BMP Trials Summary Fall and Spring.

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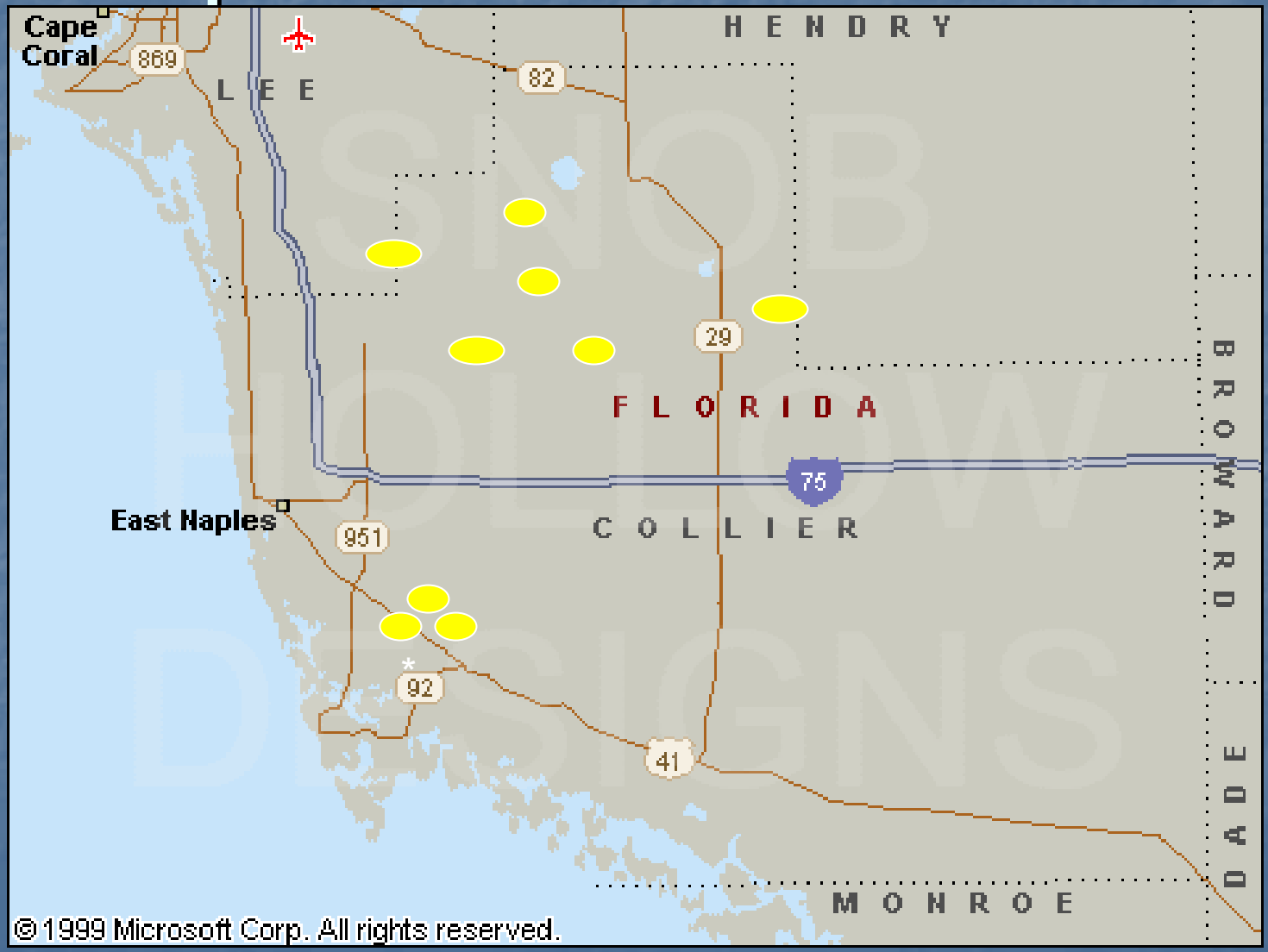
Objectives

- Establish partnerships with selected southwest Florida vegetable growers to evaluate the effects of N nutrient applications under commercial growing conditions;
- Evaluate the effect of selected N application rates on plant growth, disease incidences, and production;
- Determine the optimal N rate for tomato production and evaluate the cost effectiveness of selected N application rates;
- Propose, if needed, a change in N recommendation to PNOC
- Develop an Extension plan to demonstrate the updated N recommended rate and facilitate the adoption of nutrient BMPs by the industry.

Experiment Locations

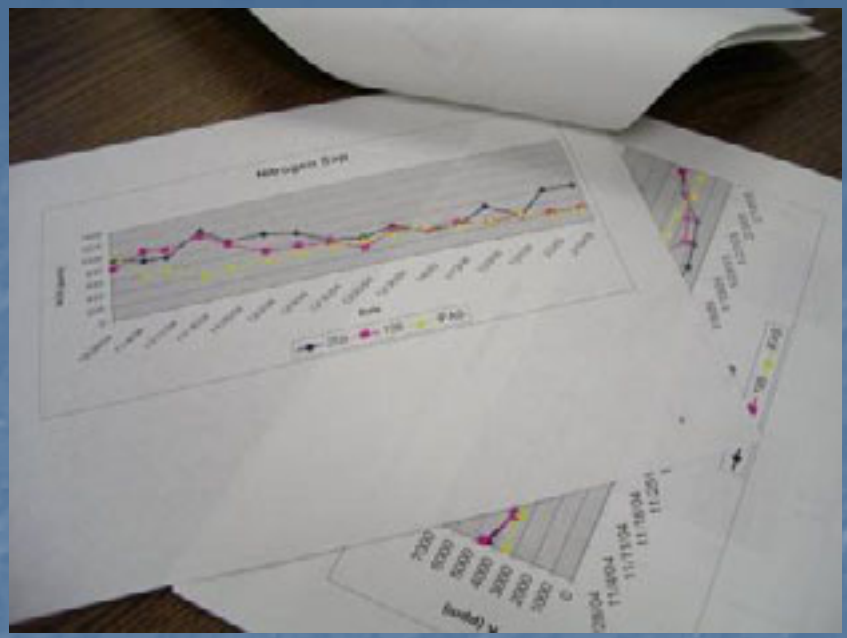


Nitrogen Rates

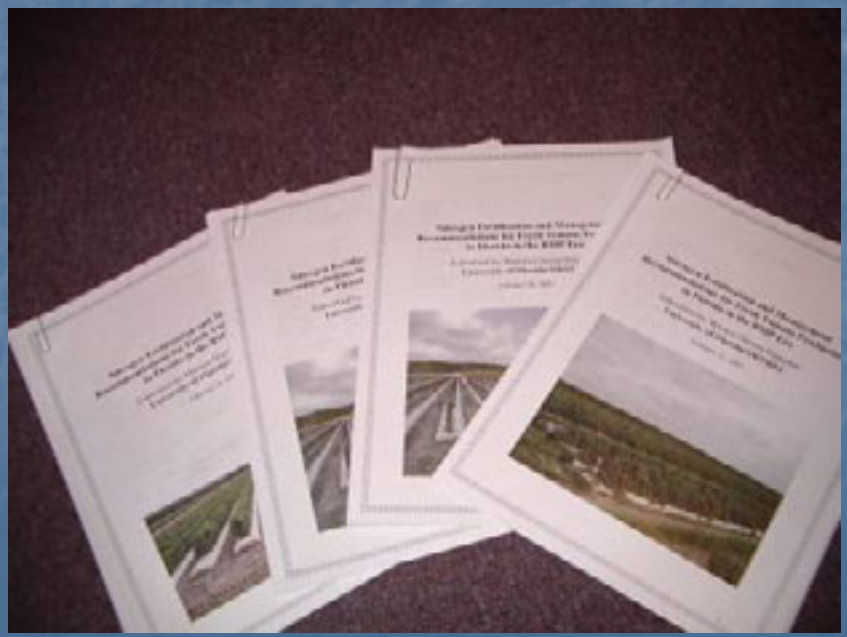
Farm	Season	Irrigation Type	N (lb/acre)	Plot size (acre)
1	Fall	Seep	200, 240, 260, 260& biosolids	0.33
2	Fall	Seep	195 and 255	0.83
2	Fall	Seep	195 and 255	0.83
2	Spring	Seep	195 and 255	0.83
3	Spring	Seep	200 and 300	0.83
4	Fall	Drip	250 and 418	0.10
5	Fall	Drip	200 and 300	50
5	Fall	Drip	200 and 300	35
5	Spring	Drip	200 and 300	52

Seep Experiments

6 plots per treatment
10 plants per plot
3 harvests



Weekly report to growers and IFAS



Final report to growers and final data set to IFAS

Fall Experiments

Field History/Fall 2004

Farm acreage	1,300
N Rates (lb/acre)	200 to 260 plus BS
IFAS rate (top mix)	1200 lb/a (15-0-26)
Irrigation	Seepage
Plot size	0.33 acre
Planting Date	28-Sep-04
Cell Size	242
Fumigation	Methyl Bromide
Linear ft per acre	7,260
Plant population	4,840
Bed Heigth	8 in
Plant Spacing	18 in
Row run	North - South
Monitoring Wells	4
Harvest Date	
1st	27-Dec-04
2nd	19-Jan-05
3rd	8-Feb-05

Farm acreage	3,600
N Rates (lb/acre)	200 & 255
IFAS rate (top mix)	1500 lb/a (11-0-26)
Irrigation	Seepage
Plot size	0.83 acres
Planting Date	10/5/2004
Cell Size	200
Fumigation	M.B 150/acre (98:2)
Linear ft per acre	7,260
Plan population	4,271
Bed Heigth	8 in
Plant Spacing	20 in
Row run	North to South
Monitoring Wells	2
Harvest Date	
1st	10-Jan-05
2nd	28-Jan-05
3rd	10-Feb-05

Farm acreage	2,500
N Rates (lb/acre)	200 & 300
IFAS rate (top mix)	1350 lb/a (14-0-26)
Irrigation	Seepage
Plot size	0.83 acre
Planting Date	10/5/2004
Cell Size	128
Fumigation	M.B 200/Acre (67:33)
Linear ft per acre	7,260
Plant population	3,346
Bed Heigth	8 in
Plant Spacing	26 in
Row run	North to South
Monitoring Wells	2
Harvest Date	
1st	3-Jan-05
2nd	18-Jan-05

