JOURNAL OF PLANT NUTRITION, 14(8), 775-807 (1991)

MORPHOLOGICAL, TEMPORAL, AND NODAL ACCUMULATION OF NUTRIENTS BY DETERMINATE SOYBEAN

E. J. Sadler, D. L. Karlen, R. E. Sojka, and H. D. Scott[1]

Coastal Plains Soil and Water Conservation Research Center, USDA-ARS, P.O. Box 3039, Florence, SC 29501

ABSTRACT: Crop growth models that account for nutrient accumulation offer insight into soil fertility and plant nutrition interactions. This understanding provides opportunities to develop improved management practices. During the 1980s, several process-level growth models were developed for soybean [*Glycine max* (L.) Merr.]. Model validation and application to different locations and weather require detailed, independent data sets. An extensive data set describing the nutrient status of a determinate soybean ('Bragg') was collected in 1979 on a Goldsboro (Aquic Paleudult) loamy sand near Florence, SC, USA. Because of its importance to subsequent model development, we concluded that providing this entire data set in a readily accessible form was a logical step in the course of this experiment. We report here, in tabular form, mean and standard deviation data for aerial accumulation of dry matter and eight nutrients (N, P, K, Ca, Mg, Mn, Fe, and Zn) for 10 dates, for four plant components (stems, leaves, petioles, pods, and total), and for each node (and whole plant). We will provide, upon arrangement, these same data on diskette for use in simulation models or other applications.

Copyright © 1991 by Marcel Dekker, Inc.

INTRODUCTION

Model development is an iterative procedure by which mathematical equations of a model are gradually improved as a result of evaluations with increasing numbers of data sets. For soybean growth and development, this has resulted in the process-level models such as SOYGRO[2], for example. However, there remains a critical need for independent data to validate the models for environments and cultivars other than those used for model development.

Historically, most nutrient data has been published as concentrations because they can be used to diagnose nutrient deficiencies using either critical values[3] or Diagnosis Recommendation Integrated System [DRIS][4]. However, validating plant growth models requires nutrient and dry matter accumulation data. Fertilizer recommendations are more easily recognized from nutrient accumulation expressed in mass per unit area rather than from concentration. Furthermore, nutrient accumulation curves can be differentiated over time to produce nutrient accumulation rates. Illustrations of this type of analysis exist for corn[5,6] and for wheat[7].

Aerial dry matter and nutrient concentrations for an intensive experiment with determinate soybean have been documented graphically in this journal[8,9,10,11] as functions of time, plant part, and nodal position. Recognizing both the unique combination of temporal and nodal information represented therein and the modelers' need for independent data, we concluded that providing the entire data set in a readily accessible form was a logical step in the course of communicating the results of the experiment. While preparing this information on determinate soybean, we became aware of a data set[12] describing row spacing and soil water effects on indeterminate soybean grown in Iowa, and coincidentally, in the same year. For two sampling dates in their study, values for leaf area, pod number, and component masses were published as a function of height, but this was not done for nutrient information. To our knowledge, the information presented here on determinate soybean is the only

data set with nutrient accumulation as a function of plant part, time, and nodal position

MATERIALS AND METHODS

Crop culture, weather, sampling methods, soil analyses, and nutrient analysis procedures have been reported previously[8,9,10,11]. Nutrient concentrations and aerial dry matter data that were used for graphs in those publications were used to produce the nutrient accumulation tables reported here. Nutrient concentrations were multiplied by aerial dry matter values for each day, node, and plant part, and then converted to kg/ha. Tables for each nutrient were created using PROC TABULATE of SAS[13,14], including mean and standard deviation of the individual cells, and summary values across plant part and node. These statistics represent the mean and standard deviation of the nutrient accumulation; that is, individual measurements of dry mass and concentration multiplied, rather than means of each multiplied. This procedure accounted for the cross correlation between mass and concentration. The original sampling had 4 replicates at each of 4 locations per treatment. For this analysis, locations were considered a second hierarchy of replicate, resulting in 16 points per mean value. There were 8226 dry matter samples. For about 2500 samples, there was not enough plant material to perform the concentration analysis, so replicates were physically combined. Samples were also combined over replicates for the last 4 dates in order to reduce the total number from about 4000 to about 1000. For all pooled cases, the separate masses were recorded, then the physical samples combined across replications as needed to provide a suitable sample. In about 600 cases, replicates 1 and 2 or 3 and 4 were pooled; where samples were smaller still (about 1000 cases), all 4 replicates were pooled; where samples were smallest, the pooling extended to locations as well (45 determinations were made on the combined material from all 16 dry matter samples). In order to produce the best estimate of data variance, individual masses were multiplied by the concentration that was common to the combined sample. The standard deviation

was then indicative of variation in the mass alone. This was done by necessity only. It is expected that concentration was by far more conservative than mass, thus the variation in mass for pooled samples represents most of the variation in the accumulation of a nutrient.

RESULTS AND DISCUSSION

Temporal and nodal changes in soybean growth, development, and nutrient concentration from this experiment were discussed previously[8,9,10,11], but are summarized to provide insight to analyses of these data available in the literature. Scott et al.[8] presented growth analysis and statistical representations of partitioning coefficients and of sample variability. Sojka et al.[9] showed that nodal and temporal mean K and Ca concentrations varied over time and node, but mean Mg concentrations did not. They also concluded that mean concentrations of these elements in all plant parts can vary two fold or more depending on plant age and node. Sojka et al.[10,11] described variation in N, P, Fe, Mn, and Zn that was similar to variation in K and Ca. These presentations were normally 2-dimensional response surfaces describing concentration, sample variability, or other characteristics over time and node. These graphs are easily interpreted for trends and main effects, but are not easily used for model validation.

The tabular presentation of accumulation data from this experiment in Tables 1 through 9, presented as an appendix, allows potential users to scrutinize accumulation and partitioning of aerial dry matter and eight essential plant nutrients. We will provide this information and daily weather data on diskette upon request. Each nutrient is given in a separate table, with the four plant parts and total comprising the headings of the columns. Time is the major vertical dimension, and nodal position the minor, resulting in 171 observations over date and node. After each date, the sum of accumulated nutrient over the nodes is given. Each cell in the table holds the mean and standard deviation of the value.

TABLE 1. Aerial dry matter accumulation means and standard deviations for each day after planting (DAP), node, and plant part. Values are in kg/ha, and planting date was 143 (23 May).

		----Stems--		---Leaves--		--Petioles-		----Pods---		---Totals--	
DAP	Node	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev
44	1	58.8	21.0	0.0	0.0	0.0	0.0	0.0	0.0	58.8	21.0
	2	29.6	8.5	0.5	1.8	0.2	0.9	0.0	0.0	30.3	8.8
	3	22.4	5.8	12.2	8.3	7.7	10.0	0.0	0.0	42.4	19.2
	4	28.1	9.2	73.7	19.2	19.0	6.4	0.0	0.0	120.8	31.5
	5	29.0	9.1	99.2	37.9	25.7	8.0	0.0	0.0	153.8	49.9
	6	25.7	8.1	107.7	37.3	23.8	8.9	0.0	0.0	157.2	52.5
	7	15.1	7.7	61.5	29.9	15.3	8.8	0.0	0.0	91.9	40.3
	8	6.6	9.7	20.7	28.5	4.2	6.0	0.0	0.0	31.4	41.1
	9	0.4	1.6	1.8	5.0	0.4	1.0	0.0	0.0	2.6	7.1
	All	215.8	66.6	377.2	110.8	96.2	32.0	0.0	0.0	689.2	203.8
57	1	71.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	71.0	19.5
	2	51.3	10.8	4.9	12.4	3.2	7.9	0.0	0.0	59.3	23.8
	3	37.8	8.0	23.5	17.0	13.4	10.8	0.0	0.0	74.7	29.9
	4	49.1	10.4	34.5	21.2	17.6	11.1	0.0	0.0	101.2	35.0
	5	52.6	10.9	93.4	23.2	35.6	6.8	0.0	0.0	181.6	29.9
	6	55.1	12.9	135.5	19.4	43.8	7.3	0.0	0.0	234.3	37.3
	7	49.4	10.9	156.3	23.1	52.1	14.4	0.0	0.0	257.9	45.6
	8	44.9	10.1	158.6	30.2	51.9	13.3	0.0	0.0	255.4	52.4
	9	35.0	12.4	121.4	41.0	38.1	16.6	0.0	0.0	194.6	69.5
	10	18.7	11.6	63.2	41.4	18.5	15.6	0.0	0.0	100.5	67.1
	11	5.8	7.1	15.7	21.8	4.4	6.2	0.0	0.0	26.0	34.5
	12	1.1	2.7	1.8	4.6	0.7	1.8	0.0	0.0	3.5	9.0
	All	471.7	112.1	808.8	165.1	279.3	79.4	0.0	0.0	1559.9	349.9
70	1	110.9	44.2	0.0	0.0	0.0	0.0	0.0	0.0	110.9	44.2
	2	94.4	28.2	36.5	71.3	43.4	86.3	0.0	0.0	174.3	177.0
	3	71.0	20.8	63.2	64.4	67.3	75.5	0.0	0.0	201.5	149.0
	4	87.3	22.2	48.1	40.4	53.5	51.3	0.0	0.0	188.9	102.4
	5	101.8	22.4	49.4	42.1	56.1	47.1	0.0	0.0	207.3	89.7
	6	106.1	29.0	37.3	34.3	38.3	29.6	0.0	0.0	181.6	72.2
	7	99.9	25.3	66.8	42.0	74.4	37.4	0.0	0.0	241.2	83.9
	8	104.7	26.8	169.5	65.4	121.2	42.5	0.0	0.0	395.5	119.8
	9	94.3	30.7	166.0	40.3	88.6	25.3	0.0	0.0	349.0	86.6
	10	85.9	19.8	167.4	38.0	76.5	17.5	0.0	0.0	329.8	68.0
	11	82.3	26.0	192.2	45.9	85.3	17.8	0.0	0.0	359.8	78.5
	12	66.7	20.5	186.5	48.0	79.0	22.0	0.0	0.0	332.3	89.8
	13	50.1	17.3	141.3	55.8	59.2	21.7	0.0	0.0	250.6	93.5
	14	29.9	16.2	81.1	46.4	35.3	19.0	0.0	0.0	146.3	81.2
	15	5.5	8.4	14.8	23.2	6.8	10.7	0.0	0.0	27.1	42.3
	16	0.0	0.0	1.2	4.9	0.7	2.7	0.0	0.0	1.9	7.6
	All	1190.8	296.2	1421.4	292.5	885.7	221.3	0.0	0.0	3497.9	774.0
79	1	181.7	37.0	0.0	0.0	0.0	0.0	0.0	0.0	181.7	37.0
	2	119.2	19.7	17.9	46.7	16.6	43.1	0.0	0.0	153.8	91.9
	3	89.7	13.7	58.3	84.4	90.6	131.9	0.0	0.0	238.5	219.5
	4	124.5	23.5	71.6	90.1	104.2	126.7	0.0	0.0	300.4	226.0
	5	139.3	31.2	49.2	45.1	70.5	69.4	0.0	0.0	259.0	130.3
	6	151.1	30.6	45.0	33.3	60.0	43.1	0.0	0.0	256.1	90.2
	7	152.1	24.5	131.3	49.3	170.7	61.7	0.0	0.0	454.1	118.5
	8	158.2	23.1	129.7	68.6	157.0	82.3	0.0	0.0	444.9	165.9
	9	140.9	27.5	149.1	53.7	115.6	37.7	0.0	0.0	405.6	99.5
	10	137.0	19.1	198.2	33.5	113.5	24.5	0.0	0.0	448.6	65.8
	11	122.5	18.4	212.7	33.0	109.0	16.9	0.0	0.0	444.2	62.2
	12	104.5	21.9	202.9	30.2	101.2	17.3	0.0	0.0	408.6	60.9
	13	81.5	22.7	181.3	34.6	87.3	22.0	0.0	0.0	350.1	74.0
	14	55.4	23.6	142.8	48.7	66.8	23.9	0.0	0.0	265.1	94.5
	15	36.3	21.8	95.9	54.9	43.2	25.8	0.0	0.0	175.3	101.5
	16	18.5	17.3	50.2	47.1	20.2	17.2	0.0	0.0	88.9	80.8
	17	6.7	10.8	16.2	24.2	7.2	10.6	0.0	0.0	30.0	45.4
	18	0.7	2.6	1.6	6.4	0.9	3.4	0.0	0.0	3.1	12.5
	All	1819.7	317.2	1753.7	438.5	1334.5	435.8	0.0	0.0	4908.0	1107.0

(cont'd)

TABLE 1. (cont'd)

90	1	157.0	39.2	0.0	0.0	0.0	0.0	0.0	0.0	147.2	54.5
	2	139.7	25.8	49.2	62.3	84.6	88.1	1.6	2.4	257.9	166.3
	3	106.7	18.6	158.2	130.6	274.4	227.1	5.8	6.5	511.0	382.1
	4	139.1	24.8	152.9	136.0	210.6	197.9	4.2	3.8	475.1	353.9
	5	149.4	27.6	84.5	73.8	131.6	131.3	3.0	2.8	345.5	235.7
	6	161.4	28.6	68.5	46.6	100.0	53.7	3.2	1.6	312.3	130.0
	7	160.2	24.9	137.4	53.9	201.6	63.0	6.6	2.5	474.2	170.4
	8	169.2	27.6	143.2	73.4	192.9	99.9	7.7	2.4	480.9	217.3
	9	155.1	25.3	111.3	46.9	135.8	58.8	6.6	2.8	383.3	153.7
	10	152.4	22.4	121.8	57.1	102.8	46.5	5.2	1.4	358.2	136.6
	11	148.5	20.6	192.7	37.0	116.6	24.4	5.2	1.5	434.1	129.8
	12	132.6	26.7	216.4	29.8	117.5	20.5	6.0	2.1	443.0	135.1
	13	107.2	22.8	197.0	37.7	103.6	19.4	5.3	1.8	387.3	123.4
	14	81.7	20.4	174.0	49.8	87.1	20.5	5.6	2.2	326.7	121.5
	15	59.2	19.3	138.2	45.2	68.6	24.7	5.4	2.0	254.4	109.4
	16	38.2	17.7	98.8	48.5	47.4	22.7	3.6	1.5	176.3	97.9
	17	30.0	36.8	67.1	38.7	27.6	17.6	2.0	1.6	118.8	85.3
	18	8.3	7.0	29.7	21.8	11.9	8.4	1.3	1.3	48.1	37.6
	19	1.6	2.3	6.9	10.2	2.3	3.7	0.3	0.6	10.4	16.0
	20	0.2	0.6	1.4	3.8	0.3	1.0	0.1	0.3	1.9	5.4
	All	2097.8	338.5	2149.1	522.7	2017.2	673.8	78.7	20.7	5946.5	2106.3
100	1	178.8	52.8	0.0	0.0	0.0	0.0	0.0	0.0	178.8	52.8
	2	161.7	37.0	18.8	34.0	34.5	70.3	2.6	5.3	217.6	118.8
	3	125.2	27.6	79.3	85.2	136.3	135.1	8.2	10.8	349.0	229.9
	4	173.4	40.0	163.7	118.9	250.3	163.2	15.5	11.7	602.9	299.0
	5	191.6	44.0	59.8	76.8	94.2	117.1	8.2	10.4	353.8	206.5
	6	211.8	59.9	119.3	85.5	160.8	114.0	13.1	8.7	504.9	224.6
	7	199.9	48.1	177.7	81.3	255.2	114.3	19.0	10.8	651.9	221.9
	8	209.1	50.9	194.3	93.3	271.0	149.4	30.4	13.5	704.8	274.9
	9	200.4	49.4	175.4	68.0	218.4	116.4	27.3	10.3	621.5	223.7
	10	205.2	46.1	170.2	47.5	173.5	65.5	23.9	9.9	572.8	127.9
	11	201.5	42.0	252.7	76.5	157.0	36.4	21.7	6.4	633.0	131.6
	12	181.2	42.0	265.7	52.8	154.3	35.5	28.7	13.1	629.9	128.9
	13	151.2	39.0	251.1	53.7	138.4	33.0	29.4	11.6	570.1	117.6
	14	113.2	32.0	220.7	54.9	118.4	28.9	36.2	12.1	488.4	115.6
	15	84.1	26.1	162.2	48.6	85.1	28.3	31.0	12.0	362.4	103.9
	16	57.8	22.0	125.7	50.8	60.5	27.8	25.7	11.2	269.8	100.2
	17	35.4	18.3	103.2	39.4	41.7	20.6	17.7	10.4	197.9	80.8
	18	16.1	11.8	61.4	41.0	25.0	19.8	12.5	10.7	115.1	75.3
	19	4.7	7.1	22.7	28.5	7.8	9.8	4.7	7.3	39.9	48.3
	20	0.7	1.2	5.7	10.8	1.7	3.8	1.3	2.8	9.4	17.3
	All	2703.1	612.2	2629.8	537.9	2383.9	761.6	357.1	91.2	8073.9	1788.5
113	1	216.8	90.6	0.0	0.0	0.0	0.0	0.0	0.0	216.8	90.6
	2	160.3	31.4	31.4	52.1	57.2	96.6	14.7	26.4	263.5	189.3
	3	126.8	29.8	46.8	68.4	93.4	130.1	19.5	31.9	286.5	238.7
	4	166.6	38.2	113.6	153.0	215.1	304.8	57.4	86.0	552.7	543.8
	5	200.8	48.5	100.6	105.3	186.8	211.1	58.2	55.3	546.4	397.0
	6	210.2	59.3	130.7	107.1	248.9	224.5	75.2	66.5	665.0	434.6
	7	206.8	48.2	196.8	90.6	328.9	145.7	97.6	48.1	830.0	291.6
	8	214.2	41.8	158.5	44.6	248.8	104.1	105.1	42.3	726.6	192.4
	9	195.6	40.4	111.1	77.8	154.6	121.6	85.9	44.7	547.1	262.4
	10	205.0	38.0	127.3	64.4	125.0	50.4	73.4	26.8	530.7	134.8
	11	214.3	42.4	229.1	76.6	171.5	42.8	83.6	26.5	698.5	146.6
	12	189.1	34.1	278.4	37.2	172.7	30.7	98.3	25.5	738.5	97.3
	13	151.4	32.0	240.4	45.3	149.6	28.8	102.5	40.3	643.8	120.1
	14	116.8	26.5	209.9	44.3	130.5	32.9	125.3	37.9	582.5	106.0
	15	85.6	22.0	159.8	48.7	95.3	33.5	118.3	41.1	459.0	115.8
	16	56.9	22.8	123.9	32.3	66.4	25.8	77.7	44.9	324.9	96.4
	17	31.1	17.7	87.4	37.1	42.7	24.5	55.0	24.6	216.2	94.5
	18	9.8	13.4	36.8	40.4	15.7	20.1	30.5	37.0	92.8	102.1
	19	2.9	7.2	4.7	9.3	2.0	3.9	5.3	16.4	14.8	29.9
	20	0.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
	All	2761.1	549.9	2387.0	432.9	2505.0	895.7	1283.5	394.5	8936.7	2038.1

TABLE 1. (cont'd)

