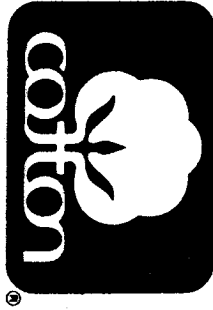
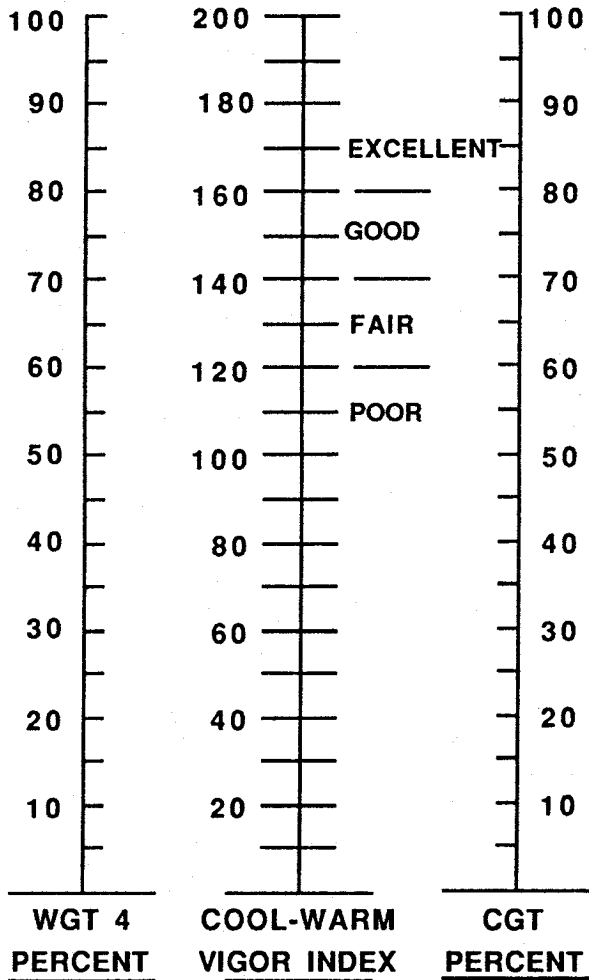


NOMOGRAPH OF COTTON SEED QUALITY



Seed Vigor Index
COTTON INCORPORATED
 4505 Creedmoor Road
 Raleigh, NC 27612



SEED VIGOR INDEX

The Seed Vigor Index was developed by and in conjunction with the following scientists.

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Funding was provided by Cotton Incorporated and Plains Cotton Growers, Inc.

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INCORPORATED**

SEED VIGOR INDEX

Top production starts with a good stand. Research across the Cotton Belt over the last two decades has demonstrated the economic importance of getting cotton off to a good start. The emerging seedling must cope with a wide range of adversities including heat, cold, flooding, drought, salt, diseases, insects, and in some areas, blowing sand. Using high quality cottonseed is essential and is the single most important practice to insure a healthy stand under stresses. While no single test can confidently predict field emergence, a combination of tests has proven to be a more reliable indicator of seed vigor. The Cool-Warm Vigor Index provides the cotton producer the necessary information at planting time to make knowledgeable choices between seed lots.

Principles of the Test:

The Cool-Warm Vigor Index test combines germination results from the standard Warm Germination Test and a Cool Germination Test. Once the Cool-Warm Vigor Index is determined, the seed lot can be rated as Excellent, Good, Fair, or Poor.

The equipment and supplies needed to conduct this test are identical to those required for a standard germination test. The data required are obtained from two tests: a warm germination test that cycles daily -- 16 hours at 20C (68F) and 8 hours at 30C (86F) counted after four days; and a cool germination test 18C (64F) counted after seven days.

The Cool-Warm Vigor Index test can be conducted at the Texas Department of Agriculture Seed Laboratories:

Texas Department of Agriculture
Seed Laboratories
P.O. Box 629
Giddings, Texas 78942

Texas Department of Agriculture
Seed Laboratories
4502 Englewood Avenue
Lubbock, Texas 79414

Calculating the Index

Upon completion of the two tests, the germination percentages are added together to give the Cool-Warm Vigor Index level. Seed lots are then classified as Poor, Fair, Good, or Excellent according to the following vigor index values:

Excellent = 160 or greater
Good = 140 - 159
Fair = 120 - 139
Poor = Less than 120

The nomograph on the reverse side is a convenient way to calculate the index. To use the nomograph, place a straight edge on the values obtained from the Warm Germination Test after 4 days (WGT 4) and Cool Germination Test (CGT). The intersection of the straight edge with the center scale indicates the Cool-Warm Vigor Index level and category.

How to Use Results

Interpreting the results correctly allows a grower to separate his seed lots according to their vigor level. Seed with an excellent vigor rating may be planted at the earliest possible planting date when less than optimum conditions are likely to be encountered. The producer may follow with seed with a lower vigor level later in the season as soils become warmer. Seed lots with vigor index values of 150 or higher can insure an adequate stand and permit the use of lower planting rates. On 38 to 40-inch rows, a final stand of 3 to 4 plants per foot produces an ideal population of 40,000 to 50,000 plants per acre.