Soil Analysis/Fall 2004

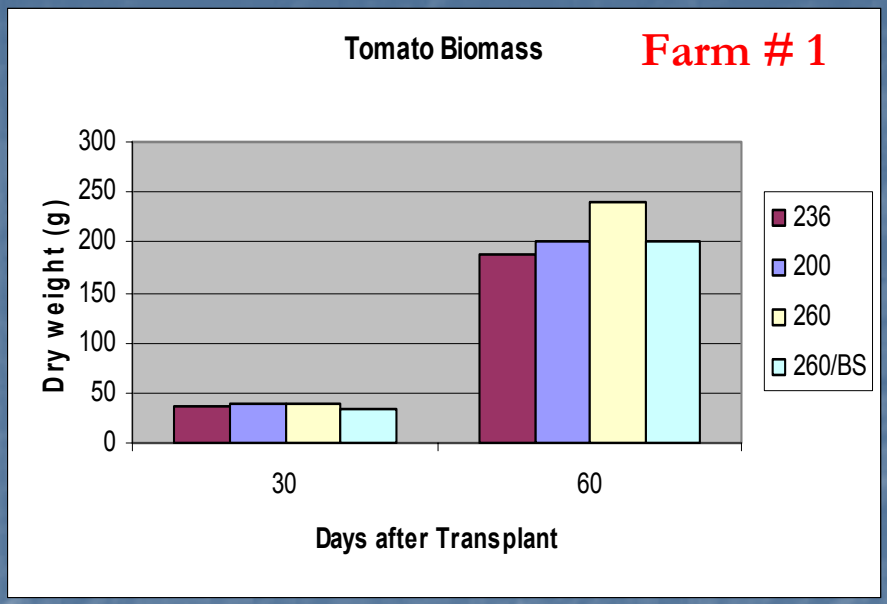
Farm #1	Soil Analysis (ppm)
pH	6.6
Phosphorus	>145
Potassium	11
Magnesium	>208
Calcium	>1024

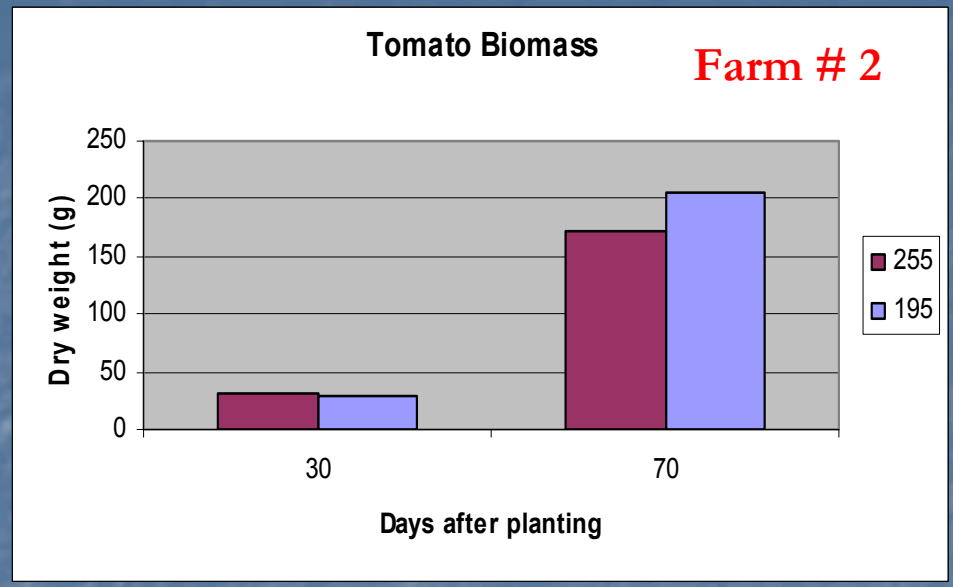
Farm #2	Soil Analysis (ppm)
pH	7.4
Phosphorus	92
Potassium	4
Magnesium	47
Calcium	430

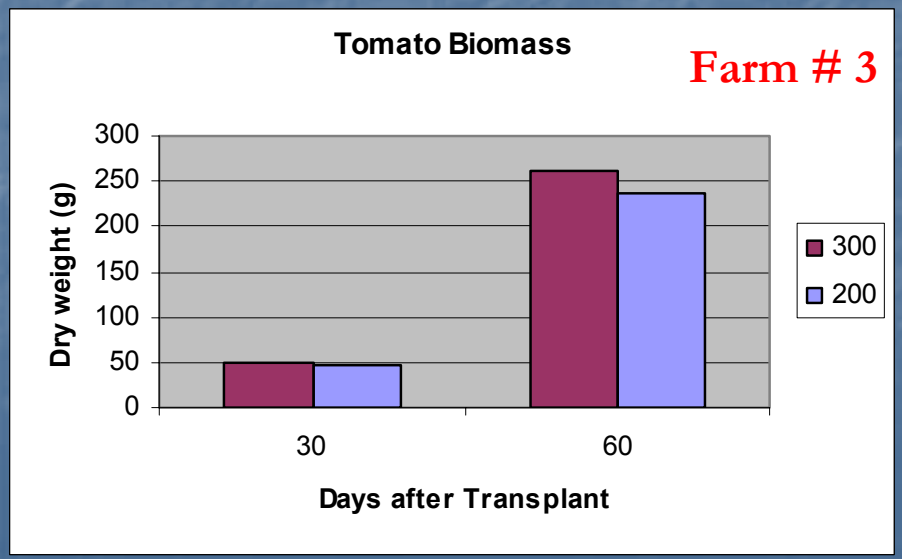
Farm #3	Soil Analysis (ppm)
pH	6.9
Phosphorus	>184
Potassium	22
Magnesium	180
Calcium	>1494

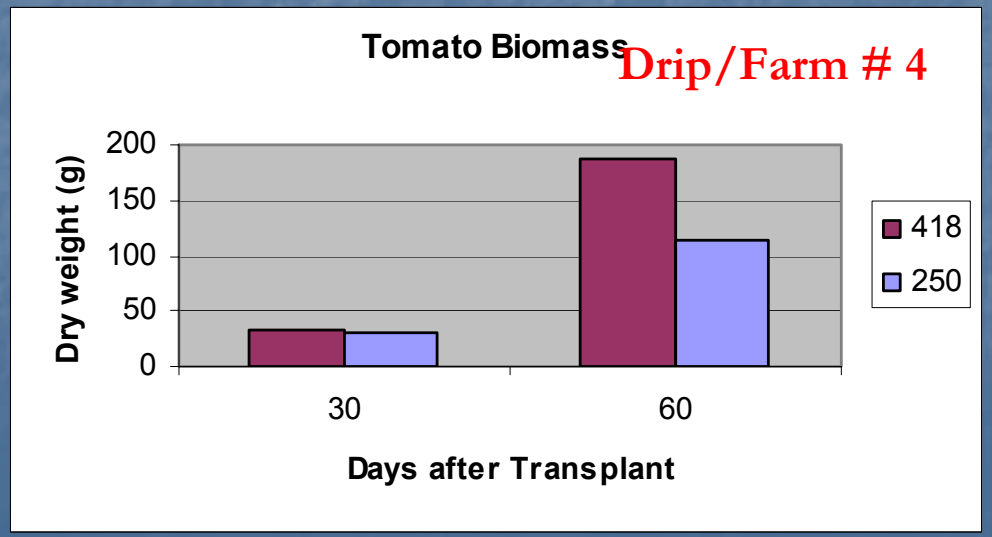
Farm #4	Soil Analysis (ppm)
pH	6.8
Phosphorus	>184
Potassium	16
Magnesium	118
Calcium	>1,868

