

TEXAS AGRICULTURAL EXPERIMENT STATION.

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SEPTEMBER, 1896.

FIELD EXPERIMENTS AT COLLEGE STATION

WITH

CORN, COTTON AND FORAGE PLANTS

POSTOFFICE:

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J. H. CONNELL, DIRECTOR, P. O. College Station, Texas.



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TEXAS AGRICULTURAL EXPERIMENT STATION.

FIELD EXPERIMENTS AT COLLEGE STATION

WITH

CORN, COTTON AND FORAGE PLANTS

J. H. CONNELL.

JAS. CLAYTON.

CONCLUSIONS.

The experiments reported upon in this Bulletin include 62 varieties of corn, 34 varieties of cotton, 21 varieties of grass, 10 varieties of clover, 2 varieties of vetch, and 32 tests with other forage plants. The seeds used were bought from the originators when it was possible to do so. High prices were often paid in order to get seeds of the best quality.

The object of these experiments is to show by actual comparison under like conditions what varieties of field crops, grasses, and forage plants are best suited to this section, and, when all varieties have been given a sufficient trial, to reject those which prove unworthy, and continue the best varieties on a larger scale for seed production.

The soil used for these tests is of a black sandy nature, from eight to twelve inches deep; it has never been manured, and is deficient in phosphoric acid. The sub-soil is blue clay and almost impervious to water. The lay of the land is very level, with poor drainage, so that the continued rains during May and June were harmful, especially to the early planting of cotton.

The results of similar experiments for 1894 were reported in Bulletin 34, and may be had on application, free of cost.

The experiments herein reported upon have been running at this Station for two seasons. Sufficient trial has not been given to any of the crops grown to make nice distinctions between the varieties tested, but it is possible for the farmer to determine in a general way the varieties of corn, cotton, forage plants, or grasses, best suited to his conditions. This Bulletin is, therefore, presented as a report of progress in field experiments.

In the comparisons made below will be found the names of the varieties of corn, cotton, grasses, and forage plants which have given best results for two years. Unfortunately, these experiments could not be continued during the present crop season (1896), but it is hoped that these and other matters of importance may receive needed attention during the coming season of 1897.

BEST VARIETIES OF COTTON GROWN.

SEASON OF 1895 (34 Varieties).

The five varieties which made the *largest yield seed cotton per acre in 1895, early planting*, were:

	Pounds		Pounds
Dickson Early Cluster.....	1364	Texas Oak	1196
Peerless	1223	Welborn's Pet	1195
Cochran's Prolific	1216		

The five varieties which made the *largest money value per acre in 1895, early planting*, were:

Texas Oak	\$35 56	Welborn's Pet	34 42
Jone's Improved	34 89	Dickson's Early Cluster ..	33 72
Cochran's Prolific	34 88		

The five varieties which made the *largest yield seed cotton per acre in 1895, late planting*, were:

	Pounds		Pounds
Welborn's Pet	1175	Sure Fruit	1099
Beck's Prolific	1142	Texas Oak	1095
Peterkin Limbed Cluster...	1114		

The five varieties which made the *largest money value per acre in 1895, late planting*, were:

Welborn's Pet	\$33 88	Peterkin Limbed Cluster..	31 81
Jone's Improved	32 84	Texas Oak	31 43
Beck's Prolific	31 92		

SEASON OF 1894 (31 Varieties).

The five varieties which made the *largest yield seed cotton per acre in 1894, early planting*, were:

	Pounds		Pounds
Sure Fruit	1282	Hawkin's Improved	1229
Drake's Cluster	1251	Allen Long Staple	1224
Peerless	1230		

The five varieties which made the *largest yield seed cotton per acre in 1894, late planting*, were:

	Pounds		Pounds
Peterkin Limbed Cluster...	1908	Truitt's Improved	1522
Herlong	1760	Southern Hope	1518
Peterkin	1538		

BEST VARIETIES OF CORN—1895 (62 Varieties).

“FIELD CORN” (22 Varieties).

The five varieties of “*Field Corn*” which made the largest yields per acre were:

Texas Yellow	35.9	Renfro's Improved	34.4
Texas White	35	Shaw's Improved	34.4
Welborn's Conscience	34.6		

The thirteen varieties making more than twenty-five bushels per acre were:

Chester County Mammoth.	32.5	North Texas Yellow	27.5
Farmer's Pride	28.1	Piasa Queen	31.2
Giant White Dent	26.8	Red Cob Ensilage	30.3
Johnson's Large White Southern Bread	31.7	Southern White Gourd Seed	28.4
Mammoth White Surprise.	32.3	Virginia Horse Tooth	28.8
Mexican, or Red Foliage.. . . .	27.5	White Rockdale	32.9
New Giant Beauty	26.6		

The four *Field* varieties which made less than twenty-five bushels per acre were:

Everitt's Mortgage Lifter.	22	N. B. & G.'s Conqueror Dent	19.7
Mammoth Yellow	19.6	Southern Queen	23.6

"EARLY FIELD CORN" (18 Varieties).

The five *Early* varieties which made the largest yields per acre were:

Golden Beauty	47.4	Hickory King	40
Forsyth's Favorite	43.2	Marsfield White Dent	39.9
Golden Dent	40.8		

The eleven *Early* varieties which made more than twenty-five bushels per acre were:

Champion White Pearl	25.7	Pride of the North	27.5
Farmer's Favorite Dent	29.1	Riley's Favorite	33.9
Golden Cable	27.3	Waterloo Early Dent	37.6
Kansas King	36	Waterloo Extra Early Dent	35.8
N. B. & G.'s Rustler White	28.2	White Cap Dent	29.1
Old Cabin Home	37		

The two *Early* varieties which made less than twenty-five bushels per acre were:

Huron	20	N. B. & G.'s Dakota Dent.	22.3
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"EXTRA EARLY FIELD CORN" (19 Varieties).

The five *Extra Early* varieties which made the largest yields per acre were:

Murdock	43.8	Thoroughbred White Flint	33.4
The Leaming	42.5	Hundred Day	32.3
Early Mastodon	41		

The four *Extra Early* varieties which made more than twenty-five bushels per acre were:

Early Eclipse	28.5	Long Pennsylvania Yellow	28.7
Large White Flint	25.7	Minnesota King	31.3

The ten *Extra Early* varieties which made less than twenty-five bushels per acre were:

Adam's Early	22.3	Longfellow	19
Early Canada	16.4	Long Yellow Flint	22.2
Golden Dewdrop	16.3	Mercer Yellow	11.4
King of Earlies	23.4	Southern Roasting Ear ..	17.2
King Phillip	15.8	Tuscarora	13.8

“ PROLIFIC CORN ” (3 Varieties).

Mosby's Prolific	48	Dungan's Prolific	42.8
Blount's Prolific	46.4		

FIVE VARIETIES MAKING LARGEST YIELDS.

Mosby's Prolific	48	Golden Beauty	47.4
Blount's Prolific	46.4	Murdock	43.8
Forsyth's Favorite	43.2		

BEST VARIETIES OF GRASSES AND FORAGE PLANTS—1895
(33 Varieties).

The five largest yields of cured hay obtained per acre, and the method of seeding, were as follows:

Forage Sorghum (drill)	11,500 pounds.
Forage Sorghum (broadcast)	10,700 pounds.
White African Millet (drill)	10,400 pounds.
White African Millet (broadcast)	10,000 pounds.
Large African Millet (drill)	9,400 pounds.

The most successful grasses and clovers grown to date are Alfalfa, Crimson and Burr Clover, Bermuda, Colorado Bottom, and Rescue grass.

EXPERIMENTS IN VARIETIES OF CORN.

The land used for this test was broken flush with a Hancock disc plow to a depth of eight inches during the latter part of February. Before planting, the land was thoroughly pulverized with spring-toothed and smoothing harrow. Plots one-tenth of an acre each were measured off and the corn planted with a John Deere double-row planter on March 20, 1895. A very good stand was obtained by April 11.