127	1	161.5	61.8	0.0	0.0	0.0	0.0	0.0	0.0	161.5	61.8
	2	149.1	40.1	33.0	74.2	72.7	138.2	44.3	114.6	299.0	316.3
	3	113.9	30.6	76.6	81.9	151.2	160.2	98.5	106.6	440.1	359.0
	4	153.1	51.0	140.6	105.7	293.4	236.4	149.5	102.7	736.6	475.8
	5	173.5	48.1	52.7	93.7	93.9	172.0	71.4	88.5	391.6	373.9
	6	191.0	61.4	101.9	75.7	188.7	155.7	152.7	94.8	634.3	335.5
	7	186.0	47.9	178.4	73.7	303.0	126.2	237.2	96.6	904.6	307.0
	8	195.8	59.3	177.9	73.8	318.3	165.7	271.6	106.7	963.5	380.0
	9	181.4	58.0	141.6	67.5	228.3	142.4	255.1	128.8	806.4	371.9
	10	177.3	50.0	106.6	41.9	137.7	72.6	206.2	80.9	627.9	212.9
	11	183.5	58.9	136.3	63.3	118.0	56.0	168.8	73.2	606.6	217.9
	12	173.5	66.0	192.1	74.7	141.1	55.0	188.8	87.1	695.5	251.9
	13	146.6	59.6	201.2	70.5	135.5	51.5	197.1	104.0	680.3	256.8
	14	116.1	49.7	174.9	66.2	114.4	47.1	195.7	80.1	601.1	221.2
	15	86.6	39.5	138.9	61.4	92.2	42.1	183.3	97.9	501.0	222.2
	16	61.4	30.2	123.5	52.9	71.9	34.1	166.0	91.9	422.8	179.8
	17	36.5	22.8	84.5	48.5	43.8	28.0	117.1	75.2	281.8	162.0
	18	18.8	16.1	48.8	35.4	23.5	19.2	75.3	59.9	166.3	123.4
	19	5.7	7.9	14.3	21.6	7.0	10.6	33.2	45.9	60.3	81.3
	20	0.4	1.1	2.6	5.8	0.8	2.0	2.5	7.2	6.3	15.7
	All	2511.7	792.8	2126.2	592.8	2535.3	1035.8	2814.3	832.2	9987.5	3108.0
139	1	178.8	44.1	0.0	0.0	0.0	0.0	0.0	0.0	178.8	44.1
	2	118.9	26.4	13.7	25.5	34.1	55.2	32.5	51.8	199.1	139.8
	3	93.9	25.5	64.7	85.4	154.6	194.3	168.3	269.8	481.6	550.2
	4	123.9	32.5	57.6	54.8	153.4	126.7	142.6	113.7	477.5	297.1
	5	141.2	44.7	29.3	33.8	71.5	70.3	92.7	92.4	334.7	189.6
	6	156.8	38.0	59.1	58.2	124.0	111.8	177.1	142.0	517.0	309.8
	7	152.9	38.2	104.7	50.2	213.9	110.9	305.7	145.7	777.3	308.9
	8	166.6	36.9	94.5	41.8	204.5	109.0	339.6	119.0	805.0	262.1
	9	153.7	34.6	77.3	47.7	156.7	104.6	369.3	165.9	756.9	316.1
	10	153.6	32.5	44.9	32.6	83.7	57.6	248.9	125.7	531.2	201.6
	11	156.8	29.0	67.2	45.0	68.8	34.0	217.9	83.0	510.7	134.0
	12	147.3	31.0	120.2	60.4	95.9	25.3	241.6	80.3	604.9	122.0
	13	125.3	32.3	151.0	39.3	99.3	23.8	266.5	90.0	642.1	146.4
	14	97.6	35.6	137.6	30.2	86.7	14.6	266.9	109.5	588.8	137.9
	15	76.0	32.5	99.0	27.6	66.5	21.2	260.4	85.9	501.8	121.7
	16	48.2	24.6	72.8	29.7	49.9	26.7	224.6	114.0	395.6	168.7
	17	29.4	21.1	54.2	24.4	32.1	18.3	145.9	93.4	261.6	129.6
	18	14.8	20.1	27.8	22.3	14.5	13.6	69.5	71.8	126.6	116.9
	19	2.5	4.4	13.9	19.0	6.9	10.5	46.3	74.2	69.6	102.2
	20	0.0	0.0	0.3	1.3	0.4	1.7	0.0	0.0	0.8	3.0
	All	2138.2	529.3	1289.8	279.1	1717.4	561.1	3616.2	974.0	8761.5	1927.5
149	1	194.9	61.0	0.0	0.0	0.0	0.0	0.0	0.0	194.9	61.0
	2	140.2	26.5	0.0	0.0	39.1	73.7	65.0	121.2	244.3	196.7
	3	97.3	15.5	0.8	1.9	62.9	91.0	80.5	122.0	241.5	212.8
	4	138.3	29.4	3.3	6.4	110.8	102.1	167.0	173.8	419.3	280.5
	5	156.2	32.6	2.6	4.6	51.5	42.3	109.2	106.6	319.6	145.5
	6	171.9	38.8	3.2	7.2	80.7	45.3	190.1	106.9	445.9	137.6
	7	171.5	36.7	6.0	7.9	179.9	44.3	427.6	190.6	785.0	235.0
	8	187.9	41.6	5.7	6.4	160.2	74.8	466.2	152.0	820.2	228.4
	9	168.9	43.8	2.5	4.6	112.9	83.2	472.5	164.0	756.8	272.1
	10	167.0	35.8	4.0	6.6	53.6	43.9	332.2	118.9	556.7	175.7
	11	175.0	39.1	2.9	4.1	28.1	13.7	340.5	77.9	546.6	115.4
	12	161.3	38.9	2.5	4.2	22.2	17.6	330.2	79.1	516.2	113.0
	13	138.3	37.0	1.3	3.0	21.5	14.9	372.9	96.4	534.0	117.3
	14	109.5	32.8	0.8	2.6	28.5	17.3	324.1	87.3	462.8	113.4
	15	78.5	27.8	0.5	1.2	25.8	15.6	299.5	117.0	404.3	151.9
	16	55.1	26.2	1.7	4.3	16.3	19.9	239.2	132.5	312.3	159.1
	17	33.6	20.5	0.0	0.0	6.2	8.4	147.4	77.2	187.1	94.6
	18	15.5	12.7	0.0	0.0	4.0	10.8	93.0	80.3	112.5	92.1
	19	2.9	4.2	0.0	0.0	0.0	0.0	19.3	32.4	22.2	35.5
	20	0.3	1.0	0.0	0.0	0.0	0.0	8.1	32.5	8.4	33.4
	All	2364.0	533.0	37.6	25.6	1004.4	296.9	4484.6	655.3	7890.6	1300.9

TABLE 2. Aerial nitrogen accumulation means and standard deviations for each day after planting (DAP), node, and plant part. Values are in kg/ha, and planting date was 143 (23 May).

		---Stems---		---Leaves---		--Petioles--		----Pods----		---Totals---	
DAP	Node	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev
44	1	0.80	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.26
	2	0.42	0.12	0.01	0.05	0.00	0.00	0.00	0.00	0.43	0.14
	3	0.37	0.10	0.57	0.40	0.16	0.21	0.00	0.00	1.10	0.59
	4	0.60	0.21	3.41	0.96	0.40	0.13	0.00	0.00	4.45	1.18
	5	0.73	0.25	3.87	2.93	0.48	0.18	0.00	0.00	1.81	1.79
	6	0.72	0.23	0.00	0.00	0.52	0.18	0.00	0.00	1.23	0.40
	7	0.46	0.23	0.00	0.00	0.37	0.21	0.00	0.00	0.83	0.42
	8	0.21	0.31	0.00	0.00	0.11	0.15	0.00	0.00	0.31	0.42
	All	4.30	1.40	4.71	2.06	2.02	0.68	0.00	0.00	12.09	4.93
57	1	0.86	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.23
	2	0.63	0.13	0.22	0.57	0.07	0.17	0.00	0.00	0.93	0.77
	3	0.50	0.12	1.11	0.83	0.33	0.26	0.00	0.00	1.93	1.10
	4	0.72	0.18	1.56	0.99	0.42	0.25	0.00	0.00	2.70	1.27
	5	0.87	0.24	3.78	0.88	0.62	0.18	0.00	0.00	5.27	0.89
	6	0.98	0.29	6.36	0.76	0.73	0.14	0.00	0.00	8.07	1.07
	7	0.96	0.23	8.26	1.25	0.91	0.28	0.00	0.00	10.08	1.62
	8	1.02	0.26	8.91	1.74	0.96	0.24	0.00	0.00	10.89	2.19
	9	0.84	0.26	7.01	2.40	0.80	0.30	0.00	0.00	8.72	2.71
	10	0.49	0.30	4.01	2.01	0.45	0.37	0.00	0.00	4.45	2.95
	11	0.15	0.19	0.86	1.19	0.12	0.17	0.00	0.00	1.13	1.52
	12	0.03	0.08	0.09	0.24	0.02	0.05	0.00	0.00	0.14	0.36
	All	8.16	2.12	41.68	8.72	5.43	1.68	0.00	0.00	56.82	12.65
70	1	1.22	0.51	0.00	0.00	0.00	0.00	0.00	0.00	1.22	0.51
	2	0.99	0.29	2.36	3.98	1.06	1.83	0.00	0.00	3.56	5.39
	3	0.89	0.46	2.64	3.12	1.25	1.39	0.00	0.00	4.78	4.53
	4	1.02	0.26	2.17	1.80	1.35	1.06	0.00	0.00	4.20	2.93
	5	1.20	0.27	2.69	2.03	1.51	0.98	0.00	0.00	4.69	3.11
	6	1.12	0.30	2.00	1.61	0.93	0.71	0.00	0.00	3.80	2.42
	7	1.13	0.32	3.10	1.81	1.57	0.80	0.00	0.00	5.79	2.53
	8	1.33	0.33	6.82	2.67	2.18	0.95	0.00	0.00	9.91	3.43
	9	1.27	0.42	7.28	2.04	1.30	0.47	0.00	0.00	9.40	2.94
	10	1.37	0.32	7.71	1.99	1.06	0.32	0.00	0.00	10.08	2.41
	11	1.59	0.44	9.38	2.72	1.27	0.27	0.00	0.00	9.72	5.11
	12	1.30	0.42	9.59	2.89	1.37	0.35	0.00	0.00	10.74	4.95
	13	1.15	0.41	7.25	2.62	1.14	0.34	0.00	0.00	8.04	4.19
	14	0.71	0.38	4.84	2.13	0.85	0.36	0.00	0.00	5.69	3.38
	15	0.14	0.22	0.79	1.24	0.16	0.24	0.00	0.00	1.09	1.69
	All	16.19	4.05	61.05	14.73	15.46	4.45	0.00	0.00	92.70	22.01
79	1	1.24	0.28	0.00	0.00	0.00	0.00	0.00	0.00	1.24	0.28
	2	0.86	0.16	0.82	2.15	0.22	0.56	0.00	0.00	1.90	2.71
	3	0.67	0.11	3.19	4.36	1.64	2.12	0.00	0.00	4.90	6.26
	4	0.94	0.16	3.48	4.47	1.78	2.06	0.00	0.00	6.20	6.58
	5	1.11	0.20	2.31	2.13	1.57	1.38	0.00	0.00	4.79	3.57
	6	1.27	0.23	1.98	1.64	1.23	0.82	0.00	0.00	4.48	2.39
	7	1.34	0.28	6.00	2.42	3.22	1.00	0.00	0.00	10.19	3.36
	8	1.55	0.24	6.53	3.15	2.97	1.27	0.00	0.00	8.27	4.88
	9	1.69	0.35	5.64	2.37	1.81	0.64	0.00	0.00	7.61	3.29
	10	1.87	0.37	7.79	1.80	1.37	0.28	0.00	0.00	8.57	3.68
	11	1.91	0.39	10.01	1.58	1.28	0.24	0.00	0.00	10.97	4.57
	12	1.94	0.25	10.52	1.74	1.25	0.26	0.00	0.00	13.26	2.39
	13	1.58	0.33	9.62	1.88	1.18	0.28	0.00	0.00	11.77	3.09
	14	1.25	0.28	8.00	2.24	1.05	0.26	0.00	0.00	9.44	3.74
	15	0.94	0.36	6.43	2.64	0.64	0.42	0.00	0.00	6.49	4.25
	16	0.54	0.36	3.22	2.86	0.39	0.25	0.00	0.00	3.04	3.32
	17	0.13	0.21	1.08	1.46	0.15	0.19	0.00	0.00	1.05	1.72
	18	0.00	0.00	0.00	0.00	0.02	0.06	0.00	0.00	0.02	0.06
	All	19.38	2.97	75.44	23.41	20.13	5.81	0.00	0.00	115.53	31.45

TABLE 2. (cont'd)

90	1	1.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.50
	2	0.92	0.16	2.89	2.96	1.08	1.29	0.00	0.00	3.73	3.90
	3	0.78	0.16	8.21	5.74	3.72	2.55	0.00	0.00	10.66	8.85
	4	0.91	0.19	8.57	5.87	3.15	2.52	0.11	0.11	9.88	8.96
	5	1.10	0.28	4.43	3.36	2.31	1.85	0.08	0.07	6.44	5.60
	6	1.29	0.33	3.27	1.94	1.51	0.70	0.08	0.04	5.00	3.21
	7	1.38	0.32	6.00	2.41	3.30	0.62	0.18	0.07	10.02	3.82
	8	1.61	0.33	6.71	3.07	3.17	1.27	0.23	0.07	10.31	5.28
	9	1.78	0.55	4.79	2.08	2.19	0.98	0.19	0.08	7.98	3.35
	10	2.11	0.70	4.98	2.20	1.56	0.74	0.16	0.04	8.26	3.53
	11	2.36	0.60	7.81	1.76	1.46	0.38	0.16	0.05	10.78	3.36
	12	2.17	0.63	9.14	1.12	1.42	0.34	0.19	0.07	11.89	3.65
	13	1.85	0.60	8.94	1.65	1.31	0.30	0.16	0.05	11.49	3.75
	14	1.38	0.47	8.03	2.20	1.12	0.31	0.18	0.07	9.62	3.66
	15	1.07	0.32	6.68	2.27	0.93	0.28	0.18	0.06	8.17	3.62
	16	0.79	0.26	4.78	2.45	0.77	0.18	0.13	0.04	5.71	3.45
	17	0.51	0.63	3.24	1.98	0.37	0.26	0.04	0.03	3.77	2.68
	18	0.20	0.16	1.40	1.09	0.18	0.12	0.00	0.00	1.57	1.34
	19	0.00	0.00	0.32	0.48	0.03	0.05	0.00	0.00	0.33	0.52
	20	0.00	0.00	0.06	0.17	0.00	0.00	0.00	0.00	0.06	0.16
	All	21.62	3.86	95.23	24.40	26.95	7.49	1.85	0.56	136.89	47.85
100	1	1.06	0.32	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.32
	2	0.99	0.22	0.78	1.41	0.38	0.78	0.09	0.17	2.24	2.34
	3	0.77	0.15	3.29	3.59	1.62	1.61	0.24	0.21	5.81	5.20
	4	1.08	0.23	7.18	5.29	3.33	2.17	0.51	0.39	12.11	7.73
	5	1.23	0.26	2.46	3.16	1.24	1.57	0.27	0.35	5.21	4.99
	6	1.40	0.38	4.95	3.25	2.38	1.64	0.51	0.29	7.87	4.88
	7	1.42	0.33	7.74	3.72	3.48	1.47	0.64	0.37	13.28	5.49
	8	1.62	0.42	8.43	4.08	3.81	1.91	1.03	0.46	14.90	6.31
	9	1.81	0.43	7.59	3.11	3.29	1.73	0.94	0.37	13.64	5.04
	10	2.25	0.62	6.59	1.87	2.33	1.01	0.82	0.35	12.00	2.79
	11	2.56	0.67	9.88	2.94	1.88	0.51	0.74	0.22	14.49	3.86
	12	2.54	0.66	10.26	2.16	1.67	0.38	0.96	0.44	15.11	3.44
	13	2.26	0.57	10.43	2.12	1.55	0.40	1.01	0.39	15.25	2.97
	14	1.78	0.53	9.60	2.31	1.34	0.33	1.24	0.43	13.97	3.25
	15	1.38	0.44	7.46	2.24	1.01	0.31	1.08	0.43	10.92	3.11
	16	1.03	0.42	5.74	2.38	0.81	0.36	0.90	0.40	8.48	3.19
	17	0.69	0.38	4.88	1.82	0.61	0.27	0.60	0.35	6.78	2.59
	18	0.36	0.27	2.87	1.89	0.39	0.30	0.42	0.36	4.05	2.57
	19	0.12	0.19	1.09	1.35	0.13	0.16	0.16	0.25	1.50	1.81
	20	0.01	0.01	0.27	0.52	0.03	0.06	0.00	0.00	0.31	0.59
	All	26.36	5.72	110.27	25.58	31.30	9.68	11.91	3.21	180.78	40.56
113	1	1.22	0.51	0.00	0.00	0.00	0.00	0.00	0.00	1.22	0.51
	2	0.93	0.16	1.49	2.01	1.02	1.32	0.71	1.00	3.35	4.00
	3	0.73	0.16	1.66	2.41	1.27	1.83	0.92	1.33	4.35	5.41
	4	0.95	0.22	4.19	5.78	2.94	4.22	2.90	3.69	10.26	13.33
	5	1.21	0.27	3.91	4.38	2.85	3.42	2.26	2.24	10.22	9.91
	6	1.28	0.35	5.03	4.35	3.58	2.92	2.77	2.48	12.66	9.81
	7	1.37	0.28	7.38	3.24	4.57	1.93	3.67	1.78	16.99	6.71
	8	1.53	0.25	6.04	1.85	3.45	1.10	3.84	1.58	14.87	3.95
	9	1.64	0.29	4.40	3.33	2.48	1.82	3.18	1.76	11.70	6.78
	10	2.18	0.48	4.65	2.30	1.81	0.82	2.64	1.05	11.28	3.31
	11	2.72	0.50	7.87	2.58	1.88	0.51	2.99	0.96	15.47	3.65
	12	2.75	0.46	9.82	1.38	1.74	0.33	3.40	0.91	17.71	2.38
	13	2.40	0.51	8.80	1.83	1.47	0.29	3.63	1.45	16.31	3.35
	14	1.92	0.43	8.00	1.78	1.33	0.34	4.58	1.37	15.83	3.04
	15	1.56	0.44	6.35	2.08	1.05	0.40	4.22	1.50	13.19	3.49
	16	1.16	0.43	5.05	1.52	0.84	0.32	2.85	1.66	9.90	3.01
	17	0.74	0.37	3.57	1.63	0.62	0.32	2.00	0.92	6.92	2.96
	18	0.24	0.32	2.01	1.73	0.23	0.28	1.47	1.47	3.08	3.44
	19	0.05	0.14	0.20	0.40	0.03	0.06	0.19	0.60	0.48	1.05
	All	26.59	4.68	89.57	19.03	32.92	12.20	46.73	15.20	195.80	47.58

(cont'd)

TABLE 2. (cont'd)

127	1	1.12	0.44	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.44
	2	0.97	0.27	1.23	2.67	1.99	3.25	2.65	5.90	5.68	10.60
	3	0.78	0.21	3.00	3.24	2.14	2.26	4.37	4.71	10.30	10.12
	4	1.07	0.35	5.29	4.00	3.96	3.18	0.00	0.00	10.32	7.43
	5	1.27	0.35	2.02	3.55	1.55	2.89	3.17	3.98	8.01	10.37
	6	1.41	0.46	3.99	3.01	3.06	2.46	6.89	4.23	15.36	9.47
	7	1.50	0.38	6.98	2.85	4.51	1.83	10.34	4.23	23.33	8.73
	8	1.66	0.50	6.98	3.01	4.60	2.27	0.00	0.00	13.25	5.44
	9	1.73	0.54	5.47	2.59	3.43	2.19	11.41	5.97	22.04	10.52
	10	1.98	0.57	4.07	1.64	2.19	1.28	9.13	3.72	17.37	6.45
	11	2.36	0.75	5.16	2.40	1.84	0.94	7.50	3.27	16.85	6.52
	12	2.51	0.94	7.03	2.83	1.91	0.82	8.29	3.83	19.74	7.53
	13	2.23	0.90	7.49	2.65	1.75	0.66	0.00	0.00	11.47	4.10
	14	1.85	0.81	6.57	2.45	1.31	0.52	8.50	3.49	18.24	6.58
	15	1.45	0.66	5.52	2.42	1.14	0.51	8.04	4.31	16.15	7.26
	16	1.13	0.55	5.03	2.18	0.88	0.42	7.21	4.01	14.26	6.12
	17	0.76	0.47	3.40	2.00	0.58	0.35	5.21	3.34	9.96	5.72
	18	0.42	0.36	1.94	1.44	0.31	0.25	3.33	2.65	6.00	4.43
	19	0.12	0.17	0.57	0.84	0.10	0.14	1.97	2.15	2.26	3.03
	20	0.01	0.03	0.10	0.23	0.01	0.03	0.11	0.31	0.23	0.58
	All	26.33	8.84	81.85	23.08	36.80	14.27	96.98	28.61	241.96	71.62
139	1	0.79	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.37
	2	0.57	0.16	0.46	0.81	0.31	0.54	1.62	2.60	2.84	3.78
	3	0.44	0.13	1.81	2.33	1.44	1.74	8.10	13.02	11.79	17.02
	4	0.58	0.17	1.74	1.68	1.62	1.45	6.69	5.28	10.63	8.12
	5	0.66	0.23	0.85	1.00	0.96	0.85	4.36	4.42	6.82	6.00
	6	0.75	0.17	1.72	1.73	1.57	1.41	8.32	6.58	12.36	9.49
	7	0.72	0.15	2.95	1.46	2.34	1.15	14.19	6.98	20.20	8.90
	8	0.81	0.15	2.65	1.17	2.21	0.97	15.75	5.52	21.42	6.85
	9	0.79	0.16	2.16	1.33	1.50	0.83	17.23	7.89	21.68	9.45
	10	0.89	0.18	1.27	0.91	0.83	0.51	11.72	6.00	14.71	6.41
	11	0.99	0.22	1.87	1.28	0.73	0.36	10.38	4.00	13.97	4.41
	12	1.01	0.23	3.26	1.67	0.92	0.23	11.51	3.73	16.69	4.27
	13	0.93	0.20	4.03	1.11	0.89	0.23	12.86	4.16	18.70	4.96
	14	0.79	0.25	3.82	0.88	0.76	0.12	12.63	5.15	18.00	5.13
	15	0.64	0.23	2.66	0.75	0.58	0.18	12.20	3.99	16.07	4.28
	16	0.45	0.20	1.90	0.78	0.45	0.23	10.72	5.48	13.51	6.02
	17	0.35	0.20	1.43	0.64	0.30	0.15	7.07	4.37	9.15	4.69
	18	0.22	0.26	0.70	0.55	0.21	0.15	3.51	3.63	4.59	4.34
	19	0.04	0.08	0.33	0.44	0.07	0.11	2.36	3.74	2.81	4.24
	All	12.23	2.70	35.49	8.04	17.62	4.91	171.21	46.93	236.54	52.36
149	1	1.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	1.02	0.37
	2	0.61	0.12	0.00	0.00	0.29	0.67	3.29	6.28	4.19	6.95
	3	0.39	0.06	0.00	0.00	0.51	0.78	5.58	6.74	5.09	7.03
	4	0.56	0.12	0.08	0.15	0.80	0.72	0.00	0.00	1.44	0.86
	5	0.57	0.14	0.06	0.10	0.45	0.36	5.33	5.18	6.40	5.40
	6	0.66	0.16	0.07	0.17	0.73	0.40	9.59	5.47	11.05	5.76
	7	0.65	0.14	0.12	0.17	1.52	0.38	22.15	9.80	24.45	9.98
	8	0.70	0.15	0.12	0.14	1.12	0.53	0.00	0.00	1.94	0.64
	9	0.63	0.16	0.05	0.09	0.88	0.56	23.96	8.71	25.52	9.28
	10	0.65	0.16	0.10	0.17	0.50	0.41	16.76	6.04	18.01	6.45
	11	0.70	0.17	0.00	0.00	0.28	0.12	17.28	3.86	18.26	3.99
	12	0.65	0.14	0.00	0.00	0.26	0.16	16.45	4.02	17.30	4.13
	13	0.63	0.18	0.00	0.00	0.21	0.15	0.00	0.00	0.85	0.24
	14	0.52	0.12	0.00	0.00	0.23	0.13	16.34	4.42	17.09	4.45
	15	0.45	0.09	0.00	0.00	0.20	0.12	15.13	5.70	15.79	5.80
	16	0.43	0.14	0.03	0.08	0.16	0.17	12.91	7.35	10.25	8.71
	17	0.34	0.18	0.00	0.00	0.06	0.08	6.64	4.01	5.38	4.44
	18	0.21	0.17	0.00	0.00	0.04	0.09	5.78	4.51	4.58	4.79
	19	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.07
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.40	1.60	0.40	1.60
	All	10.42	2.46	0.64	0.49	8.14	2.58	169.86	21.08	189.05	24.30

TABLE 3. Aerial phosphorus accumulation means and standard deviations for each day after planting (DAP), node, and plant part. Values are in kg/ha, and planting date was 143 (23 May).

