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OF

AGRICULTURAL EXPERIMENT STATION,

Agricultural and Mechanical College,

AUBURN, ALA.

SMALL FRUITS, MELONS AND VEGETABLES.

Report of Alabama Weather Service.

The Bulletins of this Station will be sent Free to any citizen of the State, on application to the Director.

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Notes on Small Fruits, Melons and Vegetables.

J. S. NEWMAN,
Agriculturist.

JAS. CLAYTON,
Assistant Agriculturist.

STRAWBERRIES.

The following notes on Strawberries were made in 1889, and owing to the quantity of other matter presented for bulletins and the smallness of the printing fund, laid aside to be combined with similar notes in 1890.

As most of the varieties were in full fruitage first of last March, the date of the memorable freeze, reliable notes could not be made. A moderate crop was produced later, but a just comparison could not be instituted between the varieties.

Early Canada and *Parry* are still the earliest varieties tested, and both have improved in quality and productiveness since their introduction to these grounds five years since.

Of the newer kinds, Belmont, Buback, Haverland, Gandy, Hoffman and 1001 or "Eureka," are very promising.

The Henderson still leads the list in its quality and its vines are becoming more vigorous and prolific as it becomes acclimated.

Wilson, Agriculturist and Sharpless still hold their places as standards.

NOTES ON

Number.	VARIETIES.	Growth of Plants.	Productiveness.	Time of first ripe berry.	Size of Fruit.	Color of Fruit.	Color of Flesh.
1	Agriculturist.....	Vigorous..	Prolific...	April 20	Medium....	Deep red	Light red
2	Belmont.....	"	"	" 26	Large.....	Red....	" "
3	Bidwell.....	"	"	" 26	"	Deep red	" "
4	Big Bob.....	"	Not Prolific	" 27	Medium....	"	" "
5	Boyden's No. 30..	Not vigorous	" "	" 13	"	" "	" "
6	Champion.....	Vigorous...	" "	" 29	"	" "	" "
7	Champion of Ky..	"	Prolific....	" 20	"	" "	" "
8	Charles Downing.	Not vigorous	Not Prolific	" 24	"	" "	" "
9	Crescent.....	Vigorous..	Prolific....	" 24	"	Red....	" "
10	Cumbrl'd Triumph	"	Not Prolific	" 24	"	"	White....
11	Daniel Boone....	Not vigorous	Prolific....	" 24	"	Deep red	Red.....
12	Early Canada....	Vigorous..	"	" 10	"	" "	" "
13	Finch's Seedling..	Not vigorous	Not prolific	" 26	"	" "	Light red.
14	Galceran.....	" "	" "	" 24	"	" "	" "
15	Golden Defiance..	" "	" "	" 26	"	" "	" "
16	Harris' Mammoth.	Vigorous..	" "	" 24	"	" "	" "
17	Haverland.....	"	Prolific....	" 24	Large obl'ng	" "	" "
18	Henderson.....	Not vigorous	Not prolific	" 26	Medium....	" "	Red.....
19	James Vick.....	Vigorous..	" "	" 26	Small.....	Red....	Light Red
20	Jewell.....	"	" "	" 24	Medium....	Deep red	Red.....
21	Jucunda.....	Not vigorous	Prolific....	" 20	"	" "	Light red.
22	Jumbo.....	" "	Not prolific	" 30	Large.....	" "	Pink.....
23	Longfellow.....	" "	" "	" 20	Obl'g ^{med} med.	Lig't red	W & r. c'tr
24	Manchester.....	Vigorous..	Prolific....	" 24	Medium....	Red....	Light red.
25	May King.....	"	Not prolific	" 27	Large.....	"	" "
26	Miners.....	Not vigorous	Prolific....	" 26	"	Deep red	White....
27	Monmouth.....	"	"	" 27	"	Red....	Light red.
28	Mount Vernon...	" "	Prolific....	" 24	Medium....	Deep red	White....
29	Mrs. Cleveland...	" "	Not prolific	" 26	Small.....	Red..	Light red.
30	Nig's Superb....	Vigorous..	" "	" 26	Large.....	"	" "
31	No. 1001 (Eureka)	"	Prolific....	" 27	Medium....	"	" "
32	Parry.....	"	Not prolific	" 10	"	"	Pink.....
33	President Lincoln.	"	" "	" 20	"	"	White....
34	Primo.....	"	" "	" 24	Large.....	"	Light red.
35	Prince of Berries..	"	" "	" 24	Medium....	Deep red	" "
36	Sharpless.....	"	Prolific....	" 24	Very large	Red....	" "
37	Wilson.....	"	"	" 24	Medium....	Deep red	" "
38	Windsor Chief....	"	Not prolific	" 27	"	Red....	" "
39	Wonderful.....	"	" "	" 24	"	Red....	Red.....

STRAWBERRIES.

Texture of Fruit.	Cavity or Core.	Free Acid.	Flavor or quality of Fruits.	REMARKS.
1 Firm	Neither	None	Best	Amateur and market.
2 " "	Core and cavity	Slight	Very good	Fine market berry.
3 " "	Neither	"	Good	
4 " "	Large Core	"	Very good	Very firm.
5 Soft	Cavity	None	" "	
6 " "		Very Acid	Barely g'd	
7 Firm	Neither	None	Very good	
8 Soft		"	Best	For amateur culture only.
9 Firm	Large Core	Slight	Good	Sho'd be plant'd by a large vig. variety
10 Soft	Slight Cavity		"	
11 " "	Neither	None	Very good	
12 " "	Cavity	"	Good	Earliest every season for five years.
13 " "	None	Slight	"	
14 Firm	None	None	Very good	
15 " "	Neither	Slight	" "	
16 Soft	"	"	" "	
17 Firm	"	None	Best	Berry v'y obl'g—resembl's Henderson
18 Soft	"	"	"	
19 " "	Slight Core	"	Barely g'd	
20 " "	" "	Slight	Good	
21 Firm	Neither	None	Best	
22 " "	Cavity	Slight	Very good	
23 Soft	Cavity	None	" "	Ripens on top while green underside.
24 Firm	Neither			
25 " "	"	None	Best	Dies out badly in summer.
26 " "	Cavity	"	Good	
27 Firm	Neither	"	Very good	
28 Soft	Cavity	"	" "	
29 Firm	Neither	Slight	Good	
30 " "	Large Core	"	Barely g'd	
31 " "	Neither	None	Good	A promising new variety.
32 " "	Slight Core	"	"	Ripens either with early Canada or a [few days later.
33 Firm	Cavity	None	"	
34 Soft	"	"	Very good	
35 Firm	Neither	"	Best	
36 " "	Cavity	"	Very good	Standard for home and market.
37 " "	Neither	Slight	Very good	Standard for home and market.
38 " "	"	"	Good	
39 " "	"	Very Acid	Barely g'd	

NOTES ON RASPBERRIES.

