
Vegetable Gardens in Kiffa

Stan Doerr

[Eds: Stan Doerr wrote to us about a vegetable garden project in Mauritania that quickly took off. We hope you enjoy reading about the project, some of the circumstances that helped make it so successful, and the results.]

The gardens are on the edge of the Sahara Desert, where the sand meets the very beginning of sparse thorn bushes like *Balanites aegyptiaca*, *Leptadenia pyrotechnica* and various *Acacia* species, marking the beginning of the Sahel. The average annual rainfall is 12 inches (300 mm), but we often receive 8 inches (200 mm) or less a year. Temperatures reach into the 120°s (45-50°C) in May and June with humidity down to 5%. We live in a place called Kiffa in the Islamic Republic of Mauritania, about 600 kms from the Atlantic coast on the northwest hump of Africa. Surprisingly, it turned out to be the perfect place for a garden.

My wife, Beth, and I came to Mauritania in 2000 to work for World Vision. I came to be the director of a development program and Beth to develop a national agricultural program. Mauritania is a country in transition from a nomadic lifestyle to a sedentary life in small villages and towns. In 1960, when Mauritania became independent from France, around 90% of the population was nomadic.

Repetitive droughts in the mid 60s, 70s, and 80s decimated the herds of livestock and forced the people to settle in small villages where they could find water. The most recent census found that only 4.7% of the population is currently nomadic. However, due to the nomadic history of the people, growing crops and gardens were not traditional skills within the culture. When we arrived in Kiffa, the only vegetable gardens that could be found were in an ancient riverbed (known as a Wadi) northwest of the town where the water table was fairly close to the surface. This land was controlled and farmed by just a few family groups. The few oases around the area were mostly used only for date palms.

The Plan

So there we were, in the desert, with Beth expected to develop an agriculture program. When the needs are so great the tendency is to try to address too many issues and end up doing nothing well. Instead, Beth decided to focus on three things: a small farm resource center (called the ARC for Agricultural Resource Center), a vegetable gardening project, and the introduction of the Moringa tree. We thought that considering the harsh climate, the ARC would be necessary for

trying various crops and techniques before introducing them to the communities. With the high levels of chronic malnutrition, the vegetable gardens and Moringa would be the most direct and sustainable solution to this problem facing every family in the area. In this article, I focus on the effort we made to introduce vegetable gardens.

The Beginning



Figure 1: A woman making a moveable garden from an old tire.

As recently as last year, the concept of a home or kitchen garden was virtually unheard of anywhere in this area except in the Wadis. When Beth and her team first introduced the concept of home gardens, the first obstacle was the demand for fencing. Goats rule the land in Kiffa and nothing is safe from their hungry mouths—not paper, not plastic, and especially not fresh tender vegetables. However, fencing is expensive. From a development point of view, if you start supplying fencing to every garden project, then soon the attitude is, “If I don’t have fencing then I cannot have a garden.” In my experience, people who come up with their own solution to a problem usually come up with both a better

and a more sustainable solution.

So what to do? Fortunately, Beth has considerable experience in working with various techniques promoted by ECHO in Fort Myers, Florida, and in working in places where rooftop or mobile gardens are needed. Beth introduced to her team the tire garden, which is just what it says it is, a moveable garden made in an old car tire (see Figure 1).

Introduction of the tire garden was successful beyond our wildest dreams. Within a few weeks, you could not find a used tire in Kiffa, they were all being snatched up and turned into gardens. The tire garden immediately solved the problems of goats getting to the vegetables because now the garden could get away from the goats! Gardens were suddenly appearing on top of metal drums, mud chicken coops, even on top of old car bodies

The Drought

To be clear in painting a picture of this success, there are two other factors that we must consider. The first is the sudden availability of seeds as the result of a gift of a 20-foot container of mostly vegetable seeds from World Vision Canada, and the second factor is the drought that hit Mauritania in 2002.

(We are cautious about disrupting existing market outlets by bringing in free seeds from overseas. However, I guess it is no stretch of the imagination to realize that a place where nobody grows vegetables would not have a ready source of vegetable seeds. In fact, our preliminary studies showed that this was a serious limiting factor in gardening. There are seeds available in Mauritania and in Senegal to the south, but with little demand for vegetable seeds in Kiffa, there has been a very small supply of seeds to the area. For the rules of supply and demand to work it is often necessary to create the demand, which in turn will lead to the supply void being met by local entrepreneurs. In this case, the seeds that were provided to start this project have been a key factor in reducing the risk to the community, allowing experience to demonstrate to people the potential of growing food for themselves.)