		---Stems---		---Leaves---		--Petioles--		----Pods----		---Totals---	
DAP	Node	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev
44	1	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.03
	2	0.05	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.05	0.02
	3	0.04	0.01	0.04	0.03	0.02	0.02	0.00	0.00	0.10	0.05
	4	0.05	0.02	0.18	0.04	0.04	0.01	0.00	0.00	0.27	0.06
	5	0.05	0.02	0.27	0.10	0.05	0.01	0.00	0.00	0.36	0.12
	6	0.06	0.02	0.33	0.11	0.06	0.02	0.00	0.00	0.45	0.15
	7	0.04	0.02	0.25	0.11	0.05	0.03	0.00	0.00	0.34	0.14
	8	0.02	0.03	0.09	0.13	0.01	0.02	0.00	0.00	0.13	0.17
	9	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.01	0.03
	All	0.40	0.12	1.17	0.33	0.22	0.07	0.00	0.00	1.86	0.58
57	1	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.02
	2	0.08	0.02	0.02	0.04	0.01	0.02	0.00	0.00	0.10	0.07
	3	0.07	0.02	0.08	0.06	0.05	0.04	0.00	0.00	0.19	0.10
	4	0.10	0.02	0.10	0.06	0.05	0.03	0.00	0.00	0.24	0.10
	5	0.11	0.03	0.21	0.04	0.06	0.02	0.00	0.00	0.37	0.05
	6	0.09	0.03	0.31	0.04	0.07	0.01	0.00	0.00	0.48	0.06
	7	0.07	0.02	0.38	0.05	0.09	0.02	0.00	0.00	0.54	0.09
	8	0.07	0.01	0.42	0.07	0.11	0.02	0.00	0.00	0.60	0.10
	9	0.07	0.02	0.42	0.18	0.11	0.04	0.00	0.00	0.61	0.22
	10	0.05	0.03	0.35	0.18	0.06	0.05	0.00	0.00	0.42	0.29
	11	0.02	0.02	0.10	0.14	0.02	0.02	0.00	0.00	0.14	0.18
	12	0.00	0.01	0.01	0.04	0.00	0.01	0.00	0.00	0.02	0.05
	All	0.81	0.22	2.35	0.62	0.63	0.21	0.00	0.00	3.90	1.04
70	1	0.15	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
	2	0.16	0.08	0.18	0.29	0.13	0.22	0.00	0.00	0.40	0.48
	3	0.12	0.07	0.20	0.21	0.18	0.20	0.00	0.00	0.46	0.40
	4	0.18	0.07	0.18	0.12	0.17	0.13	0.00	0.00	0.44	0.30
	5	0.23	0.06	0.19	0.13	0.19	0.13	0.00	0.00	0.53	0.27
	6	0.25	0.07	0.13	0.09	0.10	0.08	0.00	0.00	0.47	0.20
	7	0.22	0.06	0.21	0.15	0.18	0.10	0.00	0.00	0.61	0.24
	8	0.22	0.08	0.45	0.26	0.24	0.12	0.00	0.00	0.90	0.42
	9	0.20	0.08	0.34	0.16	0.15	0.08	0.00	0.00	0.68	0.28
	10	0.15	0.04	0.51	0.12	0.10	0.04	0.00	0.00	0.74	0.18
	11	0.14	0.04	0.59	0.16	0.17	0.04	0.00	0.00	0.86	0.22
	12	0.11	0.04	0.61	0.16	0.18	0.05	0.00	0.00	0.87	0.27
	13	0.09	0.04	0.44	0.17	0.16	0.06	0.00	0.00	0.65	0.25
	14	0.08	0.03	0.45	0.16	0.12	0.05	0.00	0.00	0.50	0.34
	15	0.02	0.02	0.07	0.11	0.03	0.05	0.00	0.00	0.11	0.18
	All	2.24	0.73	4.31	1.10	1.82	0.65	0.00	0.00	8.37	2.37
79	1	0.21	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.12
	2	0.16	0.04	0.05	0.13	0.02	0.05	0.00	0.00	0.22	0.18
	3	0.13	0.05	0.15	0.19	0.14	0.15	0.00	0.00	0.37	0.33
	4	0.17	0.05	0.19	0.21	0.31	0.36	0.00	0.00	0.66	0.56
	5	0.24	0.05	0.19	0.16	0.32	0.27	0.00	0.00	0.69	0.44
	6	0.26	0.06	0.14	0.11	0.17	0.11	0.00	0.00	0.57	0.20
	7	0.25	0.07	0.41	0.13	0.33	0.10	0.00	0.00	0.97	0.18
	8	0.23	0.06	0.47	0.25	0.30	0.13	0.00	0.00	0.96	0.41
	9	0.22	0.09	0.37	0.17	0.15	0.06	0.00	0.00	0.74	0.18
	10	0.17	0.06	0.50	0.14	0.11	0.07	0.00	0.00	0.78	0.20
	11	0.11	0.04	0.43	0.12	0.09	0.06	0.00	0.00	0.63	0.16
	12	0.11	0.04	0.56	0.15	0.12	0.05	0.00	0.00	0.79	0.17
	13	0.07	0.03	0.48	0.13	0.15	0.03	0.00	0.00	0.67	0.18
	14	0.05	0.03	0.47	0.10	0.13	0.02	0.00	0.00	0.60	0.21
	15	0.05	0.02	0.41	0.15	0.09	0.05	0.00	0.00	0.46	0.28
	16	0.03	0.02	0.21	0.17	0.05	0.03	0.00	0.00	0.24	0.22
	17	0.01	0.02	0.10	0.11	0.03	0.03	0.00	0.00	0.08	0.14
	All	2.42	0.43	4.90	1.31	2.38	0.76	0.00	0.00	9.75	2.18

(cont'd)

TABLE 3. (cont'd)

90	1	0.23	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.10
	2	0.18	0.08	0.18	0.18	0.18	0.19	0.00	0.00	0.46	0.35
	3	0.17	0.04	0.51	0.37	0.71	0.60	0.00	0.00	1.16	1.01
	4	0.23	0.06	0.50	0.35	0.53	0.36	0.00	0.00	0.98	0.77
	5	0.25	0.08	0.31	0.23	0.31	0.28	0.00	0.00	0.70	0.58
	6	0.26	0.10	0.21	0.08	0.21	0.09	0.00	0.00	0.57	0.28
	7	0.21	0.07	0.34	0.15	0.47	0.12	0.00	0.00	0.96	0.32
	8	0.21	0.10	0.44	0.20	0.36	0.18	0.00	0.00	0.89	0.44
	9	0.26	0.08	0.33	0.15	0.24	0.15	0.00	0.00	0.77	0.32
	10	0.25	0.08	0.34	0.17	0.16	0.08	0.00	0.00	0.69	0.26
	11	0.26	0.08	0.49	0.11	0.17	0.06	0.00	0.00	0.86	0.27
	12	0.21	0.12	0.52	0.10	0.15	0.04	0.00	0.00	0.83	0.30
	13	0.21	0.06	0.49	0.13	0.13	0.06	0.00	0.00	0.78	0.29
	14	0.13	0.05	0.42	0.14	0.11	0.04	0.00	0.00	0.62	0.24
	15	0.11	0.03	0.33	0.13	0.09	0.03	0.00	0.00	0.47	0.22
	16	0.09	0.02	0.22	0.08	0.08	0.03	0.00	0.00	0.29	0.19
	17	0.07	0.08	0.18	0.06	0.06	0.04	0.00	0.00	0.23	0.18
	18	0.02	0.02	0.07	0.05	0.02	0.02	0.00	0.00	0.10	0.08
	19	0.00	0.00	0.02	0.03	0.00	0.01	0.00	0.00	0.02	0.04
	20	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01
	All	3.30	0.76	5.47	1.46	3.64	1.22	0.00	0.00	11.64	4.24
100	1	0.12	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.09
	2	0.11	0.10	0.06	0.11	0.04	0.09	0.00	0.00	0.22	0.21
	3	0.12	0.04	0.20	0.24	0.30	0.33	0.02	0.02	0.63	0.56
	4	0.38	0.19	0.67	0.50	0.60	0.39	0.06	0.04	1.71	0.95
	5	0.46	0.12	0.20	0.27	0.24	0.30	0.03	0.04	0.93	0.60
	6	0.49	0.16	0.38	0.29	0.37	0.29	0.06	0.04	1.29	0.62
	7	0.45	0.14	0.49	0.28	0.60	0.24	0.07	0.04	1.61	0.57
	8	0.46	0.10	0.55	0.29	0.68	0.36	0.12	0.06	1.82	0.72
	9	0.42	0.13	0.45	0.24	0.59	0.32	0.10	0.04	1.56	0.63
	10	0.49	0.17	0.50	0.16	0.36	0.18	0.08	0.04	1.31	0.42
	11	0.00	0.00	0.56	0.19	0.27	0.06	0.07	0.03	0.90	0.23
	12	0.00	0.00	0.59	0.15	0.26	0.08	0.10	0.05	0.94	0.25
	13	0.23	0.09	0.72	0.19	0.25	0.06	0.09	0.04	1.29	0.30
	14	0.19	0.07	0.52	0.15	0.23	0.06	0.11	0.04	1.05	0.27
	15	0.14	0.06	0.50	0.17	0.16	0.06	0.10	0.04	0.89	0.28
	16	0.09	0.04	0.31	0.15	0.12	0.07	0.09	0.04	0.61	0.24
	17	0.05	0.03	0.29	0.10	0.10	0.04	0.06	0.04	0.49	0.17
	18	0.02	0.02	0.16	0.10	0.10	0.07	0.04	0.03	0.30	0.20
	19	0.01	0.02	0.06	0.07	0.02	0.02	0.01	0.02	0.10	0.12
	20	0.00	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.02	0.03
	All	4.11	0.96	7.24	1.72	5.25	1.61	1.20	0.34	17.80	4.10
113	1	0.21	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.11
	2	0.18	0.08	0.09	0.13	0.12	0.16	0.08	0.10	0.40	0.35
	3	0.19	0.06	0.15	0.17	0.18	0.25	0.11	0.16	0.56	0.55
	4	0.25	0.07	0.31	0.34	0.32	0.48	0.33	0.43	1.05	1.18
	5	0.33	0.09	0.28	0.30	0.47	0.56	0.27	0.30	1.34	1.18
	6	0.35	0.12	0.35	0.26	0.50	0.43	0.33	0.32	1.54	1.04
	7	0.36	0.11	0.52	0.23	0.65	0.31	0.43	0.22	1.96	0.80
	8	0.38	0.08	0.37	0.11	0.41	0.13	0.35	0.13	1.51	0.35
	9	0.33	0.07	0.28	0.19	0.31	0.31	0.32	0.22	1.25	0.73
	10	0.32	0.07	0.31	0.15	0.17	0.10	0.27	0.11	1.07	0.31
	11	0.31	0.07	0.49	0.15	0.27	0.11	0.27	0.09	1.35	0.28
	12	0.27	0.09	0.62	0.09	0.20	0.09	0.32	0.10	1.40	0.24
	13	0.24	0.06	0.48	0.11	0.15	0.09	0.31	0.12	1.19	0.31
	14	0.14	0.04	0.46	0.10	0.10	0.05	0.40	0.12	1.10	0.20
	15	0.11	0.05	0.35	0.10	0.09	0.03	0.46	0.28	1.02	0.36
	16	0.07	0.02	0.28	0.09	0.10	0.06	0.26	0.17	0.72	0.27
	17	0.05	0.02	0.21	0.09	0.05	0.03	0.17	0.10	0.48	0.22
	18	0.02	0.02	0.12	0.10	0.04	0.04	0.13	0.14	0.22	0.25
	19	0.00	0.01	0.01	0.02	0.00	0.00	0.01	0.04	0.03	0.07
	All	4.09	0.93	5.51	1.12	4.09	1.72	4.68	1.68	18.37	4.96

TABLE 3. (cont'd)

127	1	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.03
	2	0.07	0.03	0.09	0.20	0.20	0.32	0.26	0.57	0.51	0.98
	3	0.09	0.03	0.22	0.23	0.13	0.21	0.44	0.47	0.88	0.85
	4	0.15	0.06	0.39	0.31	0.25	0.31	0.00	0.00	0.78	0.51
	5	0.17	0.06	0.20	0.29	0.18	0.38	0.38	0.50	0.89	1.11
	6	0.21	0.08	0.31	0.25	0.46	0.41	0.71	0.43	1.58	1.02
	7	0.24	0.07	0.50	0.21	0.44	0.28	1.07	0.43	2.25	0.82
	8	0.25	0.09	0.48	0.25	0.27	0.21	0.00	0.00	1.00	0.48
	9	0.21	0.10	0.37	0.18	0.18	0.12	1.21	0.69	1.96	0.96
	10	0.24	0.07	0.26	0.11	0.19	0.17	0.89	0.35	1.57	0.61
	11	0.26	0.10	0.28	0.18	0.15	0.13	0.76	0.33	1.45	0.56
	12	0.23	0.10	0.34	0.16	0.26	0.17	0.83	0.38	1.65	0.67
	13	0.18	0.08	0.51	0.22	0.21	0.08	0.00	0.00	0.90	0.35
	14	0.14	0.07	0.34	0.16	0.17	0.08	0.80	0.32	1.45	0.54
	15	0.10	0.05	0.39	0.17	0.11	0.06	0.73	0.40	1.34	0.61
	16	0.05	0.04	0.28	0.14	0.09	0.05	0.62	0.34	1.04	0.46
	17	0.04	0.03	0.23	0.15	0.06	0.04	0.44	0.29	0.78	0.47
	18	0.02	0.03	0.11	0.08	0.04	0.03	0.28	0.22	0.45	0.34
	19	0.01	0.01	0.04	0.06	0.01	0.01	0.16	0.17	0.17	0.23
	20	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.03	0.02	0.04
	All	2.72	0.93	5.30	1.53	3.23	1.25	9.47	2.75	20.72	5.95
139	1	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.03
	2	0.09	0.03	0.03	0.06	0.03	0.06	0.13	0.20	0.27	0.31
	3	0.08	0.03	0.13	0.16	0.12	0.14	0.69	1.12	1.01	1.40
	4	0.09	0.04	0.12	0.12	0.12	0.12	0.54	0.44	0.88	0.67
	5	0.09	0.05	0.07	0.09	0.09	0.10	0.38	0.39	0.64	0.56
	6	0.13	0.03	0.14	0.14	0.16	0.17	0.66	0.49	1.08	0.77
	7	0.10	0.03	0.22	0.11	0.20	0.15	1.28	0.70	1.81	0.87
	8	0.13	0.04	0.21	0.09	0.23	0.09	1.36	0.51	1.92	0.61
	9	0.10	0.03	0.17	0.11	0.16	0.16	1.49	0.72	1.92	0.93
	10	0.11	0.04	0.09	0.08	0.07	0.05	0.95	0.50	1.23	0.55
	11	0.11	0.03	0.15	0.10	0.06	0.04	0.82	0.34	1.15	0.39
	12	0.11	0.06	0.23	0.11	0.07	0.05	0.96	0.33	1.37	0.35
	13	0.10	0.04	0.23	0.08	0.03	0.02	1.08	0.39	1.44	0.47
	14	0.09	0.03	0.18	0.07	0.04	0.01	0.98	0.39	1.28	0.39
	15	0.06	0.03	0.18	0.05	0.02	0.02	0.83	0.29	1.07	0.32
	16	0.04	0.03	0.08	0.06	0.00	0.00	0.75	0.45	0.88	0.50
	17	0.02	0.01	0.07	0.02	0.00	0.00	0.77	0.52	0.28	0.41
	18	0.00	0.00	0.03	0.02	0.01	0.01	0.00	0.00	0.04	0.03
	19	0.00	0.01	0.02	0.02	0.00	0.00	0.00	0.00	0.02	0.03
	All	1.58	0.49	2.32	0.58	1.42	0.45	13.09	4.25	18.41	5.03
149	1	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07
	2	0.09	0.02	0.00	0.00	0.07	0.19	0.30	0.59	0.45	0.77
	3	0.06	0.02	0.00	0.00	0.10	0.17	0.49	0.62	0.52	0.73
	4	0.09	0.03	0.01	0.01	0.12	0.10	0.00	0.00	0.22	0.12
	5	0.10	0.03	0.00	0.00	0.08	0.07	0.52	0.56	0.71	0.61
	6	0.13	0.05	0.01	0.01	0.12	0.07	0.87	0.48	1.14	0.54
	7	0.10	0.06	0.02	0.02	0.25	0.07	1.91	0.79	2.27	0.82
	8	0.17	0.05	0.01	0.01	0.18	0.09	0.00	0.00	0.36	0.11
	9	0.12	0.06	0.01	0.01	0.15	0.12	2.17	0.90	2.44	1.05
	10	0.13	0.03	0.00	0.00	0.07	0.07	1.41	0.51	1.61	0.58
	11	0.14	0.04	0.00	0.00	0.04	0.02	1.39	0.31	1.57	0.34
	12	0.13	0.05	0.00	0.00	0.04	0.02	1.37	0.29	1.54	0.31
	13	0.09	0.03	0.00	0.00	0.03	0.02	0.00	0.00	0.12	0.03
	14	0.07	0.02	0.00	0.00	0.03	0.02	1.40	0.41	1.50	0.42
	15	0.05	0.01	0.00	0.00	0.02	0.01	1.24	0.51	1.31	0.52
	16	0.04	0.02	0.00	0.01	0.02	0.02	1.20	0.66	0.95	0.80
	17	0.02	0.02	0.00	0.00	0.01	0.01	0.58	0.31	0.51	0.35
	18	0.01	0.01	0.00	0.00	0.00	0.01	0.50	0.39	0.39	0.41
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.14	0.04	0.14
	All	1.63	0.48	0.04	0.04	1.31	0.47	14.97	1.96	17.96	2.54

TABLE 4. Aerial potassium accumulation means and standard deviations for each day after planting (DAP), node, and plant part. Values are in kg/ha, and planting date was 143 (23 May).

		---Stems---		---Leaves---		--Petioles--		----Pods----		---Totals---	
DAP	Node	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev
44	1	1.24	0.47	0.00	0.00	0.00	0.00	0.00	0.00	1.24	0.47
	2	0.64	0.16	0.25	0.00	0.00	0.00	0.00	0.00	0.66	0.19
	3	0.52	0.13	0.29	0.21	0.38	0.49	0.00	0.00	1.19	0.66
	4	0.66	0.22	1.60	0.48	0.96	0.34	0.00	0.00	3.22	0.96
	5	0.75	0.27	2.26	0.94	1.17	0.39	0.00	0.00	4.18	1.42
	6	0.82	0.26	2.82	1.03	1.09	0.41	0.00	0.00	4.72	1.63
	7	0.63	0.32	1.69	0.85	0.72	0.41	0.00	0.00	3.04	1.34
	8	0.33	0.49	0.57	0.78	0.20	0.28	0.00	0.00	1.09	1.41
	9	0.00	0.00	0.05	0.13	0.00	0.00	0.00	0.00	0.05	0.13
	All	5.58	1.86	9.30	3.00	4.51	1.56	0.00	0.00	19.38	6.15
57	1	1.12	0.33	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.33
	2	0.80	0.20	0.12	0.29	0.13	0.31	0.00	0.00	1.04	0.63
	3	0.66	0.16	0.56	0.40	0.58	0.47	0.00	0.00	1.80	0.92
	4	0.92	0.25	0.72	0.43	0.72	0.43	0.00	0.00	2.36	0.93
	5	1.00	0.27	1.58	0.36	1.37	0.32	0.00	0.00	3.94	0.69
	6	1.08	0.34	2.34	0.45	1.62	0.40	0.00	0.00	5.04	1.05
	7	1.03	0.26	2.97	0.49	1.92	0.49	0.00	0.00	5.91	1.12
	8	1.14	0.27	3.24	0.61	2.12	0.51	0.00	0.00	6.50	1.28
	9	1.10	0.36	2.75	0.87	1.56	0.64	0.00	0.00	5.40	1.83
	10	0.77	0.48	1.79	0.95	0.78	0.65	0.00	0.00	3.11	2.15
	11	0.27	0.34	0.37	0.53	0.21	0.29	0.00	0.00	0.84	1.13
	12	0.05	0.12	0.04	0.11	0.03	0.08	0.00	0.00	0.12	0.31
	All	9.92	2.87	16.25	3.62	11.02	3.23	0.00	0.00	37.19	9.51
70	1	1.56	0.65	0.00	0.00	0.00	0.00	0.00	0.00	1.56	0.65
	2	1.35	0.60	1.26	1.98	2.59	4.33	0.00	0.00	4.23	5.96
	3	1.04	0.45	1.59	1.52	2.92	3.20	0.00	0.00	5.55	4.88
	4	1.38	0.53	1.20	1.03	2.40	2.30	0.00	0.00	4.98	3.60
	5	1.63	0.57	1.40	1.04	3.24	2.08	0.00	0.00	5.28	3.35
	6	1.75	0.66	0.98	0.69	1.82	1.35	0.00	0.00	4.43	2.27
	7	1.86	0.66	1.44	0.84	3.01	1.68	0.00	0.00	6.31	2.68
	8	1.94	0.63	2.87	1.16	4.39	1.90	0.00	0.00	9.20	3.40
	9	2.04	0.82	2.75	0.88	3.13	1.00	0.00	0.00	7.91	2.38
	10	2.15	0.59	3.08	0.74	2.77	0.77	0.00	0.00	7.83	2.00
	11	2.57	0.87	3.90	1.05	3.28	0.69	0.00	0.00	9.38	2.80
	12	2.53	0.87	4.08	1.41	3.67	0.89	0.00	0.00	9.82	3.45
	13	2.19	0.73	3.40	1.35	2.55	0.95	0.00	0.00	8.14	2.93
	14	1.42	0.84	2.20	1.15	1.81	0.75	0.00	0.00	4.92	3.00
	15	0.29	0.45	0.34	0.54	0.35	0.54	0.00	0.00	0.98	1.52
	All	25.52	8.65	29.59	8.12	35.41	10.12	0.00	0.00	90.52	25.89
79	1	2.05	0.61	0.00	0.00	0.00	0.00	0.00	0.00	2.05	0.61
	2	1.46	0.31	0.39	1.01	0.46	1.24	0.00	0.00	2.32	2.19
	3	1.15	0.25	1.41	1.79	3.31	4.40	0.00	0.00	5.28	5.99
	4	1.67	0.33	1.46	1.66	3.15	3.31	0.00	0.00	6.28	4.80
	5	1.94	0.52	1.22	1.08	3.23	2.76	0.00	0.00	5.99	4.01
	6	2.12	0.58	1.19	0.91	2.36	1.71	0.00	0.00	5.68	2.82
	7	2.24	0.54	3.06	1.14	5.98	1.92	0.00	0.00	11.28	3.00
	8	2.31	0.57	2.81	1.13	5.81	2.30	0.00	0.00	10.40	4.04
	9	2.30	0.66	2.35	0.64	3.69	1.08	0.00	0.00	8.34	1.78
	10	2.40	0.79	3.47	0.97	3.51	0.80	0.00	0.00	9.39	2.03
	11	2.56	0.72	3.87	0.84	3.13	0.71	0.00	0.00	9.56	2.06
	12	2.34	0.67	3.33	0.48	3.00	0.63	0.00	0.00	8.67	1.53
	13	1.92	0.43	3.22	0.38	2.68	0.50	0.00	0.00	7.81	1.05
	14	1.56	0.35	2.69	0.50	2.23	0.40	0.00	0.00	5.98	2.02
	15	1.23	0.44	2.20	0.66	1.51	0.90	0.00	0.00	4.23	2.59
	16	0.77	0.45	1.20	0.92	0.69	0.58	0.00	0.00	2.22	2.00
	17	0.21	0.33	0.46	0.62	0.29	0.38	0.00	0.00	0.77	1.24
	18	0.00	0.00	0.00	0.00	0.03	0.11	0.00	0.00	0.03	0.11
	All	29.44	6.66	33.14	6.78	43.68	11.94	0.00	0.00	106.26	21.33

