

TEXAS AGRICULTURAL EXPERIMENT STATIONS.

BULLETIN No. 52.

Agricultural Section—JULY, 1899—Horticulture.

REPORT OF BEEVILLE STATION
(NUMBER 3)

ON

CABBAGE AND
CAULIFLOWER.

POSTOFFICE:
COLLEGE STATION, BRAZOS CO., TEXAS.



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NOTE.—The main station is located on the grounds of the Agricultural and Mechanical College in Brazos County. The postoffice address is COLLEGE STATION, TEXAS. Reports from this station are sent free of cost to farmers of the State upon application to the Director.

Cabbage and Cauliflower.

B. C. PITTUCK AND S. A. Mc HENRY.

Vegetable growing in Southwest Texas has increased more during the past year than during all previous years combined. A large number of the farmers of that section have turned from cotton—either willingly or unwillingly—and entered into a system of intensive farming. The Mexican boll weevil has decided the course for many; others have adopted it because of the profit. The truck growers are making themselves known, and at the same time are protecting their interests by strong organization.

From the results of repeated tests at this station we are able to recommend the following varieties of Cabbage and Cauliflower, in the order named, for Southwest Texas:

Early Varieties.

1. Early Jersey Wakefield—the best and earliest of the early varieties.
2. Early Winningstadt.
3. Maule's Winningstadt.

Medium Early Varieties.

1. Improved Early Summer.
2. Chase's Early.
3. Stein's Early Flat Dutch.
4. Fottler's Short Stem.
5. Danish Ball Head.

Late Varieties.

1. Louderback's All Year.
2. Autumn King.
3. Burpee's Sure Head.
4. Frotscher's Superior Large Late Flat Dutch.
5. St. Denis (small).
6. French Market (medium size).
7. Crescent City Large Flat Dutch.

Of the varieties of Cauliflower suited to this section we can recommend for early planting, Le Normand Short Stem and Henderson's Early Snow Ball; for late planting, Late Italian Giant.

CABBAGE EXPERIMENTS.

PLANTING, CULTIVATION AND IRRIGATION.

All varieties included in this test were planted in hot beds August 10th, and protected by wire gauze. Germination took place between August 13th and 15th.

Stable manure was applied to field at the rate of 22,000 pounds per acre. Land was plowed early in September with Canton Disc plow, breaking to a depth of seven inches, and thoroughly harrowed previous to setting plants. Plants were in fine condition for transplanting by September 25th, but owing to unavoidable circumstances we were delayed in this work until October 8th.

The day previous to transferring plants from hot beds to field the land was marked off into 3 1-2 foot rows and irrigated by rills at the rate of 45,000 gallons per acre. Plants were set 20 inches apart in the drill.

Cultivation and irrigation of crop was as follows:

October 9th, cultivated with 5-tooth cultivator.

October 12th, hoed.

October 23d, cultivated with 5-tooth cultivator.

November 3d, cultivated with 5-tooth cultivator.

November 18th, hoed.

November 19th, run around cabbage with half shovel preparing to irrigate.

November 20th, irrigated at the rate of 30,000 gallons per acre.

November 23d, cultivated with 5-tooth cultivator.

December 7th, cultivated with 22-inch sweep.

January 10th, irrigated at the rate of 35,000 gallons per acre.

DESCRIPTION OF VARIETIES.

1. *Early Winningstadt*.—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to fair stand August 15; first matured January 3, last matured April 5. 97 plants made 91 salable heads, weighing 191 1-2 pounds. Nearly all cut between January 18 and February 28. Best cutting, January 31. Heads conical, very firm, stem short, medium leaf growth, heads white when matured. *A fair early variety.*
2. *Maule's Winningstadt*.—Seed from Wm. Henry Maule, Philadelphia, Pa. Germinated to good stand August 13. First matured January 11, last matured April 5. 148 plants made 137 salable heads, weighing 268 1-2 pounds. Nearly all matured between January 18 and February 28. Best cutting January 31—41 heads, weighing 85 pounds. Heads conical, very firm, whiten well when matured; short stem, with medium pale green leaf growth. *A fair early variety.*

