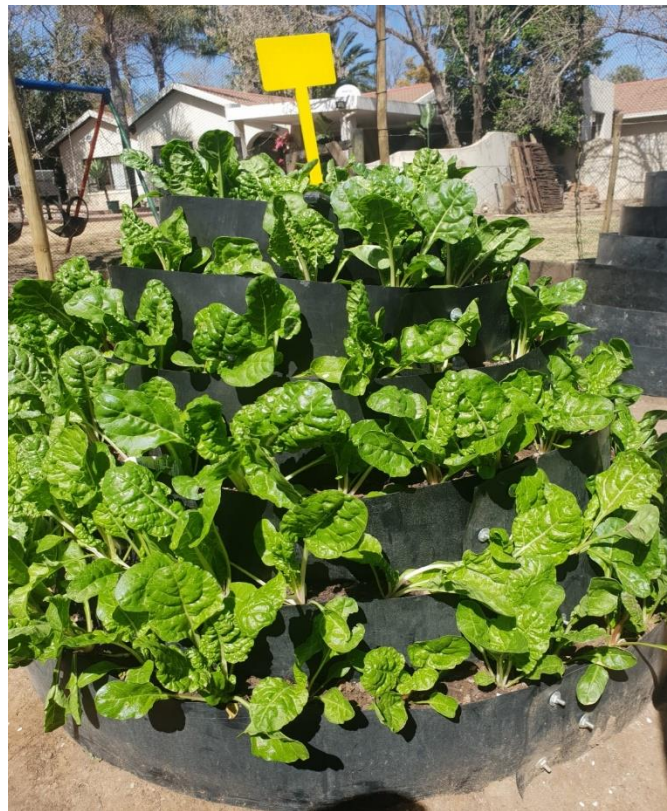




**SUSTAINABLE  
URBAN VERTICAL FARMING  
AND  
INTRODUCTION TO AGRI-PRENEURSHIP  
FOR YOUNG WOMEN  
PROJECT**





## 1. PROJECT SUMMARY

---

An urban household garden project using vertical farming to support young Soweto and Tembisa based South African women in becoming Sustainable Urban Vertical Farmers using the AmaVeggie pyramids. The women will thereby have the capacity to feed their families and sell their surplus produce and through that, we will contribute to;

- Entrepreneurship and employment,
- Food security and shortened food miles,
- Capacity building, education, and poverty alleviation.

## 2. INTRODUCTION TO AWIA

---

In response to the low participation of South African women in agriculture, AWiA, (African Women in Agriculture) was founded as a Non Profit Company in May 2018, with the purpose of developing, promoting and supporting female agri-preneurs (agricultural entrepreneurs).

Our vision is to capacitate women's access to the agricultural ecosystem, driving socio economic impact through the initiation of disruptive virtual and physical communities.

## 3. PROJECT BENEFITS

---

Reduced food waste, production close to source

Least CO2 footprint (using re-newable energy)

Minimal use of pesticides or herbicides

At least 50% reduced water consumption

No import, -increased self-sufficiency

Short trip /-traveled products

Better land use (x10)

No groundwater pollution

Sustainable jobs

## 4. PROBLEM STATEMENT

---

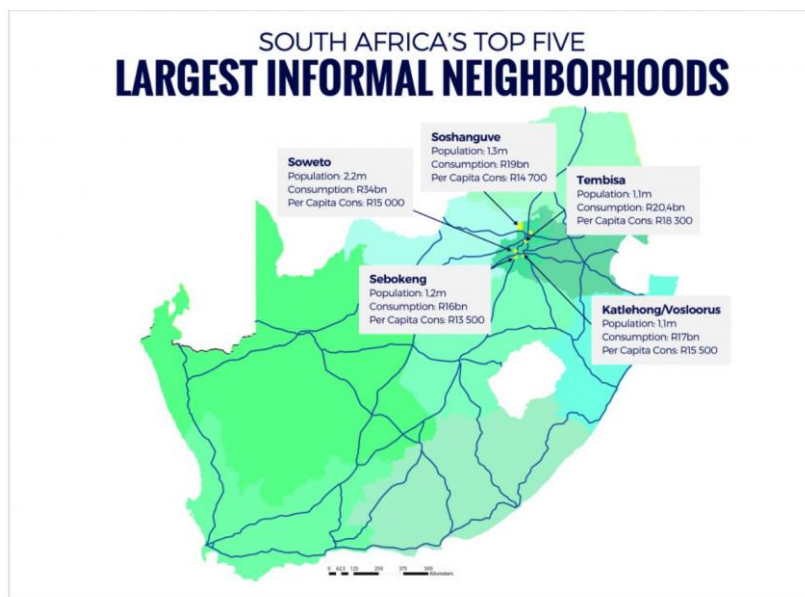
Women farmers are faced with challenges in the agricultural market, however, they make up a significant portion of the agricultural labour force, constituting an average of 43 percent in developing countries; making up approximately 50 percent in Sub-Saharan Africa. However these farmers, although experienced, are often faced with challenges when trying to access the agricultural market as individuals.