Tomato Biomass/Fall 2004

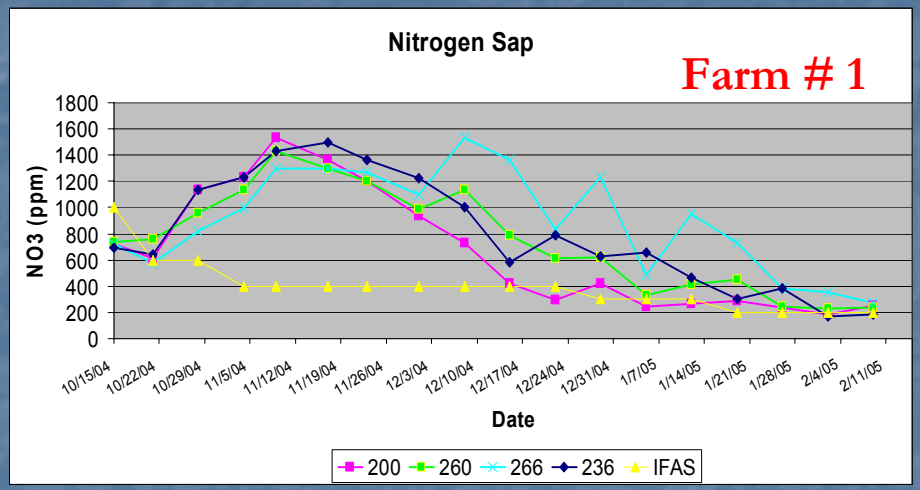


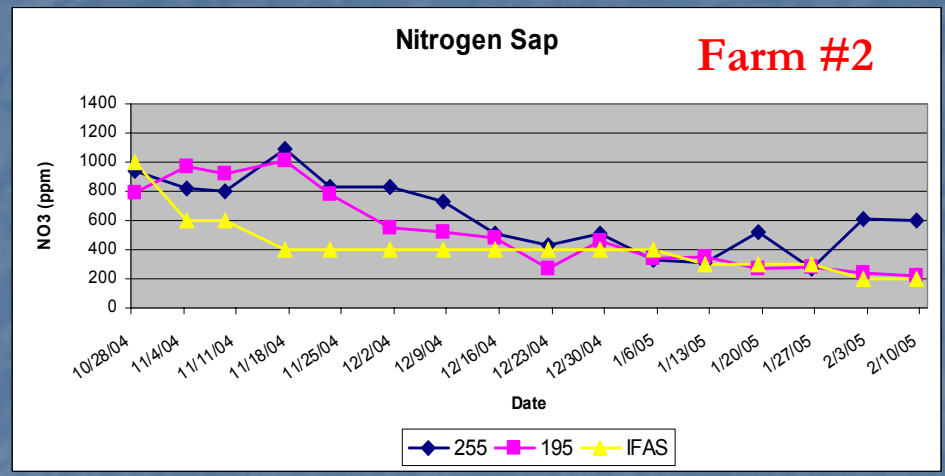


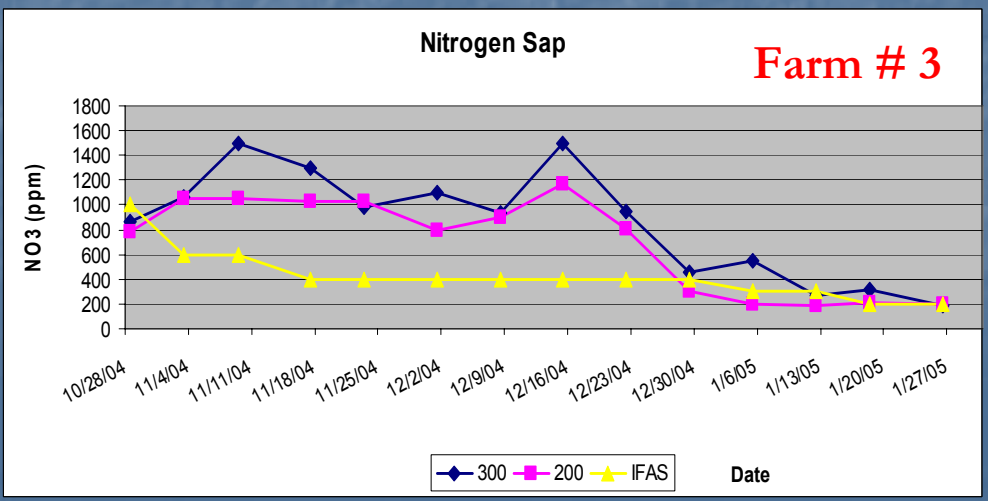


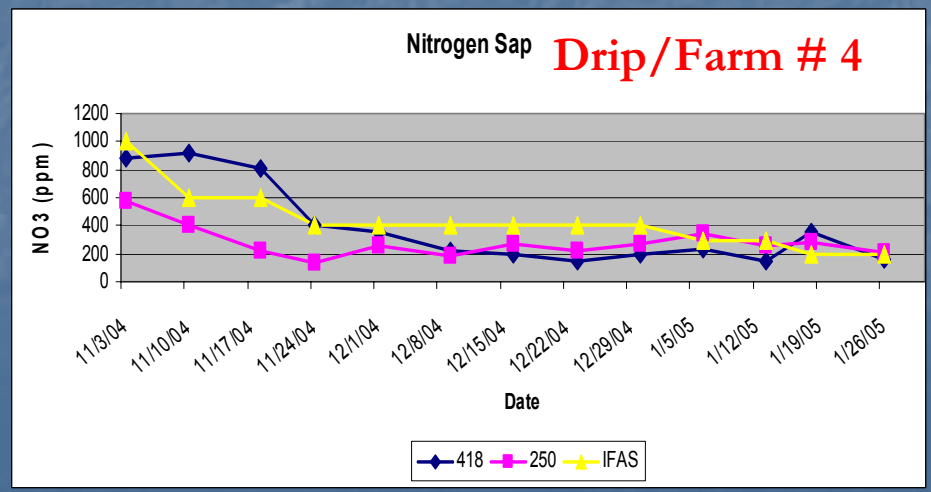


Nitrogen Sap/Fall 2004

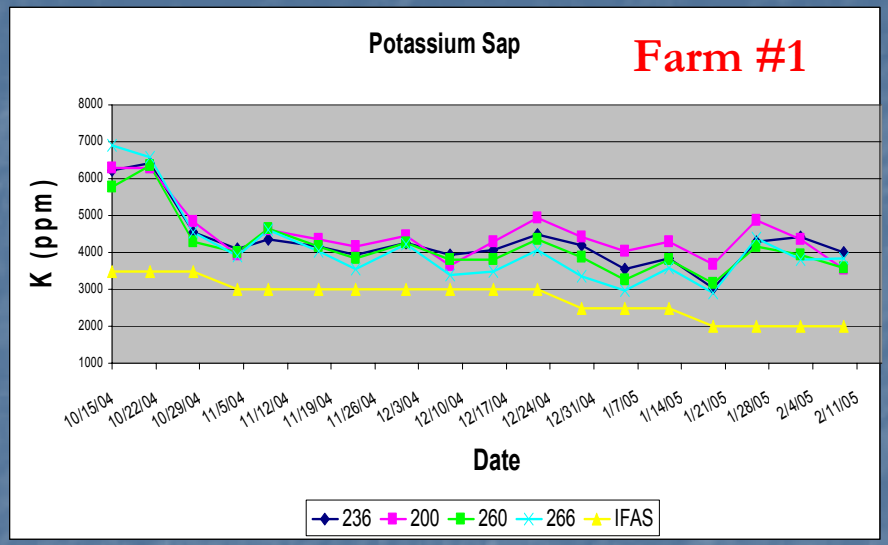


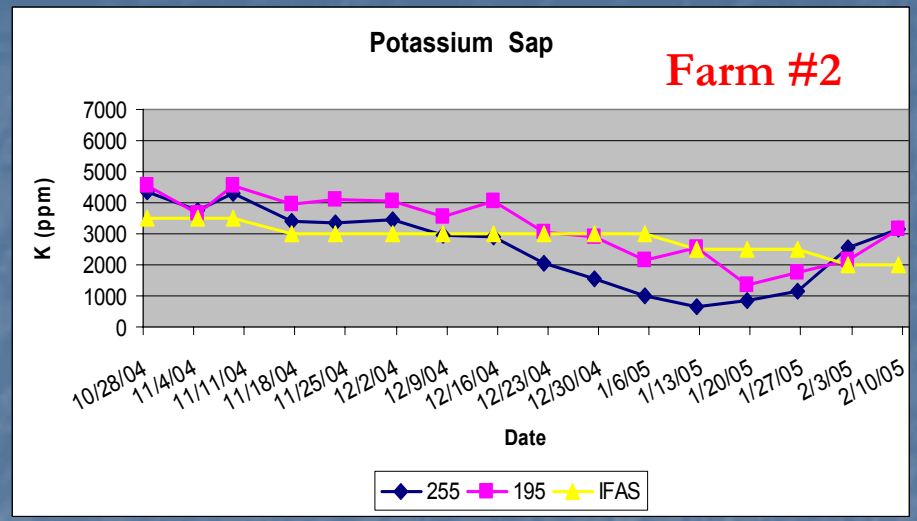


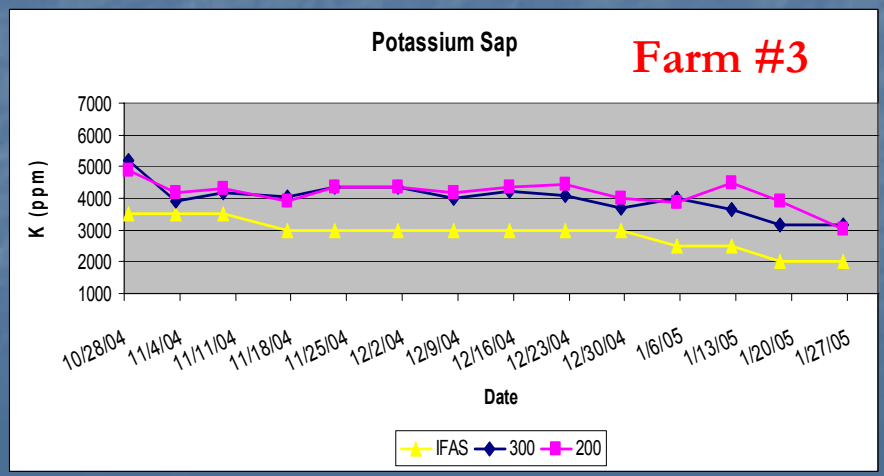


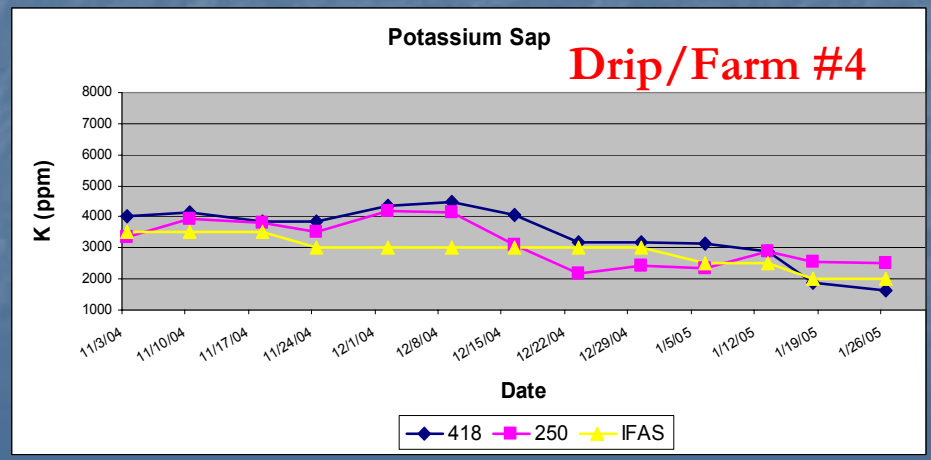


Potassium Sap/Fall 2004

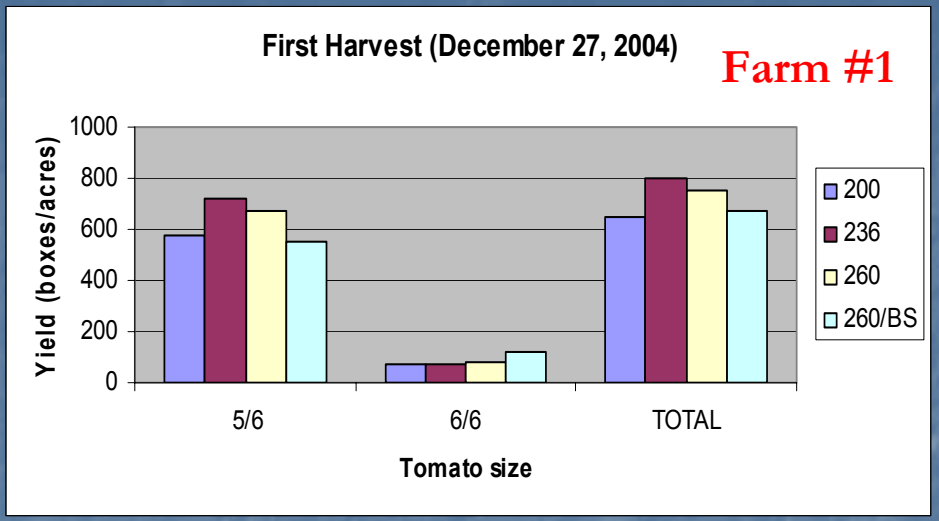


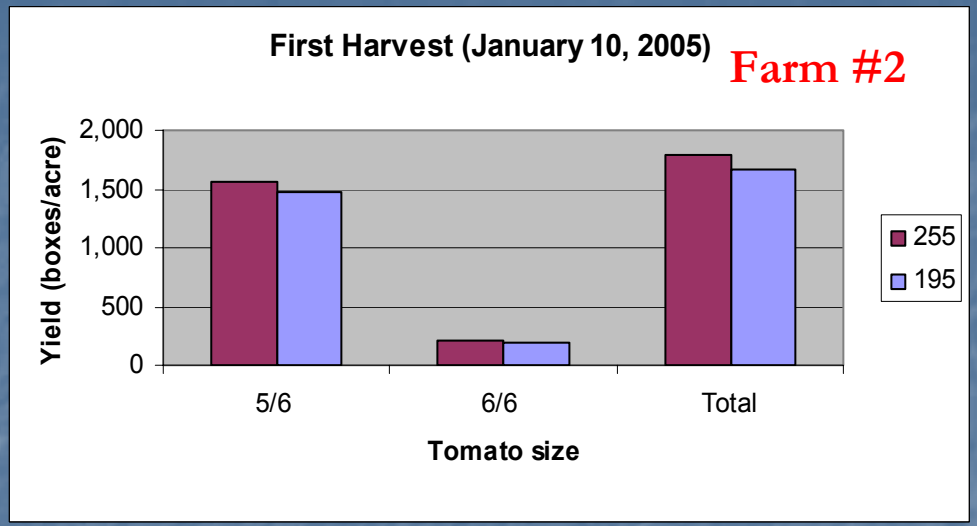


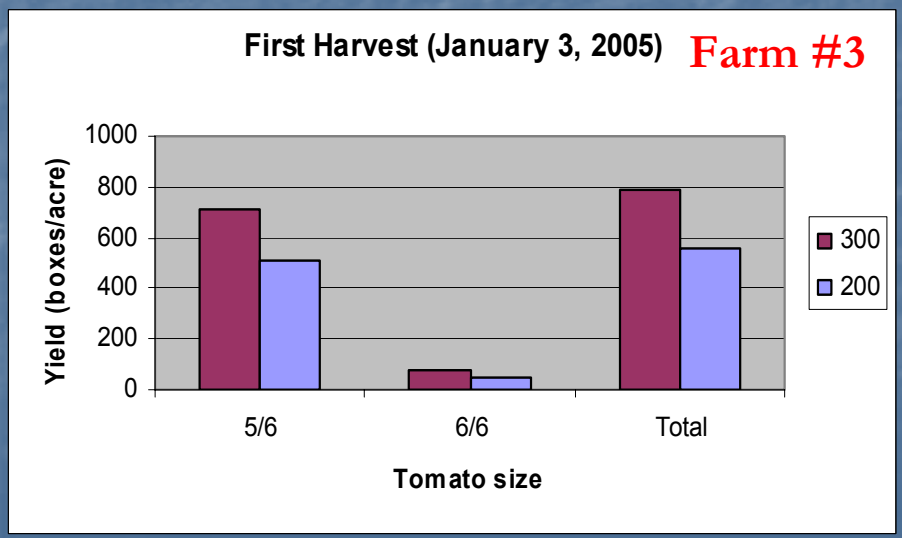


