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Tillage: A Lingering Issue in Dealing with the Drought, May 2007

What about tillage? What about in-row sub-soiling in preparation for planting? What about sub-soiling in conservation tillage versus conventional tillage?

Persisting drought has made preplant tillage difficult if not impossible as we move toward the latter part of the 2007 planting season. The purpose of in-row sub-soiling is to eliminate hard pans in the upper portion of the plant rooting zone, typically to depths of 10 to 15 inches in the soil. In most situations in South Georgia, penetrating the plow pan is critical to normal crop production. Failure to shatter the hard pan – if it exists – predisposes the crop to substandard yields. Where conservation tillage has been established for multiple years, there may be occasions where soil tilth is such that in-row tillage is unnecessary. Again, the primary reason for in-row tillage or sub-soiling is to eliminate compaction and to foster root development. Normally, a simple way to determine the presence and depth of a compaction zone is with a soil penetrometer or penetrating rod. In a year like this, soil density (hardness) throughout the profile may prevent assessment of the depth of compaction layers.

Many have reported that the progression of the drought with its depletion of sub-surface moisture has made strip tillage virtually impossible. In some cases, ripper shanks will not even go into the ground. In others, sub-soiling is bringing up huge clods, making subsequent soil/seed contact impossible. There is also the in-between condition in which compacted soil leads to repeated tripping of sub-soil shanks, breaking of points, etc. These sorts of difficulties could easily prevent a grower from reasonable, normal planting.

It is advisable that producers be in close contact with crop insurance providers on the specific requirements related to prevented planting and crop abandonment rules.

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