The cultivation was as follows: April 12th and 19th, smoothing harrow was run diagonally across the rows, when the corn was from two to six inches high; April 23d and May 4th, ran two-wheel Victor cultivator through corn; May 28th, a turn-plow was used, throwing the dirt to the corn; June 7th, a sweep was run one time in the center of the row, which completed the cultivation.

It was not an object of this series of experiments to produce the largest possible yield from the varieties planted. It was planned as a *test of varieties* to prove their adaptability to the natural soil and climatic conditions of the South-Central Texas upland prairies. No variety was given an advantage over any other. The land was well prepared and properly cultivated, but the soil is usually classed as poor soil when compared with the other soil sections of Texas. This soil responds freely to manures, and during wet seasons, where well drained, produces very satisfactory crops without extra attention. The creek and river bottom lands of this section (upon which we are not located) are of unsurpassed fertility.

The varieties were divided into four groups, and planted on adjacent plots in the following manner: (1) Common field varieties of corn; (2) early varieties; (3) extra early varieties; (4) prolific varieties of corn.

The yield from each fifth plot was intended as a basis of comparison, and planted in the same variety. The "common field" corn was thinned to one stalk every three feet; the "early" and "prolific" kinds to one stalk every eighteen inches. The rows of all varieties were three feet ten inches apart.

The results of this test will be found in the data given on the following pages:

Experiments in Corn—62 Varieties—1895.

Number of plot.	Name.	Yield per acre in bushels.	Number of ears contained in 70 pounds.	Number pounds shelled corn from 70 pounds ears.	Number pounds cobs from 70 pounds ears.	Percent of cobs.
"COMMON FIELD CORN."						
1	Chester County Mammoth.....	32.5	101	60.9	9.1	13.
2	Everett's Mortgage Lifter.....	22.	121	58.8	11.2	16.
3	Farmer's Pride.....	28.1	101	58.5	11.5	16.4
4	Giant White Dent.....	26.8	129	56.7	13.3	19.
5	Check (Ordinary North Texas).....	36.9	101	56.7	13.3	19.
6	Johnson's Large White Southern Bread...	31.7	87	52.9	17.1	24.4
7	Mammoth Yellow.....	19.6	87	53.6	16.4	23.4
8	Mammoth White Surprise ..	32.3	105	55.3	14.7	21.
9	Mexican or Red Foliage.....	27.5	94	57.8	12.2	17.4
10	Check (Ordinary North Texas).....	36.2	101	57.1	12.9	18.4
11	N. B. & G.'s Conqueror Dent.....	19.7	140	55.	15.0	21.4
12	New Giant Beauty	26.6	108	58.5	11.5	16.4
13	North Texas Yellow	27.5	119	57.1	12.9	18.4
14	Piasa Queen	31.2	101	56.	14.	20.
15	Check (Ordinary North Texas).....	35.4	101	57.4	12.6	18.
16	Red Cob Ensilage.....	30.3	119	57.4	12.6	18.
17	Renfro's Improved.....	34.4	91	57.8	12.2	17.4
18	Shaw's Improved	34.4	84	54.6	15.4	22.
19	Southern Queen	23.6	133	57.1	12.9	18.4
20	Check (Ordinary North Texas).....	34.1	101	57.1	12.9	18.4
21	Southern White Gourd Seed.....	28.4	151	57.1	12.9	18.4
22	Texas Yellow.....	35.9	105	57.1	12.9	18.4
23	Virginia Horse Tooth.....	28.8	126	60.2	9.8	14.
24	Welborn's Conscience	34.6	84	56.7	13.3	19.
25	Check (Ordinary North Texas).....	36.1	101	57.1	12.9	18.4
26	White Rockdale.....	32.9	108	59.5	10.5	15.
"EARLY FIELD CORN."						
27	Champion White Pearl	25.7	140	58.5	11.5	16.4
28	Farmer's Favorite Dent	29.1	119	57.1	12.9	18.4
29	Forsyth's Favorite	43.2	126	58.5	11.5	16.4
30	Check (Ordinary North Texas).....	32.3	101	57.1	12.9	18.4
31	Golden Beauty.....	47.4	115	57.1	12.9	18.4
32	Golden Cobb.....	27.3	196	60.6	9.4	13.4
33	Golden Dent.....	40.8	112	57.1	12.9	18.4
34	Hickory King.....	40.	178	60.6	9.4	13.4
35	Check (Ordinary North Texas).....	29.1	101	57.1	12.9	18.4
36	Huron	20.	266	59.5	10.5	15.
37	Kansas King.....	36.	143	60.9	9.1	13.
38	Marsfield White Dent	39.9	119	58.1	11.9	17.
39	N. B. & G.'s Dakota Dent.....	22.3	224	58.8	11.2	16.
40	Check (Ordinary North Texas).....	32.5	101	57.1	12.9	18.
41	N. B. & G.'s Rustler White.....	28.2	182	57.8	12.2	17.4
42	Old Cabin Home.....	37.	161	60.6	9.4	13.
43	Pride of the North	27.5	206	60.2	9.8	17.
44	Riley's Favorite.....	33.9	164	57.4	12.6	16.
45	Check (Ordinary North Texas).....	35.2	101	57.1	12.9	18.
46	Waterloo Early Dent.....	37.6	147	58.8	11.2	17.4
47	Waterloo Extra Early Dent.....	35.8	140	58.4	11.6	13.4
48	White Cap Dent.....	29.1	164	57.4	12.6	14.

Experiments in Corn—62 Varieties—1895—continued.

Number of plot.	Name.	Yield per acre in bushels.	Number of ears contained in 70 pounds.	Number pounds shelled corn from 70 pounds ears.	Number pounds cobs from 70 pounds ears.	Per cent of cobs.
"EXTRA EARLY CORN."						
49	Adam's Extra Early	22.3	203	55.	15.	18.
50	<i>Check (Ordinary North Texas)</i>	36.8	101	57.1	12.9	18.4
51	Early Canada	16.4	343	57.4	12.6	16.
52	Early Eclipse	28.5	129	59.5	10.5	18.
53	Early Mastodon	41.	126	58.8	11.2	18.
54	Golden Dew Drop.....	16.3	315	55.7	14.3	21.4
55	<i>Check (Ordinary North Texas)</i>	32.5	101	57.1	12.9	18.4
56	Hundred Day.....	32.3	136	55.3	14.7	2.1
57	King of Earlies ...	23.4	245	59.5	10.5	15.
58	King Phillip.....	15.8	343	54.6	15.4	22.
59	Large White Flint	25.7	238	56.	14.	20.
60	<i>Check (Ordinary North Texas)</i>	32.2	101	57.1	12.9	18.4
61	Longfellow	19.	280	56.	14.	20.
62	Long Pennsylvania Yellow	28.7	192	56.	14.	20.
63	Long Yellow Flint.....	22.2	227	55.3	14.7	21.
64	Mercer Yellow.....	11.4	434	55.	15.	21.4
65	<i>Check (Ordinary North Texas)</i>	36.4	101	57.1	12.9	18.4
66	Murdock.....	43.8	189	59.5	10.5	15.
67	Minnesota King.....	31.3	178	57.4	12.6	18.
68	Southern Roasting Ear.....	17.2	311	55.3	14.7	21.
69	The Leaming	42.5	140	58.5	11.5	16.4
70	<i>Check (Ordinary North Texas)</i>	32.5	101	57.1	12.9	18.4
71	Thoroughbred White Flint.....	33.4	175	52.2	17.8	25.4
72	Tuscarora	13.8	245	51.1	18.9	27.
"PROLIFIC CORN."						
73	Blount's Prolific	46.4	164	57.8	12.2	17.4
74	Dungan's Prolific	42.8	161	57.4	12.6	18.
75	<i>Check (Ordinary North Texas)</i>	27.4	101	57.1	12.9	18.4
76	Mosby's Prolific.....	48.	161	61.3	8.7	12.5

In comparing the yields, it is well to test a variety by the yield of its neighboring "check plots" rather than by some other variety. If this is carefully done, the reader will be struck with the fact that many of the varieties tested are comparatively worthless, while a few of the best far outrank in value the corn commonly planted in Central and South Texas. For our opinion of the best varieties, the reader is referred to pages 852 to 854.

