



TEXAS AGRICULTURAL EXTENSION SERVICE

---

## VALLEY VEGETABLE NOTES

---

VOL. 3, NO. 12

December 15, 1995

**IN THIS ISSUE:**

**Support for Texas Pepper Research Sought**

**Central Texas Vegetable Short course**

**Look Out for Broadmite**

**Plant Spacings can Affect Earliness in Cantaloupe**

**Bacterial Soft Rot of Honeydew**

### **Support for Texas Pepper Research Sought Lynn Brandenberger**

Times are changing in agriculture, particularly in regard to support of public research institutions such as Texas A&M. Twenty years ago Research and Extension programs could depend upon resources from the state to do the work that was necessary to support agricultural commodities. Now as a result of budget cuts, Research and Extension funds are rapidly being eliminated, and these programs are finding it difficult to carry out their missions. The budget cuts are especially troublesome for vegetable crops such as peppers where there aren't millions of acres of crops and thousands of growers to help push for public support of these programs.

Concern has grown in the past few months and people within the Texas pepper industry are meeting to discuss what might be done to help secure the future of their industry. Several growers have voiced concern that if improvements are not forthcoming several of them may be forced out of the bell pepper business. John Lacky, President of

the Texas Pepper Foundation has stated that "pepper breeding at Weslaco is one of the last publicly funded pepper improvement programs in the U.S.A. With Dr. Villalon planning to retire this next year this project may be eliminated if there is no industry support." Critical problems that have been mentioned include the lack of disease resistant bell pepper varieties and insects pests such as the pepper weevil.

Pepper growers met this fall at the Texas Produce Convention, also in the Lower Rio Grande Valley in October and plans have been made to meet with growers in the High Plains, El Paso and the Wintergarden to discuss the possibility of developing a statewide Texas Pepper Referendum. The purpose of this referendum would be to develop a mechanism to support Research and Extension programs that are vital to the future of the pepper industry. I quote John Lacky, "after 20 years of trying, it looks as if a Texas Pepper check off system to raise research funds similar to citrus and

spinach, may become a reality. This movement has the support of the Texas Pepper Foundation, Texas Vegetable Association, Vegetable Improvement Center, Texas Produce Association and the West Texas Chili Co-op.”

The West Texas Chili Co-op will be meeting at noon on January 15 in Lubbock at Gordito’s restaurant to further discuss the potential for the Texas Pepper Referendum. We’ll work to keep you posted on future plans for this important move towards supporting the Texas pepper industry.

### **Central Texas Vegetable Short course Nancy Roe**

The Comanche County Extension Horticulture Committee has planned a Vegetable Short course for Thursday, January 18, 1996 at the DeLeon City Hall Building in DeLeon. Registration begins at 8:00 a.m. with the program starting at 8:30 a.m. and continuing until 4:00 p.m. A sponsored lunch will be served at the meeting and the program will help participants earn 5 C.E.U.’s for pesticide applicators.

The meeting program includes specialists and researchers from the Texas A&M system who will be presenting information on production and marketing of several vegetable crops. In addition there will be a produce buyer from Wal-Mart and a TDA producer marketing expert to further discuss marketing possibilities in Texas.

For more information contact the Comanche County Extension office at (915) 356-2539.

### **Look Out for Broadmite David Riley**

Broadmite has the potential of being a serious pest on several vegetable crops this coming spring including melons, pepper and tomato. This potential problem can be exacerbated from the use of synthetic pyrethroids and Admire insecticides. The main point is to be aware of the potential for build up of broadmite population and to be ready to deal with them using appropriate control methods. Additional information on the broadmite can be found in an article titled: The new occurrence of

broadmite on peppers in the Lower Rio Grande Valley of Texas. 1992. Subtropical Plant Science 45:46-48.

### **Plant Spacings can Affect Earliness in Cantaloupe Lynn Brandenberger**

Earliness is an important part of melon production for South Texas growers because it has a direct bearing on the market window that they operate in. Field studies on honeydew melon that were conducted in 1993 and 1994 confirmed that spacing can affect earliness. This past spring we began work that should provide information on the effect that plant spacing has upon cantaloupe production. As with any field study it is important to realize that it takes more than one experiment to begin to understand what can occur from season to season, so be alerted that the following information is preliminary and should be treated as such.

Treatments in this study included nine different spacings and are as follows: Single row 10" in-row spacing with 1 plant per hole, (S10-1), with 2 plants per hole, (S10-2), or 3 plants per hole, (S10-3); Single row 12" in-row spacing with 1 plant per hole, (S12-1), with 2 plants per hole, (S12-2), or 3 plants per hole, (S12-3); Double row 12" in-row spacing with 1 plant per hole, (D12-1), with 2 plants per hole, (D12-2), or 3 plants per hole, (D12-3). Drip irrigation and black plastic mulch were installed on raised beds on 80 inch centers during December of 1994. Different planting hole configurations were burned into the plastic mulch on January 27, 1995 with tractor drawn machinery. Plots were direct seeded on February 1, 1995 with 5-8 seeds of the cantaloupe cultivar 'Primo' per spacing interval. Plots were thinned to the appropriate number of plants per hole on February 22, 1995. The study was located in a commercial field on Starrco Farm in Starr County Texas and was managed the same as the surrounding field, except for the plant spacings.

