Table ___. Forage yield of Sudan Varieties, Brazos River Valley Lab, Miller Clay Soil, 1957

Variety	Pounds air-dry forage per acre				
	June 12	July 8	Aug. 8	Oct. 28	Total
Piper	3130	2030	1860	830	7850
Common Sweet	2800	1690	1850	970	7310
Common	2860	1390	1810	1170	7230
Georgia 337	2770	1220	1560	870	6420
Stoneville Syn. 1	2960	950	1360	1010	6280
Stoneville Sel.	3050	780	1380	1020	6230
Sweet S.A. 372 (S-1)	2690	1190	1340	690	5910
Greenleaf	2480	1460	1140	750	5830
Sweet S.A. 372	2540	1420	1180	680	5820
Lahoma	2500	1460	1270	510	5740

Total yields not different statistically. C.V. = 19.2%
Date x variety interaction highly significant.
Test planted April 11, 1957, received 60 pounds N per acre in two top dressings.

Table . Results of Sudan Variety Test on Blackland Experiment Station, 1957

Variety	Pounds Per Acre Air-Dry Forage		
	July 3	Oct. 28	Total
Stoneville Synthetic #1	5660	1505	7165
Perennial	4540	2010	6550
Stoneville Sel.	4880	1520	6400
Tift	4275	1520	5795
GA 377	4535	1115	5650
Greenleaf F. C.	3825	1725	5550
Piper	4000	1465	5465
Sweet Common	4045	1405	5450
Sweet 372 (S-1)	3840	1260	5100
Sweet 332	3680	1210	4890
Greenleaf S. A.	3045	1245	4290
Common	3430	715	4145
Wheeler	3440	665	4105
Cahoma	2585	1370	3955
L S D	997	297	

Table ___. Sudangrass Variety Test - 1957, T.A.E.S., Substation No. 6 - Denton, Texas

Variety	Pounds air-dry forage per acre 6/17/57	7/16/57	10/4/57	Total	% Stand	Maturity
Common	2027	1958	615	4600	100	6
Piper	2198	1673	1009	4880	100	1
Greenleaf	1929	1027	794	3750	98	0
Sweet Common	2269	1235	734	4232	98	1
Ga. 337	2462	1104	656	4222	98	0
Sweet 372	2163	1451	966	4580	97	2
Sweet 372(S-1)	2031	1393	866	4290	100	0
Lahoma	1894	1257	869	4020	95	0
Stoneville Selection	1724	1233	1118	4075	92	0
Stoneville Synthetic #1	1924	1080	1386	4390	95	1
Tift	1631	1404	1225	4260	90	1
Wheeler	1924	1789	534	4247	98	6
Sorghum Almum	2217	1489	1026	4732	90	3
Perennial Sudan	2000	152	1252	4772	90	2

Notes -- Test was planted April 10, 1957 on San Saba clay soil. Plots consist of 4 12-inch rows, 25 feet long, 4 replications, with 20 feet of 2 center rows harvested for yield.

Table ___. Forage Yield and Plant Height of Sudan Varieties at Chillicothe, 1957

Variety	Lbs. hay/acre	Height(inches)
Common Sweet	3000	58
Stoneville Sel.	2980	65
Sorghum Almum	2920	72
California #23	2900	80
Stoneville Syn. #1	2780	72
Sweet S.A. 372	2780	72
Greenleaf	2680	72
Sweet S-1	2660	58
Tift	2400	60
Piper	2340	66
Lahoma	2240	57
Perennial Sweet, Lot 4	2260	56
Perennial Sweet, Lot 3	2020	72
Georgia 337	2000	70
Wheeler	1880	56
Perennial Sweet, Lot 2	1820	65
Common	1760	56
Perennial Sweet, Lot 1	1520	66

LSD(.05) for yield = 620 C. V. = 20.4%

Table ___. Forage Yield of Sudan Varieties, Prairie View, Hockley Fine Sandy Soil, 1957

