



# Georgia Extension Vegetable News

The University of Georgia

## Cooperative Extension Service

College of Agriculture and Environmental Sciences / P.O. Box 1209, Tifton, GA 31793

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April 2002

### Watermelon Variety Trials

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Extension Horticulturists  
University of Georgia  
Department of Horticulture

## Gummy Stem Infected Transplants

David Langston  
Extension Vegetable Pathologist - UGA

Gummy stem blight is the most widespread and destructive disease of watermelons in Georgia. It is also one for which there are few fungicide options due to either fungicide phytotoxicity to the rinds (chlorothalonil) or fungicide resistance (Topsin M, Benlate, and Quadris). Inoculum can survive for one year in infested cucurbit debris or can enter fields via infected seed or transplants. The problem is that this year we have observed many more transplants that are infected with gummy stem than usual. This really increases the risk of severe losses to gummy stem blight. If gummy stem is found in transplants the best option is to destroy them and use disease-free transplants. If infected transplants are used, a 7 day spray schedule of chlorothalonil is a must to prevent as much inoculum from spreading as possible. However, if weather conditions are favorable for gummy stem blight to spread and infect (wet, warm weather), severe epidemics can still occur.

Watermelon variety trials have been conducted continuously by the authors since 1998. Such trials are useful to growers and seed companies in assessing the performance of new and existing varieties. These trials can be particularly useful in assessing a variety when the data is available from several years and/or from several locations. Up until this year, we have conducted these trials only at one location, but with the start of this season we hope to have these trials conducted at two locations, the Vidalia Farm just outside Lyons, GA and in Crisp County.

In 2001, we evaluated 29 watermelon varieties in a replicated study with four replications. Each plot consisted of 10 hills spaced five feet in-row with a 12 foot between row spacing. Typically, watermelons are produced in Georgia with a spacing of about 27 square feet. The wider between-row spacing was to facilitate harvest and prevent mixing fruit of adjacent plots. Yield data per acre was calculated based on a six foot between row spacing. Three week old transplants were set on April 19, 2001. Herbicides used included Curbit, Poast, and Permit. Permit was not a labeled herbicide for watermelon. In addition, hand weeding was used as needed. Fertilization consisted of 188-75-180 of N-P-K, respectively.

Watermelons were harvested July 2, 5, 6, and 9, 2001. Data collected included yield of each plot. Two fruit from each plot was then cut and length,

width, rind thickness, percent sugar, and flesh color were recorded. In addition, melon type and any unusual characteristics were recorded.

Table 1 presents the results of the 2001 trial. About 1/3 of the varieties tested were triploid (seedless) varieties. This is representative of a trend in increased seedless watermelon production in Georgia. Yields ranged from 27,240 to 2,222 lbs/acre. There were several seedless varieties that were not of the traditional Crimson Sweet type. These included Revolution and Freedom. Although, some growers have indicated there is no market for this type of seedless melon in Georgia, buyers in Florida have indicated a strong interest. They perceive these melons to be ideal for whole melon sales and also excellent for cut melon sales.

For the years we have been conducting these trials, several melons have been in the trial for multiple years and have performed consistently. Among these varieties are Stars n Stripes, Starbrite, and Pinata. Stars n Stripes is a hybrid Allsweet type in the 22-31 lb class. It has large seed, is considered a good pollinizer, and has consistently produced high yields. Starbrite is a Jubilee hybrid with a thick rind that should be ideal for shipping. Both of these varieties are available from Seminis Seed (Asgrow).

Pinata is an Allsweet variety from Willhite Seed in the 22-25 pound class. It is considered earlier than the standard Allsweet and has good Fusarium wilt tolerance. It has consistently yielded in the top five in our trials.

Variety trials are an excellent source of information, but growers wishing to try a new variety should consider growing them on a limited basis until they are satisfied the variety will perform as they expect.

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## California or Bust: Vegetable Production Tour Planned for California

William Terry Kelley  
Extension Horticulturist

Get ready for a road trip. The University of Georgia Extension Vegetable Team is putting together a tour of the California vegetable industry August 18-25, 2002. It's been seven years since our last tour (to Mexico) and almost 14 years since the first California tour. Needless to say, things have changed a lot since then.

Spend eight days and seven nights touring some of the major vegetable production regions in the nation's leading vegetable production state. The itinerary will include a mixture of field, packing house and processing stops covering both warm-season and cool-season vegetables. Our tour guides and hosts will be various vegetable farm advisors from the University of California at Davis.

At midweek, we'll take a day off from the farm tours and enjoy a recreational day (maybe in wine country). The plans call for three tour stops each day plus travel to the next destination. It will be a full agenda that promises to be very educational yet entertaining. Space will be limited so you will want to send in the form below to get on the mailing list now. [Tentative Agenda](#)

- August 18-Depart Atlanta to San Diego
- 19-San Diego County
- 20-Kern County
- 21-Fresno County, San Joaquin area
- 22-Recreational Day
- 23-Salinas area
- 24-Central Coast, Santa Barbara area
- 25-Return to Atlanta

Departure/return will be at Atlanta Hartsfield Airport. Transportation in California will be by motor coach.

