From lab to land :

EMPOWERING FUTURE SCIENTISTS THROUGH BANANA TISSUE CULTURE

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A community engagement *program entitled 'Program Penanaman Anak Pokok Pisang Kultur Tisu & Pelantikan Duta Kecil Pisang'* was successfully conducted on 30 July 2025 at Sekolah Menengah Kebangsaan (SMK) Rantau Panjang, Bestari Jaya, Selangor. The program introduced the practical applications of plant tissue culture technology, with a focus on the in-vitro tissue culture of banana plantlets (*Musa sp.*). This outreach initiative was a part of the faculty's broader strategy to promote science education, knowledge transfer, and community impact through academic collaboration with schools, to nurture their interest in science, technology, engineering, and mathematics (STEM).

The program was officiated by Mr. Mohar Maarof, the school Principal, and followed by an interactive talk by Mdm. Noor Anilizawatima Sulong (Program coordinator). The talk encompassed a short educational video demonstrating the step-by-step process of banana plantlet propagation through tissue culture, from the preparation of explants and culture media to multiplication, rooting, and acclimatization.

The unique component of this initiative was the appointment of 10 student ambassadors known as *Duta Kecil Kultur Tisu Pisang*, to take on the responsibility of promoting plant biotechnology awareness among their peers and supporting long-term plant monitoring efforts at the school level.

The excitement continues with the hands-on activity of handling and transferring in-vitro banana plantlets from culture bottles to polybags. After the transfer session, students and facilitators moved to the school's designated planting area, where thirty banana plantlets were successfully planted into the soil. The planting area had been prepared beforehand to support the growth of these plants in an outdoor setting. Students worked in small groups under supervision, with each group responsible for planting and documenting one or two plants. This activity fostered a sense of ownership among the students and reinforced the idea that scientific knowledge can produce tangible results that directly benefit their community and environment.

As a symbolic and strategic gesture of continued collaboration, a collaboration was officially sealed between the school and UiTM, particularly in areas of community-based research dissemination. The event concluded with positive feedbacks from students.