DESCRIPTION OF "FIELD CORN" (29 Varieties).

FARMER'S PRIDE.—Seed from Alexander Drug and Seed Co., Augusta, Ga.; cost, 75 cents per half-bushel. A white gourd seed variety; roasting ear, June 22d; stalk, large and vigorous; ear, medium length, very firm and heavy, very long grain; yield per acre, 28.1 bushels of corn. One hundred pounds shucked ear corn yield 88.5 pounds grain.

GIANT WHITE DENT.—Seed from J. M. Thorburn & Co., 15 John street, New York; cost, 75 cents per half-bushel. A white dent variety; roasting ear, June 18th; stalk and ear, medium size; grain very white, large and firm; yield per acre, 26.8 bushels corn. One hundred pounds shucked ear corn yield 86.7 pounds grain.

JOHNSON'S LARGE WHITE SOUTHERN BREAD.—Seed from Mark W. Johnson, Atlanta, Ga.; cost, 50 cents per half-bushel. A white flinty dent variety; roasting ear, June 28th; stalk, large and vigorous; ear, very large and firm; yield per acre, 31.7 bushels corn. One hundred pounds shucked ear corn yield 82.9 pounds grain.

MAMMOTH YELLOW.—Seed from Mark W. Johnson, Atlanta, Ga.; cost, 60 cents per half-bushel. A yellow, flinty, dent variety; roasting ear, June 25th; stalk, large and vigorous; ear and grain, very large and firm; yield per acre, 19.6 bushels of corn. One hundred pounds shucked ear corn yield 83.6 pounds grain.

MEXICAN, OR RED FOLIAGE.—Seed presented by Dr. J. D. Fields, Manor, Texas. A white dent variety; roasting ear June 28th; stalk, large and vigorous; stalk and blade, very dark red; ear, medium size; grain, small and very soft; yield per acre, 27.5 bushels of corn. One hundred pounds shucked ear corn yield 87.8 pounds grain.

N. B. & G.'S CONQUEROR DENT.—Seed from Northrup, Braslan & Goodwin Co., Minneapolis, Minn.; cost, \$1.75 per one-half bushel. A yellow dent variety; roasting ear, June 14th; stalk and ear, medium size; grain, very long and broad; yield per acre, 19.7 bushels of corn. One hundred pounds shucked ear corn yield 85 pounds grain.

NEW GIANT BEAUTY.—Seed from Johnson & Stokes, Philadelphia, Pa.; cost, \$1 per half-bushel. A yellow dent variety; roasting ear, June 14th; stalk, medium size; ear, large and firm; yield per acre, 26.6 bushels of corn. One hundred pounds shucked ear corn yield 88.5 pounds grain.

* **NORTH TEXAS WHITE.**—Seed from Sleeper & Co., Waxahachie, Texas; cost, 25 cents per half-bushel. A white, flinty, gourd seed variety; roasting ear, June 25th; stalk, medium size; ear, large, very firm and heavy; grain, very broad, long and hard; average yield per acre, 15 plots, 33.7 bushels of corn. One hundred pounds shucked ear corn yield 87.1 pounds of grain.

RED COB ENSILAGE.—Seed from Johnson & Stokes, Philadelphia, Pa.; cost, 70 cents per half-bushel. A white dent variety; roasting ear, June 22d; stalk and ear, both medium size; yield per acre, 30.3 bushels of corn. One hundred pounds shucked ear corn yield 82 pounds of grain.

* *This variety was used in checking up all yields. It was planted on every fifth plot. The yield was satisfactory, but in many cases not so high as with some varieties of equal quality.*

RENFRO'S IMPROVED.—Seed from F. M. Renfro, Opelika, Ala.; cost, \$1.25 per half-bushel. A white, flinty, dent variety; roasting ear, June 24th; stalk, very large and vigorous; ear, very long and firm; grain, large and hard; yield per acre, 34.4 bushels of corn. One hundred pounds shucked ear corn yield 87.8 pounds grain.

SHAW'S IMPROVED.—Seed from Mark W. Johnson, Atlanta, Ga.; cost, \$1.25 per half-bushel. A white dent variety; roasting ear, June 29th; stalk and ear, both very large; grain, large and hard; yield per acre, 34.4 bushels of corn. One hundred pounds shucked ear corn yield 84.6 pounds grain.

SOUTHERN QUEEN.—Seed from J. M. Thorburn & Co., New York; cost, 75 cents per half-bushel. A yellow dent variety; roasting ear, June 14th; stalk and ear, both medium size; yield per acre, 23.6 bushels of corn. One hundred pounds shucked ear corn yield 87.1 pounds grain.

SOUTHERN WHITE GOURD SEED.—Seed from D. Landreth & Sons, Philadelphia, Pa.; cost, \$1.63 per half-bushel. A white, flinty, dent variety; roasting ear, June 22d; stalk and ear, both medium size; yield per acre, 28.4 bushels of corn. One hundred pounds shucked ear corn yield 87.1 pounds grain.

TEXAS YELLOW.—Seed from D. H. Thompson & Co., Waxahachie, Texas; cost, 25 cents per half-bushel. A yellow dent variety; roasting ear, June 22d; stalk and ear, both large; yield per acre, 35.9 bushels of corn. One hundred pounds shucked ear corn yield 87.1 pounds grain.

WHITE ROCKDALE.—Seed from Richard Frotscher, New Orleans, La.; cost, \$1.25 per half-bushel. A white, flinty, dent variety; roasting ear, June 28th; stalk, very large and vigorous; ear, large, firm and heavy; grain, large and hard; yield per acre, 32.9 bushels of corn. One hundred pounds shucked ear corn yield 89.5 pounds grain.

“EARLY FIELD” CORN.

FARMER'S FAVORITE DENT.—Seed from Johnson & Stokes, Philadelphia, Pa.; cost, 70 cents per half-bushel. A white dent variety; roasting ear, June 18th; stalk and ear, both medium size; yield per acre, 29.1 bushels of corn. One hundred pounds shucked ear corn yield 87.1 pounds grain.

GOLDEN CABLE.—Seed from Plant Seed Co., St. Louis, Mo.; cost, 90 cents per half-bushel. A yellow gourd seed variety; roasting ear, June 10th; stalk and ear, both medium size; yield per acre, 27.3 bushels of corn. One hundred pounds shucked ear corn yield 90.6 pounds grain.

MARSFIELD WHITE DENT.—Seed presented by Holloway & Co., Dallas, Texas. A white, flinty dent variety; roasting ear, June 17th; stalk and ear, both medium size; yield per acre, 39.9 bushels of corn. One hundred pounds shucked ear corn yield 88.1 pounds grain.

OLD CABIN HOME.—Seed from D. Landreth & Sons, Philadelphia, Pa.; cost, \$1.50 per half-bushel. A white, flinty dent variety; roasting ear, June 18th; stalk, medium size; ear, small, with very small cob; grain, very large and firm; yield per acre, 37 bushels of corn. One hundred pounds shucked ear corn yield 90.6 pounds grain. This variety is very much like Hickory King.

WATERLOO EARLY DENT.—Seed from J. M. Thorburn & Co., New York; cost, 75 cents per half-bushel. A yellow dent variety; roasting ear, June 14th; stalk and ear, both medium size; yield per acre, 37.6 bushels of corn. One hundred pounds shucked ear corn yield 88.1 pounds grain.

WATERLOO EXTRA EARLY DENT.—Seed from A. W. Burpee, Philadelphia, Pa.; cost, \$2.25 per half-bushel. Same as Waterloo Early Dent; roasting ear, June 14th; yield per acre, 35.8 bushels of corn. One hundred pounds shucked ear corn yield 88.4 pounds grain.

WHITE CAP DENT.—Seed from Atlee W. Burpee, Philadelphia, Pa.; cost, \$2.25 per half-bushel. A yellow dent variety; roasting ear, June 16th; stalk and ear, both medium size; grain, medium size, with white cap; yield per acre, 29.1 bushels of corn. One hundred pounds shucked ear corn yield 87.6 pounds grain.

“EXTRA EARLY” CORN.

