Table J2.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter
	In	meq/100 g	meq/100 g	pH	Pct	Pct
AfB2:						
Alford	0-8	9.0-13.5-18.0	---	4.5-5.9-7.3	0	1.0-1.5-2.0
	8-60	15-18-20-	12.0-15.0-18.0	4.5-5.3-6.0	0	0.5-0.8-1.0
	60-80	4.0-8.0-12.0	---	5.1-5.8-6.5	0	0.0-0.2-0.5
AfC:						
Alford	0-8	9.0-14.0-19.0	---	4.5-5.9-7.3	0	1.0-2.0-3.0
	8-60	15-18-20-	12.0-15.0-18.0	4.5-5.3-6.0	0	0.5-0.8-1.0
	60-80	4.0-8.0-12.0	---	5.1-5.8-6.5	0	0.0-0.2-0.5
AfC3:						
Alford	0-8	8.0-12.0-16.0	---	4.5-5.9-7.3	0	1.0-1.5-2.0
	8-60	15-18-20-	12.0-15.0-18.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	60-80	4.0-8.0-12.0	---	5.1-5.8-6.5	0	0.0-0.2-0.5
AfD:						
Alford	0-8	9.0-14.0-19.0	---	4.5-5.9-7.3	0	1.0-2.0-3.0
	8-60	15-18-20-	12.0-15.0-18.0	4.5-5.3-6.0	0	0.5-0.8-1.0
	60-80	4.0-8.0-12.0	---	5.1-5.8-6.5	0	0.0-0.2-0.5
AfD3:						
Alford	0-8	8.0-12.0-16.0	---	4.5-5.9-7.3	0	1.0-1.5-2.0
	8-60	15-18-20-	12.0-15.0-18.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	60-80	4.0-8.0-12.0	---	5.1-5.8-6.5	0	0.0-0.2-0.5
AfE:						
Alford	0-8	9.0-14.0-19.0	---	4.5-5.9-7.3	0	1.0-2.0-3.0
	8-60	15-18-20-	12.0-15.0-18.0	4.5-5.3-6.0	0	0.5-0.8-1.0
	60-80	4.0-8.0-12.0	---	5.1-5.8-6.5	0	0.0-0.2-0.5
Ba:						
Bartle	0-9	10.0-14.5-19.0	---	5.1-6.2-7.3	0	1.0-2.0-3.0
	9-29	---	12.0-15.5-19.0	3.6-4.8-6.0	0	0.5-0.8-1.0
	29-55	---	12.0-15.5-19.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	55-79	11.0-15.0-19.0	---	4.5-5.9-7.3	0	0.0-0.2-0.5
Bd:						
Birds	0-10	9.0-13.5-18.0	---	5.6-6.7-7.8	0	1.0-2.0-3.0
	10-80	10.0-13.5-17.0	---	5.1-6.5-7.8	0	0.5-1.2-2.0
Bn:						
Bonnie	0-5	11.0-15.0-19.0	---	4.5-5.9-7.3	0	1.0-2.0-3.0
	5-80	---	11.0-15.0-19.0	4.5-5.0-5.5	0	1.0-2.0-3.0
	80-84	10.0-14.5-19.0	---	4.5-6.2-7.8	0	0.5-1.2-2.0
Ev:						
Evansville	0-10	12.0-15.5-19.0	---	6.1-6.7-7.3	0	1.0-2.0-3.0
	10-42	14.0-18.5-23.0	---	6.1-7.0-7.8	0	1.0-2.0-3.0
	42-60	13.0-17.0-21.0	---	6.6-7.5-8.4	0	0.5-1.2-2.0
GnF:						
Gilpin	0-9	---	10.0-14.5-19.0	3.6-4.6-5.5	0	1.0-2.0-3.0
	9-22	---	10.0-14.5-19.0	3.6-4.6-5.5	0	0.5-0.8-1.0
	22-29	---	8.0-13.5-19.0	3.6-4.6-5.5	0	0.0-0.2-0.5
	29-60	---	---	---	0	---

