

EFFECT OF POTASSIUM FERTILIZATION ON GRAIN SORGHUM

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Sorghum grain production in Kansas is frequently hindered by lodging late in the season. Such lodging is often associated with climatic conditions during the growing season which cause stress on the plants. Such stress, in the form of heat and summer drought in nonirrigated areas, frequently leads to stalk infection with Fusarium and Macrophomia organisms which destroy the pith of the stalk allowing lodging to occur.

Frequently lodging in southeastern Kansas has been associated with fields that have received adequate to excessive levels of N and P. Little if any information has been available relative to the role of K under these conditions and how K might affect stability of stem structure when subjected to stress. These investigations were initiated to study the effect of K fertilization on grain sorghum yield, stalk strength and plant uptake of K. The interaction of K application with variety, planting date and N application was also studied in these investigations.

Experimental Procedure

Experiments conducted on this project were initiated on farmer fields in southeast Kansas. The sites were selected through the county agents using past soil tests and lodging history of the fields. Two of the studies involved combinations of N and K fertilizer rates. The fertilizer application was made on these locations by plot equipment of the Agronomy Department and the tillage, weed control and planting was done by the farmer in his normal farming of the rest of the field. The third experiment involved four rates of K and six hybrids planted at three dates. Fertilizing, planting and weed control were handled by experimental plot equipment. Composite soil samples were collected from each location before fertilizer application and analyzed as shown in Table 1.

Table 1. Chemical Analyses of Soil Samples from Potassium Experiments, 1972.

Location	Depth in	pH	Organic matter %	Avail. P ppm	Exchangeable			Avail. NO ₃ ppm N
					K #/A	Ca ppm	Mg ppm	
Bourbon Co.	0- 6	5.8	2.6	30	275	2144	155	13.5
	6-12	5.6	2.6	9	249	2166	144	5.4
	12-24	5.6	1.8	5	315	2486	161	3.7
	24-36	5.6	1.6	3	426	3368	179	3.7
Crawford Co.	0- 6	6.5	2.6	12	249	2691	158	11.4
	6-12	6.1	2.4	6	239	2437	158	9.1
	12-24	5.9	1.7	4	307	2755	150	4.5
	24-36	6.2	1.5	4	413	4455	122	4.2
Wilson Co.	0- 6	5.8		16	169			
	6-12	5.4		18	159			
	12-18	5.4		6	227			
	18-24	5.5		3	299			
	24-30	5.6		3	342			

On each of the sites leaf samples were collected at two stages of plant development--5-7 leaf stage and boot stage. Each sample consisted of 10 leaves which were dried at 65 to 70 C and then ground to pass a 2 mm sieve. The leaf samples were digested in H₂SO₄ and analyzed for N, P, and K content. In addition to the leaf samples, whole plants were collected at physiological maturity and two sections of the culm at the base of the plant and at the peduncle base, were retained for crushing strength and chemical analyses. These analyses were not completed at the time of this report, and will not be discussed.

Grain yields were obtained by hand harvesting an area from each plot and subsequently threshing with a plot thresher. All grain yields were corrected to 12.5% moisture. Percent lodging was determined at harvest by counting total heads per plot and number of lodged heads. No grain yields were obtained from the third planting date at the Wilson county sites.

Results and Discussion

Rainfall was generally adequate for excellent grain sorghum yields in the area where these experiments were located, however, an extended dry period did occur in the spring in late May through early June at the Crawford and Wilson county sites. Much K deficiency was observed in the area on corn and grain sorghum at this time because of poor uptake of native and applied K located in the surface soil. This point should be kept in mind when looking at the early leaf sample K results on the Crawford and Wilson county sites.

Grain yields were not significantly increased by either N or K fertilization at either the Bourbon or Crawford locations, Tables 2 and 3. The K soil tests on these areas were in the medium-high soil test range by present interpretation standards and the likelihood of yield response to K would be low. The lack of N response is not completely understood, but is likely tied with previous cropping history (wheat at Crawford and soybeans at Bourbon) and residual nitrogen from past applications.