VARIETIES.	Growth of Plant.	Productiveness.	Hardiness.	Date of Ripening.	Type.	Color of Fruit.	Size of Fruit.	Size of Receptacle.	Texture.	Quality of Fruit.	REMARKS.
Brandywine.....	Not vig'us	Prolific....	Not hardy	May 13	Red cap.	Red.....	Large..	Large..	Firm	Good...	
Caroline.....	Vigorous	Prolific....	Medium..	May 13	Black cap	Black.....	Medium.	Medium	Firm	Best...	
Crimson Beauty....	Not vig'us	Not prolific	Not hardy	May 29	Red cap.	Red.....	Medium.	Large..	So ft	Good...	Die out badly.
Davidson's Thornless.	Not vig'us	Not prolific	Not hardy	May 20	Black cap	Black.....	Small..	Large..	Firm	Good...	Dies badly.
Doolittle.....	Medium.	Prolific....	Hardy..	May 13	Black cap	Black.....	Small..	Small..	So ft	Very g'd	Same as Tyler.
Early Prolific.....	Vigorous	Not prolific	Not hardy	May 24	Red cap.	Purplish red	Large..	Large..	Firm	Good...	Dies badly.
Florence.....	Vigorous.	Prolific....	Hardy..	May 13	Black cap	Dark yellow	Medium.	Large..	Firm	Good...	Hybrid. Canes sunscald badly.
Golden Queen.....	Vigorous.	Not prolific.	Not hardy	May 24	Red cap.	Bright yell'w	Large..	Large..	Firm	Best....	Hyb'd. be'f'l f't. vin's die b'dly
Gregg.....	Medinm	Medium...	Not hardy	May 24	Black cap	Black.....	Large..	Small..	Firm	Good...	Musky.
Hansell.....	Not vig'us	Not prolific	Not hardy	May 20	Red cap.	Dark red..	Large..	Medium.	Firm	Good...	
Hopkins.....	Vigorous	Medium...	Medium..	May 20	Black cap	Black.....	Small..	Large..	Firm	Very g'd	Dies badly.
Marlboro.....	Medium..	Medium....	Not hardy	May 24	Red cap.	Red.....	Large..	Large..	Firm	Best...	
New Rochelle.....	Medium..	Prolific....	Medium..	May 20	Black cap	Dark purple	Large..	Medium	So ft	Good...	Dies badly—some acid.
Ohio.....	Medium..	Not prolific.	Not hardy	May 24	Black cap	Black.....	Small..	Medium.	Firm	Good...	Dies badly.
Rancocas.....	Not vig'us	Not prolific	Not hardy	May 29	Red cap.	Dark red..	Large..	Very l'ge	So ft	Very g'd	Dies badly.
Reliance.....	Not vig'us	Not prolific.	Not hardy	May 20	Red cap.	Dark red..	Very l'ge	Very l'ge	So ft	Good...	Dies badly.
Soulegan.....	Medium.	Prolific....	Medium..	May 13	Black cap	Black.....	Large..	Small..	Firm	Best...	Dies badly—similar to Tyler.
Superb.....	Medium..	Prolific....	Hardy..	May 20	Red cap.	Dark red..	Medium.	Large..	Firm	Best...	Dies back.
Thompson's E. Pride.	Medium..	Prolific....	Hardy..	May 29	Red cap.	Red.....	Large..	Medium.	Firm	Best...	A promising new variety.
Thompson's E. Prolific	Medium..	Prolific....	Hardy..	May 29	Red cap.	Red.....	Large..	Medium.	Firm	Best...	A promising new variety.
Turner.....	Very vig's	Very prolific	Very h'dy	May 20	Red cap.	Purplish red	Medium.	Small..	Firm	Best...	The most reliable variety.
Tyler.....	Medium..	Prolific....	Medium..	May 13	Black cap	Black.....	Small..	Small..	Firm	Very g'd	Same as doolittle.
Welch.....	Not vig'us	Not prolific.	Not hardy	May 24	Red cap.	Dark red..	Very l'ge	Large..	Firm	Very g'd	Dies badly.

Out of more than thirty varieties tested, during the last five years, the Turner is the most hardy and reliable. It fruits abundantly and continues long in bearing. The only objection found, so far, is its profuse multiplication of plants.

The canes are self-supporting when pruned back to two feet in length. It stands the sun of our summers in open field culture and has never been injured by freezing.

The black cap varieties sun-scald midway the canes where they bend over. Another objection to this type is that they fail to propagate under clean culture during dry seasons.

Experiments with Canteloupes planted March 22d, 1889.