3. *Early Jersey Wakefield*.—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to good stand August 13. First matured December 20, last matured March 30. 187 plants matured 176 salable heads, weighing 316 1-2 pounds. Nearly all matured between January 11 and 31. Best cutting January 18—46 heads, weighing 91 pounds. Heads conical, very firm and whitens well when matured; stem medium length, with scant pale green leaf growth. *The best early cabbage we have tested, also the earliest.*
4. *Early York*.—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to good stand August 14. First matured January 6; last matured February 28. 81 plants matured 80 salable heads, weighing 156 1-2 pounds. Nearly all matured between January 18 and February 17. Best cutting January 31—24 heads, weighing 35 pounds. Heads pointed and soft, color green; stem medium length, scant leaf growth. *Not a desirable variety.*
5. *Early Large York*.—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to good stand August 14. First matured January 1, last matured March 17. 161 plants matured 147 salable heads weighing 290 pounds. Nearly all matured between January 11 and February 17. Best cutting January 31—51 heads, weighing 108 pounds. Heads oblong, very soft, color green, stem long, leaf growth scant. *A poor market variety.*
6. *Early Large Oxheart*.—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to fair stand August 14. First matured January 2, last matured April 5. 117 plants matured 109 salable heads, weighing 314 pounds. Nearly all matured between January 31 and February 17. Best cutting February 28—26 heads, weighing 97 pounds. Heads cone shaped, moderately firm, color light green when matured, medium leaf growth. *Not desirable as a market variety.*
7. *New Earliest Express*.—Seed from Wm. Henry Maule, Philadelphia, Pa. Germinated to good stand August 14. First matured January 3, last matured March 17. 144 plants matured 140 salable heads, weighing 348 pounds. Nearly all matured between January 18 and March 17. Best cutting February 18—37 heads, weighing 98 pounds. Heads cone shaped, not firm, light green color; stem medium length, leaf growth medium. *Not a desirable market variety.*
8. *Chase's Early*.—Seed from A. W. Livingston's Sons, Columbus, Ohio. Germinated to only a fair stand August 15. First matured January 31, last matured April 1. 127 plants matured 116 salable heads, weighing 407 pounds. Nearly all matured between January 31 and March 17. Best cutting February 28—26 heads, weighing 117 pounds. Heads round, very firm and whiten well when matured; stem short, with an

- abundance of dark green foliage. *A very good medium early variety.*
9. *Earliest Etamps.*—Seed from Wm. Henry Maule, Philadelphia, Pa. Germinated to fair stand August 14; first matured January 1, last matured March 17. 121 plants matured 113 salable heads, weighing 258 1-2 pounds. Nearly all matured between January 18 and February 21. Best cutting January 31—37 heads, weighing 82 pounds. Heads globe shape, whiten fairly well when matured, not firm; stem medium length, with medium growth of light green foliage. *Not a desirable variety.*
 10. *All Head Early.*—Seed from Wm. Henry Maule, Philadelphia, Pa. Germinated to fair stand August 15; first matured January 3, last matured March 14. 113 plants matured 101 salable heads, weighing 255 pounds. Best cutting February 3—36 heads, weighing 101 pounds. Heads globe shape, medium stem, scant leaf growth. *Not desirable.*
 11. *Stein's Early Flat Dutch*—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to good stand August 13; first matured February 3, last matured March 14. 55 plants matured 55 salable heads, weighing 203 1-2 pounds. Best cutting February 3—14 heads, weighing 48 pounds. Heads round, firm, of light green color; stem long, with medium growth of dark green leaves. *A good medium early variety.*
 12. *Early Drumhead.*—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to good stand August 13; first matured January 11, last matured April 5. 193 plants matured 171 salable heads, weighing 367 1-2 pounds. Nearly all matured between January 18 and March 14. Best cutting February 3—46 heads, weighing 90 pounds. Heads round and firm; stem medium length, with an average growth of dark green leaves; heads do not close in well on top.
 13. *Improved Early Summer.*—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to fair stand August 15; first matured January 3, last matured March 14. 84 plants matured 77 salable heads, weighing 204 1-2 pounds. Nearly all matured between January 18 and March 2. Best cutting February 3—29 heads, weighing 82 pounds. Heads flat, firm and of good color; stem medium length, medium leaf growth. *One of the best medium early varieties.*
 14. *Early Flat Dutch.*—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to fair stand August 15; first matured January 11, last matured March 14. 96 plants matured 89 salable heads, weighing 254 pounds. Best cutting January 31—19 heads weighing 60 pounds. Heads flat, whitens well when matured, fairly firm; stem medium length, leaf growth medium, leaves do not close in well on top of head.
 15. *Gregory's Cannon Ball*—Seed from A. W. Livingston's Sons, Columbus, Ohio. Germinated to good stand August 14; first