ADAM’S EXTRA EARLY.—Seed from Richard Frotscher, New Orleans, La.; cost, \$1.50 per half-bushel. A white, flinty, dent variety; roasting ear, June 8th; stalk and ear, both very small; yield per acre, 22.3 bushels of corn. One hundred pounds shucked ear corn yield 85 pounds grain.

HUNDRED DAY.—Seed from Johnson & Stokes, Philadelphia, Pa.; cost, \$1 per half-bushel. A yellow, white cap, flinty, dent variety; roasting ear, June 15th; stalk, medium size; ear, very long and firm; grain, yellow, very firm, with white cap; yield per acre, 32.3 bushels of corn. One hundred pounds shucked ear corn yield 85.3 pounds grain.

LONG PENNSYLVANIA YELLOW.—Seed from D. Landreth & Sons, Philadelphia, Pa.; cost, \$1 per half-bushel. A yellow, flint variety; roasting ear, June 8th; stalk, small; ear, very long and firm; yield per acre, 28.7 bushels of corn. One hundred pounds shucked ear corn yield 86 pounds grain.

MINNESOTA KING.—Seed from Texas Seed and Floral Co., Dallas, Texas; cost, 75 cents per half-bushel. A yellow dent variety; roasting ear, June 8th; stalk and ear, both medium size; yield per acre, 31.3 bushels of corn. One hundred pounds shucked ear corn yield 87.4 pounds grain.

SOUTHERN ROASTING EAR.—Seed from D. Landreth & Sons, Philadelphia, Pa.; cost, \$1.75 per half-bushel. A white flint variety; roasting ear, June 12th; stalk and ear, both very small; yield per acre, 17.2 bushels of corn. One hundred pounds shucked ear corn yield 84.3 pounds grain.

TUSCARORA.—Seed from D. Landreth & Sons, Philadelphia, Pa.; cost, \$1.50 per half-bushel. A creamy white flint variety; roasting ear, June 18th; stalk, very small; ear, medium size, imperfectly filled; grain, very short, broad and soft; yield per acre, 13.8 bushels of corn. One hundred pounds shucked ear corn yield 81.1 pounds grain.

“PROLIFIC” CORN.

DUNGAN’S PROLIFIC.—Seed from Plant Seed Co., St. Louis, Mo.; cost, 90 cents per half-bushel. Roasting ears, June 14th; stalk, large

and vigorous; ear, medium size, very firm and heavy; yield per acre, 42.8 bushels of corn. One hundred pounds shucked ear corn yield 87.4 pounds grain.

The following thirty-five varieties of corn were tested at this Station during the season of 1894 and results published in Bulletin No. 34; they were planted again during the season of 1895. For description, cost of seed, etc., see Bulletin No. 34. The yield for the two years is given below. The small yield of the crop for 1894 was caused by the hot winds of June 29th to July 1st, which did much damage to the corn crop of the entire West.

“COMMON FIELD” CORN—Seasons 1894 and 1895 compared.

CHESTER COUNTY MAMMOTH.

1894.—Yield per acre, 10.5 bushels of corn; 100 pounds shucked ear corn yield 82.3 pounds grain.

1895.—Yield per acre, 32.5 bushels of corn; 100 pounds shucked ear corn yield 90.9 pounds grain.

EVERITT'S MORTGAGE LIFTER.

1894.—Yield per acre, 14.5 bushels of corn; 100 pounds shucked ear corn yield 82.3 pounds grain.

1895.—Yield per acre, 22 bushels of corn; 100 pounds shucked ear corn yield 88.2 pounds grain.

NORTH TEXAS YELLOW.

1894.—Yield per acre, 12.4 bushels of corn; 100 pounds shucked ear corn yield 82.3 pounds grain.

1895.—Yield per acre, 27.5 bushels of corn; 100 pounds shucked ear corn yield 87.1 pounds grain.

PIASA QUEEN.

1894.—Yield per acre, 21.1 bushels of corn; 100 pounds shucked ear corn yield 81.2 pounds grain.

1895.—Yield per acre, 31.2 bushels of corn; 100 pounds shucked ear corn yield 86 pounds grain.

VIRGINIA HORSETOOTH.

1894.—Yield per acre, 12.7 bushels of corn; 100 pounds shucked ear corn yield 86.9 pounds grain.

1895.—Yield per acre, 28.5 bushels of corn; 100 pounds shucked ear corn yield 90.2 pounds grain.

WELBORN'S CONSCIENCE.

1894.—Yield per acre, 6.5 bushels of corn; 100 pounds shucked ear corn yield 82.9 pounds grain.

1895.—Yield per acre, 34.6 bushels of corn; 100 pounds shucked ear corn yield 86.7 pounds grain.

"EARLY" CORN—Seasons 1894 and 1895 compared.

CHAMPION WHITE PEARL.

1894.—Yield per acre, 9.6 bushels of corn; 100 pounds shucked ear corn yield 81.7 pounds grain.

1895.—Yield per acre, 25.7 bushels of corn; 100 pounds shucked ear corn yield 88.5 pounds grain.

FORSYTH'S FAVORITE.

1894.—Yield per acre, 14.2 bushels of corn; 100 pounds shucked ear corn yield 80.7 pounds grain.

1895.—Yield per acre, 43.2 bushels of corn; 100 pounds shucked ear corn yield 88.5 pounds grain.

GOLDEN BEAUTY.

1894.—Yield per acre, 11.9 bushels of corn; 100 pounds shucked ear corn yield 82.3 pounds grain.

1895.—Yield per acre, 47.4 bushels of corn; 100 pounds shucked ear corn yield 87.1 pounds grain.

GOLDEN DENT.

1894.—Yield per acre, 10.5 bushels of corn; 100 pounds shucked ear corn yield 82.9 pounds grain.

1895.—Yield per acre, 40.8 bushels of corn; 100 pounds shucked ear corn yield 87.1 pounds grain.

HURON.

1894.—Yield per acre, 7.7 bushels of corn; 100 pounds shucked ear corn yield 83.6 pounds grain.

1895.—Yield per acre, 20 bushels of corn; 100 pounds shucked ear corn yield 89.5 pounds grain.

KANSAS KING.

1894.—Yield per acre, 20.4 bushels of corn; 100 pounds shucked ear corn yield 82.9 pounds grain.

1895.—Yield per acre, 36 bushels of corn; 100 pounds shucked ear corn yield 90.1 pounds grain.

N. B. AND G.'S DAKOTA DENT.

1894.—Yield per acre, 16.7 bushels of corn; 100 pounds shucked ear corn yield 80.6 pounds grain.

1895.—Yield per acre, 28.2 bushels of corn; 100 pounds shucked ear corn yield 87.8 pounds grain.

N. B. AND G.'S RUSTLER WHITE.

1894.—Yield per acre, 16.7 bushels of corn; 100 pounds shucked ear corn yield 80.6 pounds grain.

1895.—Yield per acre, 28.2 bushels of corn; 100 pounds shucked ear corn yield 87.8 pounds grain.

PRIDE OF THE NORTH.

1894.—Yield per acre, 16.7 bushels of corn; 100 pounds shucked ear corn yield 84 pounds grain.

1895.—Yield per acre, 27.5 bushels of corn; 100 pounds shucked ear corn yield 90.2 pounds grain.

RILEY'S FAVORITE.

1894.—Yield per acre, 15.5 bushels of corn; 100 pounds shucked ear corn yield 80.7 pounds grain.

1895.—Yield per acre, 33.9 bushels of corn; 100 pounds shucked ear corn yield 87.4 pounds grain.

"EXTRA EARLY" CORN—Seasons 1894 and 1895.

EARLY CANADA.

1894.—Yield per acre, 5.6 bushels of corn; 100 pounds shucked ear corn yield 70.1 pounds grain.

1895.—Yield per acre, 16.4 bushels of corn; 100 pounds shucked ear corn yield 87.4 pounds grain.

EARLY ECLIPSE.

1894.—Yield per acre 12.3 bushels of corn; 100 pounds shucked ear corn yield 83.4 pounds grain.

