



Due to the passing of Dr. Miles Karner the Cotton Sentry will be no longer published. This new weekly newsletter "*Cotton Outlook*" will be presented instead. We will strive to provide the information and assistance that Miles provided. If you have any comments or suggestions to improve this newsletter, please contact Jerry Goodson. Thank you.

Cotton Planting – How dry is too dry? - J.C. Banks

Planting rainfall has been variable throughout the area, and in some areas, planting has already started. If enough rainfall has been received to wet the top 2 to 3 inches of soil, the soil profile needs to be evaluated to determine if there is enough moisture to support tap root development of the young seedlings. When a cotton plant germinates, the plant tries first to establish a deep tap root. If the soil at a lower depth is dry enough to retard root development, the tap root will stop growing, and the plant will develop shallow lateral roots instead. Even if rainfall or irrigation is received later, the tap root will not initiate regrowth, resulting in a shallow root system throughout the season. This plant will go through much more moisture stress than a plant with an ideal tap root system. It is a good idea to use a shovel to evaluate the seedbed area, and if loose crumbly soil is found below the seeding depth, it is best to wait on a good rainfall before planting.

Best Management Practices

Excerpts from
"The First Forty days
The Most Critical Period in
Cotton Production"

Seed & Variety Selection

Variety selection and seed quality have a lasting effect upon the crop's early season vigor, and overall plant health and uniformity during the first forty days. The crop's ultimate yield and fiber quality potential at harvest begins with variety selection and seed quality. Less vigorous cultivars are more susceptible to stresses caused by inadequate moisture, cool temperatures, thrips feeding, seedling diseases and other pests.

➤ **Primary criteria.** Choose varieties with the genetic potential for higher yield and fiber quality. Yield still is the ultimate measure for a cotton crop, although the ever-increasing demand for higher fiber quality makes this factor a close second in priority. Eventually, fiber quality could become the single most important factor for American cotton.

Choose varieties with the genetic potential to produce excellent technical fiber long staple length; a strong, premium micronaire fiber; high length uniformity; and a smooth

leaf with a plant conformation that's conducive to efficient mechanical harvesting. Because of the extended fruiting period of the cotton plant and subsequent development cycle, each boll develops under different environmental conditions than other bolls on the plant. Fibers from a single plant, single boll and even a single seed will be variable for length, strength and micronaire. It's the average fiber quality within the plant that determines value; and, plant genetics and environment provide the platform for higher yields of fiber.

Growers are well advised to grow more than one variety – preferably three or four varieties. Larger-seeded varieties with high seed quality and strong seedling vigor are also more desirable. In addition to the standard warm germination test, a cool germination test also is recommended. When cool germ and warm germ numbers are added together, high quality seed will have a germ index of at least 160 (i.e., a warm germ of 90 plus a cool germ of 70 equals 160).

Early planting into cool soils requires a high germ index. When planting early, always begin with a variety that has the highest germ index.

➤ **Secondary criteria.** Trait factors and maturity rank lower in priority. The general consensus reached at the workshops discourages the selection of varieties based upon trait factors – especially if the available trait factors result in a yield drag or if the traits are coupled with poor-yielding varieties.

Seedbed Preparation, Emergence and Plant Population

The two workshop groups addressed overlapping factors – emergence and plant population – with seedbed preparation as a common denominator. The overriding concern among all participants is that growers do not adequately address planting-time considerations and needs, opting instead for speed of planting over all else. The bottom line in cotton production is that one-half the variable costs, as well as the annual fixed costs, are spent prior to or during the first forty days. The general consensus is that growers would be well advised to plan better going into the season and to do a better job of planting with precision.

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