TABLE 4. (cont'd)

90	1	1.59	0.54	0.00	0.00	0.00	0.00	0.00	0.00	1.49	0.66
	2	1.33	0.35	1.47	1.41	2.27	2.55	0.04	0.06	4.42	4.05
	3	1.12	0.30	4.16	2.90	8.55	6.12	0.15	0.16	12.05	9.82
	4	1.69	0.54	3.93	2.50	6.11	5.65	0.10	0.08	9.58	8.41
	5	1.73	0.59	2.24	1.48	4.93	3.74	0.08	0.08	7.22	6.01
	6	1.96	0.49	1.88	1.13	3.27	1.55	0.08	0.04	6.51	3.16
	7	2.06	0.61	3.37	1.26	6.71	2.07	0.15	0.06	11.52	4.41
	8	2.13	0.55	3.60	1.47	6.48	2.94	0.20	0.06	11.00	5.69
	9	2.05	0.54	2.52	1.09	4.58	2.22	0.16	0.06	8.73	4.05
	10	2.30	0.63	2.33	0.94	3.09	1.44	0.11	0.03	7.33	3.01
	11	2.54	0.76	3.37	0.75	3.64	1.01	0.12	0.04	9.07	3.11
	12	2.35	0.67	3.68	0.58	3.27	0.83	0.13	0.05	8.84	2.85
	13	2.08	0.50	3.20	0.62	2.76	0.60	0.13	0.05	7.66	2.52
	14	1.75	0.48	2.78	0.69	2.27	0.59	0.11	0.04	6.47	2.35
	15	1.16	0.38	2.32	0.60	1.99	0.52	0.12	0.04	4.91	2.24
	16	0.90	0.25	1.74	0.77	1.44	0.52	0.07	0.03	3.55	2.04
	17	0.65	0.89	1.23	0.68	0.78	0.52	0.04	0.03	2.53	1.89
	18	0.23	0.19	0.60	0.42	0.34	0.24	0.03	0.03	1.01	0.81
	19	0.00	0.00	0.16	0.23	0.06	0.10	0.00	0.00	0.21	0.32
	20	0.00	0.00	0.03	0.09	0.00	0.00	0.00	0.00	0.03	0.08
	All	29.23	7.00	42.08	11.18	59.28	19.36	1.82	0.48	124.13	46.66
100	1	1.46	0.41	0.00	0.00	0.00	0.00	0.00	0.00	1.46	0.41
	2	1.38	0.41	0.34	0.62	0.83	1.69	0.07	0.14	2.62	2.45
	3	1.12	0.33	1.45	1.53	3.33	3.23	0.20	0.17	5.99	4.84
	4	1.60	0.45	2.89	2.14	5.46	3.50	0.41	0.31	10.35	5.96
	5	1.79	0.52	1.26	1.65	2.69	3.27	0.23	0.30	5.97	5.18
	6	2.04	0.75	3.57	3.50	5.14	3.56	0.47	0.26	11.10	6.97
	7	2.08	0.64	3.98	1.84	7.47	3.39	0.56	0.33	14.10	5.60
	8	2.13	0.65	4.12	1.93	7.64	3.92	0.86	0.40	14.75	6.11
	9	2.05	0.63	3.73	1.54	6.29	3.51	0.75	0.30	12.82	5.46
	10	2.22	0.75	3.19	0.90	4.75	1.85	0.63	0.28	10.79	2.76
	11	2.34	0.67	3.91	1.14	3.91	0.98	0.56	0.17	10.71	2.37
	12	2.10	0.61	3.51	0.74	3.54	0.83	0.72	0.33	9.87	2.12
	13	1.85	0.58	3.38	0.73	3.13	0.80	0.72	0.28	9.07	1.94
	14	1.47	0.53	2.93	0.71	2.51	0.57	0.84	0.28	7.75	1.77
	15	1.08	0.36	2.27	0.66	1.80	0.52	0.70	0.27	5.85	1.57
	16	0.84	0.29	1.87	0.72	1.37	0.61	0.56	0.23	4.64	1.63
	17	0.52	0.23	1.66	0.56	0.94	0.43	0.37	0.22	3.48	1.29
	18	0.25	0.17	1.03	0.63	0.58	0.44	0.24	0.21	2.10	1.29
	19	0.08	0.12	0.38	0.48	0.18	0.23	0.09	0.14	0.74	0.88
	20	0.00	0.01	0.10	0.20	0.05	0.10	0.00	0.00	0.15	0.30
	All	28.39	7.91	45.59	9.69	61.59	18.51	8.75	2.50	144.31	33.28
113	1	1.70	0.80	0.00	0.00	0.00	0.00	0.00	0.00	1.70	0.80
	2	1.19	0.28	0.77	1.00	1.62	2.06	0.45	0.63	3.32	3.47
	3	0.94	0.25	1.07	1.27	1.98	2.58	0.61	0.92	4.19	4.55
	4	1.20	0.34	1.87	2.54	3.64	5.19	1.81	2.30	8.07	9.76
	5	1.50	0.45	2.14	2.34	4.48	5.38	1.49	1.48	9.62	9.29
	6	1.66	0.63	2.71	2.22	6.15	5.30	1.87	1.72	12.40	9.46
	7	1.64	0.44	4.09	1.75	7.19	3.22	2.43	1.19	15.35	6.12
	8	1.73	0.37	3.34	1.00	5.31	1.98	2.55	1.06	12.94	3.70
	9	1.59	0.41	2.36	1.74	3.60	2.70	2.10	1.15	9.65	5.70
	10	1.77	0.40	2.27	1.12	2.81	1.23	1.70	0.67	8.54	2.64
	11	1.90	0.43	3.20	1.00	3.28	0.84	1.91	0.60	10.29	2.24
	12	1.75	0.33	3.63	0.63	2.97	0.57	2.17	0.59	10.52	1.66
	13	4.34	5.04	2.88	0.65	2.47	0.50	2.24	0.88	11.93	5.09
	14	1.18	0.26	2.50	0.60	2.18	0.61	2.72	0.81	8.58	1.72
	15	0.94	0.23	2.13	0.76	1.63	0.58	2.48	0.90	7.18	1.95
	16	0.63	0.23	1.64	0.47	1.13	0.41	1.56	0.91	4.95	1.51
	17	0.38	0.20	1.18	0.54	0.74	0.46	1.09	0.52	3.38	1.57
	18	0.12	0.16	0.64	0.54	0.27	0.33	0.77	0.78	1.44	1.62
	19	0.03	0.06	0.06	0.13	0.03	0.06	0.10	0.32	0.22	0.49
	All	26.19	6.09	37.85	8.96	51.07	19.03	29.15	9.66	144.25	38.46

(cont'd)

TABLE 4. (cont'd)

127	1	1.28	0.51	0.00	0.00	0.00	0.00	0.00	0.00	1.28	0.51
	2	1.11	0.32	0.53	1.11	2.14	3.22	1.35	2.80	4.26	6.31
	3	0.89	0.24	1.39	1.56	2.86	3.18	2.35	2.59	7.50	7.27
	4	1.21	0.45	2.28	1.74	4.59	3.78	0.00	0.00	8.08	5.84
	5	3.95	4.96	1.40	2.09	2.26	4.11	1.70	2.09	8.95	11.59
	6	1.52	0.51	2.21	1.78	4.11	3.30	3.56	2.23	11.40	7.09
	7	1.52	0.43	3.37	1.42	5.80	2.40	5.33	2.17	16.02	5.93
	8	1.63	0.54	3.41	1.50	6.15	3.27	0.00	0.00	11.18	5.05
	9	1.57	0.57	2.70	1.28	4.48	2.94	5.87	3.03	14.62	7.43
	10	1.54	0.47	1.93	0.87	2.79	1.66	4.66	1.91	10.92	4.40
	11	1.63	0.57	1.96	0.91	2.21	1.13	3.80	1.63	9.60	3.64
	12	1.67	0.70	2.22	0.89	2.15	0.87	4.22	1.89	10.26	3.73
	13	1.45	0.63	2.15	0.75	1.96	0.71	0.00	0.00	5.55	2.01
	14	1.19	0.55	1.75	0.65	1.51	0.60	4.26	1.72	8.71	3.13
	15	0.92	0.44	1.51	0.67	1.17	0.53	3.90	2.04	7.50	3.37
	16	0.69	0.35	1.39	0.58	0.95	0.46	3.44	1.90	6.47	2.86
	17	0.43	0.27	0.91	0.49	0.60	0.40	2.41	1.57	4.34	2.55
	18	0.24	0.21	0.49	0.36	0.26	0.21	1.50	1.21	2.50	1.89
	19	0.08	0.11	0.15	0.23	0.09	0.13	0.86	0.95	0.96	1.31
	20	0.01	0.02	0.02	0.05	0.01	0.03	0.05	0.15	0.09	0.23
	All	24.53	8.51	31.41	9.16	45.54	18.86	48.71	14.08	150.18	47.82
139	1	1.10	0.32	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.32
	2	0.72	0.19	0.33	0.57	0.60	0.97	0.73	1.16	2.30	2.59
	3	0.60	0.20	1.03	1.29	2.60	3.02	3.46	5.44	7.68	9.66
	4	0.80	0.30	0.93	0.93	2.59	2.26	2.93	2.35	7.25	5.46
	5	0.91	0.35	0.62	0.72	1.74	1.66	2.07	2.21	5.34	4.39
	6	1.07	0.31	1.14	1.09	2.85	2.60	3.80	3.02	8.86	6.61
	7	1.09	0.31	2.01	0.92	4.60	2.60	6.39	3.22	14.08	6.41
	8	1.23	0.30	1.75	0.80	4.11	2.28	6.82	2.57	13.91	5.20
	9	1.19	0.29	1.43	0.94	2.93	2.05	7.53	3.67	13.08	6.42
	10	1.21	0.26	0.79	0.66	1.54	1.15	4.97	2.56	8.51	3.81
	11	1.23	0.25	0.87	0.57	1.02	0.52	4.28	1.68	7.40	2.23
	12	1.20	0.24	1.20	0.55	1.29	0.30	4.77	1.61	8.46	1.93
	13	1.11	0.26	1.40	0.37	1.20	0.31	5.11	1.74	8.83	2.30
	14	0.90	0.29	1.19	0.30	0.97	0.20	5.04	2.19	8.10	2.44
	15	0.74	0.28	0.89	0.27	0.75	0.25	4.82	1.58	7.20	1.90
	16	0.47	0.22	0.69	0.33	0.54	0.30	4.03	2.10	5.73	2.64
	17	0.30	0.20	0.52	0.24	0.31	0.16	2.54	1.64	3.67	1.95
	18	0.16	0.22	0.25	0.20	0.18	0.13	1.24	1.34	1.78	1.77
	19	0.03	0.05	0.10	0.14	0.05	0.08	0.83	1.37	1.01	1.57
	All	16.07	4.29	17.05	4.20	29.82	11.11	71.36	20.81	134.29	35.26
149	1	1.26	0.45	0.00	0.00	0.00	0.00	0.00	0.00	1.26	0.45
	2	0.88	0.20	0.00	0.00	0.68	1.45	1.60	3.33	3.16	4.75
	3	0.63	0.13	0.00	0.00	0.95	1.55	2.54	3.24	3.49	4.52
	4	0.92	0.26	0.09	0.18	1.64	1.40	0.00	0.00	2.65	1.59
	5	1.11	0.29	0.00	0.00	1.10	0.92	2.50	2.50	4.70	3.29
	6	1.28	0.36	0.07	0.17	1.75	0.92	4.44	2.51	7.54	3.22
	7	1.32	0.35	0.15	0.20	3.77	1.09	9.83	4.10	15.07	4.68
	8	1.48	0.38	0.15	0.17	3.24	1.72	0.00	0.00	4.87	1.96
	9	1.39	0.41	0.06	0.11	2.35	1.82	10.84	4.00	14.64	5.95
	10	1.38	0.31	0.10	0.16	1.22	1.10	7.50	2.73	10.20	3.81
	11	1.56	0.37	0.00	0.00	0.60	0.35	7.45	1.86	9.61	2.27
	12	1.50	0.33	0.00	0.00	0.54	0.35	7.18	1.63	9.09	1.94
	13	1.38	0.33	0.00	0.00	0.39	0.27	0.00	0.00	1.77	0.44
	14	1.15	0.23	0.00	0.00	0.46	0.30	6.84	1.85	8.45	2.04
	15	0.89	0.23	0.00	0.00	0.38	0.23	6.25	2.51	7.52	2.85
	16	0.65	0.24	0.02	0.06	0.29	0.32	4.91	2.67	5.81	2.94
	17	0.42	0.21	0.00	0.00	0.08	0.11	2.95	1.53	3.45	1.71
	18	0.20	0.16	0.00	0.00	0.06	0.16	1.90	1.62	2.16	1.78
	19	0.04	0.06	0.00	0.00	0.00	0.00	0.40	0.67	0.44	0.71
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.80	0.20	0.80
	All	19.44	4.70	0.65	0.50	19.29	6.62	76.68	9.45	116.06	18.64

TABLE 5. Aerial calcium accumulation means and standard deviations for each day after planting (DAP), node, and plant part. Values are in kg/ha, and planting date was 143 (23 May).

		---Stems---		---Leaves---		--Petioles--		----Pods----		---Totals---	
DAP	Node	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev
44	1	0.358	0.152	0.000	0.000	0.000	0.000	0.000	0.000	0.358	0.152
	2	0.218	0.061	0.000	0.000	0.000	0.000	0.000	0.000	0.218	0.061
	3	0.171	0.046	0.130	0.096	0.091	0.122	0.000	0.000	0.392	0.225
	4	0.245	0.081	0.975	0.277	0.270	0.085	0.000	0.000	1.491	0.398
	5	0.264	0.075	1.071	0.394	0.321	0.085	0.000	0.000	1.656	0.499
	6	0.238	0.062	0.884	0.320	0.235	0.084	0.000	0.000	1.357	0.451
	7	0.157	0.075	0.433	0.230	0.129	0.072	0.000	0.000	0.719	0.329
	8	0.069	0.104	0.125	0.172	0.031	0.045	0.000	0.000	0.224	0.288
	9	0.000	0.000	0.011	0.030	0.000	0.000	0.000	0.000	0.011	0.030
	All	1.719	0.522	3.629	1.057	1.077	0.310	0.000	0.000	6.426	1.825
57	1	0.376	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.376	0.101
	2	0.280	0.069	0.033	0.085	0.020	0.050	0.000	0.000	0.333	0.142
	3	0.234	0.105	0.161	0.111	0.101	0.080	0.000	0.000	0.494	0.231
	4	0.289	0.069	0.292	0.183	0.145	0.089	0.000	0.000	0.726	0.249
	5	0.305	0.065	1.136	0.358	0.424	0.092	0.000	0.000	1.865	0.452
	6	0.304	0.110	1.476	0.377	0.483	0.100	0.000	0.000	2.263	0.536
	7	0.333	0.080	1.591	0.403	0.565	0.201	0.000	0.000	2.489	0.611
	8	0.314	0.075	1.361	0.363	0.473	0.150	0.000	0.000	2.148	0.574
	9	0.254	0.081	0.876	0.368	0.308	0.134	0.000	0.000	1.438	0.569
	10	0.139	0.085	0.448	0.220	0.136	0.108	0.000	0.000	0.668	0.438
	11	0.049	0.051	0.089	0.123	0.033	0.051	0.000	0.000	0.152	0.194
	12	0.008	0.019	0.008	0.021	0.000	0.000	0.000	0.000	0.016	0.039
	All	2.865	0.688	7.416	1.685	2.688	0.802	0.000	0.000	13.030	3.167
70	1	0.461	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.461	0.184
	2	0.425	0.129	0.314	0.522	0.317	0.530	0.000	0.000	0.898	1.011
	3	0.291	0.148	0.399	0.469	0.408	0.472	0.000	0.000	1.097	1.003
	4	0.382	0.104	0.285	0.276	0.318	0.306	0.000	0.000	0.985	0.621
	5	0.439	0.107	0.257	0.225	0.360	0.250	0.000	0.000	1.011	0.482
	6	0.460	0.128	0.205	0.256	0.247	0.199	0.000	0.000	0.912	0.462
	7	0.411	0.107	0.452	0.378	0.552	0.313	0.000	0.000	1.415	0.647
	8	0.429	0.101	1.671	0.787	1.032	0.274	0.000	0.000	3.133	1.067
	9	0.390	0.156	1.771	0.861	0.884	0.151	0.000	0.000	3.045	1.069
	10	0.387	0.086	1.665	0.558	0.828	0.202	0.000	0.000	2.881	0.804
	11	0.388	0.108	1.612	0.342	0.811	0.172	0.000	0.000	2.811	0.565
	12	0.315	0.099	1.354	0.438	0.625	0.193	0.000	0.000	2.295	0.709
	13	0.264	0.081	0.839	0.420	0.388	0.152	0.000	0.000	1.492	0.640
	14	0.163	0.085	0.485	0.293	0.190	0.115	0.000	0.000	0.808	0.503
	15	0.032	0.049	0.080	0.125	0.037	0.058	0.000	0.000	0.148	0.232
	16	0.000	0.000	0.006	0.024	0.000	0.000	0.000	0.000	0.006	0.024
	All	5.237	1.347	11.286	3.091	6.873	1.547	0.000	0.000	23.396	5.802
79	1	0.751	0.168	0.000	0.000	0.000	0.000	0.000	0.000	0.751	0.168
	2	0.487	0.089	0.138	0.355	0.112	0.286	0.000	0.000	0.737	0.633
	3	0.378	0.064	0.435	0.644	0.529	0.770	0.000	0.000	1.343	1.430
	4	0.512	0.111	0.480	0.661	0.653	0.834	0.000	0.000	1.645	1.519
	5	0.554	0.125	0.259	0.258	0.366	0.366	0.000	0.000	1.179	0.665
	6	0.610	0.141	0.218	0.163	0.308	0.227	0.000	0.000	1.136	0.406
	7	0.563	0.116	0.685	0.346	0.899	0.371	0.000	0.000	2.148	0.753
	8	0.593	0.094	0.981	0.799	0.929	0.587	0.000	0.000	2.503	1.403
	9	0.559	0.095	1.683	0.785	1.010	0.353	0.000	0.000	3.252	1.138
	10	0.456	0.107	2.171	0.403	1.096	0.249	0.000	0.000	3.723	0.703
	11	0.428	0.054	2.065	0.374	1.069	0.211	0.000	0.000	3.561	0.607
	12	0.405	0.070	1.937	0.394	0.997	0.252	0.000	0.000	3.339	0.685
	13	0.429	0.093	1.599	0.393	0.846	0.303	0.000	0.000	2.873	0.751
	14	0.344	0.144	1.191	0.463	0.549	0.261	0.000	0.000	2.084	0.856
	15	0.247	0.138	0.735	0.400	0.323	0.234	0.000	0.000	1.259	0.787
	16	0.156	0.123	0.425	0.359	0.151	0.139	0.000	0.000	0.640	0.616
	17	0.049	0.079	0.108	0.162	0.042	0.076	0.000	0.000	0.198	0.313
	18	0.000	0.000	0.011	0.045	0.000	0.000	0.000	0.000	0.011	0.045
	All	7.502	1.332	15.022	4.170	9.860	3.336	0.000	0.000	32.383	8.538

(cont'd)

TABLE 5. (cont'd)