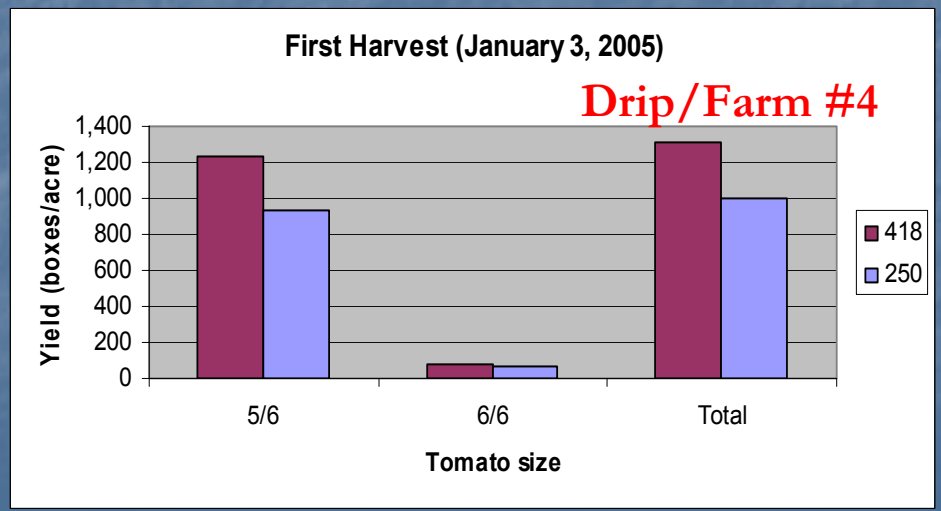


First Harvest/Fall 2004

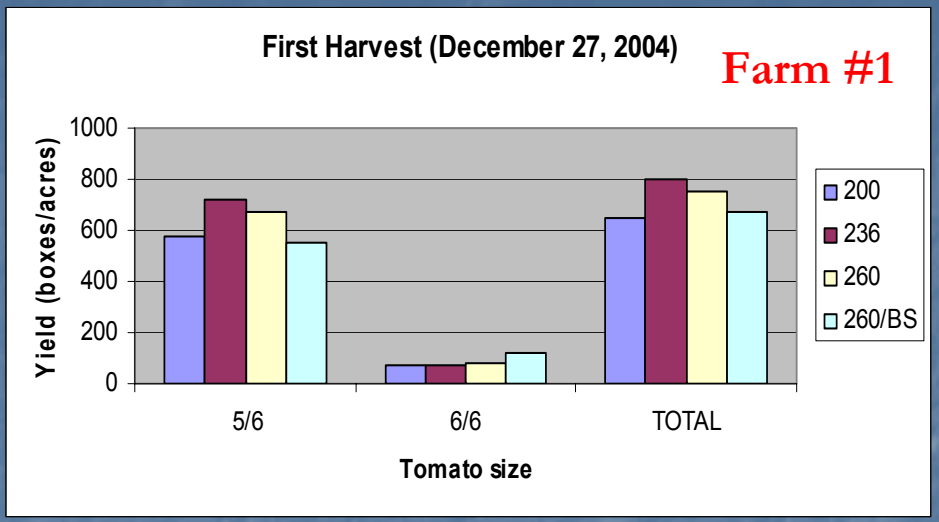


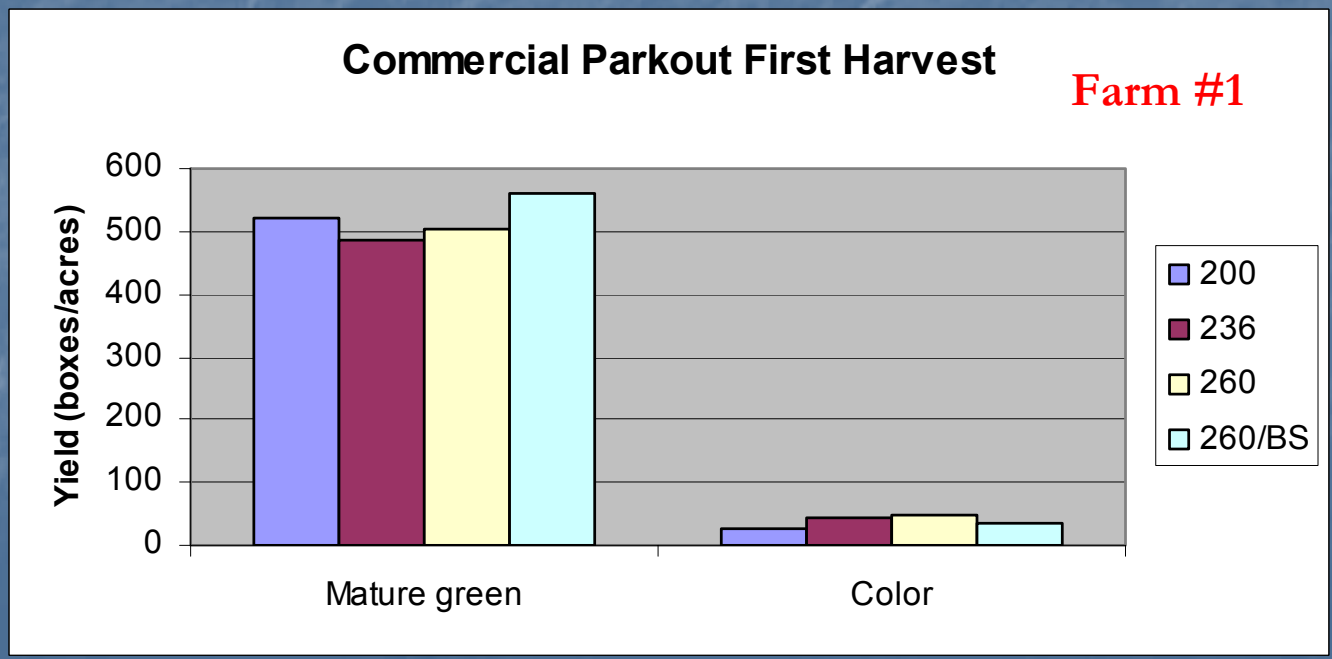




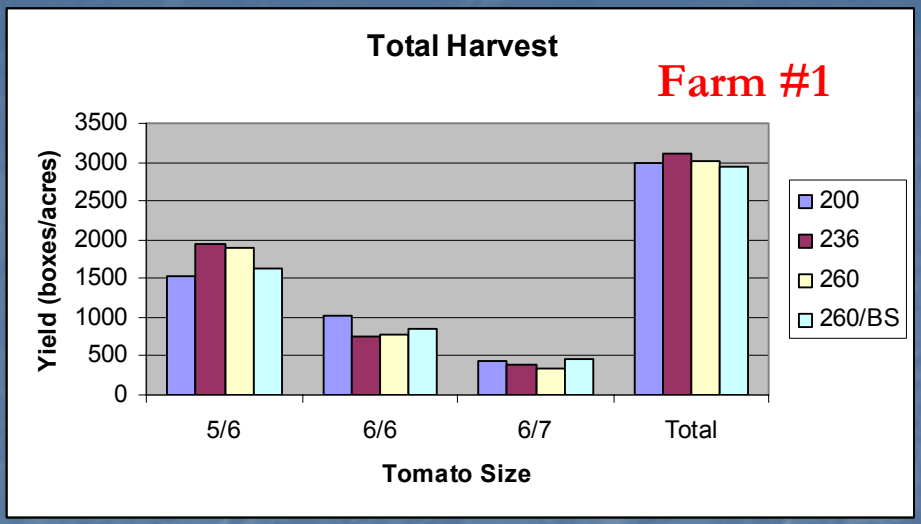


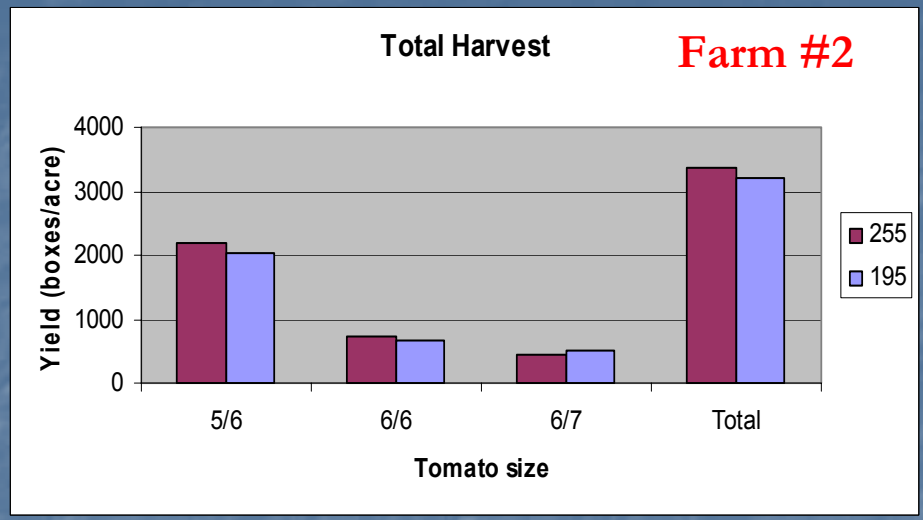
First Harvest/Fall 2004

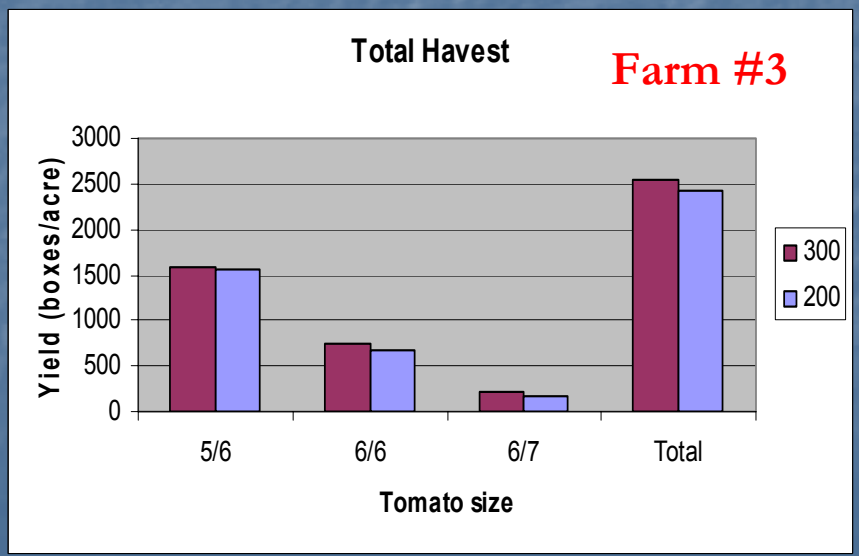


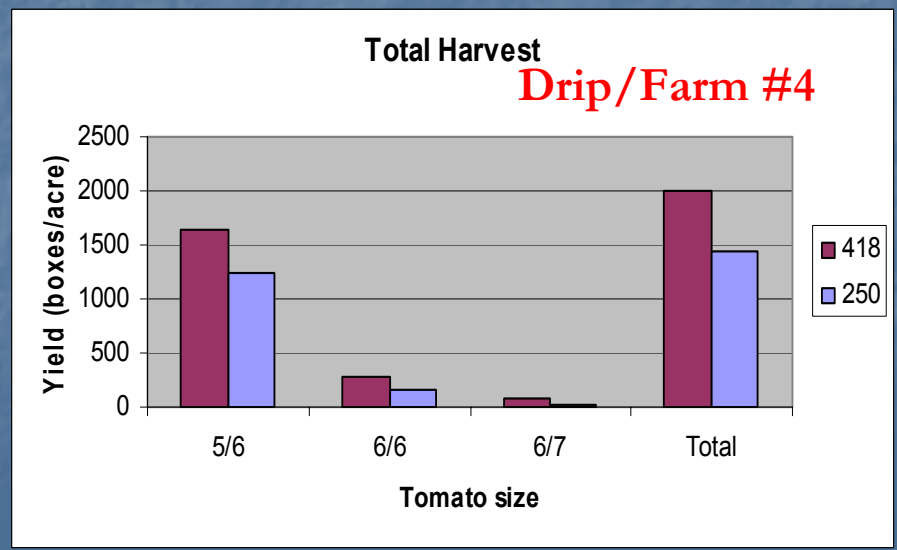


Total Yields/Fall 2004

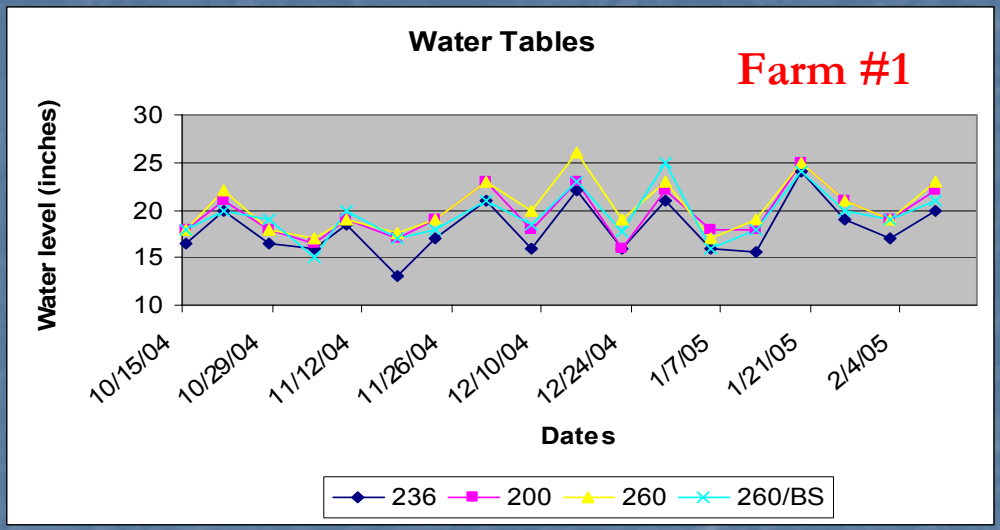


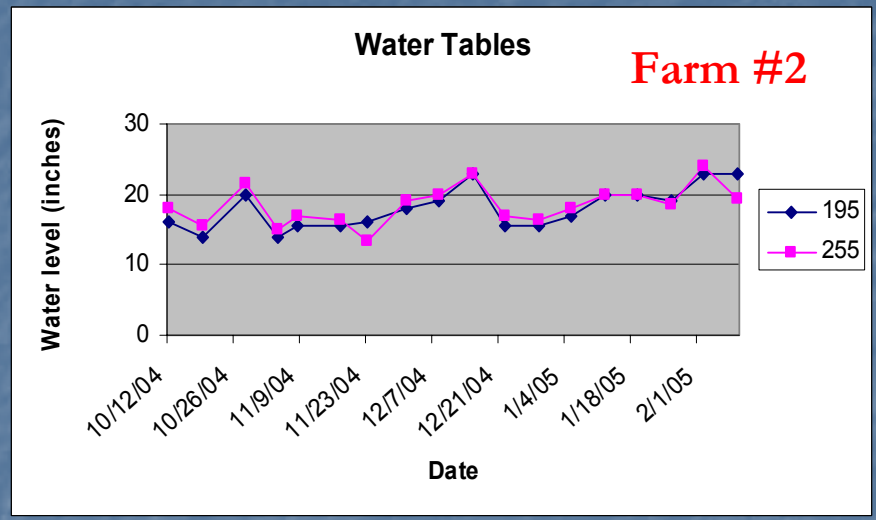


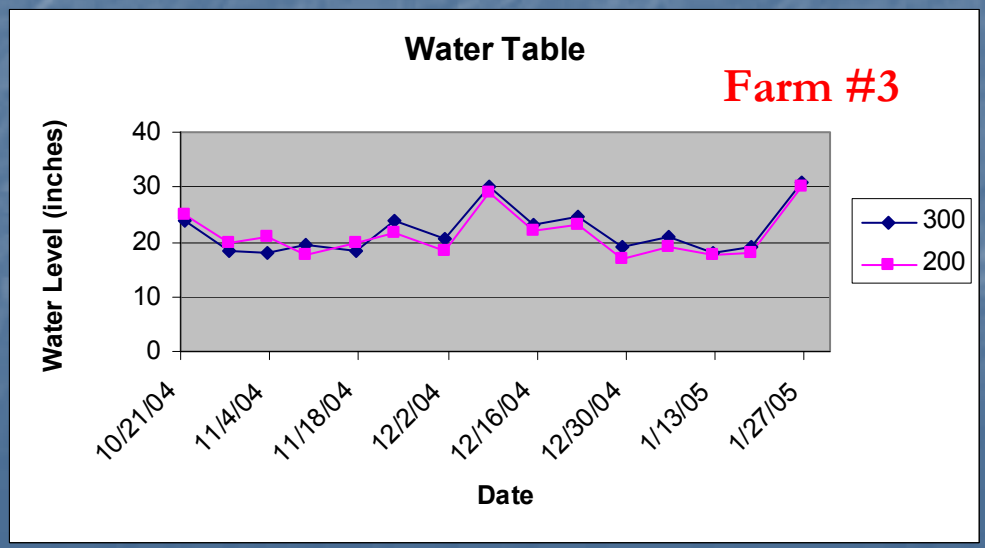


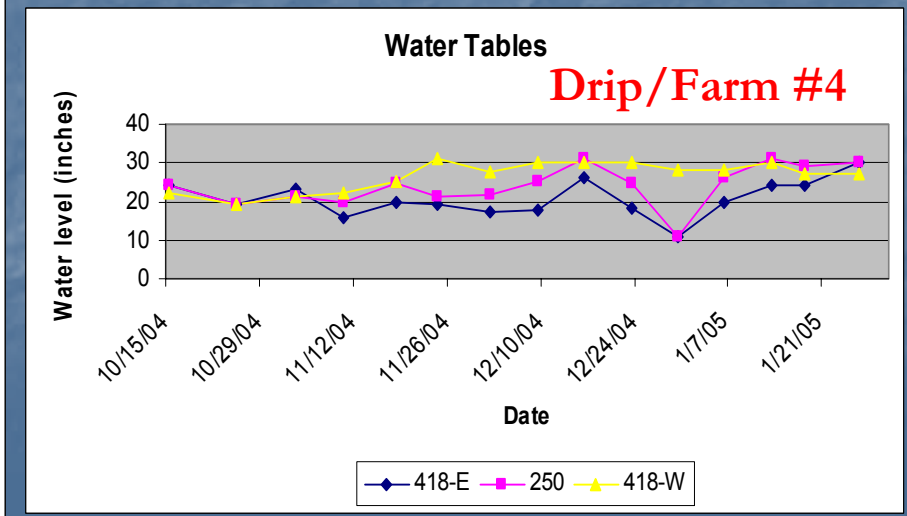