1895.—Yield per acre, 28.5 bushels of corn; 100 pounds shucked ear corn yield 88.5 pounds grain.

EARLY MASTODON.

1894.—Yield per acre, 5.3 bushels of corn; 100 pounds shucked ear corn yield 83.6 pounds grain.

1895.—Yield per acre, 41 bushels of corn; 100 pounds shucked ear corn yield 88.8 pounds grain.

GOLDEN DEW DROP.

1894.—Yield per acre, 5.7 bushels of corn; 100 pounds shucked ear corn yield 74.3 pounds grain.

1895.—Yield per acre, 16.3 bushels of corn; 100 pounds shucked ear corn yield 85.7 pounds grain.

KING OF EARLIES.

1894.—Yield per acre, 14.1 bushels of corn; 100 pounds shucked ear corn yield 85.2 pounds grain.

1895.—Yield per acre, 23.4 bushels of corn; 100 pounds shucked ear corn yield 84.6 pounds grain.

KING PHILLIP.

1894.—Yield per acre, 6.3 bushels of corn; 100 pounds shucked ear corn yield 75.4 pounds grain.

1895.—Yield per acre, 15.8 bushels of corn; 100 pounds shucked ear corn yield 84.6 pounds grain.

LARGE WHITE FLINT.

1894.—Yield per acre, 13.4 bushels of corn; 100 pounds shucked ear corn yield 78.4 pounds grain.

1895.—Yield per acre, 19 bushels of corn; 100 pounds shucked ear corn yield 86 pounds grain.

LONG YELLOW FLINT.

1894.—Yield per acre, 6.1 bushels of corn; 100 pounds shucked ear corn yield 76.1 pounds grain.

1895.—Yield per acre, 11.4 bushels of corn; 100 pounds shucked ear corn yield 76.1 pounds grain.

MURDOCK NINETY DAY.

1894.—Yield per acre, 18.2 bushels of corn; 100 pounds shucked ear corn yield 84 pounds grain.

1895.—Yield per acre, 43.8 bushels of corn; 100 pounds shucked ear corn yield 89.5 pounds grain.

THE LEAMING.

1894.—Yield per acre, 10.6 bushels of corn; 100 pounds shucked ear corn yield 81.2 pounds grain.

1895.—Yield per acre, 42.5 bushels of corn; 100 pounds shucked ear corn yield 88.5 pounds grain.

THOROUGHbred WHITE FLINT.

1894.—Yield per acre, 10.4 bushels of corn; 100 pounds shucked ear corn yield 73.1 pounds grain.

1895.—Yield per acre, 33.4 bushels of corn; 100 pounds shucked ear corn yield 82.2 pounds grain.

“PROLIFIC” CORN—Seasons 1894 and 1895 compared.

BLOUNT'S PROLIFIC.

1894.—Yield per acre, 12.4 bushels of corn; 100 pounds shucked ear corn yield 81.7 pounds grain.

1895.—Yield per acre, 46.4 bushels of corn; 100 pounds shucked ear corn yield 87.8 pounds grain.

MOSBY'S PROLIFIC.

1894.—Yield per acre, 5.2 bushels of corn; 100 pounds shucked ear corn yield 81.7 pounds grain.

1895.—Yield per acre, 48 bushels of corn; 100 pounds shucked ear corn yield 91.3 pounds grain.

EXPERIMENTS IN VARIETIES OF COTTON.

The land used for these tests was of the same character of soil as that used for the experiments in corn. It was measured into tenth-acre plots and thrown into beds four feet wide with a one-horse Avery pony plow, March 9, 1895. Two separate plantings were made of each variety with an Eclipse planter. The "early planting" was made April 10th, and the "late planting" on May 17th. A smoothing harrow was run diagonally across the rows before each planting. In the arrangement of the experiment, the varieties of cotton were planted in the following manner: (1) "Long Staple"; (2) "Long Limbed"; (3) "Cluster" varieties were grouped together. The yield from each fifth plot was intended as a basis of comparison, and the plot was planted in the same variety which is in general use in this section, and locally known as "Bohemian." A good stand was obtained by April 25th of all the varieties in the early planting.

All varieties in the early planting were cultivated in the following manner: April 29th, smoothing harrow was run diagonally across the rows as the cotton was coming through; May 13th, plowed cotton with turning plow run with bar side next row; May 16th, thinned one stalk every two feet; June 5th, plowed with sweep; June 14th, hoed; July 2d, plowed with sweep cultivator; July 12, plowed with side harrow; July 30th, plowed with double sweep, and on August 28th, plowed very shallow with sweep, which completed the cultivation. The late planting was similarly cultivated.

In the table given below will be found the total yield of seed cotton per acre, per cent of total yield at each picking, per cent of lint, total yield and value of lint, yield and value of seed, and total value of lint and seed per acre.

The short staple cotton is valued at eight cents, the long staple at eight and one-quarter cents, and the Sea Island at ten cents per pound (Houston quotations), based on middling classifications, February 14th, 1896.

The difference in the length of long and short staple varieties would, of course, be greater when grown on valley lands, and this matter should receive the special consideration of farmers who contemplate planting long staple cotton. A saw gin was used in separating lint from seed with all varieties.

Early Planting, April 10, 1895.