No lodging had occurred at harvest time on the Bourbon county site and only a minimal amount had occurred on the Crawford county site. The application of K significantly reduced the amount of lodging at the Crawford location with the first increment (80 lbs K_2O/A) being as effective as higher rates. The two K sources (KCl and K_2SO_4) were not significantly different in their effect on lodging, but the data would suggest a trend to KCl being more effective. However, more data is needed to fully evaluate material differences.

Nitrogen application increased N content at both sampling dates at the Crawford locations, whereas, N application had no significant influence on N content at the Bourbon location. The N contents were relatively high in all samples at this location. Potassium application significantly increased K content of leaf samples at the early sampling date at both locations, but had no significant effect on K content at the boot stage. The Crawford location had consistently

lower K contents in the leaf samples than the Bourbon location. The K contents at the early sampling at the Crawford location were quite low in comparison to what is normally found at this stage of maturity and probably are a reflection of poor K uptake due to the extremely dry conditions that occurred for about a month after sorghum planting.

Recognizing that grain sorghum hybrids differ in stalk strength, a third study was initiated using 5 commonly grown grain sorghum hybrids in the area and RS626 a sorghum described by sorghum researchers as having a tendency to lodge. These hybrids were planted at three different dates on blocks receiving rates of K up to 320 lbs K_2O/A . The site selected was a shallow soil with a low to medium soil test for K. The three planting dates starting in mid-April and at monthly intervals thereafter were selected to cover the normal range of planting dates for the area. Weather conditions during this season were cool and damp during April and early May and then quite dry until early June after which adequate moisture was received.

No significant yield responses to K application were found from either of the first two planting dates, Tables 4 and 5. A trend for yield increase due to K application is noted for the second planting date (about 20% probability level). Hybrid differences were noted at the first planting date. Early observation of the plots indicated poor stands on the RS626 and DeKalb C42A at the first planting date due to seedling vigor differences under the cool conditions of April-May after planting. No significant hybrid differences were noted for the second planting date.

An analysis of variance of combined dates for yield showed significant planting date, hybrid, planting date x K, planting date x hybrid and K x hybrid effects. This would indicate K is involved with yield increases but hybrid and weather conditions (planting date) are also involved.

Similar observations can be made on lodging. Significant hybrid differences are found when individual planting dates are examined, but when a combined analysis of dates is made, many significant interactions are found indicating a combination of the factors studied is involved in lodging.

The leaf samples collected at two stages of growth at all three planting dates (Tables 4, 5, and 6) indicate a substantial and consistent increase in K content with K application. The first two planting dates (no K applied) show higher K contents at boot stage than at the early stage. This is opposite of what is normally found but is probably due to the cool dry weather conditions of the early growing season. Hybrid differences are noted for N and P content as well as K content of the leaf samples. Potassium content differences among hybrids, however, are only significant at the boot stage sampling for all three planting dates. It is interesting to note that Asgrow Dorado and Funks G522 were consistently in the top three ranks for K content and RS626 and ACCO R1090 were in the bottom three for K content. More site years of data would be needed to establish the significance of this observation.

Summary

In summary, the data collected from these investigations would indicate that K application can have a beneficial effect on reducing lodging of grain sorghum. The data also indicates that many other factors are also involved, such as N rates, hybrids and climatic conditions. Potassium application also can be expected to increase the leaf potassium content. The leaf K content is not only influenced by K application but climatic and hybrid differences. Differences in K content due to K application were shown to be greater at an early stage of plant growth than at the boot stage.

Table 2. Nitrogen-Potassium Effects on Yield, Lodging and Leaf Composition of Grain Sorghum

Richard Geir, Crawford Co.

