

# Cotton Field Check

## Field Conditions and Comments: Early June, 2007

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Plants across San Joaquin Valley fields remain quite variable in vigor and stage of growth, but with many fields receiving a first within-season irrigation recently, many plants that earlier looked pretty beat up or low in vigor are starting to look better. Field evaluations of some weaker-looking fields in recent weeks have revealed that many slower growing plants had: (a) damage to leaves and terminals from thrips or high winds and earlier hot weather; and/or (b) beat up root systems, with damaged tap roots, relatively weak lateral roots that were trying to get into moist soil. In our opinion, particularly where this combination of conditions occurred, plants had limited resources to extend roots deep enough to access available soil moisture, and timely irrigations helped “save” or greatly improved chances of renewed growth in damaged plants. With hotter weather supposed to be back in the picture again this coming week and plants actively squaring, this improvement in growth rates will improve chances of making up for some rough weeks of slower growth in some fields. As we approach first bloom, attention to developing plant growth problems and assessments of retention and pest control issues should be prime concerns. The next three to five weeks or so are probably some of the most sensitive times of the production season in terms of avoiding big irrigation, PGR and pest management problems that can damage yield potentials and the chance for sustained fruit retention.

Some plant mapping examples shown below indicate a few developing situations that might have some relevance to your field situations. Many fields observed recently have had fairly “normal” node counts to the first fruiting branch. By comparison, last year many plants had higher node counts to the first fruiting branch, resulting in plants more inclined to be strongly vegetative early on, and prone to aggressive vegetative growth if any fruit retention problems occurred. This year in many fields such as #'s 1, 2, and 4 in the table below, plants were a little shorter for the current node counts, the first fruiting branch was lower, and this combination should help naturally regulate plant growth rates and lessen the need for more aggressive, early PGR applications. As always, there are exceptions to these generalizations, such as field #3 below, which showed greater plant heights, longer 4<sup>th</sup>-5<sup>th</sup> internode distances than other fields, and somewhat lower fruit retention. Field #5 should also be watched for growth issues, as the retention is down a bit in combination with lengthening internodes.

**Table 1. Average Mapping Characteristics of Fields – week of June 4, 2007**

Field ID	Type of cotton	Variety	# veget nodes	# fruiting nodes	Fruit retention (%) First Position only bottom-5	plant height (in)	4th-5 <sup>th</sup> Internode dist. (in)
1	PIMA	Phy-800	7	5	83	17	1.73
2	PIMA	DP-340	6	5	88	14	1.49
3	PIMA	Phy-800	6	8	62	22	2.59
4	ACALA	Daytona	5	6	88	15	1.66
5	ACALA	Phy-72	6	7	74	19	2.47

This will not be a year for blanket, across-the-board PGR applications for all fields. Fields 2 and perhaps 4 are examples of fields showing moderate to lower vigor (partly due to earlier stresses). Lower vigor combined with the higher fruit retention indicates that these fields should be evaluated carefully for proper irrigation and PGR decisions to sustain some growth and development of fruiting branches and positions. There is admittedly a long growing season ahead and many opportunities to get some good yield potential realized in all these fields, but this time of the growing season is one to avoid additional severe stresses such as unnecessary PGR's or severe irrigation delays.