- matured December 30, last matured March 14. 117 plants matured 73 salable heads, weighing 105 pounds. Heads round and very firm; stem short, leaf growth scant, leaves of a dark green color. *Heads too small to be of any value.*
16. *Autumn King*.—Seed from A. W. Livingston's Sons, Columbus, Ohio. Germinated to good stand August 14; first matured January 3, last matured April 5. 154 plants matured 144 salable heads, weighing 667 pounds. Nearly all matured between January 31 and April 5. Best cutting February 25—40 heads, weighing 213 pounds. Head deep and flat, medium as to firmness, whiten well when matured; stem medium length, leaves dark green, and do not close in quite enough on top of head, rank leaf growth. *For general market purposes this variety proved second best of the late varieties.*
 17. *Solid South*.—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to fair stand August 15; first matured January 3, last matured March 14. 103 plants matured 98 salable heads, weighing 286 1-2 pounds. Nearly all matured between January 31 and March 14. Best cutting February 25—15 heads, weighing 75 pounds. Heads flat, firm and whiten well when mature, slightly inclined to point; stem and leaf growth medium. *Only a fair variety.*
 18. *Louderback's All Year*.—Seed from A. W. Livingston's Sons, Columbus, Ohio. Germinated to good stand August 13; first matured January 31, last matured April 5. 138 plants matured 136 salable heads, weighing 680 pounds. Nearly all matured between January 31 and April 17. Best cutting February 25—64 heads, weighing 345 pounds. Heads large and flat; stem medium length, with an abundant growth of dark green leaves; heads whiten well when mature. *The best late variety we have tested here.*
 19. *Luxemburg Hard Head*.—Seed from A. W. Livingston's Sons, Columbus, Ohio. Germinated to good stand August 14; first matured February 3, last matured April 5. 90 plants matured 67 salable heads, weighing 196 1-2 pounds. Nearly all matured between February 18 and April 5. Best cutting March 2—18 heads, weighing 66 pounds. Head slightly oval and flat, color green; stem long, with heavy growth of dark green leaves; heads a little open on top. *Only a fair market variety.*
 20. *Burpee's Surehead*.—Seed from A. W. Livingston's Sons, Columbus, Ohio. Germinated to fair stand August 15; first matured February 3, last matured April 5. 92 plants matured 72 salable heads, weighing 390 1-2 pounds. Best cutting March 2—31 heads, weighing 190 pounds. Heads round and hard, whiten well when mature; stem long, leaves dark green and heavy. *One of the best late varieties.*
 21. *Succession*.—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to fair stand August 15; first matured February

- 3, last matured April 5. 125 plants matured 92 salable heads, weighing 297 1-2 pounds. Nearly all matured between February 21 and March 14. Best cutting March 2—27 heads, weighing 111 pounds. Heads flat and hard, whiten well when matured, leaves do not close in well on top; stems short, with heavy growth of dark green leaves. *A poor market variety.*
22. *Filderkraut*.—Seed from A. W. Livingston's Sons, Columbus, Ohio. Germinated to fair stand August 14; first matured January 18, last matured April 1. 94 plants matured 81 salable heads, weighing 178 pounds. Nearly all matured between February 3 and March 2. Best cutting February 3—32 heads, weighing 69 pounds. Heads conical, very pointed, firm and whiten fairly well when mature; stem long, with medium growth of leaves. quality very inferior—coarse and tough. *Not desirable.*
23. *Improved Large Late Drumhead*.—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to fair stand August 15; first matured February 3, last matured April 5. 86 plants matured 77 salable heads, weighing 347 pounds. Nearly all matured between February 20 and March 15. Best cutting March 20—20 heads, weighing 120 pounds. Heads globular, whitens well when mature, but soft on under side; stem medium length, with an average growth of dark green leaves.
24. *Large American Drumhead*.—Seed from A. W. Livingston's Sons, Columbus, Ohio. Germinated to good stand August 14; first matured February 21, last matured April 5. 94 plants matured 71 salable heads, weighing 296 pounds. Best cutting March 14—28 heads weighing 119 pounds. Heads globular and firm, color green; stem medium length, with heavy dark green foliage. *A very fair variety, but of no special value.*
25. *Fottler's Short Stem*.—Seed from A. W. Livingston's Sons, Columbus, Ohio. Germinated to good stand August 14; first matured January 11, last matured April 5. 100 plants matured 97 salable heads, weighing 290 pounds. Nearly all matured between January 20 and March 10. Best cutting January 31—29 heads, weighing 80 1-2 pounds. Heads globular, very firm, whiten well when mature; stem short, with medium growth of dark green leaves. *A very fair medium early variety.*
26. *Crescent City Large Flat Dutch*.—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to good stand August 14; first matured January 11, last matured April 5. 90 plants matured 82 salable heads, weighing 330 pounds. Nearly all matured between February 20 and March 14. Best cutting February 29—29 heads, weighing 127 pounds. Heads flat, medium as to firmness, whiten well when mature; stems short, with heavy dark green leaf growth. *A very good late variety.*
27. *Danish Ball Head*.—Seed from A. W. Livingston's Sons, Co-

