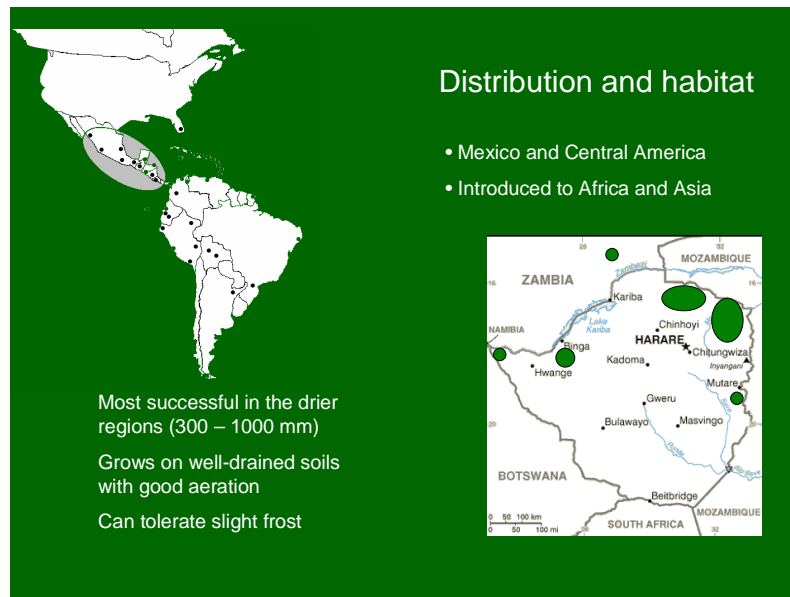


## **Jatropha situation in Zimbabwe. Banarbas Mawire.**

I started promoting Jatropha in 1996 when I was appointed the first Forest extension officer for Binga district upon my return from Cyprus where I trained as a forester for two years. I teamed up with retired medical doctors Titia and Jan Wandolf who formed the Binga Trees Trust and we started conducting a number of awareness meetings with the rural communities on the potential of multipurpose trees such as Jatropha, Neem and Moringa in improving livelihoods. A number of training workshops were conducted which ranged from propagation techniques of the trees, oil extraction, soap making, Moringa powder making and use of the Jatropha cake as an organic fertilizer. The team also attended an international conference in 1997 organised and funded by the Rockefeller Foundation on Jatropha in Harare. The workshop was an eye opener for us as we came into contact with scientists from across the globe and business people who showed great interest in the potential offered through utilisation of Jatropha. One of the most important delegates who attended the workshop whose presentation inspired our work is Mr. R. Henning who presented the Malian experience. This gave us more confidence and upon returning to Binga we mobilised the education system in promotion of planting Jatropha trees and for the first time in the history of Matabeleland North Province one of the primary schools came out number two in the national Tree growing and tree care programme. Most of the schools particularly Binga primary school won a number of science exhibition competition through displaying of Jatropha products such as hand made soaps, organic fertilizer and the Binga lamp developed by Binga Trees Trust. Meanwhile the number of Jatropha trees planted in the district increased from less a hundred to more than 10000 trees between 1996 and in 1998. Binga Trees Trust acquired a number of manual oil pressing machines and eventually managed to buy an electric machine such that by the end of 1998 good quantities of oil were being produced in the district. Most of the trees planted from seed in 1996 started producing seed in 1998 and since then Binga trees has been growing from strength to strength and in 1999 I was transferred to Zvimba district.

Zvimba district is in Mashonaland West province and unlike Binga (which receives an annual precipitation less than 400mm); the district receives an annual rainfall above 700mm. I continued promotion of Jatropha but the results were not as good as compared to Binga where the trees grew faster and produced seed in two years. In Zvimba where the temperatures are a bit on the low side it took the trees raised from seed almost five years to start producing seed.

In 2002, I left the Forestry commission and joined Environment Africa which is a Local non-governmental organisation involved in environmental education and livelihood projects with various communities in Zimbabwe and Zambia. The same year so the organisation launching an ambitious project called Tree Africa with the aim of promoting the planting of more than a million trees per year for five years. Jatropha took the centre stage again and communities in Victoria Falls, Mashonaland central and Mashonaland East started to grow more Jatropha trees. Tree Africa started to do some scientific work on Jatropha. Through the works of Mr. Jacob Jepsen who has done a lot of work in improving propagation techniques and linking up with experiences from Egypt and India through exchange of information and propagation material.



