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Esther Unathi Sihlahla

Founder, Pella Food Garden Cooperative,
South Africa

[Website](#)

Esther Unathi Sihlahla is a 52-year-old woman who was born in Pella and got to Grade 12 in school. She was married for 17 years before her husband passed away. Esther has three daughters, one son, and three grandchildren. She learned how to grow vegetables at a young age from her father and grandparents, giving her an agricultural background, and has participated in several agricultural training sessions. Esther is currently the project leader of the Pella Food Garden, where she does the actual work in the field and manages the group's admin and financials. The Pella Food Garden is made up of five permanent members who work in the field, along with three contract workers who assist as needed. They specialize in aquaponics, traditional crop production, and growing seedlings in their nursery. The local community, local primary school for their feeding scheme, the old age homes, and shops in the area are their market. The Pella Food Garden runs an aquaponics enterprise that combines soilless crop production and fish farming in a solar-powered, symbiotic closed system. This system generates 10 times the amount of produce as conventional agriculture in the same space while using 90% less water. The cooperative's aquaponics enterprise utilizes approximately 90% less water and produces up to 10 times more in the same space as conventional agriculture. This system eliminates the need for chemical fertilizers, herbicides, and pesticides. The project also incorporates rainwater harvesting to supply the systems and solar power to sustain their limited energy needs, further establishing aquaponics as a resource-efficient climate adaptation solution. This aquaponics system design supports sufficient production to strengthen not only nutritious food security, providing protein from fish and varied, nutrient-rich vegetables, but also to supply consistent volumes of high-quality, in-demand produce to commercial markets. The unit has an annual production capacity of 10,000+ kg of various greens (lettuce, herbs, etc.), fruiting plants (tomatoes, peppers, etc.), and protein-rich fish within a space of <300 m².



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Hellen Oyare

Founder and Director, Helena Agspace Ltd, Kenya

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