Table J2.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter
	In	meq/100 g	meq/100 g	pH	Pct	Pct
GpD:						
Gilpin	0-9	---	10.0-14.5-19.0	3.6-4.6-5.5	0	1.0-2.0-3.0
	9-22	---	10.0-14.5-19.0	3.6-4.6-5.5	0	0.5-0.8-1.0
	22-29	---	8.0-13.5-19.0	3.6-4.6-5.5	0	0.0-0.2-0.5
	29-60	---	---	---	0	---
HeA:						
Henshaw	0-9	9.0-14.0-19.0	---	5.6-6.1-6.5	0	1.0-2.0-3.0
	9-50	10.0-14.5-19.0	---	5.1-6.2-7.3	0	0.5-0.8-1.0
	50-70	8.0-13.5-19.0	---	7.4-7.9-8.4	10-20-30	0.0-0.2-0.5
HoA:						
Hosmer	0-9	8.0-11.0-14.0	---	4.5-5.5-6.5	0	1.0-2.0-3.0
	9-30	---	13.0-15.0-17.0	4.5-5.0-5.5	0	0.5-0.8-1.0
	30-65	---	8.0-11.0-14.0	4.5-5.3-6.0	0	0.0-0.2-0.5

HoB:						
Hosmer	0-9	8.0-11.0-14.0	---	4.5-5.5-6.5	0	1.0-2.0-3.0
	9-30	---	13.0-15.0-17.0	4.5-5.0-5.5	0	0.5-0.8-1.0
	30-65	---	8.0-11.5-15.0	4.5-5.3-6.0	0	0.0-0.2-0.5
HoB3:						
Hosmer	0-9	7.0-9.0-11.0	---	4.5-5.5-6.5	0	1.0-1.5-2.0
	9-20	---	13.0-15.0-17.0	4.5-5.0-5.5	0	0.0-0.2-0.5
	20-65	---	8.0-11.5-15.0	4.5-5.3-6.0	0	0.0-0.2-0.5
HoC:						
Hosmer	0-9	8.0-11.0-14.0	---	4.5-5.5-6.5	0	1.0-2.0-3.0
	9-30	---	13.0-15.0-17.0	4.5-5.0-5.5	0	0.5-0.8-1.0
	30-65	---	8.0-11.5-15.0	4.5-5.3-6.0	0	0.0-0.2-0.5
HoC3:						
Hosmer	0-9	7.0-9.0-11.0	---	4.5-5.5-6.5	0	1.0-1.5-2.0
	9-20	---	13.0-15.0-17.0	4.5-5.0-5.5	0	0.0-0.2-0.5
	20-65	---	8.0-11.5-15.0	4.5-5.3-6.0	0	0.0-0.2-0.5
HoD:						
Hosmer	0-9	8.0-11.0-14.0	---	4.5-5.5-6.5	0	1.0-2.0-3.0
	9-30	---	13.0-15.0-17.0	4.5-5.0-5.5	0	0.5-0.8-1.0
	30-65	---	8.0-11.5-15.0	4.5-5.3-6.0	0	0.0-0.2-0.5
HoD3:						
Hosmer	0-9	7.0-9.0-11.0	---	4.5-5.5-6.5	0	1.0-1.5-2.0
	9-20	---	13.0-15.0-17.0	4.5-5.0-5.5	0	0.0-0.2-0.5
	20-65	---	8.0-11.5-15.0	4.5-5.3-6.0	0	0.0-0.2-0.5
Hu:						
Huntington	0-11	15.0-21.0-27.0	---	5.6-6.7-7.8	0	3.0-4.5-6.0
	11-44	10.0-14.5-19.0	---	5.6-6.7-7.8	0	0.5-1.2-2.0
	44-60	8.0-13.5-19.0	---	5.6-6.7-7.8	0	0.5-1.2-2.0
IvA:						
Iva	0-19	12.0-15.5-19.0	---	5.1-6.2-7.3	0	1.0-2.0-3.0
	19-46	12.0-14.5-17.0	---	5.1-5.8-6.5	0	0.5-0.8-1.0
	46-71	5.0-8.5-12.0	---	5.6-6.1-6.5	0	0.0-0.2-0.5
JoA:						
Johnsburg	0-13	9.0-12.5-16.0	---	4.5-5.5-6.5	0	1.0-2.0-3.0
	13-30	---	13.0-15.5-18.0	3.6-4.6-5.5	0	0.5-0.8-1.0
	30-58	---	12.0-14.5-17.0	3.6-4.6-5.5	0	0.0-0.2-0.5
	58-80	---	7.0-9.5-12.0	3.6-4.3-5.0	0	0.0-0.2-0.5

