

# Cotton Field Check

## A Cotton Management Update from UC Cooperative Extension

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### Early-June Management Considerations

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First within-season irrigation water applications have been made in many fields the past week or two in some lighter soils, with the first irrigation underway now or coming soon in heavier soil areas. Either at this or the next irrigation, this also can be the timing of primary nitrogen fertilizer applications. No one want N to be the yield limiting factor in your fields, but if irrigation water limitations are one of your production problems this year, it can be important to try and reduce applied N since you may not have the water to go for a really long fruiting cycle and extending growth well into the fall. It is not generally a productive practice to use water and fertilizer to “build” a relatively large plant in the hopes of lots of fruiting sites, and then short it for water, stressing it hard during the flowering and boll loading period. Adjust N applications while keeping in mind water availability and what you can afford.

#### GROWTH REGULATOR MANAGEMENT DECISIONS

We are still early for making growth regulator applications in most fields, but it is not a bad thing to begin thinking about PGR's and plant monitoring strategies for this year. I think that for fields with 6 to 9 nodes at this time, PGR's are not yet called for even if you are planning on trying to manage plants for reduced total water applications this year ... give it a week or so and check again to see how rapidly the plants are growing as the weather warms back up and the sun comes out. For fields where plants are at about 10 total nodes or more and you have relatively high soil fertility, take a look at the specific fields where in the past you have had past problems with excessive vegetative growth and see how plants are progressing this year. In fields with 10-12 nodes where you have prior history of growth management problems, those “might” be candidates for those early (pre-first bloom) PGR applications ... but only those types of plant and field combinations. Check those plants carefully to see if early squares are holding, as good early square and fruit set helps with regulating growth to some extent.

We have a range of planting dates and variable plant conditions across regions of the valley and between even adjacent fields, with plants ranging from quite low vigor to fairly high vigor growth. In some fields more PGR use will be likely, but in others, a plan to monitor plants and then decide is a much better approach in my opinion. As plants enter a period of more rapid leaf growth, earliest fruiting branches develop, and squares become bigger and easier to evaluate during coming weeks, think about how to best monitor to see if any of these field descriptions apply:

- Moderate to high vegetative vigor / normal or early first fruiting branch set / good early retention – *if vigor is still high in plants with these characteristics, typical first-flower PGR timing will likely be called for and effective if fruit retention remains good*
- Moderate to high vegetative vigor / delayed (higher) first fruiting branch development / lower than normal early retention – *higher vigor in plants with these characteristics will make them a very likely candidate for higher rates or more PGR applications*
- Lower than normal vegetative vigor / any range of fruit retention – *early root or plant damage might mean that some reduced vigor may persist for a while – these fields will need more careful monitoring to decide if PGR's will be detrimental or helpful*

The bottom line still remains that it is generally not a good idea to make blanket recommendations regarding PGR timing and rates ..... as with irrigation and fertilizer decisions, there are benefits to making field-specific decisions based on how plant growth progresses and how fruit retention shapes up. Comments on management considerations based on crop conditions recently seen "out there":

#### FIELDS WITH SEEDLING DISEASE LOSSES OR EARLY LEAF INJURY

While seedling disease losses haven't appeared to be too bad from fields visited so far this year, there are a number of plantings that show one or more of the following: a) weakened root systems due to seedling disease; b) what appears to be thrips damage to leaves and even terminals in quite a few fields; or c) some limited early leaf

damage from worms (only seen in a couple of fields). As weather warms, plants with decent root systems within these fields have shown decent recovery in most instances from early insect or disease damage. Where leaf and especially where terminal damage was extensive, growers will have to watch for signs of abnormal growth due to increased vegetative branching associated with damage to the main growing points on the developing stem. Plants with extensive early damage like this are likely to be delayed in setting first fruit, with a 1 or 2 node higher position for the first fruiting branch and some potential for additional PGR applications to manage vegetative branches. In the past we have seen fields with what looks like severe thrips injury in which the first position squares are gone on the first one or two fruiting branches, even when no lygus appear to be present. In the worst affected fields where terminal damage was evident, there is the possibility that squares were damaged early in development. Don't conclude that the losses are necessarily from a current lygus population unless your sweep counts find them