NON-GLANDULAR TRICHOME CELL WALLS ARE COMPOSITIONALLY UNIQUE IN UPLAND COTTON

Phillip G. Cochran Kevin C. Vaughn USDA-ARS Stoneville, MS Rickie B. Turley Stoneville, MS

Abstract

Cotton leaf trichomes were examined on small leaves (approx., 5 mm) of DP5690 and pilose lines. These leaves were fixed and embedded in LR white, sectioned and subjected to immunolocalization using a battery of monoclonal antibodies for various complex carbohydrate groups specific for cell wall components. Interestingly, anti xylan antibodies labeled many of the non-glandular trichomes of these young leaves. This would make these trichomes very rigid and slightly woody.