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## Boron Fertilization of Corn in Kentucky

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UNIVERSITY OF KENTUCKY COLLEGE OF AGRICULTURE Lexington, Kentucky 40506

COOPERATIVE EXTENSION SERVICE



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BORON FERTILIZATION OF CORN IN KENTUCKY

by

L.W. Murdock, K.L. Wells, and H.F. Miller

The need for use of boron (B) for alfalfa production has been recognized for many years in Kentucky and is presently recommended for general use as an annual topdressing on alfalfa fields. Use of B is also recommended in Kentucky for red clover fields which are to be harvested for seed. In recent years, there has been interest in use of fertilizer B for good corn production in Kentucky. Plant available B is greatly affected by soil pH and decreases with increasing soil pH. Because of this, some states recommend use of B on corn grown on soils with a pH of 6.1 or higher. Also, some commercial soil testing laboratories serving Kentucky routinely test for B, and often recommend its use for corn. This has resulted in many corn growers in Kentucky asking if they need to use B on corn.

In order to determine if B is needed for corn production in Kentucky, a large number of field trials have been conducted by the U.K. Agronomy Department to test for B response. These studies were conducted during 1972-1976 under various soil, climatic, and corn production systems in the state. Results of these field trials are listed below.

				CORN	YIELDS	,	٢
	Soil	Soil	Number of	No		Boron	
County	Series	<u>pH</u>	Replications	$\frac{\text{Boron}}{\text{bu}/4}$	Boron bu/A	Rate #/ac	
	÷	19	72	DU/M		"740	
Union	Huntington	7.3	<u> </u>	131	128	1	
Union	Huntington	7.3	4	131	1.25	3	
Henderson	Huntington	7.4	4	126	132	1	
Henderson	Huntington	7.4	<u> </u>	126	158	3	
cont'd						,	

