08	0.72	5.14	0.31	7.55	9.15	6666.22
0.85	0.21	0.08	0.72	5.12	0.29	4.14	18	3766
0.86	0.14	0.08	0.72	5.04	0.27	0	0	0
1.12	0.11	0.08	0.72	5.62	0.31	0	0	0
0.89	0.13	0.08	0.72	5.54	0.32	0	0	0
0.92	0.21	0.08	0.72	5.62	0.29	0	0	4000
0.79	0.23	0.08	0.72	4.94	0.25	8.8	32.55	659.57
0.86	0.14	0.08	0.72	5.39	0.33	0	0	0
0.82	0.16	0.08	0.72	5.5	0.28	4.14	13.5	1530
0.85	0.12	0.08	0.72	5.36	0.32	4.3	15	479.16
0.88	0.11	0.08	0.72	5.31	0.29	4.96	16.2	700
0.81	0.13	0.08	0.72	5.16	0.32	10.3	31.5	0
0.94	0.2	0.08	1.12	6.2	0.27	16.56	25	7000
0.91	0.23	0.08	0.72	5.91	0.31	9.38	20.4	6666.24
0.83	0.19	0.08	0.72	5.41	0.28	16.56	31.02	2500
1.12	0.14	0.08	0.72	5.77	0.25	8.28	36	0
1.04	0.11	0.08	0.72	5.22	0.31	8.28	36	800
0.85	0.21	0.08	1.12	5.49	0.28	0	0	5000
0.98	0.22	0.08	0.72	5.59	0.33	6.36	13.84	4615.38
0.91	0.17	0.08	1.12	5.85	0.29	2.76	18	2666.52
0.79	0.14	0.08	0.72	4.92	0.27	8.83	19.2	333.42
0.94	0.13	0.08	0.72	5.1	0.31	38.3	45.31	0
0.78	0.12	0.08	0.72	5.09	0.32	11.5	50	0
0.8	0.11	0.08	0.72	4.95	0.28	10.8	39.13	869.56
0.86	0.13	0.08	0.72	5.18	0.29	13.68	49.45	0
0.91	0.14	0.08	1.04	5.89	0.31	0	0	1000
0.79	0.11	0.08	1.12	5.39	0.24	0	0	1200
0.89	0.13	0.08	1.05	5.36	0.29	5.11	8.24	0
0.8	0.13	0.08	0.72	4.9	0.25	4.14	18	0
0.78	0.2	0.08	0.72	4.99	0.31	5.01	10.9	4545.16
0.79	0.18	0.08	1.02	5.67	0.24	0	0	0
0.8	0.16	0.08	1.12	5.89	0.24	0	0	2000
0.85	0.21	0.08	1.12	5.48	0.33	0	0	2000
0.82	0.17	0.08	0.72	5.13	0.29	12.42	45	0
0.8	0.19	0.08	0.72	5.1	0.31	5.52	24	0
0.98	0.19	0.08	0.72	5.52	0.27	8.28	28.8	2096
0.95	0.16	0.08	0.72	5.47	0.31	0	0	0
0.81	0.13	0.08	0.72	4.86	0.26	4.06	8.57	1851.76
0.79	0.12	0.08	0.72	5	0.28	4.96	10.8	1200
0.83	0.11	0.08	0.72	5.31	0.26	5.9	7.03	833.53
0.8	0.23	0.08	0.72	5.14	0.31	7.55	9.15	6666.22
0.85	0.21	0.08	0.72	5.12	0.29	4.14	18	3766
0.86	0.14	0.08	0.72	5.04	0.27	0	0	0
1.12	0.11	0.08	0.72	5.62	0.31	0	0	0
0.89	0.13	0.08	0.72	5.54	0.32	0	0	0

0.92	0.21	0.08	0.72	5.62	0.29	0	0	4000
0.79	0.23	0.08	0.72	4.94	0.25	8.8	32.55	659.57
0.86	0.14	0.08	0.72	5.39	0.33	0	0	0
0.82	0.16	0.08	0.72	5.5	0.28	4.14	13.5	1530
0.85	0.12	0.08	0.72	5.36	0.32	4.3	15	479.16
0.88	0.11	0.08	0.72	5.31	0.29	4.96	16.2	700
0.81	0.13	0.08	0.72	5.16	0.32	10.3	31.5	0
0.94	0.2	0.08	1.12	6.2	0.27	16.56	25	7000
0.91	0.23	0.08	0.72	5.91	0.31	9.38	20.4	6666.24
0.83	0.19	0.08	0.72	5.41	0.28	16.56	31.02	2500
0.91	0.17	0.08	1.12	5.85	0.29	2.76	18	2666.52
0.79	0.14	0.08	0.72	4.92	0.27	8.83	19.2	333.42
0.94	0.13	0.08	0.72	5.1	0.31	38.3	45.31	0
0.78	0.12	0.08	0.72	5.09	0.32	11.5	50	0
0.8	0.11	0.08	0.72	4.95	0.28	10.8	39.13	869.56
0.86	0.13	0.08	0.72	5.18	0.29	13.68	49.45	0
0.91	0.14	0.08	1.04	5.89	0.31	0	0	1000
0.79	0.11	0.08	1.12	5.39	0.24	0	0	1200
0.89	0.13	0.08	1.05	5.36	0.29	5.11	8.24	0
0.8	0.13	0.08	0.72	4.9	0.25	4.14	18	0
0.89	0.13	0.08	1.05	5.36	0.29	5.11	8.24	0
0.8	0.13	0.08	0.72	4.9	0.25	4.14	18	0
0.78	0.2	0.08	0.72	4.99	0.31	5.01	10.9	4545.16
0.79	0.18	0.08	1.02	5.67	0.24	0	0	0
0.8	0.16	0.08	1.12	5.89	0.24	0	0	2000
0.85	0.21	0.08	1.12	5.48	0.33	0	0	2000
0.82	0.17	0.08	0.72	5.13	0.29	12.42	45	0
0.89	0.17	0.08	0.72	5.42	0.24	0	0	1750
0.86	0.16	0.08	0.72	5.34	0.31	0	0	2166.41
0.85	0.12	0.08	0.72	4.88	0.21	6.67	29.03	1532.58
1.01	0.1	0.08	0.72	5.34	0.25	4.14	9	150
0.89	0.19	0.08	0.72	5.41	0.25	0	0	6363.55
0.85	0.11	0.08	0.72	5.04	0.9	4.11	10.8	1200
0.86	0.23	0.08	0.72	4.93	0.24	5.09	6.85	4321.69
0.98	0.19	0.08	0.72	5.52	0.27	8.28	28.8	2096
0.95	0.16	0.08	0.72	5.47	0.31	0	0	0
0.81	0.13	0.08	0.72	4.86	0.26	4.06	8.57	1851.76
0.79	0.12	0.08	0.72	5	0.28	4.96	10.8	1200
0.83	0.11	0.08	0.72	5.31	0.26	5.9	7.03	833.53
0.8	0.23	0.08	0.72	5.14	0.31	7.55	9.15	6666.22
0.85	0.21	0.08	0.72	5.12	0.29	4.14	18	3766
0.86	0.14	0.08	0.72	5.04	0.27	0	0	0
1.12	0.11	0.08	0.72	5.62	0.31	0	0	0
0.89	0.13	0.08	0.72	5.54	0.32	0	0	0
0.92	0.21	0.08	0.72	5.62	0.29	0	0	4000
0.79	0.23	0.08	0.72	4.94	0.25	8.8	32.55	659.57
0.86	0.14	0.08	0.72	5.39	0.33	0	0	0

0.82	0.16	0.08	0.72	5.5	0.28	4.14	13.5	1530
0.85	0.12	0.08	0.72	5.36	0.32	4.3	15	479.16
0.88	0.11	0.08	0.72	5.31	0.29	4.96	16.2	700
0.81	0.13	0.08	0.72	5.16	0.32	10.3	31.5	0
0.94	0.2	0.08	1.12	6.2	0.27	16.56	25	7000

























