

Assistant Professor Chae Eunyong from NUS' Department of Biological Sciences holding a pot of choy sum. On one of the leaves is a tiny smart chip which has sensors to monitor plant growth and health in real time.
PHOTO: NUS



Late last year, the National University of Singapore launched a research programme and fund to put together 100 cross-faculty research teams in five years, with the aim of getting 20 new projects running every year.

plant signals to impose early intervention," said Assistant Professor Chae Eunyong from the NUS' Department of Biological Sciences.

The project's ambition is to build a system that will tell farmers the optimal conditions to grow various types of vegetables as the temperature gets warmer and water becomes scarcer, among other changes in the environment. It may then be possible to breed more resilient plants that can survive and thrive in drought.

The NUS programme will invest in projects covering issues such as sustainability, disease outbreak preparedness, supply chain resilience, human behaviour and policies, as well as IT security and privacy.

Although post-pandemic research priorities have emerged, universities here are also still busy with projects related to Covid-19 and infectious diseases.

NTU is investing in a new state-of-the-art biosafety level three laboratory – a high-containment facility where researchers can work with highly infectious and potentially lethal microbes.

In last year's edition of its yearly internal research grant call, the Singapore Management University (SMU) encouraged its faculty to submit Covid-19-related proposals.

Innovation-driven projects born from the pandemic at the Singapore University of Technology and Design (SUTD) include designing housing models for foreign workers to prevent cross-contamination and optimise ventilation, and developing a breath sensor to detect Covid-19 with chemical gas sensing techniques using a mobile phone.

Last September, SUTD also started a research programme that will delve deeper into the changes in offices and the Central Business District, as flexible work arrangements may be here to stay.

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Unis shifting research focus to challenges of post-pandemic era

Emphasis on interdisciplinary studies to solve pressing issues, like in food security, public health

Shabana Begum

Universities here are altering their research landscape to emphasise interdisciplinary and results-driven studies. This is meant to find more solutions for pressing global issues such as in food security

and public health – the challenges of a post-pandemic era.

Late last year, the National University of Singapore (NUS) launched a research programme and fund to put together 100 cross-faculty research teams in five years, with the aim of getting 20 new projects running every year.

Injecting up to \$20 million a year on the Reimagine Research Initiative, NUS will fund interdisciplinary studies that go beyond getting published in prestigious journals, to making impact in the real world.

The initiative has enrolled 21

groups so far, and it is set to be one of the largest university-wide research programmes, said NUS deputy president of research and technology Chen Tsuhan.

In January, the Nanyang Technological University (NTU) unveiled its five-year plan detailing goals in education and research. A key tenet of its plan is to support interdisciplinary research to address global challenges, and find ways to accelerate innovation from discoveries.

At NUS, Professor Chen said faculty members are adept at going deep into their specific areas of in-

terest, and are driven by their own curiosities and passion. But to "create powerful, unconventional solutions", researchers must work across schools, and that is where Reimagine Research comes in.

One of the 21 teams has pulled in plant biologists, engineers and computer scientists to develop "wearables" for crops to track their growth and health in urban farms. Once attached to a leaf, the tiny chip containing sensors will detect plant signals to predict problems such as infection and damage.

"We are definitely short of tools in detecting and interpreting such