- lumbus, Ohio. Germinated to good stand August 14; first matured January 31, last matured February 25. 70 plants matured 64 salable heads, weighing 223 1-2 pounds. Best cutting February 25—35 heads weighing 139 pounds. Heads globular, very firm, medium size. color bluish green; stem larger than the average. *An excellent late variety.*
28. *Frotscher's Superior Large Late Flat Dutch.*—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to poor stand August 15; first matured January 18, last matured March 15. 78 plants matured 75 salable heads, weighing 450 pounds. Nearly all matured between January 30 and March 15. Best cutting February 28—12 heads, weighing 76 pounds. Heads flat, fairly firm, whitens well when mature; stem short, with heavy dark green leaf growth. *One of the best late varieties.*
29. *Large Flat Brunswick.*—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to very poor stand August 15; first matured January 3, last matured March 15. 69 plants matured 66 salable heads, weighing 178 1-2 pounds. Nearly all matured between January 20 and March 1. Best cutting January 31—22 heads, weighing 62 pounds. Heads flat and firm, color green; stem short, with an abundance of dark green leaves. *Of no special value.*
30. *St. Denis, or Chou Bonneuil.*—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to fair stand August 15; first matured January 18, last matured April 1. 125 plants matured 120 salable heads, weighing 344 pounds. Nearly all matured between January 28 and March 15. Best cutting February 17—56 heads, weighing 166 pounds. Heads globular, very firm, color green; stem short, medium growth of leaves. *A very good small, late variety.*
31. *French Market.*—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to fair stand August 15; first matured January 18, last matured April 1. 121 plants matured 110 salable heads. Nearly all matured between January 30 and March 15. Best cutting February 17—38 heads, weighing 120 1-2 pounds. Heads globular, very firm, color green; stem short, with an abundance of dark green leaves. *One of the best medium size late varieties.*
32. *The Lupton.*—Seed from Wm. Henry Maule, Philadelphia, Pa. Germinated to fair stand August 15; first matured January 18, last matured April 1. 47 plants matured 42 salable heads, weighing 242 pounds. Nearly all matured between January 30 and March 15. Best cutting February 11—19 heads weighing 66 pounds. Heads globular, firm and whiten well when mature; stem medium length, with heavy leaf growth. *A very good variety.*
33. *Drumhead Savoy.*—Seed from J. Steckler Seed Co., New Or-

- leans, La. Germinated to good stand August 13; first matured January 31, last matured February 25. 50 plants matured 43 salable heads. Best cutting February 25—28 heads. Heads globular, fairly firm; stem and leaf growth medium. *Best of Savoys—none of which have proven valuable here.*
34. *Early Dwarf Savoy.*—Seed from J. Steckler Seed Co., New Orleans, La. Germinated to good stand August 15; first matured February 25, last matured April 5. 39 plants matured 11 salable heads, weighing 18 pounds. Heads very soft. *Of no value.*
35. *Kale or Thousand Headed Cabbage.*—Seed from Wm. Henry Maule, Philadelphia, Penn. Germinated to fair stand August 4. Made good growth, *but of no value here.*

TABLE I.

Cabbage—(Varieties, number heads, weight and value).