As strange as it sounds, the drought was good for the gardens. As a result of the drought that hit this area during what was supposed to be our rainy season, many of the animals died. One traditional coping mechanism during tough times for the people here is to sell some animals and buy imported food. Due to the drought, most of the animals have died and those that have not died are worthless. No rain means no grass, and no grass means no food for the animals, and what is the point of buying a skinny animal when there is no food for it? Cattle prices in the Kiffa area dropped from \$425 a head in early 2002 to less than \$100 a head by the end of October, 2002. With the drought and the breakdown of one of the most significant traditional coping mechanisms, the concept of being able to grow some of their own food became very attractive to people

It was the combination of drought, desperation, reduced risk, key elements being provided, and truly appropriate technology that resulted in a radical transformation of Kiffa.

The Gardens

The work of World Vision in Kiffa is managed through what are known as Area Development Projects (ADPs). The Kiffa ADP works with various women's cooperatives, through which the training in tire gardening was done. After the training, each woman was given several small packets of seeds and encouraged to start a garden. We have visual images burned into our minds as we drove away from a training session seeing a woman kneeling down over an old tire with a baby strapped to her back, cutting the top rim out of a tire, starting her first tire garden!

Time passed and we began to get reports of home gardens being seen all over Kiffa. In order to verify this development Beth asked me to make follow-up visits around the town. What a development worker's dream-come-true these followup visits have been!

This is my report from the follow-up visits:

"The team from Kiffa ADP took me to a small garden on the eastern edge of the town. All we could see from the vehicle was a small square of tattered cloth hanging on a motley frame of old sticks and metal pieces. As we approached we could see inside and much to my surprise, those rags were protecting a lush garden about 8 meters square. Tomatoes, squash, lettuce, beetroot, cabbage—they had it all. I asked the owner of the garden if she had done gardens before and she proudly told me this was the first time she had ever grown anything. As we admired her garden, another woman came up to us and asked us to come and visit her garden. We asked where it was and she pointed to another line of rags about 100 meters away. As my eyes began to scan the area around me, I began to see numerous little enclosures made of the same combination of rags, scrap wire, old car parts, and whatever else could protect a green place from the marauding goats. I turned to the Development Agent from Kiffa ADP and asked him, "How many of these are in Kiffa?" His response: "It would take you a month to visit every one, and all of them are first-time gardens!"

"After visiting several gardens, we went to another part of Kiffa and it was the same. It is hard for me to give you an actual word picture of what I saw. Kiffa is a very drab town. Everything is brown or sand colored and coated with dust. There are no trees, no grass, nothing but square mud houses and sand with a scattering of rocks. As my eyes got used to looking for these small enclosures of faded scraps of cloth, I began to notice them at almost every house. It was only after I got right up to the enclosure that I could see inside and see that each little refuge protected a beautiful little garden in which every inch was occupied by a vegetable plant.

"As I talked to the women who had produced these gardens, every one of them told me this was the first garden they had ever grown. It was obvious that the children were especially benefiting from these gardens. As we stood talking in the garden, the kids were constantly popping peas and cherry tomatoes in their mouth...they knew exactly what tasted good and had obviously been munching on these since the garden first began to produce.

"I asked the women what problems they were facing. Water was always the issue. Since we live in the Sahara Desert, I would not have expected anything different. What did surprise me was that nobody said fencing was a problem. When the project started, this was the main constraint. But the women had obviously found their own solution to this problem. Garden pests did not seem to be a big problem other than grasshoppers, lizards and small birds that bother anything green. I also



Figure 2: One of the many gardens that resulted from the project. A fence and several functioning tire gardens are also visible in the picture.

noticed that the ladies were still using the tire gardens but instead of this being the main garden, the tire gardens were used as seedbeds and then the plants were transplanted from the tire garden into the main bed when they were large enough.

"As we began to leave the last garden for the day and were standing by the vehicle I noticed a small little boy in tattered shorts tugging on the leg of my driver. I asked what he wanted, and the driver began to laugh as he told me that the little boy wanted me to visit his mother's garden too. I reached down and took his hand, and he proudly walked me over to his mother's garden to let me admire her vegetables. It is days like this that I thank God for the opportunity to be here."

Conclusion

The introduction of kitchen gardens to Kiffa and the success of this introduction can be attributed to a combination of things. With the drought, the need for a way to meet the nutritional needs of the family was a top priority for everyone in the community, especially the women. The simple introduction of the tire gardens suddenly made it possible to grow a garden at home because it was small, manageable and could easily be protected from the goat population that troubles anyone wanting to grow something in Kiffa. Training provided the skills needed to get started and donated seeds reduced the risk of trying something new.

I specifically asked the Development team if they thought that World Vision would need to provide seeds again next year. The team said they had also wondered about that. Their survey of the community indicated that the women were so impressed with their ability to grow a garden in Kiffa that they said they would find a source of seeds next growing season even if they had to get a relative in Senegal to buy them and bring them to Mauritania.

In our high tech western world, we often think that success depends on bigger, better, and often expensive new things. It is good to be reminded that, for most of the world, simple is usually the best. It is very refreshing to know that something as simple as a packet of seeds and an old car tire has totally transformed an entire community, and especially to know that this has vastly improved nutritional levels for hundreds of children.