90	1	0.617	0.148	0.000	0.000	0.000	0.000	0.000	0.000	0.579	0.210
	2	0.596	0.116	0.517	0.635	0.509	0.547	0.019	0.028	1.474	1.204
	3	0.463	0.094	1.366	1.047	1.655	1.041	0.067	0.073	3.141	2.302
	4	0.443	0.105	1.376	1.262	1.331	1.121	0.051	0.045	2.831	2.441
	5	0.467	0.122	0.729	0.579	0.869	0.805	0.033	0.031	1.767	1.488
	6	0.487	0.072	0.401	0.258	0.522	0.280	0.033	0.016	1.353	0.639
	7	0.573	0.115	0.752	0.293	1.076	0.369	0.061	0.023	2.308	0.898
	8	0.621	0.101	0.750	0.432	1.076	0.573	0.074	0.025	2.363	1.167
	9	0.601	0.078	0.633	0.322	0.822	0.286	0.064	0.025	1.988	0.757
	10	0.644	0.100	1.032	0.643	0.761	0.371	0.053	0.014	2.334	1.121
	11	0.717	0.105	1.946	0.389	0.998	0.215	0.055	0.016	3.483	1.096
	12	0.700	0.114	2.189	0.462	1.062	0.187	0.063	0.022	3.763	1.225
	13	0.613	0.105	1.807	0.422	0.938	0.208	0.062	0.021	3.206	1.081
	14	0.549	0.111	1.521	0.536	0.777	0.283	0.071	0.028	2.735	1.137
	15	0.450	0.127	1.135	0.417	0.627	0.257	0.071	0.025	2.140	0.951
	16	0.272	0.142	0.744	0.444	0.436	0.235	0.051	0.021	1.409	0.871
	17	0.240	0.258	0.557	0.381	0.279	0.195	0.029	0.023	1.037	0.781
	18	0.077	0.064	0.248	0.200	0.128	0.092	0.018	0.017	0.441	0.355
	19	0.013	0.019	0.063	0.093	0.026	0.041	0.000	0.000	0.095	0.148
	20	0.000	0.000	0.014	0.037	0.000	0.000	0.000	0.000	0.013	0.036
	All	9.143	1.409	17.430	4.634	13.576	4.212	0.875	0.235	38.461	13.992
100	1	0.664	0.182	0.000	0.000	0.000	0.000	0.000	0.000	0.664	0.182
	2	0.643	0.160	0.179	0.326	0.217	0.443	0.029	0.058	1.068	0.834
	3	0.487	0.115	0.740	0.811	0.820	0.828	0.083	0.109	2.130	1.686
	4	0.587	0.150	1.484	1.070	1.368	0.875	0.151	0.118	3.590	2.040
	5	0.613	0.187	0.490	0.618	0.518	0.634	0.078	0.098	1.700	1.325
	6	0.670	0.204	0.902	0.702	0.850	0.618	0.123	0.081	2.545	1.400
	7	0.601	0.160	1.224	0.569	1.284	0.582	0.179	0.102	3.289	1.260
	8	0.622	0.157	1.258	0.619	1.434	0.781	0.278	0.121	3.592	1.518
	9	0.588	0.145	1.127	0.432	1.280	0.648	0.247	0.094	3.243	1.172
	10	0.715	0.181	1.455	0.450	1.233	0.378	0.207	0.088	3.610	0.746
	11	0.746	0.182	2.831	0.886	1.333	0.323	0.176	0.055	5.086	1.179
	12	0.689	0.178	3.145	0.654	1.424	0.374	0.233	0.113	5.491	1.185
	13	0.640	0.150	3.032	0.761	1.343	0.387	0.245	0.099	5.261	1.238
	14	0.529	0.150	2.699	0.762	1.145	0.358	0.317	0.105	4.691	1.260
	15	0.424	0.124	2.063	0.728	0.888	0.362	0.285	0.116	3.660	1.209
	16	0.320	0.158	1.550	0.730	0.652	0.330	0.249	0.114	2.771	1.212
	17	0.228	0.118	1.132	0.472	0.466	0.269	0.168	0.099	1.993	0.892
	18	0.127	0.091	0.690	0.486	0.307	0.273	0.121	0.103	1.244	0.875
	19	0.041	0.061	0.273	0.355	0.107	0.139	0.045	0.070	0.466	0.582
	20	0.000	0.000	0.072	0.137	0.022	0.048	0.015	0.031	0.109	0.206
	All	9.933	2.419	26.346	5.490	16.692	5.418	3.231	0.869	56.201	12.926
113	1	0.815	0.327	0.000	0.000	0.000	0.000	0.000	0.000	0.815	0.327
	2	0.630	0.114	0.341	0.467	0.408	0.551	0.176	0.259	1.325	1.225
	3	0.482	0.105	0.418	0.660	0.498	0.699	0.162	0.268	1.561	1.650
	4	0.632	0.126	1.041	1.441	1.294	1.892	0.422	0.629	3.389	3.940
	5	0.768	0.167	0.696	0.703	0.869	0.927	0.450	0.421	2.783	2.101
	6	0.764	0.188	0.951	0.870	1.209	1.041	0.595	0.510	3.519	2.511
	7	0.722	0.145	1.350	0.637	1.436	0.619	0.761	0.378	4.269	1.605
	8	0.747	0.137	1.065	0.328	1.205	0.418	0.770	0.297	3.788	0.971
	9	0.682	0.129	0.749	0.486	0.805	0.493	0.568	0.297	2.803	1.299
	10	0.768	0.142	1.179	0.627	0.869	0.335	0.464	0.166	3.280	0.970
	11	0.745	0.167	2.765	0.916	1.453	0.369	0.490	0.156	5.453	1.355
	12	0.709	0.128	3.340	0.458	1.515	0.265	0.593	0.157	6.158	0.785
	13	0.614	0.117	2.943	0.596	1.346	0.286	0.629	0.242	5.533	1.071
	14	0.515	0.125	2.567	0.593	1.214	0.361	0.748	0.224	5.045	1.095
	15	0.412	0.114	1.777	0.573	.895	0.343	0.718	0.245	3.803	1.093
	16	0.311	0.123	1.518	0.496	.680	0.278	0.470	0.256	2.979	0.949
	17	0.205	0.109	1.129	0.454	.500	0.284	0.358	0.162	2.192	0.939
	18	0.069	0.094	0.501	0.604	.221	0.293	0.190	0.236	0.980	1.160
	19	0.025	0.062	0.073	0.146	.028	0.055	0.032	0.098	0.158	0.296
	All	10.618	1.985	24.317	4.158	1 .344	4.839	8.552	2.774	59.831	12.697

TABLE 5. (cont'd)

127	1	0.651	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.651	0.250
	2	0.597	0.162	0.347	0.765	0.485	0.920	0.226	0.571	1.655	2.204
	3	0.461	0.119	0.801	0.853	0.878	0.885	0.545	0.572	2.684	2.333
	4	0.600	0.196	1.646	1.328	1.713	1.410	0.000	0.000	3.959	2.880
	5	0.677	0.189	0.506	0.970	0.602	1.172	0.379	0.458	2.164	2.650
	6	0.739	0.229	0.884	0.654	1.021	0.853	0.841	0.501	3.535	2.037
	7	0.679	0.170	1.519	0.757	1.676	0.761	1.313	0.518	4.637	2.021
	8	0.748	0.226	1.654	0.740	1.907	0.894	0.000	0.000	4.309	1.747
	9	0.688	0.216	1.237	0.609	1.370	0.846	1.383	0.688	4.678	2.187
	10	0.703	0.201	1.053	0.395	0.952	0.480	1.070	0.420	3.777	1.303
	11	0.702	0.232	1.632	0.806	0.968	0.452	0.786	0.336	4.089	1.612
	12	0.675	0.259	2.763	1.068	1.337	0.534	0.843	0.400	5.619	2.067
	13	0.558	0.237	2.839	1.029	1.281	0.493	0.000	0.000	4.573	1.728
	14	0.483	0.213	2.577	1.005	1.088	0.463	0.893	0.356	5.041	1.900
	15	0.385	0.177	2.008	0.910	0.930	0.440	0.844	0.440	4.167	1.844
	16	0.295	0.148	1.895	0.857	0.781	0.384	0.793	0.436	3.764	1.616
	17	0.209	0.132	1.333	0.718	0.546	0.354	0.566	0.364	2.787	1.425
	18	0.120	0.102	0.903	0.670	0.313	0.262	0.373	0.290	1.708	1.275
	19	0.035	0.049	0.253	0.422	0.094	0.138	0.270	0.235	0.517	0.754
	20	0.000	0.000	0.052	0.116	0.000	0.000	0.038	0.075	0.061	0.146
	All	9.914	3.210	25.853	7.843	17.943	7.275	11.001	3.115	65.956	21.846
139	1	0.530	0.119	0.000	0.000	0.000	0.000	0.000	0.000	0.530	0.119
	2	0.366	0.083	0.140	0.265	0.209	0.354	0.145	0.234	0.860	0.856
	3	0.281	0.074	0.841	1.155	0.998	1.322	0.683	1.080	2.803	3.544
	4	0.352	0.088	0.685	0.681	0.957	0.799	0.564	0.442	2.558	1.839
	5	0.388	0.109	0.312	0.412	0.436	0.403	0.351	0.302	1.487	1.037
	6	0.420	0.088	0.624	0.615	0.735	0.782	0.664	0.578	2.305	1.845
	7	0.400	0.092	1.073	0.503	1.289	0.693	1.125	0.501	3.886	1.655
	8	0.425	0.096	1.003	0.476	1.148	0.520	1.191	0.372	3.768	1.242
	9	0.396	0.078	0.889	0.587	0.918	0.607	1.212	0.465	3.414	1.581
	10	0.427	0.098	0.515	0.371	0.584	0.362	0.772	0.341	2.298	0.844
	11	0.433	0.073	0.990	0.660	0.635	0.319	0.651	0.213	2.709	0.983
	12	0.398	0.085	2.026	0.988	1.053	0.279	0.768	0.262	4.245	1.222
	13	0.341	0.087	2.568	0.591	1.138	0.312	0.870	0.296	4.917	1.004
	14	0.305	0.111	2.488	0.550	0.997	0.250	0.894	0.349	4.684	0.742
	15	0.242	0.101	1.787	0.518	0.781	0.292	0.908	0.294	3.718	0.770
	16	0.163	0.088	1.486	0.672	0.643	0.408	0.849	0.419	3.141	1.285
	17	0.121	0.093	1.169	0.511	0.464	0.312	0.655	0.401	2.408	0.998
	18	0.078	0.105	0.677	0.547	0.216	0.210	0.329	0.317	1.300	1.058
	19	0.023	0.037	0.354	0.492	0.113	0.172	0.204	0.318	0.683	0.962
	All	6.078	1.498	19.625	4.123	13.174	4.129	12.837	3.181	51.715	9.755
149	1	0.710	0.239	0.000	0.000	0.000	0.000	0.000	0.000	0.710	0.239
	2	0.507	0.093	0.000	0.000	0.180	0.336	0.249	0.442	0.936	0.778
	3	0.340	0.054	0.009	0.021	0.320	0.482	0.465	0.579	1.019	1.023
	4	0.478	0.107	0.040	0.078	0.556	0.506	0.000	0.000	1.074	0.592
	5	0.536	0.118	0.023	0.042	0.282	0.234	0.448	0.440	1.289	0.646
	6	0.574	0.125	0.047	0.107	0.496	0.318	0.729	0.420	1.846	0.661
	7	0.543	0.116	0.078	0.108	0.923	0.219	1.747	0.932	3.291	1.122
	8	0.593	0.121	0.055	0.062	0.758	0.352	0.000	0.000	1.407	0.436
	9	0.531	0.132	0.039	0.073	0.565	0.367	1.674	0.488	2.809	0.915
	10	0.549	0.117	0.050	0.083	0.305	0.213	1.250	0.482	2.153	0.730
	11	0.584	0.123	0.050	0.072	0.178	0.080	1.105	0.230	1.916	0.352
	12	0.529	0.118	0.049	0.081	0.178	0.160	1.189	0.300	1.945	0.440
	13	0.462	0.110	0.022	0.050	0.204	0.148	0.000	0.000	0.687	0.197
	14	0.405	0.094	0.019	0.062	0.344	0.213	1.206	0.303	1.975	0.472
	15	0.321	0.099	0.000	0.000	0.323	0.212	1.123	0.396	1.767	0.630
	16	0.260	0.118	0.034	0.088	0.227	0.305	0.992	0.576	1.512	0.872
	17	0.181	0.107	0.000	0.000	0.090	0.122	0.589	0.305	0.860	0.434
	18	0.114	0.093	0.000	0.000	0.080	0.214	0.378	0.324	0.572	0.501
	19	0.024	0.035	0.000	0.000	0.000	0.000	0.082	0.137	0.105	0.163
	20	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.075	0.019	0.075
	All	8.241	1.861	0.514	0.384	6.011	1.987	13.127	1.531	27.893	4.380

TABLE 6. Aerial magnesium accumulation means and standard deviations for each day after planting (DAP), node, and plant part. Values are in kg/ha, and planting date was 143 (23 May).

		---Stems---		---Leaves---		--Petioles--		----Pods----		---Totals---	
DAP	Node	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev
44	1	0.136	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.136	0.056
	2	0.096	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.096	0.026
	3	0.089	0.025	0.070	0.053	0.041	0.057	0.000	0.000	0.200	0.111
	4	0.145	0.047	0.477	0.137	0.113	0.039	0.000	0.000	0.735	0.196
	5	0.161	0.053	0.555	0.208	0.140	0.044	0.000	0.000	0.855	0.275
	6	0.148	0.041	0.523	0.182	0.107	0.044	0.000	0.000	0.778	0.259
	7	0.095	0.047	0.280	0.138	0.061	0.035	0.000	0.000	0.436	0.187
	8	0.041	0.063	0.085	0.118	0.015	0.022	0.000	0.000	0.142	0.183
	9	0.000	0.000	0.007	0.021	0.000	0.000	0.000	0.000	0.007	0.021
	All	0.911	0.285	1.997	0.581	0.477	0.161	0.000	0.000	3.386	0.987
57	1	0.128	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.128	0.035
	2	0.112	0.023	0.023	0.058	0.015	0.037	0.000	0.000	0.149	0.099
	3	0.096	0.019	0.104	0.079	0.072	0.058	0.000	0.000	0.271	0.152
	4	0.147	0.029	0.166	0.106	0.089	0.058	0.000	0.000	0.402	0.165
	5	0.183	0.037	0.550	0.153	0.212	0.053	0.000	0.000	0.945	0.212
	6	2.126	7.656	0.751	0.181	0.226	0.048	0.000	0.000	3.102	7.695
	7	0.219	0.052	0.814	0.181	0.255	0.107	0.000	0.000	1.289	0.328
	8	0.205	0.053	0.787	0.189	0.224	0.073	0.000	0.000	1.216	0.295
	9	0.174	0.053	0.593	0.219	0.149	0.063	0.000	0.000	0.916	0.307
	10	0.100	0.062	0.307	0.161	0.073	0.059	0.000	0.000	0.441	0.296
	11	0.035	0.037	0.065	0.090	0.018	0.028	0.000	0.000	0.105	0.133
	12	0.005	0.013	0.007	0.017	0.000	0.000	0.000	0.000	0.012	0.030
	All	3.518	7.726	4.127	0.983	1.333	0.454	0.000	0.000	9.011	7.955
70	1	0.150	0.055	0.000	0.000	0.000	0.000	0.000	0.000	0.150	0.055
	2	0.147	0.051	0.219	0.362	0.190	0.320	0.000	0.000	0.454	0.643
	3	0.112	0.061	0.266	0.308	0.235	0.272	0.000	0.000	0.613	0.605
	4	0.166	0.049	0.197	0.192	0.199	0.192	0.000	0.000	0.563	0.391
	5	0.207	0.055	0.213	0.186	0.218	0.154	0.000	0.000	0.610	0.339
	6	0.236	0.066	0.162	0.175	0.152	0.122	0.000	0.000	0.551	0.314
	7	0.246	0.062	0.313	0.211	0.300	0.150	0.000	0.000	0.859	0.355
	8	0.279	0.051	0.920	0.389	0.530	0.147	0.000	0.000	1.730	0.549
	9	0.271	0.095	0.850	0.257	0.443	0.085	0.000	0.000	1.564	0.351
	10	0.294	0.060	0.803	0.231	0.414	0.121	0.000	0.000	1.511	0.364
	11	0.292	0.076	0.858	0.206	0.433	0.108	0.000	0.000	1.583	0.345
	12	0.243	0.079	0.795	0.251	0.356	0.106	0.000	0.000	1.394	0.416
	13	0.192	0.061	0.569	0.262	0.224	0.092	0.000	0.000	0.985	0.406
	14	0.119	0.063	0.347	0.199	0.115	0.070	0.000	0.000	0.560	0.341
	15	0.022	0.034	0.063	0.098	0.021	0.032	0.000	0.000	0.105	0.164
	16	0.000	0.000	0.006	0.023	0.000	0.000	0.000	0.000	0.006	0.023
	All	2.976	0.695	6.505	1.546	3.755	0.798	0.000	0.000	13.237	2.917
79	1	0.254	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.254	0.056
	2	0.177	0.040	0.082	0.213	0.056	0.143	0.000	0.000	0.316	0.360
	3	0.149	0.031	0.264	0.373	0.297	0.435	0.000	0.000	0.711	0.815
	4	0.222	0.052	0.325	0.424	0.358	0.458	0.000	0.000	0.905	0.899
	5	0.256	0.065	0.213	0.205	0.212	0.210	0.000	0.000	0.681	0.437
	6	0.294	0.071	0.188	0.132	0.175	0.118	0.000	0.000	0.658	0.261
	7	0.308	0.070	0.540	0.195	0.489	0.178	0.000	0.000	1.336	0.400
	8	0.359	0.076	0.588	0.354	0.538	0.322	0.000	0.000	1.486	0.710
	9	0.393	0.079	0.790	0.302	0.561	0.195	0.000	0.000	1.744	0.525
	10	0.431	0.070	1.011	0.203	0.594	0.140	0.000	0.000	2.036	0.378
	11	0.454	0.079	1.011	0.181	0.594	0.129	0.000	0.000	2.059	0.367
	12	0.393	0.095	0.931	0.165	0.505	0.150	0.000	0.000	1.829	0.377
	13	0.308	0.096	0.793	0.178	0.403	0.151	0.000	0.000	1.503	0.396
	14	0.214	0.104	0.605	0.218	0.267	0.133	0.000	0.000	1.086	0.449
	15	0.143	0.076	0.416	0.202	0.147	0.108	0.000	0.000	0.680	0.399
	16	0.085	0.065	0.233	0.184	0.067	0.062	0.000	0.000	0.337	0.311
	17	0.025	0.040	0.062	0.092	0.017	0.031	0.000	0.000	0.104	0.160
	18	0.000	0.000	0.006	0.023	0.000	0.000	0.000	0.000	0.006	0.023
	All	4.454	0.930	8.002	1.981	5.272	1.786	0.000	0.000	17.729	4.538

TABLE 6. (cont'd)

90	1	0.281	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.263	0.104
	2	0.268	0.055	0.255	0.303	0.279	0.301	0.009	0.013	0.729	0.620
	3	0.231	0.052	0.717	0.515	0.914	0.590	0.032	0.036	1.673	1.223
	4	0.311	0.076	0.727	0.665	0.735	0.672	0.024	0.021	1.593	1.384
	5	0.325	0.069	0.436	0.326	0.442	0.408	0.017	0.016	1.033	0.801
	6	0.354	0.053	0.286	0.183	0.250	0.137	0.018	0.009	0.853	0.380
	7	0.343	0.050	0.584	0.208	0.499	0.177	0.037	0.014	1.372	0.523
	8	0.377	0.044	0.582	0.298	0.451	0.244	0.045	0.014	1.364	0.639
	9	0.413	0.065	0.453	0.178	0.364	0.129	0.038	0.016	1.190	0.446
	10	0.485	0.079	0.546	0.272	0.365	0.174	0.029	0.008	1.336	0.588
	11	0.557	0.056	0.893	0.198	0.500	0.116	0.028	0.008	1.854	0.579
	12	0.532	0.108	0.990	0.214	0.518	0.117	0.031	0.010	1.942	0.643
	13	0.432	0.104	0.850	0.210	0.422	0.109	0.027	0.009	1.623	0.561
	14	0.331	0.100	0.721	0.246	0.319	0.130	0.029	0.011	1.312	0.560
	15	0.239	0.083	0.548	0.195	0.233	0.109	0.027	0.010	0.982	0.451
	16	0.147	0.085	0.359	0.218	0.149	0.086	0.018	0.008	0.632	0.408
	17	0.119	0.134	0.242	0.168	0.084	0.059	0.010	0.008	0.427	0.329
	18	0.034	0.031	0.101	0.081	0.035	0.027	0.006	0.006	0.165	0.137
	19	0.006	0.008	0.024	0.035	0.007	0.011	0.000	0.000	0.034	0.053
	20	0.000	0.000	0.005	0.014	0.000	0.000	0.000	0.000	0.005	0.014
	All	5.785	0.804	9.131	2.470	6.398	2.114	0.426	0.110	20.382	7.392
100	1	0.315	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.315	0.102
	2	0.323	0.077	0.086	0.156	0.121	0.246	0.014	0.028	0.544	0.434
	3	0.277	0.074	0.362	0.388	0.496	0.497	0.048	0.063	1.182	0.917
	4	0.388	0.090	0.736	0.516	0.859	0.555	0.082	0.063	2.066	1.144
	5	0.421	0.112	0.300	0.385	0.277	0.350	0.047	0.059	1.045	0.786
	6	0.469	0.131	0.581	0.438	0.430	0.329	0.072	0.047	1.552	0.840
	7	0.429	0.106	0.796	0.350	0.642	0.266	0.104	0.056	1.971	0.691
	8	0.501	0.129	0.823	0.381	0.683	0.360	0.167	0.068	2.175	0.835
	9	0.541	0.138	0.734	0.267	0.585	0.268	0.147	0.050	2.006	0.625
	10	0.641	0.171	0.753	0.217	0.597	0.164	0.127	0.051	2.119	0.431
	11	0.715	0.178	1.211	0.396	0.716	0.171	0.112	0.032	2.754	0.625
	12	0.654	0.170	1.256	0.274	0.774	0.188	0.141	0.066	2.824	0.586
	13	0.564	0.134	1.222	0.330	0.693	0.197	0.147	0.059	2.625	0.596
	14	0.416	0.128	1.072	0.315	0.548	0.159	0.178	0.061	2.215	0.572
	15	0.310	0.104	0.778	0.237	0.390	0.151	0.156	0.063	1.634	0.483
	16	0.208	0.116	0.553	0.229	0.263	0.130	0.132	0.062	1.156	0.471
	17	0.138	0.077	0.395	0.142	0.167	0.083	0.087	0.049	0.788	0.315
	18	0.069	0.051	0.234	0.142	0.100	0.077	0.058	0.050	0.461	0.280
	19	0.020	0.030	0.082	0.100	0.032	0.041	0.021	0.033	0.155	0.186
	20	0.000	0.000	0.020	0.039	0.005	0.012	0.007	0.013	0.032	0.060
	All	7.401	1.769	11.994	2.326	8.378	2.505	1.848	0.465	29.621	6.143
113	1	0.399	0.152	0.000	0.000	0.000	0.000	0.000	0.000	0.399	0.152
	2	0.309	0.057	0.177	0.238	0.246	0.331	0.103	0.152	0.704	0.673
	3	0.263	0.056	0.205	0.308	0.304	0.444	0.093	0.154	0.865	0.912
	4	0.376	0.086	0.395	0.536	0.671	1.000	0.265	0.394	1.707	1.934
	5	0.462	0.102	0.383	0.354	0.461	0.491	0.281	0.254	1.588	1.127
	6	0.493	0.127	0.489	0.374	0.587	0.481	0.365	0.302	1.934	1.216
	7	0.486	0.103	0.778	0.381	0.696	0.308	0.470	0.233	2.431	0.915
	8	0.554	0.104	0.613	0.157	0.542	0.171	0.492	0.186	2.200	0.455
	9	0.575	0.107	0.423	0.262	0.341	0.213	0.381	0.196	1.721	0.667
	10	0.722	0.138	0.544	0.288	0.411	0.161	0.327	0.118	2.004	0.514
	11	0.734	0.157	1.091	0.387	0.830	0.219	0.354	0.114	3.008	0.677
	12	0.692	0.144	1.254	0.235	0.843	0.138	0.423	0.110	3.212	0.417
	13	0.526	0.142	1.051	0.222	0.728	0.133	0.443	0.171	2.748	0.501
	14	0.371	0.107	0.886	0.189	0.617	0.159	0.539	0.166	2.414	0.443
	15	0.266	0.088	0.613	0.179	0.406	0.153	0.498	0.164	1.783	0.448
	16	0.187	0.086	0.490	0.141	0.283	0.113	0.331	0.187	1.291	0.391
	17	0.108	0.058	0.316	0.104	0.183	0.098	0.231	0.099	0.838	0.319
	18	0.031	0.043	0.138	0.140	0.069	0.086	0.127	0.154	0.366	0.387
	19	0.012	0.030	0.020	0.039	0.010	0.019	0.020	0.061	0.061	0.120
	All	7.569	1.423	9.823	1.564	8.166	2.181	5.717	1.744	31.275	5.826