RESPONSE OF CORN TO BORON FERTILIZATION OVER FIVE YEARS THROUGHOUT KENTUCKY

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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	*******		· · · · ·		Corn Yields		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	County	Soil Series	Soil pH	Number of Replications	No <u>Boron</u> bu/A	Boron bu/A	Boron <u>Rate</u> #/ac
Shelby       Lowell       6.1       4       210       193       3         Shelby       Huntington       6.3       4       140       146       3         Breathitt       Pope       7.0       3       162       171       3         Pulaski       Crider       7.0       4       145       148       3         Caldwell       Zanesville       5.4       1       69       74       0.33         Daviess       Falaya       7.0       1       166       159       0.33         Graves       -       6.7       1       104       105       0.33         Union       Huntington       6.8       1       45       54       0.33         Simpson       -       6.7       3       102       113       3         Simpson       -       6.7       3       102       113       3         Barren       Fembroke       7.1       3       130       144       3         Union       Collins       5.9       3       162       151       1         Lee       Allegheny       6.0       3       183       179       1 <td< td=""><td></td><td></td><td></td><td><u>1973</u></td><td></td><td>•</td><td></td></td<>				<u>1973</u>		•	
Shelby       Huntington       6.3       4       140       146       3         Breathitt       Allegheny       6.8       3       175       165       3         Breathitt       Pope       7.0       3       162       171       3         Pulaski       Crider       7.0       4       145       148       3         Caldwell       Zanesville       5.4       1       69       74       0.33         Graves       -       6.7       1       104       105       0.33         Graves       -       6.7       1       104       105       0.33         Butler       7       5.4       3       173       162       3         Simpson       -       6.7       3       102       113       3         Baren       Pembroke       7.1       3       130       144       3         Union       Collins       5.9       1       133       136       0.33         Breathitt       Fope       6.9       4       122       122       1         Breathitt       Pope       6.9       4       122       122       1         G	Shelby	Lowell	6.1	4	210	193	3
Breathitt       Allegheny       6.8       3       175       165       3         Breathitt       Pope       7.0       3       162       171       3         Breathitt       Pope       7.0       4       145       148       3         Caldwell       Zanesville       5.4       1       69       74       0.33         Daviess       Falaya       7.0       1       166       159       0.33         Crittenden       Philo       7.5       1       165       159       0.33         Union       Huntington       6.8       1       45       54       0.33         Simpson       -       6.9       3       138       142       3         Simpson       -       6.7       3       102       113       3         Barren       Pembroke       7.1       3       130       144       3         Union       Collins       5.9       3       162       151       1         Lee       Allegheny       6.0       3       183       179       1         Graves       Collins       -       1       125       126       0.33 <tr< td=""><td>Shelby</td><td>Huntington</td><td>6.3</td><td>4</td><td>140</td><td>146</td><td>3</td></tr<>	Shelby	Huntington	6.3	4	140	146	3
Breathitt       Fope       7.0       3       162       171       3         Pulaski       Crider       7.0       4       145       148       3         Caldwell       Zanesville       5.4       1       69       74       0.33         Daviess       Falaya       7.0       1       166       159       0.33         Graves       -       6.7       1       104       105       0.33         Union       Huntington       6.8       1       45       54       0.33         Butler       -       5.4       3       173       162       3         Simpson       -       6.7       3       102       113       3         Barren       Pembroke       7.1       3       130       144       3         Union       Collins       5.9       1       133       136       0.33         Breathitt       Pope       6.9       4       122       122       1         Breathitt       Allegheny       5.9       3       162       151       1         Lee       Allegheny       6.0       3       183       179       1	Breathitt	Allegheny	6.8	3	175	165	3
PulaskiCrider7.041451483CaldwellZanesville5.4169740.33DaviessFalaya7.011661590.33Graves-6.711041050.33CrittendenPhilo7.511651590.33DutonHuntington6.8145540.33Butler-5.431731623Simpson-6.731021133BarrenPembroke7.131301443UnionCollins5.911331360.33BreathittPope6.941221221BreathittPope6.941221221BreathittPope6.931831791LeeAllegheny6.031831791GravesCollins-11251260.33CaldwellPembroke6.53981142GravesCollins5.731451411GravesCollins5.731451411GravesGrenada6.231211022McCrackenRobinsonville6.13100922GravesGrenada6.831391312G	Breathitt	Pope	7.0	3	162	171	3
Caldwell       Zanesville       5.4       1       69       74       0.33         Daviess       Falaya       7.0       1       166       159       0.33         Graves       -       6.7       1       104       105       0.33         Graves       -       6.7       1       104       105       0.33         Union       Huntington       6.8       1       45       54       0.33         Butler       -       5.4       3       173       162       3         Simpson       -       6.9       3       138       142       3         Simpson       -       6.7       3       102       113       3         Barren       Pembroke       7.1       3       130       144       3         Union       Collins       5.9       1       133       136       0.33         Breathitt       Pope       6.9       4       122       122       1         Lee       Allegheny       6.0       3       183       179       1         Graves       Collins       -       1       125       126       0.33         Graves<	Pulaski	Crider	7.0	4	145	1,48	3