NAMES OF VARIETIES	Seedsman.	Time of Ripening.	Average weight in lbs.	Netting.	Form	Length in inches	Diam. in inches	Cavity.	Thickness of rind.	Thickness of flesh.	Color of flesh.	Texture.	Flavor or quality of fruit.
Acme.....	Landreth.....	July 10	2.72	Perfect	Oblong.....	6.16	5.16	Small..	.33	.88	Green..	Firm&coarse	Very g'd
Baltimore.....	Ferry.....	July 9	2.12	Perfect	Oblong.....	5.12	4.08	Small..	.29	.87	Green..	Soft & coarse	Very g'd
Baltimore.....	Thorburn.....	July 5	2.77	Perfect	Oblo'g&point'd	6.77	5.75	V'y sm'll	.33	.91	Green..	Soft & coarse	Best....
Bird's New Canteloupe	".....	July 22	5	Perfect	Flat.....	5.50	7	Small..	.37	1.25	Pale g'n.	Soft & coarse	Good....
California.....	Landreth.....	July 15	4.48	Imperf't	Roundish..	5.08	6.33	Medium	.37	1.	Yellow	Soft & coarse	Good....
Cassaba.....	U. S. Dep't Agr.	July 15	4.43	Medium	Oblong.....	8.80	8.54	Medium	.29	.87	Pale g'n.	Fine and soft	Good....
Chicago.....	Thorburn.....	July 1	3.12	Medium	Round.....	5.26	4.70	Large..	.29	.79	Green..	Fine and firm	Good....
Champion Market.....	U. S. Dep't Agr.	July 20	2.16	Imperf't	Round.....	5.16	4.87	Large..	.25	.75	Green..	Soft and fine	Good....
Early White Japan.....	Thorburn.....	July 4	2.88	V'y sli't	Round.....	5.35	5.37	Medium	.36	.61	Green..	Soft and fine	Good....
Extra Early Hackensack.	".....	June 28	2.48	Medium	Round.....	4.58	5.43	Medium	.34	.63	Green..	Fine and firm	Good....
Emerald Gem.....	".....	July 8	1.57	None..	Roundish flat	4.26	5.26	V'y sm'll	.26	.72	Yellow	Soft and fine	Good....
Emerald Gem.....	Dreer.....	July 11	1	None..	Roundish flat	3.88	4.27	V'y sm'll	.25	.82	Yellow	Soft and fine	Good....
Fine Nutmeg.....	Thorburn.....	June 28	2.50	Medium	Roundish..	4.75	5.12	Small..	.37	.87	Pale g'n	Soft & coarse	Very g'd
Golden Perfection.....	".....	July 6	3.06	Medium	Round.....	3.25	3.63	Medium	.11	.51	Yellow	Soft & coarse	Very g'd
Golden Netted Gem.....	".....	July 5	1.22	Perfect	Slightly oblong	3.16	3.97	V'y sm'll	.25	.72	Green..	Fine and firm	Best....
Golden Perfection.....	U. S. Dep't Agr.	July 5	2.25	Perfect	Round.....	4.95	5.69	Small..	.30	.80	Pale g'n.	Soft & coarse	Very g'd
Green Citron Nutmeg.....	".....	July 12	4.45	Medium	Oblong.....	7.06	5.98	Medium	.31	.98	Pale g'n.	Soft & coarse	Very g'd
Green Montreal.....	Thorburn.....	July 9	3.87	Imperf't	Roundish..	5.96	5.23	Large..	.25	.70	Pale g'n.	Fine and firm	Good....
Hybrid Bay View.....	".....	July 10	5.22	Perfect	Long.....	10.42	5.03	Medium	.25	.96	Pale g'n.	Fine and firm	Very g'd
Hackensack.....	".....	July 4	4	Perfect	Roundish..	4.72	5.86	Medium	.26	.91	Green..	Soft & coarse	Good....
Jenny Lind.....	".....	July 4	1.22	Medium	Flat.....	2.98	4.45	Medium	.24	.61	Green..	F'm & coarse	Very g'd
Miller Cream.....	Dreer.....	July 14	2.98	Imperf't	Roundish..	5.88	5.22	Large..	.25	.75	Yellow	Fine and firm	Good....
Montreal.....	Landreth.....			Fail	ure.....								
New Surprise.....	Thorburn.....	July 8	4.16	Imperf't	Roundish..	5.98	6.27	Medium	.42	.96	Yellow	Firm and fine	Good....
New Early Hackensack..	Henderson.....	July 13	3.81	Medium	Round.....	5.37	5.33	Small..	.25	1.06	Pale g'n.	Firm and fine	Very g'd
Nixon.....	Alexander.....	July 20	4.16	Perfect	Oblo'g.....	7.37	5.18	Small..	.31	1.18	Yellow	Soft and fine	Good....
Orange Christina.....	Thorburn.....	July 9	3.27	Perfect	Round.....	5.45	5.41	Medium	.35	.60	Yellow	Firm&coarse	Good....
Prolific Nutmeg.....	U. S. Dep't Agr.	July 18	2.35	Medium	Round.....	5.75	5.75	Medium	.25	.75	Pale g'n.	Soft and fine	Good....
Skillman's Netted Gem	Thorburn.....	July 12	2.77	Perfect	Flat.....	4.69	5.37	Medium	.36	.69	Pale g'n.	Soft & coarse	Good....
The Delmonico.....	Henderson.....	July 13	8.50	Perfect	Round.....	6.87	6.37	Medium	.28	.96	Yellow	Soft and fine	Good....
Ward's Nectar.....	Thorburn.....	July 12	2.03	Imperf't	Round.....	4.55	4.76	Medium	.41	.75	Pale g'n.	Soft & coarse	Good....

The above notes of comparison were made in 1889. The list embraces a large number of varieties not well suited to this soil and climate. The cantaloupe to succeed in this latitude must be well covered with rough nettings to prevent sun-scalding. The Persian or Cassaba, so highly prized at the North fails here on account of scalding under our suns. A melon with yellow flesh rarely ranks higher than "good." Those varieties which rank "best" usually have deep green flesh. The Delmonico is the best yellow fleshed variety yet tested. The Washington Market grown here for the first time this year is a very superior variety. After previously comparing all of the varieties advertised in the principal seed catalogues, all except a few of the best old varieties have been discarded. These few best are planted from year to year as standards of comparison for the new candidates for popular favor. The following table shows results of such comparison the present season.

CANTELOUPES PLANTED APRIL 3rd, 1890.