Plots were harvested by commercial harvesting crews on 16 consecutive days starting on May 5, 1995 and ending on May 20, 1995. At each

harvest the melons from each plot were sized and the number of each size were recorded along with the number of cull melons. Data were analyzed utilizing analysis of variance with a probability of 0.05 as the critical value. Total yields were determined by adding each of the individual harvest yields together for each day and each size class. Earliness is given as cumulative yield for each day and was determined by dividing the overall total of melons harvested for a particular treatment up to and including the harvest date by the total number of melons harvested for all 16 harvest dates.

Treatments in the study exhibited significant differences in earliness beginning on May 11 and continuing through May 17, (table 1 on back page). The largest differences in earliness occurred on May 14, 15 and 16 with the S10-1 and S12-1 treatments exhibiting the highest percent cumulative yields to that point. The most distinct differences for earliness were observed on May 15, (figure 1 on back page) when S10-1 and S12-1 recorded percent cumulative yields of 75.7 and 78.6%, respectively, compared to the next highest of 63.7% for S12-2. The results indicate that both of these spacings may have some merit in regard to promoting earliness.

This coming spring we hope to continue our work on cantaloupe spacing so we will be able to provide you with conclusive results next year. We would like to acknowledge the assistance in time, effort and resources given us by Mr. James Peterson and Mr. Edelmiro Perez of Starr Produce in this study.

### **Bacterial Soft Rot of Honeydew** **Tom Isakeit**

Last month, samples of honeydew melons were submitted to me for identification of the pathogen, which was *Erwinia carotova* pv. *carotovora*. There was some question as to how the infection started. Through some simple experiments, I found that contamination of slightly wounded fruit was sufficient to result in fruit rot. One day after putting a drop of a bacterial suspension on wounded fruit, there is a water-soaked appearance around the wound that quickly enlarges. Meanwhile, the inside of the fruit turns to liquid. The fruit then easily collapses.

The wound must be freshly made in order for the bacteria to get established. When bacteria were placed on wounds that were made two days earlier, the fruit did not rot. This is because the fruit is capable of healing the wound and sealing out the bacteria. Since this soft rot bacterium is commonly found in soil, it is possible that wounded fruit could become infected in the field. If the infected fruit is left at warm temperatures for several hours, bacteria will start multiplying in the wound. This fruit could then contaminate other, freshly-wounded fruit in the packing shed, if the wash water is not properly treated. The wash water needs to be chlorinated (100 ppm chlorine is recommended) to decontaminate it. Water needs to be treated continually, since the chlorine does not persist (e.g. soil washed from fruit will inactivate it). Cool temperatures will retard soft rot development. Honeydew should be cooled to 41-45 degrees as quickly as possible.

In summary, soft rot is a post-harvest problem that can be prevented by carefully seeking out deficiencies in post-harvest operations.

---

LYNN BRANDENBERGER, Ph.D.  
Associate Professor and Extension Specialist

\*\*\*\*\*  
The information given herein is for educational purposes only.  
References to commercial products or trade names are made with

the understanding that no discrimination is intended and no endorsement by the Cooperative Extension Service is implied

Table 1. Spring 1995 cantaloupe spacing study percent cumulative yield for 7 of 16 harvest days.

Date	Percent cumulative yield <sup>a</sup>								
	S10-1	S10-2	S10-3	S12-1	S12-2	S12-3	D12-1	D12-2	D12-3
May 11	25.2 a	22.7 ab	18.3 abc	22.4 ab	22.3 ab	19.3 abc	24.3 a	13.3 bc	9.9 c
May 12	41.2 a	38.5 a	32.3 abc	37.0 ab	36.8 ab	36.4 ab	35.5 ab	23.7 bc	21.2 c
May 13	52.5 a	45.8 a	42.8 ab	56.8 a	49.9 a	44.8 ab	49.8 a	31.8 bc	27.2 c
May 14	63.2 a	54.7 ab	46.4 bc	65.0 a	57.6 ab	50.5 ab	55.3 ab	33.6 c	33.3 c
May 15	75.7 a	63.0 b	55.8 b	78.6 a	63.7 b	59.9 b	62.4 b	38.2 c	42.6 c
May 16	84.7 a	80.0 a	67.6 bc	84.3 a	75.3 ab	78.2 ab	76.2 ab	55.9 d	60.1 cd
May 17	91.4 ab	94.1 a	83.8 bc	92.1 ab	87.0 abc	90.0 ab	89.1 ab	74.6 d	79.6 cd

<sup>a</sup>Numbers within the same row followed by the same letter are not statistically different.

Figure 1. Percent cumulative yield on 5-15-95

