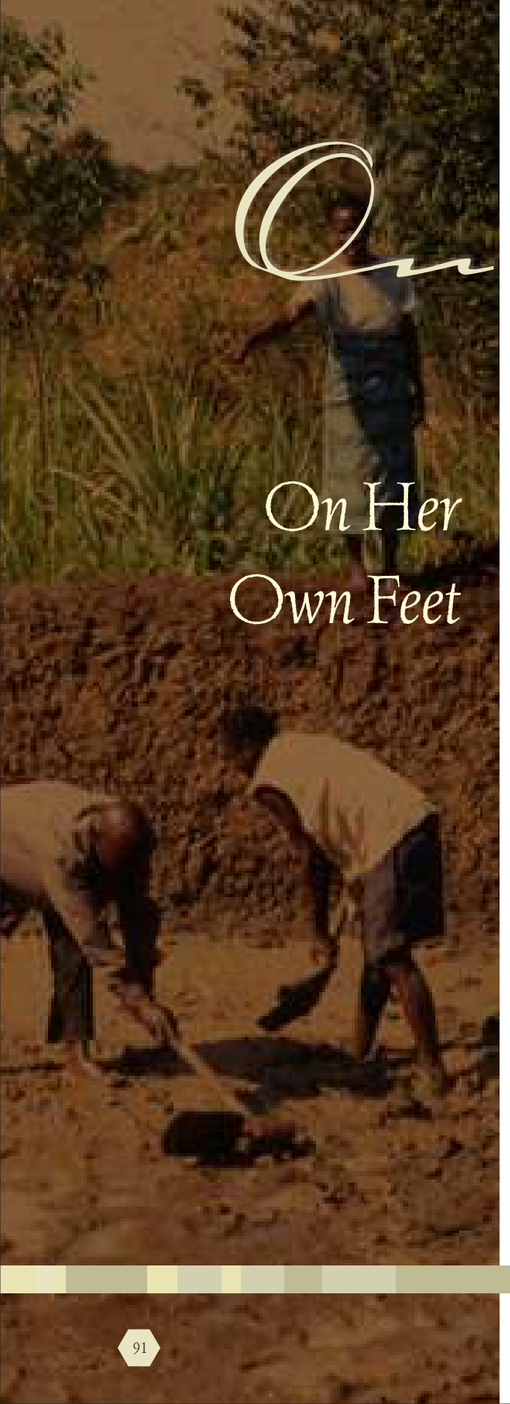

On her own feet

On Her Own Feet

Looking at her, sitting calmly and smiling in the middle of her fenced courtyard, you would believe that Mrs Jessie Kaunde had all the time in the world. There is no noise from traffic, as the dusty road outside the fence is empty. At the moment, the only noise is the laughter of children splashing in a nearby pool. But, if you were to take things at face value, and believe that it is always this quiet here, or that time is of no importance here, you would be totally wrong. This household, in Mangwengwe village in the Zomba district of southernmost Malawi, can be a very busy place indeed.

You have arrived at a quiet time. So, for a while, the easy atmosphere and small-talk prevail while a few chickens scrape around in the dust. Then a black rooster, who believes it is time to impress the broilers (or the visitors) crows so loudly that it is hard to hear a word of the conversation. So, let us leave the chairs and the shade and look at what is behind Mrs Kaunde's white-painted concrete house.

You will find that you have arrived on a lucky day. Just behind the living quarters are a line of smaller buildings which, until recently, housed 500 chickens. Consider how hard the rooster had to work to impress them all. They were sold after eight weeks, once they had grown to broiler size.

Of the 510 that had been bought as one day old chicks, only ten died off–a very low loss rate indeed. The rest were fed commercial feed and then simply sold at the farm gate, after a few notices were placed around the village.

So, you might think that Mrs Kaunde is a successful chicken farmer. Someone who knows the rules of the game. It is obvious that she knows how to treat the chickens by dosing their drinking water with medicine. And she also knows that it is better to keep only 500 birds in her chicken house (even though 600 are recommended) and so make sure that they are all well fed and that they do not fight. But if you ask Mrs Kaunde if chicken farming is the family's trade, she will say "yes and no". To understand that answer, we need to know a little more about Mrs Kaunde herself.

As a 47 year old widow, whose three grown-up children now live away from home, Mrs Kaunde manages the household on her own. She is one of the many female household heads found in southern African agriculture. But she is not alone in the house, she has taken in three of her grandchildren–remember the laughter and the splashing water we heard earlier? We will meet them in a short while.

Chicken farmer, then? "Up to a point", Mrs Kaunde admits. The cash from selling chickens a few times a year goes a good way towards providing for her family's needs. It pays for the children's general educational expenses (for example, school uniforms, text books and paper and pencils). It also allows her to send her youngest son to secondary boarding school.