(cont'd)

TABLE 6. (cont'd)

127	1	0.225	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.083
	2	0.238	0.061	0.123	0.275	0.322	0.630	0.186	0.487	0.870	1.363
	3	0.207	0.052	0.298	0.321	0.526	0.539	0.424	0.458	1.456	1.315
	4	0.304	0.094	0.561	0.423	1.018	0.807	0.000	0.000	1.883	1.293
	5	0.377	0.103	0.199	0.348	0.338	0.633	0.312	0.382	1.227	1.383
	6	0.420	0.127	0.370	0.268	0.529	0.430	0.657	0.393	2.000	1.098
	7	0.417	0.106	0.580	0.268	0.890	0.396	1.011	0.404	2.649	1.080
	8	0.478	0.144	0.624	0.250	0.888	0.399	0.000	0.000	1.990	0.725
	9	0.501	0.157	0.488	0.233	0.620	0.385	1.133	0.569	2.742	1.253
	10	0.568	0.163	0.399	0.159	0.474	0.232	0.896	0.354	2.336	0.784
	11	0.632	0.210	0.573	0.269	0.556	0.258	0.701	0.300	2.461	0.894
	12	0.584	0.225	0.891	0.319	0.797	0.304	0.750	0.350	3.022	1.047
	13	0.442	0.188	0.914	0.330	0.752	0.276	0.000	0.000	2.026	0.746
	14	0.362	0.166	0.757	0.296	0.611	0.252	0.788	0.316	2.518	0.915
	15	0.249	0.116	0.574	0.255	0.487	0.225	0.733	0.386	2.043	0.893
	16	0.181	0.097	0.502	0.232	0.391	0.187	0.666	0.366	1.740	0.745
	17	0.117	0.075	0.357	0.188	0.242	0.153	0.472	0.306	1.258	0.652
	18	0.056	0.048	0.208	0.152	0.136	0.113	0.302	0.237	0.703	0.521
	19	0.016	0.023	0.055	0.095	0.042	0.062	0.200	0.174	0.214	0.303
	20	0.000	0.000	0.012	0.028	0.000	0.000	0.026	0.052	0.019	0.050
	All	6.293	2.020	8.431	2.342	9.618	3.592	9.139	2.578	34.197	10.587
139	1	0.182	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.182	0.037
	2	0.142	0.029	0.045	0.082	0.112	0.192	0.135	0.214	0.435	0.488
	3	0.126	0.030	0.241	0.321	0.572	0.756	0.672	1.075	1.611	2.146
	4	0.190	0.042	0.180	0.183	0.673	0.566	0.547	0.428	1.590	1.140
	5	0.204	0.052	0.101	0.105	0.226	0.213	0.361	0.333	0.893	0.593
	6	0.227	0.040	0.211	0.218	0.378	0.434	0.674	0.571	1.419	1.155
	7	0.215	0.043	0.345	0.176	0.586	0.315	1.163	0.538	2.309	0.981
	8	0.259	0.044	0.294	0.128	0.547	0.226	1.261	0.405	2.360	0.665
	9	0.284	0.049	0.258	0.150	0.417	0.242	1.398	0.596	2.356	0.920
	10	0.393	0.101	0.158	0.106	0.283	0.150	0.914	0.422	1.748	0.587
	11	0.390	0.067	0.302	0.212	0.416	0.219	0.795	0.274	1.904	0.536
	12	0.359	0.091	0.595	0.307	0.686	0.205	0.892	0.291	2.533	0.568
	13	0.272	0.086	0.713	0.218	0.706	0.164	0.989	0.327	2.680	0.592
	14	0.223	0.096	0.634	0.149	0.600	0.100	0.994	0.389	2.450	0.487
	15	0.166	0.081	0.451	0.145	0.447	0.153	0.967	0.308	2.030	0.491
	16	0.113	0.065	0.330	0.128	0.350	0.195	0.823	0.408	1.616	0.678
	17	0.083	0.059	0.263	0.108	0.243	0.143	0.569	0.330	1.159	0.509
	18	0.052	0.067	0.160	0.147	0.109	0.106	0.282	0.278	0.603	0.524
	19	0.016	0.025	0.076	0.102	0.059	0.089	0.180	0.285	0.322	0.465
	All	3.888	0.892	5.356	1.306	7.341	1.833	13.615	3.394	30.200	5.727
149	1	0.155	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.155	0.049
	2	0.115	0.022	0.000	0.000	0.104	0.202	0.261	0.486	0.480	0.684
	3	0.092	0.016	0.002	0.006	0.208	0.299	0.467	0.568	0.653	0.818
	4	0.149	0.033	0.012	0.023	0.370	0.328	0.000	0.000	0.531	0.354
	5	0.174	0.033	0.011	0.020	0.141	0.122	0.448	0.446	0.774	0.541
	6	0.200	0.044	0.010	0.022	0.224	0.161	0.734	0.421	1.167	0.503
	7	0.203	0.041	0.022	0.028	0.444	0.123	1.676	0.888	2.345	1.003
	8	0.241	0.056	0.019	0.021	0.321	0.135	0.000	0.000	0.581	0.155
	9	0.263	0.063	0.007	0.014	0.258	0.154	1.775	0.591	2.304	0.759
	10	0.349	0.077	0.015	0.026	0.167	0.111	1.346	0.529	1.877	0.667
	11	0.422	0.112	0.015	0.022	0.116	0.048	1.219	0.256	1.773	0.340
	12	0.402	0.122	0.014	0.024	0.116	0.105	1.282	0.327	1.814	0.403
	13	0.324	0.104	0.006	0.013	0.139	0.100	0.000	0.000	0.468	0.140
	14	0.261	0.086	0.005	0.017	0.219	0.129	1.226	0.317	1.712	0.416
	15	0.196	0.069	0.000	0.000	0.200	0.125	1.099	0.403	1.496	0.539
	16	0.164	0.077	0.006	0.017	0.136	0.182	0.924	0.525	1.231	0.678
	17	0.105	0.065	0.000	0.000	0.050	0.068	0.549	0.289	0.705	0.360
	18	0.065	0.052	0.000	0.000	0.032	0.084	0.337	0.291	0.434	0.356
	19	0.012	0.018	0.000	0.000	0.000	0.000	0.069	0.116	0.081	0.129
	20	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.097	0.024	0.097
	All	3.893	0.995	0.145	0.098	3.245	1.016	13.319	1.486	20.603	2.920

TABLE 7. Aerial manganese accumulation means and standard deviations for each day after planting (DAP), node, and plant part. Values are in g/ha, and planting date was 143 (23 May).

		---Stems---		---Leaves---		--Petioles--		----Pods----		---Totals---	
DAP	Node	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev
44	1	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5
	2	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2
	3	0.5	0.1	0.5	0.3	0.2	0.2	0.0	0.0	1.2	0.6
	4	0.7	0.2	4.0	1.2	0.4	0.1	0.0	0.0	5.0	1.4
	5	0.7	0.2	4.9	1.9	0.5	0.2	0.0	0.0	6.1	2.2
	6	0.5	0.2	4.8	1.8	0.4	0.2	0.0	0.0	5.7	2.2
	7	0.3	0.1	2.6	1.4	0.2	0.1	0.0	0.0	3.1	1.6
	8	0.1	0.2	0.8	1.2	0.1	0.1	0.0	0.0	1.0	1.4
	9	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.2
	All	4.3	1.4	17.7	5.6	1.7	0.6	0.0	0.0	23.8	7.5
57	1	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.2
	2	0.7	0.1	0.2	0.6	0.1	0.1	0.0	0.0	1.0	0.8
	3	0.5	0.1	1.4	1.0	0.3	0.2	0.0	0.0	2.2	1.3
	4	0.5	0.1	2.2	1.4	0.3	0.2	0.0	0.0	3.0	1.6
	5	0.6	0.1	6.7	2.2	0.7	0.1	0.0	0.0	8.1	2.2
	6	0.7	0.2	7.3	1.2	0.9	0.2	0.0	0.0	8.9	1.5
	7	0.7	0.1	7.9	1.5	1.0	0.2	0.0	0.0	9.5	1.8
	8	0.7	0.1	8.1	2.0	0.8	0.3	0.0	0.0	9.6	2.3
	9	0.7	0.2	5.4	2.0	0.8	0.4	0.0	0.0	6.8	2.6
	10	0.4	0.2	3.0	1.5	0.4	0.4	0.0	0.0	3.4	2.3
	11	0.1	0.1	0.7	0.9	0.1	0.2	0.0	0.0	0.8	1.1
	12	0.2	0.4	0.1	0.2	0.0	0.0	0.0	0.0	0.2	0.6
	All	6.4	1.4	42.5	8.8	5.4	1.6	0.0	0.0	54.7	11.9
70	1	1.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.5
	2	1.3	0.3	2.7	4.2	1.2	1.9	0.0	0.0	4.2	5.6
	3	0.8	0.4	3.3	3.7	1.4	1.5	0.0	0.0	5.5	5.3
	4	1.0	0.3	2.5	2.4	1.3	1.3	0.0	0.0	4.8	3.8
	5	1.3	0.3	2.1	1.8	1.4	1.0	0.0	0.0	4.6	2.8
	6	1.4	0.4	1.6	1.6	0.9	0.7	0.0	0.0	4.0	2.3
	7	1.7	0.4	3.3	2.2	1.7	0.9	0.0	0.0	6.7	3.1
	8	2.2	0.5	10.1	4.2	3.0	1.1	0.0	0.0	15.3	5.3
	9	1.8	0.9	8.5	4.1	2.5	0.6	0.0	0.0	12.7	4.2
	10	1.5	0.4	9.3	2.3	2.3	0.5	0.0	0.0	13.1	2.9
	11	1.9	0.5	10.0	2.5	2.6	0.6	0.0	0.0	14.4	3.4
	12	1.6	0.6	9.6	3.4	2.4	0.7	0.0	0.0	13.5	4.5
	13	1.1	0.5	6.6	3.2	1.8	0.7	0.0	0.0	9.4	4.3
	14	0.6	0.3	3.9	2.3	1.0	0.6	0.0	0.0	5.3	3.4
	15	0.1	0.1	0.6	1.0	0.2	0.3	0.0	0.0	0.9	1.4
	16	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.2
	All	19.7	5.0	73.1	16.5	23.2	5.3	0.0	0.0	116.0	25.8
79	1	2.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.5
	2	1.4	0.3	0.9	2.4	0.2	0.5	0.0	0.0	2.5	2.8
	3	0.9	0.1	3.0	4.2	1.4	2.0	0.0	0.0	5.3	6.2
	4	1.4	0.2	3.8	4.9	1.8	2.2	0.0	0.0	7.0	7.1
	5	1.7	0.4	2.5	2.3	1.2	1.2	0.0	0.0	5.4	3.7
	6	1.9	0.6	1.7	1.2	1.0	0.7	0.0	0.0	4.5	2.1
	7	1.5	0.4	4.9	2.2	2.6	0.8	0.0	0.0	9.0	3.0
	8	1.7	0.2	5.4	3.3	3.1	1.7	0.0	0.0	10.2	4.9
	9	1.6	0.4	8.0	3.6	3.1	1.0	0.0	0.0	12.8	4.6
	10	1.6	0.3	11.6	2.8	3.2	0.7	0.0	0.0	16.4	3.3
	11	1.6	0.3	12.5	2.7	2.5	0.6	0.0	0.0	16.6	3.3
	12	1.5	0.3	10.6	2.1	2.1	0.5	0.0	0.0	14.2	2.6
	13	1.4	0.5	8.9	2.2	1.6	0.6	0.0	0.0	11.9	3.0
	14	1.0	0.4	6.6	2.4	1.5	0.6	0.0	0.0	9.1	3.4
	15	0.7	0.4	4.7	2.5	1.0	0.7	0.0	0.0	6.1	3.7
	16	0.4	0.3	2.6	2.1	0.5	0.5	0.0	0.0	3.1	2.9
	17	0.1	0.2	0.7	1.0	0.2	0.3	0.0	0.0	1.0	1.5
	18	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.1	0.3
	All	22.9	4.1	87.7	23.0	27.0	8.3	0.0	0.0	137.6	33.4

(cont'd)

	1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.9
	2	0.4	2.2	2.5	1.3	1.3	0.1	0.1	5.2	3.9
	3	0.3	8.4	6.3	4.9	3.4	0.3	0.3	13.4	10.4
	4	0.3	7.4	6.3	3.2	2.6	0.2	0.2	11.0	9.2
	5	0.4	5.0	4.0	2.6	2.5	0.1	0.1	8.1	7.0
	6	0.3	3.2	2.0	1.8	1.0	0.1	0.1	6.7	3.4
	7	0.4	6.1	2.3	3.5	0.9	0.3	0.1	11.0	4.2
	8	0.4	5.7	2.8	4.2	2.1	0.3	0.1	11.7	5.7
	9	0.5	5.1	2.2	3.1	1.3	0.3	0.1	10.0	4.3
	10	0.3	7.2	4.6	2.0	1.2	0.2	0.1	9.9	5.7
	11	0.3	11.6	2.4	2.3	0.7	0.2	0.1	14.5	4.8
	12	0.2	13.2	3.1	2.5	0.6	0.2	0.1	16.3	5.4
	13	0.3	11.5	3.0	1.9	0.4	0.2	0.1	14.3	5.2
	14	0.3	10.0	3.6	1.6	0.5	0.3	0.1	12.2	5.2
	15	0.3	8.0	2.7	1.2	0.5	0.3	0.1	9.7	4.2
	16	0.3	4.9	3.0	0.8	0.5	0.2	0.1	6.1	3.9
	17	0.6	2.5	1.6	0.4	0.3	0.1	0.1	3.3	2.4
	18	0.1	1.1	0.9	0.2	0.1	0.1	0.1	1.5	1.2
	19	0.0	0.3	0.4	0.0	0.1	0.0	0.0	0.3	0.5
	20	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
	All	4.1	111.4	21.1	36.7	10.2	3.5	0.9	167.4	55.0
100	1	0.7	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.7
	2	0.6	0.8	1.5	0.5	1.1	0.1	0.2	3.8	2.8
	3	0.3	3.8	4.1	2.3	2.2	0.3	0.5	7.9	6.5
	4	0.5	8.0	5.7	3.7	2.5	0.7	0.6	14.7	8.7
	5	0.6	2.3	2.8	1.4	1.7	0.4	0.4	6.6	4.8
	6	0.7	4.7	3.5	2.4	1.8	0.5	0.3	10.2	5.5
	7	0.7	7.1	2.9	3.9	1.6	0.8	0.4	14.3	5.0
	8	0.7	7.6	3.5	4.3	2.2	1.2	0.5	15.8	6.1
	9	0.5	7.3	2.4	3.6	1.9	1.1	0.4	14.1	4.4
	10	0.8	8.2	2.4	3.1	0.8	0.9	0.3	14.9	3.3
	11	0.6	14.6	4.6	3.3	0.7	0.8	0.3	21.6	5.7
	12	0.7	16.0	3.4	3.4	0.8	1.1	0.5	23.0	4.7
	13	0.6	14.5	3.5	3.0	0.7	1.2	0.5	21.2	4.7
	14	0.5	12.4	3.3	2.6	0.6	1.5	0.5	18.5	4.4
	15	0.3	8.9	2.6	1.9	0.5	1.4	0.6	13.4	3.4
	16	0.5	7.2	3.0	1.3	0.5	1.2	0.6	10.6	4.1
	17	0.3	5.7	2.0	0.9	0.4	0.8	0.5	8.2	3.0
	18	0.2	3.5	2.3	0.6	0.4	0.6	0.5	5.0	3.1
	19	0.2	1.3	1.6	0.2	0.2	0.2	0.3	1.7	2.1
	20	0.0	0.3	0.6	0.0	0.1	0.1	0.1	0.4	0.8
	All	8.0	134.3	23.8	42.3	11.3	14.9	3.9	228.7	41.2
	1	2.1	0.0	0.0	0.0	0.0	0.0	0.0	4.3	2.1
	2	0.6	1.8	2.4	2.0	2.5	1.0	1.3	6.2	6.0
	3	0.6	2.1	3.0	2.3	2.9	0.9	1.5	7.5	7.5
	4	0.5	3.7	7.4	6.1	8.8	2.7	4.2	15.3	17.9
	5	0.7	2.3	2.9	5.1	5.1	3.0	2.7	13.8	9.2
	6	0.9	5.3	4.6	7.1	5.7	3.7	3.0	19.5	13.7
	7	0.8	7.8	3.7	8.6	4.0	5.1	2.6	25.1	10.3
	8	0.7	6.5	1.7	6.7	2.0	5.2	1.8	22.3	4.8
	9	0.7	4.6	3.1	4.5	3.2	4.0	2.1	16.7	8.2
	10	0.8	6.8	3.6	3.4	1.2	3.1	1.1	17.5	5.1
	11	0.8	15.3	6.0	5.5	1.6	3.7	1.2	28.9	8.2
	12	0.7	19.1	3.1	5.5	0.9	4.2	1.2	33.2	4.2
	13	0.6	17.0	3.7	4.8	0.9	3.4	1.4	28.7	5.7
	14	0.5	14.4	3.4	4.2	1.0	4.2	1.4	25.3	5.2
	15	0.4	10.5	3.6	3.1	0.9	4.0	1.3	19.6	5.2
	16	0.5	8.7	3.0	2.3	0.7	2.8	1.6	15.2	4.5
	17	0.4	6.0	2.3	1.5	0.7	2.2	0.9	10.5	4.0
	18	0.4	2.6	3.0	0.6	0.8	1.1	1.3	4.6	5.1
	19	0.2	0.4	0.8	0.1	0.2	0.2	0.5	0.7	1.4
	All	9.4	134.5	22.1	73.0	21.0	54.0	16.4	315.0	60.2

TABLE 7. (cont'd)

127	1	2.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.0
	2	2.0	0.6	1.9	4.6	2.3	4.6	1.9	5.0	8.1	13.9
	3	1.6	0.4	4.5	4.8	4.3	4.4	4.0	4.1	14.4	13.2
	4	2.0	0.7	8.2	6.2	9.2	7.3	0.0	0.0	19.4	13.8
	5	2.4	0.7	2.7	5.0	3.0	5.2	2.9	3.4	11.0	13.6
	6	2.7	1.2	5.6	4.1	6.1	4.7	6.5	3.8	21.2	12.7
	7	3.0	0.8	10.3	4.8	10.9	4.3	11.1	4.3	31.9	12.5
	8	3.7	1.3	9.9	4.1	11.7	5.7	0.0	0.0	25.3	10.4
	9	3.7	1.4	6.5	3.0	8.6	5.4	11.6	5.8	30.5	14.8
	10	3.9	1.2	5.9	2.2	5.6	3.2	8.8	3.5	24.1	9.0
	11	4.2	1.4	9.7	5.2	5.4	2.6	6.8	2.9	26.2	10.5
	12	4.2	1.7	15.6	6.0	6.5	2.5	7.3	3.3	33.6	11.9
	13	3.7	1.5	16.7	6.1	6.0	2.3	0.0	0.0	25.7	9.8
	14	3.1	1.4	13.7	5.1	4.3	1.7	7.6	3.1	28.8	10.4
	15	2.5	1.2	10.7	4.8	3.9	1.7	7.2	3.7	24.4	10.5
	16	1.9	0.9	10.1	4.3	3.2	1.5	6.8	3.8	22.0	9.2
	17	1.3	0.8	7.2	3.6	2.2	1.5	4.7	3.0	16.0	8.0
	18	0.7	0.6	4.5	3.4	1.2	1.1	2.9	2.3	9.2	7.0
	19	0.2	0.2	1.4	2.6	0.4	0.6	1.9	1.7	2.9	4.4
	20	0.0	0.0	0.3	0.8	0.0	0.0	0.3	0.6	0.4	1.0
	All	48.1	17.3	144.7	39.7	95.0	36.0	91.2	24.4	386.8	119.6
139	1	4.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	1.0
	2	3.1	0.7	0.7	1.4	0.3	0.7	1.3	2.1	5.4	4.1
	3	2.5	0.6	4.3	5.5	1.8	2.0	6.2	9.7	14.8	17.1
	4	3.2	0.7	3.3	3.3	3.9	6.7	5.3	4.4	15.7	12.7
	5	2.8	1.0	1.7	2.1	1.3	1.0	3.6	3.2	9.4	5.9
	6	2.6	0.5	3.7	4.2	1.9	3.4	6.8	6.2	14.7	12.9
	7	2.7	0.5	6.1	3.3	2.7	2.3	10.9	4.7	22.4	9.3
	8	2.7	0.4	4.6	2.0	2.5	1.4	12.1	3.5	21.9	5.2
	9	2.6	0.5	3.9	2.3	2.2	1.1	13.3	5.1	22.1	7.6
	10	2.7	0.5	2.7	1.8	1.5	0.9	8.6	3.9	15.4	4.5
	11	2.6	0.4	5.4	3.9	2.4	1.6	7.7	2.6	18.0	6.5
	12	2.6	0.4	10.2	5.9	3.4	1.5	8.9	3.0	25.1	8.7
	13	2.6	0.5	11.5	4.1	3.9	1.1	9.9	3.4	27.9	7.6
	14	2.3	0.7	10.6	2.9	3.7	0.7	9.5	3.8	26.0	5.1
	15	1.4	1.0	7.3	2.2	2.7	0.7	8.3	2.8	19.8	5.2
	16	1.2	0.5	5.5	2.0	2.4	1.3	7.4	3.5	16.5	5.9
	17	0.5	0.6	4.6	1.7	1.6	0.7	5.1	3.1	11.9	4.5
	18	0.1	0.1	2.8	2.4	0.8	0.7	2.5	2.3	6.1	4.8
	19	0.0	0.0	1.2	1.6	0.4	0.6	1.5	2.3	3.1	4.2
	All	42.7	7.9	90.2	23.9	39.0	12.8	128.9	27.6	300.8	47.0
149	1	4.4	1.6	0.0	0.0	0.0	0.0	0.0	0.0	4.4	1.6
	2	3.1	0.7	0.0	0.0	1.3	2.4	2.4	4.5	6.8	7.0
	3	2.1	0.4	0.1	0.1	1.7	2.5	4.2	5.2	7.0	7.3
	4	2.9	0.6	0.2	0.3	2.9	2.5	0.0	0.0	5.9	2.8
	5	3.1	0.6	0.1	0.2	1.7	1.6	3.9	4.0	8.7	5.6
	6	3.3	0.7	0.2	0.4	2.4	1.4	6.6	3.9	12.4	5.0
	7	3.3	0.8	0.4	0.6	5.3	1.5	16.0	8.7	25.0	10.5
	8	3.1	0.6	0.3	0.3	4.4	1.8	0.0	0.0	7.7	2.1
	9	2.8	0.7	0.1	0.3	3.2	1.8	17.2	5.5	23.5	7.2
	10	2.9	0.6	0.3	0.5	1.8	1.3	11.5	4.0	16.5	5.3
	11	3.6	0.7	0.3	0.4	1.1	0.4	10.0	2.0	14.9	2.6
	12	4.0	0.9	0.3	0.4	0.9	0.7	10.2	2.4	15.4	3.2
	13	3.5	1.0	0.1	0.2	0.9	0.7	0.0	0.0	4.5	1.2
	14	2.8	0.7	0.0	0.1	1.3	0.7	9.9	2.5	14.0	3.0
	15	2.0	0.5	0.0	0.0	1.2	0.7	9.4	3.4	12.5	4.1
	16	1.6	0.5	0.1	0.2	0.7	0.8	7.9	4.3	10.2	5.0
	17	1.1	0.5	0.0	0.0	0.3	0.4	4.7	2.4	6.0	2.9
	18	0.6	0.5	0.0	0.0	0.2	0.6	3.1	2.6	3.9	3.1
	19	0.1	0.2	0.0	0.0	0.0	0.0	0.6	1.1	0.7	1.2
	20	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	0.2	0.8
	All	50.2	10.1	2.4	1.6	31.2	7.6	116.7	13.3	200.4	26.6

TABLE 8. Aerial iron accumulation means and standard deviations for each day after planting (DAP), node, and plant part. Values are in g/ha, and planting date was 143 (23 May).

