

## **Clean Klean Cotton Varieties (CKC-01, CKC-03, CKC-05 and CKC-06) approved for commercial release in Pakistan**

Pakistan Environmental Protection Agency (Pak-EPA) approved cotton varieties CKC-01, CKC-03 of Centre of Excellence in Molecular Biology (CEMB), University of the Punjab, Lahore for commercial release in the country in 22<sup>nd</sup> meeting of National Biosafety Committee (NBC) held on 4<sup>th</sup> November 2020, and whereas CKC-05 and CKC-06 were approved in 27<sup>th</sup> meeting of NBC held on 22<sup>nd</sup> April 2024. The said varieties have the potential to tolerate cotton bollworms, especially pink bollworms that have played a drastic role in our cotton production recently. CKC varieties harbor CKC technology with two insecticidal genes (*cry1Ac+cry2A*) and one herbicidal gene (GTG). Thus, varieties help the farmers to control bollworms by reducing the number of insecticidal sprays. The number of sprays on cotton crops to control sucking and chewing insect pests goes beyond tens that increase cost of production per acre. Besides that, farmers control weeds by manual hoeing or tractors in cotton crops. Both methods increase the cost of cotton production per acre. CKC technology has helped the farmers to reduce the number of sprays used for control of insect pests and weeds. This has ultimately led to an increase in farm productivity saving billions of Pakistani rupees each year. CEMB Cotton has immense potential for the economy of Pakistan as it earns the largest export revenues and in addition to the lint, the seed of cotton for oil and meal accounts for 80 percent of the national production of oilseed.



Prof. Dr. Abdul Qayyum Rao and Dr. Allah Bakhsh visiting CKC varieties in the field.



**CKC1**



**CKC3**



**CKC5**



**CKC6**