



# Cotton Field Check

Management Updates from UC Cooperative Extension  
June 06, 2008

## Field Situations, Management Options For San Joaquin Valley Cotton – early-June, 2008

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The 2008 season to date has given us cool, dry weather at the beginning, one fairly severe hot and windy spell, followed by repeated periods with cooler and quite windy weather. The result is that we have cotton fields in a range of situations this first week in June. There are some mid- to late-March plantings particularly in the southern SJV that look pretty good, with acceptable progress in square development. April and even early May plantings visited recently in mid and northern SJV represent a much broader range of conditions in terms of stand losses, variability in plant populations within and between fields, apparent leaf damage from thrips and/or wind damage, plant vigor and progress toward squaring and bloom. Something to keep in mind in years like this is that there is a tendency to think that if plantings are two to even three weeks later than what you are used to at this time of year, first and peak bloom will likewise be late by that same time frame, and yield potentials will be off dramatically. However, for some of these fields it is still a little early to make those pronouncements and we need to see if a warm-up in the weather and first irrigations improve plant vigor and progress.

While it is important to keep an eye on early square and fruit losses in what looks like a slow to develop crop this year, some cautions are still warranted: (1) if you see significant square loss, make sure to check for continuing, damaging levels of any suspected insect pests; (2) balance current pest situations against considerations such as crop growth stage, time remaining to compensate for losses, severity of fruit loss or plant damage, populations of beneficials, and resistance mgmt. issues; (3) consider and re-consider yield goals as the season develops and you start adding up input costs. The added nasty twist this year is ... water. Most growers don't want to deal with anything that extends the growing season unless the yield/price compensations are great, since price and availability of irrigation water are major issues this year. Based on past experiences, recommendations are that conditions like all these mean that early attention to plant mapping and pest evaluations will pay off.

Plant evaluations done in some Kern and Fresno County sites this past week showed:

- Generally shorter plants, lower height:node ratios than typical for this time of year (some fields)
- More leaf and terminal damage consistent with ongoing thrips injury in the later plantings, with some moderately severe damage in some locations and varieties – hopefully with better weather will outgrow this damage soon, but may require follow-up
- Some continuing losses of small plants to seedling disease in patchy areas of fields, primarily *Rhizoctonia* based on visual inspections in those fields

In some fields, however, even plants with low height:node ratios were starting to show better leaf expansion and some longer internodes at the terminal, hopefully indicating that vegetative growth rates

were starting to improve (with warming weather, irrigations, nitrogen applications of the past week or two). As plants hopefully start to respond to what we hope will be more favorable weather, available soil water and nutrients, it will be important to focus on specific plant growth responses. While some earlier south and central SJV plantings are moving along in development, right now it looks like many later fields won't have blooms present until late-June or even early July. During square development and with the threats of limited water and somewhat later development, it will be useful to assess developing field situations and continue with some plant mapping and consistent monitoring of pests and beneficials. This year we expect to see some significant acreage of plants that could be described in one of the following ways:

**WEAK TO MODERATE VEGETATIVE GROWTH, THINNER STANDS, SOME RETENTION PROBLEMS.** There are a lot of issues going on in these fields, and some variable plant populations to manage all in the same field. Variable plant populations mean that these fields will be hard to sample (for plant growth and insect counts) season long. As we approach first flower, be flexible in making plant growth regulator (PGR's such as PIX, etc.) decisions. If retention remains good in some of these weaker stands, PGR applications may be at lower rates or unnecessary. However, if good growth rates develop and fruit retention is highly variable, expect that more intensive sampling will be required to assess both plant growth and insect situations, as a range of things may be going on in the field. Try to go back to the same zones within the field each time to get a handle on how things are going.

#### **WEAKER VEGETATIVE GROWTH AND GOOD RETENTION**

It may be a little early to tell about retention possibilities, but we may end up with plants fitting this description. Such plants could become candidates for early cutout if retention is good and growth limited by factors such as limited water, delayed irrigations. These plants could move toward early cutout, which may be a bad thing (reduced yield potential) or a good thing (earlier crop termination with a late-planted crop or where concerns are with running out of water). Particularly if plants have weak root systems and poor/moderate early growth, you could decide to push plants with water or nutrients (if availability and input costs pencil out) to promote and prolong active growth. Your own past experience with the ground will help tell you if the plants are likely to broadly respond and continue growth with earlier or higher amounts of irrigation and fertilizer used to "push" the plants, or if the response will likely be sporadic across the field. If you're unsure of the response or think yield responses or water/input availability will be limited, keep supplemental fertilizer applications (those made after a first split) moderate in amount (30-40 lbs N/acre, for instance) and see how plants respond. It is still pretty early in the season to make final judgements about yield potential.

#### **A REMINDER - INFORMATION ON FUSARIUM IN COTTON:**

In University and industry meetings in recent years, we have reminded PCA's and growers to be on the lookout for signs of the fungal pathogen "Fusarium oxysporum" (particularly Race 4) in cotton fields in the San Joaquin Valley. While the foliar damage in some ways resembles that with *Verticillium* wilt, the worst impacts typically hit closer to the timing of seedling disease losses (early season). Therefore, this is the time of the year to pay particular attention if you see symptoms in areas with no prior known history with this disease. Updated information on why you should be aware of this potential problem, what is different in the Fusarium race identified, pictures of symptoms, information on the organism life cycle, and containment recommendations are shown in COTTON MANAGEMENT GUIDELINES and FUSARIUM UPDATES available on our UCCE cotton website at: <http://cottoninfo.ucdavis.edu> or from your county UCCE Farm Advisor.