Daviess       Falaya       7.0       1       166       159       0.33         Graves       -       6.7       1       104       105       0.33         Crittenden       Philo       7.5       1       165       159       0.33         Crittenden       Philo       7.5       1       165       159       0.33         Butler       -       5.4       3       173       162       3         Simpson       -       6.7       3       102       113       3         Barren       Pembroke       7.1       3       130       144       3         Union       Collins       5.9       1       133       136       0.33         Breathitt       Pope       6.9       4       122       122       1         Breathitt       Allegheny       6.0       3       183       179       1         Lee       Allegheny       6.0       3       183       179       1         Graves       Collins       -       1       125       126       0.33         Graves       Collins       5.7       3       145       141       1	Caldwell	Zanesville	5.4	1 .	69	74	0.33
Graves       -       6.7       1       104       105       0.33         Crittenden       Philo       7.5       1       165       159       0.33         Union       Huntington       6.8       1       45       54       0.33         Butler       -       5.4       3       173       162       3         Simpson       -       6.9       3       138       142       3         Simpson       -       6.7       3       102       113       3         Barren       Pembroke       7.1       3       130       144       3         Union       Collins       5.9       1       133       136       0.33         Breathitt       Pope       6.9       4       122       122       1         Breathitt       Allegheny       6.0       3       183       179       1         Graves       Collins       -       1       125       126       0.33         Graves       Collins       5.7       3       145       141       1         Graves       Collins       5.7       3       145       143       2         Gr	Daviess	Falava	7.0	1	166	159	0.33
Grittenden       Philo       7.5       1       165       159       0.33         Undon       Huntington       6.8       1       45       54       0.33         Butler       -       5.4       3       173       162       3         Simpson       -       6.9       3       138       142       3         Simpson       -       6.7       3       102       113       3         Barren       Pembroke       7.1       3       130       144       3         Union       Collins       5.9       1       133       136       0.33         Breathitt       Pope       6.9       4       122       122       1         Breathitt       Allegheny       5.9       3       162       151       1         Lee       Allegheny       6.0       3       183       179       1         Graves       Collins       -       1       125       126       0.33         Graves       Collins       -       1       125       126       0.33         Graves       Collins       5.7       3       145       141       1 <td< td=""><td>Graves</td><td>~ ~</td><td>6.7</td><td>1</td><td>104</td><td>105</td><td>0.33</td></td<>	Graves	~ ~	6.7	1	104	105	0.33
Union       Huntington       6.8       1       45       54       0.33         Butler       -       5.4       3       173       162       3         Simpson       -       6.9       3       138       142       3         Barren       Pembroke       7.1       3       130       144       3         Union       Collins       5.9       1       133       136       0.33         Breathitt       Pope       6.9       4       122       122       1         Breathitt       Allegheny       5.9       3       162       11       1         Lee       Allegheny       6.0       3       183       179       1         Graves       Collins       -       1       125       126       0.33         Graves       Collins       -       1       125       126       0.33         Graves       Collins       -       1       125       126       0.33         Graves       Collins       5.7       3       145       141       1         Graves       Grenada       6.2       3       121       102       2 <td< td=""><td>Crittenden</td><td>Philo</td><td>7.5</td><td>1</td><td>165</td><td>159</td><td>0.33</td></td<>	Crittenden	Philo	7.5	1	165	159	0.33
Butler       -       5.4       3       173       162       3         Simpson       -       6.9       3       138       142       3         Simpson       -       6.7       3       102       113       3         Barren       Pembroke       7.1       3       130       144       3         Union       Collins       5.9       1       133       136       0.33         Breathitt       Pope       6.9       4       122       122       1         Breathitt       Allegheny       5.9       3       162       151       1         Lee       Allegheny       6.0       3       183       179       1         Graves       Collins       -       1       125       126       0.33         Graves       Collins       -       1       125       126       0.33         Graves       Collins       5.7       3       145       141       1         Graves       Collins       5.7       3       145       141       1         Graves       Grenada       6.2       3       121       102       2         McCrack	Union	Huntington	6.8	1	45	54	0.33