Adapted from Jacob Jepsen (2005).

### **The current situation.**

Quite a number of small scale oil producing mills have mushroomed in the country in areas such as Mutoko, Harare, Guruve, Beatrice, Victoria falls, Gwanda and Masvingo. Most of these mills use electric oil pressing machines whilst villagers use manual oil pressing machines. The oil produced is either used for soap making or it is sold to some buyers inside the country and there are some unconfirmed reports that some buyers from as far as South Africa and the United Kingdom have been buying oil from Zimbabwe. There are also unconfirmed reports that buyers from outside the country have been buying *Jatropha* seed from Zimbabwe. There is a huge demand for *Jatropha* seed and transporting the seed from remote areas remains a big challenge.

### **Research on Biodiesel form *Jatropha*.**

Quite a number of organisations have stepped up their research on production of biodiesel while others have gone under. Most research is being conducted at the Harare and Masvingo polytechnic colleges where a number of demonstrations have been done on engines running on *Jatropha* biodiesel. The Scientific and Industrial Research and Development Centre (SIRDC) have also been doing some research. The government of Zimbabwe has also come out strongly in support of all efforts that promote *Jatropha*. In 2005 the government launched a big campaign to promote planting of *Jatropha* and the tree was declared the main species to be planted during commemorations of the country's National tree planting day celebrated every first Saturday of December. The government went further introducing an out grower scheme implemented through the National oil company of Zimbabwe. Apart from this the government also introduced a ban on export of *Jatropha* seed and even gazetted the producer price of seed. A tonne of *Jatropha* seed was pegged at 7000 Zimbabwe dollars (or 7 million dollars in old currency). This was a very sad development because some private buyers were paying farmers almost ten times the gazetted price. Some private buyers feel disadvantaged from this development as they

are now not allowed to buy seed from farmers. Farmers are supposed to sell their seed to the National Oil Company of Zimbabwe.

Some NGOs such as Environment Africa have also devoted a lot of resources in promotion of community projects. In Victoria Falls an electric mill has been purchased for a group of women who are now making soap from Jatropha oil. In Beatrice, Environment Africa has teamed up with an individual farmer who have planted close to 500 000 Jatropha trees in plantations and also as live fence along the periphery of his 500 ha farm. The project is an integrated approach with components such as piggery, fish farming, cattle and poultry. The manure from cattle and pigs is used in growing of Jatropha trees and the results are quite impressive. The trees are also planted as live fence along paddock boundaries and a good record keeping system have been put in place. The farmer aims to produce organic fertiliser, biogas and biodiesel which will be used to run farm implements such as tractors and grinding mills. The farmer is also investing in an electricity generator which runs on Jatropha. I think this is one of the biggest Jatropha project in the country and a lot of lessons can be learnt from it. The farm is also currently being used as a training venue for Agricultural and extension officers who in turn go out to promote growing of Jatropha in their respective areas. So far more than 100 extension workers from Manyame district received training in propagation and caring of Jatropha trees. Some farmers from across the country are visiting the farm on look and learn tours.

#### **Main challenges.**

- Some of the people who have done a lot of work especially those who have in the past developed an industrial plant have stopped operations under unclear circumstances. One such example is the Pentagon industries and the Plant oil producers association.
- The current economic crisis facing the country is a challenge to people who may want to venture into Jatropha in such a hyperinflationary environment.
- Current state intervention in controlling the price of Jatropha seed and banning the export of Jatropha has negative impacts especially on small industries who have been offering farmers higher prices thereby creating incentives for planting of more Jatropha trees.
- Much of the publicity on Jatropha has resulted in communal communities having a lot of conflicts especially where trees are communally owned.
- More research is needed on fast growing species which can fruit early so as to keep farmers motivated especially in difficult circumstances where one cannot afford to tie up capital for three years before realising benefits.
- Much more work need to be done so as to improve on quantities of Jatropha especially for soap making so as to attract private investment from industries.

I am currently studying towards a Masters of Arts in Development Management at Ruhr University in Bochum and I have decided to do a cost benefit analysis of the Jatropha system in Zimbabwe. In this analysis I would also like to come up with an update of the Jatropha situation in Zimbabwe