Serial num	Districts	Sectors	metadata/	farmer age	metadata/	metadata/	duration_c	area_soy	ir	Does the
1	2	4	1	34	1	1.5	5	0.03	no	
2	2	4	1	71	1	1.14	6	0.8	yes	
3	2	4	1	41	1	1.2	1	0.18	yes	
4	2	4	2	57	1	1	4	0.07	no	
5	2	4	2	42	2	0.3	4	0.06	yes	
6	2	4	2	63	1	0.06	6	0.04	no	
7	2	4	2	78	1	1	6	0.07	no	
8	2	4	1	68	1	0.5	6	0.12	yes	
9	2	4	2	57	1	1.2	5	0.02	no	
10	2	4	2	65	0	0.3	5	0.02	no	
11	2	4	1	52	1	0.8	6	0.06	yes	
12	2	4	1	64	0	1	4	0.21	no	
13	2	4	2	26	2	1.5	3	0.02	no	
14	2	4	2	63	1	2	6	0.04	yes	
15	2	4	2	44	1	4	3	0.08	yes	
16	2	4	2	71	1	1	6	0.6	yes	
17	2	4	2	61	1	1.4	4	0.03	yes	
18	2	4	2	37	1	0.5	6	0.02	no	
19	2	4	2	53	1	0.7	6	0.03	no	
20	2	4	2	45	1	0.9	4	0.01	no	
21	2	4	2	50	4	0.2	2	0.05	no	
22	2	4	1	53	1	0.15	3	0.01	yes	
23	2	4	2	53	1	0.7	6	0.03	no	
24	2	4	1	59	1	0.5	6	0.05	yes	
25	2	4	2	67	3	0.8	5	0.08	yes	
26	2	4	1	58	2	1	6	0.03	yes	
27	2	5	1	27	1	0.6	3	0.03	yes	
28	2	5	2	52	1	0.7	6	0.04	no	
29	2	5	1	60	0	0.8	6	0.07	no	
30	2	5	1	36	2	0.5	3	0.02	yes	
31	2	5	1	62	1	0.3	6	0.02	no	
32	2	5	2	65	1	0.4	6	0.02	no	
33	2	5	2	55	2	0.8	6	0.05	no	
34	2	6	2	48	1	0.5	6	0.1	yes	
35	2	6	1	67	1	0.04	6	0.01	yes	
36	2	6	1	80	1	1.5	6	0.01	yes	
37	2	6	2	62	4	0.8	4	0.03	no	
38	2	6	2	64	1	1.03	6	0.03	no	
39	2	6	1	64	1	1	6	0.08	no	
40	2	6	1	66	1	1	6	0.06	no	
41	2	6	2	29	1	0.72	4	0.03	no	
42	2	4	2	73	0	1	6	0.08	yes	
43	2	4	2	50	1	1.7	4	0.08	no	
44	2	4	1	42	1	0.12	3	0.01	yes	
45	2	4	1	60	1	1.5	5	0.08	no	
46	2	4	1	53	1	0.8	6	0.02	yes	

47	2	4	1	32	3	0.2	2	0.01 no
48	2	4	1	74	1	0.4	5	0.07 no
49	2	5	2	62	1	0.3	6	0.02 no
50	2	5	2	65	1	0.4	6	0.02 no
51	2	5	2	55	2	0.8	6	0.05 no
52	2	6	2	48	1	0.5	6	0.1 yes
53	2	6	1	67	1	0.04	6	0.01 yes
54	2	6	1	80	1	1.5	6	0.01 yes
55	2	6	2	62	4	0.8	4	0.03 no
56	2	6	1	64	1	1.03	6	0.03 no
57	2	6	1	64	1	1	6	0.08 no
58	2	6	1	66	1	1	6	0.06 no
59	2	6	2	29	1	0.72	4	0.03 no
60	2	4	2	73	0	1	6	0.08 yes
61	2	4	2	50	1	1.7	4	0.08 no
62	2	4	1	42	1	0.12	3	0.01 yes
63	2	4	1	60	1	1.5	5	0.08 no
64	2	4	1	53	1	0.8	6	0.02 yes
65	2	4	1	32	3	0.2	2	0.01 no
66	2	4	1	74	1	0.4	5	0.07 no
67	2	6	1	64	1	1.03	6	0.03 no
68	2	6	1	64	1	1	6	0.08 no
69	2	6	1	66	1	1	6	0.06 no
70	2	6	2	29	1	0.72	4	0.03 no
71	2	4	2	73	0	1	6	0.08 yes
72	2	4	2	50	1	1.7	4	0.08 no
73	2	4	1	42	1	0.12	3	0.01 yes
74	2	4	1	60	1	1.5	5	0.08 no
75	2	4	1	53	1	0.8	6	0.02 yes
76	2	4	1	32	3	0.2	2	0.01 no
77	2	4	1	74	1	0.4	5	0.07 no
78	2	5	1	62	1	0.3	6	0.02 no
79	2	5	2	65	1	0.4	6	0.02 no
80	2	5	2	55	2	0.8	6	0.05 no
81	2	6	2	48	1	0.5	6	0.1 yes
82	2	6	1	67	1	0.04	6	0.01 yes
83	2	6	1	80	1	1.5	6	0.01 yes
84	2	6	2	62	4	0.8	4	0.03 no
85	2	6	2	64	1	1.03	6	0.03 no
86	2	6	2	64	1	1	6	0.08 no
87	2	6	1	66	1	1	6	0.06 no
88	2	4	2	64	0	1	4	0.21 no
89	2	4	2	26	2	1.5	3	0.02 no
90	2	4	1	63	1	2	6	0.04 yes
91	2	4	2	44	1	4	3	0.08 yes
92	2	4	2	71	1	1	6	0.6 yes
93	2	4	1	61	1	1.4	4	0.03 yes

94	2	4	2	37	1	0.5	6	0.02 no
95	2	4	2	53	1	0.7	6	0.03 no
96	2	4	2	45	1	0.9	4	0.01 no
97	2	4	2	50	4	0.2	2	0.05 no
98	2	4	1	53	1	0.15	3	0.01 yes
99	2	4	2	53	1	0.7	6	0.03 no
100	2	4	1	59	1	0.5	6	0.05 yes
101	2	4	2	67	3	0.8	5	0.08 yes
102	2	4	1	58	2	1	6	0.03 yes
103	2	5	1	27	1	0.6	3	0.03 yes
104	2	5	2	52	1	0.7	6	0.04 no
105	2	5	1	60	0	0.8	6	0.07 no
106	2	5	1	36	2	0.5	3	0.02 yes
107	2	5	2	62	1	0.3	6	0.02 no
108	2	5	2	65	1	0.4	6	0.02 no
109	2	5	2	55	2	0.8	6	0.05 no
110	2	6	2	48	1	0.5	6	0.1 yes
111	2	6	1	67	1	0.04	6	0.01 yes
112	2	6	1	80	1	1.5	6	0.01 yes
113	2	6	2	62	4	0.8	4	0.03 no
114	2	6	1	64	1	1.03	6	0.03 no
115	2	6	1	64	1	1	6	0.08 no
116	2	6	1	66	1	1	6	0.06 no
117	2	6	2	29	1	0.72	4	0.03 no
118	2	4	2	73	0	1	6	0.08 yes
119	2	4	2	50	1	1.7	4	0.08 no
120	2	4	1	42	1	0.12	3	0.01 yes
121	2	4	1	60	1	1.5	5	0.08 no
122	2	4	1	53	1	0.8	6	0.02 yes
123	2	4	1	32	3	0.2	2	0.01 no
124	2	4	1	74	1	0.4	5	0.07 no
125	2	5	2	62	1	0.3	6	0.02 no
126	2	5	2	65	1	0.4	6	0.02 no
127	2	5	2	55	2	0.8	6	0.05 no
128	2	6	2	48	1	0.5	6	0.1 yes
129	2	6	1	67	1	0.04	6	0.01 yes
130	2	6	1	80	1	1.5	6	0.01 yes
131	2	6	2	62	4	0.8	4	0.03 no
132	2	6	1	64	1	1.03	6	0.03 no
133	2	6	1	64	1	1	6	0.08 no
134	2	6	1	66	1	1	6	0.06 no
135	2	6	2	29	1	0.72	4	0.03 no
136	2	4	2	73	0	1	6	0.08 yes
137	2	4	2	50	1	1.7	4	0.08 no
138	2	4	1	42	1	0.12	3	0.01 yes
139	2	4	1	60	1	1.5	5	0.08 no
140	2	4	1	53	1	0.8	6	0.02 yes