Women have limited access to finance, agricultural inputs such as seeds, farming implements and transport. They are impacted by a lack of specialist agricultural skills and infrastructure, and the majority of them are involved in small-scale farming. They additionally have limited knowledge and use of farming technologies. AWiA would like to close this gap in knowledge and resources by empowering women.

Gauteng is province in South Africa, home to greater Johannesburg where Soweto and Tembisa can be found. Soweto has an estimated population of 2.2 million and R 34 billion in consumption, Tembisa has an estimated population of 1.1 million and a consumption of R 20.4 billion, making them two of the fastest growing retail markets. (Source: Fraym analysis of granular retail spending data 2019)

Urban homes in Soweto and Tembisa are built on small pieces of land not suitable for large backyard vegetable gardens. The Amaveggie pyramid allows urban gardeners to creatively maximise growth of vegetables and increase the quantities produced on small pieces of land. AWiA would like to provide an affordable urban vertical farming solution that allows women to grow vegetables for consumption and as a profitable entrepreneurial venture.



## 5. PROJECT OBJECTIVES

- To secure the future of Food security by fostering the establishment of urban household vertical vegetable gardens, thus building a network of new female community farmers.
- Offer a viable solution for post Covid-19 South Africa through the introduction of farming training and agri-business to young women as a viable career option.



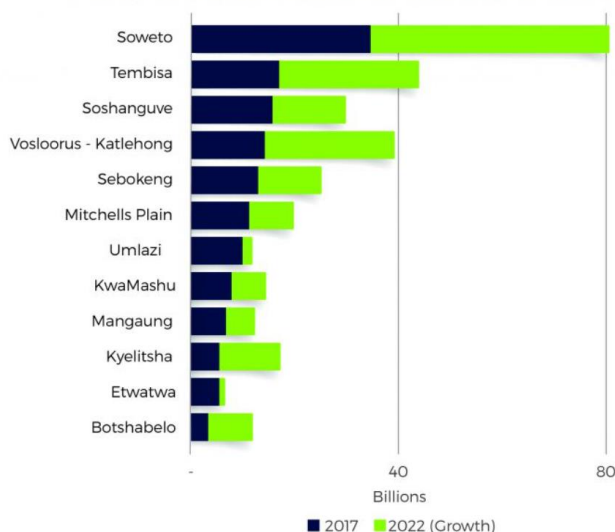
- Skills and community development for women in the Soweto and Tembisa area and beyond.
- To use land at schools and community centres as vegetable gardens thus introduce urban young women to the world of small scale agriculture.
- To shorten food miles by having vegetables grown in the community.
- Entrepreneurial development and formalisation of agricultural businesses for young women.
- To develop a group of community agri-extension managers who will help manage the project to ensure sustainability.

## 6. TARGET AREA AND BENEFICIARIES

Young women in the Soweto and Tembisa areas and beyond. AWiA is currently farming on 3 hectares of arable and fertile land in the Soweto area which is ideally located. AWiA has recently completed a program whereby 12 female agripreneurs were trained, and we have recruited our second cohort who are in agri-business training; successfully growing a variety of vegetables and herbs. We currently have planted on four Amaveggie pyramids all which grow a variety of vegetables, ranging from spinach to spring onions.

Soweto and Tembisa have the largest expected retail consumption growth in South Africa, thus we feel we are rightly positioned to meet household demand for vegetables. We are looking at each household developing their own vegetable gardening business.