PLOT	VARIETIES	No heads matured per acre	Weight of heads per acre	Value per acre at 1½c. per pound	Best Cutting
1.	Early Winningstadt.....	7,005	14,741	\$221.11	Jan. 31
2.	Maule's Winningstadt.....	6,911	13,545	203.17	Jan. 31
3.	Early Jersey Wakefield.....	7,092	12,754	191.31	Jan. 18
4.	Early York.....	7,375	14,427	216.40	Jan. 31
5.	Early Large York.....	6,816	13,447	201.70	Jan. 31
6.	Early Large Oxheart.....	6,959	20,049	300.73	Feb. 28
7.	New Earliest Express.....	7,259	18,343	275.14	Feb. 18
8.	Chase's Early.....	6,820	23,931	358.91	Feb. 28
9.	Earliest Etampes.....	6,973	15,952	239.28	Jan. 31
10.	All Head Early.....	6,674	16,850	252.75	Feb. 3
11.	Stein's Early Flat Dutch.....	10,850	40,146	602.19	Feb. 3
12.	Early Drumhead.....	6,614	14,214	213.21	Feb. 3
13.	Improved Early Summer.....	6,764	17,965	269.47	Feb. 3
14.	Early Flat Dutch.....	6,922	19,756	296.84	Jan. 31
15.	Gregory's Cannon Ball.....	4,661	6,704	105.56
16.	Autumn King.....	6,981	32,772	491.58	Feb. 25
17.	Solid South.....	7,105	20,771	311.56	Feb. 25
18.	Louderback's All Year.....	7,361	39,731	595.96	Feb. 25
19.	Luxemberg Hard Head.....	5,569	16,303	244.51	Mch. 2
20.	Burpee's Sure Head.....	5,843	31,692	475.38	Mch. 2
21.	Succession.....	5,457	17,647	264.70	Mch. 2
22.	Filderkraut.....	6,434	14,140	212.10	Feb. 3
23.	Improved Large Late Drumhead.....	6,685	30,126	451.89	Mch. 20
24.	Large American Drumhead.....	5,640	23,514	352.71	Mch. 14
25.	Fottler's Short Stem.....	7,243	21,654	324.81	Jan. 31
26.	Crescent City Large Flat Dutch.....	6,803	27,380	410.70	Feb. 29
27.	Danish Ball head.....	6,507	22,725	340.87	Feb. 25
28.	Frotscher's Superior Large Late Flat Dutch.....	7,179	45,471	682.06	Feb. 28
29.	Large Flat Brunswick.....	7,331	19,829	297.43	Jan. 31
30.	St. Denis.....	7,118	20,406	306.09	Feb. 17
31.	French Market.....	6,788
32.	The Lupton.....	6,672	38,444	576.66	Feb. 11
33.	Drumhead Savoy.....	6,423	26,033	390.49	Feb. 25
34.	Early Dwarf Savoy.....	2,106	3,446	51.69
35.	Kale or Thousand Head.....

CAULIFLOWER EXPERIMENTS.

Our test with cauliflower included eight varieties, all of which were purchased of the R. Frotscher Seed Co., New Orleans, La. Owing to the small acreage of each variety, we were unable to test the markets or marketing values of each variety thoroughly. There was only a small demand for cauliflower in Beeville, the prevailing price being 7 cents per pound. Shipments to San Antonio on January 10th netted 8 1-2 cents per pound; January 11th netted 6 3-4 cents per pound; January 12th netted 5 cents per pound. Shipments to Dallas on January 21st netted 5 3-4 cents per pound.

The Le Normand Short Stem was the earliest variety, and sold well. Heads of this variety averaged a little less than one pound.

Henderson's Early Snow Ball was second in early maturity and by far the most attractive of all varieties grown at this station. Heads of this variety average over one pound.

The Late Italian Giant came upon the market last, but at that time the demand for cauliflower was good. Heads of this variety averaged one pound and a half. 100 plants of this variety set in the field matured 100 salable heads.

The following table shows the number of heads per acre matured by each variety, also weight and value at 7 cents per pound; the calculation is based upon the percentage of plants transplanted maturing salable heads:

TABLE II.

Cauliflower—(Varieties, yield, weight, value).

