

Gardening gets "reel"

A young South African's water-wise project is transforming lives in impoverished communities, and winning international acclaim

The Trinity Day Care Centre in Kya Sands, north of Johannesburg, has no running water and access to only a few bare patches of land. Yet, they will soon be harvesting a bumper crop of fresh produce from the small vegetable garden they have created with the help of the Reel Gardening concept.

Just kilometres away from Trinity, in the township of Diepsloot, resident Kenith Mahlanga is almost ready to do the same. Although he speaks no English, and has a learning disability, it took only one demonstration for him to learn and implement the Reel Gardening system. His source of food has now become a possible future source of income.

WATER PRIZE

What started off as a part-time project by high school student Claire Reid, is not only ensuring sustainable nourishment for people like Kenith and the 40-odd children at the Trinity Centre, but it has also gained global recognition. In August this year, Claire's project won the Junior Water Prize from the Stock-



Claire Reed received the Junior Water Prize award from Sweden's HRH Crown Princess Victoria at a ceremony on 12 August, in Stockholm.

holm International Water Institute. The award – given annually for an outstanding water science research project by a person or group of people under the age of 20 – was announced during World Water Week in Stockholm. The nominating committee, in its official motivation, awarded the prize to Claire for “an innovative, practical, easily applicable technique for planting and successfully germinating seeds in water-scarce areas to improve urban and peri-urban livelihoods”.

REEL GARDENING

What makes Reel Gardening unique and so applicable in communities such as Diepsloot, is that it enables

people to produce healthy crops with about 80% less water and seed cost. The concept is so simple that planting and maintenance can be explained through one demonstration, thereby overcoming any language or education barriers.

Claire, who is a pupil at St Theresa's Mercy School in Gauteng, explains how Reel Gardening works:

“Using a flour and fertiliser paste, seeds are stuck onto newspaper strips at measured intervals, and left to dry. This ‘seed tape’ is then wound into reels.

“The strips are planted in furrows, with one edge of the newspaper left visible, just above the soil. Seeds can then be watered by pouring small amounts of water along the newspaper strip, e.g., using a two-litre cooldrink bottle. The newspaper absorbs the water, reducing water leakage into the soil, and concentrating moisture around the seed. By keeping the seeds damp for longer, and by providing some protection from the cold, the newspaper helps the seeds to germinate

A SOUTH AFRICAN FIRST

Founded in 1995, the prestigious Stockholm Junior Water Prize is an annual event which recognises outstanding water-related research focusing on topics of environmental, scientific, social or technological importance. The international honour is given to an individual or group who, like their 26 co-competitors, has been awarded the top prize among national competitions. These national winners travel to Stockholm from as far afield as Israel, Australia and the Ukraine. This year, China, Cameroon and Russia joined as first-time entrants.

Claire's Reel Gardening project qualified for entry, after winning gold at this year's Eskom Expo for Young Scientists and she won the South African Youth Water Prize sponsored by the Department of Water Affairs and Forestry (DWAF).

The Junior Water Prize includes a US\$5 000 scholarship and a blue crystal water-drop sculpture. Claire received the award from Sweden's HRH Crown Princess Victoria at a ceremony on 12 August, in Stockholm.

"The Stockholm Junior Water Prize has established itself as the 'world championship' on water research for youth," says committee chairman Dr Johan Rockström. "This is a great achievement, but more importantly, it is filling an enormous gap. There are simply far too few arenas of tribute of young excellence in managing our finite and precious natural resources."

DWAF

In South Africa the Department of Water Affairs and Forestry is implementing a national education initiative in schools called the 2020 Vision Water Education Programme. Part of the Programme is the South African Youth Water Prize competition which is held annually and in which the winner qualifies to compete in Stockholm, Sweden, as South Africa's representative in the International Youth Water Prize Competition.

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faster than in traditional planting methods. The bacteria from the decomposing flour paste also releases nitrogen into the soil, thus boosting growth."

On average, says Claire, the Reel Gardening method produces more plants from the same amount of seeds, possibly because the strip eliminates the threat of birds eating the seeds.

"When measured over a two month period, Reel Garden plants also showed up to 20% better growth than seedlings planted in the traditional manner," she says.

"The whole process is environmentally friendly, and because seed tape is stored in reels, it can be sold by the metre in large or small quantities. At an estimated price of between 14 cents and 18 cents a seed, this makes it extremely cost effective for a subsistence farmer who can't afford to buy whole packets of seeds (around R9 each) at a time."

For Joseph, the caretaker at Trinity Day Centre, this seemingly simple concept is making a world of difference. With a gardening rake, one water bottle, and virtually no money, he has created a small oasis that is helping to feed his community. Something which – thanks to Reel Gardening – we might be seeing a lot more of in the future.



Seeds are pasted with a flour/fertiliser mixture, onto newspaper strips.



Newspaper strips are then air-dried before being rolled up into reels, for easy storage and distribution.



Seeds strips are planted in furrows, with one edge of the newspaper left visible, just above the soil.



Kenith, a Diepsloot resident and proud Reel Garden "graduate", is seen here in his vegetable garden with Claire Reed (far left), and members of the Anne's Rotary Club, Randburg, who helped to facilitate the Reel Gardening experiment.



Claire Reid demonstrates the Reel Gardening method to Joseph, caretaker at the Trinity Day Care Centre in Kaya Sands. The Centre's only access to water is the nearby Jukskei River. The limited water needed for successful Reel Gardening has enabled the centre to grow fresh vegetables for the first time.



One of the first experimental crops of beans grown by Claire Reid using the Reel Gardening method.