141	2	4	1	32	3	0.2	2	0.01 no
142	2	4	1	74	1	0.4	5	0.07 no
143	2	6	1	64	1	1.03	6	0.03 no
144	2	6	1	64	1	1	6	0.08 no
145	2	6	1	66	1	1	6	0.06 no
146	2	6	2	29	1	0.72	4	0.03 no
147	2	4	2	73	0	1	6	0.08 yes
148	2	4	2	50	1	1.7	4	0.08 no
149	2	4	1	42	1	0.12	3	0.01 yes
150	2	4	1	60	1	1.5	5	0.08 no
151	2	4	1	53	1	0.8	6	0.02 yes
152	2	4	1	32	3	0.2	2	0.01 no
153	2	4	1	74	1	0.4	5	0.07 no
154	2	5	1	62	1	0.3	6	0.02 no
155	2	5	2	65	1	0.4	6	0.02 no
156	2	5	2	55	2	0.8	6	0.05 no
157	2	6	2	48	1	0.5	6	0.1 yes
158	2	6	1	67	1	0.04	6	0.01 yes
159	2	6	1	80	1	1.5	6	0.01 yes
160	2	6	2	62	4	0.8	4	0.03 no
161	2	6	1	64	1	1.03	6	0.03 no
162	2	6	1	64	1	1	6	0.08 no
163	2	6	1	66	1	1	6	0.06 no
164	2	4	1	42	1	0.12	3	0.01 yes
165	2	4	1	60	1	1.5	5	0.08 no
166	2	4	1	53	1	0.8	6	0.02 yes
167	2	4	1	32	3	0.2	2	0.01 no
168	2	4	1	74	1	0.4	5	0.07 no
169	2	5	1	62	1	0.3	6	0.02 no
170	2	5	2	65	1	0.4	6	0.02 no
171	2	5	2	55	2	0.8	6	0.05 no
172	2	6	2	48	1	0.5	6	0.1 yes
173	2	6	1	67	1	0.04	6	0.01 yes
174	2	6	2	48	1	0.5	6	0.1 yes
175	2	6	1	67	1	0.04	6	0.01 yes
176	2	6	1	80	1	1.5	6	0.01 yes
177	2	6	2	62	4	0.8	4	0.03 no
178	2	6	1	64	1	1.03	6	0.03 no
179	2	6	1	64	1	1	6	0.08 no
180	2	6	1	66	1	1	6	0.06 no
181	2	4	1	42	1	0.12	3	0.01 yes
182	2	4	1	60	1	1.5	5	0.08 no
183	2	4	1	53	1	0.8	6	0.02 yes
184	2	4	1	32	3	0.2	2	0.01 no
185	2	4	1	74	1	0.4	5	0.07 no
186	2	5	1	62	1	0.3	6	0.02 no
187	2	6	2	29	1	0.72	4	0.03 no

188	2	4	2	73	0	1	6	0.08 yes
189	2	4	2	50	1	1.7	4	0.08 no
190	2	4	1	42	1	0.12	3	0.01 yes
191	2	4	1	60	1	1.5	5	0.08 no
192	2	6	2	29	1	0.72	4	0.03 no

Available P	Does th Total N ap	Does the fæ	Quantity of F	yld_twnty_b	yld_twnty	yld_twnty	yld_twnty
0 no	0 yes	6666.66	702.35	1056.57	750.18	1096.14	
6.8 yes	10.7 no	0	260.91	790.24	280.5	805.16	
10.25 yes	15 yes	2333.33	389.01	708.49	410.27	751.21	
0 no	0 no	0	280.16	680.73	310.84	720.44	
8.28 yes	18 yes	6500	720.33	1100.58	741.25	1503.52	
0 no	0 no	0	288.86	622.35	271.1	607.13	
0 no	0 no	0	246	580.36	255.37	568.96	
6.5 yes	15 no	0	386.67	650.22	301.67	710.44	
0 no	0 yes	3809.52	529.17	830.77	505.79	901.34	
0 no	0 yes	7000.85	905.21	1500.28	970.22	1580.11	
7.05 yes	6 no	0	270.58	546.32	245.6	510.37	
0 no	0 no	0	290.15	475.25	320	423.61	
0 yes	18 yes	3500	650.2	1200.77	620.79	1280.34	
6.21 yes	22.5 yes	4500	700.75	1390.17	670.61	1210.77	
9.46 yes	41.14 yes	4000	923.18	1320.76	805.14	1290.18	
6.25 yes	3 no	0	166.67	393.31	190.83	440.24	
5.52 yes	24 yes	5333.33	850.11	1456.09	800.17	1500.96	
0 no	0 no	0	180.22	401.24	197.88	422.04	
0 no	0 yes	1200	290.15	584.55	320.26	537.41	
0 no	0 yes	1466.66	313.24	670.39	290.35	690.06	
0 no	0 yes	3000	570.83	1205.97	535.22	780.67	
24.84 yes	54 no	0	210.75	495.66	243.87	450.29	
0 no	0 yes	2000	403.51	700.62	433.72	785.61	
4.96 yes	10.8 yes	2540.82	460.22	902.46	413.03	928.18	
5.5 yes	9 yes	1250	302.56	690.75	311.04	711.2	
5.52 yes	12 yes	1300	360.56	754.19	320.27	788.03	
11.04 yes	24 no	0	260.82	462.25	277.92	480.63	
0 no	0 yes	4522.19	710.45	1205.34	698.72	740.62	
0 no	0 yes	5260.85	802.41	1300.63	771.71	1240.62	
8.28 yes	18 no	0	260.35	490.12	245.69	505.74	
0 no	0 no	0	240.83	440.76	270.61	420.36	
0 no	0 yes	1200.43	228.61	460.9	255.62	420.77	
0 no	0 yes	600	202.04	590.31	250.64	511.02	
4.14 yes	9 yes	1000	380.6	799.44	450.32	823.12	
8.28 yes	36 yes	1400.38	406.99	805.82	430.66	841.75	
23 yes	50 no	0	395.23	744.55	345.38	701.04	
0 no	0 yes	5000	690.17	1402.12	553.27	1450.82	
0 no	0 yes	8571.42	915.67	1603.78	885.34	1560.17	
0 no	0 yes	5000	730.61	1450.12	779.33	1308.19	
0 no	0 yes	5000	760.83	1450.8	460.18	891.46	
0 no	0 yes	4500.79	560.5	1260.22	601.27	1050.54	
6.58 yes	9 yes	2500	387.26	785.27	322.44	804.25	
0 no	0 yes	2976.19	300.5	870.52	320.8	850.14	
8.28 yes	18 no	0	270.85	600.87	250	656.22	
0 no	0 yes	6250	715.76	1350.75	697.31	1280.11	
8.28 yes	18 yes	4500	622.04	1230.42	786.44	1301.78	

0 no	0 no	0	193.5	378.46	220.17	350.04
0 no	0 yes	2000	320.85	780.9	350.66	800.47
0 no	0 no	0	240.83	440.76	270.61	420.36
0 no	0 yes	1200.43	228.61	460.9	255.62	420.77
0 no	0 yes	600	202.04	590.31	250.64	511.02
4.14 yes	9 yes	1000	380.6	799.44	450.32	823.12
8.28 yes	36 yes	1400.38	406.99	805.82	430.66	841.75
23 yes	50 no	0	395.23	744.55	345.38	701.04
0 no	0 yes	5000	690.17	1402.12	553.27	1450.82
0 no	0 yes	8571.42	915.67	1603.78	885.34	1560.17
0 no	0 yes	5000	730.61	1450.12	779.33	1308.19
0 no	0 yes	5000	760.83	1450.8	460.18	891.46
0 no	0 yes	4500.79	560.5	1260.22	601.27	1050.54
6.58 yes	9 yes	2500	387.26	785.27	322.44	804.25
0 no	0 yes	2976.19	300.5	870.52	320.8	850.14
8.28 yes	18 no	0	270.85	600.87	250	656.22
0 no	0 yes	6250	715.76	1350.75	697.31	1280.11
8.28 yes	18 yes	4500	622.04	1230.42	786.44	1301.78
0 no	0 no	0	193.5	378.46	220.17	350.04
0 no	0 yes	2000	320.85	780.9	350.66	800.47
0 no	0 yes	8571.42	915.67	1603.78	885.34	1560.17
0 no	0 yes	5000	730.61	1450.12	779.33	1308.19
0 no	0 yes	5000	760.83	1450.8	460.18	891.46
0 no	0 yes	4500.79	560.5	1260.22	601.27	1050.54
6.58 yes	9 yes	2500	387.26	785.27	322.44	804.25
0 no	0 yes	2976.19	300.5	870.52	320.8	850.14
8.28 yes	18 no	0	270.85	600.87	250	656.22
0 no	0 yes	6250	715.76	1350.75	697.31	1280.11
8.28 yes	18 yes	4500	622.04	1230.42	786.44	1301.78
0 no	0 no	0	193.5	378.46	220.17	350.04
0 no	0 yes	2000	320.85	780.9	350.66	800.47
0 no	0 no	0	240.83	440.76	270.61	420.36
0 no	0 yes	1200.43	228.61	460.9	255.62	420.77
0 no	0 yes	600	202.04	590.31	250.64	511.02
4.14 yes	9 yes	1000	380.6	799.44	450.32	823.12
8.28 yes	36 yes	1400.38	406.99	805.82	430.66	841.75
23 yes	50 no	0	395.23	744.55	345.38	701.04
0 no	0 yes	5000	690.17	1402.12	553.27	1450.82
0 no	0 yes	8571.42	915.67	1603.78	885.34	1560.17
0 no	0 yes	5000	730.61	1450.12	779.33	1308.19
0 no	0 yes	5000	760.83	1450.8	460.18	891.46
0 no	0 no	0	290.15	475.25	320	423.61
0 yes	18 yes	3500	650.2	1200.77	620.79	1280.34
6.21 yes	22.5 yes	4500	700.75	1390.17	670.61	1210.77
9.46 yes	41.14 yes	4000	923.18	1320.76	805.14	1290.18
6.25 yes	3 no	0	166.67	393.31	190.83	440.24
5.52 yes	24 yes	5333.33	850.11	1456.09	800.17	1500.96