NAMES OF VARIETIES.	Seedsman.	Time of ripening.	Productiveness.	Form.	Netting.	Average weight in lbs.	Length in inches.	Diameter in inches.	Thickness of flesh in inches.	Thickness of rind in inches.	Color of flesh.	Cavity.	Flavor.	Texture.	Remarks.
Atlantic City.....	Landreth	July 4	V'ry g'd	Oblong..	Perfect.	4 1/2	8	5	1 3-16	3-16	Green ...	Medium	V'y good	Soft & coarse	
Baltimore.....	Thorburn	J'ne 28	Good ..	Oblong..	V'ry slit	5 1/4	8	6	1 3/8	1/8	Yellow...	Medium	Good. .	Fine and firm	
Champion Market....	Thorburn	July 2	Good ..	Roundish	Perfect.	3 1/2	6 1/2	5 1/4	1 1/8	1/8	Green ...	Medium	Good. .	Fine and firm	
Delmonico.....	Henderson	J'ly 28	Good ..	Roundish..	Perfect.	5	7 1/8	5 1/4	7-16	1/8	Yellow...	Medium	Good. .	Fine and firm	
Extra Early Cape May	Landreth	July 1	V'ry g'd	Roundish..	Imperf't	4 3/4	7	5 1/8	1	1/8	Lig't green	Large ..	Good. .	Fine and firm	
Extra E'ly Hackensack	Landreth	J'ne 25	V'ry g'd	Flat.....	Perfect.	3 7/8	5	5 5/8	1 1-16	3-16	Green	Large ..	Good. .	Fine and firm	
Extra Early June	Landreth	July 2	V'ry g'd	Flat.....	Perfect.	3	3 7/8	5 5/8	1	3-16	Green	Large ..	Good. .	Fine and firm	
Golden Netted Gem....	Thorburn	J'ne 28	Best ..	Oblong ..	Perfect.	1 1/4	4 1/4	3	1 1-16	1/8	Green ...	Small ..	Best ..	Fine and firm	
New Orleans Market..	Buist...	July 2	V'ry g'd	Round ...	Very g'd	3 1/2	5 7/8	5 3/4	1 1/2	1/8	Green ...	V'y sm'l	V'y good	Fine and firm	
Osage.....	Hallock & Son.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Worthless.
Picaninny.....	Northrop B. & G. Co	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Worthless.
Pine Apple.....	Buist. . .	J'ne 30	Best ..	Oblong ..	Perfect.	2 3/4	7 1/4	4 1/2	1 3-16	1/8	Green ..	Small ..	Best ..	Soft & coarse	
The Princess.....	Hallock & Son.	July 1	V'ry g'd	Round ...	Perfect.	3 3/4	5 1/4	5 3/4	1 1/8	3-16	Yellow...	Medium	Good. .	Fine and firm	
Versailles Prize.....	Buist .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Worthless.
Washington Market..	Buist. . .	July 1	V'ry g'd	Roundish..	Perfect.	4 1/2	6 1/8	5 1/2	1 7/8	1/8	Green	Small	Best ..	Soft & coarse	

EXPERIMENTS WITH WATERMELONS, PLANTED MARCH 19, 1889.

NAMES OF VARIETIES.	SEEDSMAN.	Time of Ripening.	Average weight in lbs.	FORM.	Color of Rind.	Corrugations	Length in Inches	Diam in Inches	Thick. of Rind.	Cavity	Color of Seed.	Color of Flesh	Quality
Boss.	Ferry.	July 12	19 20	Oblong.	Dark Green	Distinct.	14.43	9.87	1.	Slight.	Black.	Red	v'y g'd
Cuba	Home Grown.	"	15 19 66	Long.	D'k Gr'n St'p'd	None	17.66	7.41	.58	None	Wh. with br' tips	d'k red	Best.
Cuban Queen	Thorburn.	"	12 29.70	Slig'ly Ob'lg	Rattle Snake.	Slight.	14.66	9 75	.68	Slight	White.	Red.	Best.
Florida Favorite	Thorburn.	"	10 17.03	Oblong	D'k Rat. Sn'ke	Slight.	14.31	7 69	.75	Slight		d'p red	Best.
Goodwin's Imperial.	Thorburn.	"	10 14.40	Roundish.	Pea Green	Distinct.	9.61	8.80	.75	Slight	Br. with bl'k tips	p'le r'd	Good.
Green and Gold	Dreer.	"	10 17.83	Oblong.	Ming. Green	Distinct.	13.87	9 56	.75	None.	Wh. with br' tips	Or'ng'	Good
Green and Gold	Henderson.	"	13 16.	Slig'ly Ob'lg	Ming. Green.	Slight.	11.09	8 50	.53	None	Wh. with br' tips	Lemo'	Good.
Ice Cream	Thorburn.	"	15 16.60	Long	Green	Distinct.	14.37	8.37	.87	None.	Black.	p'le r'd	Good.
Icing	Thorburn.	"	13 19.42	Roundish.	Green	Slight.	11.	9.06	.87	Slight.	White	Red	Good.
Kolb Gem	Dreer.	"	12 27.62	Round.	Green Striped.	None.	11.50	9.50	.87	None.	Black	Red	v'y g'd
Kolb Gem	Exp't Station.	"	12 28.25	Round.	Green Striped	None.	11.37	10 12	1.06	Large	Black	Red	Good
Light Icing	U S Dep. Agr.	"	13 22.50	Round.	Gray.	None.	13.50	10.50	.75	None	White	Li' r'd	v'y g'd
Oemlers	U S Dep. Agr.	Failed											
Peerless.	Ferry.	"	12 20.64	Long.	Mingled Green	Slight.	16.78	8.06	.96	Slight	White	Red	v'y g'd
Perfection.	U S Dep. Agr.	"	12 14.	Round.	Dark Green.	Slight.	11.	10.	1.	None	Black	p'le r'd	Good.
Round Light Icing	Ferry.	"	12 21.90	Oblong	Gray	None.	13.78	8.75	1.25	Med.	White	Red	Good.
Scaly Bark	U S Dep. Agr	"	13 17.	Oblong	Mottled Green	Slight.	13.25	8.33	.93	Slight.	Wh. with br' tips	d'k red	Good.
*Seminole	Thorburn.	"	13 21.20	Long	Gray	None.	17 01	6.92	.86	Slight	Brown	d'k r'd	v'y g'd
*Seminole	Dreer.	"	13 20.50	Long	Gray.	Slight.	17.50	8.50	.75	Slight	Brown	d'k r'd	v'y g'd
†Seminole.	Ely.	"	18 16.	R'nd & L'ng	G'y & Sc'y B'k	Slight.	11.	8.29	.70	Slight	Wh. with br' tips	l'm' r'd	Good.
Sugar Loaf	Clayton.	"	13 29.50	Long.	Gray.	None.	19.	9 30	.75	None	Brown	d'k r'e	Best.
Spanish Queen.	U S Dep. Agr.	"	12 16.50	Round.	Dark Green	Distinct.	9 75	9 18	.75	None	Black	p'le r'd	Good
W'te Seed'd Ice Cr'm.	Thorburn.	"	12 20 94	Roundish	Dark Green	Distinct.	11 96	7 64	.96	V'y l'g	White	Red	v'y g'd
Pride of Georgia.	Thorburn	"	10 23 50	Round.	D'k Gr'n St'p'd	Slight.	12.	10 50	1.	Slight	Wh' with br' tips	Red.	Best.