N lbs/A	Treatments K ₂ O	K carrier	Grain yield bu/A	Lodging %	Leaf Composition					
					7 Leaf Stage			Boot Stage		
					N %	P %	K %	N %	P %	K %
0	0	--	95	2.1	3.19	0.328	0.93	2.50	0.335	1.22
75	0	--	105	13.2	3.43	0.316	1.05	2.57	0.350	1.42
150	0	--	89	14.9	3.37	0.300	1.04	2.87	0.361	1.40
225	0	--	88	12.4	3.62	0.336	1.07	3.00	0.361	1.38
0	80	KCl	93	0.6	3.34	0.337	1.14	2.64	0.343	1.42
75	80	"	99	1.7	3.31	0.298	1.21	2.76	0.360	1.50
150	80	"	111	1.2	3.42	0.310	1.34	2.96	0.383	1.43
225	80	"	97	1.3	3.53	0.332	1.38	2.92	0.389	1.48
0	160	"	95	1.6	3.01	0.324	1.40	2.58	0.343	1.40
75	160	"	106	3.2	3.30	0.315	1.25	2.85	0.383	1.42
150	160	"	94	2.8	3.46	0.319	1.38	2.87	0.355	1.37
225	160	"	111	1.3	3.35	0.307	1.25	2.84	0.358	1.44
0	320	"	88	1.4	3.25	0.330	1.62	2.58	0.345	1.53
75	320	"	107	0.0	3.30	0.313	1.63	2.87	0.351	1.37
150	320	"	106	0.4	3.47	0.333	1.77	3.05	0.380	1.49
225	320	"	101	0.3	3.41	0.302	1.71	2.89	0.357	1.49
0	160	K ₂ SO ₄	100	1.6	3.22	0.323	1.54	2.71	0.363	1.49
75	160	"	92	6.8	3.40	0.313	1.44	2.59	0.385	1.51
150	160	"	94	6.4	3.42	0.300	1.37	3.01	0.381	1.41
225	160	"	100	3.3	3.51	0.307	1.41	2.78	0.373	1.45
LSD	.05		NS	6.9	0.24	NS	0.30	0.31	NS	NS

Table 2 continued.

Mean Values:

Lbs N/A

0	93	1.4	3.20	0.330	1.27	2.57	0.342	1.39
75	104	4.5	3.34	0.310	1.28	2.76	0.361	1.43
150	100	4.8	3.43	0.316	1.38	2.94	0.370	1.42
225	99	3.8	3.48	0.320	1.35	2.91	0.366	1.45

LSD .05

Lbs K₂O/A

0	94	10.6	3.40	0.320	1.02	2.73	0.352	1.36
80	100	1.2	3.40	0.319	1.27	2.82	0.369	1.46
160	102	2.2	3.28	0.316	1.32	2.79	0.360	1.41
320	101	0.5	3.36	0.320	1.68	2.85	0.358	1.47

LSD .05

KCl

K₂SO₄

NS	NS	3.6	NS	NS	0.16	NS	NS	NS
102	102	2.2	3.28	0.316	1.32	2.79	0.360	1.41
97	97	4.5	3.39	0.311	1.44	2.77	0.375	1.47

LSD .05

$\frac{1}{L}$ All plots received 50 lb P₂O₅/A as 0-46-0 pre-plant.

Variety: Prairie Valley PV735

Planted: May 8.

Exch. K

1b/A: 0-6" 249

6-12" 239

12-24" 307

24-36" 413

Table 3. Nitrogen-Potassium Effects on Yield, Lodging and Leaf Composition of Grain Sorghum