*Estimated cost: \$700-900/person, double occupancy, not including meals or entertainment. Cost includes air and ground transportation and lodging.*

Clip and mail the form to the left to get on the mailing list for additional information. Sending the form does not commit you to go. It simply gets you on the mailing list. Brochures and registration materials will be mailed when final costs and itinerary are determined (probably late April). For questions regarding the tour call 229-386-3410 or send e-mail to [wtkelley@uga.edu](mailto:wtkelley@uga.edu).

### Get on the Mailing List

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

e-mail: \_\_\_\_\_

Number in Party \_\_\_\_\_

Mail completed form to:  
Dr. Terry Kelley, Dept. Horticulture,  
P.O. Box 1209, Tifton, GA 31793

by the freezing temperatures. There were no severe losses reported, however, in many areas all of these tender crops received some light to moderate cosmetic damage.

For the most part, these crops will recover and produce normally. Damage to outer leaves may make some of these plants look bad for awhile, but if the bud is unaffected, the new growth should develop normally. Some plants have developed abnormally-shaped leaves due to these cold snaps. These leaves were probably exposed to chill injury in the bud, however, no actual tissue death occurred. Again, subsequent leaves should develop normally.

Chilling injury can occur when the plants are exposed to temperatures just above freezing for an extended period of time. Several hours of these temperatures can often cause root uptake of water and nutrients to be slowed and can alter the permeability of cell membranes after they return to normal temperatures. Some surface lesions, abnormal pigmentation and abnormal growth may occur in response to chilling injury.

More severe temperatures occurred on February 28-March 5. There were very few warm-season vegetables planted at that time, however, a substantial amount of late winter crops did receive some level of damage. Leafy greens and cabbage were affected the most. Established cabbage seemed to receive only moderate cosmetic damage. Newer plantings did receive some substantial burn and even some stand loss in a few cases. Tender greens such as turnips and mustard were more affected than collards and kale.

A band of hail on April 3 produced some severe damage in a few counties. Entire fields of watermelons and tomatoes were reported destroyed. Golf-ball sized hail was reported in some of these counties. Hail injury can cause various degrees of damage. Generally, the hail simply "rags" up the leaves and produces some lesions on stems. In most of these cases, the crop can recover fully if there has been no fruit set. After fruit set, damage becomes more severe since there can be quality and yield loss of the fruit itself. In many of the cases in early April, the hail was so severe that it completely destroyed the crop prior to fruit set or blooming.

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## Weather Woes Appear Early

William Terry Kelley  
Extension Horticulturist

Inclement weather has hit the late winter and spring vegetable crops before they even got a good start. Freezing temperatures in early and mid-March and hail in some areas in early April caused varying degrees of damage to several crops.

Temperatures dipped below freezing on the morning of March 23 in several areas of south Georgia where plantings were already established. Pepper, squash, cantaloupes, tomatoes, watermelons, beans and some corn were singed

One of the more prevalent weather related conditions that is normally seen each year is sandblasting injury. March winds will often cause sand particles to be carried along the field, scrubbing up against plant stems and leaves as it goes. In fields with plastic mulch, this can be quite severe since the surface of the plastic does not slow the sand particles down. In most cases, this injury is simply cosmetic and the plant will outgrow any damage. However, in a few instances each year, there can be severe injury to the stem. In most severe cases, stems can even be severed by the particles. Stunting, stand loss and reduced yield can occur in the most severe cases. The use of windbreaks in the field can substantially reduce injury due to sand blasting.

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## **Sandea Label Granted For Georgia Cucumber and Cantaloupe ONLY**

Stanley Culpepper  
Extension Weed Scientist

A Section 24(c) label request for the use of Sandea herbicide in Georgia cucumber and cantaloupe has been granted. Sandea is not labeled for use in squash or watermelon. Application of Sandea to squash or watermelon may result in crop stunting, delayed crop maturity, and significant yield loss.

Sandea may be applied to both seeded and transplant cucumber or cantaloupe. Make only one application per crop.

### **Seeded Crop Bare Ground:**

1) Apply immediately after seeding but before cracking.

OR

2) Apply after crop has reached the 3 leaf stage but before flowering.

### **Transplant Crop Bare Ground:**

1) Apply AT LEAST five days before transplanting.

OR

2) Apply no sooner than 14 days after transplant but before flowering.

### **Seeded Crop Plastic Mulch:**

1) Apply after final bed shaping and just prior to installation of plastic mulch. Application must be AT LEAST five days before seeding.

OR

2) Apply after crop has reached the 3 leaf stage but before flowering.

### **Transplant Crop Plastic Mulch:**

1) Apply after final bed shaping and just prior to installation of plastic mulch. Application must be AT LEAST five days before seeding.

OR

2) Apply no sooner than 14 days after transplant but before flowering.

### **Row Middles:**

1) Minimize contact with crop and keep herbicide off plastic. Do not disturb row middle for at least seven days after application.