0 no	0 no	0	180.22	401.24	197.88	422.04
0 no	0 yes	1200	290.15	584.55	320.26	537.41
0 no	0 yes	1466.66	313.24	670.39	290.35	690.06
0 no	0 yes	3000	570.83	1205.97	535.22	780.67
24.84 yes	54 no	0	210.75	495.66	243.87	450.29
0 no	0 yes	2000	403.51	700.62	433.72	785.61
4.96 yes	10.8 yes	2540.82	460.22	902.46	413.03	928.18
5.5 yes	9 yes	1250	302.56	690.75	311.04	711.2
5.52 yes	12 yes	1300	360.56	754.19	320.27	788.03
11.04 yes	24 no	0	260.82	462.25	277.92	480.63
0 no	0 yes	4522.19	710.45	1205.34	698.72	740.62
0 no	0 yes	5260.85	802.41	1300.63	771.71	1240.62
8.28 yes	18 no	0	260.35	490.12	245.69	505.74
0 no	0 no	0	240.83	440.76	270.61	420.36
0 no	0 yes	1200.43	228.61	460.9	255.62	420.77
0 no	0 yes	600	202.04	590.31	250.64	511.02
4.14 yes	9 yes	1000	380.6	799.44	450.32	823.12
8.28 yes	36 yes	1400.38	406.99	805.82	430.66	841.75
23 yes	50 no	0	395.23	744.55	345.38	701.04
0 no	0 yes	5000	690.17	1402.12	553.27	1450.82
0 no	0 yes	8571.42	915.67	1603.78	885.34	1560.17
0 no	0 yes	5000	730.61	1450.12	779.33	1308.19
0 no	0 yes	5000	760.83	1450.8	460.18	891.46
0 no	0 yes	4500.79	560.5	1260.22	601.27	1050.54
6.58 yes	9 yes	2500	387.26	785.27	322.44	804.25
0 no	0 yes	2976.19	300.5	870.52	320.8	850.14
8.28 yes	18 no	0	270.85	600.87	250	656.22
0 no	0 yes	6250	715.76	1350.75	697.31	1280.11
8.28 yes	18 yes	4500	622.04	1230.42	786.44	1301.78
0 no	0 no	0	193.5	378.46	220.17	350.04
0 no	0 yes	2000	320.85	780.9	350.66	800.47
0 no	0 no	0	240.83	440.76	270.61	420.36
0 no	0 yes	1200.43	228.61	460.9	255.62	420.77
0 no	0 yes	600	202.04	590.31	250.64	511.02
4.14 yes	9 yes	1000	380.6	799.44	450.32	823.12
8.28 yes	36 yes	1400.38	406.99	805.82	430.66	841.75
23 yes	50 no	0	395.23	744.55	345.38	701.04
0 no	0 yes	5000	690.17	1402.12	553.27	1450.82
0 no	0 yes	8571.42	915.67	1603.78	885.34	1560.17
0 no	0 yes	5000	730.61	1450.12	779.33	1308.19
0 no	0 yes	5000	760.83	1450.8	460.18	891.46
0 no	0 yes	4500.79	560.5	1260.22	601.27	1050.54
6.58 yes	9 yes	2500	387.26	785.27	322.44	804.25
0 no	0 yes	2976.19	300.5	870.52	320.8	850.14
8.28 yes	18 no	0	270.85	600.87	250	656.22
0 no	0 yes	6250	715.76	1350.75	697.31	1280.11
8.28 yes	18 yes	4500	622.04	1230.42	786.44	1301.78

0 no	0 no	0	193.5	378.46	220.17	350.04
0 no	0 yes	2000	320.85	780.9	350.66	800.47
0 no	0 yes	8571.42	915.67	1603.78	885.34	1560.17
0 no	0 yes	5000	730.61	1450.12	779.33	1308.19
0 no	0 yes	5000	760.83	1450.8	460.18	891.46
0 no	0 yes	4500.79	560.5	1260.22	601.27	1050.54
6.58 yes	9 yes	2500	387.26	785.27	322.44	804.25
0 no	0 yes	2976.19	300.5	870.52	320.8	850.14
8.28 yes	18 no	0	270.85	600.87	250	656.22
0 no	0 yes	6250	715.76	1350.75	697.31	1280.11
8.28 yes	18 yes	4500	622.04	1230.42	786.44	1301.78
0 no	0 no	0	193.5	378.46	220.17	350.04
0 no	0 yes	2000	320.85	780.9	350.66	800.47
0 no	0 no	0	240.83	440.76	270.61	420.36
0 no	0 yes	1200.43	228.61	460.9	255.62	420.77
0 no	0 yes	600	202.04	590.31	250.64	511.02
4.14 yes	9 yes	1000	380.6	799.44	450.32	823.12
8.28 yes	36 yes	1400.38	406.99	805.82	430.66	841.75
23 yes	50 no	0	395.23	744.55	345.38	701.04
0 no	0 yes	5000	690.17	1402.12	553.27	1450.82
0 no	0 yes	8571.42	915.67	1603.78	885.34	1560.17
0 no	0 yes	5000	730.61	1450.12	779.33	1308.19
0 no	0 yes	5000	760.83	1450.8	460.18	891.46
8.28 yes	18 no	0	270.85	600.87	250	656.22
0 no	0 yes	6250	715.76	1350.75	697.31	1280.11
8.28 yes	18 yes	4500	622.04	1230.42	786.44	1301.78
0 no	0 no	0	193.5	378.46	220.17	350.04
0 no	0 yes	2000	320.85	780.9	350.66	800.47
0 no	0 no	0	240.83	440.76	270.61	420.36
0 no	0 yes	1200.43	228.61	460.9	255.62	420.77
0 no	0 yes	600	202.04	590.31	250.64	511.02
4.14 yes	9 yes	1000	380.6	799.44	450.32	823.12
8.28 yes	36 yes	1400.38	406.99	805.82	430.66	841.75
4.14 yes	9 yes	1000	380.6	799.44	450.32	823.12
8.28 yes	36 yes	1400.38	406.99	805.82	430.66	841.75
23 yes	50 no	0	395.23	744.55	345.38	701.04
0 no	0 yes	5000	690.17	1402.12	553.27	1450.82
0 no	0 yes	8571.42	915.67	1603.78	885.34	1560.17
0 no	0 yes	5000	730.61	1450.12	779.33	1308.19
0 no	0 yes	5000	760.83	1450.8	460.18	891.46
8.28 yes	18 no	0	270.85	600.87	250	656.22
0 no	0 yes	6250	715.76	1350.75	697.31	1280.11
8.28 yes	18 yes	4500	622.04	1230.42	786.44	1301.78
0 no	0 no	0	193.5	378.46	220.17	350.04
0 no	0 yes	2000	320.85	780.9	350.66	800.47
0 no	0 no	0	240.83	440.76	270.61	420.36
0 no	0 yes	4500.79	560.5	1260.22	601.27	1050.54

