



Growing Knowledge®

Managing Cotton for Earliness After Delayed Planting or Replanting



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Much of the 2009 cotton crop across the belt has experienced either delayed plantings or replanting much later than normal. With the late plantings come questions regarding the management of cotton for maximum earliness.

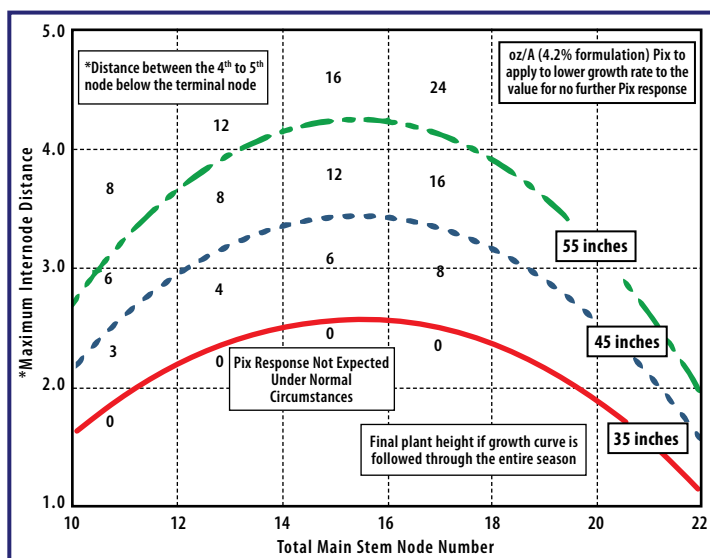
Earliness Management Checklist.

The following check list for earliness management provides a number of ideas to move the crop along to a timely cut out, maturity, and harvest.

Encourage early fruit retention - This season may boil down to a race to see how quickly you can get a fruit load on the crop. Any loss of early fruit (first 5 – 7 nodes of fruiting) will slow you on that race and may encourage vegetative growth, rather than strong reproductive growth. Close scouting of fields for Lygus spp. (plant bugs) or other fruit feeding insects will be essential to keep fruit retention high. Watch early vigor of the plant, to make sure that vegetative growth stays in check (see section below on controlling plant growth).

Know the maturity of the variety planted – If you have planted a mid to full maturing cotton variety, then maturity management will be absolutely critical to make sure that the crop matures before the season runs out of heat units. This issue is critical for fields of mid-full maturing varieties like DP 164 B2RF or DP 555 BG/RR that got off to a late start. In this case, utilize the earliness techniques described here to move the crop to cutout and maturity on time for your growing area.

Control the plant's vegetative growth – Use of mepiquat chloride (MC) will likely be needed to assure that the crop will reach cutout on a timely basis. Prior to bloom, use a locally tested method to determine the need for MC based on the current growth of the crop. The following chart is useful to determine the rate and timing of MC to apply.



Don't over-fertilize – Nitrogen fertility is especially tricky this season after flooding rains, standing water, and replanting. Most growers and consultants probably suspect that nitrogen fertilizer has either been leached below the effective root zone or denitrified by the flooded conditions. Applying too much in-season N, however, to replace the “lost nitrogen” on a late-planted crop may delay maturity. Nitrogen fertilizer promotes vegetative growth, sometimes at the expense of reproductive growth. Fields that have been flooded and replanted are good candidates for a residual nitrogen soil test before any additional N fertilizer is applied. Petiole testing during bloom to determine the need for late side-dress or foliar applications is also an excellent management technique under these circumstances.

Timely irrigation, but don't irrigate to push the crop too late – Another tricky management area will be irrigating a late planted crop. Irrigation should be timed for only limited stresses throughout the growing season. This should keep the crop producing new nodes and avoid going into a premature cutout. As the crop does approach cutout, begin to slow down on irrigations so that the vegetative development slows and cutout (NAWF=5) will occur timely and before the last effective bloom date in your area, based on historic heat unit accumulation.

Manage the crop for a timely cutout – The goal of managing for earliness in a late planted cotton crop should be to reach cutout before the season runs out of heat units to mature the crop. Cutout is defined as the crop stage when the last effective bloom occurs on the plant and is measured as nodes above white flower (NAWF)=5. By tracking NAWF from early bloom when it should peak at near 9 to cutout of 5, a grower can adjust his inputs to result in a timely cutout. One danger in late planted cotton

in short season environments is the risk of reaching the last effective bloom date (based on historic heat unit accumulation) before the crop has reached NAWF=5. In this scenario, the crop has a significant number of squares that have a low probability of receiving enough heat units to mature the resulting bolls.

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