### EXPECTED CONSUMPTION GROWTH FOR THE LARGEST RETAIL MARKETS





## 7. BENEFITS OF AMAVEGGIE PYRAMIDS

Benefits of AmaVeggie Pyramids include:

- Optimise space- grown over 1.7m x 1.7m area, so those with small gardens have the opportunity to grow vegetables.
- High productivity- 120 seedlings of spinach on 3m<sup>2</sup> space.
- Save water;
- Low maintenance costs;
- Income potential;
- 5 year life span



## 8. GOAL AND APPROACH

The project will involve the supply of AmaVeggie pyramids to young women in selected urban areas, this will be followed by an intensive training program to allow the agripreneurs to establish a viable vegetable business. The training will include the establishment and set up of the Amaveggie pyramid, vertical farming practices for urban farmers, entrepreneurship and business management practices training, including financial management. Team leaders will be selected as trainers, for reporting and for trouble-shooting.

The young ladies do not need access to vast tracts of land, and given the current state of migration of urban areas, communities in Soweto and Tembisa will benefit from this innovation.

**The AWIA approach will result in:**

**Community AmaVeggie garden growers groups established-** To capture potential economies of scale in small groups that allow communal equipment use, or knowledge-sharing by facilitating collaboration by agri-preneurs.

**Innovative Urban Vegetable farming practices applied-** The collaboration-based model will be put into practice. The project will provide training, a defined share of inputs including seedlings, AmaVeggie pyramid, topsoil and manure where needed. This allows budding farmers to start in an area with minimal risk.



**Farmers' access to markets improved-** To strengthen vegetable logistics, promote local enterprise development and farm-to-market linkages for agripreneurs.

## 9. OUTCOMES

---

Successful project implementation will result in the development of a new group of effective female agripreneurs, improve their livelihood and provide a sustainable supply of high-quality spinach and other vegetables while meeting specific social and commercial objectives. Success indicators will include a scalable model that provides household nourishment, sales and sustainable profit for the farmer. Effective implementation will result in job creation, reduced crop production risk through the low risk Pyramid, increased income security for women agripreneurs and improved social responsibility. The project could potentially result in over 30 women learning to develop vertical gardens.

## 10. DURATION

---

Two years, a four month program for each group of agripreneurs. We can train 40 agripreneurs per location, per group. A total of 240 per year, 480 in two years.

## 11. MONITORING AND EVALUATION

---

- Agricultural extension workers, one for every ten beneficiaries, will be identified and trained to support the beneficiaries, keep them motivated, and write reports.
- Scalable model for vegetable seedling farming demonstrated- Farming income for project beneficiary smallholders.
- Community seedling growers groups established- established registered groups with membership lists.
- Sustainable seedling vegetable farming practices applied- access to training, improved farming infrastructure and equipment.
- Farmers' access to markets improved- documented access to markets.

Reports will be drafted detailing progress, we will photograph results and ultimately vegetable consumption or sales.

## 12. BUDGET

---

**AmaVeggie Pyramid Package-** AmaVeggie Pyramid, Training, Compost, Topsoil, Assorted Seedlings (Spinach, Carrots, Spring Onions, Beetroot, Beans), Planting, Watering can, and Installation of AmaVeggie Pyramid- R 3 000 each (Between 100 and 120 plants to set up)



A Total budget of R 2 352 000.00 for 480 women including training and support over 2 years.

Travel- Location dependent (AA rates)

Protective Netting- Optional Extra

### 13. SUSTAINABILITY

---

AWiA believes that sustainable agriculture is productive, competitive and efficient, whilst at the same time protecting and improving the natural environment and conditions of local communities. The extension workers will make sure that the AmaVeggie Pyramids continue to provide vegetable for the household and enough for sale.

Our strategic imperative is to build the agricultural ecosystem. Our AmaVeggie Gardening project will develop female agripreneurs skilled in effective vertical farming, resulting in vegetable production, which will contribute to food security while allowing the women to develop a critical farming skill. Our vision is that these women will become our ambassadors in their communities where they will introduce other community members to vegetable gardening.

### 14. WHAT SUPPORT ARE WE REQUESTING?

---

AWiA is seeking Funding and strategic partnership. Our vision is to allow women access to the agricultural ecosystem, and we seek to be involved in communities who need a 'hand up' not a hand-out. We can work together to accomplish this. So far, we have incubated 12 women in the agricultural industry, and we are in the process of incubating a further 24 for 2022.



AWiA Team: Janice Scheckter, Agnes Chikukwa Hove, Veronica Aswani, Bianca Clarke, Sibongile Cele.