### **THINGS TO CONSIDER:**

- 1) Sandea rate ranges from 0.5 to 0.75 oz of product per acre. Use lower rates on sandier soils.
- 2) Make only 1 application per crop.
- 3) Heavy rainfall or irrigation after an at-plant application may cause severe crop stunting.
- 4) Do not irrigate within 4 hours of postemergence application.
- 5) Temporary yellowing and stunting may be noted with postemergence applications.
- 6) Do not apply under cool or stressful growing conditions.
- 7) Do not apply to seeded crop from cracking until the 3-leaf stage or after bloom.
- 8) Do not apply ovetop of plastic mulch prior to seeding or transplanting.
- 9) Do not incorporate Sandea prior to seeding or transplanting.
- 10) Sandea will not work adequately if nutsedge or other weeds are drought stressed.

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The Georgia Extension Vegetable News is published bimonthly. This newsletter is also available on the World Wide Web at [www.cpes.peachnet.edu/veg](http://www.cpes.peachnet.edu/veg).

County Extension Agent \_\_\_\_\_

**Table 1. Watermelon Variety Trial, Vidalia Onion and Vegetable Research Center, Lyons, GA, 2001**

Variety	Company	(lbs/acre)	Fruit Weight (lbs)	Fruit Length (in.)	Fruit Width (in.)	Rind Width (in.)	Sugar (%)	FleshColor	Melon Type
Royal Star	Petoseed	27,240	16.0	12.5	8.9	0.75	10.2	Red	Crimson Sweet
Big Stripe	Willhite	25,406	14.9	12.7	8.6	0.83	10.4	Red	Jubilee Blocky
WX8 (large seed)	Willhite	23,766	12.6	13.6	8.1	0.78	10.8	Red	Allsweet
WX22 (small seed)	Willhite	21,312	14.0	12.4	8.3	0.66	10.2	Red	Jubilee
Montreal (5023)	Sunseeds	21,225	13.3	12.7	8.2	0.53	10.0	Red	Allsweet
Moon & Stars	G. Hunter	20,045	16.7	11.6	9.6	0.78	8.6	Red	Moon & Stars
WX55 Triploid	Willhite	19,889	12.7	13.7	7.3	0.70	9.0	Red	Crimson Sweet Seedless
Festival (large seed)	Willhite	19,548	12.0	14.4	7.3	0.63	9.5	Pink/Red	Allsweet
Revolution (4034) Triploid	Sunseeds	19,471	10.9	12.8	7.9	0.81	11.7	Red	Allsweet Seedless
Piñata (large seed)	Willhite	19,185	13.9	12.4	8.4	0.83	9.4	Red	Allsweet
XP 4525247	Asgrow	18,999	13.1	13.4	8.0	0.58	9.2	Red	Allsweet
Tribute (PX59696) Triploid	Petoseed	18,999	11.9	10.7	8.7	0.70	11.0	Red	Crimson Sweet Seedless
Stars n Stripes	Asgrow	18,891	12.7	13.8	7.5	0.72	10.2	Red	Jubilee
Falcon (PS 56395)	Petoseed	17,874	14.5	14.7	8.0	0.69	11.1	Red	Allsweet
Sweet Eat'n Triploid	D. Palmer	17598	10.3	9.6	7.7	0.67	11.4	Red	Crimson Sw. Seedless
Sentinel (PS 36694)	Petoseed	17,544	11.8	12.0	7.9	0.72	11.3	Red	Allsweet
Sweetheart (large seed)	Willhite	17,105	12.7	11.6	8.8	0.95	10.3	Red	Jubilee
Legacy (OP)	Willhite	16,212	10.6	12.3	7.6	0.72	8.3	Red	Allsweet Blocky
Vista F1	Hollar Seed	15,043	14.3	12.0	8.4	0.69	11.6	Red	Jubilee
AU Golden Producer	Hollar Seed	14,810	13.2	9.9	8.8	0.67	10.0	Yellow	Crimson Sweet
Freedom (3022) Triploid	Sunseeds	13,957	12.0	12.3	8.2	0.72	11.8	Red	Jubilee Seedless
AU Producer ZYMV	Auburn Univ.	13,605	13.4	10.1	9.1	0.72	9.6	Red	Crimson Sweet
Afternoon Delight Triploid	D. Palmer	13,511	8.9	9.2	8.4	0.77	11.5	Red	Crimson Sweet Seedless
Stargazer	Asgrow	12,977	11.2	12.7	7.4	0.64	8.5	Red	Allsweet
WX24 (large seed)	Willhite	12,814	13.1	13.5	7.4	0.81	9.3	Red	Blocky Crimson Sweet
Cooperstown	Asgrow	11,576	10.6	9.6	8.2	0.58	10.9	Red	Crimson Sweet Seedless
Triton	Petoseed	11,558	10.0	8.9	8.4	0.75	11.3	Yellow	Crimson Sweet Seedless
AU Allsweet	Auburn Univ.	11,489	13.8	12.0	7.4	0.61	9.1	Red	Allsweet
Sapphire F1	Hollar Seed	2,222	10.2	8.8	7.5	0.66	10.9	Red	Crimson Sweet Seedless
	R <sup>2</sup>	0.353					0.563		
	CV	50%					14%		
Adjusted LSD (p#0.05)		14,199					1.8		