6.58 yes	9 yes	2500	387.26	785.27	322.44	804.25
0 no	0 yes	2976.19	300.5	870.52	320.8	850.14
8.28 yes	18 no	0	270.85	600.87	250	656.22
0 no	0 yes	6250	715.76	1350.75	697.31	1280.11
0 no	0 yes	4500.79	560.5	1260.22	601.27	1050.54

yld_twnty	Bulk Densi	pH water	Aggregate	% OC	% OM	Available P	Total Nitro	Ca(cmol/kg
730.14	1.39	5.09	55.02	1.52	2.61	7.91	0.09	2.23
250.49	1.48	5.33	52.6	0.9	1.54	5.65	0.07	2.34
422.37	1.33	5.43	47.22	1.27	2.18	7.12	0.12	2.32
290.63	1.45	5.68	50.16	1.15	1.97	6.22	0.08	2.19
701.45	1.34	5.52	50.15	2.1	3.61	8.97	0.11	2.14
259.37	1.49	5.45	51.2	1.59	2.73	5.67	0.11	2.35
270.39	1.46	5.67	55.39	1.45	2.49	4.73	0.09	2.41
351.17	1.48	5.51	48.31	1.59	2.73	6.85	0.14	2.32
497.38	1.37	5.46	58.39	1.43	2.45	5.74	0.12	2.31
940.28	1.31	5.63	62.35	1.64	2.82	4.25	0.1	2.34
220.61	1.46	5.25	41.62	1.04	1.78	7.39	0.09	2.37
270.64	1.46	5.11	45.62	0.87	1.49	6.13	0.09	2.42
630.25	1.42	5.61	53.67	1.62	2.78	7.13	0.11	2.22
688.42	1.39	5.41	58.77	1.83	3.14	6.97	0.1	2.44
707.38	1.36	5.44	60.39	1.91	3.28	7.11	0.13	2.3
180.75	1.47	4.68	47.12	0.76	1.3	4.61	0.08	2.06
770.28	1.44	5.56	56.96	1.95	3.35	7.42	0.11	2.36
220.07	1.48	4.77	50.27	0.9	1.54	5.25	0.07	2.21
350.44	1.45	5.34	50.42	1.37	2.35	5.27	0.11	2.56
330.47	1.41	5.45	54.31	1.32	2.27	6.88	0.08	1.97
1107.13	1.42	5.64	67.09	1.34	2.3	7.85	0.12	2.17
227.11	1.47	5.11	48.36	0.91	1.56	5.49	0.07	2.36
411.03	1.43	5.48	53.44	1.36	2.33	7.15	0.09	2.35
911.28	1.35	5.82	61.22	1.41	2.42	8.17	0.12	2.21
337	1.47	5.48	58.09	1.45	2.49	4.92	0.08	2.32
310.9	1.44	5.24	59.22	1.48	2.54	8.09	0.11	2.22
255.53	1.49	5.49	50.35	1.28	2.2	7.55	0.07	2.34
700.25	1.37	5.54	58.16	1.59	2.73	6.59	0.09	2.37
750.39	1.41	5.43	59.6	1.37	2.35	8.26	0.12	2.32
260.66	1.48	4.95	50.4	1.16	1.99	4.71	0.08	2.22
255.29	1.46	5.49	56.44	1.02	1.75	4.78	0.09	1.57
230.64	1.41	5.25	54.05	0.98	1.68	5.02	0.11	2.22
232.29	1.42	4.99	54.89	1.01	1.73	7.75	0.11	2.06
450.18	1.39	5.61	60.25	1.23	2.11	7.08	0.13	2.34
411.07	1.44	5.42	55.62	0.97	1.66	6.47	0.12	2.31
320.11	1.39	5.66	55.27	1.13	1.94	7.18	0.08	2.52
606.35	1.47	4.75	59.2	1.08	1.85	6.82	0.13	2.49
810.22	1.36	5.88	60.13	1.67	2.87	8.9	0.12	2.36
755.24	1.39	5.61	50.12	1.75	3.01	7.05	0.11	2.34
420.73	1.46	5.01	54.41	1.58	2.71	6.89	0.12	1.88
580.19	1.34	5.79	60.52	2.01	3.45	8.21	0.11	2.39
305.28	1.46	5.36	55.29	1.01	1.73	6.02	0.09	2.34
288.93	1.42	5.77	47.3	1.23	2.11	8.55	0.11	2.35
236.29	1.43	4.82	52.22	1.08	1.85	7.16	0.07	2.34
720.46	1.38	5.62	57.72	1.16	1.99	6.75	0.11	2.3
745.89	1.35	5.48	50.15	1.82	3.13	8.04	0.09	2.29

203.02	1.45	4.78	54.59	1.27	2.18	5.92	0.06	2.04
306.71	1.41	5.26	49.28	1.01	1.73	6.71	0.09	1.98
255.29	1.46	5.49	56.44	1.02	1.75	4.78	0.09	1.57
230.64	1.41	5.25	54.05	0.98	1.68	5.02	0.11	2.22
232.29	1.42	4.99	54.89	1.01	1.73	7.75	0.11	2.06
450.18	1.39	5.61	60.25	1.23	2.11	7.08	0.13	2.34
411.07	1.44	5.42	55.62	0.97	1.66	6.47	0.12	2.31
320.11	1.39	5.66	55.27	1.13	1.94	7.18	0.08	2.52
606.35	1.47	4.75	59.2	1.08	1.85	6.82	0.13	2.49
810.22	1.36	5.88	60.13	1.67	2.87	8.9	0.12	2.36
755.24	1.39	5.61	50.12	1.75	3.01	7.05	0.11	2.34
420.73	1.46	5.01	54.41	1.58	2.71	6.89	0.12	1.88
580.19	1.34	5.79	60.52	2.01	3.45	8.21	0.11	2.39
305.28	1.46	5.36	55.29	1.01	1.73	6.02	0.09	2.34
288.93	1.42	5.77	47.3	1.23	2.11	8.55	0.11	2.35
236.29	1.43	4.82	52.22	1.08	1.85	7.16	0.07	2.34
720.46	1.38	5.62	57.72	1.16	1.99	6.75	0.11	2.3
745.89	1.35	5.48	50.15	1.82	3.13	8.04	0.09	2.29
203.02	1.45	4.78	54.59	1.27	2.18	5.92	0.06	2.04
306.71	1.41	5.26	49.28	1.01	1.73	6.71	0.09	1.98
810.22	1.36	5.88	60.13	1.67	2.87	8.9	0.12	2.36
755.24	1.39	5.61	50.12	1.75	3.01	7.05	0.11	2.34
420.73	1.46	5.01	54.41	1.58	2.71	6.89	0.12	1.88
580.19	1.34	5.79	60.52	2.01	3.45	8.21	0.11	2.39
305.28	1.46	5.36	55.29	1.01	1.73	6.02	0.09	2.34
288.93	1.42	5.77	47.3	1.23	2.11	8.55	0.11	2.35
236.29	1.43	4.82	52.22	1.08	1.85	7.16	0.07	2.34
720.46	1.38	5.62	57.72	1.16	1.99	6.75	0.11	2.3
745.89	1.35	5.48	50.15	1.82	3.13	8.04	0.09	2.29
203.02	1.45	4.78	54.59	1.27	2.18	5.92	0.06	2.04
306.71	1.41	5.26	49.28	1.01	1.73	6.71	0.09	1.98
255.29	1.46	5.49	56.44	1.02	1.75	4.78	0.09	1.57
230.64	1.41	5.25	54.05	0.98	1.68	5.02	0.11	2.22
232.29	1.42	4.99	54.89	1.01	1.73	7.75	0.11	2.06
450.18	1.39	5.61	60.25	1.23	2.11	7.08	0.13	2.34
411.07	1.44	5.42	55.62	0.97	1.66	6.47	0.12	2.31
320.11	1.39	5.66	55.27	1.13	1.94	7.18	0.08	2.52
606.35	1.47	4.75	59.2	1.08	1.85	6.82	0.13	2.49
810.22	1.36	5.88	60.13	1.67	2.87	8.9	0.12	2.36
755.24	1.39	5.61	50.12	1.75	3.01	7.05	0.11	2.34
420.73	1.46	5.01	54.41	1.58	2.71	6.89	0.12	1.88
270.64	1.46	5.11	45.62	0.87	1.49	6.13	0.09	2.42
630.25	1.42	5.61	53.67	1.62	2.78	7.13	0.11	2.22
688.42	1.39	5.41	58.77	1.83	3.14	6.97	0.1	2.44
707.38	1.36	5.44	60.39	1.91	3.28	7.11	0.13	2.3
180.75	1.47	4.68	47.12	0.76	1.3	4.61	0.08	2.06
770.28	1.44	5.56	56.96	1.95	3.35	7.42	0.11	2.36