Behind the hen house

There is another poultry house in Mrs Kaunde's backyard, but it is also

The neighbourhood children channel surplus water, from the canals which feed the fish ponds, into irrigation channels in the surrounding fields.

empty. Until some weeks ago, however, as many as 105 ducks resided there. Like the chickens, they were also sold off recently. But what might surprise you as you look around is that there are very few marks to show that poultry have been living in any of these small clay buildings. Everything has been cleaned up thoroughly. And for a good reason. As Mrs Kaunde will tell you, nothing goes to waste here, and definitely not something as valuable as chicken and duck droppings.

But why are chicken and duck droppings valuable? The explanation lies just behind the house, where the farmland begins. As you can see, there are around 3 ha–mostly consisting of green land but some occupied by a cluster of three small fish ponds. The small field, the garden plots and the fish ponds will take whatever manure she can spare–hence the clean poultry houses. The ponds need fertiliser to make algae grow as feed for the fish, who pop to the surface now and again to snatch at an inviting bit of greenery floating on the surface.

Are these the ponds where we heard the children playing earlier? Were they playing in dirty, fishy waters? In fact the answer is "no". The children are not in the ponds, they are further away. But, in spite of their happy voices, they are not really playing. They and their friends are doing farm work in their after-school hours. Maybe not particularly hard work, but definitely useful work which must be done here. Let's walk over.

Water, water everywhere

We recommend that you walk barefoot here–in any event, do not bring your best shoes along. If you could see through the eyes of one of the small hawks circling above, hoping for a bit of fish, you would be able to see exactly why the ground is so muddy. Not too far from the Kaundes' farmland is a small river, and a system of small canals have been dug from this to take water to the ponds and to encircle every garden-plot

Because fish farms have a readily available water supply, fields like this can be kept green even in the dry season. To local fish farmers, this can mean the difference between food security and starvation.

and field. But this alone does not provide enough water to grow green maize and vegetables. So, all plants are grown on small ridges, to let the water from the canals be diverted through the tiny ditches between the rows.

The canal water runs slowly downwards from the river, and care is taken to regularly clear the canals. But, in each plot, the water needs a bit of lifting to reach the plants. This is what the children are doing–using hoes and their hands they are gradually irrigating the small maize field and darkening the soil nicely. But, of course, eight children in a line–working on their own and splashing in nice cool water on a hot day–cannot help wetting a neighbour now and again (or even quite often). Still the beauty of the thing is that all the water will, in the end, hit a piece of land in need of it. So let us call it 'playing while you work'.

In a group of her own

So, one might call Jessie Kaunde a farmer with fish ponds. But, she would not subscribe to that. She would stress that all the things she does are combined in her correct title: fish farmer. These days there are quite a number of fish farmers around, but only a very limited number of them are female. In the fish farmer group that Mrs Kaunde belongs to, she is the only female. In the neighbouring village the picture is the same: out of 19 group members, there is only one who is a woman farming fish on her own.

But, if you ask the wives in the fish farming families they will tell you that they contribute as much as their husbands, except that they do not take part in construction work.

For many, and Jessie Kaunde is one of that group, the tricky part of taking up fish farming is the construction work. It takes many hours of hard manual labour to excavate a pond which is deep enough (around 1 m deep). The pond also needs to have broad dykes around it. These are used for walking on and, hopefully, also for growing vegetables and bananas, or simply grass for small animals to graze–they will fertilise your ponds while they eat there. Because of the work involved, not all ponds get dug to the right depth and many dykes are very narrow and muddy, hence the advice to go barefoot when walking here.

An efficient system of vegetable gardens and fish ponds. By mixing co-operative work with private ownership, farmers in southern Malawi have radically altered the landscape of this upland valley.

Of course, on many fish farms you will see the odd very small pond. Small ponds make for cheaper construction, of course, and so are usually the sign of a tentative beginning being made by a newcomer to the trade. Maybe they saw their neighbours taking up the trade and wanted to have a go on their own but, not being exactly sure what was needed, tried a small pond first. Of course, this is not the only way to hear about fish farming. Other people, Mrs Kaunde included, have been introduced to fish farming by means of a national radio programme, which did not necessarily give the full picture.

Still, you can bet that everybody takes better care when they build their second pond, and Mrs Kaunde is no exception. She made sure that her second pond was deep enough and big enough, and that it had stable dykes. Also, excavation work in a number of places shows that pond number one is now being improved. The first year of fish farming has sharpened Mrs Kaunde's appetite; now she is seeking expert advice. So, WorldFish Center staff, housed at a nearby research station, are eagerly consulted whenever they come by to make observations and give advice.

A very special group

In a different corner of the district, no one has made the mistake of constructing fish ponds which are incorrectly proportioned. Here nothing

This man is considering how best to implement the improvement plan he developed when attending a training course for new fish farmers. He intends to make more improvements each year, as and when he can afford them.

is left to chance, since all the ponds are created through group work involving the 28 members of the newly formed association. So, even the first time round, they always build the ponds correctly. A local branch of an international NGO, World Vision, has taken an interest in the fish ponds, and has secured Australian funds for setting up what little administration is needed for a small scheme quite different from anything else around.