PLOT	VARIETIES	No. salable heads per acre	Weight per acre in pounds	Value per acre at 7 cents per pound
1.	Early Paris.....	4,702	3,707	\$259.49
2.	Henderson's Early Snow Ball.....	5,171	5,373	376.11
3.	Extra Early Paris.....	5,623	5,154	360.78
4.	Early Giant.....	5,026	4,600	322.00
5.	Le Normand's Short Stem.....	4,444	4,242	296.94
6.	Early Erfurt.....	5,256	5,343	374.01
7.	Late Italian Giant.....	6,223	10,050	703.50
8.	Large Algiers.....	4,292	3,109	217.63

PLANTING, IRRIGATION AND CULTIVATION.

Land used for this test was planted to Irish potatoes during the spring of 1897, and fertilized for that purpose by an application of 20,000 pounds of stable manure, 400 pounds Acid Phosphate and 600 pounds Bat Guano per acre. Since then no fertilizers have been applied. Land was plowed three weeks before setting, using a ten-inch turning plow, running to a depth seven inches. Land was thoroughly harrowed previous to setting, and on September

28th marked off in three and one-half foot rows with ten-inch sweep, and irrigated at the rate of 50,000 gallons per acre.

September 28th, plants were transferred from hot beds and transplanted to field, leaving them two feet apart in the drill.

September 30th, cultivated with 5-tooth cultivator.

October 11th, cultivated with 5-tooth cultivator.

October 23d, barred off and irrigated at the rate of 40,000 gallons per acre.

October 26th, cultivated with 5-tooth cultivator.

November 3d, cultivated with 5-tooth cultivator.

November 5th, hoed.

November 13th, cultivated with 5-tooth cultivator.

November 19th, barred off with half shovel preparatory to irrigating.

November 20th, irrigated at the rate of 30,000 gallons per acre.

November 23d, cultivated with 5-tooth cultivator.

December 5th, cultivated with 22-inch sweep.

January 10th, irrigated at the rate of 35,000 gallons per acre.

January 12th, cultivated with 22-inch sweeps.

NOTES ON EIGHT VARIETIES CAULIFLOWER.—1898.

Half Early Paris.—Germinated to good stand August 3d; first matured January 7th, last matured January 20th. 94 plants matured 71 heads, weighing 56 pounds. Best cutting January 13th—36 heads, weighing 22 pounds. Heads only fairly well protected by foliage; color white, moderately compact, with very large dark green leaf growth.

Henderson's Early Snowball.—Germinated to good stand August 3d; first matured January 3d, last matured February 2nd. 77 plants matured 64 heads, weighing 66 1-2 pounds. Best cutting January 26th—13 heads, weighing 13 pounds. Heads well protected by foliage, color white, leaves pale green and of medium size. *This variety matured the most attractive heads of any tested here.*

Extra Early Paris.—Germinated to good stand August 4th; first matured January 3d, last matured January 26th. 73 plants matured 66 heads, weighing 60 1-2 pounds. Best cutting January 10th—14 heads, weighing 15 pounds. Heads white, compact and well protected, leaves pale green, medium size.

Early Italian Giant.—Germinated to good stand August 4th; first matured January 10th, last matured February 2nd. 73 plants matured 59 heads, weighing 54 pounds. Best cutting January 26th—14 heads, weighing 12 pounds. Heads white, compact and not well protected; stem long, with dark green leaves.

Le Normand's Short Stem.—Germinated to fair stand August 4th; first matured January 3d, last matured January 13. 77 plants matured 55 heads, weighing 52 1-2 pounds. Best cutting Jan-

uary 7th—23 heads, weighing 25 pounds. Heads poorly protected, of a creamy color; stem short, foliage small, pale green.

Early Erfurt.—Germinated to good stand August 4th; first matured January 10th, last matured February 2nd. 71 plants matured 60 heads, weighing 61 pounds. Best cutting January 26th—20 heads, weighing 20 pounds. Heads white, and well protected; stem short, leaves medium size.

Late Italian Giant.—Germinated to good stand August 4th; first matured February 28th, last matured March 16th. 100 plants matured 100 heads, weighing 161 1-2 pounds. Best cutting February 22nd—22 heads, weighing 34 pounds. Heads white, fairly well protected; stem long, with large dark green foliage. *Every plant matured a salable head.*

Large Algiers.—Germinated to good stand August 4th; first matured January 3d, last matured February 2nd. 71 plants matured 49 heads, weighing 35 1-2 pounds. Best cutting January 7th—5 heads, weighing 6 pounds. Heads not very white, poorly protected, foliage small; stem short. *A very inferior variety.*