CDL1C Executive Summary

Summary:

In 1990, a Cotton Research and Development Corporation funded project was begun, in co-operation with the Industry Hail Scheme Insurers, to evaluate the growth response after hail damage, of cotton varieties currently grown in the Australian cotton industry. The regrowth of varieties after simulated hail damage was investigated in a series of trials carried out over three cotton seasons. Australian-bred varieties, currently grown, were compared to the U.S. bred variety, Deltapine 90. Growth responses were measured in terms of final lint yield, delayed maturity and changes in lint quality. It was found that although there are observed differences between varieties in the rate of regrowth of vegetative material and in the rate of square production following simulated damage, hail did not affect the lint yield of varieties differentially. Date of damage and level of damage were found to be the major contributing factors to yield loss. Seasonal effects such as season length were examined to determine the effect on the lint yield of varieties, and from this it was determined that hail damage will not produce a difference in lint yield between varieties as long as the each variety is allowed to go through to maturity This is not the case in 'normal commercial cotton production' where total farm management or the climatic character of an area impose restrictions on the regrowth of one variety in comparison to another and hence can induce a difference in final lint yield. From this data, loss adjustment procedures are to be modified by the overlaying of damage date and season length to take into account the effect of damage date as measured in this work. Varietal recommendations for high hail risk areas cannot be made on the basis of differing ability of varieties to regrow after hail but should be made on the basis of the suitability of a variety for a cotton production of the specified average season length, with management strategies imposed following damage to ensure that the variety fully matures in the remaining available growing season.