

**COMMERCIAL FIELD TRIAL PROTOCOL  
TIPBURN CONTROL/WEIGHT INCREASE-ICEBERG LETTUCE - HURON**

**Fresh Express**  
**1225 Merrill Street**  
**Salinas, CA**

**Grower Cooperator: Mike Dressick- Dressick Farms – Huron, CA.**  
**Joe Halkum - Dressick Farms – Huron, CA.**

**NUTRI-CAL Contact: Mike Carpenter/Nick Macris (C.S.I. Chemical)**

**Target Crop: Iceberg Lettuce**

**Principal**

**Investigator:** Diego Celis – (831 970 3573 Cellular)- (831 784 3116 Office)  
(831 784 3160 FAX)

**Principal**

**Coordinator:** Mike Carpenter (C.S.I. Chemical)

**Plot Design:** Multiple Acre-Field Split (Half field treated vs Half untreated)  
Ten (10) acre minimum per treatment.

**Trial Objective:** To measure tipburn reduction and/or control and crop increase in weight by including an organic source of readily available Calcium (**Nutri-Cal**) throughout all the growth stages of an iceberg lettuce crop

**Replications: (set up on 10/5/02 mtg)**

Lot 733- 28.4 acres- 436 beds- 4 total applications  
1 ground ~ 10/11; air on 10/15; air on 10/19-21; air on 11/1  
Estimated harvest week of 11/4/02 (actual 11/6/02)

Lot 2846 – 25.2 acres – 388 beds- 4 total applications  
~ 2 grounds starting on 10/8 followed by 2 air  
Estimated harvest week of 11/18/02 (actual 11/24/02)

**Application Method:**

1. Apply as a Foliar spray with each pesticide application ( 4 to times/crop)
2. May be ground and/or air applied

**TREATMENTS**

1. **UNTREATED CHECK** : Split field in half with no **NutriCal** treatment

2. **NUTRI-CAL TREATMENT:**

1. Apply as a Foliar spray with each pesticide application ( 4 times/crop)
2. Tank mix 2 quarts of NutriCal with each pesticide foliar application to the crop.

## FIELD DATA

1. Soil pH: To be provided by grower
2. Soil Type:
3. **Crop Variety: Sundevil (lot #733)  
Maxum (lot #2846)**
4. Daily Max. & Min. Temperatures:

## EVALUATION:

1. Yield by weight difference to be evaluated at harvest by FEX
2. % Tipburn Present: To be evaluated by FEX harvest supervisors and principal investigator
3. Overall Quality: To be evaluated by FEX harvest supervisors and principal investigator

## OBJECTIVES:

- Main objective is to reduce/control % age tipburn in Huron Area Fall Deal by supplementing a readily available Calcium source to the crop by foliar sprays.
- Secondary objective is to measure any increase in crop weight by supplemental Calcium applications to the crop.
- Observations will be taken as crop develops, prior to harvest and at harvest.

## RESULTS (733)

- Field was harvested on 11/6/02. The East side half of the field (14.2 acres) was treated with NutriCal 4 times and harvested by VHP.
- Field was harvested on 11/6/02. The West side half of the field (14.2 acres) **was not** treated with NutriCal and harvested by JLG.
- Field harvest was coordinated by Rey Curiel and Leo Urzua.
- Post harvest- shelf life evaluations by Galen Peiser (to be submitted at a later date).

EVALUATION	TREATED	UNTREATED	TOTAL FIELD
TOTAL WEIGHT	466,888 LBS.	304,280	771,168
% OF TOTAL WT.	60.5 %	39.4 %	
# OF BINS	580	410	990
% OF BINS	52 %	48 %	
AVE. WT. OF BINS	805 LBS	742 LBS.	
INCREASE WT/BIN	+ 63 LBS		
INCREASE IN LBS/ACRE	+2,573		
INCREASE IN TONS/ACRE	+1.28		
TOTAL WT. INCREASE (%)	+21.1 %		
ACRES	14.2	14.2	28.4
% TIPBURN	0 %	0 %	0 %
LEAF COLOR	DARK GREEN	LIGHTER GREEN	

**RESULTS (2846)**

- Field was harvested on 11/24/02 & 11/25/02. The East side half of the field (12.7 acres) was treated with NutriCal .
- Field was harvested on 11/24/02 & 11/25/02. The West side half of the field (12.5 acres) **was not** treated with NutriCal
- Bin counts and weights were not taken into account in this lot due to a mix of plastic & fiber bins used during harvest
- Field harvest was coordinated by Rey Curiel and Lupe Rangel.
- Post harvest- shelf life evaluations by Galen Peiser (to be submitted at a later date).
- Weight increases per acre were similar in both blocks, leading to a consistent weight increase/acre under a Nutri-Cal foliar spray program in Iceberg lettuce in the Huron area

EVALUATION	TREATED	UNTREATED	TOTAL FIELD
<b>TOTAL WEIGHT</b>	<b>441,584 LBS.</b>	<b>399,156 LBS</b>	<b>840,740 LBS</b>
<b>% OF TOTAL WT.</b>	<b>52.5 %</b>	<b>47.5%</b>	
<b>LBS/ACRE</b>	<b>34,770.4</b>	<b>31,932.5</b>	
<b>INCREASE IN LBS/ACRE</b>	<b>+2,838</b>		
<b>INCREASE IN TONS/ACRE</b>	<b>+1.42</b>		
<b>TOTAL WT. INCREASE (%)</b>	<b>+5 %</b>		
<b>ACRES</b>	<b>12.7</b>	<b>12.5</b>	<b>25.2</b>
<b>% TIPBURN</b>	<b>0 %</b>	<b>0 %</b>	<b>0 %</b>
<b>LEAF COLOR</b>	<b>DARK GREEN</b>	<b>LIGHTER GREEN</b>	

HARVEST DATES	TREATED	UNTREATED	LBS. DIFFERENCE
<b>11/24/02</b>	<b>340,524 LBS (9.87 acres)</b>	<b>154,540 Lbs (4.66 acres)</b>	
<b>LBS/ACRE</b>	<b>34,501</b>	<b>33,163</b>	<b>+ 1,338</b>
<b>11/25/02</b>	<b>101,060 Lbs (2.83 acres)</b>	<b>244,616 Lbs (7.84 acres)</b>	
<b>LBS/ACRE</b>	<b>35,710</b>	<b>31,201</b>	<b>+ 4,509</b>
<b>TOTAL LBS.</b>	<b>441,584</b>	<b>399,156</b>	<b>+42,428</b>
<b>TOTAL ACRES</b>	<b>12.7</b>	<b>12.5</b>	<b>+ 2,838/acre</b>