220.07	1.48	4.77	50.27	0.9	1.54	5.25	0.07	2.21
350.44	1.45	5.34	50.42	1.37	2.35	5.27	0.11	2.56
330.47	1.41	5.45	54.31	1.32	2.27	6.88	0.08	1.97
1107.13	1.42	5.64	67.09	1.34	2.3	7.85	0.12	2.17
227.11	1.47	5.11	48.36	0.91	1.56	5.49	0.07	2.36
411.03	1.43	5.48	53.44	1.36	2.33	7.15	0.09	2.35
911.28	1.35	5.82	61.22	1.41	2.42	8.17	0.12	2.21
337	1.47	5.48	58.09	1.45	2.49	4.92	0.08	2.32
310.9	1.44	5.24	59.22	1.48	2.54	8.09	0.11	2.22
255.53	1.49	5.49	50.35	1.28	2.2	7.55	0.07	2.34
700.25	1.37	5.54	58.16	1.59	2.73	6.59	0.09	2.37
750.39	1.41	5.43	59.6	1.37	2.35	8.26	0.12	2.32
260.66	1.48	4.95	50.4	1.16	1.99	4.71	0.08	2.22
255.29	1.46	5.49	56.44	1.02	1.75	4.78	0.09	1.57
230.64	1.41	5.25	54.05	0.98	1.68	5.02	0.11	2.22
232.29	1.42	4.99	54.89	1.01	1.73	7.75	0.11	2.06
450.18	1.39	5.61	60.25	1.23	2.11	7.08	0.13	2.34
411.07	1.44	5.42	55.62	0.97	1.66	6.47	0.12	2.31
320.11	1.39	5.66	55.27	1.13	1.94	7.18	0.08	2.52
606.35	1.47	4.75	59.2	1.08	1.85	6.82	0.13	2.49
810.22	1.36	5.88	60.13	1.67	2.87	8.9	0.12	2.36
755.24	1.39	5.61	50.12	1.75	3.01	7.05	0.11	2.34
420.73	1.46	5.01	54.41	1.58	2.71	6.89	0.12	1.88
580.19	1.34	5.79	60.52	2.01	3.45	8.21	0.11	2.39
305.28	1.46	5.36	55.29	1.01	1.73	6.02	0.09	2.34
288.93	1.42	5.77	47.3	1.23	2.11	8.55	0.11	2.35
236.29	1.43	4.82	52.22	1.08	1.85	7.16	0.07	2.34
720.46	1.38	5.62	57.72	1.16	1.99	6.75	0.11	2.3
745.89	1.35	5.48	50.15	1.82	3.13	8.04	0.09	2.29
203.02	1.45	4.78	54.59	1.27	2.18	5.92	0.06	2.04
306.71	1.41	5.26	49.28	1.01	1.73	6.71	0.09	1.98
255.29	1.46	5.49	56.44	1.02	1.75	4.78	0.09	1.57
230.64	1.41	5.25	54.05	0.98	1.68	5.02	0.11	2.22
232.29	1.42	4.99	54.89	1.01	1.73	7.75	0.11	2.06
450.18	1.39	5.61	60.25	1.23	2.11	7.08	0.13	2.34
411.07	1.44	5.42	55.62	0.97	1.66	6.47	0.12	2.31
320.11	1.39	5.66	55.27	1.13	1.94	7.18	0.08	2.52
606.35	1.47	4.75	59.2	1.08	1.85	6.82	0.13	2.49
810.22	1.36	5.88	60.13	1.67	2.87	8.9	0.12	2.36
755.24	1.39	5.61	50.12	1.75	3.01	7.05	0.11	2.34
420.73	1.46	5.01	54.41	1.58	2.71	6.89	0.12	1.88
580.19	1.34	5.79	60.52	2.01	3.45	8.21	0.11	2.39
305.28	1.46	5.36	55.29	1.01	1.73	6.02	0.09	2.34
288.93	1.42	5.77	47.3	1.23	2.11	8.55	0.11	2.35
236.29	1.43	4.82	52.22	1.08	1.85	7.16	0.07	2.34
720.46	1.38	5.62	57.72	1.16	1.99	6.75	0.11	2.3
745.89	1.35	5.48	50.15	1.82	3.13	8.04	0.09	2.29

203.02	1.45	4.78	54.59	1.27	2.18	5.92	0.06	2.04
306.71	1.41	5.26	49.28	1.01	1.73	6.71	0.09	1.98
810.22	1.36	5.88	60.13	1.67	2.87	8.9	0.12	2.36
755.24	1.39	5.61	50.12	1.75	3.01	7.05	0.11	2.34
420.73	1.46	5.01	54.41	1.58	2.71	6.89	0.12	1.88
580.19	1.34	5.79	60.52	2.01	3.45	8.21	0.11	2.39
305.28	1.46	5.36	55.29	1.01	1.73	6.02	0.09	2.34
288.93	1.42	5.77	47.3	1.23	2.11	8.55	0.11	2.35
236.29	1.43	4.82	52.22	1.08	1.85	7.16	0.07	2.34
720.46	1.38	5.62	57.72	1.16	1.99	6.75	0.11	2.3
745.89	1.35	5.48	50.15	1.82	3.13	8.04	0.09	2.29
203.02	1.45	4.78	54.59	1.27	2.18	5.92	0.06	2.04
306.71	1.41	5.26	49.28	1.01	1.73	6.71	0.09	1.98
255.29	1.46	5.49	56.44	1.02	1.75	4.78	0.09	1.57
230.64	1.41	5.25	54.05	0.98	1.68	5.02	0.11	2.22
232.29	1.42	4.99	54.89	1.01	1.73	7.75	0.11	2.06
450.18	1.39	5.61	60.25	1.23	2.11	7.08	0.13	2.34
411.07	1.44	5.42	55.62	0.97	1.66	6.47	0.12	2.31
320.11	1.39	5.66	55.27	1.13	1.94	7.18	0.08	2.52
606.35	1.47	4.75	59.2	1.08	1.85	6.82	0.13	2.49
810.22	1.36	5.88	60.13	1.67	2.87	8.9	0.12	2.36
755.24	1.39	5.61	50.12	1.75	3.01	7.05	0.11	2.34
420.73	1.46	5.01	54.41	1.58	2.71	6.89	0.12	1.88
236.29	1.43	4.82	52.22	1.08	1.85	7.16	0.07	2.34
720.46	1.38	5.62	57.72	1.16	1.99	6.75	0.11	2.3
745.89	1.35	5.48	50.15	1.82	3.13	8.04	0.09	2.29
203.02	1.45	4.78	54.59	1.27	2.18	5.92	0.06	2.04
306.71	1.41	5.26	49.28	1.01	1.73	6.71	0.09	1.98
255.29	1.46	5.49	56.44	1.02	1.75	4.78	0.09	1.57
230.64	1.41	5.25	54.05	0.98	1.68	5.02	0.11	2.22
232.29	1.42	4.99	54.89	1.01	1.73	7.75	0.11	2.06
450.18	1.39	5.61	60.25	1.23	2.11	7.08	0.13	2.34
411.07	1.44	5.42	55.62	0.97	1.66	6.47	0.12	2.31
450.18	1.39	5.61	60.25	1.23	2.11	7.08	0.13	2.34
411.07	1.44	5.42	55.62	0.97	1.66	6.47	0.12	2.31
320.11	1.39	5.66	55.27	1.13	1.94	7.18	0.08	2.52
606.35	1.47	4.75	59.2	1.08	1.85	6.82	0.13	2.49
810.22	1.36	5.88	60.13	1.67	2.87	8.9	0.12	2.36
755.24	1.39	5.61	50.12	1.75	3.01	7.05	0.11	2.34
420.73	1.46	5.01	54.41	1.58	2.71	6.89	0.12	1.88
236.29	1.43	4.82	52.22	1.08	1.85	7.16	0.07	2.34
720.46	1.38	5.62	57.72	1.16	1.99	6.75	0.11	2.3
745.89	1.35	5.48	50.15	1.82	3.13	8.04	0.09	2.29
203.02	1.45	4.78	54.59	1.27	2.18	5.92	0.06	2.04
306.71	1.41	5.26	49.28	1.01	1.73	6.71	0.09	1.98
255.29	1.46	5.49	56.44	1.02	1.75	4.78	0.09	1.57
580.19	1.34	5.79	60.52	2.01	3.45	8.21	0.11	2.39