		---Stems---		---Leaves---		--Petioles--		----Pods----		---Totals---	
DAP	Node	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev
44	1	4.1	1.7	0.0	0.0	0.0	0.0	0.0	0.0	4.1	1.7
	2	1.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.4
	3	1.3	0.3	2.7	1.8	0.9	1.3	0.0	0.0	4.9	2.9
	4	1.6	0.5	16.7	4.6	1.9	0.7	0.0	0.0	20.2	5.2
	5	1.8	0.5	17.1	5.7	2.3	0.7	0.0	0.0	21.2	6.2
	6	1.7	0.4	18.2	6.2	1.8	0.7	0.0	0.0	21.7	7.1
	7	1.2	0.6	10.7	5.8	1.2	0.7	0.0	0.0	13.1	6.3
	8	0.7	1.0	2.1	3.0	0.3	0.4	0.0	0.0	3.1	4.0
	9	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.2	0.5
	All	13.8	4.0	67.7	17.3	8.4	2.5	0.0	0.0	89.9	22.2
57	1	4.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0	4.2	2.2
	2	1.1	0.5	2.5	6.4	0.8	2.0	0.0	0.0	4.4	8.5
	3	1.8	1.6	11.7	9.7	4.7	4.5	0.0	0.0	18.6	16.0
	4	3.0	0.6	18.0	12.4	4.8	3.8	0.0	0.0	25.8	15.9
	5	3.7	0.8	40.1	18.0	6.8	2.3	0.0	0.0	50.5	19.3
	6	4.6	1.9	39.3	9.4	7.0	2.5	0.0	0.0	50.9	12.0
	7	4.7	1.3	37.9	10.9	7.2	2.9	0.0	0.0	49.8	13.9
	8	4.8	1.6	31.9	9.7	7.4	3.4	0.0	0.0	44.1	13.6
	9	4.5	1.9	22.3	8.7	5.2	1.9	0.0	0.0	32.0	11.5
	10	2.8	2.0	12.9	5.5	3.2	3.1	0.0	0.0	17.3	11.1
	11	0.9	1.0	2.7	3.8	0.7	1.1	0.0	0.0	3.9	5.3
	12	0.1	0.3	0.2	0.6	0.0	0.0	0.0	0.0	0.4	0.9
	All	35.9	9.4	217.9	66.7	47.6	24.5	0.0	0.0	304.1	103.3
70	1	6.6	2.1	0.0	0.0	0.0	0.0	0.0	0.0	6.6	2.1
	2	4.6	1.1	10.2	16.0	4.2	6.5	0.0	0.0	15.4	20.9
	3	2.7	1.4	11.5	12.5	4.3	4.7	0.0	0.0	18.5	17.6
	4	2.5	0.6	9.4	9.0	3.7	3.6	0.0	0.0	15.6	12.7
	5	2.8	0.7	8.9	7.7	4.4	3.0	0.0	0.0	15.6	10.7
	6	1.5	1.7	6.4	6.6	2.7	2.0	0.0	0.0	10.6	7.7
	7	0.0	0.0	10.6	6.4	4.5	2.6	0.0	0.0	15.1	8.3
	8	0.0	0.0	23.5	10.0	6.8	2.1	0.0	0.0	30.3	11.3
	9	0.9	1.3	21.6	11.7	4.6	2.0	0.0	0.0	27.1	12.2
	10	2.7	0.6	24.2	4.6	3.3	0.8	0.0	0.0	30.2	5.2
	11	3.0	0.8	30.1	7.5	3.4	0.8	0.0	0.0	36.5	8.6
	12	3.2	1.5	28.3	7.8	3.6	1.2	0.0	0.0	35.1	9.8
	13	2.9	1.3	16.3	7.4	2.4	1.3	0.0	0.0	21.6	8.8
	14	2.1	1.1	8.9	5.2	2.1	1.2	0.0	0.0	12.6	7.6
	15	0.5	0.7	1.5	2.3	0.4	0.7	0.0	0.0	2.4	3.7
	16	0.0	0.0	0.1	0.6	0.0	0.0	0.0	0.0	0.1	0.6
	All	36.1	7.7	208.4	45.5	48.6	13.3	0.0	0.0	293.1	63.6
79	1	8.1	2.4	0.0	0.0	0.0	0.0	0.0	0.0	8.1	2.4
	2	4.1	1.0	3.2	8.0	0.8	2.1	0.0	0.0	8.1	10.2
	3	3.3	1.5	10.0	13.6	4.9	6.5	0.0	0.0	18.1	20.2
	4	5.5	1.7	12.6	16.1	5.7	7.1	0.0	0.0	23.8	24.3
	5	4.7	1.2	9.2	8.7	4.1	4.2	0.0	0.0	17.9	13.3
	6	6.0	2.4	7.6	5.2	3.6	2.5	0.0	0.0	17.2	7.7
	7	7.5	2.8	21.0	7.2	9.4	2.6	0.0	0.0	37.9	10.4
	8	6.3	1.0	19.9	10.0	9.3	4.6	0.0	0.0	35.4	14.6
	9	5.5	1.3	23.8	8.6	7.3	2.4	0.0	0.0	36.5	11.3
	10	4.4	0.7	31.4	7.0	6.8	1.8	0.0	0.0	42.6	8.3
	11	4.4	0.8	34.0	6.7	4.5	0.8	0.0	0.0	42.9	7.5
	12	3.7	0.9	31.6	5.7	4.2	0.9	0.0	0.0	39.6	6.6
	13	2.5	0.8	26.6	6.3	3.8	0.8	0.0	0.0	32.8	6.8
	14	2.0	0.9	21.3	8.6	3.5	1.4	0.0	0.0	26.7	10.7
	15	1.5	0.9	13.5	8.0	2.3	1.6	0.0	0.0	16.5	10.7
	16	0.9	0.7	7.1	6.4	1.1	1.0	0.0	0.0	8.0	8.0
	17	0.3	0.5	2.1	3.1	0.4	0.7	0.0	0.0	2.7	4.3
	18	0.0	0.0	0.2	0.8	0.0	0.0	0.0	0.0	0.2	0.8
	All	70.4	10.4	273.2	73.2	71.5	22.7	0.0	0.0	415.0	103.3

TABLE 8. (cont'd)

90	1	7.5	1.7	0.0	0.0	0.0	0.0	0.0	0.0	7.0	2.5
	2	7.3	1.7	8.7	9.6	0.8	3.1	0.2	0.3	14.8	11.1
	3	5.2	0.8	26.5	20.1	5.2	13.2	0.7	0.8	33.3	30.9
	4	5.3	1.5	24.1	20.1	7.5	15.6	0.5	0.4	33.1	32.9
	5	6.6	1.5	14.0	9.3	1.0	3.6	0.3	0.3	18.7	12.3
	6	7.0	1.0	11.0	7.6	6.3	12.7	0.4	0.2	23.1	17.3
	7	5.8	1.0	20.7	9.1	13.3	7.3	0.8	0.3	38.0	17.3
	8	7.4	2.4	21.0	11.1	10.7	5.8	0.9	0.3	37.5	19.7
	9	6.5	1.3	16.2	7.4	11.8	6.1	0.0	0.0	32.3	13.7
	10	5.4	5.4	17.2	7.8	5.6	4.2	0.0	0.0	26.5	13.4
	11	7.0	2.4	28.0	5.5	3.5	1.0	0.0	0.0	36.2	11.4
	12	7.8	2.9	31.1	4.3	15.6	10.4	0.0	0.0	51.1	19.3
	13	0.1	0.2	27.4	5.4	5.8	5.6	0.0	0.0	31.2	10.1
	14	0.6	1.7	21.8	6.3	2.0	0.8	0.0	0.0	22.9	9.6
	15	0.0	0.0	18.0	6.0	1.8	1.2	0.3	0.3	18.7	8.2
	16	1.2	1.3	12.7	7.7	2.1	1.4	0.1	0.2	15.1	10.0
	17	0.9	1.2	7.5	5.3	1.7	1.2	0.1	0.1	9.7	7.6
	18	0.3	0.4	3.6	2.7	0.7	0.5	0.1	0.1	4.4	3.6
	19	0.0	0.0	0.9	1.3	0.1	0.2	0.0	0.0	1.0	1.5
	All	82.0	12.7	303.9	84.4	94.3	33.9	4.4	1.6	454.3	164.6
100	1	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
	2	1.9	3.2	2.5	4.6	2.1	4.3	0.3	0.6	6.8	9.6
	3	4.9	3.3	12.9	16.0	5.0	6.3	0.9	1.1	23.7	20.0
	4	10.6	4.2	24.9	17.8	11.6	7.3	1.7	1.3	48.7	27.5
	5	9.2	5.5	9.6	11.9	4.9	6.0	0.9	1.2	24.6	20.4
	6	2.8	3.9	18.8	13.9	9.5	6.3	1.6	1.1	32.7	22.3
	7	5.5	5.4	27.2	13.2	13.7	5.4	2.3	1.3	48.8	19.8
	8	5.7	8.5	27.1	13.3	14.3	7.5	3.3	1.5	50.4	25.3
	9	7.0	6.0	23.7	9.4	11.4	5.7	3.0	1.2	45.1	17.2
	10	8.0	4.5	21.9	6.4	9.1	3.2	2.5	1.0	41.4	9.7
	11	7.7	4.1	31.5	9.5	8.3	1.9	2.2	0.7	49.7	12.1
	12	3.6	3.7	32.0	7.0	8.2	2.2	3.0	1.4	46.7	9.5
	13	2.8	3.0	28.9	6.4	9.2	3.2	3.1	1.2	44.0	10.4
	14	2.4	2.1	24.0	6.2	7.2	1.8	3.7	1.2	37.2	9.2
	15	2.7	2.1	17.6	5.3	5.3	1.7	3.3	1.3	28.9	9.1
	16	2.3	1.8	14.4	6.1	2.7	1.2	2.6	1.2	22.0	8.8
	17	1.8	1.3	12.1	4.5	2.5	1.8	1.7	1.0	18.1	7.3
	18	0.9	0.8	6.7	4.3	1.4	1.1	1.2	1.0	10.2	6.4
	19	0.3	0.4	2.5	3.1	0.4	0.5	0.4	0.6	3.6	4.4
	20	0.0	0.0	0.6	1.2	0.1	0.1	0.0	0.0	0.7	1.4
	All	80.0	24.5	338.8	76.6	126.8	37.9	37.5	9.8	583.1	133.2
113	1	13.9	6.3	0.0	0.0	0.0	0.0	0.0	0.0	13.9	6.3
	2	7.3	1.3	4.7	7.3	7.0	9.6	3.8	5.7	18.9	19.0
	3	5.9	1.4	4.4	7.1	8.4	15.6	2.3	4.3	21.0	20.9
	4	7.6	1.8	13.6	23.2	15.1	20.2	8.2	11.8	44.6	53.6
	5	9.6	2.2	15.9	24.8	12.7	13.5	7.0	8.6	45.2	46.9
	6	9.4	2.2	22.6	18.4	18.2	15.1	10.4	9.2	60.6	43.3
	7	8.4	2.3	20.8	16.1	23.9	11.5	13.3	7.1	66.4	26.6
	8	8.6	1.4	16.5	11.3	17.2	6.0	13.9	6.0	56.2	15.7
	9	8.8	2.0	14.4	14.1	11.5	8.1	11.7	5.4	46.5	25.3
	10	8.9	1.9	25.6	14.7	7.4	4.0	8.0	3.2	49.9	19.7
	11	9.4	1.9	45.0	14.6	9.1	3.0	10.1	4.0	73.5	20.2
	12	8.7	1.6	55.8	10.1	8.4	2.0	10.5	2.8	83.4	14.3
	13	7.5	1.7	48.6	8.5	6.9	1.9	13.3	5.8	76.4	15.2
	14	5.4	0.7	43.9	10.3	7.2	3.4	14.9	4.9	71.4	15.9
	15	4.9	1.6	33.2	8.2	4.4	1.6	14.0	5.1	56.5	12.7
	16	3.3	1.1	20.9	13.9	3.2	1.7	7.2	6.5	34.6	17.8
	17	2.1	1.2	16.7	9.9	2.3	1.4	6.4	5.0	27.5	11.7
	18	0.6	0.8	5.0	5.4	0.7	1.0	4.2	5.2	10.4	11.3
	19	0.2	0.5	0.9	1.9	0.1	0.2	0.5	1.5	1.7	3.5
	All	130.4	24.8	407.4	65.4	162.0	63.7	158.8	53.4	858.6	176.2

(cont'd)

TABLE 8. (cont'd)

127	1	24.5	9.4	0.0	0.0	0.0	0.0	0.0	0.0	24.5	9.4
	2	19.9	5.3	1.3	4.6	5.7	11.0	4.9	12.3	31.7	24.3
	3	9.8	3.8	6.3	14.7	12.7	13.7	6.8	10.4	35.6	34.9
	4	8.0	4.2	34.7	29.1	28.4	22.9	0.0	0.0	71.0	54.9
	5	5.4	4.1	13.3	26.4	9.1	17.3	8.1	10.6	35.9	55.3
	6	5.9	5.0	19.8	15.3	14.9	12.7	15.3	9.3	58.5	40.1
	7	11.0	3.0	30.6	16.3	20.5	8.9	24.0	9.5	75.7	33.0
	8	11.7	4.0	29.3	12.4	19.5	9.4	0.0	0.0	60.5	24.1
	9	12.1	5.1	21.3	10.9	14.8	9.5	28.7	14.7	77.0	34.4
	10	9.2	2.6	15.2	6.4	8.7	5.0	20.8	7.5	53.8	18.3
	11	10.8	3.8	19.5	8.9	7.2	3.5	18.4	7.9	55.9	20.3
	12	13.9	5.3	26.9	10.2	8.2	3.6	18.6	9.7	67.6	25.5
	13	12.3	4.9	24.8	9.4	6.6	4.9	0.0	0.0	41.4	18.0
	14	13.8	5.8	22.5	8.7	6.5	2.7	15.5	7.0	58.2	21.8
	15	11.0	5.2	19.8	9.2	6.4	2.9	15.1	21.0	52.3	28.0
	16	9.0	4.6	17.7	7.7	6.1	3.0	17.8	9.9	50.7	21.4
	17	5.2	3.4	15.6	10.8	3.5	2.2	11.8	7.8	37.9	21.4
	18	2.8	2.5	6.0	4.3	2.0	1.7	6.6	7.3	17.4	14.6
	19	0.1	0.3	1.6	2.7	0.5	0.7	4.7	4.3	4.6	6.5
	20	0.0	0.0	0.3	0.8	0.0	0.0	0.8	1.6	0.5	1.4
	All	192.9	65.0	322.8	110.8	180.9	80.5	215.0	57.7	934.6	316.1
139	1	16.8	4.1	0.0	0.0	0.0	0.0	0.0	0.0	16.8	4.1
	2	9.7	2.9	4.0	7.9	2.4	4.6	4.0	6.3	20.1	18.6
	3	6.9	1.8	7.5	9.2	16.1	20.3	17.0	26.5	47.4	48.6
	4	11.2	4.0	8.2	10.6	20.2	29.5	15.0	11.3	54.7	45.6
	5	5.2	6.1	2.9	5.3	3.0	3.7	10.1	10.5	21.3	17.4
	6	5.2	3.4	11.8	11.2	7.4	7.7	17.4	13.5	40.4	29.5
	7	8.7	5.9	20.2	12.2	12.6	7.0	26.3	13.3	67.7	28.6
	8	3.7	4.0	13.7	6.0	10.1	4.9	27.1	9.3	54.6	18.8
	9	8.7	3.0	11.8	6.7	9.4	6.5	30.0	12.9	59.8	22.1
	10	11.1	3.9	6.4	4.2	5.3	3.9	20.5	10.0	43.2	10.9
	11	8.3	2.8	10.2	6.7	5.0	3.1	18.3	6.6	41.8	10.2
	12	6.2	4.3	19.2	9.3	6.5	1.4	19.8	6.3	51.6	14.1
	13	7.4	4.9	20.5	14.5	5.1	3.7	21.7	7.2	54.7	24.1
	14	11.6	8.4	22.9	5.4	4.6	1.0	17.9	13.2	57.0	15.5
	15	0.0	0.0	14.6	4.7	4.4	1.5	20.6	6.3	39.6	9.6
	16	5.7	4.8	9.6	3.6	2.9	1.4	17.5	8.9	35.7	15.2
	17	2.7	3.4	8.0	4.0	2.2	1.4	12.1	7.1	24.9	11.9
	18	0.2	0.4	4.2	3.7	1.4	1.5	6.2	6.1	11.9	10.0
	19	0.3	0.4	2.1	2.9	0.0	0.0	5.0	7.9	7.3	10.6
	All	129.3	35.8	197.6	39.1	117.1	43.8	306.5	90.0	750.6	148.2
149	1	14.5	4.4	0.0	0.0	0.0	0.0	0.0	0.0	14.5	4.4
	2	8.6	2.1	0.0	0.0	2.6	4.9	6.7	13.5	18.0	18.2
	3	6.8	1.3	0.1	0.3	2.2	3.8	11.4	13.7	17.6	14.8
	4	8.0	1.7	0.6	1.1	4.9	4.2	0.0	0.0	13.5	5.8
	5	8.6	2.0	0.5	1.0	2.6	2.2	11.0	10.7	22.8	13.0
	6	10.2	2.8	0.5	1.1	4.0	2.2	23.9	15.2	38.6	16.8
	7	10.7	2.5	1.0	1.2	8.6	2.1	43.8	19.9	64.1	21.8
	8	4.4	2.9	0.8	0.9	6.7	3.0	0.0	0.0	11.9	3.2
	9	5.8	1.2	0.3	0.6	5.8	5.2	47.4	14.7	59.2	19.9
	10	7.1	1.6	0.5	0.9	2.5	1.8	36.3	14.7	46.4	17.1
	11	8.0	1.9	0.3	0.4	1.3	0.5	32.8	8.0	42.3	9.4
	12	7.3	1.7	0.3	0.6	1.3	1.1	29.0	7.3	37.9	8.5
	13	6.5	1.9	0.1	0.3	1.2	0.8	0.0	0.0	7.7	2.1
	14	4.6	1.2	0.1	0.2	1.4	0.8	29.5	8.4	35.6	9.3
	15	3.6	1.1	0.0	0.0	1.0	1.0	24.0	9.5	28.6	10.7
	16	3.1	1.0	0.2	0.5	0.7	0.9	20.0	10.6	24.0	11.4
	17	1.7	0.9	0.0	0.0	0.3	0.4	11.9	6.0	13.8	6.6
	18	1.0	0.8	0.0	0.0	0.2	0.4	8.2	7.1	9.3	7.7
	19	0.2	0.2	0.0	0.0	0.0	0.0	1.7	2.8	1.8	3.0
	20	0.0	0.0	0.0	0.0	0.0	0.0	0.9	3.4	0.9	3.4
	All	120.6	23.2	5.4	3.6	47.0	13.6	335.5	35.9	508.5	63.5

TABLE 9. Aerial zinc accumulation means and standard deviations for each day after planting (DAP), node, and plant part. Values are in g/ha, and planting date was 143 (23 May).