Treatments		K carrier	Grain yield bu/A	Lodging %	Leaf Composition					
N lbs/A	K ₂ O				6 Leaf Stage		Leaf Stage		Boot Stage	
				N %	P %	K %	N %	P %	K %	
0	0	---	117	0	4.33	0.401	2.12	3.15	0.443	1.62
75	0	---	101	0	4.31	0.413	2.00	3.24	0.433	1.53
150	0	---	111	0	4.42	0.408	1.81	3.58	0.483	1.67
225	0	---	103	0	4.58	0.424	2.14	3.31	0.454	1.69
0	80	KCl	101	0	4.35	0.424	2.20	3.25	0.454	1.67
75	80	"	106	0	4.25	0.437	2.23	3.24	0.465	1.50
150	80	"	107	0	4.40	0.417	2.35	3.39	0.469	1.68
225	80	"	109	0	4.27	0.418	1.98	3.47	0.469	1.71
0	160	"	107	0	4.15	0.407	2.20	3.43	0.452	1.63
75	160	"	109	0	4.27	0.411	2.45	3.35	0.463	1.66
150	160	"	121	0	4.35	0.416	2.08	3.39	0.462	1.70
225	160	"	98	0	4.24	0.411	2.12	3.52	0.452	1.64
0	320	"	90	0	4.22	0.359	2.28	3.23	0.464	1.64
75	320	"	119	0	4.24	0.402	2.20	3.30	0.469	1.70
150	320	"	108	0	4.34	0.432	2.51	3.31	0.459	1.59
225	320	"	109	0	4.29	0.423	2.42	3.31	0.451	1.64
0	160	K ₂ SO ₄	106	0	4.26	0.398	2.39	3.19	0.393	1.64
75	160	"	118	0	4.36	0.424	2.46	3.41	0.438	1.61
150	160	"	96	0	4.38	0.413	2.24	3.44	0.470	1.76
225	160	"	112	0	4.45	0.411	2.25	3.46	0.469	1.74
				NS	NS	NS	0.33	NS	NS	NS
LSD .05										
										16

Table 3 continued:
Mean Values:

Lbs N/A															
	0	104	---	4.26	0.398	2.20	3.26	0.454	1.64						
	75	109	---	4.27	0.416	2.22	3.28	0.457	1.60						
	150	112	---	4.38	0.418	2.19	3.42	0.468	1.66						
	225	105	---	4.35	0.419	2.17	3.40	0.457	1.67						
LSD	.05	NS		NS	NS	NS	NS	NS	NS						
Lbs K ₂ O/A															
	0	108	---	4.41	0.412	2.02	3.32	0.453	1.63						
	80	106	---	4.32	0.424	2.19	3.34	0.464	1.64						
	160	109	---	4.25	0.412	2.22	3.42	0.457	1.66						
	320	106	---	4.27	0.404	2.35	3.29	0.461	1.64						
LSD	.05	NS		0.11	NS	0.17	NS	NS	NS						
KCl		109	---	4.25	0.412	2.22	3.42	0.457	1.66						
K ₂ SO ₄		108	---	4.36	0.412	2.33	3.38	0.442	1.69						
LSD	.05	NS		0.11	NS	NS	NS	NS	NS						

1/ All plots received 50 lb P₂O₅/A as 0-46-0 pre-plant.

2/ No lodging at this location.

Variety: Acco 109
 Planted: May 19
 Exch. K lb/A: 0-6" 275
 6-12" 249
 12-24" 315
 24-36" 426

Table 4.

Effects of Planting Date, Variety and Potassium Rates on Yield, Lodging and Leaf Composition of Grain Sorghum