Variety	Pounds air-dry forage per acre		
	July 24	October 11	Total
Stoneville Selection	7940	1440	9380
Sweet S.A. 372	6390	1430	7820
Stoneville Syn. #1	6200	1210	7410
Georgia 337	5830	1480	7310
Lahoma	5700	1580	7280
Greenleaf	5880	1190	7070
Piper	5080	1710	6790
Sweet S.A. 372 (S-1)	5400	1170	6570
Common	5100	1320	6420
Common Sweet	5140	1230	6370

C.V. = 43%
500 pounds per acre of 5-10-10 applied before planting.

Table ___. Forage Yield of Annual and Perennial Sudan Varieties, Brazos River Valley Lab, Miller Clay Soil, 1957

Variety	Pounds air-dry forage per acre				
	June 12	July 8	Aug. 8	Oct. 28	Total
Sorghum Almum	2930	910	1040	640	5520
Perennial Sweet	2580	1030	1090	810	5510
Common Sudan	2500	1300	1010	490	5300
Sweet Sudan	2450	1180	1040	420	5090
S. Almum (Australia)	2610	950	990	480	5030

Yields not significantly different, C.V. = 19%

Test was planted April 11, side-dressed with 30# N per acre June 12, July 2, Sept. 9, 1957

Table ___. Forage Yield of Second-Year Sorghum Almum
BRUL, 1957

Variety	Pounds air-dry forage per acre				
	May 23	June 15	July 18	Sept. 17	Total
Sorghum Almum	1250	1560	650	2540	6000
Sorghum Almum (Negra)	1030	1250	700	2810	5790
Perennial Sudan	880	960	710	3000	5550

Yields not significantly different

Plots received 30# Nitrogen per acre June 12, July 2, Sept. 4, 1957.

Table . Results of Perennial Sudan Variety Test on Blackland Station, 1957

Variety	Pounds Per Acre Air-Dry Forage			
	June 18	August 13	October 29	Total
Perennial	3700	5055	940	9695
Perennial Sweet	3880	4155	840	8875
Sorghum almum	4030	4055	670	8755
Sorghum almum (A)	4060	4035	460	8555
Sweet	3215	4620	510	8345
Common	3355	3485	510	7350
Sorghum sp (R)	2265	3590	475	6330
L S D	754	N.S.	100	

Table ___. Forage Yield of Annual and Perennial Sudan at Prairie View, Hockley Fine Sandy Soil, 1957

Variety	Pounds air-dry forage per acre		
	July 24	Oct. 11	Total
Perennial Sweet	4910	2720	7630
Sorghum Almum	4290	2110	6400
Common	2560	1120	3680
Sweet	2710	960	3670

500 pounds 5-10-10 per acre before planting

Table ___. Forage Yield Of Millet Varieties, Agronomy Farm, 1957, Lufkin fine Sandy Loam Soil 1/

Variety	Pounds air-dry forage per acre		
	July 1	August 23	Total
Georgia Hybrid #1	2480	3700	6680
Common Sudan	2810	3820	6630
Cattail #7	3030	2200	5230
Regular hegari	2530	2630	5160
Common	2720	2450	5170
Starr	2200	2220	4420
Hybrid Cattail #55	2390	1790	4180
Improved Starr	1781	2010	3790
German Millet #8	1820	---	1820
German Millet R	1780	---	1780

LSD (05) for total yield = 1100. C.V. = 25.5%

1/ The test was planted May 16 and received a 40-40-40 fertilizer before planting, 30 pound nitrogen top dressing following first harvest and 4 inches of water in two applications.