Simpson       -       6.9       3       138       142       3         Simpson       -       6.7       3       102       113       3         Barren       Pembroke       7.1       3       130       144       3         Union       Collins       5.9       1       133       136       0.33         Breathitt       Pope       6.9       4       122       122       1         Breathitt       Allegheny       5.9       3       162       151       1         Lee       Allegheny       6.0       3       183       179       1         Graves       Collins       -       1       125       126       0.33         Graves       Collins       -       1       125       126       0.33         Graves       Collins       -       1       125       126       0.33         Graves       Collins       5.7       3       145       141       1         Graves       Collins       5.7       3       145       141       1         Graves       Grenada       6.2       3       121       102       2	Butler	~~~~	5.4	3	173	162	3
Simpson       -       6.7       3       102       113       3         Barren       Pembroke       7.1       3       130       144       3         Union       Collins       5.9       1       133       136       0.33         Breathitt       Pope       6.9       4       122       122       1         Breathitt       Allegheny       5.9       3       162       151       1         Lee       Allegheny       6.0       3       183       179       1         Graves       Collins       -       1       125       126       0.33         Graves       Collins       5.7       3       145       141       1         Graves       Grenada       6.2       3       121       101       1	Simpson	· · · · · · · · · · · · · · · · · · ·	6.9	3.	138	142	3
Barren       Pembroke       7.1       3       130       144       3         Union       Collins       5.9       1       133       136       0.33         Breathitt       Pope       6.9       4       122       122       1         Breathitt       Allegheny       5.9       3       162       151       1         Lee       Allegheny       6.0       3       183       179       1         Graves       Collins       -       1       125       126       0.33         Graves       Collins       5.7       3       145       141       1         Graves       Grenada       6.2       3       121       101       1         Graves       Grenada       6.2       3       121       102       2 <tr< td=""><td>Simpson</td><td></td><td>6.7</td><td>3</td><td>102</td><td>113</td><td>3</td></tr<>	Simpson		6.7	3	102	113	3
Union       Collins       5.9       1       133       136       0.33         Breathitt       Pope       6.9       4       122       122       1         Breathitt       Allegheny       5.9       3       162       151       1         Lee       Allegheny       6.0       3       183       179       1         Graves       Collins       -       1       125       126       0.33         Graves       Collins       5.7       3       145       141       1         Graves       Grenada       6.2       3       121       102       2         McCracken       Robinsonville       6.1       3       100       96       1	Barren	Pembroke	7.1	3	130	144	3
Breathitt       Pope       6.9       4       122       122       1         Breathitt       Allegheny       5.9       3       162       151       1         Lee       Allegheny       6.0       3       183       179       1         Graves       Collino       -       1       125       126       0.33         Graves       Collins       -       3       183       179       1         Graves       Collins       -       1       125       126       0.33         Graves       Collins       5.7       3       145       141       1         Graves       Grenada       6.2       3       121       101       1         Graves       Grenada       6.2       3       121       102       2         McCracken       Robinsonville       6.1       3       100       92       2	Union	Colling	5 0	1	133	136	0.33
Breathitt       Pope       6.9       4       122       122       1         Breathitt       Allegheny       5.9       3       162       151       1         Lee       Allegheny       6.0       3       183       179       1         Green       Baxter       6.3       3       115       ,120       1         Graves       Collins       -       1       125       126       0.33         Caldwell       Pembroke       6.5       3       98       102       1         Caldwell       Pembroke       6.5       3       98       114       2         Graves       Collins       5.7       3       145       141       1         Graves       Grenada       6.2       3       121       100       1         Graves       Grenada       6.2       3       121       101       1         Graves       Grenada       6.2       3       121       102       2         McCracken       Robinsonville       6.1       3       100       92       2         Graves       Grenada       6.8       3       139       131       2	UNITON	COTTINS	1.12	107/	.4.00	1.50	<b>0.00</b>
Breathitt       Allegheny       5.9       3       162       151       1         Lee       Allegheny       6.0       3       183       179       1         Green       Baxter       6.3       3       115       120       1         Green       Baxter       6.3       3       115       120       1         Graves       Collins       -       1       125       126       0.33         Caldwell       Pembroke       6.5       3       98       102       1         Caldwell       Pembroke       6.5       3       98       114       2         Graves       Collins       5.7       3       145       141       1         Graves       Grenada       6.2       3       121       102       2         McCracken       Robinsonville       6.1       3       100       96       1         McCracken       Robinsonville       6.1       3       139       131       2         Graves       Grenada       6.8       3       139       131       2         Graves       Grenada       6.4       3       184       187       2 <td>Breathitt</td> <td>Pone</td> <td>6 9</td> <td><u></u></td> <td></td> <td>122</td> <td>, 1 , ·</td>	Breathitt	Pone	6 9	<u></u>		122	, 1 , ·