David Voth, Wilson Co., First Planting Date - April 19, 1972

Variety	Treatments K ₂ O Lbs/A	Grain yield bu/A	Lodging l/ %	Leaf Composition				Boot Stage				
				N %	P %	K %	9 %	N %	P %	K %	Stage %	
Asgrow Dorado	0	83	0.0	3.38	0.302	0.85	3.34	0.397	3.34	0.323	1.18	1.18
"	80	79	3.4	3.28	0.296	1.03	3.20	0.391	3.20	0.391	1.18	1.18
"	160	93	0.0	3.48	0.342	1.57	3.35	0.417	3.35	0.417	1.26	1.26
"	320	64	1.3	3.46	0.328	1.87	3.20	0.417	3.20	0.417	1.33	1.33
RS626	0	43	7.6	3.34	0.326	0.95	3.05	0.323	3.05	0.323	1.00	1.00
"	80	53	4.4	3.38	0.302	1.13	2.96	0.301	2.96	0.301	1.07	1.07
"	160	37	3.2	3.66	0.305	1.67	3.04	0.339	3.04	0.339	1.31	1.31
"	320	88	2.2	3.12	0.296	1.71	3.16	0.338	3.16	0.338	1.30	1.30
Funks G522	0	92	0.0	3.63	0.333	1.03	2.94	0.425	2.94	0.425	1.19	1.19
"	80	82	0.0	3.60	0.318	1.21	3.24	0.420	3.24	0.420	1.20	1.20
"	160	80	0.0	3.46	0.320	1.66	3.26	0.382	3.26	0.382	1.24	1.24
"	320	76	1.5	3.29	0.283	1.56	3.18	0.407	3.18	0.407	1.29	1.29
Acco R1090	0	80	2.5	3.41	0.332	0.88	3.29	0.382	3.29	0.382	1.05	1.05
"	80	91	2.9	3.46	0.313	1.25	3.17	0.378	3.17	0.378	1.07	1.07
"	160	80	2.3	3.33	0.338	1.47	3.24	0.365	3.24	0.365	1.15	1.15
"	320	72	2.4	3.53	0.293	1.78	3.11	0.361	3.11	0.361	1.22	1.22
DeKalb C42A	0	65	27.0	3.52	0.361	1.09	3.26	0.367	3.26	0.367	1.05	1.05
"	80	56	2.6	3.68	0.341	1.31	3.35	0.373	3.35	0.373	1.11	1.11
"	160	43	4.8	3.56	0.340	1.57	3.43	0.387	3.43	0.387	1.24	1.24
"	320	30	8.8	3.58	0.323	2.02	3.36	0.379	3.36	0.379	1.24	1.24
NC ⁺ 70X	0	78	4.4	3.66	0.337	1.03	2.93	0.331	2.93	0.331	1.09	1.09
"	80	76	1.2	3.61	0.329	1.32	2.78	0.320	2.78	0.320	1.28	1.28
"	160	55	0.0	3.65	0.347	1.51	2.99	0.337	2.99	0.337	1.46	1.46
"	320	57	0.0	3.75	0.313	1.90	2.92	0.330	2.92	0.330	1.51	1.51

Table 4 continued:

Mean Values:

K₂O/A
Lbs

	0	6.9	3.49	0.332	0.97	3.13	0.371	1.10
	80	2.4	3.50	0.317	1.21	3.12	0.364	1.15
	160	1.7	3.52	0.332	1.58	3.22	0.371	1.28
	320	2.7	3.45	0.306	1.81	3.15	0.372	1.32
LSD .05	NS	NS	NS	NS	0.26	NS	NS	0.11
Asgrow Dorado	80	1.2	3.40	0.317	1.33	3.27	0.405	1.24
RS626	55	4.3	3.38	0.307	1.37	3.05	0.325	1.17
Funks G522	82	0.4	3.50	0.313	1.37	3.15	0.408	1.23
Acco R1090	81	2.5	3.43	0.319	1.34	3.21	0.372	1.12
DeKalb C42A	48	10.8	3.58	0.342	1.50	3.35	0.377	1.16
NC+ 70X	66	1.4	3.67	0.332	1.44	2.91	0.330	1.33
LSD .05	19	5.1	0.20	0.018	NS	0.14	0.021	0.06

$\frac{1}{2}$ Average of 2 reps

Exch. K lbs/A	0-6"	169
	6-12"	159
	12-18"	227
	18-24"	299
	24-30"	342

Table 5. Effects of Planting Date, Variety and Potassium Rates on Yield, Lodging and Leaf Composition of Grain Sorghum

