

## The Financial Basis of Faith in Action

We support Paul's teaching given in 2 Corinthians 9:7 that we should give as we have decided in our own heart, and not under pressure. We do not, therefore, include any requests for donations in our literature. However, we do want to provide some information about how we operate financially.

All our work is done on a voluntary basis. We are

therefore able to use 100% of any gift according to the donors' chosen designation. Please would you indicate clearly if you want a donation to be used for a specific project.

We would be grateful if you could let us know if you would like to receive a Gift Aid Declaration Form. We use a small percentage of the money that we receive back

from gift-aided donations to cover the cost of producing news-sheets and leaflets, and for other administration costs which relate directly to projects. Please could you also tell us if you are not receiving a news-sheet, and would like to be added to our mailing list. These news-sheets give on-going feed-back about our projects.

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Faith in Action exists to support the ministry of local churches in Africa by:

- Developing personal links and church to church contacts
- Strengthening the work of local pastors
- Supplying Christian resources in local languages
- Sending relief consignments and funding development projects in villages
- Encouraging diversification of crops for food security
- Making small interest-free loans for family businesses
- Providing wells
- Supporting orphans



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## Windmill Pump Irrigation

Windmill pumps provide a low-technology, easy to maintain, free to run, way to food security.



Well and Windmill Pump

Most families living in the Lower Shire are subsistence farmers, who are dependant on growing enough food each year to provide for all their needs. However, weather patterns have changed, and much suffering has been caused during the last ten years from erratic and unreliable rains. Although there have been a few years when excessive rain has caused flooding, by far the greatest problem has been caused by insufficient rain.

In a normal year, the rain should

commence at the beginning of November, when seeds are planted. It should then continue until the end of March, and the harvest is gathered in during April. It has been quite common in recent years for the rain to stop at the end of January, and during one year the rain did not start until early in February. For the rest of the year, there is rarely any rain at all, and nothing can be grown except for cassava — a drought crop, or the few plants that can be grown on land close to a river.

In order to provide greater food

security, we set up a pilot windmill pump irrigation project in Saopa Village during 2007, which proved to be extremely successful. Since then we have built a total of five windmill pumps in Malawi, and one in Mozambique. The Mpotola windmill pump which we use, is produced in Malawi, and so all spare parts, as well as the technology to maintain the windmill, will be available locally.

These windmill pumps will provide a low-technology, easy to maintain, free to run, way to bring about greatly increased food security. As these windmill pumps operate through a well, they can be set up throughout this area, not just beside a river, as with other methods of irrigation. They are also better for the environment, as they circulate ground water, instead of taking water from rivers.

These windmill pumps will not only enable farmers to grow one crop



Concrete Reservoir

each year during the rainy season, but also one or two further crops during the dry season. And, if flooding destroys crops during the rainy season, they can grow a replacement crop during the dry season, when it will not flood.

The structure and operation of these windmill pumps is as follows: A well is constructed to a depth of 45 metres on the highest area of land in the surrounding area. The windmill pump structure is then built over the well, and it operates the pump which draws up the water. These windmills use either a Jooste or Afridev pump, and the spare parts for them are available in local markets.

The Mpotola windmill operates with wind speeds between 2-5 metres per second. A chart showing wind speeds throughout Malawi at a height of 2 metres, shows that the average wind speeds for two towns in the Lower Shire ranges from 2.3—6.4 metres per second. There should, therefore, be sufficient wind throughout the Lower Shire to operate this windmill throughout the year, although the wind may be a little too strong during October, when the windmill pump can be turned off.

### An irrigated Field showing Mud Channels

After the water has been drawn up through the well, it is then piped underground to a large concrete reservoir. Although the photographs in this leaflet show an uncovered reservoir, we are putting a cover over this, in order to keep the water clean, and also to stop children from climbing into it.

There is a tap at the side of this reservoir which allows water to be drawn off into plastic piping, which directs the water to different farmers' fields on a rotation basis. One windmill pump can irrigate 50 acres of land. In each field the farmer will construct mud channels, which can be blocked and unblocked, to direct the water to all of his crops.

The first crop in Saopa Village produced a total yield of 210,000kg of maize, which is 4,200kg per acre. This yield is slightly higher than the highest quoted yield for this particular hybrid type of maize. The total crop produced from this first planting, could



have been sold for £36,000; and thus £72,000 could be raised from growing two crops per year, and £108,000 if three are grown.

The total cost of one well, windmill pump, reservoir, and plastic piping, together with construction and a year's oversight and maintenance is currently (Malawi Kwacha) MK 2,150,000, or £9,389.

We are now linking the provision of windmill pump irrigation with generating income for community projects, such as orphan day-care centres and clinics. This project can therefore provide food, as well as medical and orphan care. (Please see separate leaflet.)

Current exchange rate: MK229 = £1

Farmers blocking and unblocking Water Channels