*Same as sugar-loaf. †Badly mixed.

Comparison of varieties discovers many old acquaintances under new names. The "sugar loaf" melon has been growing in Georgia and Alabama for nearly half a century, and has continuously sustained a high character for productiveness and excellent quality. It came to us from a seedsman three years ago, as "Jordan's Gray Monarch." Last year it was extensively advertised under the attractive name of "Seminole," which was not only identical, in every respect, with the old sugar loaf, but produced the same sport—a melon of the same form, but of a darker gray. In 1888 the Kob Gem came to us as "New Round Excelsior." The same year almost a fac-simile of the rattlesnake came under the name of "Mammoth Ironclad." This year the old rattlesnake comes as "The Wild."

For shipping, no other variety compares with the Kolb Gem. For home use, there are several varieties superior to it, being of finer flavor and having more tenderflesh. Among these are the Cuba, Sugar Loaf, Florida Favorite and Pride of Georgia. The Cuba is known in Georgia under the local names of "Tinker," "Simpson," and "Kirkpatrick." It is the sweetest melon grown, but is too small for market. The Georgia rattlesnake possesses fine qualities when fully developed, but has a tendency to grow in irregular shapes. The sugar loaf is probably the most prolific variety yet tested. Watermelons cross so readily that a patch of *thoroughbreds* is rarely seen on our farms. This station will distribute, during the winter, a few pure Cuba and sugar loaf melons seed; and some Nixon cantaloupe seed, for trial in different parts of the State.

WATERMELONS PLANTED MAY 3d, 1890.

VARIETIES.	Form.	Color of Rind.	Color of Flesh.	Quality.	Seedsman.	REMARKS.
Birdsong.....	Round.	Mixed	Yellow.....	Good.....	.....	Presented by Chancellor Foster.
Crawford*.....	Oblong	Dark rattle-snake.	Bright red	Very good .....	.....	Presented by Mr. Cox.
Kentucky Wonder.	Oblong	Green	Red.....	Good.....	N. B. G. Co	
Pearson*.....	Oblong	Dark rattle-snake.	Bright red	Very good.....	.....	Presented by Mr. Averett.
Ruby Gold.....	Oblong	Green.....	Orange red	Very good.....	Henderson	
The Wild	Oblong	.....	.....	.....	Henderson	Same as Georgia Rattle-snake.

* Local names for an old variety—known in Florida as “Florida Favorite”—known in Burke county, Ga., thirty years ago as the “Lawson Melon”—supposed to be the parent of the Georgia Rattlesnake.

BEANS--BUSH OR DWARF VARIETY. PLANTED APRIL 15, 1890.

NAME.	SEEDSMAN.	Time Edible.	Color.	Form.	Productiv-ness.	Growth of Vine.	Affected with Anthracnose.	REMARKS.
Bismark	Buist	June 5	Wax	Round.	Very Good	Vigorous	Slight	
Black-Eyed Wax	Thorburn	June 9	Wax	Round	Good	Poor	Slight	
California Tree	N B & G Co		Green	Roundish	Very Good	Vigorous	Free	
Canadian Wonder	Thorburn	June 9	Green	Flat	Very Good	Very Vigorous	Slight	
Crystal Wax	Thorburn		Wax	Flat	Very Good	Very Vigorous		
Cylinder Black Wax	Henderson	June 5	Wax	Round	Best	Vigorous	Badly	
Dun Colored Bush	Thorburn	June 7	Green	Flat	Good	Vigorous	Slight	
Dwarf Black Wax	Thorburn	June 5	Wax	Round	Good	Poor	Free	
Dwarf Ivory Pod Wax	Thorburn	June 5	White	Flat	Very Good	Poor	Free	
Dwarf Mexican Tree	Thorburn		Green	Roundish	Very Good	Vigorous	Free	
Dwarf White Wax	Thorburn	June 7	Wax	Short & Flat	Very Good	Poor	Very Slight	
Early China	Thorburn	June 9	Green	Short & Flat	Good	Poor	Very Slight	
Early Mohawk	Thorburn	June 9	Green	Long & Flat	Very Good	Very Vigorous	Free	
Early Round Six Weeks	Thorburn	June 9	Green	Flat	Very Good	Very Vigorous	Very Slight	
Early Valentine	Thorburn	June 10	Green	Round	Very Good	Very Vigorous	Free	
Ely's Prolific Dwarf Wax	Ely	June 5	Wax	Round	Very Good	Vigorous	Badly	
Extra Early Maine	Thorburn	June 8	Green	Flat	Very Good	Very Vigorous	Free	
Golden Butter Wax	Thorburn	June 2	Wax	Round	Good	Poor	Free	
Golden Refugee	Thorburn	June 12	Pea Gr'n	Round	Very Good	Vigorous	Medium	
Golden Wax Bush	Thorburn	June 5	Wax	L'g & Round	Best	Vigorous	Slight	
King of the Green's Flagoelet	Thorburn	June 10	Green	Flat	Best	Vigorous	Free	Woody.
Large White Kidney	Thorburn	June 10	Green	Flat	Good	Very Vigorous	Free	
Lemon Pod Wax	Thorburn							Failed to Vegetate.
Low's New Champion	Thorburn	June 9	Pea Gr'n	Very Flat	Best	Very Vigorous	Free	Woody.
Marble Head Dwarf Horticultural	Thorburn		Green	Flat	Good	Poor	Very Slight	
Ne Plus Ultra	Thorburn	June 10	Green	Roun'ish flat	Best	Vigorous	Free	
New Date Wax	Thorburn	June 7	Wax	Flat	Best	Vigorous	Very Slight	
New White Valentine	Thorburn	June 10	Pea Gr'n	Flat	Best	Vigorous	Very Slight	
Red Kidney	Thorburn	June 7	Green	Very Flat	Very Good	Vigorous	Very Slight	Woody.
Refugee, or 1000 to 1	Thorburn	June 9	Pea Gr'n	Round	Best	Vigorous	Free	
Saddle Wax	Landreth	June 10	Wax	Round	Good	Poor	Badly	
Scimeter	Thorburn	June 10	D'k Gr'n	Flat	Best	Vigorous	Very Slight	Woody.
Thorburn's Ex. Early Refugee	Thorburn	June 9	Pea Gr'n	Round	Best	Vigorous	Free	
Wardwell's New Dwarf	Thorburn	June 7	Wax	Flat & Long	Best	Vigorous	Free	
White Marrow	Thorburn	June	Green	Flat	Best	Very Vigorous	Very Slight	Woody.
Wonder of France	Thorburn	June 10	D'k Gr'n	Flat	Best	Very Vigorous	Free	Woody.
Yosemite	Henderson	June 10	Wax	Round	Good	Poor	Very Slight	