Name of variety.	Per cent of total yield at different pickings.					Total yield of seed cotton per acre.	Per cent of lint.	Yield of lint cotton per acre.	Yield of seed per acre.	Value of lint per acre.	Value of seed per acre.	Total value per acre.	Excess over Bohemian.
	First picking— Aug. 19.	Second pick- ing—Sept. 3.	Third picking— Sept. 23.	Fourth pick- ing—Oct. 24.	Fifth picking— Dec. 17.								
Bohemian (Check).....	25.2	28.0	29.6	3.4	13.8	1017	31.6	331	696	25.68	2.78	28.46	
Allen Long Staple.....	29.5	28.1	23.4	3.1	15.9	942	29.2	275	667	22.68	2.66	25.34	
Coltharp's Eureka.....	21.9	27.1	31.0	4.1	15.9	960	31.9	306	554	25.24	2.61	27.85	0.61
Dalkeith's Eureka.....	22.9	29.1	28.9	4.6	14.5	874	28.9	252	622	20.79	2.48	23.27	
Dooley's Improved.....	36.1	28.8	18.6	1.7	14.8	964	30.1	291	678	24.00	2.71	26.71	0.47
Bohemian (Check).....	26.3	26.2	31.8	7.1	8.6	931	31.6	294	637	23.52	2.54	26.06	
Hurley's Choice.....	28.2	23.1	34.3	9.7	14.7	752	28.8	216	503	17.82	2.14	19.96	
Jone's Wonderful.....	25.2	24.9	34.1	5.7	10.1	828	29.6	245	583	20.21	2.33	22.54	
Matthews' Extra Long Staple.....	33.9	20.8	20.6	4.8	19.9	951	30.5	290	681	23.92	2.64	26.56	
Sea Island.....		11.3	57.4	27.0	4.3	515	16.9	87	428	8.91	1.71	10.62	
Bohemian (Check).....	25.2	30.8	32.3	4.5	7.2	998	31.6	315	684	25.20	2.72	27.92	
Southern Hope.....	31.5	27.6	26.7	2.8	11.4	1083	28.7	310	773	25.57	3.09	28.66	3.72
Gold Dust.....	54.6	14.0	7.1	-5.0	19.3	1103	32.5	377	786	30.16	3.14	33.30	8.26
King's Improved.....	53.7	16.5	8.6	1.8	19.4	958	35.6	341	617	27.28	2.46	29.74	4.70
Peeler.....	19.2	36.9	27.7	6.8	9.3	884	28.6	252	632	20.16	2.52	22.68	
Bohemian (Check).....	31.2	31.9	24.9	1.0	11.0	792	31.6	250	542	20.00	2.16	22.16	
Peterkin Improved.....	20.0	31.1	29.8	11.0	8.1	873	34.3	299	574	23.92	2.29	26.21	4.77
Petit Gulf.....													
Storm Proof.....	24.0	27.2	30.5	11.6	6.7	886	32.2	285	601	22.80	2.40	25.20	3.76
Dickson's Improved.....	31.7	27.7	18.8	6.2	15.6	975	29.0	282	693	22.56	2.77	25.33	3.89
Bohemian (Check).....	30.9	33.2	25.6	4.0	6.3	744	31.6	235	509	18.80	2.03	20.83	
Hawkin's Improved.....	27.9	28.2	30.3	9.1	4.5	1165	29.3	341	824	27.28	3.29	30.57	9.43
Marston.....													
Peerless.....	32.9	18.9	26.2	10.8	11.2	1223	28.4	347	876	27.76	3.50	31.26	10.12
Peterkin Limbed Cluster.....	26.0	22.7	30.2	17.4	3.7	919	33.1	304	615	24.32	2.46	26.78	5.64
Bohemian (Check).....	22.9	31.4	28.9	7.1	9.7	767	31.6	242	525	19.36	2.10	21.46	
Sure Fruit.....	37.7	25.1	20.3	7.8	9.1	927	33.5	310	617	24.80	2.46	27.26	3.24
Truitt's Improved.....	33.8	31.8	12.9	5.1	11.4	837	31.3	261	576	20.88	2.30	23.18	
Tyler's Limbed Cluster.....	46.8	29.2	14.3	3.3	6.4	822	29.4	241	581	19.28	2.32	21.60	
Beck's Prolific.....	43.5	25.9	18.9	5.2	6.6	1135	29.0	329	806	26.32	3.22	29.54	5.56
Bohemian (Check).....	38.7	26.7	22.3	6.0	6.3	948	31.6	270	649	23.92	2.59	26.51	
Boyd's Prolific.....	19.4	30.6	33.3	13.4	3.3	982	27.5	270	712	21.60	2.84	24.44	
Cochran's Prolific.....	7.8	18.7	36.1	35.4	2.0	1216	32.5	395	854	31.60	3.28	34.88	8.55
Dickson's Early Cluster.....	14.2	22.2	31.1	29.3	3.2	1364	27.3	372	992	29.76	3.96	33.72	6.39
Drake's Cluster.....	16.4	22.2	28.8	25.8	6.8	1125	31.5	354	771	28.32	3.08	31.40	5.07
Bohemian (Check).....	16.0	30.2	35.5	12.7	5.6	935	31.6	295	640	23.60	2.56	26.16	
Herlong.....	10.8	22.1	28.4	33.9	4.8	1075	29.4	316	759	25.28	3.03	28.31	2.15
Jone's Improved.....	10.6	24.2	34.1	26.2	4.9	1124	35.6	400	746	32.00	2.89	34.89	8.63
Texas Oak.....	10.8	28.8	31.9	25.7	2.8	1196	33.9	405	750	32.40	3.16	35.56	9.40
Welborn's Pet.....	23.8	33.1	22.7	15.9	4.5	1195	32.7	390	805	31.20	3.22	34.42	8.26
Japan.....	30.4	30.9	25.9	9.0	3.8	622	28.5	177	445	14.16	1.78	15.94	
Bohemian (Check).....	22.5	36.8	32.7	2.8	5.2	981	31.6	309	672	24.72	2.68	27.40	

Late Planting, May 17, 1895.

Name of variety.	Per cent total yield at different pickings.				Total yield of seed cotton per acre.	Per cent of lint.	Yield of lint cotton per acre.	Yield of seed per acre.	Value of lint per acre.	Value of seed per acre.	Total value per acre.	Excess over Bohemian.
	First picking.	Second picking.	Third picking.	Fourth picking.								
Bohemian (Check)	19.7	35.2	39.5	5.6	860	28.6	245	615	20.21	2.46	23.67	
Allen Long Staple	24.5	38.9	31.4	5.2	976	29.4	286	690	23.59	2.76	26.35	1.87
Coltharp's Eureka	9.9	35.1	49.4	5.6	828	28.9	239	589	19.71	2.35	22.06	
Dalkeith's Eureka	26.9	39.7	28.6	4.8	958	27.7	265	693	21.86	2.77	24.63	.15
Dooley's Improved	28.4	41.8	22.7	7.0	878	31.5	276	602	22.08	2.40	24.48	
Bohemian (Check)	11.4	33.3	49.8	5.5	978	29.2	283	589	23.34	2.35	25.69	
Hurley's Choice	22.8	39.3	30.3	7.6	924	29.9	276	648	22.77	2.59	25.36	1.06
Jone's Wonderful	13.7	34.9	43.1	8.3	903	28.5	257	646	21.20	2.58	23.78	
Matthew's Extra Long Staple												
Sea Island	26.1	42.3	29.4	2.2	864	31.5	272	592	21.76	2.36	24.12	
Bohemian (Check)	27.0	36.8	29.0	7.2	886	27.7	245	611	20.21	2.56	22.77	
Southern Hope	49.7	29.1	17.3	3.9	863	28.1	242	622	19.36	2.48	21.84	
Gold Dust	46.4	30.0	22.0	2.5	863	32.7	281	581	22.48	2.32	24.80	.68
King's Improved	24.2	36.2	36.6	3.0	1063	27.9	296	767	23.68	3.06	26.74	2.62
Peeler	25.5	31.2	38.6	4.7	866	31.1	272	594	21.76	2.37	24.13	
Bohemian (Check)	25.1	39.8	32.4	2.7	956	34.3	327	629	26.16	3.51	28.67	
Peterkin Improved	13.5	36.2	45.3	5.0	884	30.5	260	615	21.52	2.46	23.98	
Ladde	13.9	39.9	40.7	5.5	920	32.0	294	626	23.52	2.50	26.02	.77
Storm Proof	20.5	37.1	38.2	4.2	944	29.6	279	665	22.32	2.66	24.98	
Dickson's Improved	25.1	29.6	35.2	10.1	910	31.5	286	624	22.88	2.49	25.37	
Bohemian (Check)	12.7	38.5	42.6	6.2	963	30.1	289	673	23.12	2.69	25.81	
Hawkin's Improved	7.3	31.5	55.5	5.4	903	30.3	272	630	24.81	2.52	24.36	
Keno	25.2	29.2	35.7	9.9	912	30.8	280	632	22.40	2.56	24.92	
Peerless	11.5	30.9	51.8	5.0	1114	32.4	300	754	28.80	3.01	31.81	5.11
Peterkin's Limbed Cluster	25.9	34.0	35.5	5.5	968	31.5	304	664	24.32	2.65	26.97	
Bohemian (Check)	18.2	32.8	45.5	4.2	1099	31.7	348	751	27.84	3.00	30.84	
Sure Fruit	18.2	34.9	36.4	10.1	1012	29.4	297	715	23.96	2.86	26.82	
Truitt's Improved	26.1	33.5	34.6	6.2	1040	28.7	276	764	22.08	3.05	25.13	
Tyler's Limbed Cluster	18.1	33.4	44.2	5.4	1142	31.6	300	782	28.80	3.12	31.92	5.22
Beck's Prolific	28.1	34.2	29.6	9.9	940	31.5	298	650	23.84	2.60	26.44	
Bohemian (Check)	35.7	30.9	29.1	5.8	840	27.8	233	607	18.64	2.12	21.16	
Boyd's Prolific	22.7	36.3	33.8	4.6	951	30.7	291	660	23.28	2.64	25.92	
Cochran's Prolific	29.9	38.9	30.5	3.5	888	30.3	269	619	21.52	2.47	23.99	
Drake's Cluster	17.1	42.5	38.1	2.3	866	30.1	260	606	20.80	2.42	23.22	
Herlong	26.9	38.9	27.9	6.3	930	31.5	292	638	23.36	2.55	25.91	
Bohemian (Check)	39.7	35.1	22.9	2.3	1049	36.0	377	672	30.16	2.68	32.84	
Jone's Improved	31.9	36.7	28.2	3.2	1095	32.6	356	739	28.48	2.95	31.43	5.42
Texas Oak	48.7	27.6	21.2	2.5	1175	32.7	384	791	30.72	3.16	33.88	7.97
Welborn's Pet	30.7	38.7	20.9	9.7	369	31.1	114	255	9.12	1.02	10.14	
Japan												

In order that the check plots might be used most carefully and conservatively, the last column of data presented in the tables (value of excess over Bohemian) was gotten by comparing the yield of a variety with the average yield of the two nearest check plots, planted in Bohemian seed. Experimental field plots are always subject to errors from slight variations in drainage, fertility, stand, cultivation, etc., and a series of years must be covered before conclusive results may be safely reached, however careful and efficient the experimenter may be.