David Voth, Wilson Co., Second Planting Date - May 16, 1972

Variety	Treatments K ₂ O Lbs/A	Grain ^{1/} yield bu/A	Lodging ^{1/} %	Leaf Composition					
				7 Leaf Stage			Boot Stage		
				N	P	K	N	P	K
				%	%	%	%	%	%
Asgrow Dorado	0	51	16.2	4.00	0.354	1.04	3.24	0.441	1.21
"	80	103	10.4	4.15	0.341	1.44	3.45	0.451	1.32
"	160	86	12.4	4.11	0.342	2.00	3.45	0.427	1.32
"	320	93	20.5	3.87	0.348	2.37	3.25	0.431	1.38
RS626	0	72	18.5	3.87	0.333	0.90	3.01	0.323	1.00
"	80	90	4.1	4.00	0.337	1.47	3.02	0.355	1.28
"	160	75	5.3	4.11	0.339	1.80	3.10	0.373	1.41
"	320	69	8.5	3.79	0.346	2.30	3.03	0.335	1.46
Funks G522	0	68	18.9	3.95	0.346	0.99	3.28	0.454	1.26
"	80	105	7.2	3.99	0.334	1.45	3.30	0.447	1.31
"	160	94	11.1	3.70	0.342	1.71	3.29	0.431	1.38
"	320	95	12.6	3.92	0.350	2.28	3.27	0.419	1.40
Acco R1090	0	82	27.8	3.93	0.351	0.97	3.22	0.388	1.10
"	80	109	11.0	3.96	0.343	1.48	3.20	0.437	1.34
"	160	101	13.2	3.95	0.330	1.85	3.35	0.419	1.25
"	320	91	32.2	3.67	0.348	2.06	3.20	0.421	1.32
DeKalb C42A	0	62	25.1	4.03	0.362	0.91	3.45	0.403	0.95
"	80	88	10.4	4.01	0.352	1.62	3.37	0.404	1.28
"	160	89	19.7	4.04	0.341	1.83	3.60	0.412	1.30
"	320	87	6.4	3.99	0.371	2.17	3.48	0.396	1.44
NC ⁺ 70X	0	83	5.9	4.21	0.363	1.06	3.28	0.437	1.24
"	80	75	18.0	4.15	0.370	1.53	3.33	0.441	1.48
"	160	89	6.8	4.09	0.354	1.84	3.37	0.458	1.45
"	320	94	12.1	4.03	0.380	2.24	3.28	0.438	1.41

Table 5 continued:
Mean Values:

	K ₂ O/A		Lbs									
	70	18.7	4.00	0.352	0.98	3.25	0.408	1.13				
	95	10.2	4.04	0.346	1.50	3.28	0.423	1.33				
	89	11.4	4.00	0.341	1.84	3.36	0.420	1.35				
	88	15.4	3.88	0.357	2.24	3.25	0.407	1.40				
LSD .05	NS	NS	0.11	NS	0.23	NS	NS	NS	0.07			
Asgrow Dorado	83	14.9	4.03	0.346	1.72	3.35	0.437	1.31				
RS626	77	9.1	3.94	0.339	1.62	3.04	0.347	1.29				
Funks G522	90	12.5	3.89	0.343	1.60	3.29	0.438	1.34				
Acco RI090	96	21.1	3.88	0.343	1.59	3.24	0.417	1.25				
DeKalb C42A	82	15.4	4.02	0.357	1.63	3.47	0.404	1.24				
NC+ 70X	85	10.7	4.12	0.367	1.67	3.31	0.444	1.40				
LSD .05	NS	6.9	NS	0.015	NS	0.12	0.020	0.06				

1/ Average of 2 reps

Exch. K lbs/A	0-6"	169
	6-12"	159
	12-18"	227
	18-24"	299
	24-30"	342

Table 6. Effects of Planting Date, Variety and Potassium Rates on Yield, Lodging and Leaf Composition of Grain Sorghum

