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Sharjah Develops High-Protein Desert Wheat with Yields above Global Benchmarks

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Sharjah has achieved a breakthrough in desert wheat cultivation, producing plants with protein levels nearly twice the global soft-wheat average and yields above international benchmarks, a result that researchers say marks significant progress in crop breeding for arid regions.

Second-generation plants from Sharjah's wheat development project recorded eight spikes per plant, surpassing the internationally recognised benchmark of seven. The crop achieved a protein content of 19.3 per cent, placing it among the highest levels reported globally.

Standard soft wheat varieties typically contain between 10 per cent and 13 per cent protein, while durum wheat averages between 12 per cent and 15 per cent. At 19.3 per cent, Sharjah's wheat falls into the premium category used for specialised food products, researchers said.

The findings come as countries across the Gulf and beyond reassess agricultural strategies in response to climate change and disruptions to global food supply chains. Dr Fadel ElZubi, director of the Geneva Centre for Studies and an international food security expert, noted that Sharjah's experience represented an "exceptional case study" in the Arab world and serves as a regional model for developing crops that are resistant to climate change.

The expert said food security is no longer determined by fertile land or water resources, but also by technology, scientific research, and efficient resource management.

Sharjah's agricultural model relies on an integrated system combining precision farming, artificial intelligence, ground sensors, and satellite imagery to manage irrigation and reduce water loss in one of the most climate-challenging regions. Precision farming technologies could raise productivity by 20 per cent to 40 per cent while cutting water consumption by up to 30 per cent, improving the sustainability of farming in dry regions, ElZubi said.