Table ___. Millet Variety Test, Temple, 1957

Variety	Pounds per acre Air-dry forage
Cattail #7 Pearl (F.C. 33678)	3,635
Common Pearl (F.C. 33190)	3,620
Ga. Hybrid #1 Pearl (F.C. 33189)	3,440
Hybrid Cattail (SJ)(F.C. 33679)	2,985
Starr Pearl (F.C. 33193)	2,775
Common Pearl (F.C. 33719)	2,465
Improved Starr (F.C. 33194)	1,115
German R (F.C. 33689)	630
L.S.D.	462

Forage yield of millet varieties at Denton
on San Saba clay, 1957.

Variety	Pounds air dry forage per acre			
	June 17	July 16	Oct. 4	Total
Cattail No. 7	1880	1430	160	3470
Georgia Hybrid No. 1	1420	1360	300	3080
Common pearl millet	970	1640	100	2710
Starr Pearl	840	1580	100	2520
Hybrid cattail	940	1420	80	2440
Hybrid cattail SJ	1010	1200	90	2300
German millet R	420	--	--	420
German millet 8	280	--	--	280
Improved Starr	130	--	--	130

L.S.D. (.05) for total yield = 730, C.V. = 15.1%

Test was planted April 10, 1957 in 12-inch rows, 25 feet long, 4 replications.

Table ___. Forage Yield of Millet Varieties at Prairie View, Hockley Fine Sandy Soil, July 24, 1957

Variety	Acre yield in pounds		%
	Green	air-dry	Moisture
Hybrid Cattail S-J	20200	5390	76.4
Common	19360	5360	75.5
Georgia Hybrid #1	29120	5240	84.1
Cattail #7	17030	5200	73.1
Starr	28380	4400	86.3
Improved Starr	24540	3280	83.2
German R	4630	1570	70.0
German B	3300	1050	71.8
LSD (.05)		990	

500 pounds 5-10-10 per acre before planting

Table ___. Miscellaneous Summer Legumes, Prairie View, Texas, 1956 and 1957

Variety	Dry-Matter production in pounds per acre						
	7-21-56	Rank	7-24-57	8-13-57	Rank	2-year Average	Rank
Crotalaria striata	1440	1	---	2000	4	1720	2
Crotalaria spectablis	700	7	---	1220	7	960	5
Sesbania exalta	1370	3	---	3510	1	2440	1
Chinese Red cowpea	1410	2	2010	---	3	1710	3
Mesa guar	1050	4	1100	---	8	1080	4
Texsel guar	880	5	---	---		---	
Groehler guar	620	6	---	---		---	
Imp. Pelican soybean	---		2110	---	2	---	
Lee soybean	---		1880	---	5	---	
Jackson soybean	---		1490	---	6	---	
L.S.D. .05	340		420	420		---	

1957 SOYBEAN EVALUATION TESTS - ANNUAL REPORT

The major production area for soybeans in Texas continues to be the High Plains area of the Panhandle. However, farmers in the Rolling Plains and along the Red, Trinity, Sabine and Brazos rivers are showing more interest in this crop. During 1957, approximately 21,000 acres of soybeans were harvested with 20,000 acres located in the High Plains. This acreage is a reduction of about 30 percent from the acreage in 1956, and can be attributed largely to the wet spring weather and a subsequent delay in the spring planting schedule for a warm season crop.

Uniform nurseries consisting of Maturity groups IV, V, VI, VII and VIII were planted at College Station, Chillicothe, Lubbock and Plainview and a special test was grown at Denton. Above normal rainfall was recorded at all locations, but most of the moisture came during the spring and fall months. The months of July, August and September were, for the most part, dry. The tests at Chillicothe and Denton were conducted under dryland conditions while all other tests were irrigated. In addition, several experiments were conducted to determine proper cultural practices for the various soybean producing regions.

