CONTROLLED ATMOSPHERE STORAGE RESULTS FOR 2006

Controlled atmosphere (CA) storage has been a boom to the Vidalia onion industry. This type of storage adopted from the apple industry uses a low oxygen (3%), high carbon dioxide (5%) atmosphere under refrigeration (34 deg. F.) and high humidity (70% rel. humidity) to extend the storage life of onions. This technology has taken Vidalia onions from a late spring specialty item to a commodity that is available from late spring into early fall. This technology has helped increase acreage from 4,000 to 14,000 over the past 15 years. CA storage has not, however, been the panacea growers had hoped with variable results from one year to the next. For example, the 2003 onions stored in CA did extremely poorly with none exceeding 25% marketable. The primary disease affecting stored onions is Botrytis neck rot, but why it should be particularly bad one year and not the next is not known. It is known that Botrytis neck rot is incapable of sporulating in CA storage so disease spread from one onion to another can only occur with direct contact. A few infected onions in a load are not going to infect all the others under CA storage.

We pulled onions from CA storage on October 9, 2006. The onions were placed in storage as they were harvested. In the past, we have stored early maturing onions under refrigeration until all of the onions were harvested and ready to be placed in CA. Doing this, we noticed, that early maturing onions generally faired worse in CA. We thought the time under refrigeration prior to CA storage might have played a role in their overall poor performance so beginning last year we have been placing onions in CA as they mature and can be transported from the farm to the CA storage facility.

Weight loss in storage this year ranged from 2.7% to 9.4%. The five varieties with the greatest weight loss in storage were DY 606, Yel. Granex 15085, Honeycomb, Sweet Vidalia, and SSC 1535 F_1. The five varieties with the least weight loss in storage included FS 2005, Honeybee, Ohoopee Sweet, Yel Granex 129101, and Yel. Granex 114101. The average weight loss for all the onions was 5.4%, which is in line with previous results.

The percent marketable onions after five months of CA storage averaged 66.3% and ranged from 8.1% for DY 606 to 88.3% for Georgia Boy. These results are in line with typical results in past years.

The onions were held for two weeks under ambient conditions and re-evaluated. The percent marketable (based on pre-storage weights) ranged from 5% for SSC 1535 F1 to 70.1% for Georgia Boy. Overall all the onions lost an additional 24% in marketable onions during this two week period. It would be a good idea for growers and handlers to tell their buyers of CA onions to keep them under refrigeration as much as is practicable to minimize losses.

FROM MY DESK

Last month I sent out my newsletter as a PDF file to spruce it up a bit. It was suggested that tables continue to be sent as Excel attachments since this allows the reader

to sort the numbers by various columns and look at the data in different ways. So starting with this issue I will make sure all tables are sent as attachments. Although the PDF newsletter looked OK, I thought sending an HTML email would be nicer. It will open as a web formatted newsletter with graphics and pictures in most email programs. I've purchased a program for just such a purpose. If your email program can't handle HTML or if you've turned off loading images, it should come through as a straight text file. Let me know what you think.

Next month is the National Alliums Conference in Texas and Reid Torrance (Tattnall Co. extension agent) and I are attending. This should be a good conference, with lots of information from other onion producing areas.

Regards,

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