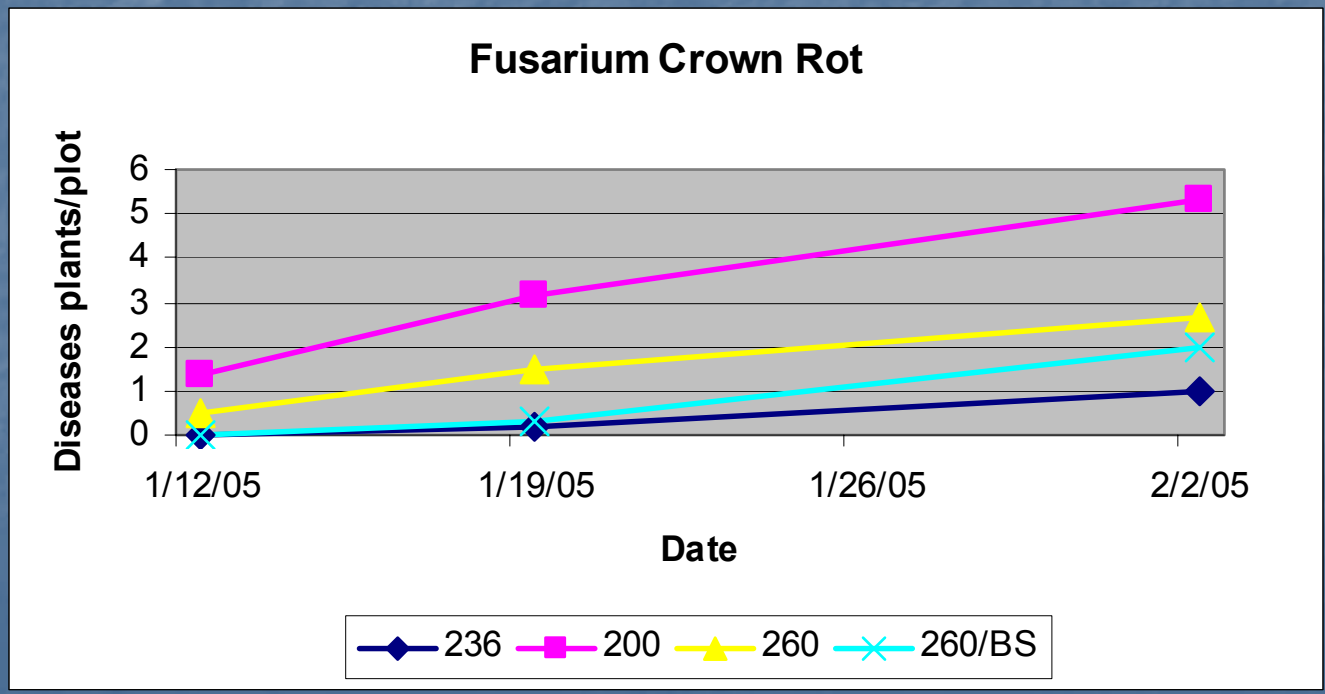
Water Tables/Fall 2004










Fusarium Crown Rot
Diseases plants/plot
6
5
4
3
2
1
0
1/12/05
1/19/05
1/26/05
2/2/05
Date
236
200
260
260/BS


Farm # 5
Drip Irrigation
Fall, 2004
200 lb N/acre
300 lb N/acre


Farm # 5
Drip Irrigation
Fall, 2004

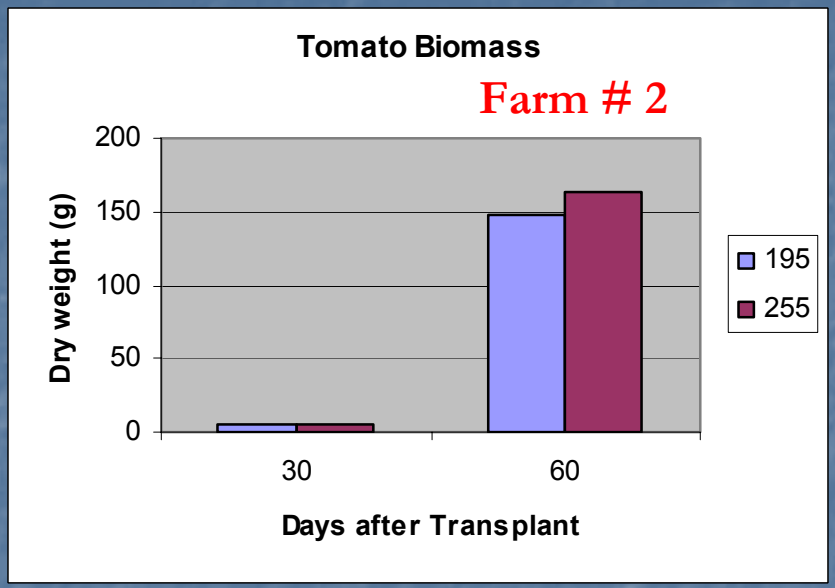
Spring Experiments

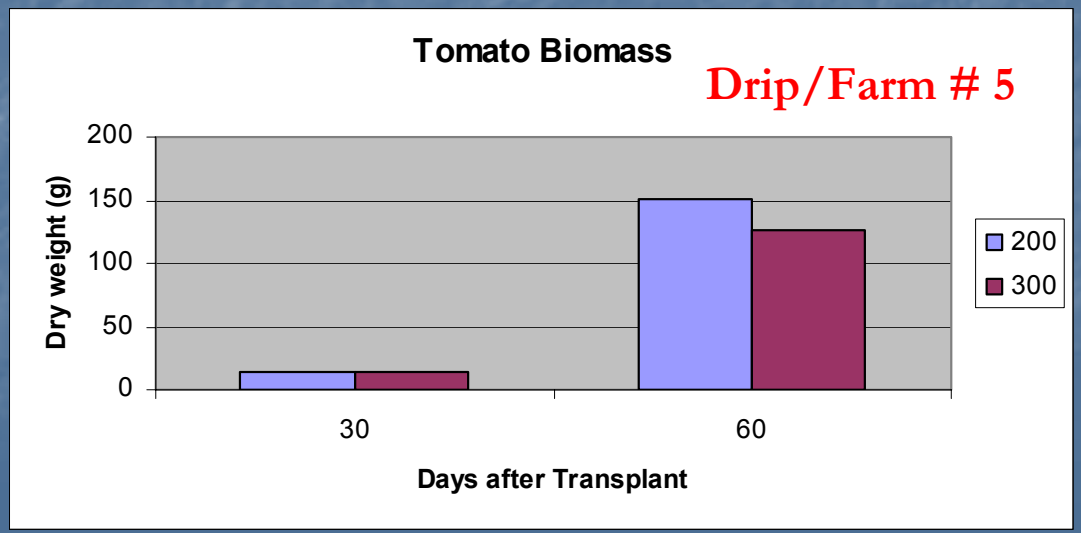
Field History/Spring 2005

Field History	
Farm acreage	3,600
Irrigation	Seepage
Planting Date	Dec 3th 2004
Cell Size	200
