1743 Physical basis of jassid (*Amrasca devastans*) resistance in Cotton

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Jassids cause significant production losses of cotton in Asia. Although higher trichome density confers host-plant resistance, it has negative effect on the agronomic performance. Leaf anatomical studies in wild and cultivated *Gossypium* species and introgression derivatives (42 entries) were done to understand physical basis of resistance. Based on the variability studies of different anatomical features, diversity analysis and correlation and path co-efficient studies' following conclusion were made to explain jassid resistance in cotton. Non-pubescent nature does not indicate susceptibility. Lower palisade cells in leaf lamina act as physical barrier for feeding and oviposition. Thicker laminar coupled with absence of pubescence or lower palisade depicts susceptibility, but with them confers resistance. The sucking distance (distance between lower midrid epidermis to phloem) alone, without knowing nature of cortex cell arrangement doesn't depict resistance or susceptibility. Higher cortex cell density irrespective of sucking distance is indicative of resistance. The physical resistance is a plant factor as stylet length of jassid (526 mm) is much longer than the sucking distance (465 mm) observed in the *Gossypium* species.