Lee       Allegheny       5.5       3 $102$ $131$ $1$ Lee       Allegheny       6.0       3 $183$ $179$ $1$ Green       Baxter       6.3       3 $115$ $120$ $1$ Green       Baxter       6.3       3 $115$ $120$ $1$ Graves       Collins $ 1$ $125$ $126$ $0.33$ Caldwell       Pembroke $6.5$ $3$ $98$ $102$ $1$ Graves       Collins $5.7$ $3$ $145$ $144$ $2$ Graves       Grenada $6.2$ $3$ $121$ $101$ $1$ Graves       Grenada $6.2$ $3$ $121$ $101$ $1$ Graves       Grenada $6.2$ $3$ $121$ $102$ $2$ McCracken       Robinsonville $6.1$ $3$ $100$ $92$ $2$ Graves       Grenada $6.8$ $3$ $139$ $149$ $1$ Graves       Grenada	Breathitt	Alloghopy	50	. 4	162	151	·
LeeAllegheny6.031831791GreenBaxter6.331151201GravesCollins-11251260.33CaldwellPembroke6.53981021CaldwellPembroke6.53981142GravesCollins5.731451411GravesCollins5.731451432GravesGrenada6.231211011GravesGrenada6.231211022McCrackenRobinsonville6.13100961McCrackenRobinsonville6.131391491GravesGrenada6.831391491GravesGrenada6.431841872	Loo	Alloghony	6.0	, J , J	102	170	· , , , , , , , , , , , , , , , , , , ,
Graves       Colling       -       1       125       126       0.33         Graves       Colling       -       1       125       126       0.33         Caldwell       Pembroke       6.5       3       98       102       1         Caldwell       Pembroke       6.5       3       98       102       1         Graves       Collins       5.7       3       145       141       1         Graves       Collins       5.7       3       145       143       2         Graves       Grenada       6.2       3       121       101       1         Graves       Grenada       6.2       3       121       102       2         McCracken       Robinsonville       6.1       3       100       96       1         McCracken       Robinsonville       6.1       3       139       149       1         Graves       Grenada       6.8       3       139       131       2         Graves       Grenada       6.4       3       184       187       2         Graves       Collins       6.4       3       184       187       2     <	Groon	Bowton	0.0 6.0	2	115	120	- 4
Graves.       Collin       -       1       125       126       0.33         Caldwell       Pembroke       6.5       3       98       102       1         Caldwell       Pembroke       6.5       3       98       114       2         Graves       Collins       5.7       3       145       141       1         Graves       Collins       5.7       3       145       143       2         Graves       Grenada       6.2       3       121       101       1         Graves       Grenada       6.2       3       121       102       2         McCracken       Robinsonville       6.1       3       100       96       1         McCracken       Robinsonville       6.1       3       100       92       2         Graves       Grenada       6.8       3       139       149       1         Graves       Grenada       6.8       3       139       131       2         Graves       Collins       6.4       3       184       187       2	oreen	DAXLEL	0.5	ي ب	TT	¥ 120	т
Graves       Collins       -       1       125       126       0.33         Caldwell       Pembroke       6.5       3       98       102       1         Caldwell       Pembroke       6.5       3       98       114       2         Graves       Collins       5.7       3       145       141       1         Graves       Collins       5.7       3       145       143       2         Graves       Grenada       6.2       3       121       101       1         Graves       Grenada       6.2       3       121       102       2         McCracken       Robinsonville       6.1       3       100       96       1         McCracken       Robinsonville       6.1       3       100       92       2         Graves       Grenada       6.8       3       139       149       1         Graves       Grenada       6.8       3       139       131       2         Graves       Collins       6.4       3       184       187       2		0.111		<u>1975</u>	105	inc	0.00
Caldwell       Pembroke       6.5       3       98 $102$ 1         Caldwell       Pembroke       6.5       3       98 $114$ 2         Graves       Collins       5.7       3 $145$ $141$ 1         Graves       Collins       5.7       3 $145$ $143$ 2         Graves       Grenada $6.2$ 3 $121$ $101$ 1         Graves       Grenada $6.2$ 3 $121$ $102$ 2         McCracken       Robinsonville $6.1$ 3 $100$ $92$ 2         Graves       Grenada $6.8$ $3$ $139$ $149$ $1$ Graves       Grenada $6.8$ $3$ $139$ $149$ $1$ Graves       Grenada $6.8$ $3$ $139$ $131$ $2$ Graves       Collins $6.4$ $3$ $184$ $187$ $2$	Graves.	Collins	_	, , <b>L</b>	125	126	0.33
Caldwell       Pembroke       6.5       3       98       114       2         Graves       Collins       5.7       3       145       141       1         Graves       Collins       5.7       3       145       143       2         Graves       Grenada       6.2       3       121       101       1         Graves       Grenada       6.2       3       121       102       2         McCracken       Robinsonville       6.1       3       100       96       1         McCracken       Robinsonville       6.1       3       100       92       2         Graves       Grenada       6.8       3       139       149       1         Graves       Grenada       6.8       3       139       131       2         Graves       Collins       6.4       3       184       150       1         Graves       Collins       6.4       3       184       187       2	Caldwell	Pembroke	6.5	3	98	102	
Graves       Collins       5.7       3       145       141       1         Graves       Collins       5.7       3       145       143       2         Graves       Grenada       6.2       3       121       101       1         Graves       Grenada       6.2       3       121       102       2         McCracken       Robinsonville       6.1       3       100       96       1         McCracken       Robinsonville       6.1       3       100       92       2         Graves       Grenada       6.8       3       139       149       1         Graves       Grenada       6.8       3       139       131       2         Graves       Grenada       6.4       3       184       150       1         Graves       Collins       6.4       3       184       187       2	Caldwell	Pembroke	6.5	/3	.98	114	2
