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CENTER FOR IRRIGATION TECHNOLOGY

AG Gas™ Test-Plot 2002:Yield Summary

October 15, 2002

AG Gas™ contracted with the Center of Irrigation Technology – California State University at Fresno (CIT) and the University of California – Davis (UC-Davis) to undertake a 2.1-acre, open-field, test-plot involving 12,000 tomato plants during the summer of 2002 at the CIT research facilities in Fresno, California. Researchers from University of California Kearney Agricultural Center and USDA were also involved in the project.

The objective of the test-plot was to determine the open-field effects of Carbogation™ brand CO_2 enrichment on fresh market tomatoes and to provide third party (university) verification of data results. Approximately ½ of the tomatoes were provided with Carbogation™ brand CO_2 enrichment, and the other ½ that was not CO_2 enriched, was used as a baseline data control-plot. All other standard-California, agricultural practices and applications (cultivation, fertilizer, herbicide, irrigation, etc.) were applied equally to both plots. A popular brand of commercial drip-irrigation system was employed, which was interfaced with AG Gas™ equipment to provide both irrigation needs and independent CO_2 gas deliveries during the day.

CIT, UC-Davis, UC Kearney Agriculture Center and USDA undertook extensive monitoring and measurement including: visual inspections, leaf area index, root growth, photosynthetic rates, leaf and plant size, fruit set, CO_2 levels, wind speeds, air temperature, soil moisture, post harvest fruit evaluations and yield data. Data results were compiled and transmitted to AG Gas™ on a weekly basis and a weekly project team meeting was held to monitor the test. Tomatoes were first harvested on September 3, 2002 and harvesting continued one day per week for a total of five harvests.

Summary of Yield Results

AG Gas™ achieved desired, elevated, CO_2 concentrations in the open-field conditions, producing associated visible and measurable crop vigor and enhancement. The Carbogation™ brand CO_2 enriched plot demonstrated increased fruit production versus control-plot with:

- Total fruit number increase of 25%;
- Marketable fruit number increase of 98%;
- Weight increase of 65%; and,
- Total marketable harvest weight increase of 120% (yield more than doubled)

In sub-plots with relatively less "weed control" than the majority of the test plots, the CO_2 enriched tomatoes demonstrated:

- Weight increase of 72%; and,
- Total marketable harvest weight increase of 211%.

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