		David Voth, Wilson Co., Third Planting Date - June 16, 1972										
Variety	Treatments K ₂ O lbs/A	Grain ^{1/} yield bu/A	Lodging ^{2/} %	---5 Leaf Stage---			Leaf Composition			---Boot Stage---		
				N %	P %	K %	N %	P %	K %	N %	P %	K %
Asgrow Dorado	0	0	--	3.84	0.299	1.75	2.94	0.403	1.37			
"	80	"	--	3.70	0.296	2.09	2.73	0.358	1.44			
"	160	"	--	3.79	0.299	2.33	2.84	0.362	1.56			
"	320	"	--	4.00	0.303	2.47	2.98	0.370	1.74			
RS626	0	"	--	3.90	0.315	1.88	3.13	0.381	1.24			
"	80	"	--	3.78	0.275	2.15	3.00	0.364	1.27			
"	160	"	--	3.95	0.311	2.36	3.03	0.347	1.41			
"	320	"	--	3.92	0.283	2.51	3.00	0.369	1.46			
Funks G522	0	"	--	3.96	0.321	2.05	3.06	0.417	1.42			
"	80	"	--	3.82	0.268	2.15	2.86	0.351	1.44			
"	160	"	--	3.88	0.308	2.36	2.89	0.358	1.57			
"	320	"	--	3.94	0.313	2.49	2.80	0.373	1.71			
Acco RL090	0	"	--	3.96	0.314	1.88	3.00	0.385	1.34			
"	80	"	--	3.93	0.301	2.10	2.90	0.358	1.34			
"	160	"	--	4.11	0.308	2.42	2.97	0.353	1.60			
"	320	"	--	4.03	0.318	2.48	2.91	0.362	1.61			
DeKalb C42A	0	"	--	4.02	0.312	1.97	3.05	0.417	1.36			
"	80	"	--	3.92	0.307	2.27	2.96	0.384	1.49			
"	160	"	--	4.20	0.342	2.48	3.02	0.401	1.62			
"	320	"	--	4.07	0.311	2.42	2.99	0.380	1.66			
NC ⁺ 70X	0	"	--	3.96	0.316	2.02	2.94	0.389	1.41			
"	80	"	--	4.02	0.314	2.22	3.08	0.366	1.34			
"	160	"	--	4.04	0.329	2.48	3.01	0.352	1.52			
"	320	"	--	4.06	0.318	2.60	2.92	0.354	1.56			

Table 6 continued:
Mean Values:

	K ₂ O/A		Lbs		K ₂ O/A		Lbs		K ₂ O/A		Lbs	
LSD .05												
Asgrow Dorado	---	---	---	---	---	---	---	---	---	---	---	---
RS626	---	---	---	---	---	---	---	---	---	---	---	---
Funks G522	---	---	---	---	---	---	---	---	---	---	---	---
Acco R1090	---	---	---	---	---	---	---	---	---	---	---	---
DeKalb C42A	---	---	---	---	---	---	---	---	---	---	---	---
NC+ 70X	---	---	---	---	---	---	---	---	---	---	---	---
LSD .05	0.13	NS	NS	NS	0.34	NS	NS	NS	0.10	NS	NS	0.07
	3.95	0.313	1.93	3.02	0.399	1.36	3.86	0.294	2.16	2.92	0.363	1.39
	3.89	0.296	2.23	3.04	0.365	1.35	4.00	0.316	2.41	2.96	0.362	1.55
	3.90	0.302	2.27	2.90	0.375	1.54	4.00	0.308	2.50	2.93	0.368	1.63
	4.01	0.310	2.22	2.94	0.364	1.47						
	4.05	0.318	2.29	3.00	0.396	1.53						
	4.02	0.319	2.33	2.99	0.365	1.46						
LSD .05	0.13	NS	NS	0.10	NS	0.07						

1/ No yield on this date.

2/ No lodging notes taken.

Exch. K lbs/A	0-6"	169
	6-12"	159
	12-18"	227
	18-24"	299
	24-30"	342