Based on the advice of farmers, they have located a rather unlikely piece of land on which to implement the scheme. They have opted for the high and flat part of an upland valley, with villages below it—typical rice land really you might think. But rice has been tried here, as has maize, and the owners found that they did not have much success. Still, it was fairly simple to divert water from the mountains this way and, over a two-year period, the area has been turned into a vast lifted plain of ponds, exposed to the sun and the skies. Now there are 80 large ponds, and more are being added by the month.

Gradually the grand scheme is being put in place. All the flat land will be developed into ponds and, in the surrounding area, vegetables, bananas and off-season maize will be grown—making good use of spill-over water from the ponds. The interesting thing about the scheme is that the agricultural waste used to fertilise and feed the ponds will not only come from the surrounding belt of fields. The member farmers—who own the ponds and the surrounding vegetable gardens individually—will bring leftovers from their homestead up here, to be recycled in the pond water. After all, no one lives more than 1 km away.

The opportunity to set up this unique assembly of ponds existed only because the village head—the traditional authority in these parts—was able to compensate the farmers who owned the land by giving them corresponding pieces on communally owned land nearby. The association which built the ponds is the focus of free advice given by the NGO which helped them. And, all of this is based on methodology developed by the WorldFish Center and its counterpart, Malawi's Fisheries Department. We follow this promising new concept with interest. Now, the project is starting to produce so regularly that production is expected eventually to be too high for the passers-by to simply buy all of it. So, the association is considering setting up an infrastructure for sales, using transport organised jointly by farmers.

What about the extras?

Of course, such a project would not suit everybody. Jessie Kaunde and her group of fish farmers might not necessarily see this project as a model they should follow. If you asked them, they would give you quite a few reasons why they thought this system would not work for them. They like the fact that their ponds are next door to their houses and that the water system used covers their whole plot, and not only a piece of land they own some distance away. If they wanted to be productive at both places, they would have to develop two water systems. And, they would probably not be able to take all their waste to a pond which was some distance away. What is more, many of them would miss the opportunity of having ducks sitting on their ponds. Certainly, you would have trouble keeping ducks in a place where there was nobody to lock them up at night and keep a watchful eye on them, as is done down in the village. Also, not only do the ducks fertilise the ponds, they take insects sitting on the water, and eat the eggs of the mosquito that carries malaria. They also eat snails, some of which carry the frightful disease bilharzia. This service is not insignificant. Surveys have shown that fish farmers, even those working with water all the time, suffer fewer water-borne diseases than other farmers. The reason for this is, probably, that the ducks 'clean up' their ponds for them.

Through hard work and dedication, Jessie Kaunde has built a successful fish farm and ensured that she and her family have a more secure future.

Food and cash

The pioneers in the upland valley had few cash problems when it came to construction work–they could rely on each other. Other people may find it more expensive to construct their ponds but, in the long term, the cash benefits can outweigh initial costs. Down in Mangwengwe, Jessie Kaunde made some profit from small-scale trading: buying fish from fishers on the lake and selling it at the market (so you could add the title 'petty trader' to the list of her careers). But, she gave that up when fish farming became possible, back in 1999–"much better business", she explains. Even if the chicken farming can be fine, it is risky. Some chickens might die, and one might not be able to sell the broilers at exactly eight weeks old. If you keep them longer, you have to feed them with expensive feed, but they do not fetch a better price because they will only grow a little more in the following weeks or months.

"Fish in the pond are like money in the bank", Mrs Kaunde will tell you. Very safe, and you know you can always take some out, just in case. You will not lose your investment and, even if the fish do earn relatively less for the money spent on them than a 'lucky' generation of chickens, she is cautious. She invests the money from the sales she makes in workers, who prepare the land for the agricultural season and repair her ponds.

Her colleagues (from the veterans who began pond fisheries as early as the 1970s to those who established their ponds only last year) all agree that aquaculture is reliable. It feeds the family and provides them with much of the cash they need.

If you ask any of them about their future plans, they will all tell you that they want to do more involving fisheries. They want to construct

Jessie Kaunde takes a moment to rest and exchange ideas with a visiting WorldFish Center staff member.

new ponds, take on new types of fish, and set up small concrete ponds for the production of young fish, which they can sell to new fish farmers.

In fact, they have a number of ideas. Many of these are the result of discussions in the clubs or of observations made on other fish farms. Others are the result of seminars and courses, organised by a number of NGOs in the district.

If you ask them about the content of these training courses, you will be told that the basics of every seminar or course can be tracked back to a model which integrates plant and fish production. And if you tell them that this sounds a rather complicated matter, they will agree that this is what they themselves thought when they first encountered the ideas. Most of them had originally thought that they could just add a pond and continue cultivating their fields as normal. But they will also tell you that now they simply could not think of running a farm without having every component fit in with another.

So now if you walk around with a fish farmer, she or he will be happy to demonstrate the idea of integrating different aspects of the farm. You only need to watch a fish farmer cleaning up an empty pond after the fish harvest, digging up the mud from the bottom and spreading it on his banana lot. "For fertiliser" he says, in answer to your puzzled look.