DESCRIPTION OF COTTON.

* "LONG STAPLE."

KENO.—Seed presented by Coltharp Bros., Tallulah, La. Late planting, first bloom July 19th; first open boll September 1st. Description:

* For description of varieties not mentioned here see Bulletin 34, pp. 574 to 579.

Stalk, pyramidal; wood limbs from near the ground; fruit limbs short, with short joints; bolls, small and round; plant, medium size; average height, three feet; yield seed cotton per acre, 884 pounds, showing 30.5 per cent lint.

LADDE.—Seed presented by Coltharp Bros., Tallulah, La. Late planting, first bloom July 14th; first open boll August 29th. *Description*: Stalk pyramidal; wood limbs from near the ground; fruit limbs short, with short joints; bolls small and round; yield seed cotton per acre, 903 pounds, showing 30.3 per cent lint.

* SEA ISLAND. — Seed from Richard Frotscher, New Orleans, La.; cost, \$1 per half-bushel. Early planting, first bloom July 1st; first open boll August 14th. *Description*: Stalk very large and open; very long limbed, with very long joints; bolls very small, long and pointed; leaves light green, with deep lobes; plant a very vigorous grower; average height four and one-half feet; yield of seed cotton per acre, 515 pounds, showing 16.9 per cent lint.

† “LONG LIMBED.”

JAPAN.—Seed from Holloway & Co., Dallas, Texas; cost, \$1 per half-bushel. Early planting, first bloom June 24th, first open boll July 25th; late planting, first bloom July 8th, first open boll August 15th. *Description*: Stalk very open, with long drooping limbs; bolls very small, usually not more than three locks of cotton in each; seed very small; staple very short, coarse and weak; average height of plant, three feet; yield seed cotton per acre from early planting 622 pounds, showing 28.5 per cent lint, 369 pounds from late planting, showing 31 per cent lint.

TEXAS OAK.—Seed from United States Department of Agriculture, Washington, D. C. Early planting, first bloom July 1st, first open boll August 12th; late planting, first bloom July 14th, first open boll August 30th. *Description*: Stalk very open, long limbs and long joints; bolls small; average height of plant, four feet; vigorous, with light green foliage; yield of seed cotton per acre 1196 pounds from early planting, showing 33.9 per cent lint; 1095 pounds from late planting, showing 32.6 per cent lint.

† “CLUSTER.”

BOYD'S PROLIFIC.—Seed from Richard Frotscher, New Orleans, La.; cost, \$1 per half-bushel. Early planting, first bloom June 24th, first open boll July 30th; late planting, first bloom July 16th, first open boll August 28th. *Description*: Stalk open pyramidal; very few wood limbs; fruit limbs long, with short joints; bolls small and round; average height of plant, three feet; yield of seed cotton per acre from early planting 982 pounds, showing 27.5 per cent lint, 840 pounds from late planting, showing 27.8 per cent lint.

DICKSON'S EARLY CLUSTER.—Seed presented by Capers Dickson, Oxford, Ga. Early planting, first bloom June 28th, first open boll August

* *In experiment with this variety at the Mississippi Experiment Station in 1890, the yield of seed cotton per acre was 489 pounds, showing 21.7 per cent lint.*

† For description of varieties not mentioned here see Bulletin 34, pp. 574 to 579.

5th. *Description*: Resembles Welborn's Pet in main characteristics; yield seed cotton per acre, 1364 pounds, showing 27 3 per cent lint

The following 28 varieties of cotton were tested on this Station during the season of 1894, and results published in Bulletin No. 34. They were planted again during the season of 1895. For description and cost of seed, see Bulletin No. 34.

The total yield and money value are given below for the two years:

"LONG STAPLE."

Yields for Two Years Compared.

ALLEN LONG STAPLE.

1894.—Yield of seed cotton per acre from early planting, 1224 pounds, total value \$21.57; from late planting, 1238 pounds, total value \$21.26.

1895.—Yield of seed cotton per acre from early planting 942 pounds, total value \$25.34; from late planting 976 pounds, total value \$26.35.

COLTHARP'S EUREKA.

1894.—Yield of seed cotton per acre from early planting 1271 pounds, total value \$24.26; from late planting 1404 pounds, total value \$24.99.

1895.—Yield of seed cotton per acre from early planting 960 pounds, total value \$27.85; from late planting 976 pounds, total value \$26.35.

DALKEITH'S EUREKA.

1894.—Yield of seed cotton per acre from late planting 1140 pounds, total value \$19.96.

1895.—Yield of seed cotton per acre from early planting 874 pounds, total value \$23.27; from late planting 828 pounds, total value \$22.06.

DOOLEY'S IMPROVED.

1894.—Yield per acre of seed cotton from early planting 1111 pounds, total value \$19.34; from late planting 1026 pounds, total value \$16.59.

1895.—Yield of seed cotton per acre from early planting 969 pounds, total value \$26.59; from late planting 958 pounds, total value \$24.63.

HURLEY'S CHOICE.

1894.—Yield of seed cotton per acre from early planting 1027 pounds, total value \$17.96; from late planting 1338 pounds, total value \$23.91.

1895.—Yield of seed cotton per acre from early planting 752 pounds, total value \$19.96; from late planting 972 pounds, total value \$25.69.

JONES' WONDERFUL.

1894.—Yield of seed cotton per acre from early planting 1123 pounds, total value \$19.66; from late planting 1180 pounds, total value \$21.68.

1895.—Yield of seed cotton per acre from early planting 828 pounds, total value \$22.54; from late planting 924 pounds, total value \$25.36.

MATTHEWS' EXTRA LONG STAPLE.

1894.—Yield of seed cotton per acre from early planting 1006 pounds, total value \$18.45; from late planting 1270 pounds, total value \$22.37.

1895.—Yield of seed cotton per acre from early planting 951 pounds, total value \$26.56; from late planting 903 pounds, total value \$23.78.

SOUTHERN HOPE.

1894.—Yield of seed cotton per acre from early planting 1041 pounds, total value \$17.69; from late planting 1052 pounds, total value \$25.94.

1895.—Yield of seed cotton per acre from early planting 1083 pounds, total value \$28.66; from late planting 866 pounds, total value \$22.07.

GOLD DUST.

1894.—Yield of seed cotton per acre from early planting 937 pounds, total value \$17.53; from late planting 1198 pounds, total value \$19.73.

1895.—Yield of seed cotton per acre from early planting 1163 pounds, total value \$33.30; from late planting 886 pounds, total value \$22.77.

KING'S IMPROVED.

1894.—Yield of seed cotton per acre from early planting 1174 pounds, total value \$23.56; from late planting 998 pounds, total value \$18.54.

1895.—Yield of seed cotton per acre from early planting 958 pounds, total value \$29.74; from late planting 862 pounds, total value \$24.80.

PETERKIN.

1894.—Yield of seed cotton per acre from early planting 1349 pounds, total value \$26.72; from late planting 1538 pounds, total value \$29.88.

1895.—Yield of seed cotton per acre from early planting 873 pounds, total value \$26.21; from late planting 956 pounds, total value \$28.67.

STORM PROOF.

1894.—Yield of seed cotton per acre from early planting 674 pounds, total value \$13.74; from late planting 1102 pounds, total value \$20.18.

1895.—Yield of seed cotton per acre from early planting 886 pounds, total value \$25.20; from late planting 920 pounds, total value \$26.02.

DICKSON'S IMPROVED.

1894.—Yield of seed cotton per acre from early planting 1165 pounds, total value \$20.17; from late planting 1392 pounds, total value \$23.98.

1895.—Yield of seed cotton per acre from early planting 975 pounds, total value \$25.33; from late planting 944 pounds, total value \$24.98.

HAWKIN'S IMPROVED.