TOMATOES—Seeds sown March 21st. Transplanted May 5th, 1890.

NAME OF VARIETIES.	Seedsman.	Time of ripening.	Average wt in ounces.	Form.	Color.	Corrugations.	Length in inches.	Diameter in inches.	Cavity around s'd.	Average waste in ounces.	Core.	Flavor	Remarks.
Chernin	Burpee	July 20	3 1/3	Round	Light red	None	2 1/8	2 1/8	None	1-6	Slight	Good	
Dwarf Champion	Thorburn	July 20	3 2/3	Roundish flat	Pinkish	None	1 3/4	2 3/4	None	1/4	V'y "	v'y g'd	
Early Ruby	Henderson												No test. Plants all d'd
Earliest of All	Northrop, B. & G. Co												No test. Plants all d'd
Golden Queen	Landreth	July 17	4 2/3	Irregular	Light yellow	Decid'd	1 1/2	2 3/4	None	1/3	Dcid'd	Best.	Standard.
Haines' No. 64	Hallock	July 17	5 1/2	Roundish	Red	Slight	1 7/8	2 7/8	None	1/3	V'y sl	v'y g'd	
Horsford's Prelude	Thorburn	July 17	1/2	Round	Pinkish	None	1 3/8	3/8	None	None	Dcid'd	Good	Small but very prolific
Ignotum	"	July 22	6 3/4	Roundish flat	Red	None	2	3 1/4	None	1-6	Slight	Best	A very super'r variety.
Livingston's Beauty	"	July 17	5 1/3	"	Red	None	1 7/8	3	None	1-6	Slight	Best.	Standard.
Livingston's Favorite	"	July 22	5 1/2	"	Light red	None	1 3/4	3	None	1-12	None	Good	Standard.
Matchless	Hallock	July 22	4 1/3	"	Light red	None	3 7/8	2 5/8	None	1-12	V'y sl.	Good	
New Paragon	Thorburn	July 20	4 1-6	"	Red	None	1 1/2	2 7/8	None	1-6	V'y sl.	v'y g'd	[tle red cherry.
New Zealand Fig	Hallock	July 17			Yellow								Size and shape of lit-
Optimus	Thorburn	July 20	2 2/3	Roundish	Red	None	1 1/2	2 1/4	None	1-12	None	Good.	
Station Upright Tree	"	July 22											Sam' as Dw'f Ch'mp'n
Thorburn's New Jersey	"	July 22	4 5-6	Roundish flat	Light red	None	1 3/4	2 1/2	None	1/4	V'y sl.	v'y g'd	
Volunteer	"	July 17	4 2/3	"	Light red	None	1 5/8	3 1/8	None	1-6	Dcid'd	Good	

The same plan was adopted with tomatoes as with melons—a few standard varieties only were used with which to compare the new candidates.

By length is meant the diameter which is a continuation of the axis of the stem.

By diameter is meant the length of the axis at right angles to this.

The "waste" is the difference between the weight of the whole tomato and that after cutting away the thicker part around the stem cavity.

ONIONS.

Seeds furnished by the U. S. Department of Agriculture, sown April 5th, and produced sets which were planted September 25th, 1889.

Varieties.	Time ripe 1890.	Diam. in inches	Form.	Color.	Remarks.
Danvers Yellow	J'ne 14	2 $\frac{1}{2}$	Round . . .	Yell'w	Standard variety.
Early Garden Queen . .	M'y 30	2 $\frac{3}{4}$	Roundish.	Whi'e	Early and desirable.
Early White Norcera . .	M'y 30	3 $\frac{1}{4}$	Roundish.	Whi'e	Early and desirable.
Early White Queen . . .	M'y 9	3 $\frac{1}{4}$	Flat	Whi'e	Very early and fine.
Extra Early Red	M'y 30	3 $\frac{1}{4}$	Flat	Yell'w	Yellow instead of red.
Flat Madeira	J'ne 10	3	Flat	Yell'w	
Giant Red Rocca	J'ne 10	3 $\frac{1}{4}$	Roundish..	Red . .	Large and fine,
Giant Yel. Globe Rocca	J'ne 10	3 $\frac{3}{8}$	Roundish.	Yell'w	
Giant White Italian . . .	M'y 30	4	Flat	Yell'w	Superior.
Mammoth Pompeii	J'ne 10	3 $\frac{3}{4}$	Roundish..	Yell'w	Large and fine.
Mam'oth R'd Garganus	M'y 30	3 $\frac{1}{4}$	Flat	Red . .	Large and fine.
Mammoth Red Pompeii	J'ne 10	3 $\frac{3}{4}$	Round . . .	Yell'w	Large and fine.
Mammoth Silver King.	M'y 30	4 $\frac{1}{4}$	Flat	Whi'e	Superior.
New Adriatic Barletta.	M'y 9	2 $\frac{3}{4}$	Flat	Whi'e	Extra early & desirable
Round Madeira	J'ne 16	4	Round . . .	Yell'w	
White Maggiajola	M'y 9	3 $\frac{1}{4}$	Flat	Whi'e	Extra early & desirable

ACKNOWLEDGMENTS

OF

SEEDS, PLANTS, ETC., PRESENTED TO THE STATION, 1890.