Table ___. USDA Regional Soybean Strain Test, College Station, Texas --- 1957[1/]

Variety	Yield Bu./Acre	Height inches	Lodging	Seed Qual.	Grams/100 Seeds	% Protein	% Oil
Group VI							
D51 - 4888	55.4	32	1	3	17.3	--	--
N51 - 1403	54.8	27	1	3	16.4	--	--
D53 - 1301	54.4	30	1	1	14.8	--	--
Lee	54.2	31	1	1	15.2	--	--
D51 - 4969	51.3	37	1	1	15.0	--	--
N53 - 3599	51.0	31	1	2*	14.9	--	--
- 3592	50.9	30	1	2*	13.3	--	--
- 5263	50.5	27	1	2	15.3	--	--
D51 - 5100	50.1	36	1	1	14.3	--	--
Ogden	49.4	31	1	1	16.4	--	--
D53 - 1569	48.6	32	1	1	16.9	--	--
N53 - 3646	45.9	27	1	1	13.7	--	--
* = shatters							
Group VII							
D52 - 834	47.8	37	2	1	15.8	40.4	21.8
D53 - 1664	47.1	31	1	2	15.1	40.7	21.9
N54 - 1748	45.5	32	2	3	17.6	39.4	22.1
Jackson	44.7	37	1	2	16.8	38.1	22.4
N51 - 3185	44.7	34	1	3	16.6	38.8	23.2
Lee	44.5	27	1	1	15.2	41.2	20.7
N52 - 3908	44.3	30	1	2	17.1	39.5	21.8
N51 - 2764	44.1	38	2	2	16.1	37.1	22.7
- 2302	43.8	27	1	2	16.4	40.1	22.4
N54 - 1842	43.4	28	1	2	16.9	37.9	22.4
Roanoke	40.7	37	2	3	16.2	38.2	21.8
D51 - 5091	38.1	44	3	1	14.8	37.6	22.3
Group VIII							
F55 - 310	49.2	40	3	1	14.3	40.0	20.9
La 49-1-4	42.2	39	2	3	16.5	41.5	21.7
-2-4	41.7	35	1	3	15.8	40.5	22.1
F55 - 1766	41.1	37	2	3	15.3	37.8	23.6
La 53-97-1	39.9	38	3	1	17.0	40.0	22.4
-99	39.8	36	3	4	16.2	40.2	22.4
Majos 53 - 87	39.6	40	4	2	18.1	37.6	21.9
Jackson	39.2	37	1	3	17.1	38.3	22.7
La 49-11-6	37.1	36	1	2	15.9	39.0	22.5
Imp. Pelican	36.0	53	4	2	13.0	40.9	21.0
Yelnanda 53-116	36.0	39	3	4	18.8	40.1	20.3
J.E.W. 45	33.4	37	4	4	18.6	40.5	21.5

1/ Planted May 30, 1957

Table . USDA Regional Soybean Strain Test, Lubbock, Texas, 1957.

Variety	Yield Bu./Acre	Height Inches	Seed Quality	Maturity Date
Group VI				
N51-1403	23.1	20	2	-3
D51-4888	23.0	24	2	-3
D53-1569	22.7	27	2	-10
-1301	21.8	29	2	-3
Lee	21.3	26	2	-3
D51-5100	21.0	29	2	-10
N53-3592	20.9	24	2	-10
-5263	20.9	23	2	-10
-3599	20.3	21	2	-10
-3646	18.9	24	2	-3
Ogden (ck)	18.9	24	2	Oct. 27
D51-4969	18.4	28	2	-3
Group VII				
N52-3908	26.9	31	2	-10
N54-1842	23.0	27	2	0
N51-3185	22.8	37	2	0
D53-1664	22.8	38	2	-10
N51-2302	22.6	31	2	-10
N54-1748	22.4	30	2	0
Lee	21.4	28	2	-3
D51-5091	21.1	42	2	-3
Roanoke	20.7	39	2	0
D52-834	20.2	38	2	0
Jackson (ck)	19.4	36	2	Oct. 27
N51-2764	15.7	44	2	0

Table . USDA Regional Soybean Strain Test, Chillicothe, Texas, 1957.