Graves       Collins       5.7       3       145       143       2         Graves       Grenada       6.2       3       121       101       1         Graves       Grenada       6.2       3       121       102       2         McCracken       Robinsonville       6.1       3       100       96       1         McCracken       Robinsonville       6.1       3       100       92       2         Graves       Grenada       6.8       3       139       149       1         Graves       Grenada       6.8       3       139       131       2         Graves       Grenada       6.4       3       184       150       1         Graves       Collins       6.4       3       184       187       2	Graves	Collins	5.7	3	145	141	Т Э
Graves       Grenada       6.2       3       121       101       1         Graves       Grenada       6.2       3       121       102       2         McCracken       Robinsonville       6.1       3       100       96       1         McCracken       Robinsonville       6.1       3       100       92       2         Graves       Grenada       6.8       3       139       149       1         Graves       Grenada       6.8       3       139       131       2         Graves       Grenada       6.4       3       184       150       1         Graves       Collins       6.4       3       184       187       2	Graves	Collins	5./	. 3	145	.143	2
Graves       Grenada       6.2       3       121       102       2         McCracken       Robinsonville       6.1       3       100       96       1         McCracken       Robinsonville       6.1       3       100       92       2         Graves       Grenada       6.8       3       139       149       1         Graves       Grenada       6.8       3       139       131       2         Graves       Grenada       6.4       3       184       150       1         Graves       Collins       6.4       3       184       187       2	Graves	Grenada	6.2	3	121	101	1
McCracken         Robinsonville         6.1         3         100         96         1           McCracken         Robinsonville         6.1         3         100         92         2           Graves         Grenada         6.8         3         139         149         1           Graves         Grenada         6.8         3         139         131         2           Graves         Collins         6.4         3         184         150         1           Graves         Collins         6.4         3         184         187         2	Graves	Grenada	6.2	. 3	121	102	2
McCracken         Robinsonville         6.1         3         100         92         2           Graves         Grenada         6.8         3         139         149         1           Graves         Grenada         6.8         3         139         131         2           Graves         Collins         6.4         3         184         150         1           Graves         Collins         6.4         3         184         187         2	McCracken	Robinsonville	6.1	3	100	96	1
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Graves         Grenada         6.8         3         139         149         1           Graves         Grenada         6.8         3         139         131         2           Graves         Collins         6.4         3         184         150         1           Graves         Collins         6.4         3         184         187         2				1976			
Graves         Grenada         6.8         3         139         131         2           Graves         Collins         6.4         3         184         150         1           Graves         Collins         6.4         3         184         187         2	Graves	Grenada	6.8	3	139	149	1
Graves         Collins         6.4         3         184         150         1           Graves         Collins         6.4         3         184         187         2	Graves	Grenada	6.8	3	139	131	2
Graves Collins 6.4 3 184 187 2	Graves	Collins	6.4	<sup>~</sup> 3	184	150	1
	Graves	Collins	6.4	3	184	187	2
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Of these 36 different tests, only two resulted in significantly higher yields from use of B (Barren County in 1973; Henderson County @ 3 lb B/A in

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`` `` 1972). Three tests also resulted in significantly lower yields from use of B. In either case (significant increase or significant decrease), soil pH was 6.1 or greater.

As shown in the table, average yield from all sites was 135 bu/A without B and 134 bu/A with B. Considering only those sites with pH 6.1 or greater, average yield was 133 bu/A without B and 132 bu/A with B.

In a number of the studies, plant leaf samples were taken in order to insure that no toxicities or deficiencies existed. All of the other nutrients were found to be at acceptable concentrations. Boron content in the leaf tissue was found to be adequate even where no B was added. The concentration of B in the leaves increased with boron fertilization, indicating the B applied was available for plant use.

## SUMMARY

Results of these studies show it is very difficult to predict a response of boron fertilization on corn. It also indicates that boron fertilization of corn on most soils in the state of Kentucky will likely result in no increase in yield. A negative response in corn yield from boron fertilization appears just as probable as a positive response. The data show little evidence that B fertilization on corn would be profitable on Kentucky soils at the present time.