Table J2.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter
	In	meq/100 g	meq/100 g	pH	Pct	Pct
MkB2:						
Markland	0-8	13.0-15.5-18.0	---	5.1-6.2-7.3	0	1.0-1.5-2.0
	8-39	21.0-25.0-29.0	---	5.1-6.2-7.3	0	0.5-0.8-1.0
	39-60	18.0-22.5-27.0	---	7.4-7.9-8.4	20-30-40	0.0-0.2-0.5
MkC:						
Markland	0-8	13.0-16.0-19.0	---	5.1-6.2-7.3	0	1.0-2.0-3.0
	8-39	21.0-25.0-29.0	---	5.1-6.2-7.3	0-8-15	0.5-0.8-1.0
	39-60	18.0-22.5-27.0	---	7.4-7.9-8.4	20-30-40	0.0-0.2-0.5
MoC3:						
Markland	0-4	16.0-19.5-23.0	---	5.1-6.2-7.3	0	1.0-1.5-2.0
	4-24	21.0-25.0-29.0	---	5.1-6.2-7.3	0-8-15	0.0-0.2-0.5
	24-60	18.0-22.5-27.0	---	7.4-7.9-8.4	20-30-40	0.0-0.2-0.5
MrA:						
Mcgary	0-9	14.0-16.5-19.0	---	6.1-6.7-7.3	0	1.0-1.5-2.0
	9-36	18.0-22.5-27.0	---	5.6-6.7-7.8	0	0.5-0.8-1.0
	36-60	18.0-22.5-27.0	---	7.6-8.0-8.4	20-30-40	0.0-0.2-0.5
MuA:						
Muren	0-8	9.0-14.0-19.0	---	5.1-5.8-6.5	0	1.0-2.0-3.0
	8-42	12.0-15.0-18.0	---	5.1-5.6-6.0	0	0.5-0.8-1.0
	42-66	4.0-8.0-12.0	---	5.6-6.1-6.5	0	0.0-0.2-0.5
MuB2:						
Muren	0-8	9.0-13.5-18.0	---	5.1-5.8-6.5	0	1.0-1.5-2.0
	8-42	12.0-15.0-18.0	---	5.1-5.6-6.0	0	0.5-0.8-1.0
	42-66	4.0-8.0-12.0	---	5.6-6.1-6.5	0	0.0-0.2-0.5
Ne:						
Newark	0-10	9.0-15.0-21.0	---	5.6-6.7-7.8	0	1.0-2.0-3.0
	10-30	11.0-16.0-21.0	---	5.6-6.7-7.8	0	1.0-2.0-3.0
	30-60	6.0-12.5-19.0	---	5.6-6.7-7.8	0	0.5-1.2-2.0
OrB:						
Orthents	0-60	8.0-16.0-24.0	---	5.6-6.5-7.3	0	0.5-0.8-1.0
OrD:						

Orthents----------	0-60	8.0-16.0-24.0	---	5.6-6.5-7.3	0	0.5-0.8-1.0
OrG:						
Orthents----------	0-60	8.0-16.0-24.0	---	5.6-6.5-7.3	0	0.5-0.8-1.0
OsF:						
Orthents----------	0-60	8.0-16.0-24.0	---	5.6-6.5-7.3	0	0.5-0.8-1.0
OsG:						
Orthents----------	0-60	8.0-16.0-24.0	---	5.6-6.5-7.3	0	0.5-0.8-1.0
Pa:						
Patton----------	0-10	19.0-24.0-29.0	---	6.6-7.0-7.3	0	3.0-4.5-6.0
	10-42	14.0-17.5-21.0	---	6.1-7.0-7.8	0	0.5-1.2-2.0
	42-60	11.0-15.0-19.0	---	6.6-7.5-8.4	0-15-30	0.5-0.8-1.0
PeB2:						
Pekin----------	0-7	6.0-10.0-14.0	---	5.6-6.5-7.3	0	1.0-1.5-2.0
	7-21	10.0-13.5-17.0	---	4.5-5.5-6.5	0	0.5-0.8-1.0
	21-48	10.0-13.5-17.0	---	4.5-5.5-6.5	0	0.0-0.2-0.5
	48-66	4.0-10.5-17.0	---	4.5-5.9-7.3	0	0.0-0.2-0.5