Fumigation	M.B 150/acre (98:2)
Linear ft per acre	7,260
Plant population	4,271
Bed Heigth	8 in
Plant Spacing	20 in
Row run	North to South
Monitoring Wells	2
Harvest Date	
1st	22-Mar-05
2nd	5-Apr-05
3rd	19-Apr-05

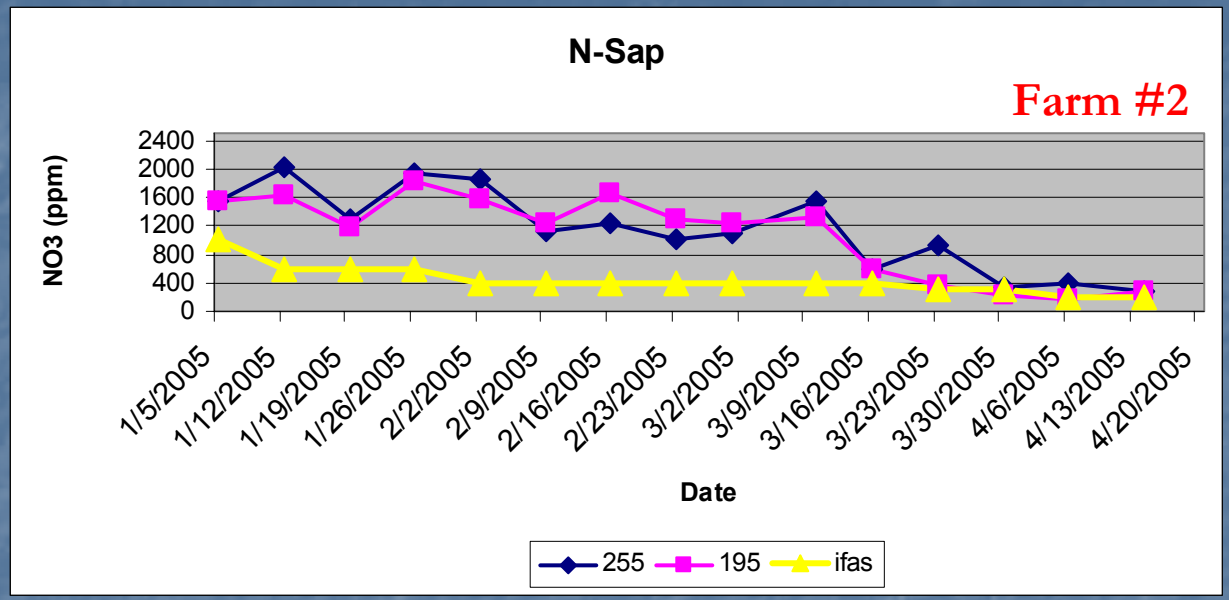
Field History	
Farm Acreage	5,000
Irrigation	Drip
Planting Date	22-Nov-04
Cell Size	Various
Fumigation	M.B
Linear ft per acre	8,712
Plant population	4,312
Bed Heigth	8 in
Plant Spacing	24 in
Row run	North to South
Monitoring Wells	2
Harvest Date	20 weeks
1st	15-Mar-05
2nd	29-Mar-05
3rd	12-Apr-05