1894.—Yield of seed cotton per acre from early planting 1229 pounds, total value \$20.99; from late planting 1248 pounds, total value \$21.77.

1895.—Yield of seed cotton per acre from early planting 1165 pounds, total value \$30.57; from late planting 962 pounds, total value \$25.81.

PEERLESS.

1894.—Yield of seed cotton per acre from early planting 1230 pounds, total value \$20.41; from late planting 1248 pounds, total value \$21.95.

1895.—Yield of seed cotton per acre from early planting 1223 pounds, total value \$31.26; from late planting 912 pounds, total value \$24.92.

PETERKIN LIMBED CLUSTER.

1894.—Yield of seed cotton per acre from early planting 930 pounds, total value \$17.16; from late planting 1908 pounds, total value \$35.36.

1895.—Yield of seed cotton per acre from early planting 919 pounds, total value \$26.78; from late planting 1114 pounds, total value \$31.81.

SURE FRUIT.

1894.—Yield of seed cotton per acre from early planting 1282 pounds, total value \$24.41; from late planting 1508 pounds, total value \$27.43.

1895.—Yield of seed cotton per acre from early planting 927 pounds, total value \$27.26; from late planting 1099 pounds, total value \$30.84.

TRUITT'S IMPROVED.

1894.—Yield of seed cotton per acre from early planting 1059 pounds, total value \$18.57; from late planting 1522 pounds, total value \$25.99.

1895.—Yield of seed cotton per acre from early planting 837 pounds, total value \$23.18; from late planting 1012 pounds, total value \$26.62.

TYLER'S LIMBED CLUSTER.

1894.—Yield of seed cotton per acre from late planting 1020 pounds, total value \$24.94.

1895.—Yield of seed cotton per acre from early planting 822 pounds, total value \$21.60; from late planting 1040 pounds, total value \$25.13.

BECK'S PROLIFIC.

1894.—Yield of seed cotton per acre from early planting 1011 pounds, total value \$17.07; from late planting 1486 pounds, total value \$...

1895.—Yield of seed cotton per acre from early planting 1135 pounds, total value \$29.54; from late planting 1142 pounds, total value \$31.92.

COCHRAN'S PROLIFIC.

1894.—Yield of seed cotton per acre from early planting 1061 pounds, total value \$19.67; from late planting 1004 pounds, total value \$26.79.

1895.—Yield of seed cotton per acre from early planting 1216 pounds, total value \$34.88; from late planting 951 pounds, total value \$25.92.

DRAKE'S CLUSTER.

1894.—Yield of seed cotton per acre from early planting 1251 pounds, total value \$22.64.

1895.—Yield of seed cotton per acre from early planting 1125 pounds, total value \$26.16; from late planting 888 pounds, total value \$23.99.

HERLONG.

1894.—Yield of seed cotton per acre from early planting 1109 pounds, total value \$18.95; from late planting 1760 pounds, total value \$30.59.

1895.—Yield of seed cotton per acre from early planting 1075 pounds, total value \$28.31; from late planting 866 pounds, total value \$23.22.

JONES' IMPROVED.

1894.—Yield of seed cotton per acre from early planting 1014 pounds, total value \$20.35; from late planting 1176 pounds, total value \$23.86.

1895.—Yield of seed cotton per acre from early planting 1124 pounds, total value \$34.89; from late planting 1049 pounds, total value \$32.84.

WELBORN'S PET.

1894.—Yield of seed cotton per acre from early planting 1172 pounds, total value \$23.92.

1895.—Yield of seed cotton per acre from early planting 1195 pounds, total value \$34.42; from late planting 1175 pounds, total value \$33.88.

BOHEMIAN.

1894.—Yield of seed cotton per acre from early planting 923 pounds, total value \$14.93; from late planting 1008 pounds, total value \$15.22.

1895.—Yield of seed cotton per acre from early planting 865 pounds, total value \$24.13; from late planting 1002 pounds, total value \$28.23.

EXPERIMENTS IN VARIETIES OF FORAGE PLANTS.

For this test the land used was a black sandy loam, which was thoroughly broken with a rotary disc plow to a depth of eight inches. It was pulverized with a spring-tooth and smoothing harrow. Plots 1-20 of an acre were accurately measured, seeds were planted in drills four feet apart and broadcast, and all covered very shallow with harrow.

The object of the experiment was to compare the growth of different plants tested, the method of seeding, and the yield of cured hay per acre. The table below gives results of this test:

Name of Variety.	No. pounds seed planted per acre.	Time of planting.	How planted, drill or broadcast.	Time of harvesting.	Yield per acre cured hay.
Orange Sorghum.....		April 9..	Drill.....	Aug. 29..	7,700
Forage Sorghum.....		..do ..	..do ..	..do ..	6,400
Forage Sorghum.....		..do ..	Broadcast ..	..do ..	3,800
Red Kaffir Corn .....		..do ..	Drill .....	..do ..	7,400
White Kaffir Corn.....		..do ..	..do ..	..do ..	7,500
Red Milo Maize.....		..do ..	..do ..	..do ..	6,400
Cattail Millet .....		..do ..	..do ..	..do ..	2,400
Large African Millet.....	40	May 11..	..do ..	Aug. 15..	9,400
Large African Millet.....	40	..do ..	Broadcast ..	..do ..	5,500
White African Millet.....	40	..do ..	Drill	Aug. 20..	10,400
White African Millet.....	40	..do ..	Broadcast ..	..do ..	10,000
Jerusalem Corn	40	..do ..	Drill .....	..do ..	5,000
Forage Sorghum.....	40	..do ..	..do ..	..do ..	11,500
Forage Sorghum.....	40	..do ..	Broadcast ..	..do ..	10,700
Soja Bean	60	..do ..	Drill .....	..do ..	700
Soja Bean	60	..do ..	Broadcast ..	..do ..	200
Clay Pea	100	..do ..	..do ..	..do ..	1,700
Whippoorwill Pea	100	..do ..	..do ..	Aug. 15..	1,200
Tory Pea	100	..do ..	..do ..	Aug. 29..	1,100
Japan Buckwheat.....	20	..do ..	..do ..	Aug. 15..	1,200
Silver Hull Buckwheat.....	20	..do ..	..do ..	..do ..	1,400
M. E. Broomcorn.....	20	..do ..	Drill	Aug. 20..	*810
Dwarf Broomcorn	20	..do ..	..do ..	Aug. 15..	*960

*Tops.

GRASSES, CLOVERS, ETC.

These tests of varieties of grasses and clovers were begun in the fall of 1893 and continued through 1895. Further trial will be necessary before positive conclusions can be drawn.

The varieties given below have been grown for two seasons. For description, cost of seed, method of seeding and results, see Bulletin No. 34. Conclusions based on field trials of the forage plants grown in 1895 are identical with those formed on the experiments of 1894.

The following varieties were grown under test: Awnless Brome, Colorado Bottom, Crested Dog's Tail, English Rye, Hard Fescue, Kentucky Blue, Meadow Fescue, Meadow Fox Tail, Meadow Soft, Orchard,

Pace's English Rye, Red Top, Rescue, Rough Stalked Meadow, Sheep's Fescue, Sweet Vernal, Tall Meadow Oat, Timothy, Water Meadow, and Wood Meadow.

Alfalfa, Alsike, Burr, Crimson, Japan, Red, Sweet or Melilotus, Turkestan Alfalfa, and White Clovers.

Spring or Hairy, Winter and Miscellaneous Vetches, Dwarf Essex Rape, Lathyrus, Sacaline, Spurry.

The list given below was added during the fall of 1894 and spring of 1895:

Curly Mesquite, Giant Beggar Weed, Lentil, Sanfoin, Sand Alfalfa, Seradella, Yellow Lupine.

The mesquite grass grows well in Texas, and needs no introduction. It is claimed that the Giant Beggar Weed makes fine forage in the South-eastern States, but in this section it is too woody. Sand Alfalfa (*medicago lupulina*) thrives about as well as does common Alfalfa. Lentil, Sanfoin, Seradella and Yellow Lupins are all failures in this immediate vicinity.

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