1512 The use of morphophysiological methods to evaluate *gossypium* germplasm for drought resistance

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Development of drought-resistant cotton varieties is particularly important in Uzbekistan due to limitations in water resources. Our team has established that several morphophysiological methods can be used in breeding cotton for drought resistance. Under insufficient water supply we observed a reduction in: water content and intensity of leaf transpiration, area, number and dry weight of leaves, immature boll length, raw cotton weight, boll number and seed number per boll, weight of 1000 seeds, sympodial branch number, boll weight, plant height, main stem diameter. For most genotypes, there was an increased water holding and water absorbing ability of leaves, number of glandular trichomes on leaves, leaf area per boll, water content in immature boll, and leaf specific density. Morphophysiological methods do not require the application of specialized equipment or chemical reagents. Future cotton varieties that can withstand limited water supplies can be developed by combining measurement of morphophysiological and economically valuable parameters.

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