D. H. Tolbot, Sioux City, Iowa.....	Black Barley
Jacob C. Bauer, Judsonia, Ark..	{ Van Deman, Mitchell's Early, Doubravas, No. 3. } Strawberry Plants
Peter Henderson & Co., New York.....	Vegetable and Flower Seeds
G. H. Miller & Son, Rome, Ga.....	Raspberry Plants
Geo. D. Norris, New Market, Ala.....	Vegetable Seeds
S. W. Hatcher, Ceres, Ga.....	Plow Stock and Attachments
J. R. Hawkins, Mountainville, N. Y.....	Banquet Strawberry Plants
W. E. Alexander, Leighton, Ala.....	Venango Grape Cuttings
Judge J. B. Jones, Herndon, Ga.....	Bertram Grape Cuttings
G. R. Banks, Tallassee, Ala.....	Wafford Grape Cuttings
B. F. Ingram, Marvyn, Ala.....	Wafford Grape Cuttings
Heller, Hirsh & Co., New York.....	One Sack Evaporated Tankage
Geo. F. Watson, Chicago, Ill.....	White's Northern Muscat Grape Vines
Stephen Hoyt's Sons, New Canaan, Conn..	Green Mountain Grape Vines
W. J. Smilie, Baileyville, Texas.....	Storm Proof Cotton Seed
W. Altee Burpee.....	Vegetable Seeds
Prof. S. M. Tracy, Agricultural College..	Miss Lespedza Cyrtobotrya Seed
Virgil Wilson, Huntsville, Ala.....	Red Blackberry
Jas. B. Olcott, South Manchester, Conn..	Grass Seeds and Sets Festuca No 1
Vernon Rhodes, Memphis, Tenn.....	Cultivator Hoe
A. B. Stroud, Haines City, Fla.....	Casava Roots and Canes
Smiths, Powell & Lamb, New York....	2 Group Pictures, Holstein Cattle
U. S. Dep't. Agr. Washington, D. C.....	Peach and Plum Seeds
" " " " " " " " " " " "	Osier Willow Cuttings, 13 Varieties
" " " " " " " " " " " "	Fig Cuttings, from Smyrna, 12 "
" " " " " " " " " " " "	Cotton Seed, 2 Varieties
" " " " " " " " " " " "	Sorghum Seed, 13 Varieties
" " " " " " " " " " " "	Wheat for Fall Planting, 2 Varieties

Appendix to Bulletin No. 20, of the Alabama Experiment Station.

REPORT

OF THE

ALABAMA WEATHER SERVICE.

Co-operating with the U. S. Signal Service.

October, 1890.

STATE POLYTECHNIC INSTITUTE,
Auburn, Ala., November 15th, 1890. }

The rainfall for October was rather large, and the most of it fell during the first two weeks of the month. So much moisture falling on the cotton fibre in such a short period produced damaging results. The last part of the month, however, was clear and very favorable for rapidly gathering the cotton that quickly opened under the warming influence of the sun's rays. The average precipitation for the month was 1.54 inches above the normal.

The last of October was cool, that reduced the average temperature 2.95 below the normal. The first frost occurred on the 15th, throughout North Alabama. It was light, however, and not much damage was done. The first killing frost that occurred, throughout the State, was on the 28th. That was accompanied by thin ice. On the 31st there was another heavy frost with ice.

MONTHLY SUMMARY.

Atmospheric pressure (in inches)—Monthly mean, 30.043; maximum observed, 30.420, at Livingston on 31st; minimum observed, 29.615, at Chattanooga on 29th; range, .805.

Temperature (degrees F.)—Monthly mean, 62.3; highest monthly mean, 68.5, at Citronelle; lowest monthly mean, 56.1, at Valley Head; maximum, 93, at Citronelle, on 4th and 5th; minimum, 28, at Valley Head on 31st; range for State, 65; greatest local monthly range, 57, at Valley Head.

Precipitation, including melting snow, (in inches).—Average for the State, 4.01; greatest, 7.33, at Opelika; least, 1.90, at Fort Deposit.

Mean relative humidity, 82, at Auburn; 77, at Montgomery; 90.4, at Valley Head; at Uniontown, 77.3

Wind—Prevailing direction, N. W; miles traveled, at Chattanooga, 4,036; at Montgomery, 3,333; at Mobile, 5,185; at Auburn, 3,940.

J. M. QUARLES,

Assistant.

P. H. MELL,

Director.

 NOTES FROM OBSERVERS.

Greensboro, (M. H. Yerby)—The first three weeks of the month the weather was very unpropitious and retarded the gathering of cotton very materially—but the last ten days of the month were beautiful, with continuous sunshine, so that cotton picking has progressed finely and the crop will be gathered without great damage. Killing frost and thin ice occurred in this locality on the 30th and 31st, which is a month earlier than for the past two years.

Livingston, (J. W. A. Wright).—Our rainfall for October (2.82 inches) was less than the normal which is 2.90. Of this amount, only 0.39 fell in the first 14 days; 0.95 fell during the storm of 15th and 16th, and 1.48 during the storm of 21st and 22d. No precipitation on the last 9 days of the month. So, altogether, October was true to its record, as, in the long run, October, September and May are our months of the least rainfall. On the 15th, 20th and 24th the minimum temperature was 41° each day, and there were light frosts. Minimum on the 27th, 28th and 31st, respectively, was 39°, 38° and 34° each, with a little heavier frost. The average here of 60° for the month, is 3° cooler than the normal for October.