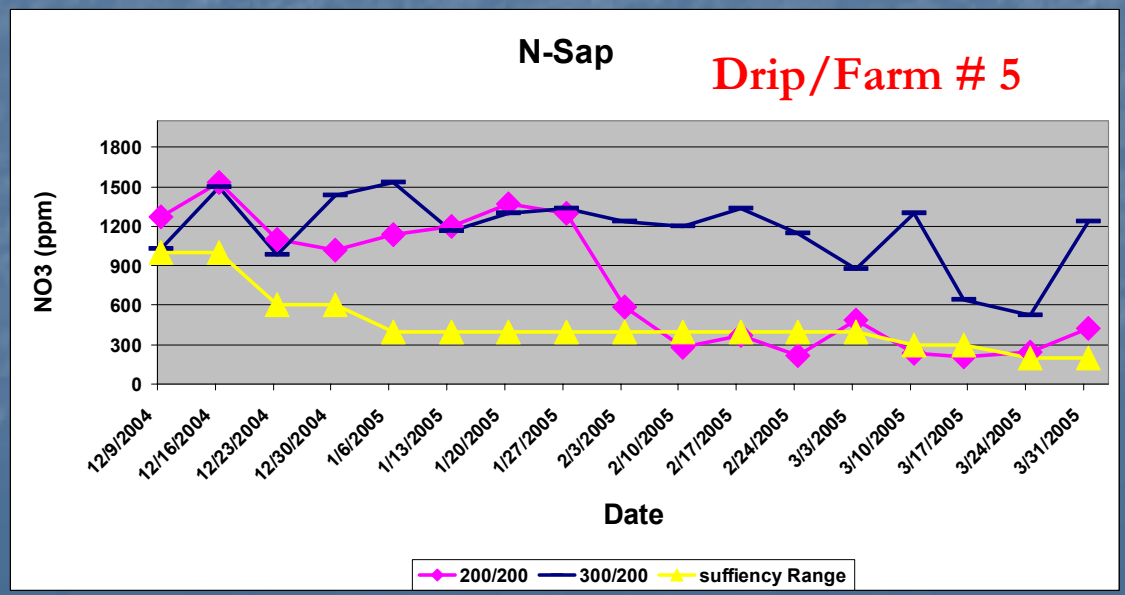
Tomato Biomass/Spring 2005



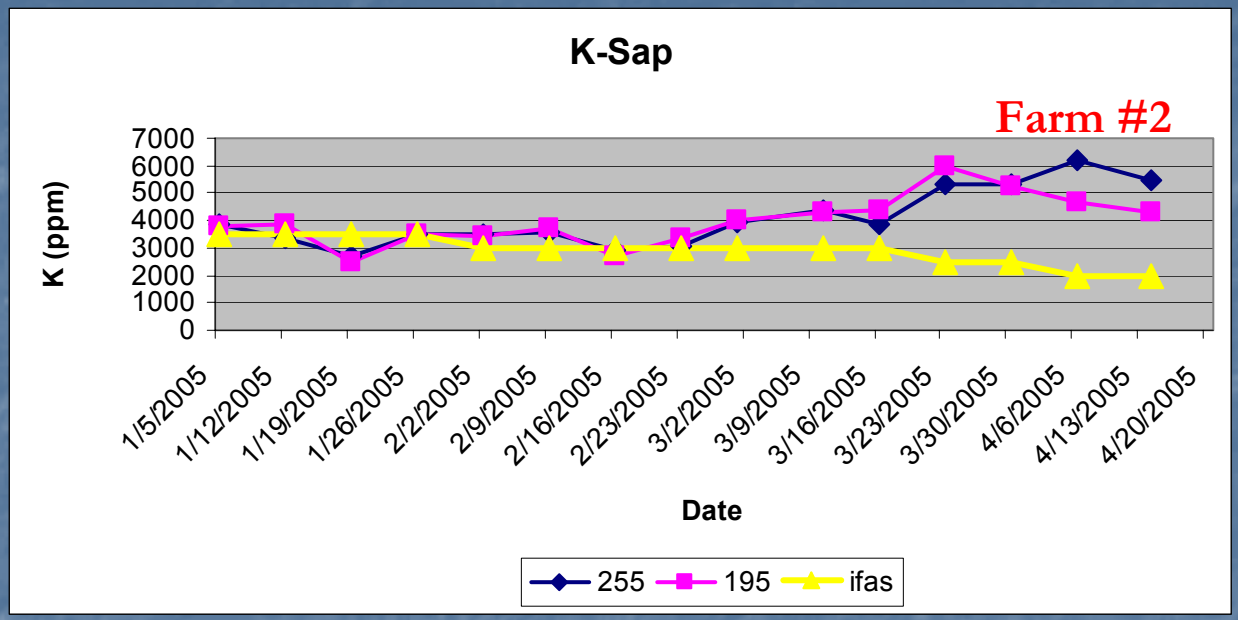


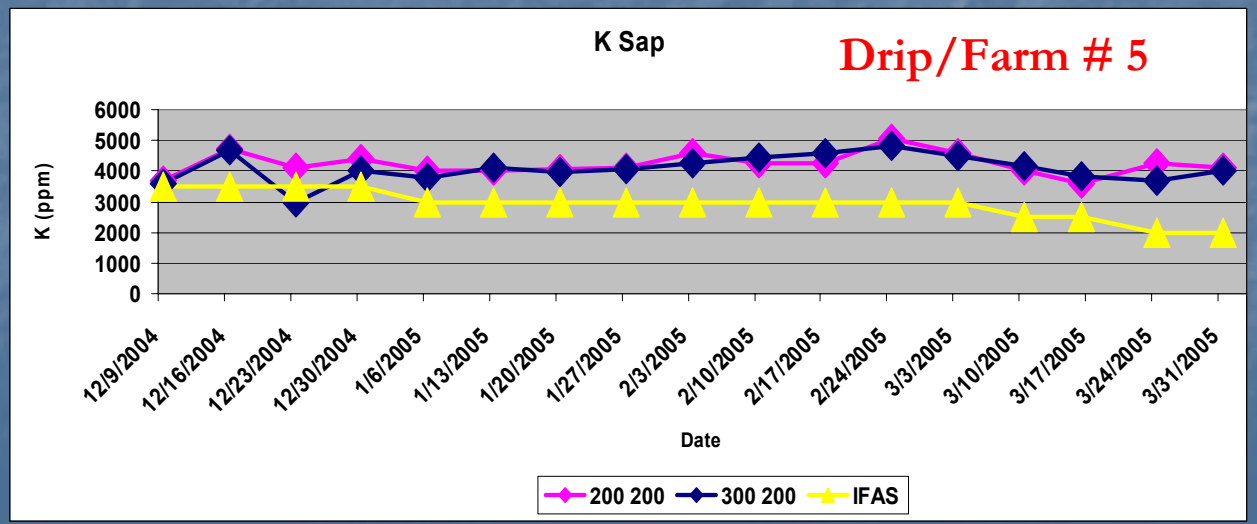
Nitrogen Sap/Spring 2005



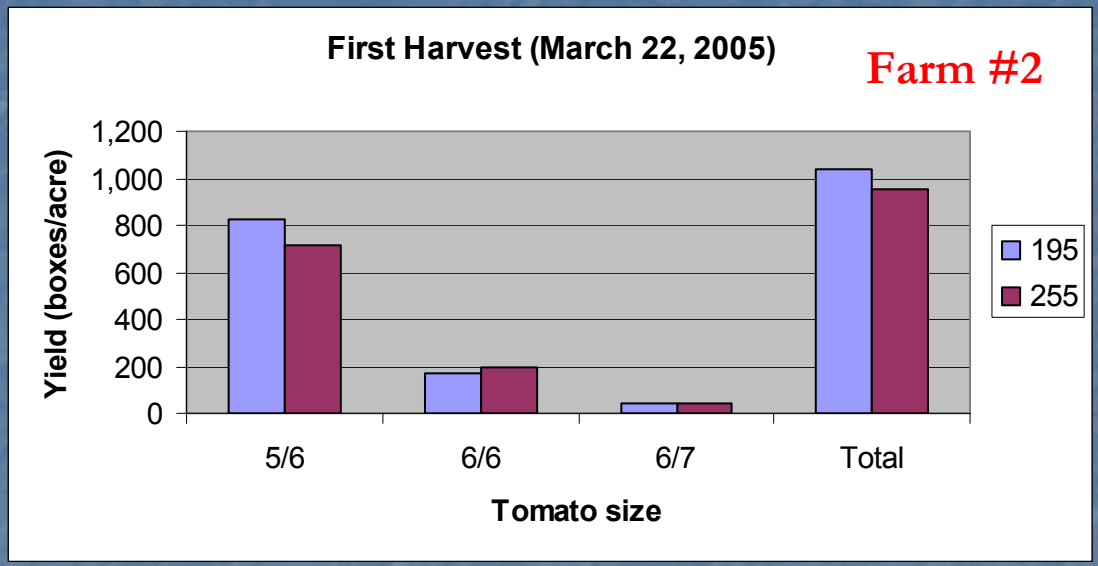


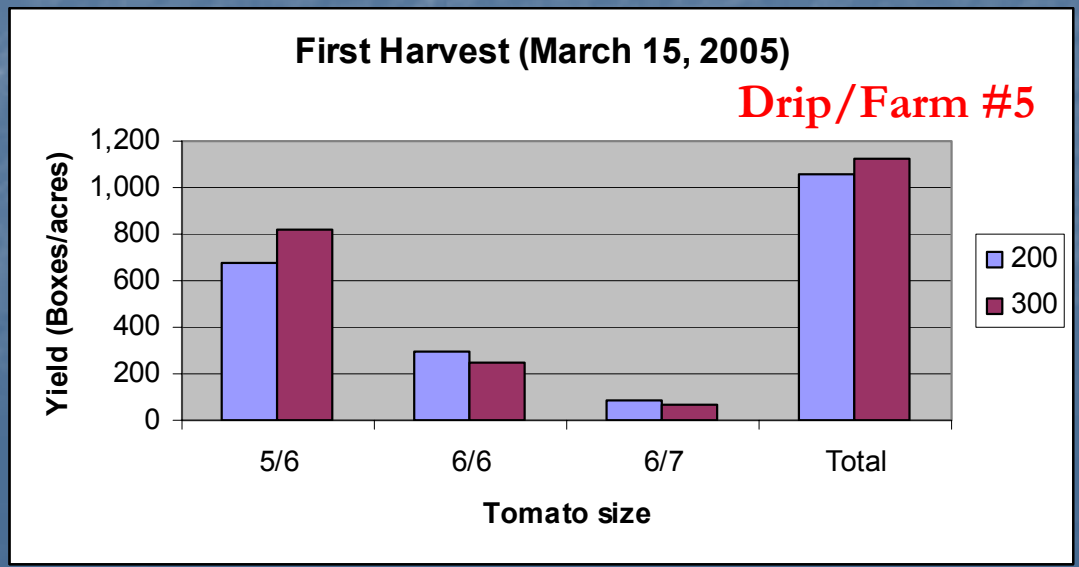
Potassium Sap/Spring 2005



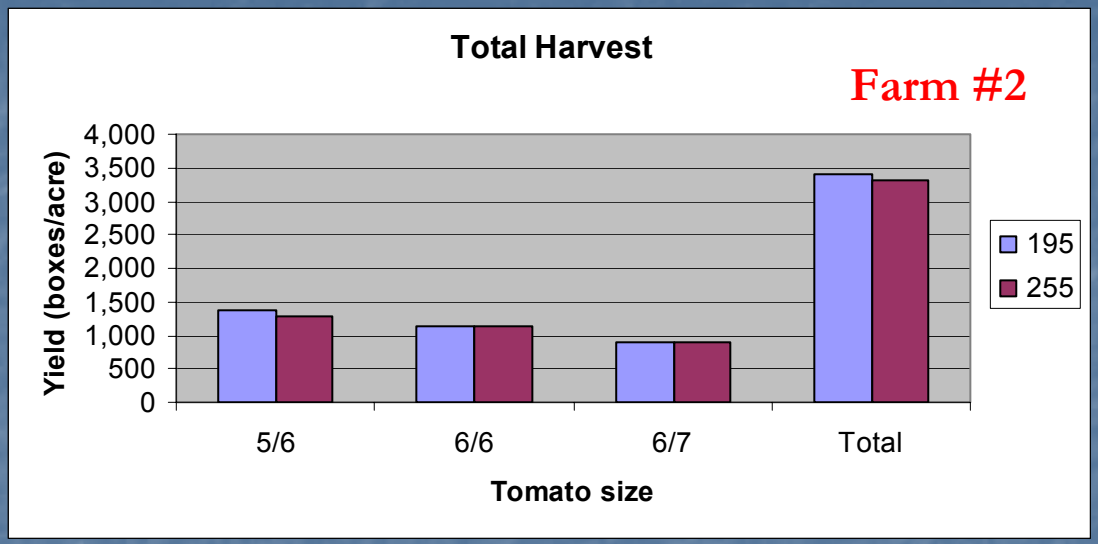


