



**LOCAL PRODUCTION OF LEAFY VEGETABLES TO BE GIVEN A BOOST  
WITH THE SUCCESSFUL DEVELOPMENT OF VERTICAL FARMING  
SYSTEM (VFS) PROTOTYPE**

A successful collaboration between the Agri-Food & Veterinary Authority (AVA) and a private company, DJ Engineering, has resulted in the development of a vertical farming system (VFS) prototype. This prototype is suitable for intensive vegetable farming in the tropics.

2. This collaboration, which started in April 2010, involves the use of both agricultural science and engineering solutions. Chief Executive Officer of AVA, Ms Tan Poh Hong said: “The project would not have been possible without the combination of different expertise from AVA and DJ Engineering. On AVA’s part, we conducted multiple studies and R&D on maximizing crop yields while DJ Engineering built and modified several prototypes.”

3. The VFS consists of multiple tiers of planting troughs that are rotated around an aluminum frame to ensure that the vegetables obtain uniform sunlight. A water pulley system is used to rotate the troughs and irrigate the crops. The system is economically sustainable as features such as the water-pulley system and the use of natural sunlight minimises the use of electricity and keep production costs low. The VFS is expected to yield at least 5 times more leafy vegetables than that of a conventional soil-based farm.

4. During his visit to view the VFS prototype at AVA’s Sembawang Research Station, Minister for National Development, Mr Mah Bow Tan expressed optimism that the system will help to enhance Singapore’s supply resilience of leafy vegetables. “I am heartened that we have achieved this technological breakthrough. This home-grown innovation, I hope, will bring us a step closer to reaching our local production target of 10% of our local leafy vegetables consumption.”

**M E D I A   R E L E A S E**

5. Minister Mah also highlighted the need for innovative solutions and public-private sector collaborations to maximise Singapore's limited resources and raise local farming productivity. He urged more private sector players to come forward with innovative projects to enhance Singapore's food supply.

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