Variety	Yield Bu./Acre	Height Inches	Lodging	Seed Quality
Group VI				
Lee	7.5	12	0	1
D53-1301	5.9	14	0	1
N53-3599	5.9	17	0	1
D51-5100	5.5	12	0	1
N51-1403	5.5	11	0	1
Ogden (ck)	5.3	11	0	1
D51-4969	5.0	13	0	1
D53-1569	5.0	10	0	1
D51-4888	4.7	15	0	1
N53-3646	4.6	12	0	1
-3592	3.7	9	0	1
-5263	3.6	13	0	1
Group VII				
Lee	7.0	16	0	1
D53-1664	6.7	17	0	1
N51-3185	5.1	23	0	1
-2764	4.3	24	0	1
Roanoke	4.1	20	0	1
D51-5091	3.7	20	0	1
N54-1748	3.6	14	0	1
N52-3908	3.5	17	0	1
Jackson (ck)	3.5	21	0	1
D52-834	3.3	22	0	1
N54-1842	3.0	19	0	1
N51-2302	2.3	18	0	1

Table . USDA Regional Soybean Strain Tests for maturity groups IV and V, Plainview, Texas, 1957

Variety	Yield Bu./Acre	Height Inches	Maturity Date	Relative Scores for Shattering	Lodging
Group IV					
C-1069	46.8	29	-1	1	2+
S2-7158	43.6	29	-2	2	2
D53-138	42.8	31	+2	1+	2
-1254	42.6	25	+2	1+	1+
D54-2437	42.0	25	+1	2	1
-3281	42.0	30	+3	1+	2+
D53-184	40.7	30	+2	1+	2
D52-203	37.6	29	+2	2	1
D53-354	37.6	27	0	1+	2+
-190	37.0	27	+2	2	2
Clark	36.3	25	-7	2	1+
Perry (ck)	35.9	24	10/1	2	1
Group V					
D53-142	44.4	23	+4	2	1
-697	42.4	29	+4	2+	2
-526	40.7	27	+2	1	1+
Dorman (ck)	37.5	27	10/14	2+	2+
D54-3362	36.5	23	+3	1	2
-3350	36.5	29	+3	1	2
D53-492	36.2	25	+4	1	1+
D54-3310	36.2	22	+4	1+	1+
-3416	34.8	24	+4	1+	2+
Dortchsoy 67	32.7	30	+6	2	1+
D54-2213	32.0	27	-1	2	2+
-3340	30.2	23	-1	2+	1

Table . USDA Regional Soybean Strain Tests for maturity groups VI and VII, Plainview, Texas, 1957

Variety	Yield Bu./Acre	Height Inches	Maturity Date	Relative Scores for Shattering	Lodging
Group VI					
Ogden (ck)	37.2	29	10/25	1	2
N51-1403	37.1	26	0	2	2
D51-4888	36.5	25	0	1	1
N53-3599	35.2	27	0	2	2+
D51-4969	34.1	30	0	1	2
D53-1301	34.1	30	0	2	2
-5263	33.8	32	0	1+	2
Lee	33.2	32	0	1	2+
N53-3646	33.1	27	0	3	2
D51-5100	32.5	30	0	1	3+
D53-1569	30.3	33	0	1	3+
N53-3592	26.1	28	0	2+	1
Group VII					
Lee	35.3	34	0	1	2+
N52-3908	31.6	34	0	1	2+
D53-1664	27.4	34	0	1	2+
N54-1842	25.4	35	0	1	3
N51-2764	23.5	36	0	1	3+
D52-834	22.6	37	0	1	2+
D51-5091	22.3	40	0	1	3+
N51-3185	19.4	34	0	1	4
Jackson (ck)	18.2	38	10/27	1	2+
N54-1748	17.4	33	0	1	1
Roanoke	16.0	34	0	1	3+
N51-2302	12.0	29	0	2	1+