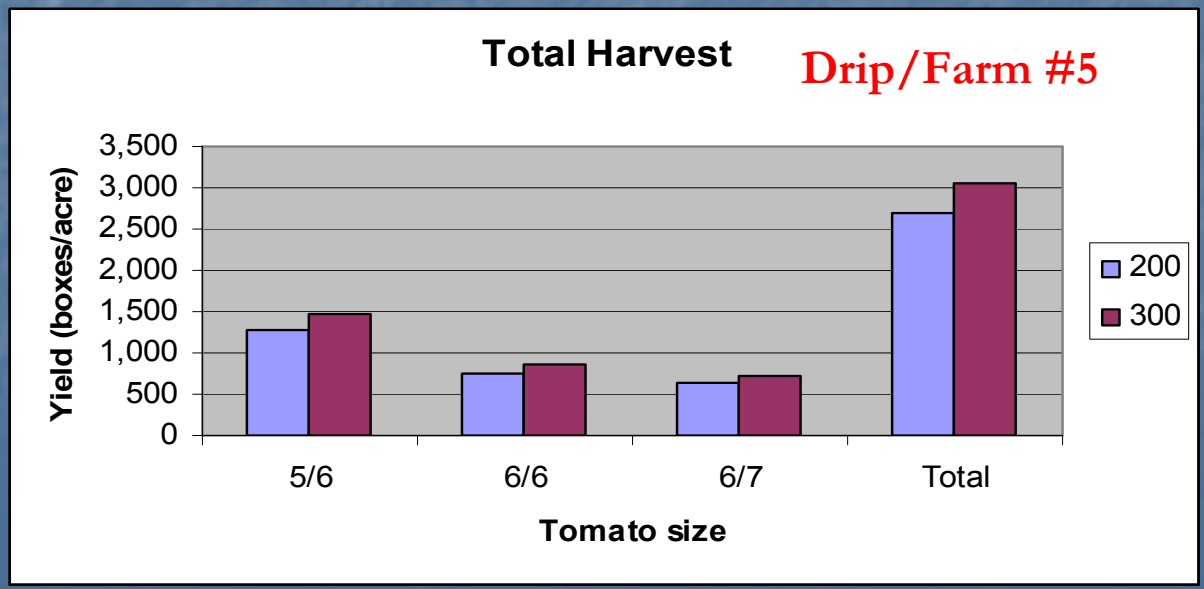
First Harvest/Spring 2005



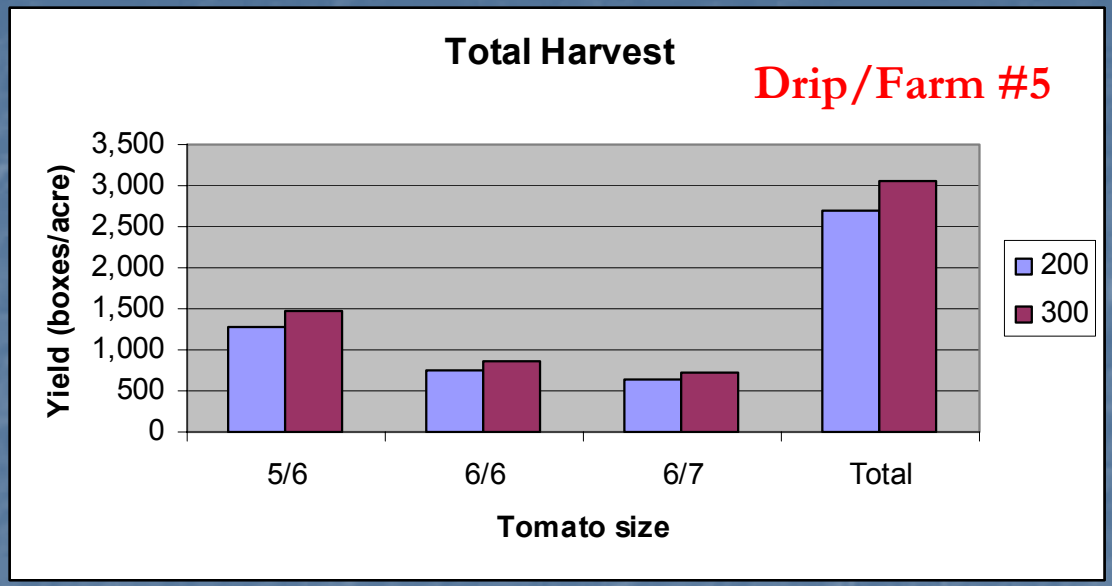


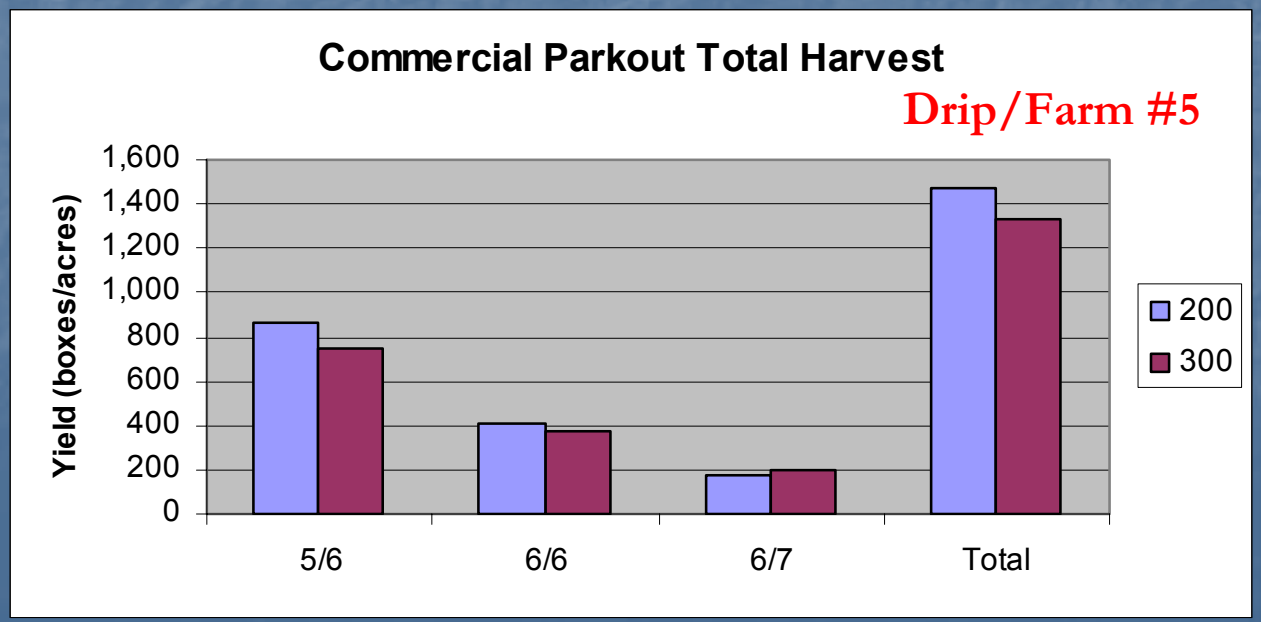
Total Yields/Spring 2005



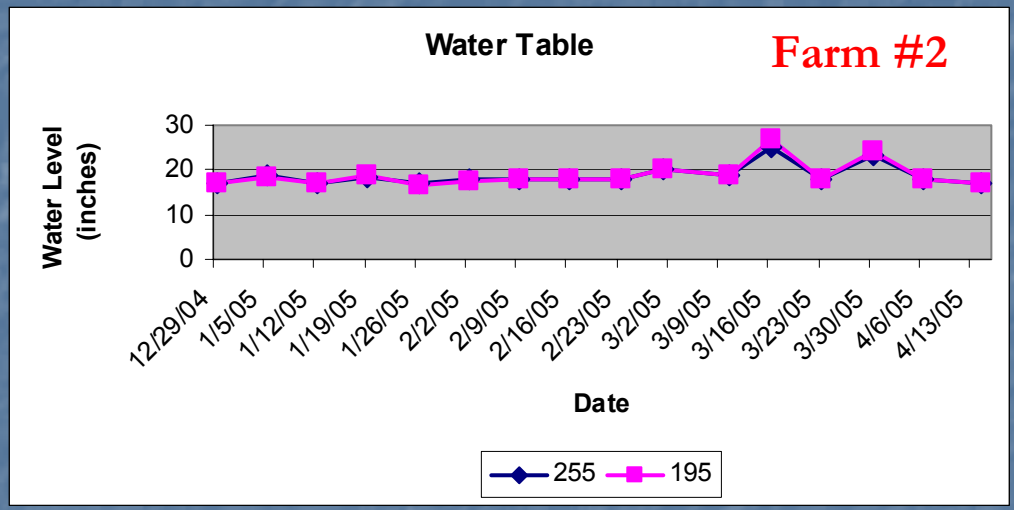


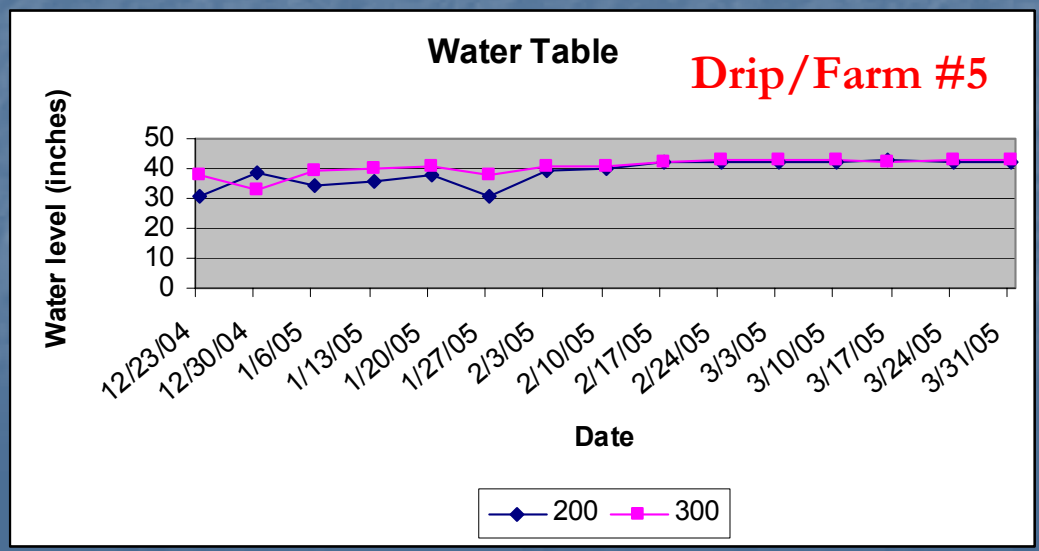
Total Yields/Spring 2005





Water Tables/Spring 2005





Future Testing