Table J2.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter
	In	meq/100 g	meq/100 g	pH	Pct	Pct
Pg:						
Peoga----------	0-26	9.0-14.0-19.0	---	4.5-5.9-7.3	0	1.0-2.0-3.0
	26-60	---	12.0-15.5-19.0	4.5-5.0-5.5	0	0.0-0.2-0.5
	60-80	10.0-14.5-19.0	---	4.5-5.5-6.5	0	0.0-0.2-0.5
ScA:						
Sciotoville----------	0-8	10.0-14.5-19.0	---	5.1-5.8-6.5	0	1.0-2.0-3.0
	8-24	---	11.0-14.5-18.0	4.5-5.0-5.5	0	0.5-0.8-1.0
	24-60	---	11.0-14.5-18.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	60-80	8.0-13.5-19.0	---	5.1-5.8-6.5	0	0.0-0.2-0.5
Se:						
Steff----------	0-9	8.0-13.0-18.0	---	4.5-5.9-7.3	0	1.0-2.0-3.0
	9-33	---	8.0-13.0-18.0	4.5-5.0-5.5	0	1.0-2.0-3.0
	33-60	---	6.0-11.0-16.0	4.5-5.0-5.5	0	0.5-1.2-2.0
Sn:						
Stendal----------	0-6	11.0-15.0-19.0	---	4.5-5.5-6.5	0	1.0-2.0-3.0
	6-60	10.0-14.5-19.0	---	4.5-5.5-6.5	0	0.5-1.2-2.0
TtA:						
Tilsit----------	0-8	8.0-13.5-19.0	---	4.5-5.8-7.0	0	1.0-2.0-3.0
	8-24	---	15.0-17.0-19.0	4.5-5.0-5.5	0	0.5-0.8-1.0
	24-53	---	15.0-17.0-19.0	4.5-5.0-5.5	0	0.0-0.2-0.5
	53-80	---	5.0-16.0-27.0	4.5-5.0-5.5	0	0.0-0.2-0.5
TtB2:						
Tilsit----------	0-8	8.0-12.5-17.0	---	4.5-5.8-7.0	0	1.0-1.5-2.0
	8-24	---	15.0-17.0-19.0	4.5-5.0-5.5	0	0.5-0.8-1.0
	24-53	---	15.0-17.0-19.0	4.5-5.0-5.5	0	0.0-0.2-0.5
	53-80	---	5.0-16.0-27.0	4.5-5.0-5.5	0	0.0-0.2-0.5
UnB2:						
Uniontown----------	0-9	9.0-12.0-15.0	---	5.1-6.2-7.3	0	1.0-1.5-2.0
	9-40	10.0-14.0-18.0	---	5.1-6.5-7.8	0	0.5-0.8-1.0
	40-60	5.0-11.0-17.0	---	6.6-7.5-8.4	0-15-30	0.0-0.2-0.5
UnC:						
Uniontown----------	0-9	9.0-12.5-16.0	---	5.1-6.2-7.3	0	1.0-2.0-3.0
	9-40	10.0-14.0-18.0	---	5.1-6.5-7.8	0	0.5-0.8-1.0
	40-60	5.0-11.0-17.0	---	6.6-7.5-8.4	0-15-30	0.0-0.2-0.5
UnD:						
Uniontown----------	0-9	9.0-12.5-16.0	---	5.1-6.2-7.3	0	1.0-2.0-3.0
	9-40	10.0-14.0-18.0	---	5.1-6.5-7.8	0	0.5-0.8-1.0
	40-60	5.0-11.0-17.0	---	6.6-7.5-8.4	0-15-30	0.0-0.2-0.5
UtC3:						
Uniontown----------	0-8	8.0-10.5-13.0	---	5.1-6.2-7.3	0	1.0-1.5-2.0
	8-30	10.0-14.5-19.0	---	5.1-6.5-7.8	0	0.0-0.2-0.5
	30-60	5.0-11.0-17.0	---	6.6-7.5-8.4	0-15-30	0.0-0.2-0.5
W:						
Water----------	---	---	---	---	---	---
Wa:						
Wakeland----------	0-10	7.0-10.5-14.0	---	5.6-6.5-7.3	0	1.0-2.0-3.0
	10-60	7.0-10.5-14.0	---	5.6-6.5-7.3	0	1.0-2.0-3.0