305.28	1.46	5.36	55.29	1.01	1.73	6.02	0.09	2.34
288.93	1.42	5.77	47.3	1.23	2.11	8.55	0.11	2.35
236.29	1.43	4.82	52.22	1.08	1.85	7.16	0.07	2.34
720.46	1.38	5.62	57.72	1.16	1.99	6.75	0.11	2.3
580.19	1.34	5.79	60.52	2.01	3.45	8.21	0.11	2.39

Mg(cmol(+ k(cmol/kg) Al3+(cmol(H+ (cmol(+ CEC(cmol(+ Fe(cmol/kg Available P Total N ap Quantity o								
0.71	0.16	0.11	1.04	4.3	0.32	0	0	6666.66
0.6	0.19	0.08	0.72	3.95	0.31	6.8	10.7	0
0.71	0.17	0.08	0.72	4	0.25	10.25	15	2333.33
0.75	0.15	0.08	1.12	4.29	0.19	0	0	0
0.72	0.14	0.08	0.72	3.76	0.23	8.28	18	6500
0.7	0.19	0.08	1.12	4.48	0.38	0	0	0
0.65	0.21	0.08	0.72	4.07	0.31	0	0	0
0.63	0.2	0.08	0.72	3.95	0.22	6.5	15	0
0.7	0.13	0.08	0.72	3.89	0.25	0	0	3809.52
0.71	0.17	0.08	0.72	4.02	0.29	0	0	7000.85
0.6	0.15	0.12	1.36	4.52	0.27	7.05	6	0
0.71	0.21	0.08	1.12	4.54	0.23	0	0	0
0.6	0.16	0.08	0.72	3.78	0.19	0	18	3500
0.65	0.18	0.11	1.21	4.66	0.29	6.21	22.5	4500
0.63	0.21	0.08	1.09	4.33	0.25	9.46	41.14	4000
0.65	0.13	0.14	1.23	4.17	0.22	6.25	3	0
0.67	0.14	0.08	1.12	4.34	0.31	5.52	24	5333.33
0.71	0.11	0.08	1.12	4.23	0.27	0	0	0
0.67	0.16	0.08	1.12	4.59	0.21	0	0	1200
0.65	0.15	0.08	1.52	4.19	0.32	0	0	1466.66
0.75	0.11	0.08	0.72	3.78	0.23	0	0	3000
0.83	0.21	0.08	0.72	4.21	0.19	24.84	54	0
0.71	0.18	0.08	0.72	4.04	0.23	0	0	2000
0.65	0.21	0.08	1.12	4.27	0.27	4.96	10.8	2540.82
0.63	0.22	0.08	1.12	4.41	0.33	5.5	9	1250
0.63	0.19	0.08	1.12	4.32	0.24	5.52	12	1300
0.64	0.21	0.08	0.72	4.05	0.28	11.04	24	0
0.65	0.18	0.08	0.72	4.06	0.36	0	0	4522.19
0.64	0.17	0.08	1.12	4.33	0.25	0	0	5260.85
0.63	0.17	0.13	2.72	5.69	0.24	8.28	18	0
0.64	0.21	0.08	0.72	3.22	0.33	0	0	0
0.61	0.18	0.11	2.08	5.1	0.22	0	0	1200.43
0.63	0.12	0.09	1.76	4.66	0.29	0	0	600
0.66	0.16	0.08	0.72	3.96	0.24	4.14	9	1000
0.6	0.1	0.08	1.12	4.21	0.26	8.28	36	1400.38
0.72	0.22	0.08	0.72	4.26	0.25	23	50	0
0.87	0.21	0.12	2.72	6.48	0.22	0	0	5000
0.75	0.23	0.08	0.72	4.14	0.24	0	0	8571.42
0.64	0.15	0.08	1.12	4.33	0.32	0	0	5000
0.6	0.18	0.13	2	4.51	0.26	0	0	5000
0.67	0.21	0.09	2.72	6.11	0.34	0	0	4500.79
0.65	0.23	0.08	1.12	4.42	0.29	6.58	9	2500
0.61	0.23	0.08	0.72	3.99	0.26	0	0	2976.19
0.61	0.21	0.08	1.12	4.36	0.32	8.28	18	0
0.65	0.15	0.08	0.72	3.9	0.31	0	0	6250
0.65	0.13	0.08	1.12	4.27	0.27	8.28	18	4500

0.63	0.12	0.11	1.44	4.34	0.29	0	0	0
0.6	0.15	0.13	1.76	4.5	0.23	0	0	2000
0.64	0.21	0.08	0.72	3.22	0.33	0	0	0
0.61	0.18	0.11	2.08	5.1	0.22	0	0	1200.43
0.63	0.12	0.09	1.76	4.66	0.29	0	0	600
0.66	0.16	0.08	0.72	3.96	0.24	4.14	9	1000
0.6	0.1	0.08	1.12	4.21	0.26	8.28	36	1400.38
0.72	0.22	0.08	0.72	4.26	0.25	23	50	0
0.87	0.21	0.12	2.72	6.48	0.22	0	0	5000
0.75	0.23	0.08	0.72	4.14	0.24	0	0	8571.42
0.64	0.15	0.08	1.12	4.33	0.32	0	0	5000
0.6	0.18	0.13	2	4.51	0.26	0	0	5000
0.67	0.21	0.09	2.72	6.11	0.34	0	0	4500.79
0.65	0.23	0.08	1.12	4.42	0.29	6.58	9	2500
0.61	0.23	0.08	0.72	3.99	0.26	0	0	2976.19
0.61	0.21	0.08	1.12	4.36	0.32	8.28	18	0
0.65	0.15	0.08	0.72	3.9	0.31	0	0	6250
0.65	0.13	0.08	1.12	4.27	0.27	8.28	18	4500
0.63	0.12	0.11	1.44	4.34	0.29	0	0	0
0.6	0.15	0.13	1.76	4.5	0.23	0	0	2000
0.75	0.23	0.08	0.72	4.14	0.24	0	0	8571.42
0.64	0.15	0.08	1.12	4.33	0.32	0	0	5000
0.6	0.18	0.13	2	4.51	0.26	0	0	5000
0.67	0.21	0.09	2.72	6.11	0.34	0	0	4500.79
0.65	0.23	0.08	1.12	4.42	0.29	6.58	9	2500
0.61	0.23	0.08	0.72	3.99	0.26	0	0	2976.19
0.61	0.21	0.08	1.12	4.36	0.32	8.28	18	0
0.65	0.15	0.08	0.72	3.9	0.31	0	0	6250
0.65	0.13	0.08	1.12	4.27	0.27	8.28	18	4500
0.63	0.12	0.11	1.44	4.34	0.29	0	0	0
0.6	0.15	0.13	1.76	4.5	0.23	0	0	2000
0.64	0.21	0.08	0.72	3.22	0.33	0	0	0
0.61	0.18	0.11	2.08	5.1	0.22	0	0	1200.43
0.63	0.12	0.09	1.76	4.66	0.29	0	0	600
0.66	0.16	0.08	0.72	3.96	0.24	4.14	9	1000
0.6	0.1	0.08	1.12	4.21	0.26	8.28	36	1400.38
0.72	0.22	0.08	0.72	4.26	0.25	23	50	0
0.87	0.21	0.12	2.72	6.48	0.22	0	0	5000
0.75	0.23	0.08	0.72	4.14	0.24	0	0	8571.42
0.64	0.15	0.08	1.12	4.33	0.32	0	0	5000
0.6	0.18	0.13	2	4.51	0.26	0	0	5000
0.71	0.21	0.08	1.12	4.54	0.23	0	0	0
0.6	0.16	0.08	0.72	3.78	0.19	0	18	3500
0.65	0.18	0.11	1.21	4.66	0.29	6.21	22.5	4500
0.63	0.21	0.08	1.09	4.33	0.25	9.46	41.14	4000
0.65	0.13	0.14	1.23	4.17	0.22	6.25	3	0
0.67	0.14	0.08	1.12	4.34	0.31	5.52	24	5333.33