		---Stems---		---Leaves---		--Petioles--		----Pods----		---Totals---	
DAP	Node	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev
44	1	1.43	0.75	0.00	0.00	0.00	0.00	0.00	0.00	1.43	0.75
	2	0.75	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.24
	3	0.68	0.19	0.69	0.48	0.43	0.52	0.00	0.00	1.79	0.98
	4	1.03	0.37	4.08	1.75	0.99	0.40	0.00	0.00	6.11	2.31
	5	1.17	0.40	4.98	2.33	1.17	0.50	0.00	0.00	7.32	2.96
	6	0.96	0.37	5.38	2.39	1.11	0.48	0.00	0.00	7.46	3.14
	7	0.70	0.37	3.43	1.79	0.81	0.46	0.00	0.00	4.94	2.29
	8	0.34	0.50	1.17	1.61	0.24	0.35	0.00	0.00	1.75	2.29
	9	0.00	0.00	0.11	0.30	0.00	0.00	0.00	0.00	0.11	0.30
	All	7.06	2.59	19.84	8.01	4.76	1.86	0.00	0.00	31.65	11.93
57	1	1.25	0.40	0.00	0.00	0.00	0.00	0.00	0.00	1.25	0.40
	2	0.84	0.24	0.24	0.61	0.11	0.28	0.00	0.00	1.20	0.86
	3	0.67	0.18	1.24	0.83	0.73	0.60	0.00	0.00	2.63	1.56
	4	0.99	0.24	1.71	1.02	0.82	0.46	0.00	0.00	3.52	1.39
	5	1.14	0.25	4.40	1.54	1.45	0.41	0.00	0.00	7.00	1.79
	6	1.52	0.89	6.68	1.32	1.69	0.41	0.00	0.00	9.89	1.90
	7	1.34	0.35	14.15	21.05	2.17	0.86	0.00	0.00	17.66	21.50
	8	1.28	0.30	9.39	2.19	2.08	0.62	0.00	0.00	12.75	3.02
	9	1.09	0.36	7.40	2.54	1.52	0.61	0.00	0.00	10.01	3.48
	10	0.70	0.43	4.72	2.41	0.83	0.67	0.00	0.00	5.66	3.81
	11	0.26	0.28	1.11	1.53	0.20	0.29	0.00	0.00	1.47	1.91
	12	0.04	0.11	0.12	0.32	0.00	0.00	0.00	0.00	0.17	0.42
	All	11.02	2.88	50.58	25.12	11.60	3.76	0.00	0.00	73.53	29.59
70	1	1.58	0.64	0.00	0.00	0.00	0.00	0.00	0.00	1.58	0.64
	2	1.21	0.36	2.70	4.07	1.32	2.09	0.00	0.00	4.23	5.67
	3	0.85	0.45	3.44	3.77	1.60	1.76	0.00	0.00	5.89	5.67
	4	1.18	0.36	2.81	2.71	1.46	1.41	0.00	0.00	5.45	4.27
	5	1.41	0.37	2.82	2.45	1.66	1.20	0.00	0.00	5.69	3.69
	6	1.40	0.48	2.01	1.80	1.09	0.79	0.00	0.00	4.50	2.59
	7	1.34	0.30	3.57	2.07	1.89	1.02	0.00	0.00	6.80	2.97
	8	1.58	0.41	9.33	5.00	3.08	1.27	0.00	0.00	14.00	6.22
	9	1.42	0.58	9.19	4.71	2.18	0.75	0.00	0.00	12.79	4.90
	10	1.47	0.40	10.97	3.95	1.74	0.51	0.00	0.00	14.18	4.64
	11	1.68	0.53	11.31	2.97	1.78	0.46	0.00	0.00	14.77	3.86
	12	1.57	0.74	11.06	4.54	1.89	0.60	0.00	0.00	14.52	5.70
	13	1.15	0.60	8.26	3.90	1.26	0.68	0.00	0.00	10.66	4.61
	14	0.66	0.37	5.32	3.15	1.14	0.71	0.00	0.00	6.79	4.38
	15	0.16	0.24	1.04	1.62	0.23	0.35	0.00	0.00	1.42	2.22
	16	0.00	0.00	0.11	0.43	0.00	0.00	0.00	0.00	0.11	0.43
	All	18.67	5.48	82.92	24.85	21.78	6.52	0.00	0.00	123.38	35.74
79	1	2.84	0.69	0.00	0.00	0.00	0.00	0.00	0.00	2.84	0.69
	2	1.74	0.29	1.02	2.62	0.32	0.81	0.00	0.00	3.08	3.38
	3	1.60	0.67	3.65	5.26	2.36	3.13	0.00	0.00	7.61	8.59
	4	1.84	0.23	4.27	5.59	3.00	3.59	0.00	0.00	9.11	9.24
	5	2.16	0.39	2.56	2.35	2.36	2.28	0.00	0.00	7.08	4.73
	6	2.12	0.54	2.51	1.78	2.18	1.52	0.00	0.00	6.81	3.38
	7	1.91	0.38	7.24	2.23	5.30	1.49	0.00	0.00	14.46	3.64
	8	2.43	0.36	7.29	3.74	4.59	2.16	0.00	0.00	14.30	5.79
	9	2.25	0.77	10.04	3.63	3.51	1.15	0.00	0.00	15.80	4.52
	10	2.25	0.38	13.79	3.12	3.18	0.83	0.00	0.00	19.22	3.99
	11	2.26	0.33	13.32	1.89	2.32	0.55	0.00	0.00	17.91	2.23
	12	1.99	0.31	11.24	1.71	2.20	0.62	0.00	0.00	15.43	2.15
	13	1.62	0.71	9.51	1.75	2.09	0.46	0.00	0.00	13.22	2.43
	14	1.03	0.40	7.35	2.27	1.64	0.65	0.00	0.00	10.02	3.24
	15	0.80	0.42	5.27	2.54	1.16	0.84	0.00	0.00	6.90	3.96
	16	0.48	0.37	2.86	2.21	0.58	0.55	0.00	0.00	3.44	3.16
	17	0.17	0.27	0.84	1.27	0.18	0.33	0.00	0.00	1.19	1.85
	18	0.00	0.00	0.09	0.36	0.00	0.00	0.00	0.00	0.09	0.36
	All	29.43	3.82	102.18	19.99	36.90	9.58	0.00	0.00	168.51	31.39

(cont'd)

TABLE 9. (cont'd)

90	1	1.96	0.56	0.00	0.00	0.00	0.00	0.00	0.00	1.84	0.73
	2	1.71	0.32	3.69	4.24	2.15	2.23	0.11	0.16	6.72	6.37
	3	1.40	0.34	13.24	10.68	7.64	5.09	0.38	0.42	19.93	16.77
	4	1.53	0.43	9.75	8.06	4.29	3.67	0.28	0.27	13.99	11.42
	5	1.75	0.50	5.65	4.53	4.39	5.08	0.20	0.19	9.99	9.82
	6	2.17	1.09	3.45	2.22	2.55	1.34	0.21	0.11	7.86	4.12
	7	1.84	0.77	7.78	2.67	5.61	1.26	0.45	0.18	14.69	5.53
	8	2.54	2.71	7.92	3.76	4.99	2.57	0.52	0.16	14.97	8.06
	9	1.93	0.39	6.55	2.71	3.92	1.66	0.43	0.20	12.04	5.19
	10	2.59	2.10	7.66	4.32	3.24	1.43	0.32	0.10	12.95	6.44
	11	2.30	0.71	11.77	3.16	3.82	1.21	0.31	0.09	17.07	6.31
	12	2.06	0.55	12.50	3.43	4.00	1.11	0.34	0.12	17.71	6.58
	13	1.84	0.42	10.48	2.50	3.32	0.75	0.30	0.10	14.94	5.09
	14	1.55	0.41	9.89	3.75	2.72	1.04	0.32	0.13	13.58	5.99
	15	1.36	0.43	7.71	2.69	2.36	0.80	0.33	0.12	11.02	4.72
	16	0.74	0.37	4.87	3.04	1.52	0.76	0.23	0.09	6.91	4.43
	17	0.70	0.74	2.83	1.83	1.41	1.28	0.13	0.10	4.75	3.35
	18	0.25	0.20	1.23	0.91	0.44	0.29	0.09	0.09	1.89	1.43
	19	0.04	0.06	0.27	0.41	0.08	0.12	0.00	0.00	0.37	0.57
	20	0.00	0.00	0.07	0.20	0.00	0.00	0.00	0.00	0.07	0.19
	All	30.26	7.21	124.54	27.79	57.09	14.46	4.94	1.30	203.28	70.43
100	1	1.27	0.59	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.59
	2	1.85	1.14	0.91	1.64	0.59	1.19	0.14	0.28	3.48	3.39
	3	2.86	0.55	4.48	4.81	2.54	2.43	0.54	0.71	10.43	7.76
	4	4.08	1.08	9.73	6.63	4.52	2.94	0.89	0.66	19.21	10.26
	5	4.04	1.44	3.47	4.23	1.76	2.14	0.54	0.68	9.80	7.15
	6	2.35	0.90	7.49	5.57	3.58	2.31	0.83	0.55	14.25	8.16
	7	3.00	2.83	10.69	4.85	5.74	2.65	1.20	0.67	20.64	7.88
	8	2.97	1.62	10.64	4.85	5.92	3.06	1.69	0.74	21.21	8.97
	9	2.32	0.65	10.21	3.93	5.20	2.86	1.73	0.66	19.46	7.45
	10	2.61	0.76	9.91	2.83	3.70	1.60	1.45	0.65	17.67	4.50
	11	2.68	0.70	13.79	4.23	3.00	0.97	1.22	0.36	20.69	5.41
	12	2.09	0.64	14.14	3.25	3.26	0.79	1.51	0.68	21.01	4.63
	13	2.28	1.13	13.07	3.18	3.35	1.21	1.59	0.63	20.29	4.17
	14	1.69	0.55	11.70	3.33	2.47	0.72	1.86	0.61	17.72	4.62
	15	1.45	0.53	8.28	2.65	1.68	0.58	1.65	0.62	13.06	3.71
	16	0.96	0.48	6.32	2.81	1.26	0.59	1.36	0.56	9.91	3.87
	17	0.68	0.29	5.07	2.05	0.99	0.48	0.95	0.58	7.70	3.16
	18	0.40	0.26	2.91	2.03	0.61	0.48	0.65	0.55	4.57	2.94
	19	0.12	0.18	1.06	1.32	0.17	0.21	0.23	0.36	1.58	1.88
	20	0.00	0.00	0.24	0.45	0.03	0.07	0.08	0.17	0.35	0.64
	All	39.71	10.03	144.10	28.98	50.36	14.44	20.13	5.04	254.30	52.50
113	1	2.86	1.17	0.00	0.00	0.00	0.00	0.00	0.00	2.86	1.17
	2	1.76	0.35	1.71	2.31	1.48	1.91	1.19	1.67	5.04	5.44
	3	1.42	0.33	2.27	3.33	1.89	2.46	1.30	2.25	6.88	7.97
	4	1.63	0.39	5.39	7.41	3.70	5.18	3.47	5.02	14.19	17.51
	5	2.01	0.50	5.62	6.77	4.02	4.52	3.83	3.71	15.48	14.78
	6	2.17	0.69	6.82	6.22	5.32	4.44	4.72	4.27	19.04	15.01
	7	2.08	0.59	9.80	4.46	6.48	2.93	6.17	3.04	24.53	10.25
	8	2.04	0.46	7.47	2.22	4.93	1.71	6.30	2.48	20.75	5.54
	9	2.25	0.47	5.62	4.33	3.61	2.78	5.27	2.80	16.74	9.79
	10	3.06	1.31	6.08	3.15	2.09	0.87	4.35	1.58	15.59	4.19
	11	2.88	0.54	12.25	3.89	2.59	0.61	4.90	1.58	22.62	5.31
	12	2.54	0.45	15.50	2.39	2.53	0.44	5.39	1.58	25.96	3.60
	13	2.39	0.81	13.52	3.23	2.42	0.78	4.41	1.75	22.75	5.00
	14	1.44	0.37	11.49	2.96	1.86	0.53	5.02	1.47	19.81	4.26
	15	1.19	0.25	8.91	3.51	1.40	0.51	4.96	1.80	16.45	4.56
	16	0.89	0.31	6.80	2.30	1.01	0.36	3.17	1.75	11.87	3.52
	17	0.57	0.25	4.58	2.17	0.67	0.35	2.25	0.95	8.07	3.36
	18	0.19	0.25	1.93	2.28	0.26	0.34	1.30	1.62	3.68	4.12
	19	0.04	0.10	0.27	0.53	0.03	0.07	0.21	0.66	0.55	1.22
	All	33.38	6.58	125.62	29.51	45.93	15.69	67.92	22.44	272.86	67.69

TABLE 9. (cont'd)

127	1	3.09	1.45	0.00	0.00	0.00	0.00	0.00	0.00	3.09	1.45
	2	2.35	0.62	1.76	3.83	1.88	3.60	2.47	6.09	8.46	13.21
	3	1.67	0.45	4.84	5.47	9.80	17.02	4.95	5.33	21.27	25.49
	4	12.56	21.19	8.08	6.28	5.88	4.98	0.00	0.00	26.53	28.06
	5	2.58	0.76	3.60	6.26	1.95	3.33	3.64	4.48	11.77	14.07
	6	3.04	1.13	6.34	4.91	3.56	2.89	7.51	4.57	21.09	12.79
	7	3.68	2.33	10.28	4.89	5.72	2.23	11.63	4.73	27.82	12.21
	8	8.64	10.73	9.96	4.47	5.67	2.77	0.00	0.00	24.27	12.07
	9	14.72	23.62	7.38	3.51	4.28	2.71	12.79	6.75	39.18	28.83
	10	1.82	1.27	5.65	2.32	2.83	1.62	10.13	4.14	20.44	7.12
	11	2.52	0.81	8.26	3.55	2.56	1.18	8.14	3.57	21.48	7.97
	12	2.35	0.92	11.84	4.63	3.06	1.24	8.84	3.97	26.09	9.57
	13	2.13	0.89	12.81	4.95	2.10	1.56	0.00	0.00	16.64	6.68
	14	1.65	0.71	15.46	15.11	2.17	0.92	8.74	3.52	28.03	17.79
	15	1.31	0.60	7.28	3.22	1.77	0.82	8.37	4.37	18.73	8.25
	16	0.98	0.49	6.05	2.96	1.36	0.65	7.60	4.21	16.00	6.95
	17	0.64	0.40	4.65	2.91	0.86	0.58	5.73	3.71	12.26	6.42
	18	0.34	0.30	2.09	1.60	0.42	0.34	3.65	2.77	6.50	4.62
	19	0.11	0.16	0.48	0.85	0.12	0.19	2.09	1.83	1.77	2.51
	20	0.00	0.00	0.13	0.29	0.00	0.00	0.30	0.60	0.20	0.55
	All	65.65	29.50	125.55	42.70	56.01	30.52	105.33	30.09	359.97	119.61
139	1	6.43	1.90	0.00	0.00	0.00	0.00	0.00	0.00	6.43	1.90
	2	4.12	1.05	0.66	1.23	0.65	1.04	1.87	2.98	7.30	5.36
	3	3.25	0.98	3.66	4.83	4.17	3.85	8.56	13.30	19.64	21.22
	4	4.42	1.01	3.34	3.81	2.93	2.49	7.37	5.89	18.07	11.84
	5	4.76	3.57	1.17	1.99	4.51	8.10	5.46	5.53	15.90	15.29
	6	4.98	1.31	2.78	2.75	3.10	3.11	10.71	10.26	20.99	15.39
	7	4.93	1.70	4.67	2.18	4.99	2.93	22.98	14.65	37.57	16.72
	8	5.98	2.35	4.66	2.10	3.94	1.97	16.60	5.98	31.18	9.87
	9	16.71	15.03	3.66	2.35	2.88	1.98	17.85	8.12	41.10	17.89
	10	2.52	2.70	2.37	1.82	1.87	1.50	12.16	6.41	18.92	9.50
	11	0.78	1.43	3.60	2.62	1.60	0.79	10.31	3.81	16.29	5.59
	12	1.30	1.38	6.61	3.62	2.26	0.88	11.44	3.72	21.61	7.21
	13	4.39	4.01	8.07	2.20	2.37	0.68	12.70	4.19	27.54	6.61
	14	2.12	0.84	7.97	2.59	1.94	0.33	12.43	4.94	24.47	6.46
	15	1.45	0.60	3.35	2.38	1.43	0.46	11.31	3.66	17.53	4.64
	16	0.77	0.39	2.95	1.24	1.02	0.53	9.87	4.96	14.61	6.06
	17	0.63	0.51	2.17	0.92	0.63	0.36	6.83	4.23	10.25	5.02
	18	0.28	0.35	1.03	0.80	0.35	0.34	3.58	3.55	5.24	4.69
	19	0.08	0.12	0.42	0.56	0.10	0.15	2.30	3.58	2.86	4.23
	All	69.85	20.77	63.14	15.66	40.17	13.65	184.33	44.24	357.49	65.96
149	1	4.72	1.69	0.00	0.00	0.00	0.00	0.00	0.00	4.72	1.69
	2	3.99	0.87	0.00	0.00	1.28	2.46	7.01	14.72	12.29	17.21
	3	2.56	0.49	0.02	0.05	2.57	4.98	3.49	6.91	7.76	10.86
	4	4.07	1.05	0.15	0.29	3.25	2.88	0.00	0.00	7.46	3.65
	5	5.08	2.44	0.19	0.34	1.76	1.59	5.83	5.71	12.86	8.84
	6	4.63	2.78	0.16	0.36	2.67	1.32	10.11	5.65	17.57	7.94
	7	4.36	2.70	0.27	0.33	6.29	2.73	22.24	10.12	33.16	11.26
	8	8.19	5.57	0.42	0.49	6.42	3.53	0.00	0.00	15.03	8.36
	9	4.42	4.17	0.12	0.23	4.24	2.30	25.56	10.02	34.33	11.24
	10	2.46	1.75	0.19	0.33	1.83	1.74	18.25	8.62	22.74	11.17
	11	3.18	0.92	0.11	0.16	1.16	1.13	19.77	5.06	24.21	6.05
	12	2.48	0.57	0.07	0.12	1.58	1.60	19.31	5.93	23.44	7.58
	13	3.25	1.42	0.09	0.20	1.76	2.66	0.00	0.00	5.10	2.70
	14	2.08	0.75	0.05	0.17	0.92	0.58	23.62	10.43	26.67	11.28
	15	1.60	0.52	0.00	0.00	0.73	0.44	28.93	19.33	31.26	19.91
	16	1.19	0.51	0.07	0.18	0.36	0.45	28.29	35.14	29.91	35.49
	17	0.62	0.32	0.00	0.00	0.25	0.34	7.99	4.24	8.86	4.56
	18	0.42	0.41	0.00	0.00	0.08	0.21	5.25	4.30	5.74	4.59
	19	0.11	0.16	0.00	0.00	0.00	0.00	1.14	1.91	1.26	2.04
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.45	1.82	0.45	1.82
	All	59.42	16.48	1.93	1.26	37.13	11.16	226.36	55.50	324.83	67.30

SUMMARY

Independent validation of process-based simulation models requires extensive data sets that are often very costly to obtain. This paper provides an extensive dry matter and nutrient accumulation data set (also available in machine format) for a maturity Group VII, determinate soybean ('Bragg') grown on a Goldsboro loamy sand in the South Carolina Coastal Plain.

REFERENCES:

1 Soil scientist, USDA-ARS, Florence, SC; Soil scientist, USDA-ARS, Ames, IA; Soil scientist, USDA-ARS, Kimberly, ID; Professor, Dept. of Agronomy, Univ. of Arkansas, Fayetteville, AR.

2 Jones, J. W., K. J. Boote, G. Hoogenboom, S. S. Jagtap, and G. G. Wilkerson. 1989. SOYGRO V5.42 Soybean crop growth simulation model: User's guide. Florida Agricultural Experiment Station Journal No. 8304.

3 Small, H. G., Jr., and H. A. Ohlrogge. 1973. Plant analysis as an aid in fertilizing soybeans and peanuts, pp. 315-327. *In*: L. M. Walsh and J. D. Beaton, (eds.) Soil Testing and Plant Analysis. Soil Science Society of America, Madison, WI.

4 Sumner, M. E. 1977. Preliminary N, P, and K foliar diagnostic norms for soybeans. Agron. J. 69:226-230.

5 Karlen, D. L., E. J. Sadler, and C. R. Camp. 1987. Dry matter, N, P, and K accumulation rates by corn on Norfolk loamy sand. Agron. J. 79:649-656.

6 Karlen, D. L., R. L. Flannery, and E. J. Sadler. 1988. Aerial accumulation and partitioning of nutrients by corn. Agron. J. 80: 232-242.

Karlen, D. L., and E. J. Sadler. 1990. Nutrient accumulation rates for wheat in the southeastern Coastal Plain. J. Plant Nutrition. 21(13-16):1329-1352.

8 Scott, H. D., R. E. Sojka, D. L. Karlen, F. B. Arnold, V. L. Quisenberry, and C. W. Doty. 1983. Bragg soybeans grown on a southern Coastal Plain soil. I. Dry matter distribution, nodal growth analysis, and sample variability. J. Plant Nutrition. 6(2):133-162.

9 Sojka, R. E., H. D. Scott, and D. L. Karlen. 1985. Bragg soybeans grown on a southern Coastal Plain soil. II. Seasonal changes in nodal K, Ca, and Mg concentrations. J. Plant Nutrition. 8:751-785.

10 Sojka, R. E., D. L. Karlen, and H. D. Scott. 1986. Bragg soybeans grown on a southern Coastal Plain soil. III. Seasonal changes in nodal Fe, Zn, and Mn concentrations. J. Plant Nutrition. 9:1353-1390.

Sojka, R. E., D. L. Karlen, and H. D. Scott. 1989. Bragg soybeans grown on a southern Coastal Plain soil. IV. Seasonal changes in nodal N and P concentrations. J. Plant Nutrition. 12(9):939-972.

12 Mason, W. K., H. M. Taylor, A. T. P. Bennie, H. R. Rowse, D. C. Reicosky, Y. Jung, A. A. Righes, R. L. Yang, T. C. Kaspar, and J. A. Stone. 1980. Soybean row spacing and soil water supply: their effect on growth, development, water relations, and mineral uptake. AAT-NC-5. USDA-SEA-AR-NCR, Peoria, Illinois 61615.

13 SAS Institute, Inc. 1985. SAS User's Guide: Statistics, Version 5 Edition. SAS Institute, Cary, NC.

14 Mention of a trademark, proprietary name, or vendor is for convenience of the reader only, and neither constitutes a guarantee or warranty of the product by the U.S. Department of Agriculture nor implies its approval to the exclusion of other suitable products or vendors.