Table J2.--Chemical Properties of the Soils--Continued

Map symbol	Depth	Cation	Effective	Soil	Calcium	Organic

and soil name		exchange capacity	cation exchange capacity	reaction	carbon-ate	matter
	In	meq/100 g	meq/100 g	pH	Pct	Pct
WbA:						
Weinbach----------	0-11	12.0-15.5-19.0	---	4.5-5.9-7.3	0	1.0-2.0-3.0
	11-25	---	11.0-14.0-17.0	4.5-5.0-5.5	0	0.5-0.8-1.0
	25-58	---	12.0-15.5-19.0	4.5-5.0-5.5	0	0.0-0.2-0.5
	58-80	---	8.0-13.5-19.0	4.5-5.3-6.0	0	0.0-0.2-0.5
WeD:						
Wellston----------	0-10	9.0-14.0-19.0	---	5.1-5.8-6.5	0	1.0-2.0-3.0
	10-36	---	10.0-14.5-19.0	4.5-5.3-6.0	0	0.5-0.8-1.0
	36-44	---	8.0-13.5-19.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	44-46	---	---	---	0	---
WeD3:						
Wellston----------	0-10	8.0-12.0-16.0	---	5.1-5.8-6.5	0	1.0-1.5-2.0
	10-36	---	10.0-14.5-19.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	36-44	---	8.0-13.5-19.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	44-46	---	---	---	0	---
WeE2:						
Wellston----------	0-10	9.0-13.5-18.0	---	5.1-5.8-6.5	0	1.5-2.0-2.5
	10-36	---	10.0-14.5-19.0	4.5-5.3-6.0	0	0.5-0.8-1.0
	36-44	---	8.0-13.5-19.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	44-46	---	---	---	0	---
WhA:						
Wheeling----------	0-12	9.0-12.5-16.0	---	5.1-5.8-6.5	0	1.0-2.0-3.0
	12-50	7.0-12.0-17.0	---	5.1-5.6-6.0	0	0.5-0.8-1.0
	50-60	4.0-8.0-12.0	---	5.1-5.6-6.0	0	0.0-0.2-0.5
WhB2:						
Wheeling----------	0-12	9.0-12.0-15.0	---	5.1-5.8-6.5	0	1.0-1.5-2.0
	12-50	7.0-12.0-17.0	---	5.1-5.6-6.0	0	0.5-0.8-1.0
	50-60	4.0-8.0-12.0	---	5.1-5.6-6.0	0	0.0-0.2-0.5
Wm:						
Wilbur----------	0-10	7.0-10.5-14.0	---	5.6-6.5-7.3	0	1.0-2.0-3.0
	10-60	7.0-10.5-14.0	---	5.6-6.5-7.3	0	1.0-2.0-3.0
Wo:						
Woodmere----------	0-10	13.0-18.0-23.0	---	6.1-6.7-7.3	0	1.0-2.0-3.0
	10-24	14.0-18.5-23.0	---	6.1-6.7-7.3	0	1.0-2.0-3.0
	24-84	---	16.0-20.5-25.0	4.5-5.3-6.0	0	0.5-1.2-2.0
ZaB2:						
Zanesville----------	0-7	---	9.0-13.5-18.0	4.5-5.3-6.0	0	1.0-1.5-2.0
	7-32	---	10.0-14.5-19.0	4.5-5.3-6.0	0	0.5-0.8-1.0
	32-52	---	10.0-14.5-19.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	52-80	---	10.0-16.0-22.0	4.5-5.3-6.0	0	0.0-0.2-0.5
ZaC:						
Zanesville----------	0-7	---	9.0-14.0-19.0	4.5-5.3-6.0	0	1.5-2.2-3.0
	7-32	---	10.0-14.5-19.0	4.5-5.3-6.0	0	0.5-0.8-1.0
	32-52	---	10.0-14.5-19.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	52-80	---	10.0-16.0-22.0	4.5-5.3-6.0	0	0.0-0.2-0.5
ZaC3:						
Zanesville----------	0-7	---	8.0-12.0-16.0	4.5-5.3-6.0	0	1.0-1.5-2.0
	7-26	---	10.0-14.5-19.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	26-52	---	10.0-14.0-18.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	52-80	---	10.0-16.0-22.0	4.5-5.3-6.0	0	0.0-0.2-0.5

Table J2.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter
	In	meq/100 g	meq/100 g	pH	Pct	Pct
ZaD:						
Zanesville----------	0-7	---	9.0-14.0-19.0	4.5-5.3-6.0	0	1.0-2.0-3.0
	7-32	---	10.0-14.5-19.0	4.5-5.3-6.0	0	0.5-0.8-1.0
	32-52	---	10.0-14.0-18.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	52-80	---	10.0-16.0-22.0	4.5-5.3-6.0	0	0.0-0.2-0.5
ZaD3:						
Zanesville----------	0-7	---	8.0-12.0-16.0	4.5-5.3-6.0	0	1.0-1.5-2.0
	7-26	---	10.0-14.5-19.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	26-52	---	10.0-14.0-18.0	4.5-5.3-6.0	0	0.0-0.2-0.5
	52-80	---	10.0-16.0-22.0	4.5-5.3-6.0	0	0.0-0.2-0.5
Zp:						
Zipp----------	0-10	20.0-24.0-28.0	---	5.6-6.5-7.3	0	1.5-2.2-3.0
	10-48	21.0-25.0-29.0	---	5.6-6.5-7.3	0	0.5-0.8-1.0
	48-60	20.0-23.5-27.0	---	6.6-7.5-8.4	0-15-30	0.5-0.8-1.0