0.71	0.11	0.08	1.12	4.23	0.27	0	0	0
0.67	0.16	0.08	1.12	4.59	0.21	0	0	1200
0.65	0.15	0.08	1.52	4.19	0.32	0	0	1466.66
0.75	0.11	0.08	0.72	3.78	0.23	0	0	3000
0.83	0.21	0.08	0.72	4.21	0.19	24.84	54	0
0.71	0.18	0.08	0.72	4.04	0.23	0	0	2000
0.65	0.21	0.08	1.12	4.27	0.27	4.96	10.8	2540.82
0.63	0.22	0.08	1.12	4.41	0.33	5.5	9	1250
0.63	0.19	0.08	1.12	4.32	0.24	5.52	12	1300
0.64	0.21	0.08	0.72	4.05	0.28	11.04	24	0
0.65	0.18	0.08	0.72	4.06	0.36	0	0	4522.19
0.64	0.17	0.08	1.12	4.33	0.25	0	0	5260.85
0.63	0.17	0.13	2.72	5.69	0.24	8.28	18	0
0.64	0.21	0.08	0.72	3.22	0.33	0	0	0
0.61	0.18	0.11	2.08	5.1	0.22	0	0	1200.43
0.63	0.12	0.09	1.76	4.66	0.29	0	0	600
0.66	0.16	0.08	0.72	3.96	0.24	4.14	9	1000
0.6	0.1	0.08	1.12	4.21	0.26	8.28	36	1400.38
0.72	0.22	0.08	0.72	4.26	0.25	23	50	0
0.87	0.21	0.12	2.72	6.48	0.22	0	0	5000
0.75	0.23	0.08	0.72	4.14	0.24	0	0	8571.42
0.64	0.15	0.08	1.12	4.33	0.32	0	0	5000
0.6	0.18	0.13	2	4.51	0.26	0	0	5000
0.67	0.21	0.09	2.72	6.11	0.34	0	0	4500.79
0.65	0.23	0.08	1.12	4.42	0.29	6.58	9	2500
0.61	0.23	0.08	0.72	3.99	0.26	0	0	2976.19
0.61	0.21	0.08	1.12	4.36	0.32	8.28	18	0
0.65	0.15	0.08	0.72	3.9	0.31	0	0	6250
0.65	0.13	0.08	1.12	4.27	0.27	8.28	18	4500
0.63	0.12	0.11	1.44	4.34	0.29	0	0	0
0.6	0.15	0.13	1.76	4.5	0.23	0	0	2000
0.64	0.21	0.08	0.72	3.22	0.33	0	0	0
0.61	0.18	0.11	2.08	5.1	0.22	0	0	1200.43
0.63	0.12	0.09	1.76	4.66	0.29	0	0	600
0.66	0.16	0.08	0.72	3.96	0.24	4.14	9	1000
0.6	0.1	0.08	1.12	4.21	0.26	8.28	36	1400.38
0.72	0.22	0.08	0.72	4.26	0.25	23	50	0
0.87	0.21	0.12	2.72	6.48	0.22	0	0	5000
0.75	0.23	0.08	0.72	4.14	0.24	0	0	8571.42
0.64	0.15	0.08	1.12	4.33	0.32	0	0	5000
0.6	0.18	0.13	2	4.51	0.26	0	0	5000
0.67	0.21	0.09	2.72	6.11	0.34	0	0	4500.79
0.65	0.23	0.08	1.12	4.42	0.29	6.58	9	2500
0.61	0.23	0.08	0.72	3.99	0.26	0	0	2976.19
0.61	0.21	0.08	1.12	4.36	0.32	8.28	18	0
0.65	0.15	0.08	0.72	3.9	0.31	0	0	6250
0.65	0.13	0.08	1.12	4.27	0.27	8.28	18	4500

0.63	0.12	0.11	1.44	4.34	0.29	0	0	0
0.6	0.15	0.13	1.76	4.5	0.23	0	0	2000
0.75	0.23	0.08	0.72	4.14	0.24	0	0	8571.42
0.64	0.15	0.08	1.12	4.33	0.32	0	0	5000
0.6	0.18	0.13	2	4.51	0.26	0	0	5000
0.67	0.21	0.09	2.72	6.11	0.34	0	0	4500.79
0.65	0.23	0.08	1.12	4.42	0.29	6.58	9	2500
0.61	0.23	0.08	0.72	3.99	0.26	0	0	2976.19
0.61	0.21	0.08	1.12	4.36	0.32	8.28	18	0
0.65	0.15	0.08	0.72	3.9	0.31	0	0	6250
0.65	0.13	0.08	1.12	4.27	0.27	8.28	18	4500
0.63	0.12	0.11	1.44	4.34	0.29	0	0	0
0.6	0.15	0.13	1.76	4.5	0.23	0	0	2000
0.64	0.21	0.08	0.72	3.22	0.33	0	0	0
0.61	0.18	0.11	2.08	5.1	0.22	0	0	1200.43
0.63	0.12	0.09	1.76	4.66	0.29	0	0	600
0.66	0.16	0.08	0.72	3.96	0.24	4.14	9	1000
0.6	0.1	0.08	1.12	4.21	0.26	8.28	36	1400.38
0.72	0.22	0.08	0.72	4.26	0.25	23	50	0
0.87	0.21	0.12	2.72	6.48	0.22	0	0	5000
0.75	0.23	0.08	0.72	4.14	0.24	0	0	8571.42
0.64	0.15	0.08	1.12	4.33	0.32	0	0	5000
0.6	0.18	0.13	2	4.51	0.26	0	0	5000
0.61	0.21	0.08	1.12	4.36	0.32	8.28	18	0
0.65	0.15	0.08	0.72	3.9	0.31	0	0	6250
0.65	0.13	0.08	1.12	4.27	0.27	8.28	18	4500
0.63	0.12	0.11	1.44	4.34	0.29	0	0	0
0.6	0.15	0.13	1.76	4.5	0.23	0	0	2000
0.64	0.21	0.08	0.72	3.22	0.33	0	0	0
0.61	0.18	0.11	2.08	5.1	0.22	0	0	1200.43
0.63	0.12	0.09	1.76	4.66	0.29	0	0	600
0.66	0.16	0.08	0.72	3.96	0.24	4.14	9	1000
0.6	0.1	0.08	1.12	4.21	0.26	8.28	36	1400.38
0.66	0.16	0.08	0.72	3.96	0.24	4.14	9	1000
0.6	0.1	0.08	1.12	4.21	0.26	8.28	36	1400.38
0.72	0.22	0.08	0.72	4.26	0.25	23	50	0
0.87	0.21	0.12	2.72	6.48	0.22	0	0	5000
0.75	0.23	0.08	0.72	4.14	0.24	0	0	8571.42
0.64	0.15	0.08	1.12	4.33	0.32	0	0	5000
0.6	0.18	0.13	2	4.51	0.26	0	0	5000
0.61	0.21	0.08	1.12	4.36	0.32	8.28	18	0
0.65	0.15	0.08	0.72	3.9	0.31	0	0	6250
0.65	0.13	0.08	1.12	4.27	0.27	8.28	18	4500
0.63	0.12	0.11	1.44	4.34	0.29	0	0	0
0.6	0.15	0.13	1.76	4.5	0.23	0	0	2000
0.64	0.21	0.08	0.72	3.22	0.33	0	0	0
0.67	0.21	0.09	2.72	6.11	0.34	0	0	4500.79

0.65	0.23	0.08	1.12	4.42	0.29	6.58	9	2500
0.61	0.23	0.08	0.72	3.99	0.26	0	0	2976.19
0.61	0.21	0.08	1.12	4.36	0.32	8.28	18	0
0.65	0.15	0.08	0.72	3.9	0.31	0	0	6250
0.67	0.21	0.09	2.72	6.11	0.34	0	0	4500.79

Does the farmer apply FYM? Does the farmer apply FYM? Does the farmer applies FYM?

no	no	yes
yes	yes	no
yes	yes	yes
no	no	no
yes	yes	yes
no	no	no
no	no	no
yes	yes	no
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yes	yes	yes
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