Table ___. Soybean Variety Test, Denton, Texas, 1957

Variety	Seed Yield - Bushels per Acre					Harvest Date
	Rep. I	Rep. II	Rep. III	Rep. IV	Average	
Group IV						
Clark	11.0	8.6	11.8	11.4	10.7	9/20
D53-354	7.6	10.3	10.9	8.4	9.3	"
Group V						
Dorman	8.4	9.3	8.6	8.6	8.7	9/24
D53-526	6.9	10.0	9.7	7.8	8.6	"
Group VI						
Lee	7.8	10.0	10.9	8.4	8.6	10/30
D53-1569	5.8	7.4	7.7	6.9	7.0	"
D53-1301	4.8	4.3	5.3	4.7	4.8	"
D51-4969	2.4	1.8	4.5	1.9	2.6	"
LSD .05					1.4	

C.V. = 13.01%

Table ___. Yield in Bushels Per Acre of Soybean Varieties Grown Under Dryland and Irrigated Conditions, College Station, 1957 1/

Variety	Treatment		Average
	Irrigated	Dryland	
Jackson	25.8	28.1	27.0
Lee	27.2	21.0	23.6
Dorman	26.1	13.1	19.6
Average	26.4	20.7	

1/ Planted June 10, 1957

Table ___. Yield and Other Agronomic Data on Irrigated Lee Soybeans Innoculated with Different Innoculum Cultures, College Station, 1957 1/

Culture	Yield Bu./Acre	Height inches	Nodulation per Plant 8/16/57 Number	Size	Grams/100 Seed	Leaf Color
S.M. Culture Beltsville, Md.	35.0	28	28	Large	15.3	Dk. green
Commercial Culture Nitragin Co.	33.2	28	33	Medium	14.9	Dk. green
Chlorotic Culture	21.5	24	25	Small	13.8	Lt. green
Check	22.4	23	3	Medium	13.6	Lt. green

1/ Planted June 10, 1957. Chlorotic culture produced typical symptoms for 4 to 6 weeks during July and August.

Table . Effect of date of planting on the average yield of Soybeans at three locations.

Date	College Station 1951-55	Chillicothe 1946-55	Plainview* 1956-57
April 15	--	5.6	--
May 1	10.3	--	--
May 15	13.1	8.2	35.3
May 23	--	--	42.0
May 29	--	--	44.2
June 1	11.3	--	--
June 12	11.7	10.3	38.2
June 19	--	--	27.8
June 25	--	--	40.7

*Irrigated, all other data dryland.

Table . Effect of row spacing on Lee soybeans at Plainview, Texas, 1957.

Row Spacing (inches)	Yield (bu./acre)	Height (inches)	Lodging Rating	Grams per 100 seed	Percent Oil	Percent Protein
38	32.4	34	1	14.4	16.9	38.2
20	36.4	30	2	13.7	17.2	37.4

Table ___. Yield of Lee Soybeans Planted at Different Row Spacing, College Station, 1957 1/

Row Spacing	Yield Bu./Acre	Height inches	Seed Quality	Grams/100 Seed	% Increase in Yield
40 inches	43.8	27.0	2	15.1	---
20 inches	50.8	28.6	2	15.0	13.8

1/ Planted May 31, 1957. Rate of seeding in 20" rows was double that of 40" rows.

Table ___. Effect of Irrigation and Shading on Yield and Percent Pod Set in Soybeans, College Station, 1957 1/

Variety and Treatment	Yield Bu./Acre	No. of Pods per Raceme	Av. % Pod Set	Height inches	Grams/100 Seed
Lee					
Irrigated - no shade	27.2	4.04	49.1	26	15.0
Irrigated-shaded	19.0	5.13	61.6	30	13.6
Dryland-no shade	21.0	3.97	50.9	19	14.0
Jackson					
Irrigated-no shade	25.8	3.09	45.2	33	16.2
Irrigated-shaded	21.3	4.70	60.4	36	16.0
Dryland-no shade	28.1	4.25	51.3	29	16.7

1/ Planted June 10, 1957. Number of racemes per plant and number of beans per pod were not checked.