

INTEGRA Biosciences' pipettes empower agri-genomic research with robust micropipettes

04 July 2024 | News

VOYAGER adjustable tip spacing pipettes streamlines phenotyping and genotyping workflows in agriculture research activities



VOYAGER adjustable tip spacing pipettes streamlines phenotyping and genotyping workflows in agriculture research activities

To streamline its liquid handling workflows, the National Agricultural Research and Development Institute (NARDI) in Fundulea, Romania, uses electronic multichannel pipettes from INTEGRA Biosciences. In order to address current agricultural challenges, such as climate change, land scarcity and biodiversity loss, the institute's phenotyping and genotyping laboratory uses these pipettes to extract and analyze DNA from hundreds of samples each day.

[NARDI Fundulea](#) is recognized as the main agricultural research center in Romania, and has developed over 400 cultivars of field crops – including sunflower, maize, wheat, durum wheat, barley and soybeans – in its breeding program. To support this work, the institute conducts a variety of genetic diversity and association studies for important agronomic traits, including disease resistance, heat and stress tolerance, drought yield and quality.

The facility introduced its first [VOYAGER adjustable tip spacing pipette](#) to the laboratory in 2015, and the pipettes quickly became an integral part of laboratory workflows.

Daniel Cristina, a researcher in the genotyping and phenotyping laboratory, explained: “We investigate many different genomic and phenotypic markers in crops that we harvest from local fields, and our results help our in-house breeders to create new plant varieties with desirable traits. This requires us to perform a large number of polymerase chain reaction (PCR) assays – as well as more specific types of genotyping experiments, such as competitive allele-specific PCR (KASP) assays – which involve many liquid handling steps. We therefore rely on our VOYAGER pipettes – with their unique, motorized tip spacing adjustment – to efficiently and simultaneously transfer multiple samples between different labware sizes and formats, including from tubes to plates.”