Valley Head, (Dr. E. P. Nicholson).—The first frost of the month, and of the autumn, occurred on the 14th; first severe frost on the 19th, with very thin ice crystals; on the 28th and 31st, killing frost, with ice. The minimum thermometer registered 24°. This is the lowest I have seen recorded anywhere South.

Jasper, (Howard Lamar).—The latter part of the month has been clear and cool. Frost occurred 9 days during latter half of month, and ice twice. All vegetables have been killed by recent frosts and forest trees are shedding their leaves very rapidly.

TABLE OF SOIL TEMPERATURES—OCTOBER, 1890.

(The observations for this table were taken at Auburn, Ala.)

A. M. LLOYD, Observer.

NOTE—There are three sets of thermometers—Nos. 1 and 2 are situated on a hill in sandy soil, and No. 3 is placed near a small stream in bottom land. The depth of instruments range from 1 inch to 96 inches below the surface, and the observations are made three times each day—morning, noon, and evening.

Depth in Inches.	Set No. 1, on Hill.	Set No. 2, on Hill.	Set No. 3, in Bottom.
1	66.0°	65.5°	67.0°
3	66.0	65.7	66.6
6	65.2	65.7	66.4
9	64.6	65.2	65.7
12	64.9	64.9	65.5
24	68.0	67.7	68.2
36	69.4	69.7	69.5
48	71.2	70.9	70.7
60	72.3	71.6	71.5
72		71.8	
84		72.2	
96		72.3	

Monthly Summary of Meteorological Reports of the Alabama Weather Service, October, 1890.

STATIONS.	COUNTIES.	Altitude.	Latitude.	Longitude N.	BAROMETER.				TEMPERATURE.								Total precipitat'n	Clear Days.	Fair Days.	Cloudy Days.	Days of Rain.	Prevailing Wind	OBSERVERS.		
					Monthly Mean	Max.		Min.		Monthly mean.	Mean of Max.	Mean of Min.	Max.		Min.									Monthly Range	Me'n d'ly range
						Height.	Date.	Height.	Date.				Degrees.	Date.	Degrees.	Date.									
Selma	Dallas	32 28	87 00			63 8	76.4	51 3	89	13 34	31 55	25 1	2.66									+			
Valley Head	DeKalb	1031 34 34	85 37			56 1	67.7	44.6	85	12 28	31 57	23 1	3.44	18	3	10	7	S e				+	E. P. Nicholson.		
Pine Apple		31 35	87 00			63 5	74.7	52 3	86	6 33	27-31 52	22 4	5.53									+			
Florence	Lauderdale	34 48	87 37			61 6	72.8	50 4	85	10-12 30	20 55	22 4	2.04												
Chattanooga	Tennessee	783 35 03	85 30	30 060	30 304	31 29 615	29 59 5	68 3	50 7 84	12 33	28 51	17 6	4.13	14	11	6	12	N w					*L. M. Pinfield.		
Montgomery	Montgomery	219 32 22	86 23	30 044	30 272	31 29 756	22 65 0	74 3	55 8 88	5 37	31 51	18 8	5.87	19	4	8	10	W					*L. Dunne.		
Marion	Perry																					+			
Union Spr'gs	Bullock	516 32 12	85 39				65 6		86	5 43	31 43	6 55	7 16	8	5	N e							R. J. Grady.		
Bermuda	Monroe	31 43	87 12				60 8		85	5 36	28 49	2 90											Wm. Fowler.		
Mobile	Mobile	30 30 41	88 20	30 054	30 292	31 29 695	22 66 8	75 2	58 3 86	4-10 41	27 45	16 9	5.58	13	12	6	10	N					*A. Pritchard.		
Carrollton.	Pickens																							M. L. Stansel.	
Auburn	Lee	826 32 40	85 30	30 050	30 303	31 29 787	22 63 6	71 1	56 0 83 5	5 36	31 47 5	15 1	7 21	23	2	6	8	N w					J. M. Quarles.		
Livingston	Sumter	150 32 34	88 08	30 018	30 420	31 29 970	29 60 0		84	5 6 12 38	28 46	2 82	20	2	9	7	N w						J. W. A. Wright		
Greensboro.	Hale	220 32 41	87 36				62 8		86	5 11 36	31 50	3 15	22	9	8	N w							M. H. Yerby.		
Mt. Willing	Lowndes	32 07	86 45				63 5		84	5-7 31	31 53	6 50												Wm. M. Garrett.	
Uniontown	Perry	273 32 28	86 44	30 030	30 300	31 29 680	22 64 1	74 1	54 1 87	5 36	31 51	20 3 21	20	3	8	5	E						W. H. Newman.		
Citronelle	Mobile	352 31 03	87 30				68 5	80 7	56 2 93	4 5 37	31 56	25 5	4 08	23	3	5	5							J. G. Michael.	
Fayette	Fayette	33 42	83 12																					Hon. D. Collier.	
Opelika	Lee	32 45	85 28				60 8	70 9	50 8 83	5 30	31 53	20 1	7 33											+	
Guntersville.	Marshall	655 34 24	86 18																						A. J. Baker.
Chepultepec	Blount	890 33 53	86 20																						W. B. Allgood.
Columbiana	Shelby	560 33 15	86 38				60 3	71 1	49 5 84	12 29	31 55	21 6	5 56											W. D. Lovett.	
Centre.	Cherokee	728 34 10	85 42																						Thos. Bradford.
Double Sp'gs	Winston	34 08	85 35				57 1		51 6 79	7 30	31 49	3 53													A. M. Weiler.
Butler	Choctaw	32 05	87 24																						B. F. Gilder.
Jasper	Walker	310 33 49	88 12				61 3	71 3	51 3 83	12 31	31 52	20 3 16	16	8	7	6								Howard Lamar.	
Tuscumbia	Colbert	468 34 42	87 38				57 9		85	12 34	31 51	3 15													L. B. Thornton.
Fort Deposit	Lowndes	34 42	86 36				64 9	74 8	55 0 89	5 38	30 51	19 8	1 90											+	
Means						30 043	62 3	73 1	52 5			51 1	20 6	4 01	15	8	7	N w							

NOTE.—*Sergeants of the Signal Service. †Cotton Belt Stations.